



**PNEUMAX**



# GREEN LINE

PNEUMATIC FITTINGS  
CATALOGUE



# Green Line

## Pneumatic Fittings Catalogue

The Green Line range includes solutions for connection in pneumatic circuits made of brass, technopolymer or stainless steel.





# Titan Engineering

Expertise and Reliability since 1993



## a Pneumax Group Company



Italy



Europe



World

9

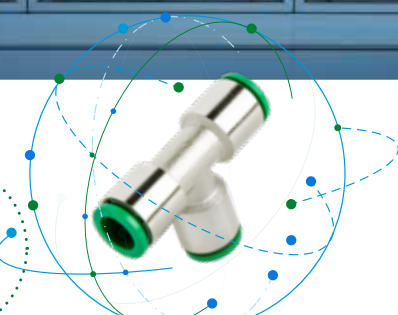
Production plants

28

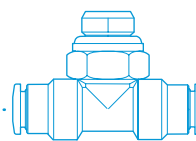
Group companies

+90

Distributors worldwide



Titan Engineering S.p.A. is a company of the **Pneumax Group**, founded in 1993 with the goal of becoming the production site and warehouse for fittings and accessories for compressed air for the worldwide Pneumax distribution network, following the development strategies pursued by the Group over the years. The constant growth of the company during the years is due to the capability of modeling itself on the needs of customers: this allows to make targeted investments in production activities, in co-operation agreements with the best Italian and foreign partners, enhancing the quality and flexibility of the service. The main result of this strategy is the creation of the “Green Line Catalog”, a tool for specialists of fittings for compressed air, among the most comprehensive available on the market.



TECHNOLOGY

QUALITY

COMPETENCE

## A wide range of solutions for pneumatic connections



- Push-in fittings
- Standard fittings
- Compression fittings

- Push-on fittings
- Flow regulator
- Valves and Function fittings

- Ball taps
- Silencers and Flow nozzles
- Tubes and accessories



# Selected and certified materials

Brass, Technopolymer and Stainless Steel



## METALS

Brass CW614N CW6117N (OT 58 ), Brass CW510N (OT 57)  
Aluminum, Stainless Steel (AISI 301- AISI 304 -K110-316-316L)

## TECHNOPOLYMERS

Acetal compounds – POM compounds – ABS compounds with  
glass fibre reinforcement IXEF 1022 – IXEF 1022FC – Grivory HT1V-4

## SEALS

NBR, VITON, FKM, EXTREME VITON, SILICON, TEFLON

## COMPETENCE AND EXPERIENCE

Application engineering knowledge allows us to always provide the best solution



Our R&D department is available to work in co-design with customers, creating customized projects, using brass, technopolymer or other special materials. Titan Engineering also has partnership agreements with accredited laboratories for the execution of tests dedicated to specific sectors.



### Special products

- Machine Tools
- Life Science
- Food and Beverage



- Cooling
- Wood Machinery
- Textile
- Stone & Glass Machinery



## SMART PRODUCTION

Our production department is constantly renewed by integrating the **most advanced technologies** to ensure maximum efficiency and flexibility to manage batches of different sizes and special productions dedicated to individual customers.

Product assembling is managed through machines equipped with anthropomorphic robots. Ultrasonic welding guarantees maximum tightness of the technopolymer fittings.

The control of assembly phases is done by integrated vision systems with **real-time self-learning software**, guaranteeing each single component high quality.

All the machined batches are tested using dedicated instrumentation such as load cells and simulating real operating conditions.

High flexibility to manage small and big batches





## TOTAL QUALITY MANAGEMENT

At Titan Engineering **Total Quality is an “operating style”** constantly nurtured by ongoing training at all levels and an awareness of shared “knowledge” as a corporate asset essential to the company’s success.

Choosing to operate under a total quality system means implementing management methods and tools that involve all staff and enable constant monitoring of process efficiency and product quality, starting from the raw materials and the components necessary to make them and continuing through processing and assembly.

**All company departments work in compliance with ISO 9001, ISO 14001 and ISO 45001 standards.**

Product and process certifications to meet customers needs



### Certifications:

#### ISO Certifications

- Quality Management System Certification ISO 9001-14001-45001 IQNET
- Quality Management System Certification ISO 9001-14001-45001 SQS

#### Food Certifications

- Certificate NFS – San Marino Factory
- Certificate NFS
- Product in contact with food certification Regulation CE 1935/2004 FCM
- Product in contact with water Intendend for human consumption Certification Italy D.M. 174/2004



COMPONENT

### FCM Fittings - Food Contact Materials

Designed to operate in Food & Beverage sector in compliance with FCM and NSF/ANSI 169 standards.



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## Pneumatic fittings

### Push-in fittings

#### Brass push-in fittings



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Series MINI

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#### Technopolymer push-in fittings



Series Tecnorap - Tecnorap Black

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#### Stainless steel push-in fittings



Series SS

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#### Push-in fittings for Food & Beverage



Series FCM

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#### Stems for push-in fittings



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## Standard fittings

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## Flow regulators

### Brass flow regulators



Series Rap - Rap Black - OT

124

### Technopolymer flow regulators



Series Tecnorap - Tecnorap Black

135

### Stainless steel flow regulators



Series SSN-G



142

## Valves and function fittings


### Function fittings

|                                                                                   |                        |     |
|-----------------------------------------------------------------------------------|------------------------|-----|
|  | <b>Series TECNOFUN</b> | 145 |
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### Quick exhaust valves




|                                                                                   |                   |     |
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|                                                                                     |                   |     |
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## Ball taps

### Ball taps - mini

|                                                                                     |                    |     |
|-------------------------------------------------------------------------------------|--------------------|-----|
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## Silencers and flow nozzles

### Silencers

|                                                                                     |                 |     |
|-------------------------------------------------------------------------------------|-----------------|-----|
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### Flow nozzles

|                                                                                     |                 |     |
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## Tubes and accessories

### Tubes and accessories



Series AC

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## Appendix

Mounting instructions  
Chemical compatibility chart  
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# Push-in fittings

The RAP series push-in fittings are produced in Italy according to the reference ISO norms as warranty of high quality level.

- **Brass push-in fittings**
- **Brass push-in fittings Mini series**
- **Technopolymer push-in fittings**
- **Stainless steel push-in fittings**
- **Push-in fittings for Food & Beverage**
- **Stems for push-in fittings**



## Brass push-in fittings

# Series RAP - RAP BLACK - OT



The RAP series push-in fittings are produced in Italy according to the reference ISO norms as warranty of high quality level. They are available with different thrust sleeve colours and in numerous variants to meet all application requirements.

### Ordering code

**A 10 C 08 M5**

#### THRUST SLEEVE COLOUR

blank = Green  
**A** = Blue  
**B** = Black  
**S** = Grey

#### MODEL TYPE

01 ... 90

#### FUNCTIONAL DENOMINATIONS

**OT** = Nickel-plated Brass Sleeve  
**OTV** = Nickel-plated Brass Sleeve - O-Ring Viton  
**OV** = All Metal - O-Ring FKM  
**C** = Conical thread  
**F** = Threaded body  
**L** = Extended elbow  
**E** = Increaser  
**V** = Thrust sleeve in POM - O-Ring FKM

#### TUBE CONNECTION

04 ... 14 = Tube diameter (mm)

#### THREADED CONNECTION

**M5; M6; M12; 18; 14; 38; 12** = Thread size (M5; M6; M12x1,5; 1/8; 1/4; 3/8; 1/2)

04 ... 16 = Tube diameter

**L0** = Version with lateral plug

See assembly instructions in the appendix on page 204

### Series

• **B**



• **OT**



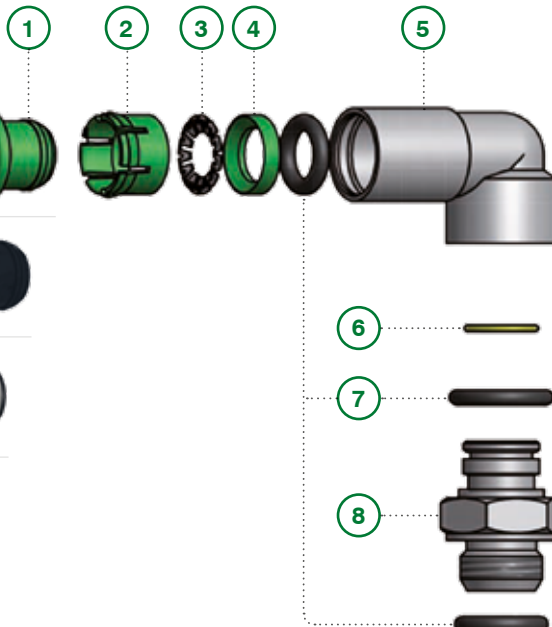
• **S**

*on request*



• **A**

*on request*



### Components

- 1 Thrust sleeve
- 2 Lock ring
- 3 Crimping gripper
- 4 Supporting ring
- 5 Fitting body
- 6 Elastic ring
- 7 O-Ring seal
- 8 Swivel base



## Technical sheet

|                                 |                                           |                                                                                                                                                                                                      |
|---------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                           | Compressed air (for different fluid please contact our Technical Dept.)                                                                                                                              |
| <b>APPLICATIONS</b>             |                                           | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms. Suitable for vacuum applications.                                                                         |
| <b>SUGGESTED TUBES</b>          |                                           | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                                        |
| <b>TUBES TOLERANCES</b>         |                                           | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                          |
| <b>PROTECTION RATING</b>        |                                           | IP 68                                                                                                                                                                                                |
| <b>TEMPERATURE AND PRESSURE</b> | Recommended limit values                  | Temperatures and pressures usually depend by the technical features of the employed tubes, anyway it is suggested a limit working pressure of 15 bar and a temperature range between -20°C and +70°C |
|                                 | Technical testing data                    | In the table below there are indicated the load traction resistance values and the main working and breaking limit (Pressure and Temperature) of the main commercial tubing.                         |
|                                 | Note                                      | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                            |
| <b>THREAD TYPE</b>              |                                           | BSP paralell UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                    |
| <b>MATERIALS</b>                | Body, "OT" sleeve, stems and swivel bases | Brass UNI EN 12164 CW614N                                                                                                                                                                            |
|                                 | Sleeve, collar and back ring              | POM copolymer ISO1043-1                                                                                                                                                                              |
|                                 | Spring                                    | Stainless steel AISI 301 austenitic                                                                                                                                                                  |
|                                 | Seals                                     | NBR 70 DWGV-EN549 UL157                                                                                                                                                                              |

## Additional technical informations

Each RAP production batch is tested according to severe cyclics "lot breaker" controls along all the production period, which include shape observation, leakage verification, functionality, at the working pressure of 8 bar. Then all samples taken from the lot are tested by a traction machine which simulate a breaking pressure of 50 bar. Here below are indicated the traction loads (in Newton) for each size:

|                      |      |       |       |       |       |       |
|----------------------|------|-------|-------|-------|-------|-------|
| <b>TUBE DIAMETER</b> | Ø4   | Ø6    | Ø8    | Ø10   | Ø12   | Ø14   |
| <b>BREAKING LOAD</b> | 63 N | 141 N | 251 N | 393 N | 566 N | 750 N |

**Important note:** The values refer to the resistance of the crimping gripper, "core part" of both fittings, the brass RAP and the technopolymer Tecno-RAP, whereby homogeneous. The breaking experimental values measured, according to the diameter, were from 1.2 to 2.5 times higher.

## Additional information regarding the working temperatures:

Further to all the necessary assessments on the use of the fittings in operating conditions different from how suggested in the initial technical sheet must be considered, with reference to temperatures, the nominal data regarding the type of the used tube and the limit imposed by the most critical component.

Series TECNORAP: **-20° +50°**  
 Series RAP: **-20° +70°**  
 Series RAP-BLACK: **-20° +70°**  
 Series RAP OT: **-20° +80°**  
 Series OV: **-20° +120°**  
 Series SS: **-20° +140°**

| WORKING PRESSURE AND BREAKING PRESSURE (BAR) AT DIFFERENT TEMPERATURES |               |                |               |                |               |                |
|------------------------------------------------------------------------|---------------|----------------|---------------|----------------|---------------|----------------|
| Example                                                                | T-20°C        |                | T+23°C        |                | T+60°C        |                |
| Tube 6x4 colored                                                       | Working P bar | Breaking P bar | Working P bar | Breaking P bar | Working P bar | Breaking P bar |
| <b>TPU</b>                                                             | 18,7          | 74,8           | 10,0          | 40,0           | 5,2           | 20,8           |
| <b>PA11</b>                                                            | 37,4          | 149,6          | 20,0          | 80,0           | 10,4          | 41,6           |
| <b>PA12</b>                                                            | 48,6          | 168,3          | 26,0          | 90,0           | 10,4          | 36,0           |
| <b>PE</b>                                                              | 18,7          | 74,8           | 10,0          | 40,0           | 5,0           | 20,0           |

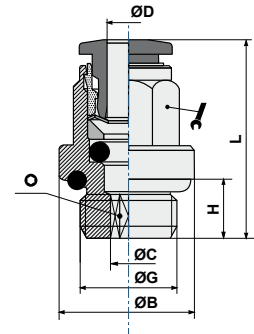


ART. **01**

**Straight male adaptor (parallel)**



| COD.     | ØD | G   | ØC   | ØB   | H   | L     |    |     |     |      |
|----------|----|-----|------|------|-----|-------|----|-----|-----|------|
| 01CH04M5 | 4  | M5  | 2    | 8    | 4   | 20,85 | 10 | 2   | 100 | 5,8  |
| 0104M5   | 4  | M5  | 2,5  | 8    | 4   | 20,85 | *  | 2,5 | 100 | 4,1  |
| 0104M6   | 4  | M6  | 2,5  | 9    | 5   | 21,85 | *  | 2,5 | 50  | 4,3  |
| 010418   | 4  | 1/8 | 2,5  | 13,5 | 5,5 | 20    | 9  | 2,5 | 50  | 7,4  |
| 010414   | 4  | 1/4 | 2,5  | 17   | 6,5 | 20    | 9  | 2,5 | 50  | 11   |
| 0106M5   | 6  | M5  | 2,5  | 8    | 4   | 24,4  | *  | 2,5 | 50  | 6    |
| 0106M6   | 6  | M6  | 2,5  | 11   | 5   | 25,4  | *  | 2,5 | 50  | 6,7  |
| 010618   | 6  | 1/8 | 4,1  | 13,5 | 5,5 | 25,4  | 11 | 4   | 50  | 10,1 |
| 010614   | 6  | 1/4 | 4,1  | 17   | 6,5 | 23,4  | 11 | 4   | 50  | 13,6 |
| 010818   | 8  | 1/8 | 5,1  | 13   | 5,5 | 26,8  | 13 | 5   | 50  | 11,3 |
| 010814   | 8  | 1/4 | 6,1  | 17   | 6,5 | 24    | 13 | 6   | 50  | 12,5 |
| 010838   | 8  | 3/8 | 6,1  | 20   | 7,5 | 24    | 13 | 6   | 50  | 18,9 |
| 010812   | 8  | 1/2 | 6,1  | 24   | 9   | 25    | 13 | 6   | 25  | 18   |
| 011018   | 10 | 1/8 | 5,1  | 13,5 | 5,5 | 30,3  | 16 | 4   | 25  | 19,6 |
| 011014   | 10 | 1/4 | 7,2  | 16   | 6,5 | 29,4  | 16 | 7   | 50  | 18,1 |
| 011038   | 10 | 3/8 | 8,2  | 21   | 7,5 | 29,4  | 16 | 8   | 50  | 24,9 |
| 011012   | 10 | 1/2 | 8,2  | 24   | 9   | 29,4  | 16 | 8   | 25  | 34,8 |
| 011214   | 12 | 1/4 | 7,2  | 16   | 6,5 | 32,2  | 19 | 7   | 25  | 26,3 |
| 011238   | 12 | 3/8 | 10,2 | 22   | 7,5 | 32,2  | 19 | 10  | 25  | 31,2 |
| 011212   | 12 | 1/2 | 10,2 | 24   | 9   | 31,7  | 19 | 10  | 25  | 37,3 |
| 011438   | 14 | 3/8 | 10,2 | 21   | 7,5 | 35    | 21 | 10  | 25  | 35,9 |
| 011412   | 14 | 1/2 | 12,2 | 25   | 9   | 34,3  | 21 | 12  | 25  | 39,3 |
| 011638   | 16 | 3/8 | 11,5 | 20   | 7,5 | 35    | 24 | 8   | 25  | 38,5 |
| 011612   | 16 | 1/2 | 15,5 | 24   | 10  | 37    | 24 | 10  | 25  | 45,5 |



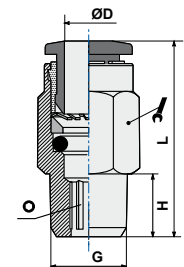
\* codes without key flats having the following Ø:  
0104M5 and 0104M6 = Ø9  
0106M5 and 0106M6 = Ø11

ART. **01C**

**Straight male adaptor (tapered)**



| COD.    | ØD | G   | H    | L    |    |    |    |      |
|---------|----|-----|------|------|----|----|----|------|
| 01C0418 | 4  | 1/8 | 7,5  | 19,6 | 10 | 3  | 50 | 6,3  |
| 01C0414 | 4  | 1/4 | 9,5  | 18   | 14 | 3  | 50 | 12,1 |
| 01C0438 | 4  | 3/8 | 10,5 | 19,1 | 17 | 3  | 25 | 21,7 |
| 01C0618 | 6  | 1/8 | 7,5  | 20,3 | 12 | 4  | 50 | 7,1  |
| 01C0614 | 6  | 1/4 | 9,5  | 22,1 | 14 | 4  | 50 | 12,9 |
| 01C0638 | 6  | 3/8 | 10,5 | 20,1 | 17 | 4  | 25 | 21,1 |
| 01C0612 | 6  | 1/2 | 13,5 | 24,1 | 24 | 4  | 25 | 39,3 |
| 01C0818 | 8  | 1/8 | 7,5  | 25,7 | 14 | 5  | 50 | 11,2 |
| 01C0814 | 8  | 1/4 | 9,5  | 24,7 | 14 | 6  | 50 | 12,3 |
| 01C0838 | 8  | 3/8 | 10,5 | 21,7 | 17 | 6  | 50 | 18,3 |
| 01C0812 | 8  | 1/2 | 12,5 | 25,7 | 21 | 6  | 25 | 36,5 |
| 01C1018 | 10 | 1/8 | 7,5  | 29,3 | 17 | 4  | 25 | 18,1 |
| 01C1014 | 10 | 1/4 | 9,5  | 30,8 | 17 | 6  | 50 | 19,7 |
| 01C1038 | 10 | 3/8 | 10,5 | 28,3 | 17 | 8  | 50 | 20,5 |
| 01C1012 | 10 | 1/2 | 13,5 | 26,1 | 21 | 8  | 25 | 34,9 |
| 01C1218 | 12 | 1/8 | 7,5  | 30,8 | 21 | 4  | 25 | 28,4 |
| 01C1214 | 12 | 1/4 | 9,5  | 32,8 | 19 | 6  | 25 | 21,3 |
| 01C1238 | 12 | 3/8 | 10,5 | 29,8 | 21 | 8  | 25 | 29,7 |
| 01C1212 | 12 | 1/2 | 13,5 | 32,3 | 21 | 8  | 25 | 39   |
| 01C1438 | 14 | 3/8 | 10,5 | 34,2 | 21 | 8  | 25 | 34,9 |
| 01C1412 | 14 | 1/2 | 13,5 | 32,7 | 21 | 10 | 25 | 37,5 |

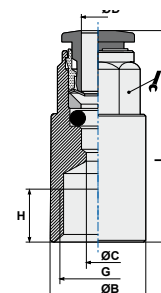


ART. **02**

**Straight female adaptor**



| COD.   | ØD | G   | ØC | ØB | H    | L    |    |    |      |
|--------|----|-----|----|----|------|------|----|----|------|
| 020418 | 4  | 1/8 | 3  | 12 | 7,5  | 26,5 | 9  | 50 | 10,7 |
| 020414 | 4  | 1/4 | 3  | 17 | 11,5 | 29,5 | 9  | 50 | 19,1 |
| 020618 | 6  | 1/8 | 5  | 12 | 7,5  | 29,1 | 11 | 50 | 11   |
| 020614 | 6  | 1/4 | 5  | 17 | 11,5 | 31,9 | 11 | 50 | 16,8 |
| 020818 | 8  | 1/8 | 7  | 12 | 7,5  | 28   | 13 | 50 | 10,9 |
| 020814 | 8  | 1/4 | 7  | 17 | 11,5 | 33,3 | 13 | 50 | 19,2 |

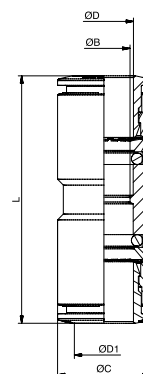


ART. **03**

**Straight connector**



| COD.   | ØD | ØD1 | ØB | ØC | L    |    |      |
|--------|----|-----|----|----|------|----|------|
| 030400 | 4  | 4   | 3  | 11 | 32,7 | 50 | 5,7  |
| 030600 | 6  | 6   | 5  | 13 | 37,3 | 50 | 9,5  |
| 030800 | 8  | 8   | 7  | 13 | 38,6 | 50 | 12,5 |
| 031000 | 10 | 10  | 9  | 18 | 43,3 | 50 | 17,8 |
| 031200 | 12 | 12  | 11 | 21 | 46,4 | 25 | 32,5 |
| 031400 | 14 | 14  | 13 | 21 | 50   | 25 | 36   |

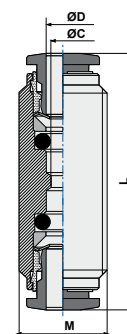


ART. **03F**

**Threaded connector**



| COD.    | ØD | ØC | M    | L    |    |      |
|---------|----|----|------|------|----|------|
| 03F0400 | 4  | 3  | 11x1 | 32,7 | 50 | 10,7 |
| 03F0600 | 6  | 5  | 14x1 | 37,3 | 50 | 18,7 |
| 03F0800 | 8  | 7  | 16x1 | 38,6 | 50 | 24,1 |
| 03F1000 | 10 | 9  | 18x1 | 43,3 | 50 | 33,4 |
| 03F1200 | 12 | 11 | 22x1 | 46,4 | 25 | 53,3 |
| 03F1400 | 14 | 13 | 24x1 | 50   | 25 | 61,2 |

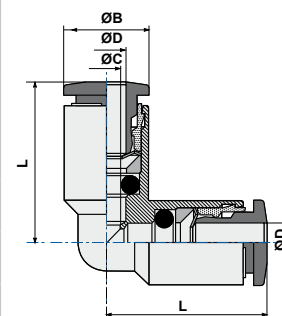


ART. **04**

**Elbow connector**



| COD.   | ØD | ØC | ØB | L     |    |      |
|--------|----|----|----|-------|----|------|
| 040400 | 4  | 3  | 9  | 18,55 | 50 | 7,6  |
| 040600 | 6  | 5  | 11 | 20,4  | 50 | 8,6  |
| 040800 | 8  | 7  | 13 | 23,3  | 50 | 13,7 |
| 041000 | 10 | 9  | 16 | 27,1  | 50 | 20,1 |
| 041200 | 12 | 11 | 19 | 29,3  | 25 | 47,2 |
| 041400 | 14 | 13 | 21 | 31,7  | 25 | 45   |

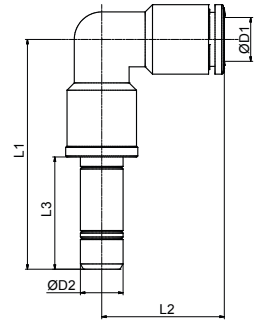


ART. **04L0**

**Plug-in elbow connector**



| COD.   | ØD1 | ØD2 | L1   | L2    | L3   |    |      |
|--------|-----|-----|------|-------|------|----|------|
| 0404L0 | 4   | 4   | 34,5 | 18.55 | 16,7 | 50 | 6,6  |
| 0406L0 | 6   | 6   | 39   | 20.4  | 19,5 | 50 | 7,5  |
| 0408L0 | 8   | 8   | 43   | 23.8  | 21   | 50 | 22,4 |
| 0410L0 | 10  | 10  | 51   | 27.1  | 24   | 25 | 27   |
| 0412L0 | 12  | 12  | 54   | 29.3  | 25   | 25 | 64   |

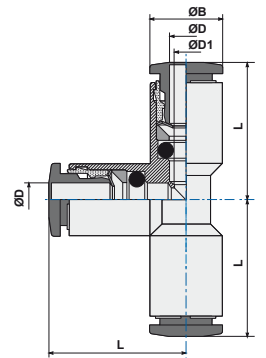


ART. **05**

**T connector**



| COD.   | ØD | ØD1 | ØB | L     |    |      |
|--------|----|-----|----|-------|----|------|
| 050400 | 4  | 3   | 9  | 18.55 | 50 | 10,8 |
| 050600 | 6  | 5   | 11 | 21.2  | 50 | 12,2 |
| 050800 | 8  | 7   | 13 | 23.3  | 50 | 16,4 |
| 051000 | 10 | 8   | 16 | 26.9  | 25 | 30,6 |
| 051200 | 12 | 10  | 19 | 29.3  | 25 | 56   |
| 051400 | 14 | 12  | 21 | 31.7  | 10 | 58,3 |

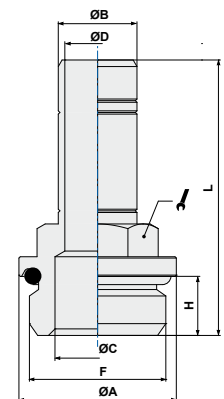


ART. **06**

**Adaptor parallel (short)**

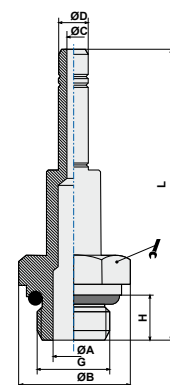


| COD.   | ØB | F   | ØA | ØC  | ØD  | H   | L    |    |    |      |
|--------|----|-----|----|-----|-----|-----|------|----|----|------|
| 0604M5 | 4  | M5  | 8  | 2   | 2   | 4   | 24,7 | 8  | 50 | 3,6  |
| 0604M6 | 4  | M6  | 9  | 2   | 2   | 5   | 25,7 | 8  | 50 | 3,7  |
| 060418 | 4  | 1/8 | 13 | 5,5 | 2   | 5,5 | 27,7 | 13 | 50 | 9,1  |
| 060414 | 4  | 1/4 | 16 | 7,5 | 2   | 6,5 | 29,2 | 13 | 50 | 11,2 |
| 0606M5 | 6  | M5  | 8  | 2,6 | 2,6 | 4   | 27,5 | 8  | 50 | 4,6  |
| 060618 | 6  | 1/8 | 13 | 5,5 | 4   | 5,5 | 30,5 | 13 | 50 | 9,6  |
| 060614 | 6  | 1/4 | 16 | 7,5 | 4   | 6,5 | 33,5 | 13 | 50 | 12   |
| 060818 | 8  | 1/8 | 13 | 6   | 6   | 5,5 | 32,0 | 13 | 50 | 10,5 |
| 060814 | 8  | 1/4 | 16 | 7,5 | 6   | 6,5 | 33,5 | 13 | 50 | 31,1 |
| 060838 | 8  | 3/8 | 20 | 9   | 6   | 7,5 | 35,5 | 13 | 50 | 18,9 |
| 061018 | 10 | 1/8 | 13 | 6   | 6   | 5,5 | 35,0 | 13 | 50 | 16,7 |
| 061014 | 10 | 1/4 | 16 | 8   | 8   | 6,5 | 38   | 13 | 50 | 14,1 |
| 061038 | 10 | 3/8 | 20 | 8   | 8   | 7,5 | 39,5 | 13 | 50 | 20,8 |
| 061214 | 12 | 1/4 | 16 | 8   | 8   | 6,5 | 37,5 | 13 | 25 | 21,5 |
| 061238 | 12 | 3/8 | 20 | 11  | 10  | 7,5 | 40,5 | 13 | 25 | 21,1 |
| 061212 | 12 | 1/2 | 24 | 13  | 10  | 9   | 42,0 | 16 | 25 | 31,3 |
| 061438 | 14 | 3/8 | 20 | 12  | 12  | 7,5 | 43,0 | 16 | 25 | 22,3 |
| 061412 | 14 | 1/2 | 24 | 13  | 12  | 9   | 44,5 | 16 | 25 | 32,2 |

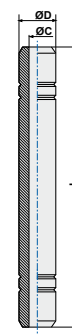


**ART. 60**
**Adaptor parallel (long)**

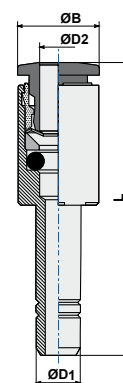

| COD.   | ØD | G   | ØC | ØB | H   | L    | ØA  |    |    |      |
|--------|----|-----|----|----|-----|------|-----|----|----|------|
| 600418 | 4  | 1/8 | 2  | 13 | 5,5 | 39,2 | 6   | 13 | 50 | 10,2 |
| 600618 | 6  | 1/8 | 4  | 13 | 5,5 | 44,5 | 5,5 | 13 | 50 | 13,5 |
| 600614 | 6  | 1/4 | 4  | 16 | 6,5 | 48   | 7,5 | 13 | 50 | 18,1 |
| 600818 | 8  | 1/8 | 6  | 13 | 5,5 | 48   | 6   | 13 | 50 | 19,1 |
| 600814 | 8  | 1/4 | 6  | 16 | 6,5 | 49,5 | 7,5 | 13 | 50 | 19,8 |
| 600838 | 8  | 3/8 | 6  | 20 | 7,5 | 51,5 | 9   | 13 | 50 | 27   |
| 601038 | 10 | 3/8 | 8  | 20 | 7,5 | 56   | 9   | 13 | 25 | 33,2 |


**ART. 07**
**Connector**

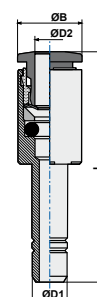

| COD.   | ØD | ØB | L    |     |      |
|--------|----|----|------|-----|------|
| 070400 | 4  | 2  | 33,4 | 100 | 2,6  |
| 070600 | 6  | 4  | 39   | 50  | 5    |
| 070800 | 8  | 6  | 42   | 50  | 7,5  |
| 071000 | 10 | 8  | 48   | 50  | 10,8 |
| 071200 | 12 | 10 | 48   | 50  | 14,3 |


**ART. 08**
**Plug-in reducer**


| COD.   | ØD1 | ØD2 | ØB | L     |    |      |
|--------|-----|-----|----|-------|----|------|
| 080604 | 6   | 4   | 9  | 32,85 | 50 | 5,5  |
| 080804 | 8   | 4   | 9  | 34    | 50 | 9,7  |
| 080806 | 8   | 6   | 11 | 36,9  | 50 | 8,6  |
| 081006 | 10  | 6   | 11 | 39,9  | 50 | 15,5 |
| 081008 | 10  | 8   | 13 | 39,3  | 50 | 11,8 |
| 081208 | 12  | 8   | 13 | 39,8  | 25 | 18,8 |
| 081210 | 12  | 10  | 16 | 41,9  | 25 | 16,6 |
| 081406 | 14  | 6   | 15 | 36,9  | 25 | 36   |


**ART. 08E**
**Plug-in increaser**


| COD.    | ØD1 | ØD2 | ØB | L    |    |      |
|---------|-----|-----|----|------|----|------|
| 08E0406 | 4   | 6   | 11 | 40,4 | 50 | 7,5  |
| 08E0608 | 6   | 8   | 13 | 44   | 50 | 11,3 |

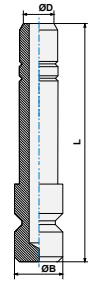


ART. **09**

**Plug**



| COD.   | ØD | ØB | L    |    |      |
|--------|----|----|------|----|------|
| 090400 | 4  | 5  | 26   | 50 | 3,1  |
| 090600 | 6  | 7  | 29   | 50 | 4,7  |
| 090800 | 8  | 9  | 31,5 | 50 | 7,7  |
| 091000 | 10 | 11 | 35   | 50 | 10,8 |
| 091200 | 12 | 13 | 37   | 25 | 14,5 |

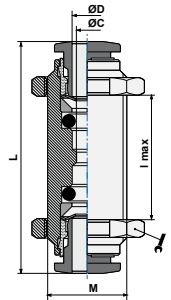


ART. **10**

**Bulkhead connector**



| COD.   | ØD | ØC | M    | lmax | L    |    |    |      |
|--------|----|----|------|------|------|----|----|------|
| 100400 | 4  | 3  | 11x1 | 14   | 32,7 | 14 | 50 | 15,8 |
| 100600 | 6  | 5  | 14x1 | 14,5 | 37,3 | 17 | 50 | 25,9 |
| 100800 | 8  | 7  | 16x1 | 15   | 38,6 | 18 | 50 | 30   |
| 101000 | 10 | 9  | 18x1 | 16,5 | 43,3 | 21 | 25 | 44,4 |
| 101200 | 12 | 11 | 22x1 | 18,6 | 46,4 | 26 | 25 | 70,6 |
| 101400 | 14 | 13 | 24x1 | 21,7 | 50   | 27 | 25 | 79,9 |

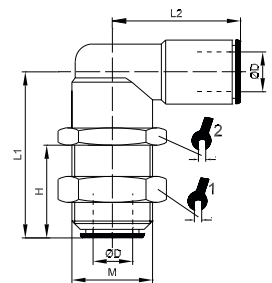


ART. **10L**

**Elbow bulkhead**



| COD.    | ØD | M     | H    | L1   | L2 |    |    |    |      |
|---------|----|-------|------|------|----|----|----|----|------|
| 10L0400 | 4  | M11x1 | 12,5 | 25,5 | 20 | 13 | 13 | 50 | 22,4 |
| 10L0600 | 6  | M14x1 | 15   | 28   | 21 | 17 | 17 | 50 | 31,1 |
| 10L0800 | 8  | M16x1 | 17   | 30,5 | 24 | 18 | 18 | 50 | 35   |
| 10L1000 | 10 | M18x1 | 19   | 35   | 27 | 21 | 21 | 25 | 52,7 |

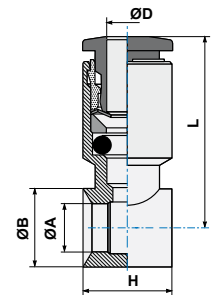


ART. **13**

**Single banjo body**



| COD.    | ØD | G*  | ØA    | ØB | H  | L     |    |      |
|---------|----|-----|-------|----|----|-------|----|------|
| 1304M5  | 4  | M5  | 5     | 9  | 9  | 19,85 | 50 | 5,9  |
| 130418  | 4  | 1/8 | 9,9   | 14 | 15 | 21,65 | 50 | 13,4 |
| 130618  | 6  | 1/8 | 9,9   | 14 | 15 | 24,9  | 50 | 14,2 |
| 130614  | 6  | 1/4 | 13,3  | 18 | 17 | 26,1  | 50 | 20,4 |
| 130818  | 8  | 1/8 | 9,9   | 14 | 15 | 25,15 | 50 | 14,6 |
| 130814  | 8  | 1/4 | 13,3  | 18 | 17 | 26,8  | 50 | 20,8 |
| 130838  | 8  | 3/8 | 16,75 | 21 | 20 | 28,3  | 50 | 27,6 |
| 131014  | 10 | 1/4 | 13,3  | 18 | 17 | 28,9  | 50 | 25,7 |
| 131038  | 10 | 3/8 | 16,75 | 21 | 20 | 30,35 | 25 | 30   |
| 131214  | 12 | 1/4 | 13,3  | 18 | 17 | 30,7  | 25 | 28,1 |
| 131238  | 12 | 3/8 | 16,75 | 21 | 20 | 31,6  | 25 | 32,6 |
| 131212  | 12 | 1/2 | 21    | 26 | 24 | 35,15 | 25 | 47,3 |
| 13R04M5 | 4  | M5  | 6     | 9  | 10 | 19,85 | 50 | 5,4  |
| 13R06M5 | 6  | M5  | 6     | 9  | 10 | 22,1  | 50 | 7,9  |



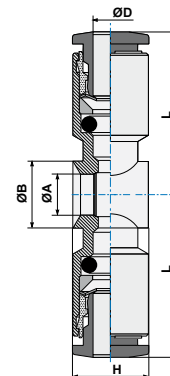
G\* = stem thread. See page 88 of stem section

ART. **14**

**Double banjo body**



| COD.   | ØD | G*  | ØA    | ØB | H  | L    |    |      |
|--------|----|-----|-------|----|----|------|----|------|
| 140618 | 6  | 1/8 | 9,9   | 14 | 15 | 24,3 | 50 | 17,2 |
| 140818 | 8  | 1/8 | 9,9   | 14 | 15 | 24,8 | 50 | 18   |
| 140814 | 8  | 1/4 | 13,3  | 18 | 17 | 26,5 | 50 | 27,6 |
| 140838 | 8  | 3/8 | 16,75 | 21 | 20 | 28   | 50 | 32,2 |
| 141014 | 10 | 1/4 | 13,3  | 18 | 17 | 28,4 | 50 | 31,4 |
| 141038 | 10 | 3/8 | 16,75 | 21 | 20 | 29,9 | 25 | 36,9 |



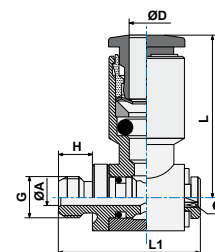
G\* = Stem thread. See page 88 of stem section

ART. **15**

**Complete single banjo (rotating under pressure)**



| COD.   | ØD | G   | ØA  | H   | L1   | L     | ⊙   |    |      |
|--------|----|-----|-----|-----|------|-------|-----|----|------|
| 1504M5 | 4  | M5  | 2   | 4   | 16,8 | 19,85 | 2,5 | 50 | 8,4  |
| 1504M6 | 4  | M6  | 2   | 5   | 17,8 | 19,85 | 2,5 | 50 | 8,5  |
| 150418 | 4  | 1/8 | 5,5 | 5,5 | 24,5 | 21,65 | 3   | 50 | 22,9 |
| 1506M5 | 6  | M5  | 2   | 4   | 16,8 | 22,4  | 2,5 | 50 | 9,3  |
| 150618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,9  | 3   | 50 | 23,3 |
| 150614 | 6  | 1/4 | 7,8 | 6,5 | 27,8 | 26,1  | 4   | 50 | 38,8 |
| 150818 | 8  | 1/8 | 5,5 | 5,5 | 24,5 | 25,15 | 3   | 50 | 24,2 |
| 150814 | 8  | 1/4 | 7,8 | 6,5 | 27,8 | 26,8  | 4   | 50 | 39,4 |
| 150838 | 8  | 3/8 | 10  | 7,5 | 32,5 | 28,3  | 5   | 25 | 60   |
| 151014 | 10 | 1/4 | 7,8 | 6,5 | 27,8 | 28,9  | 4   | 25 | 44,6 |
| 151038 | 10 | 3/8 | 10  | 7,5 | 32,5 | 30,35 | 5   | 25 | 63,5 |
| 151214 | 12 | 1/4 | 7,8 | 6,5 | 27,8 | 30,85 | 4   | 25 | 46,9 |
| 151238 | 12 | 3/8 | 10  | 7,5 | 32,5 | 31,6  | 5   | 25 | 65,2 |
| 151212 | 12 | 1/2 | 12  | 9   | 38,8 | 35,15 | 8   | 10 | 110  |

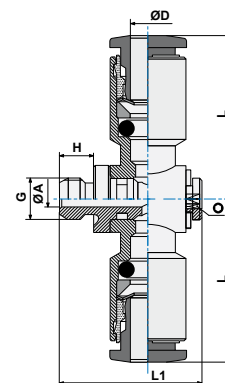


ART. **16**

**Complete double banjo (rotating under pressure)**



| COD.   | ØD | G   | ØA  | H   | L1   | L    | ⊙ |    |      |
|--------|----|-----|-----|-----|------|------|---|----|------|
| 160618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,3 | 3 | 50 | 27,4 |
| 160818 | 8  | 1/8 | 5,5 | 5,5 | 25   | 24,8 | 3 | 50 | 27,4 |
| 160814 | 8  | 1/4 | 7,8 | 6,5 | 28   | 26,5 | 4 | 25 | 32,1 |
| 160838 | 8  | 3/8 | 10  | 7,5 | 32,5 | 28   | 5 | 25 | 39,8 |
| 161014 | 10 | 1/4 | 7,8 | 6,5 | 28   | 28,4 | 4 | 25 | 49,9 |
| 161038 | 10 | 3/8 | 10  | 7,5 | 32,5 | 29,9 | 5 | 25 | 55,1 |

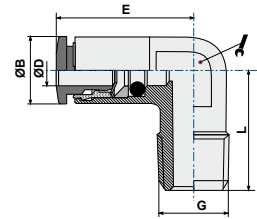


ART. **19**

**Elbow tapered male adapter**



| COD.   | ØD | G   | ØB | E     | L    |    |     |      |
|--------|----|-----|----|-------|------|----|-----|------|
| 190418 | 4  | 1/8 | 9  | 19,35 | 16,5 | 10 | 100 | 11,6 |
| 190618 | 6  | 1/8 | 11 | 24,4  | 16,5 | 10 | 100 | 13,3 |
| 190614 | 6  | 1/4 | 11 | 25,4  | 22   | 11 | 100 | 19,3 |
| 190818 | 8  | 1/8 | 13 | 25,3  | 18,5 | 11 | 100 | 16,5 |
| 190814 | 8  | 1/4 | 13 | 25,3  | 22,0 | 11 | 100 | 19,1 |
| 191014 | 10 | 1/4 | 16 | 26,9  | 23,5 | 13 | 50  | 25,4 |

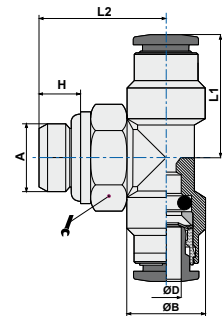


ART. **20**

**Swivel male stud T (parallel)**



| COD.   | ØD | A   | H   | ØB   | L1   | L2   |    |    |      |
|--------|----|-----|-----|------|------|------|----|----|------|
| 2004M5 | 4  | M5  | 3,5 | 11   | 18,1 | 15,7 | 10 | 50 | 16,6 |
| 200418 | 4  | 1/8 | 5,5 | 11,3 | 18,1 | 18,5 | 13 | 50 | 21,5 |
| 200414 | 4  | 1/4 | 6,5 | 11,3 | 18,1 | 20,5 | 16 | 50 | 28,7 |
| 2006M5 | 6  | M5  | 3,5 | 12   | 20,1 | 15,7 | 10 | 50 | 16   |
| 200618 | 6  | 1/8 | 5,5 | 11   | 20,1 | 18,5 | 13 | 50 | 20,1 |
| 200614 | 6  | 1/4 | 6,5 | 11   | 20,1 | 20,5 | 16 | 50 | 27,4 |
| 200818 | 8  | 1/8 | 5,5 | 13   | 23,6 | 20,5 | 13 | 50 | 25,8 |
| 200814 | 8  | 1/4 | 6,5 | 13   | 23,6 | 21,3 | 16 | 50 | 29,8 |
| 200838 | 8  | 3/8 | 7,5 | 13   | 23,6 | 22,8 | 16 | 25 | 36   |
| 201014 | 10 | 1/4 | 6,5 | 16   | 28,6 | 25,7 | 16 | 25 | 50,3 |
| 201038 | 10 | 3/8 | 7,5 | 16   | 28,6 | 25,7 | 17 | 25 | 50,3 |

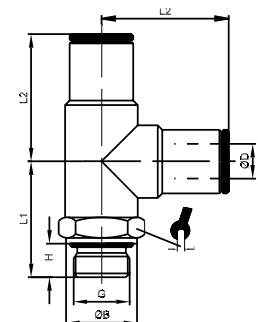


ART. **21**

**Swivel male branch T (parallel)**

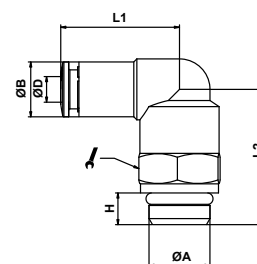


| COD.   | ØD | G    | H   | ØB | L1   | L2   |    |    |      |
|--------|----|------|-----|----|------|------|----|----|------|
| 2104M5 | 4  | M5   | 4   | 8  | 16,5 | 19   | 9  | 50 | 14,7 |
| 210418 | 4  | G1/8 | 5,5 | 13 | 18,5 | 17,5 | 13 | 50 | 26,8 |
| 210414 | 4  | G1/4 | 6,5 | 16 | 22,5 | 19   | 13 | 50 | 29,7 |
| 210618 | 6  | G1/8 | 5,5 | 13 | 20   | 21   | 13 | 50 | 29   |
| 210614 | 6  | G1/4 | 6,5 | 16 | 24   | 21   | 13 | 50 | 31,8 |
| 210818 | 8  | G1/8 | 5,5 | 13 | 20   | 23   | 13 | 50 | 29,6 |
| 210814 | 8  | G1/4 | 6,5 | 16 | 24   | 23   | 13 | 50 | 32,6 |
| 210838 | 8  | G3/8 | 4,5 | 20 | 25,5 | 23   | 17 | 25 | 37,2 |
| 211014 | 10 | G1/4 | 6,5 | 16 | 24   | 27   | 16 | 25 | 51,5 |

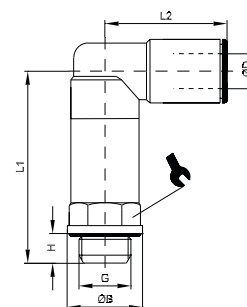


**ART. 22**
**Swivel elbow male adaptor (parallel)**

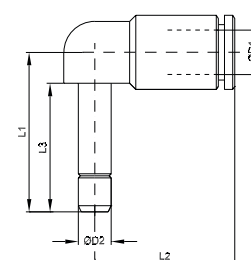

| COD.    | ØD | A       | H   | ØB  | L1    | L2   |    |     |      |
|---------|----|---------|-----|-----|-------|------|----|-----|------|
| 2204M5  | 4  | M5      | 4   | 9,1 | 18,55 | 14,8 | 9  | 100 | 8,9  |
| 2204M12 | 4  | M12x1,5 | 6,5 | 9,1 | 20,35 | 22,4 | 13 | 100 | 10   |
| 220418  | 4  | 1/8     | 5,5 | 9,1 | 20,35 | 19,9 | 13 | 100 | 18,1 |
| 220414  | 4  | 1/4     | 6,5 | 9,1 | 20,35 | 22,7 | 13 | 100 | 21,6 |
| 220438  | 4  | 3/8     | 7,5 | 9,1 | 20,35 | 24,9 | 13 | 100 | 21,9 |
| 2206M5  | 6  | M5      | 4   | 11  | 22,4  | 15   | 9  | 100 | 10,6 |
| 2206M12 | 6  | M12x1,5 | 6,5 | 11  | 23,9  | 22,2 | 13 | 100 | 12,7 |
| 220618  | 6  | 1/8     | 5,5 | 11  | 23,9  | 19,7 | 13 | 100 | 19,5 |
| 220614  | 6  | 1/4     | 6,5 | 11  | 23,9  | 22,7 | 13 | 100 | 22,6 |
| 220638  | 6  | 3/8     | 7,5 | 11  | 23,9  | 24,7 | 13 | 100 | 28,3 |
| 2208M12 | 8  | M12x1,5 | 6,5 | 13  | 24,3  | 22,2 | 13 | 100 | 21,3 |
| 220818  | 8  | 1/8     | 5,5 | 13  | 23,95 | 19,7 | 13 | 100 | 18,8 |
| 220814  | 8  | 1/4     | 6,5 | 13  | 24,3  | 22,7 | 13 | 50  | 21,9 |
| 220838  | 8  | 3/8     | 7,5 | 13  | 24,3  | 24,7 | 13 | 50  | 28,4 |
| 221014  | 10 | 1/4     | 6,5 | 16  | 28,4  | 22,6 | 16 | 50  | 32,8 |
| 221038  | 10 | 3/8     | 7,5 | 16  | 28,4  | 26,6 | 16 | 50  | 38,8 |
| 221012  | 10 | 1/2     | 9   | 16  | 28,4  | 28,1 | 16 | 50  | 43,5 |
| 221214  | 12 | 1/4     | 6,5 | 19  | 31,4  | 29,2 | 16 | 25  | 60,3 |
| 221238  | 12 | 3/8     | 7,5 | 19  | 31,4  | 27,2 | 20 | 25  | 58,7 |
| 221212  | 12 | 1/2     | 9   | 19  | 31,4  | 31,7 | 20 | 25  | 68,8 |
| 221438  | 14 | 3/8     | 7,5 | 21  | 32,0  | 28,5 | 20 | 25  | 57,5 |
| 221412  | 14 | 1/2     | 9   | 21  | 32,0  | 33,5 | 20 | 25  | 71   |


**ART. 22L**
**Swivel longer elbow male adaptor (parallel)**


| COD.    | ØD | G    | ØB | H   | L1   | L2    |    |    |      |
|---------|----|------|----|-----|------|-------|----|----|------|
| 22L0418 | 4  | G1/8 | 13 | 5,5 | 33,2 | 20,35 | 13 | 25 | 29,1 |
| 22L0414 | 4  | G1/4 | 16 | 6,5 | 38,2 | 20,35 | 13 | 25 | 32,5 |
| 22L0618 | 6  | G1/8 | 13 | 5,5 | 33   | 23,9  | 13 | 25 | 30,5 |
| 22L0614 | 6  | G1/4 | 16 | 6,5 | 38   | 23,9  | 13 | 25 | 34,2 |
| 22L0818 | 8  | G1/8 | 13 | 5,5 | 33   | 24    | 13 | 25 | 30,2 |
| 22L0814 | 8  | G1/4 | 16 | 6,5 | 38   | 24,3  | 13 | 25 | 33,7 |
| 22L1014 | 10 | G1/4 | 16 | 6,5 | 40,5 | 28,4  | 16 | 25 | 52,5 |


**ART. 22L0**
**Plug-in elbow connector**


| COD.   | ØD1 | ØD2 | L1   | L2    | L3   |    |      |
|--------|-----|-----|------|-------|------|----|------|
| 2204L0 | 4   | 4   | 25,2 | 20,35 | 16,2 | 50 | 8,9  |
| 2206L0 | 6   | 6   | 28,5 | 23,9  | 19,5 | 50 | 19,1 |
| 2208L0 | 8   | 8   | 30   | 24,3  | 21   | 50 | 21,6 |
| 2210L0 | 10  | 10  | 35   | 28,4  | 24   | 25 | 26,5 |
| 2212L0 | 12  | 12  | 38,5 | 31,4  | 25   | 25 | 31,7 |



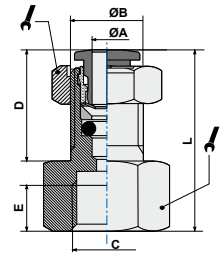


ART. **25**

**Female bulkhead**



| COD.   | ØA | C   | ØB    | D    | E    | L    |    |    |      |
|--------|----|-----|-------|------|------|------|----|----|------|
| 250418 | 4  | 1/8 | M12x1 | 13,5 | 8,5  | 23,5 | 14 | 25 | 15,8 |
| 250618 | 6  | 1/8 | M14x1 | 16,8 | 8,5  | 29,3 | 17 | 25 | 23,7 |
| 250614 | 6  | 1/4 | M14x1 | 16,8 | 11,0 | 24,6 | 17 | 25 | 26,8 |
| 250818 | 8  | 1/8 | M16x1 | 20,7 | 8,5  | 32,2 | 19 | 25 | 29,7 |
| 250814 | 8  | 1/4 | M16x1 | 20,7 | 11,0 | 26,8 | 19 | 25 | 36,5 |

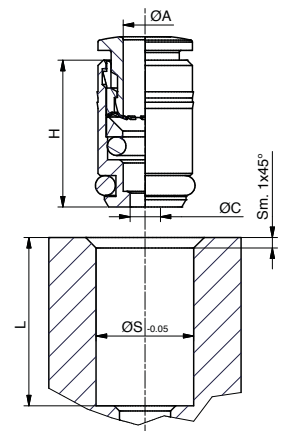


ART. **27**

**Cartridge**

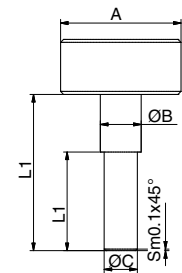


| COD.   | ØD | ØC  | H  | ØS   | L    |     |     |
|--------|----|-----|----|------|------|-----|-----|
| 270400 | 4  | 2,9 | 14 | 9,1  | 13,5 | 100 | 1,3 |
| 270600 | 6  | 4,5 | 16 | 11,1 | 15,5 | 50  | 4,8 |
| 270800 | 8  | 6,5 | 17 | 13,6 | 16,5 | 50  | 3,2 |



**Assembly instructions**

| Ø Cartridge | ØA | ØB | ØC       | L1   | L2   |
|-------------|----|----|----------|------|------|
| Ø 4         | 20 | 4  | 3.5 -0.1 | 20   | 12,5 |
| Ø 6         | 20 | 6  | 5.1 -0.1 | 20   | 12,5 |
| Ø 8         | 20 | 8  | 7.1 -0.1 | 20.5 | 12,5 |



| COD.   | ØD | ØC  | ØB   | H  |
|--------|----|-----|------|----|
| 270400 | 4  | 2.9 | 7.8  | 14 |
| 270600 | 6  | 5   | 10   | 16 |
| 270800 | 8  | 7   | 11.8 | 17 |

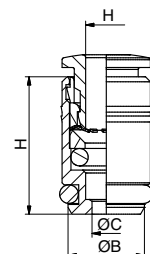
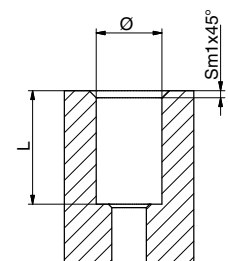


Table for housing  
on plastic material

| Ø           | L         | Ø Cartridge |
|-------------|-----------|-------------|
| 9 -0.05     | 13.5 -0.1 | Ø 4         |
| 10.97 -0.05 | 15.5 -0.1 | Ø 6         |
| 12.95 -0.05 | 16.5 -0.1 | Ø 8         |

Table for housing  
on aluminium

| Ø Cartridge | Ø          | L         |
|-------------|------------|-----------|
| Ø 4         | 9.1 -0.05  | 13.5 -0.1 |
| Ø 6         | 11.1 -0.05 | 15.5 -0.1 |
| Ø 8         | 13.6 -0.05 | 16.5 -0.1 |

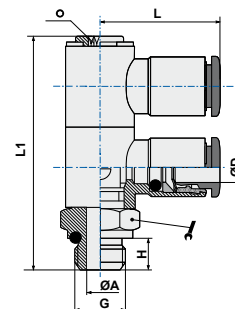


ART. **33**

**Swivel double banjo stem**



| COD.   | ØD | G   | ØA  | H   | L1   | L     |    |   |    |       |
|--------|----|-----|-----|-----|------|-------|----|---|----|-------|
| 330418 | 4  | 1/8 | 5,5 | 5,5 | 43,3 | 21,65 | 14 | 3 | 25 | 44,41 |
| 330618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,9  | 14 | 3 | 25 | 45,5  |
| 330614 | 6  | 1/4 | 7,8 | 6,5 | 50   | 26,1  | 18 | 4 | 25 | 75,6  |
| 330818 | 8  | 1/8 | 5,5 | 5,5 | 43,3 | 25,1  | 14 | 3 | 25 | 48,5  |
| 330814 | 8  | 1/4 | 7,8 | 6,5 | 50   | 26,8  | 18 | 4 | 25 | 76,4  |
| 331014 | 10 | 1/4 | 7,8 | 6,5 | 50   | 28,9  | 18 | 4 | 25 | 87    |

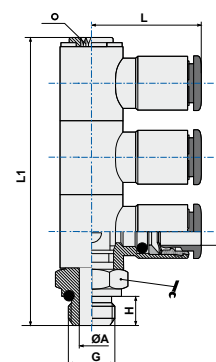


ART. **34**

**Swivel triple banjo stem**



| COD.   | ØD | G   | ØA  | H   | L1   | L     |    |   |    |       |
|--------|----|-----|-----|-----|------|-------|----|---|----|-------|
| 340418 | 4  | 1/8 | 5,5 | 5,5 | 58,4 | 21,65 | 14 | 3 | 10 | 54,1  |
| 340618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,9  | 14 | 3 | 10 | 63,9  |
| 340614 | 6  | 1/4 | 7,8 | 6,5 | 67,1 | 26,1  | 18 | 4 | 10 | 65,6  |
| 340818 | 8  | 1/8 | 5,5 | 5,5 | 58,4 | 25,1  | 14 | 3 | 10 | 66,2  |
| 340814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,8  | 18 | 4 | 10 | 108   |
| 341014 | 10 | 1/4 | 7,8 | 6,5 | 67,1 | 28,9  | 18 | 4 | 10 | 151,1 |

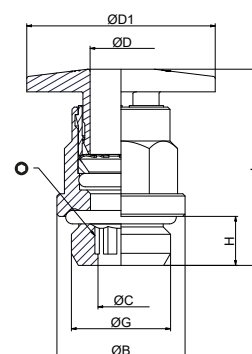


ART. **01AM**

**Straight male adaptor (parallel) larger pusher**



| COD.     | ØD | ØD1 | G   | ØC  | ØB | H   | L    |    |   |    |
|----------|----|-----|-----|-----|----|-----|------|----|---|----|
| 010814AM | 8  | 25  | 1/4 | 6,2 | 17 | 6,5 | 25,6 | 13 | 6 | 13 |

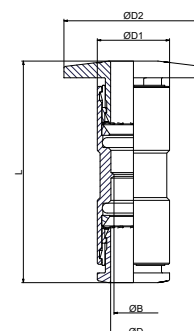


ART. **03AM**

**Straight connector larger pusher**



| COD.     | ØD | ØD1 | ØD2 | ØB | L    |      |
|----------|----|-----|-----|----|------|------|
| 030800AM | 8  | 15  | 25  | 7  | 39,9 | 12,7 |

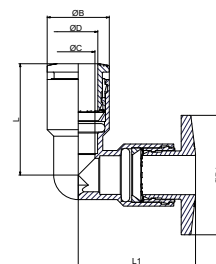


ART. **04AM**

**Elbow connector larger pusher**



| COD.     | ØD | ØD1 | ØC | ØB | L1   | L    | g  |
|----------|----|-----|----|----|------|------|----|
| 040800AM | 8  | 25  | 7  | 13 | 24,6 | 23,3 | 15 |

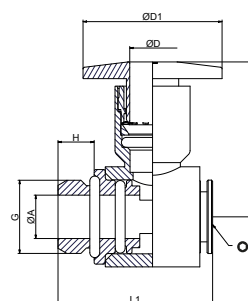


ART. **15AM**

**Complete single banjo (rotating under pressure) larger pusher**



| COD.     | ØD | ØD1 | G   | ØA  | H   | L    | L1   | Ø | g  |
|----------|----|-----|-----|-----|-----|------|------|---|----|
| 150814AM | 8  | 25  | 1/4 | 7,8 | 6,5 | 27,9 | 27,8 | 4 | 40 |

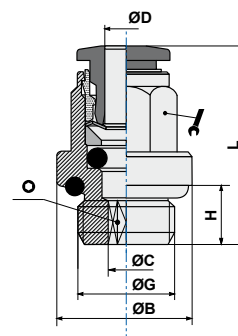


ART. **B01**

**Straight male adaptor (parallel)**



| COD.    | ØD | G   | ØC   | ØB   | H   | L     |    |     |     |      |
|---------|----|-----|------|------|-----|-------|----|-----|-----|------|
| B0104M5 | 4  | M5  | 2    | 8    | 4   | 20,85 | *  | 2   | 100 | 5,8  |
| B0104M6 | 4  | M6  | 2,5  | 9    | 5   | 21,85 | *  | 2,5 | 50  | 4,3  |
| B010418 | 4  | 1/8 | 2,5  | 13,5 | 5,5 | 20    | 9  | 2,5 | 50  | 7,4  |
| B010414 | 4  | 1/4 | 2,5  | 17   | 6,5 | 20    | 9  | 2,5 | 50  | 11   |
| B0106M5 | 6  | M5  | 2,5  | 8    | 4   | 24,4  | *  | 2,5 | 50  | 6    |
| B0106M6 | 6  | M6  | 2,5  | 11   | 5   | 25,4  | *  | 2,5 | 50  | 6,7  |
| B010618 | 6  | 1/8 | 4,1  | 13,5 | 5,5 | 25,4  | 11 | 4   | 50  | 10,1 |
| B010614 | 6  | 1/4 | 4,1  | 17   | 6,5 | 23,4  | 11 | 4   | 50  | 13,6 |
| B010818 | 8  | 1/8 | 5,1  | 13   | 5,5 | 26,8  | 13 | 5   | 50  | 11,3 |
| B010814 | 8  | 1/4 | 6,1  | 17   | 6,5 | 24    | 13 | 6   | 50  | 12,5 |
| B010838 | 8  | 3/8 | 6,1  | 20   | 7,5 | 24    | 13 | 6   | 50  | 18,9 |
| B010812 | 8  | 1/2 | 6,1  | 24   | 9   | 25    | 13 | 6   | 25  | 18   |
| B011018 | 10 | 1/8 | 5,1  | 13,5 | 5,5 | 30,3  | 16 | 4   | 25  | 19,6 |
| B011014 | 10 | 1/4 | 7,2  | 16   | 6,5 | 29,4  | 16 | 7   | 50  | 18,1 |
| B011038 | 10 | 3/8 | 8,2  | 21   | 7,5 | 29,4  | 16 | 8   | 50  | 24,9 |
| B011012 | 10 | 1/2 | 8,2  | 24   | 9   | 29,4  | 16 | 8   | 25  | 34,8 |
| B011214 | 12 | 1/4 | 7,2  | 16   | 6,5 | 32,2  | 19 | 7   | 25  | 26,3 |
| B011238 | 12 | 3/8 | 10,2 | 22   | 7,5 | 32,2  | 19 | 10  | 25  | 31,2 |
| B011212 | 12 | 1/2 | 10,2 | 24   | 9   | 31,7  | 19 | 10  | 25  | 37,3 |
| B011438 | 14 | 3/8 | 10,2 | 21   | 7,5 | 35    | 21 | 10  | 25  | 35,9 |
| B011412 | 14 | 1/2 | 12,2 | 25   | 9   | 34,3  | 21 | 12  | 25  | 39,3 |



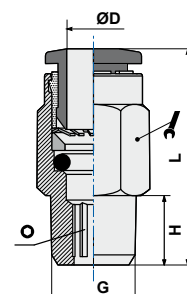
\*codes without key flats having the following Ø:  
B0104M5 and B0104M6 = Ø9  
B0106M5 and B0106M6 = Ø11

ART. **B01C**

**Straight male adaptor (tapered)**



| COD.     | ØD | G   | H    | L    |    |    |    |      |
|----------|----|-----|------|------|----|----|----|------|
| B01C0418 | 4  | 1/8 | 7,5  | 19,6 | 10 | 3  | 50 | 6,3  |
| B01C0414 | 4  | 1/4 | 9,5  | 18   | 14 | 3  | 50 | 12,1 |
| B01C0438 | 4  | 3/8 | 10,5 | 19,1 | 17 | 3  | 25 | 21,7 |
| B01C0618 | 6  | 1/8 | 7,5  | 20,3 | 12 | 4  | 50 | 7,1  |
| B01C0614 | 6  | 1/4 | 9,5  | 22,1 | 14 | 4  | 50 | 12,9 |
| B01C0638 | 6  | 3/8 | 10,5 | 20,1 | 17 | 4  | 25 | 21,1 |
| B01C0612 | 6  | 1/2 | 13,5 | 24,1 | 24 | 4  | 25 | 39,3 |
| B01C0818 | 8  | 1/8 | 7,5  | 25,7 | 14 | 5  | 50 | 11,2 |
| B01C0814 | 8  | 1/4 | 9,5  | 24,7 | 14 | 6  | 50 | 12,3 |
| B01C0838 | 8  | 3/8 | 10,5 | 21,7 | 17 | 6  | 50 | 18,3 |
| B01C0812 | 8  | 1/2 | 12,5 | 25,7 | 21 | 6  | 25 | 36,5 |
| B01C1018 | 10 | 1/8 | 7,5  | 29,3 | 17 | 4  | 25 | 18,1 |
| B01C1014 | 10 | 1/4 | 9,5  | 30,8 | 17 | 6  | 50 | 19,7 |
| B01C1038 | 10 | 3/8 | 10,5 | 28,3 | 17 | 8  | 50 | 20,5 |
| B01C1012 | 10 | 1/2 | 13,5 | 26,1 | 21 | 8  | 25 | 34,9 |
| B01C1218 | 12 | 1/8 | 7,5  | 30,8 | 21 | 4  | 25 | 28,4 |
| B01C1214 | 12 | 1/4 | 9,5  | 32,8 | 19 | 6  | 25 | 21,3 |
| B01C1238 | 12 | 3/8 | 10,5 | 29,8 | 21 | 8  | 25 | 29,7 |
| B01C1212 | 12 | 1/2 | 13,5 | 32,3 | 21 | 8  | 25 | 39   |
| B01C1438 | 14 | 3/8 | 10,5 | 34,2 | 21 | 8  | 25 | 34,9 |
| B01C1412 | 14 | 1/2 | 13,5 | 32,7 | 21 | 10 | 25 | 37,5 |

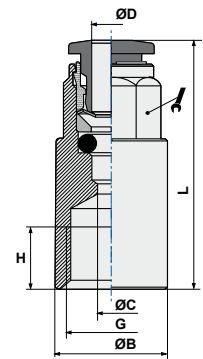


ART. **B02**

**Straight female adaptor**



| COD.    | ØD | G   | ØC | ØB | H    | L    |    |    |      |
|---------|----|-----|----|----|------|------|----|----|------|
| B020418 | 4  | 1/8 | 3  | 12 | 7,5  | 26,5 | 9  | 50 | 10,7 |
| B020414 | 4  | 1/4 | 3  | 17 | 11,5 | 29,5 | 9  | 50 | 19,1 |
| B020618 | 6  | 1/8 | 5  | 12 | 7,5  | 29,1 | 11 | 50 | 11   |
| B020614 | 6  | 1/4 | 5  | 17 | 11,5 | 31,9 | 11 | 50 | 16,8 |
| B020818 | 8  | 1/8 | 7  | 12 | 7,5  | 28   | 13 | 50 | 10,9 |
| B020814 | 8  | 1/4 | 7  | 17 | 11,5 | 33,3 | 13 | 50 | 19,2 |

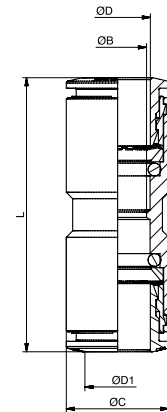


ART. **B03**

**Straight connector**



| COD.    | ØD | ØD1 | ØB | ØC | L    |    |      |
|---------|----|-----|----|----|------|----|------|
| B030400 | 4  | 4   | 3  | 11 | 32,7 | 50 | 5,7  |
| B030600 | 6  | 6   | 5  | 13 | 37,3 | 50 | 9,5  |
| B030800 | 8  | 8   | 7  | 13 | 38,6 | 50 | 12,5 |
| B031000 | 10 | 10  | 9  | 18 | 43,3 | 50 | 17,8 |
| B031200 | 12 | 12  | 11 | 21 | 46,4 | 25 | 32,5 |
| B031400 | 14 | 14  | 13 | 21 | 50   | 25 | 36   |

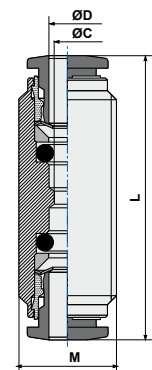


ART. **B03F**

**Threaded connector**



| COD.     | ØD | ØC | M    | L    |    |      |
|----------|----|----|------|------|----|------|
| B03F0400 | 4  | 3  | 11x1 | 32   | 50 | 10,7 |
| B03F0600 | 6  | 5  | 14x1 | 36,1 | 50 | 18,7 |
| B03F0800 | 8  | 7  | 16x1 | 38   | 50 | 24,1 |
| B03F1000 | 10 | 9  | 18x1 | 42,3 | 50 | 33,4 |
| B03F1200 | 12 | 11 | 22x1 | 45,8 | 25 | 53,3 |
| B03F1400 | 14 | 13 | 24x1 | 47,5 | 25 | 61,2 |

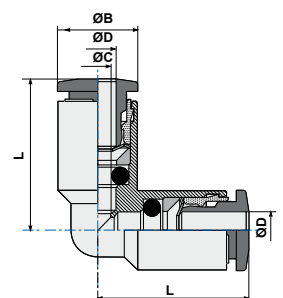


ART. **B04**

**Elbow connector**



| COD.    | ØD | ØC | ØB | L     |    |      |
|---------|----|----|----|-------|----|------|
| B040400 | 4  | 3  | 9  | 18,55 | 50 | 7,6  |
| B040600 | 6  | 5  | 11 | 20,4  | 50 | 8,6  |
| B040800 | 8  | 7  | 13 | 23,3  | 50 | 13,7 |
| B041000 | 10 | 9  | 16 | 27,1  | 50 | 20,1 |
| B041200 | 12 | 11 | 19 | 29,3  | 25 | 47,2 |
| B041400 | 14 | 13 | 21 | 31,7  | 25 | 45   |

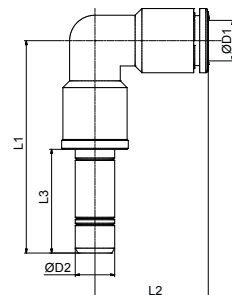


ART. **B04L0**

**Plug-in elbow connector**



| COD.    | ØD1 | ØD2 | L1   | L2    | L3   |    |      |
|---------|-----|-----|------|-------|------|----|------|
| B0404L0 | 4   | 4   | 34,5 | 18.55 | 16,7 | 50 | 6,6  |
| B0406L0 | 6   | 6   | 39   | 20.4  | 19,5 | 50 | 7,5  |
| B0408L0 | 8   | 8   | 43   | 23.8  | 21   | 50 | 22,4 |
| B0410L0 | 10  | 10  | 51   | 27.1  | 24   | 25 | 27   |
| B0412L0 | 12  | 12  | 54   | 29.3  | 25   | 25 | 64   |

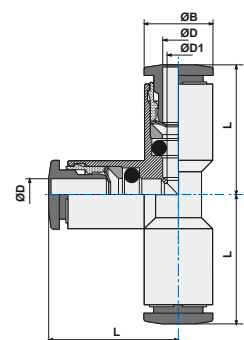


ART. **B05**

**T connector**



| COD.    | ØD | ØC | ØB | L     |    |      |
|---------|----|----|----|-------|----|------|
| B050400 | 4  | 3  | 9  | 18.55 | 50 | 10,8 |
| B050600 | 6  | 5  | 11 | 21.2  | 50 | 12,2 |
| B050800 | 8  | 7  | 13 | 23.3  | 50 | 16,4 |
| B051000 | 10 | 8  | 16 | 26.9  | 25 | 30,6 |
| B051200 | 12 | 10 | 19 | 29.3  | 25 | 56   |
| B051400 | 14 | 12 | 21 | 31.7  | 10 | 58,3 |

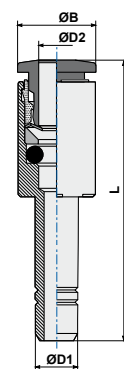


ART. **B08**

**Plug-in reducer**



| COD.    | ØD1 | ØD2 | ØB | L     |    |      |
|---------|-----|-----|----|-------|----|------|
| B080604 | 6   | 4   | 9  | 32,85 | 50 | 5,5  |
| B080804 | 8   | 4   | 9  | 34    | 50 | 9,7  |
| B080806 | 8   | 6   | 11 | 36,9  | 50 | 8,6  |
| B081006 | 10  | 6   | 11 | 39,9  | 50 | 15,5 |
| B081008 | 10  | 8   | 13 | 39,3  | 50 | 11,8 |
| B081208 | 12  | 8   | 13 | 39,8  | 25 | 18,8 |
| B081210 | 12  | 10  | 16 | 41,9  | 25 | 16,6 |
| B081406 | 14  | 6   | 15 | 36,9  | 25 | 36   |

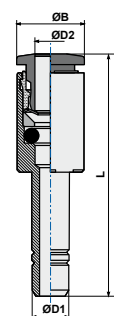


ART. **B08/E**

**Plug-in increaser**



| COD.     | ØD1 | ØD2 | ØB | L    |    |      |
|----------|-----|-----|----|------|----|------|
| B08E0406 | 4   | 6   | 11 | 40,4 | 50 | 7,5  |
| B08E0608 | 6   | 8   | 13 | 44   | 50 | 11,3 |

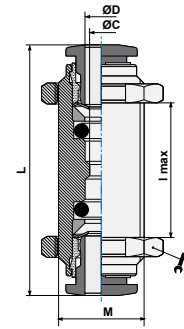


ART. **B10**

**Bulkhead connector**



| COD.    | ØD | ØC | M    | lmax | L    |    |    |      |
|---------|----|----|------|------|------|----|----|------|
| B100400 | 4  | 3  | 11x1 | 14   | 32,7 | 14 | 50 | 15,8 |
| B100600 | 6  | 5  | 14x1 | 14,5 | 37,3 | 17 | 50 | 25,9 |
| B100800 | 8  | 7  | 16x1 | 15   | 38,6 | 18 | 50 | 30   |
| B101000 | 10 | 9  | 18x1 | 16,5 | 43,3 | 21 | 25 | 44,4 |
| B101200 | 12 | 11 | 22x1 | 18,6 | 46,4 | 26 | 25 | 70,6 |
| B101400 | 14 | 13 | 24x1 | 21,7 | 50   | 27 | 25 | 79,9 |

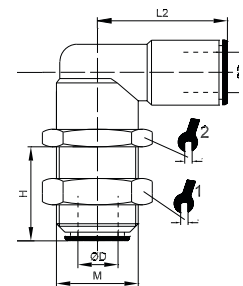


ART. **B10L**

**Elbow bulkhead**



| COD.     | ØD | M     | H    | L1   | L2 |    |    |    |      |
|----------|----|-------|------|------|----|----|----|----|------|
| B10L0400 | 4  | M11x1 | 12,5 | 25,5 | 20 | 13 | 13 | 50 | 22,4 |
| B10L0600 | 6  | M14x1 | 15   | 28   | 21 | 17 | 17 | 50 | 31,1 |
| B10L0800 | 8  | M16x1 | 17   | 30,5 | 24 | 18 | 18 | 50 | 35   |
| B10L1000 | 10 | M18x1 | 19   | 35   | 27 | 21 | 21 | 25 | 52,7 |

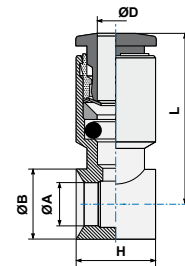


ART. **B13**

**Single banjo body**



| COD.     | ØD | G*  | ØA    | ØB | H  | L     |    |      |
|----------|----|-----|-------|----|----|-------|----|------|
| B1304M5  | 4  | M5  | 5     | 9  | 9  | 19,85 | 50 | 5,9  |
| B130418  | 4  | 1/8 | 9,9   | 14 | 15 | 21,65 | 50 | 13,4 |
| B130618  | 6  | 1/8 | 9,9   | 14 | 15 | 24,9  | 50 | 14,2 |
| B130614  | 6  | 1/4 | 13,3  | 18 | 17 | 26,1  | 50 | 20,4 |
| B130818  | 8  | 1/8 | 9,9   | 14 | 15 | 25,15 | 50 | 14,6 |
| B130814  | 8  | 1/4 | 13,3  | 18 | 17 | 26,8  | 50 | 20,8 |
| B130838  | 8  | 3/8 | 16,75 | 21 | 20 | 28,3  | 50 | 27,6 |
| B131014  | 10 | 1/4 | 13,3  | 18 | 17 | 28,9  | 50 | 25,7 |
| B131038  | 10 | 3/8 | 16,75 | 21 | 20 | 30,35 | 25 | 30   |
| B131214  | 12 | 1/4 | 13,3  | 18 | 17 | 30,7  | 25 | 28,1 |
| B131238  | 12 | 3/8 | 16,75 | 21 | 20 | 31,6  | 25 | 32,6 |
| B131212  | 12 | 1/2 | 21    | 26 | 24 | 35,15 | 25 | 47,3 |
| B13R04M5 | 4  | M5  | 6     | 9  | 10 | 19,85 | 50 | 5,4  |
| B13R06M5 | 6  | M5  | 6     | 9  | 10 | 22,1  | 50 | 7,9  |



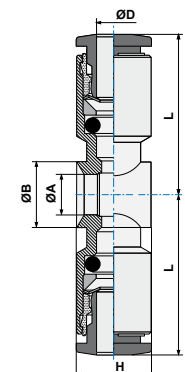
G\* = Stem thread. See page 88 of stem section.

ART. **B14**

**Double banjo body**



| COD.    | ØD | G*  | ØA    | ØB | H  | L    |    |      |
|---------|----|-----|-------|----|----|------|----|------|
| B140618 | 6  | 1/8 | 9,9   | 14 | 15 | 24,3 | 50 | 17,2 |
| B140818 | 8  | 1/8 | 9,9   | 14 | 15 | 24,8 | 50 | 18   |
| B140814 | 8  | 1/4 | 13,3  | 18 | 17 | 26,5 | 50 | 27,6 |
| B140838 | 8  | 3/8 | 16,75 | 21 | 20 | 28   | 50 | 32,2 |
| B141014 | 10 | 1/4 | 13,3  | 18 | 17 | 28,4 | 50 | 31,4 |
| B141038 | 10 | 3/8 | 16,75 | 21 | 20 | 29,9 | 25 | 36,9 |



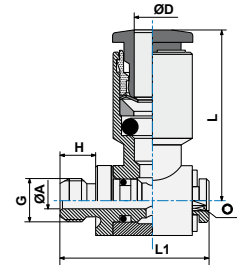
G\* = Stem thread. See page 88 of stem section.

ART. **B15**

**Complete single banjo (rotating under pressure)**



| COD.    | ØD | G   | ØA  | H   | L1   | L     | ⊙   | 📦  | 📊    |
|---------|----|-----|-----|-----|------|-------|-----|----|------|
| B1504M5 | 4  | M5  | 2   | 4   | 16,8 | 19,85 | 2,5 | 50 | 8,4  |
| B1504M6 | 4  | M6  | 2   | 5   | 17,8 | 19,85 | 2,5 | 50 | 8,5  |
| B150418 | 4  | 1/8 | 5,5 | 5,5 | 24,5 | 21,65 | 3   | 50 | 22,9 |
| B1506M5 | 6  | M5  | 2   | 4   | 16,8 | 22,4  | 2,5 | 50 | 9,3  |
| B150618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,9  | 3   | 50 | 23,3 |
| B150614 | 6  | 1/4 | 7,8 | 6,5 | 27,8 | 26,1  | 4   | 50 | 38,8 |
| B150818 | 8  | 1/8 | 5,5 | 5,5 | 24,5 | 25,15 | 3   | 50 | 24,2 |
| B150814 | 8  | 1/4 | 7,8 | 6,5 | 27,8 | 26,8  | 4   | 50 | 39,4 |
| B150838 | 8  | 3/8 | 10  | 7,5 | 32,5 | 28,3  | 5   | 25 | 60   |
| B151014 | 10 | 1/4 | 7,8 | 6,5 | 27,8 | 28,9  | 4   | 25 | 44,6 |
| B151038 | 10 | 3/8 | 10  | 7,5 | 32,5 | 30,35 | 5   | 25 | 63,5 |
| B151214 | 12 | 1/4 | 7,8 | 6,5 | 27,8 | 30,85 | 4   | 25 | 46,9 |
| B151238 | 12 | 3/8 | 10  | 7,5 | 32,5 | 31,6  | 5   | 25 | 65,2 |
| B151212 | 12 | 1/2 | 12  | 9   | 38,8 | 35,15 | 8   | 10 | 110  |

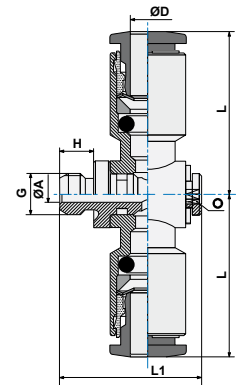


ART. **B16**

**Complete double banjo (rotating under pressure)**



| COD.    | ØD | G   | ØA  | H   | L1   | L    | ⊙ | 📦  | 📊    |
|---------|----|-----|-----|-----|------|------|---|----|------|
| B160618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,3 | 3 | 50 | 27,4 |
| B160818 | 8  | 1/8 | 5,5 | 5,5 | 25   | 24,8 | 3 | 50 | 27,4 |
| B160814 | 8  | 1/4 | 7,8 | 6,5 | 28   | 26,5 | 4 | 25 | 32,1 |
| B160838 | 8  | 3/8 | 10  | 7,5 | 32,5 | 28   | 5 | 25 | 39,8 |
| B161014 | 10 | 1/4 | 7,8 | 6,5 | 28   | 28,4 | 4 | 25 | 49,9 |
| B161038 | 10 | 3/8 | 10  | 7,5 | 32,5 | 29,9 | 5 | 25 | 55,1 |

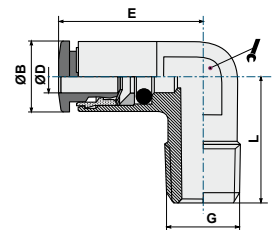


ART. **B19**

**Elbow male adaptor**



| COD.    | ØD | G   | ØB | E     | L    | 🔧  | 📦   | 📊    |
|---------|----|-----|----|-------|------|----|-----|------|
| B190418 | 4  | 1/8 | 9  | 19,35 | 16,5 | 10 | 100 | 11,6 |
| B190618 | 6  | 1/8 | 11 | 24,4  | 16,5 | 10 | 100 | 13,3 |
| B190614 | 6  | 1/4 | 11 | 25,4  | 22   | 11 | 100 | 19,3 |
| B190818 | 8  | 1/8 | 13 | 25,3  | 18,5 | 11 | 100 | 16,5 |
| B190814 | 8  | 1/4 | 13 | 25,3  | 22,0 | 11 | 100 | 19,1 |
| B191014 | 10 | 1/4 | 16 | 26,9  | 23,5 | 13 | 50  | 25,4 |

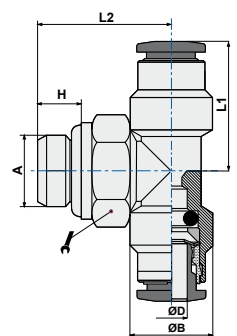


ART. **B20**

**Swivel male stud T parallel**



| COD.    | ØD | A   | H   | ØB    | L1   | L2   | 🔧  | 📦  | 📊    |
|---------|----|-----|-----|-------|------|------|----|----|------|
| B2004M5 | 4  | M5  | 4   | 9     | 17,3 | 20,0 | 8  | 50 | 16,6 |
| B200418 | 4  | 1/8 | 5,5 | 11,40 | 17,3 | 18,5 | 13 | 50 | 21,5 |
| B200414 | 4  | 1/4 | 6,5 | 9     | 19,0 | 22,5 | 16 | 50 | 28,7 |
| B2006M5 | 6  | M5  | 4   | 11,20 | 20,5 | 21   | 8  | 50 | 16   |
| B200618 | 6  | 1/8 | 5,5 | 11    | 19,5 | 18,5 | 13 | 50 | 20,1 |
| B200614 | 6  | 1/4 | 6,5 | 11    | 22,1 | 22,5 | 16 | 50 | 27,4 |
| B200818 | 8  | 1/8 | 5,5 | 13    | 23,0 | 20,5 | 13 | 50 | 25,8 |
| B200814 | 8  | 1/4 | 6,5 | 13    | 23,0 | 22,5 | 16 | 50 | 29,8 |
| B200838 | 8  | 3/8 | 7,5 | 13    | 24,5 | 25,5 | 18 | 25 | 36   |
| B201014 | 10 | 1/4 | 6,5 | 16    | 26,4 | 24,5 | 16 | 25 | 50,3 |
| B201038 | 10 | 3/8 | 7,5 | 16    | 26,4 | 25,5 | 18 | 25 | 50,3 |



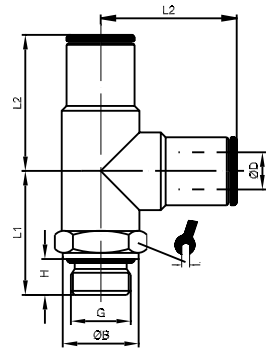


ART. **B21**

**Swivel male branch T (parallel)**



| COD.    | ØD | G    | H   | ØB | L1   | L2   |    |    |      |
|---------|----|------|-----|----|------|------|----|----|------|
| B2104M5 | 4  | M5   | 4   | 8  | 16,5 | 19   | 9  | 50 | 14,7 |
| B210418 | 4  | G1/8 | 5,5 | 13 | 18,5 | 17,5 | 13 | 50 | 26,8 |
| B210414 | 4  | G1/4 | 6,5 | 16 | 22,5 | 19   | 13 | 50 | 29,7 |
| B210618 | 6  | G1/8 | 5,5 | 13 | 20   | 21   | 13 | 50 | 29   |
| B210614 | 6  | G1/4 | 6,5 | 16 | 24   | 21   | 13 | 50 | 31,8 |
| B210818 | 8  | G1/8 | 5,5 | 13 | 20   | 23   | 13 | 50 | 29,6 |
| B210814 | 8  | G1/4 | 6,5 | 16 | 24   | 23   | 13 | 50 | 32,6 |
| B210838 | 8  | G3/8 | 4,5 | 20 | 25,5 | 23   | 17 | 25 | 37,2 |
| B211014 | 10 | G1/4 | 6,5 | 16 | 24   | 27   | 16 | 25 | 51,5 |

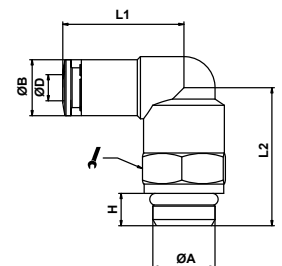


ART. **B22**

**Swivel elbow male adaptor (parallel)**



| COD.     | ØD | A       | H   | ØB  | L1    | L2   |    |     |      |
|----------|----|---------|-----|-----|-------|------|----|-----|------|
| B2204M5  | 4  | M5      | 4   | 9,1 | 18,55 | 14,8 | 9  | 100 | 8,9  |
| B2204M12 | 4  | M12x1,5 | 6,5 | 9,1 | 20,35 | 22,4 | 13 | 100 | 10   |
| B220418  | 4  | 1/8     | 5,5 | 9,1 | 20,35 | 19,9 | 13 | 100 | 18,1 |
| B220414  | 4  | 1/4     | 6,5 | 9,1 | 20,35 | 22,7 | 13 | 100 | 21,6 |
| B220438  | 4  | 3/8     | 7,5 | 9,1 | 20,35 | 24,9 | 13 | 100 | 21,9 |
| B2206M5  | 6  | M5      | 4   | 11  | 22,4  | 15   | 9  | 100 | 10,6 |
| B2206M12 | 6  | M12x1,5 | 6,5 | 11  | 23,9  | 22,2 | 13 | 100 | 12,7 |
| B220618  | 6  | 1/8     | 5,5 | 11  | 23,9  | 19,7 | 13 | 100 | 19,5 |
| B220614  | 6  | 1/4     | 6,5 | 11  | 23,9  | 22,7 | 13 | 100 | 22,6 |
| B220638  | 6  | 3/8     | 7,5 | 11  | 23,9  | 24,7 | 13 | 100 | 28,3 |
| B2208M12 | 8  | M12x1,5 | 6,5 | 13  | 24,3  | 22,2 | 13 | 100 | 21,3 |
| B220818  | 8  | 1/8     | 5,5 | 13  | 23,95 | 19,7 | 13 | 100 | 18,8 |
| B220814  | 8  | 1/4     | 6,5 | 13  | 24,3  | 22,7 | 13 | 50  | 21,9 |
| B220838  | 8  | 3/8     | 7,5 | 13  | 24,3  | 24,7 | 13 | 50  | 28,4 |
| B221014  | 10 | 1/4     | 6,5 | 16  | 28,4  | 22,6 | 16 | 50  | 32,8 |
| B221038  | 10 | 3/8     | 7,5 | 16  | 28,4  | 26,6 | 16 | 50  | 38,8 |
| B221012  | 10 | 1/2     | 9   | 16  | 28,4  | 28,1 | 16 | 50  | 43,5 |
| B221214  | 12 | 1/4     | 6,5 | 19  | 31,4  | 29,2 | 16 | 25  | 60,3 |
| B221238  | 12 | 3/8     | 7,5 | 19  | 31,4  | 27,2 | 20 | 25  | 58,7 |
| B221212  | 12 | 1/2     | 9   | 19  | 31,4  | 31,7 | 20 | 25  | 68,8 |
| B221438  | 14 | 3/8     | 7,5 | 21  | 32,0  | 28,5 | 20 | 25  | 57,5 |
| B221412  | 14 | 1/2     | 9   | 21  | 32,0  | 33,5 | 20 | 25  | 71   |

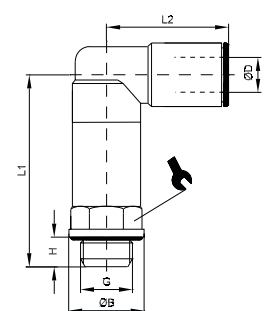


ART. **B22L**

**Swivel longer elbow male adaptor (parallel)**



| COD.     | ØD | G    | ØB | H   | L1   | L2    |    |    |      |
|----------|----|------|----|-----|------|-------|----|----|------|
| B22L0418 | 4  | G1/8 | 13 | 5,5 | 33,2 | 20,35 | 13 | 25 | 29,1 |
| B22L0414 | 4  | G1/4 | 16 | 6,5 | 38,2 | 20,35 | 13 | 25 | 32,5 |
| B22L0618 | 6  | G1/8 | 13 | 5,5 | 33   | 23,9  | 13 | 25 | 30,5 |
| B22L0614 | 6  | G1/4 | 16 | 6,5 | 38   | 23,9  | 13 | 25 | 34,2 |
| B22L0818 | 8  | G1/8 | 13 | 5,5 | 33   | 24    | 13 | 25 | 30,2 |
| B22L0814 | 8  | G1/4 | 16 | 6,5 | 38   | 24,3  | 13 | 25 | 33,7 |
| B22L1014 | 10 | G1/4 | 16 | 6,5 | 40,5 | 28,4  | 16 | 25 | 52,5 |

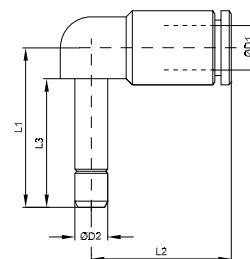


ART. **B22L0**

**Plug-in elbow connector**



| COD.    | ØD1 | ØD2 | L1   | L2    | L3   |    |      |
|---------|-----|-----|------|-------|------|----|------|
| B2204L0 | 4   | 4   | 25,2 | 20,35 | 16,2 | 50 | 8,9  |
| B2206L0 | 6   | 6   | 28,5 | 23,9  | 19,5 | 50 | 19,1 |
| B2208L0 | 8   | 8   | 30   | 24,3  | 21   | 50 | 21,6 |
| B2210L0 | 10  | 10  | 35   | 28,4  | 24   | 25 | 26,5 |
| B2212L0 | 12  | 12  | 38,5 | 31,4  | 25   | 25 | 31,7 |

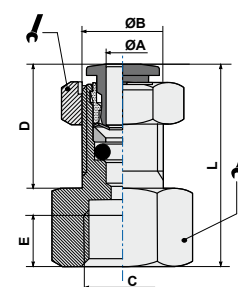


ART. **B25**

**Female bulkhead**



| COD.    | ØA | C   | ØB    | D    | E    | L    |    |    |      |
|---------|----|-----|-------|------|------|------|----|----|------|
| B250418 | 4  | 1/8 | M12x1 | 13,5 | 8,5  | 23,5 | 14 | 25 | 15,8 |
| B250618 | 6  | 1/8 | M14x1 | 16,8 | 8,5  | 29,3 | 17 | 25 | 23,7 |
| B250614 | 6  | 1/4 | M14x1 | 16,8 | 11,0 | 24,6 | 17 | 25 | 26,8 |
| B250818 | 8  | 1/8 | M16x1 | 20,7 | 8,5  | 32,2 | 19 | 25 | 29,7 |
| B250814 | 8  | 1/4 | M16x1 | 20,7 | 11,0 | 26,8 | 19 | 25 | 36,5 |

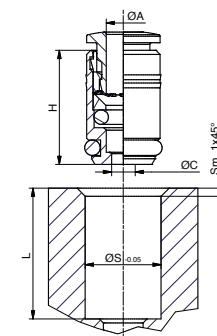


ART. **B27**

**Cartridge**

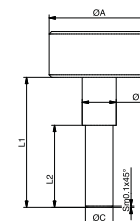


| COD.    | ØD | ØC  | H  | ØS   | L    |     |     |
|---------|----|-----|----|------|------|-----|-----|
| B270400 | 4  | 2,9 | 14 | 9,1  | 13,5 | 100 | 1,3 |
| B270600 | 6  | 4,5 | 16 | 11,1 | 15,5 | 50  | 4,8 |
| B270800 | 8  | 6,5 | 17 | 13,6 | 16,5 | 50  | 3,2 |



**Assembly instructions**

| Ø Cartuccia | ØA | ØB | ØC       | L1   | L2   |
|-------------|----|----|----------|------|------|
| Ø 4         | 20 | 4  | 3.5 -0.1 | 20   | 12,5 |
| Ø 6         | 20 | 6  | 5.1 -0.1 | 20   | 12,5 |
| Ø 8         | 20 | 8  | 7.1 -0.1 | 20.5 | 12,5 |



| COD.   | ØD | ØC  | ØB   | H  |
|--------|----|-----|------|----|
| 270400 | 4  | 2.9 | 7.8  | 14 |
| 270600 | 6  | 5   | 10   | 16 |
| 270800 | 8  | 7   | 11.8 | 17 |

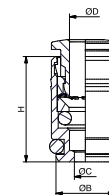
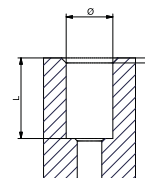


Table for housing on plastic material

Table for housing on aluminium

| Ø           | L         | Ø Cartuccia | Ø Cartuccia | Ø          | L         |
|-------------|-----------|-------------|-------------|------------|-----------|
| 9 -0.05     | 13.5 -0.1 | Ø 4         | Ø 4         | 9.1 -0.05  | 13.5 -0.1 |
| 10.97 -0.05 | 15.5 -0.1 | Ø 6         | Ø 6         | 11.1 -0.05 | 15.5 -0.1 |
| 12.95 -0.05 | 16.5 -0.1 | Ø 8         | Ø 8         | 13.6 -0.05 | 16.5 -0.1 |

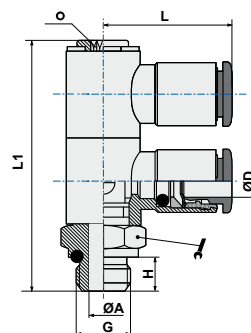


ART. **B33**

**Swivel double banjo stem**



| COD.    | ØD | G   | ØA  | H   | L1   | L     |    |   |    |       |
|---------|----|-----|-----|-----|------|-------|----|---|----|-------|
| B330418 | 4  | 1/8 | 5,5 | 5,5 | 43,3 | 21,65 | 14 | 3 | 25 | 44,41 |
| B330618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,9  | 14 | 3 | 25 | 45,5  |
| B330614 | 6  | 1/4 | 7,8 | 6,5 | 50   | 26,1  | 18 | 4 | 25 | 75,6  |
| B330818 | 8  | 1/8 | 5,5 | 5,5 | 43,3 | 25,1  | 14 | 3 | 25 | 48,5  |
| B330814 | 8  | 1/4 | 7,8 | 6,5 | 50   | 26,8  | 18 | 4 | 25 | 76,4  |
| B331014 | 10 | 1/4 | 7,8 | 6,5 | 50   | 28,9  | 18 | 4 | 25 | 87    |

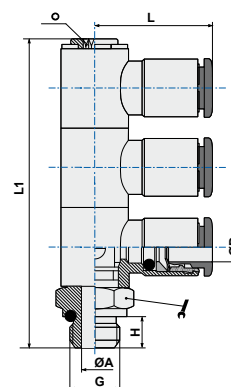


ART. **B34**

**Swivel triple banjo stem**



| COD.    | ØD | G   | ØA  | H   | L1   | L     |    |   |    |       |
|---------|----|-----|-----|-----|------|-------|----|---|----|-------|
| B340418 | 4  | 1/8 | 5,5 | 5,5 | 58,4 | 21,65 | 14 | 3 | 10 | 54,1  |
| B340618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,9  | 14 | 3 | 10 | 63,9  |
| B340614 | 6  | 1/4 | 7,8 | 6,5 | 67,1 | 26,1  | 18 | 4 | 10 | 65,6  |
| B340818 | 8  | 1/8 | 5,5 | 5,5 | 58,4 | 25,1  | 14 | 3 | 10 | 66,2  |
| B340814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,8  | 18 | 4 | 10 | 108   |
| B341014 | 10 | 1/4 | 7,8 | 6,5 | 67,1 | 28,9  | 18 | 4 | 10 | 151,1 |

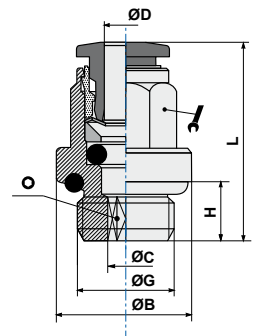


ART. **01OT**

**Straight male adaptor parallel**



| COD.     | ØD | G   | ØC   | ØB   | H   | L     |    |     |     |       |
|----------|----|-----|------|------|-----|-------|----|-----|-----|-------|
| 01OT04M5 | 4  | M5  | 2,5  | 8    | 4   | 20,85 | *  | 2,5 | 100 | 4,93  |
| 01OT04M6 | 4  | M6  | 2,5  | 9    | 5   | 21,85 | *  | 2,5 | 50  | 5,53  |
| 01OT0418 | 4  | 1/8 | 2,5  | 13,5 | 5,5 | 20    | 9  | 2,5 | 50  | 8,60  |
| 01OT0414 | 4  | 1/4 | 2,5  | 17   | 6,5 | 20    | 9  | 2,5 | 50  | 12,21 |
| 01OT06M5 | 6  | M5  | 2,5  | 8    | 4   | 24,4  | *  | 2,5 | 50  | 7,20  |
| 01OT06M6 | 6  | M6  | 2,5  | 11   | 5   | 25,4  | *  | 2,5 | 50  | 8,20  |
| 01OT0618 | 6  | 1/8 | 4,1  | 13,5 | 5,5 | 25,4  | 11 | 4   | 50  | 11,65 |
| 01OT0614 | 6  | 1/4 | 4,1  | 17   | 6,5 | 23,4  | 11 | 4   | 50  | 15,10 |
| 01OT0818 | 8  | 1/8 | 5,1  | 13   | 5,5 | 26,8  | 13 | 5   | 50  | 13,10 |
| 01OT0814 | 8  | 1/4 | 6,1  | 17   | 6,5 | 24    | 13 | 6   | 50  | 14,34 |
| 01OT0838 | 8  | 3/8 | 6,1  | 20   | 7,5 | 24    | 13 | 6   | 50  | 20,72 |
| 01OT0812 | 8  | 1/2 | 6,1  | 24   | 9   | 25    | 13 | 6   | 25  | 40,80 |
| 01OT1014 | 10 | 1/4 | 7,2  | 16   | 6,5 | 29,4  | 16 | 7   | 50  | 22,15 |
| 01OT1038 | 10 | 3/8 | 8,2  | 21   | 7,5 | 29,4  | 16 | 8   | 50  | 28,98 |
| 01OT1012 | 10 | 1/2 | 8,2  | 24   | 9   | 29,4  | 16 | 8   | 25  | 38,77 |
| 01OT1214 | 12 | 1/4 | 7,2  | 16   | 6,5 | 32,2  | 19 | 7   | 25  | 30,50 |
| 01OT1238 | 12 | 3/8 | 10,2 | 22   | 7,5 | 32,2  | 19 | 10  | 25  | 35,68 |
| 01OT1212 | 12 | 1/2 | 10,2 | 24   | 9   | 31,7  | 19 | 10  | 25  | 42,72 |
| 01OT1438 | 14 | 3/8 | 10,2 | 21   | 7,5 | 35    | 21 | 10  | 25  | 40,89 |
| 01OT1412 | 14 | 1/2 | 12,2 | 25   | 9   | 34,3  | 21 | 12  | 25  | 44,28 |



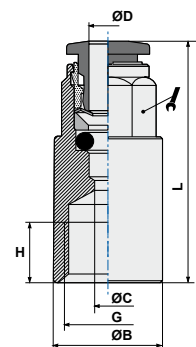
\* codes without key flats having the following Ø:  
01OT04M5 and 01OT04M6 = Ø9  
01OT06M5 and 01OT06M6 = Ø11

ART. **02OT**

**Straight female adaptor**



| COD.     | ØD | G   | ØC | ØB | H    | L    |    |    |       |
|----------|----|-----|----|----|------|------|----|----|-------|
| 02OT0418 | 4  | 1/8 | 3  | 12 | 7,5  | 26,5 | 9  | 50 | 11,92 |
| 02OT0414 | 4  | 1/4 | 3  | 17 | 11,5 | 29,5 | 9  | 50 | 20,20 |
| 02OT0618 | 6  | 1/8 | 5  | 12 | 7,5  | 29,1 | 11 | 50 | 12,50 |
| 02OT0614 | 6  | 1/4 | 5  | 17 | 11,5 | 31,9 | 11 | 50 | 18,29 |
| 02OT0818 | 8  | 1/8 | 7  | 12 | 7,5  | 28   | 13 | 50 | 12,09 |
| 02OT0814 | 8  | 1/4 | 7  | 17 | 11,5 | 33,3 | 13 | 50 | 20,94 |

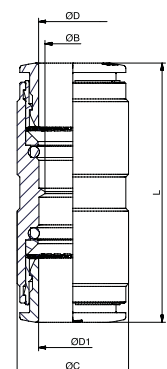


ART. **03OT**

**Straight connector**



| COD.     | ØD | ØD1 | ØB | ØC | L    |    |       |
|----------|----|-----|----|----|------|----|-------|
| 03OT0400 | 4  | 4   | 3  | 11 | 32,7 | 50 | 8,07  |
| 03OT0600 | 6  | 6   | 5  | 13 | 37,3 | 50 | 12,46 |
| 03OT0800 | 8  | 8   | 7  | 13 | 38,6 | 50 | 16,02 |
| 03OT1000 | 10 | 10  | 9  | 18 | 43,3 | 50 | 25,80 |
| 03OT1200 | 12 | 12  | 11 | 21 | 46,4 | 25 | 41,50 |
| 03OT1400 | 14 | 14  | 13 | 21 | 50   | 25 | 46    |

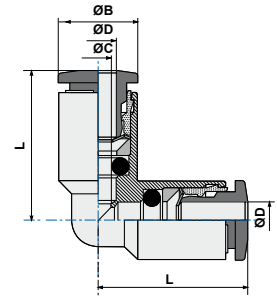


ART. **04OT**

**Elbow connector**



| COD.     | ØD | ØC | ØB | L     |    |       |
|----------|----|----|----|-------|----|-------|
| 04OT0400 | 4  | 3  | 9  | 18,55 | 50 | 10,00 |
| 04OT0600 | 6  | 5  | 11 | 20,4  | 50 | 11,63 |
| 04OT0800 | 8  | 7  | 13 | 23,3  | 50 | 17,28 |
| 04OT1000 | 10 | 9  | 16 | 27,1  | 50 | 28,08 |
| 04OT1200 | 12 | 11 | 19 | 29,3  | 25 | 56,13 |
| 04OT1400 | 14 | 13 | 21 | 31,7  | 25 | 55,01 |

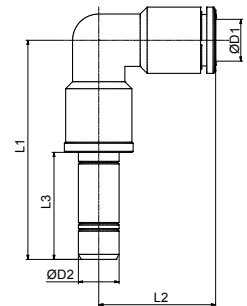


ART. **04OTL0**

**Plug-in elbow connector**



| COD.     | ØD1 | ØD2 | L1   | L2    | L3   |    |       |
|----------|-----|-----|------|-------|------|----|-------|
| 04OT04L0 | 4   | 4   | 34,5 | 18,55 | 16,7 | 50 | 7,82  |
| 04OT06L0 | 6   | 6   | 39   | 20,4  | 19,5 | 50 | 9,00  |
| 04OT08L0 | 8   | 8   | 43   | 23,8  | 21   | 50 | 24,23 |
| 04OT10L0 | 10  | 10  | 51   | 27,1  | 24   | 25 | 26,00 |
| 04OT12L0 | 12  | 12  | 54   | 29,3  | 25   | 25 | 69,02 |

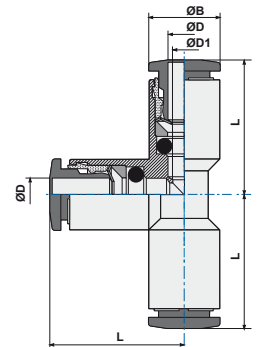


ART. **05OT**

**T connector**



| COD.     | ØD | ØC | ØB | L     |    |       |
|----------|----|----|----|-------|----|-------|
| 05OT0400 | 4  | 3  | 9  | 18,55 | 50 | 14,36 |
| 05OT0600 | 6  | 5  | 11 | 21,2  | 50 | 16,73 |
| 05OT0800 | 8  | 7  | 13 | 23,3  | 50 | 21,76 |
| 05OT1000 | 10 | 8  | 16 | 26,9  | 25 | 42,57 |
| 05OT1200 | 12 | 10 | 19 | 29,3  | 25 | 69,50 |
| 05OT1400 | 14 | 12 | 21 | 31,7  | 10 | 73,01 |

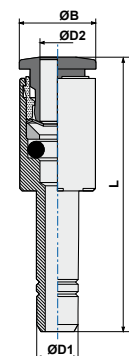


ART. **08OT**

**Plug-in reducer**



| COD.     | ØD1 | ØD2 | ØB | L     |    |       |
|----------|-----|-----|----|-------|----|-------|
| 08OT0604 | 6   | 4   | 9  | 32,85 | 50 | 6,67  |
| 08OT0804 | 8   | 4   | 9  | 34    | 50 | 10,88 |
| 08OT0806 | 8   | 6   | 11 | 36,9  | 50 | 10,10 |
| 08OT1006 | 10  | 6   | 11 | 39,9  | 50 | 17,30 |
| 08OT1008 | 10  | 8   | 13 | 39,3  | 50 | 14,44 |
| 08OT1208 | 12  | 8   | 13 | 39,8  | 25 | 20,64 |
| 08OT1210 | 12  | 10  | 16 | 41,9  | 25 | 20,56 |
| 08OT1406 | 14  | 6   | 15 | 36,9  | 25 | 37,50 |

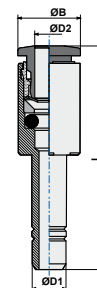


ART. **08OT/E**

**Plug-in increaser**



| COD.      | ØD1 | ØD2 | ØB | L    |    |       |
|-----------|-----|-----|----|------|----|-------|
| 08OTE0406 | 4   | 6   | 11 | 40,4 | 50 | 8,97  |
| 08OTE0608 | 6   | 8   | 13 | 44   | 50 | 13,06 |

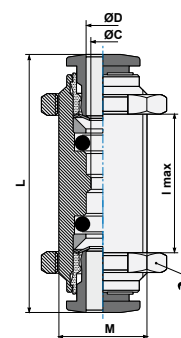


ART. **100T**

**Bulkhead connector**



| COD.     | ØD | ØC | M    | lmax | L    |    |    |       |
|----------|----|----|------|------|------|----|----|-------|
| 100T0400 | 4  | 3  | 11x1 | 14   | 32,7 | 14 | 50 | 18,19 |
| 100T0600 | 6  | 5  | 14x1 | 14,5 | 37,3 | 17 | 50 | 28,87 |
| 100T0800 | 8  | 7  | 16x1 | 15   | 38,6 | 18 | 50 | 33,60 |
| 100T1000 | 10 | 9  | 18x1 | 16,5 | 43,3 | 21 | 25 | 54,16 |
| 100T1200 | 12 | 11 | 22x1 | 18,6 | 46,4 | 26 | 25 | 79,55 |
| 100T1400 | 14 | 13 | 24x1 | 21,7 | 50   | 27 | 25 | 89,85 |

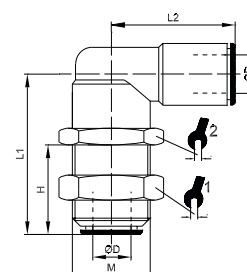


ART. **10LOT**

**Elbow bulkhead**



| COD.      | ØD | M     | H    | L1   | L2 |    |    |    |       |
|-----------|----|-------|------|------|----|----|----|----|-------|
| 10LOT0400 | 4  | M11x1 | 12,5 | 25,5 | 20 | 13 | 13 | 50 | 24,76 |
| 10LOT0600 | 6  | M14x1 | 15   | 28   | 21 | 17 | 17 | 50 | 34,11 |
| 10LOT0800 | 8  | M16x1 | 17   | 30,5 | 24 | 18 | 18 | 50 | 38,59 |
| 10LOT1000 | 10 | M18x1 | 19   | 35   | 27 | 21 | 21 | 25 | 62,49 |

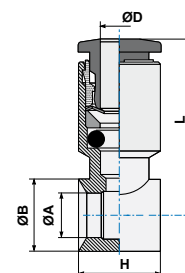


ART. **130T**

**Single banjo body**



| COD.      | ØD | G*  | ØA    | ØB | H  | L     |    |       |
|-----------|----|-----|-------|----|----|-------|----|-------|
| 130T04M5  | 4  | M5  | 5     | 9  | 9  | 19,85 | 50 | 7,05  |
| 130T0418  | 4  | 1/8 | 9,9   | 14 | 15 | 21,65 | 50 | 14,57 |
| 130T0618  | 6  | 1/8 | 9,9   | 14 | 15 | 24,9  | 50 | 15,70 |
| 130T0614  | 6  | 1/4 | 13,3  | 18 | 17 | 26,1  | 50 | 21,92 |
| 130T0818  | 8  | 1/8 | 9,9   | 14 | 15 | 25,15 | 50 | 16,39 |
| 130T0814  | 8  | 1/4 | 13,3  | 18 | 17 | 26,8  | 50 | 22,57 |
| 130T0838  | 8  | 3/8 | 16,75 | 21 | 20 | 28,3  | 50 | 29,39 |
| 130T1014  | 10 | 1/4 | 13,3  | 18 | 17 | 28,9  | 50 | 30,58 |
| 130T1038  | 10 | 3/8 | 16,75 | 21 | 20 | 30,35 | 25 | 34,90 |
| 130T1214  | 12 | 1/4 | 13,3  | 18 | 17 | 30,7  | 25 | 35,12 |
| 130T1238  | 12 | 3/8 | 16,75 | 21 | 20 | 31,6  | 25 | 37,14 |
| 130T1212  | 12 | 1/2 | 21    | 26 | 24 | 35,15 | 25 | 51,86 |
| 130TR04M5 | 4  | M5  | 6     | 9  | 10 | 19,85 | 50 | 5,65  |
| 130TR06M5 | 6  | M5  | 6     | 9  | 10 | 22,1  | 50 | 7,02  |

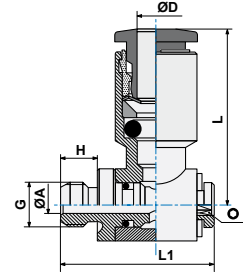


ART. **150T**

Complete single banjo (rotating under pressure)



| COD.     | ØD | G   | ØA  | H   | L1   | L     | ⊙   | 📦  | 📊      |
|----------|----|-----|-----|-----|------|-------|-----|----|--------|
| 150T04M5 | 4  | M5  | 2   | 4   | 16,8 | 19,85 | 2,5 | 50 | 9,61   |
| 150T04M6 | 4  | M6  | 2   | 5   | 17,8 | 19,85 | 2,5 | 50 | 9,74   |
| 150T0418 | 4  | 1/8 | 5,5 | 5,5 | 24,5 | 21,65 | 3   | 50 | 24,12  |
| 150T06M5 | 6  | M5  | 2   | 4   | 16,8 | 22,4  | 2,5 | 50 | 10,82  |
| 150T0618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,9  | 3   | 50 | 24,84  |
| 150T0614 | 6  | 1/4 | 7,8 | 6,5 | 27,8 | 26,1  | 4   | 50 | 40,32  |
| 150T0818 | 8  | 1/8 | 5,5 | 5,5 | 24,5 | 25,15 | 3   | 50 | 25,96  |
| 150T0814 | 8  | 1/4 | 7,8 | 6,5 | 27,8 | 26,8  | 4   | 50 | 41,19  |
| 150T0838 | 8  | 3/8 | 10  | 7,5 | 32,5 | 28,3  | 5   | 25 | 61,83  |
| 150T1014 | 10 | 1/4 | 7,8 | 6,5 | 27,8 | 28,9  | 4   | 25 | 49,51  |
| 150T1038 | 10 | 3/8 | 10  | 7,5 | 32,5 | 30,35 | 5   | 25 | 68,41  |
| 150T1214 | 12 | 1/4 | 7,8 | 6,5 | 27,8 | 30,85 | 4   | 25 | 51,38  |
| 150T1238 | 12 | 3/8 | 10  | 7,5 | 32,5 | 31,6  | 5   | 25 | 69,72  |
| 150T1212 | 12 | 1/2 | 12  | 9   | 38,8 | 35,15 | 8   | 10 | 114,78 |

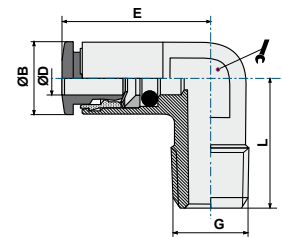


ART. **190T**

Elbow male adaptor



| COD.     | ØD | G   | ØB | E     | L    | 🔧  | 📦   | 📊     |
|----------|----|-----|----|-------|------|----|-----|-------|
| 190T0418 | 4  | 1/8 | 9  | 19,35 | 16,5 | 10 | 100 | 12,83 |
| 190T0618 | 6  | 1/8 | 11 | 24,4  | 16,5 | 10 | 100 | 14,84 |
| 190T0614 | 6  | 1/4 | 11 | 25,4  | 22   | 11 | 100 | 20,81 |
| 190T0818 | 8  | 1/8 | 13 | 25,3  | 18,5 | 11 | 100 | 18,26 |
| 190T0814 | 8  | 1/4 | 13 | 25,3  | 22,0 | 11 | 100 | 20,94 |
| 190T1014 | 10 | 1/4 | 16 | 26,9  | 23,5 | 13 | 50  | 30,26 |

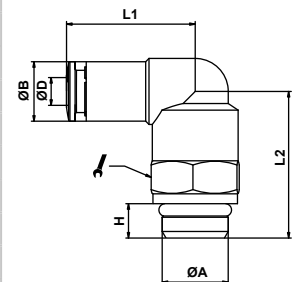


**220T**

Swivel elbow male adaptor (parallel)



| COD.      | ØD | A       | H   | ØB  | L1    | L2   | 🔧  | 📦   | 📊     |
|-----------|----|---------|-----|-----|-------|------|----|-----|-------|
| 220T04M5  | 4  | M5      | 4   | 9,1 | 18,55 | 14,8 | 9  | 100 | 10,10 |
| 220T04M12 | 4  | M12x1,5 | 6,5 | 9,1 | 20,35 | 22,4 | 13 | 100 | 11,55 |
| 220T0418  | 4  | 1/8     | 5,5 | 9,1 | 20,35 | 19,9 | 13 | 100 | 19,00 |
| 220T0414  | 4  | 1/4     | 6,5 | 9,1 | 20,35 | 22,7 | 13 | 100 | 22,80 |
| 220T0438  | 4  | 3/8     | 7,5 | 9,1 | 20,35 | 24,9 | 13 | 100 | 27,60 |
| 220T06M5  | 6  | M5      | 4   | 11  | 22,4  | 15   | 9  | 100 | 12,12 |
| 220T06M12 | 6  | M12x1,5 | 6,5 | 11  | 23,9  | 22,2 | 13 | 100 | 14,11 |
| 220T0618  | 6  | 1/8     | 5,5 | 11  | 23,9  | 19,7 | 13 | 100 | 21,02 |
| 220T0614  | 6  | 1/4     | 6,5 | 11  | 23,9  | 22,7 | 13 | 100 | 24,11 |
| 220T0638  | 6  | 3/8     | 7,5 | 11  | 23,9  | 24,7 | 13 | 100 | 29,49 |
| 220T08M12 | 8  | M12x1,5 | 6,5 | 13  | 24,3  | 22,2 | 13 | 100 | 24,55 |
| 220T0818  | 8  | 1/8     | 5,5 | 13  | 23,95 | 19,7 | 13 | 100 | 20,57 |
| 220T0814  | 8  | 1/4     | 6,5 | 13  | 24,3  | 22,7 | 13 | 50  | 23,67 |
| 220T0838  | 8  | 3/8     | 7,5 | 13  | 24,3  | 24,7 | 13 | 50  | 30,23 |
| 220T1014  | 10 | 1/4     | 6,5 | 16  | 28,4  | 22,6 | 16 | 50  | 37,68 |
| 220T1038  | 10 | 3/8     | 7,5 | 16  | 28,4  | 26,6 | 16 | 50  | 43,70 |
| 220T1012  | 10 | 1/2     | 9   | 16  | 28,4  | 28,1 | 16 | 50  | 48,40 |
| 220T1214  | 12 | 1/4     | 6,5 | 19  | 31,4  | 29,2 | 16 | 25  | 64,75 |
| 220T1238  | 12 | 3/8     | 7,5 | 19  | 31,4  | 27,2 | 20 | 25  | 63,21 |
| 220T1212  | 12 | 1/2     | 9   | 19  | 31,4  | 31,7 | 20 | 25  | 73,27 |
| 220T1438  | 14 | 3/8     | 7,5 | 21  | 32,0  | 28,5 | 20 | 25  | 62,54 |
| 220T1412  | 14 | 1/2     | 9   | 21  | 32,0  | 33,5 | 20 | 25  | 75,98 |

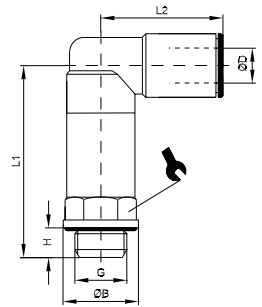


**22LOT**

**Plug-in elbow connector**



| COD.      | ØD | G    | ØB | H   | L1   | L2    |    |    |       |
|-----------|----|------|----|-----|------|-------|----|----|-------|
| 22LOT0418 | 4  | G1/8 | 13 | 5,5 | 33,2 | 20,35 | 13 | 25 | 30,34 |
| 22LOT0414 | 4  | G1/4 | 16 | 6,5 | 38,2 | 20,35 | 13 | 25 | 33,72 |
| 22LOT0618 | 6  | G1/8 | 13 | 5,5 | 33   | 23,9  | 13 | 25 | 32,04 |
| 22LOT0614 | 6  | G1/4 | 16 | 6,5 | 38   | 23,9  | 13 | 25 | 35,72 |
| 22LOT0818 | 8  | G1/8 | 13 | 5,5 | 33   | 24    | 13 | 25 | 31,97 |
| 22LOT0814 | 8  | G1/4 | 16 | 6,5 | 38   | 24,3  | 13 | 25 | 35,46 |
| 22LOT1014 | 10 | G1/4 | 16 | 6,5 | 40,5 | 28,4  | 16 | 25 | 57,49 |

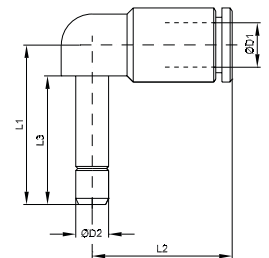


ART. **22OTL0**

**Plug-in elbow connector**



| COD.     | ØD1 | ØD2 | L1   | L2    | L3   |    |       |
|----------|-----|-----|------|-------|------|----|-------|
| 22OT04L0 | 4   | 4   | 25,2 | 20,35 | 16,2 | 50 | 22,12 |
| 22OT06L0 | 6   | 6   | 28,5 | 23,9  | 19,5 | 50 | 28,25 |
| 22OT08L0 | 8   | 8   | 30   | 24,3  | 21   | 50 | 29,15 |
| 22OT10L0 | 10  | 10  | 35   | 28,4  | 24   | 25 | 27,07 |
| 22OT12L0 | 12  | 12  | 38,5 | 31,4  | 25   | 25 | 32,45 |

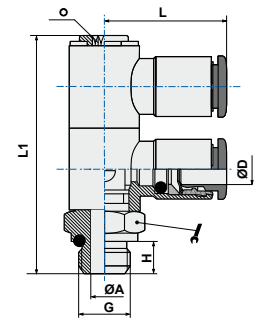


ART. **33OT**

**Swivel double banjo stem**



| COD.     | ØD | G   | ØA  | H   | L1   | L     |    |   |    |       |
|----------|----|-----|-----|-----|------|-------|----|---|----|-------|
| 33OT0418 | 4  | 1/8 | 5,5 | 5,5 | 43,3 | 21,65 | 14 | 3 | 25 | 46,81 |
| 33OT0618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,9  | 14 | 3 | 25 | 48,46 |
| 33OT0614 | 6  | 1/4 | 7,8 | 6,5 | 50   | 26,1  | 18 | 4 | 25 | 78,57 |
| 33OT0818 | 8  | 1/8 | 5,5 | 5,5 | 43,3 | 25,1  | 14 | 3 | 25 | 52,14 |
| 33OT0814 | 8  | 1/4 | 7,8 | 6,5 | 50   | 26,8  | 18 | 4 | 25 | 80,02 |
| 33OT1014 | 10 | 1/4 | 7,8 | 6,5 | 50   | 28,9  | 18 | 4 | 25 | 97,00 |

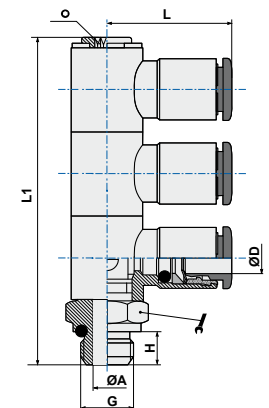


ART. **34OT**

**Swivel triple banjo stem**



| COD.     | ØD | G   | ØA  | H   | L1   | L     |    |   |    |        |
|----------|----|-----|-----|-----|------|-------|----|---|----|--------|
| 34OT0418 | 4  | 1/8 | 5,5 | 5,5 | 58,4 | 21,65 | 14 | 3 | 10 | 44,10  |
| 34OT0618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,9  | 14 | 3 | 10 | 66,93  |
| 34OT0614 | 6  | 1/4 | 7,8 | 6,5 | 67,1 | 26,1  | 18 | 4 | 10 | 107,87 |
| 34OT0818 | 8  | 1/8 | 5,5 | 5,5 | 58,4 | 25,1  | 14 | 3 | 10 | 110,86 |
| 34OT0814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,8  | 18 | 4 | 10 | 115,56 |
| 34OT1014 | 10 | 1/4 | 7,8 | 6,5 | 67,1 | 28,9  | 18 | 4 | 10 | 127,50 |





## Brass push-in fittings

### Seris MINI



The brass push-in fittings - Mini series combines light weight with maximum strength. It can be used with PA, TPU, Ny and PE hoses; the design of the O-ring seat ensures a seal even with polished and particularly slick surfaces.



#### Components

- 1 Fitting body
- 2 Elastic ring
- 3 Swivel stem
- 4 O-ring seal
- 5 Thrust and crimping sleeve



## Technical sheet

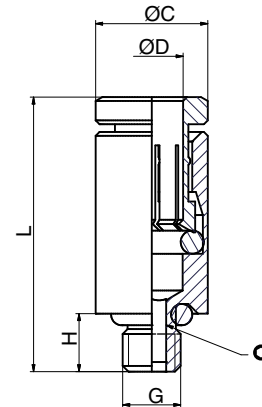
|                                |                                                                                                                                                                      |                                                           |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>FLUIDS</b>                  | Compressed air, some liquids (for different fluid please contact our Technical Dept.)                                                                                |                                                           |
| <b>APPLICATIONS</b>            | BSP parallel UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                    |                                                           |
| <b>SUGGESTED TUBES</b>         | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                        |                                                           |
| <b>TUBE TOLERANCES</b>         | Diam. from 4 to 10 mm +/- 0,05 - Diam. from 12 mm +/- 0,1                                                                                                            |                                                           |
| <b>THREAD TYPE</b>             | Cylindrical with O-ring.                                                                                                                                             |                                                           |
| <b>RECOMMENDED LIMIT VALUE</b> | Maximum torque                                                                                                                                                       | Thread M3 = 0,4 Nm; Thread M6 and M6x0,75 = 1,3 Nm        |
|                                | Temperature                                                                                                                                                          | The working temperatures range is between -20°C and +70°C |
|                                | Pressure                                                                                                                                                             | The maximum working pressure is 10 Bar.                   |
| <b>MATERIALS</b>               | Body                                                                                                                                                                 | Nichel-plated                                             |
|                                | Grip                                                                                                                                                                 | Brass                                                     |
|                                | Seals                                                                                                                                                                | Silicon free NBR                                          |
| <b>IMPORTANT NOTE</b>          | The raw material is non-magnetic, however after cold working, a small amount of austenite could be transformed into martensite, which could be very weakly magnetic. |                                                           |

ART. **RDR**

**Straight male adaptor parallel**



| COD.        | D    | G  | C   | H   | L    | ∅   |     |      |
|-------------|------|----|-----|-----|------|-----|-----|------|
| RDR320      | 2,0  | M3 | 5,4 | 3   | 13,5 | 1,5 | 100 | 1,50 |
| RDR330      | 3,0  | M3 | 5,8 | 3   | 14,5 | 1,5 | 100 | 2,00 |
| RDR331      | 3,17 | M3 | 5,8 | 3   | 14,0 | 1,5 | 100 | 1,50 |
| RDR340      | 4,0  | M3 | 7,0 | 3   | 15,5 | 1,5 | 100 | 2,50 |
| RDR340-MH05 | 4,0  | M3 | 6,9 | 5   | 17,5 | 1,5 | 100 | 2,50 |
| RDR520      | 2,0  | M5 | 5,4 | 3,5 | 13,0 | 1,5 | 100 | 1,50 |
| RDR530      | 3,0  | M5 | 5,8 | 3,5 | 14,5 | 2,0 | 100 | 1,50 |
| RDR531      | 3,17 | M5 | 5,8 | 3,5 | 14,5 | 2,0 | 100 | 1,50 |
| RDR540      | 4,0  | M5 | 5,8 | 3,5 | 16,5 | 2,0 | 100 | 2,00 |
| RDR640-FH12 | 4,0  | M6 | 7   | 12  | 24,5 | 2,0 | 100 | 3,00 |
| RDR640-MH12 | 4,0  | M6 | 7   | 12  | 24,5 | 2,0 | 100 | 3,50 |

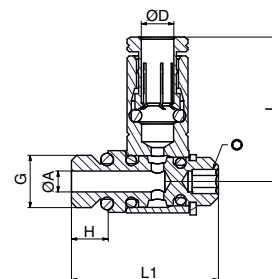


ART. **RGR**

**Complete single banjo with stem**



| COD.        | D    | G  | C   | H   | L    | L1   | ∅   |     |      |
|-------------|------|----|-----|-----|------|------|-----|-----|------|
| RGR320      | 2    | M3 | 1,4 | 3,0 | 13,5 | 13,5 | 1,5 | 100 | 3,63 |
| RGR330      | 3    | M3 | 1,4 | 3,0 | 13,5 | 13,5 | 1,5 | 100 | 3,52 |
| RGR331      | 3,17 | M3 | 1,4 | 3,0 | 13,5 | 13,5 | 1,5 | 100 | 3,34 |
| RGR340      | 4,2  | M3 | 1,4 | 3,0 | 13,5 | 13,5 | 1,5 | 100 | 3,68 |
| RGR340-MH05 | 4,2  | M3 | 1,4 | 5,0 | 13,5 | 13,5 | 1,5 | 100 | 3,80 |
| RGR520      | 2    | M5 | 2,0 | 3,5 | 14   | 14   | 2,0 | 100 | 3,64 |
| RGR530      | 3    | M5 | 2,0 | 3,5 | 14   | 14   | 2,0 | 100 | 3,62 |
| RGR531      | 3,2  | M5 | 2,0 | 3,5 | 13,5 | 13,5 | 2,0 | 100 | 3,54 |
| RGR540      | 4,2  | M5 | 2,0 | 3,5 | 13,5 | 13,5 | 2,0 | 100 | 3,82 |
| RGR640-FH12 | 4,2  | M6 | 2,0 | 12  | 13,5 | 13,5 | 2,0 | 100 | 6,01 |
| RGR640-MH12 | 4,0  | M6 | 2,0 | 12  | 13,5 | 13,5 | 2,0 | 100 | 5,94 |

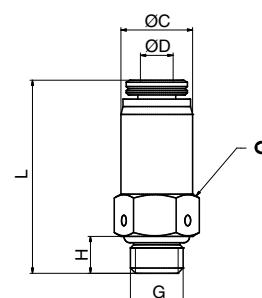


ART. **RDSR**

**Quick exhaust straight male parallel adapter**



| COD.    | L    | ∅C  | ∅D  | G  | H   | ∅ |     |      |
|---------|------|-----|-----|----|-----|---|-----|------|
| RDSR520 | 18,5 | 6,8 | 2,0 | M5 | 3,5 | 7 | 100 | 2,00 |
| RDSR530 | 18,5 | 6,8 | 3,0 | M5 | 3,5 | 7 | 100 | 3,00 |
| RDSR531 | 18,3 | 6,8 | 3,0 | M5 | 3,5 | 7 | 100 | 3,00 |
| RDSR540 | 19,5 | 7,8 | 4,2 | M5 | 3,5 | 8 | 100 | 4,00 |

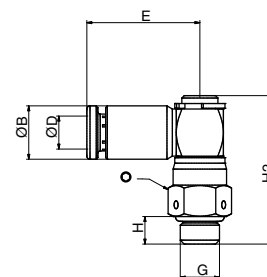


**ART. RGSR**

**Quick exhaust swivel elbow parallel adapter**



| COD.    | ØB  | ØD  | H   | H2 | E  | G  | ⊙ | 📦   | 📊    |
|---------|-----|-----|-----|----|----|----|---|-----|------|
| RGSR520 | 5,8 | 2,1 | 3,5 | 19 | 14 | M5 | 7 | 100 | 5,00 |
| RGSR530 | 5,8 | 3,0 | 3,5 | 19 | 14 | M5 | 7 | 100 | 5,00 |
| RGSR531 | 5,8 | 3,2 | 3,5 | 19 | 14 | M5 | 7 | 100 | 5,00 |
| RGSR540 | 5,8 | 4,2 | 3,5 | 19 | 14 | M5 | 7 | 100 | 5,00 |

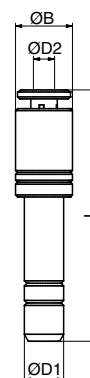


**ART. RRR**

**Plug-in reducer**



| COD.    | ØD1 | ØD2 | ØB  | L    | 📦   | 📊    |
|---------|-----|-----|-----|------|-----|------|
| RRR3020 | 2,0 | 3,2 | 5,8 | 23,2 | 100 | 2,00 |
| RRR4020 | 4,0 | 2,0 | 5,8 | 25,5 | 100 | 2,00 |
| RRR4030 | 4,0 | 3,0 | 5,8 | 25,5 | 100 | 2,50 |

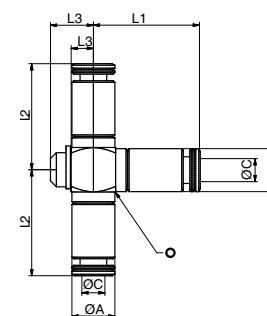


**ART. RTR020**

**T combined connector**



| COD.   | ØC   | L1   | L2 | ØB  | ØA  | L3 | ⊙ | 📦   | 📊    |
|--------|------|------|----|-----|-----|----|---|-----|------|
| RTR020 | 2,10 | 13,7 | 12 | 5,8 | 5,8 | 3  | 6 | 100 | 4,50 |

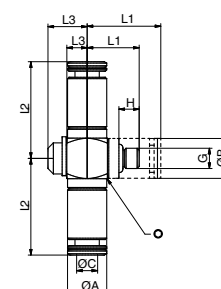


**ART. RTR330**

**T combined thread**



| COD.   | ØC  | L1  | L2 | G  | H | ØB  | ØA  | L3  | ⊙ | 📦   | 📊    |
|--------|-----|-----|----|----|---|-----|-----|-----|---|-----|------|
| RTR330 | 3,0 | 7,7 | 14 | M3 | 3 | 5,8 | 5,8 | 5,8 | 6 | 100 | 4,50 |



## Technopolymer push-in fittings

# SERIES TECNORAP - TECNORAP BLACK



Technorap series push-in fittings are manufactured in Italy, guaranteeing high quality standards according to the ISO norms of reference.

### Ordering code

**T 10 C 08 M5**

#### FITTING BODY COLOUR + THRUST SLEEVE

- T** = Grey Body Green Thrust Sleeve
- TN** = Grey Body Black Thrust Sleeve
- TS** = Grey Body Grey Thrust Sleeve
- TA** = Grey Body Blue Thrust Sleeve
- TB** = Black Body Black Thrust Sleeve
- TBV** = Black Body Green Thrust Sleeve
- TBS** = Black Body Grey Thrust Sleeve
- TBA** = Black Body Blue Thrust Sleeve

#### MODEL TYPE

**01 ... 90**

#### FUNCTIONAL DENOMINATIONS

- C** = Tapered thread
- F** = Female thread / Threaded body
- L** = Extended elbow
- B** = Two-way banjo

#### TUBE CONNECTION

**04 ... 16** = Tube diameter (mm)

#### THREADED CONNECTION

- M3; M5; 18; 14; 38; 12** = Thread size (M3; M5; 1/8; 1/4; 3/8; 1/2)
- 04 ... 16** = Tube diameter (mm)
- L0** = Version with plug
- V0** = Version with lateral plug

See assembly instructions in the appendix on page 204

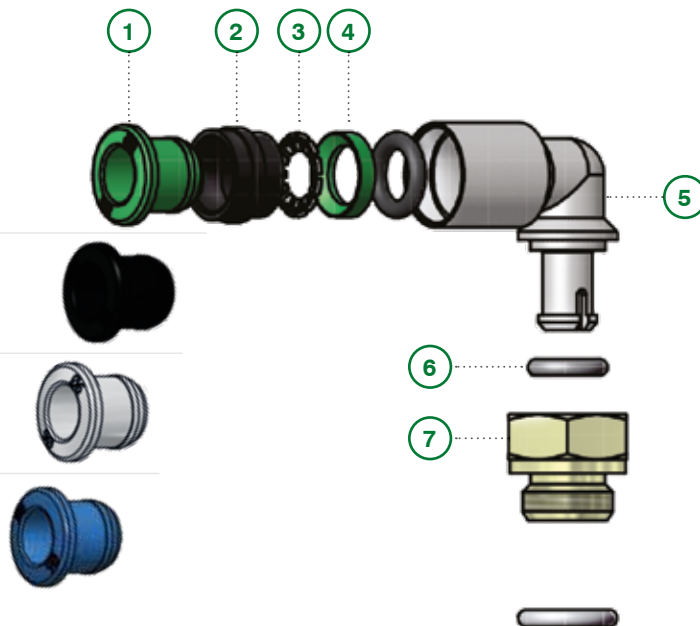
### Series

- **T, TB**

- **TN**  
*on request*

- **TS, TBS**  
*on request*

- **TA, TBA**  
*on request*



### Components

- 1 Thrust sleeve
- 2 Lock ring
- 3 Crimping gripper
- 4 Supporting ring
- 5 Fitting body
- 6 O-Ring seal
- 7 Swivel base



## Technical sheet

|                                 |                                    |                                                                                                                                                                                                      |
|---------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                    | Compressed air (for different fluid please contact our Technical Dept.)                                                                                                                              |
| <b>APPLICATIONS</b>             |                                    | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms. Suitable for vacuum applications.                                                                         |
| <b>SUGGESTED TUBES</b>          |                                    | TPU (Polyurethane), PA11/PA12 (Polyurethane), TPE (Polyurethane), TPA (Polyurethane/Copolyester)                                                                                                     |
| <b>TUBES TOLERANCES</b>         |                                    | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                          |
| <b>PROTECTION DEGREE</b>        |                                    | IP 68                                                                                                                                                                                                |
| <b>TEMPERATURE AND PRESSURE</b> | Recommended limit values           | Temperatures and pressures usually depend by the technical features of the employed tubes, anyway it is suggested a limit working pressure of 12 bar and a temperature range between -20°C and +50°C |
|                                 | Technical testing data             | In the table below there are indicated the load traction resistance values and the main working and breaking limit (Pressure and Temperature) of the main commercial tubing.                         |
|                                 | Note                               | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                            |
| <b>THREAD TYPE</b>              |                                    | BSP parallel UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                    |
| <b>MATERIALS</b>                | Body, sleeve, collar and back ring | POM copolymer ISO1043-1; Technopolymer glass-fiber reinforced                                                                                                                                        |
|                                 | Swivel stems and bases             | Brass UNI EN 12164 CW614N                                                                                                                                                                            |
|                                 | Spring                             | Stainless steel AISI 301 austenitic                                                                                                                                                                  |
|                                 | Seals                              | NBR 70 DWGV-EN549 UL157                                                                                                                                                                              |

## Additional technical informations

Each Tecno-RAP production batch is tested according to severe cyclics "lot breaker" controls along all the production period, which include shape observation, leakage verification, functionality, at the working pressure of 8 bar. Then all samples taken from the lot are tested by a traction machine which simulate a breaking pressure of 50 bar. Here below are indicated the traction loads (in Newton) for each size:

|                      |      |       |       |       |       |
|----------------------|------|-------|-------|-------|-------|
| <b>TUBE DIAMETER</b> | Ø4   | Ø6    | Ø8    | Ø10   | Ø12   |
| <b>BREAKING LOAD</b> | 63 N | 141 N | 251 N | 393 N | 566 N |

**Important note:** The values refer to the resistance of the crimping gripper, "core part" of both fittings, the technopolymer Tecno-RAP and the brass RAP, whereby homogeneous. The breaking experimental values measured, according to the diameter, were from 1.2 to 2.5 times higher.

## Additional information regarding the working temperatures:

Further to all the necessary assessments on the use of the fittings in operating conditions different from how suggested in the initial technical sheet must be considered, with reference to temperatures, the nominal data regarding the type of the used tube and the limit imposed by the most critical component.

Series TECNORAP: **-20° +50°**  
 Series RAP: **-20° +70°**  
 Series OT: **-20° + 80°**  
 Series OV: **-20° +150°**  
 Series SS: **-20° +120°**

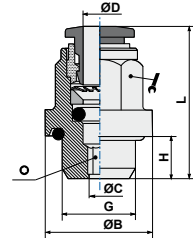
| WORKING PRESSURE AND BREAKING PRESSURE AT DIFFERENT TEMPERATURES |               |                |               |                |               |                |
|------------------------------------------------------------------|---------------|----------------|---------------|----------------|---------------|----------------|
| Example                                                          | T-20°C        |                | T+23°C        |                | T+60°C        |                |
| Tube 6x4 colored                                                 | Working P bar | Breaking P bar | Working P bar | Breaking P bar | Working P bar | Breaking P bar |
| <b>TPU</b>                                                       | 18,7          | 74,8           | 10,0          | 40,0           | 5,2           | 20,8           |
| <b>PA11</b>                                                      | 37,4          | 149,6          | 20,0          | 80,0           | 10,4          | 41,6           |
| <b>PA12</b>                                                      | 48,6          | 168,3          | 26,0          | 90,0           | 10,4          | 36,0           |
| <b>PE</b>                                                        | 18,7          | 74,8           | 10,0          | 40,0           | 5,0           | 20,0           |

ART. **T01**

**Straight male adaptor (parallel)**



| COD.     | ØD | G       | ØC  | ØB   | H   | L     |    |     |    |      |
|----------|----|---------|-----|------|-----|-------|----|-----|----|------|
| T0104M10 | 4  | M10x1,5 | 2,5 | 14,0 | 8,0 | 22,15 | 10 | 2,5 | 50 | 2,26 |
| T010418  | 4  | 1/8     | 2,5 | 14,0 | 5,5 | 19,65 | 10 | 2,5 | 50 | 2,16 |
| T010414  | 4  | 1/4     | 2,5 | 17,5 | 6,5 | 21,15 | 10 | 2,5 | 50 | 3,36 |
| T0106M10 | 6  | M10x1,5 | 4,0 | 14,0 | 8,0 | 27,60 | 12 | 4,0 | 50 | 3,18 |
| T010618  | 6  | 1/8     | 4,0 | 14,0 | 5,5 | 25,10 | 12 | 4,0 | 50 | 3,10 |
| T010614  | 6  | 1/4     | 4,0 | 17,5 | 6,5 | 26,60 | 12 | 4,0 | 50 | 4,26 |
| T0108M10 | 8  | M10x1,5 | 6,0 | 14,0 | 8,0 | 28,60 | 14 | 5,0 | 50 | 3,58 |
| T010818  | 8  | 1/8     | 5,0 | 14,0 | 5,5 | 26,10 | 14 | 5,0 | 50 | 3,53 |
| T010814  | 8  | 1/4     | 6,0 | 17,5 | 6,5 | 27,60 | 14 | 6,0 | 50 | 4,58 |
| T011014  | 10 | 1/4     | 7,0 | 17,5 | 6,5 | 29,20 | 18 | 7,0 | 50 | 6,33 |

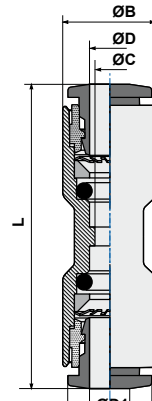


ART. **T03**

**Straight connector**



| COD.    | ØD | ØD1 | ØC | ØB   | ØB1  | L     |    |       |
|---------|----|-----|----|------|------|-------|----|-------|
| T030400 | 4  | 4   | 3  | 9,5  | 9,5  | 32,30 | 50 | 1,96  |
| T030406 | 4  | 6   | 3  | 9,5  | 11,5 | 34,25 | 50 | 2,39  |
| T030600 | 6  | 6   | 5  | 11,5 | 11,5 | 36,70 | 50 | 3,00  |
| T030608 | 6  | 8   | 5  | 11,5 | 13,5 | 37,70 | 50 | 3,27  |
| T030800 | 8  | 8   | 7  | 13,5 | 13,5 | 38,20 | 50 | 3,53  |
| T030810 | 8  | 10  | 7  | 13,5 | 17,0 | 40,75 | 50 | 5,03  |
| T031000 | 10 | 10  | 9  | 17,0 | 17,0 | 42,90 | 50 | 6,04  |
| T031012 | 10 | 12  | 9  | 17,0 | 20,0 | 44,50 | 50 | 5,04  |
| T031200 | 12 | 12  | 10 | 20,0 | 20,0 | 46,20 | 25 | 9,06  |
| T031600 | 16 | 16  | 13 | 26,5 | 26,5 | 64,00 | 10 | 28,10 |

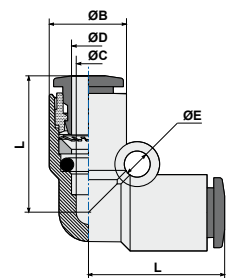


ART. **T04**

**Elbow connector**



| COD.    | ØD | ØC | ØB   | ØL    | ØE   |    |       |
|---------|----|----|------|-------|------|----|-------|
| T040400 | 4  | 3  | 9,5  | 17,35 | 3,20 | 50 | 2,21  |
| T040600 | 6  | 5  | 11,5 | 21,10 | 3,20 | 50 | 3,28  |
| T040800 | 8  | 7  | 13,5 | 23,10 | 3,20 | 50 | 4,14  |
| T041000 | 10 | 9  | 17,0 | 26,70 | 4,30 | 50 | 7,21  |
| T041200 | 12 | 10 | 20,0 | 28,90 | 4,20 | 25 | 10,98 |
| T041600 | 16 | 13 | 26,5 | 33,00 | *    | 10 | 26,80 |

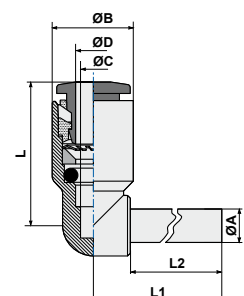


ART. **T04L0**

**Plug-in elbow connector**



| COD.    | ØD | ØC | ØB   | L     | L1    | ØA | L2   |    |      |
|---------|----|----|------|-------|-------|----|------|----|------|
| T0404L0 | 4  | 3  | 9,5  | 17,35 | 20,75 | 4  | 16,7 | 50 | 1,39 |
| T0406L0 | 6  | 5  | 11,5 | 21,10 | 24,25 | 6  | 19,5 | 50 | 2,18 |
| T0408L0 | 8  | 7  | 13,5 | 23,10 | 27,25 | 8  | 21,0 | 50 | 2,96 |
| T0410L0 | 10 | 9  | 17,0 | 26,70 | 31,80 | 10 | 24,0 | 50 | 5,07 |
| T0412L0 | 12 | 10 | 20,0 | 28,90 | 36,00 | 12 | 25,0 | 25 | 8,00 |

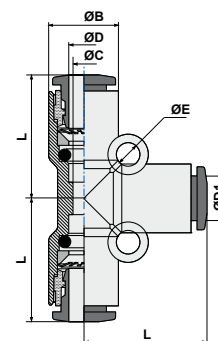


ART. **T05**

**T connector**



| COD.    | ØD | ØD1 | ØC   | ØB    | L     | ØE  |    |       |
|---------|----|-----|------|-------|-------|-----|----|-------|
| T050400 | 4  | 4   | 3,0  | 9,50  | 17,35 | 3,2 | 50 | 3,16  |
| T050604 | 6  | 4   | 5,3  | 13,00 | 19,10 | 3,2 | 50 | 8,20  |
| T050600 | 6  | 6   | 5,0  | 11,50 | 21,10 | 3,2 | 50 | 4,72  |
| T050806 | 8  | 6   | 7,1  | 14,40 | 22,70 | 3,2 | 25 | 11,07 |
| T050800 | 8  | 8   | 7,0  | 13,50 | 23,10 | 3,2 | 50 | 5,96  |
| T051008 | 10 | 8   | 9,3  | 18,40 | 27,90 | 4,2 | 25 | 21,85 |
| T051000 | 10 | 10  | 9,0  | 17,00 | 26,70 | 4,3 | 25 | 10,70 |
| T051210 | 12 | 10  | 10,0 | 21,00 | 29,90 | 4,2 | 10 | 26,78 |
| T051200 | 12 | 12  | 10,0 | 20,00 | 28,90 | 4,2 | 10 | 26,78 |
| T051600 | 16 | 16  | 13,0 | 26,50 | 32,00 | *   | 10 | 37,00 |

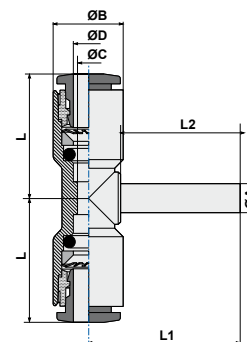


ART. **T05LO**

**Plug-in T connector (center)**



| COD.    | ØD | ØC | ØB   | L    | L1   | ØA | L2   |    |      |
|---------|----|----|------|------|------|----|------|----|------|
| T0504L0 | 4  | 3  | 9,5  | 17,2 | 20,8 | 4  | 16,7 | 50 | 2,26 |
| T0506L0 | 6  | 5  | 11,5 | 20,8 | 24,3 | 6  | 19,5 | 50 | 3,51 |
| T0508L0 | 8  | 7  | 13,5 | 23,0 | 27,3 | 8  | 21,0 | 50 | 4,66 |
| T0510L0 | 10 | 9  | 17,0 | 26,4 | 31,8 | 10 | 24,0 | 25 | 5,64 |
| T0512L0 | 12 | 10 | 20,0 | 28,9 | 36,0 | 12 | 25,0 | 10 | 7,11 |

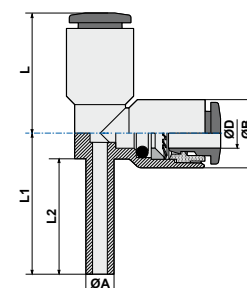


ART. **T05V0**

**Plug-in T connector (lateral)**



| COD.    | ØD | ØB   | L    | L1   | ØA | L2   |    |      |
|---------|----|------|------|------|----|------|----|------|
| T0506V0 | 6  | 11,5 | 20,8 | 24,3 | 6  | 19,5 | 50 | 3,42 |
| T0508V0 | 8  | 13,5 | 23,0 | 27,3 | 8  | 21,0 | 50 | 4,54 |
| T0510V0 | 10 | 17,0 | 26,4 | 31,8 | 10 | 24,0 | 25 | 7,65 |
| T0512V0 | 12 | 20,0 | 28,9 | 36,0 | 12 | 25,0 | 10 | 8,10 |



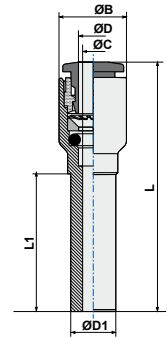


ART. **T08**

**Reducer**



| COD.    | ØD1 | ØD | ØC | ØB   | L     | L1    |    |      |
|---------|-----|----|----|------|-------|-------|----|------|
| T080604 | 6   | 4  | 3  | 9,5  | 35,65 | 19,50 | 50 | 1,37 |
| T080804 | 8   | 4  | 3  | 9,5  | 37,15 | 21,00 | 50 | 1,60 |
| T081004 | 10  | 4  | 3  | 9,5  | 40,15 | 24,00 | 25 | 1,97 |
| T081204 | 12  | 4  | 3  | 9,5  | 41,15 | 25,00 | 25 | 2,22 |
| T080806 | 8   | 6  | 5  | 11,5 | 39,35 | 23,00 | 50 | 2,10 |
| T081006 | 10  | 6  | 5  | 11,5 | 42,35 | 24,00 | 25 | 2,49 |
| T081206 | 12  | 6  | 5  | 11,5 | 43,35 | 25,00 | 25 | 2,80 |
| T081008 | 10  | 8  | 7  | 13,5 | 43,10 | 26,25 | 25 | 2,74 |
| T081208 | 12  | 8  | 7  | 13,5 | 44,10 | 25,00 | 25 | 3,00 |
| T081210 | 12  | 10 | 9  | 17,0 | 46,45 | 27,55 | 25 | 4,40 |

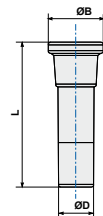


ART. **T09**

**Plug**



| COD.    | ØD | ØB   | L    |     |      |
|---------|----|------|------|-----|------|
| T090400 | 4  | 7,0  | 25,0 | 100 | 0,43 |
| T090600 | 6  | 9,5  | 27,5 | 100 | 0,84 |
| T090800 | 8  | 12,0 | 30,0 | 100 | 1,39 |
| T091000 | 10 | 14,0 | 32,5 | 100 | 2,04 |
| T091200 | 12 | 16,0 | 35,0 | 100 | 2,67 |

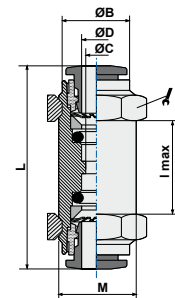


ART. **T10**

**Bulkhead connector**



| COD.    | ØD | ØB   | ØC | L    | M    | Lmax |    |    |       |
|---------|----|------|----|------|------|------|----|----|-------|
| T100400 | 4  | 9,5  | 3  | 32,0 | 11x1 | 8    | 14 | 50 | 7,78  |
| T100600 | 6  | 11,5 | 5  | 36,1 | 14,1 | 12   | 17 | 50 | 11,05 |
| T100800 | 8  | 13,5 | 7  | 38,0 | 16x1 | 15   | 18 | 50 | 10,93 |
| T101000 | 10 | 17,5 | 9  | 42,3 | 20x1 | 17   | 24 | 25 | 25,34 |
| T101200 | 12 | 20   | 10 | 46,2 | 22x1 | 20   | 26 | 25 | 33,12 |

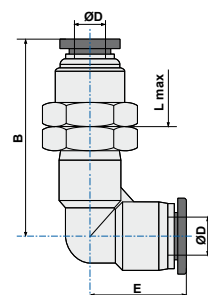


ART. **T10L**

**Elbow bulkhead**



| COD.     | ØD | M    | B    | E    | H    | Lmax | CH |    |       |
|----------|----|------|------|------|------|------|----|----|-------|
| T10L0400 | 4  | 12x1 | 28,5 | 19,0 | 14,0 | 6,0  | 14 | 25 | 17,77 |
| T10L0600 | 6  | 14x1 | 32,1 | 19,2 | 17,0 | 7,0  | 17 | 25 | 28,99 |
| T10L0800 | 8  | 16x1 | 39,4 | 23,0 | 19,0 | 7,5  | 19 | 25 | 39,23 |
| T10L1000 | 10 | 20x1 | 48,8 | 28,2 | 24,0 | 9,5  | 24 | 25 | 63,06 |
| T10L1200 | 12 | 22x1 | 49,5 | 29,5 | 27,0 | 10,0 | 26 | 10 | 79,66 |

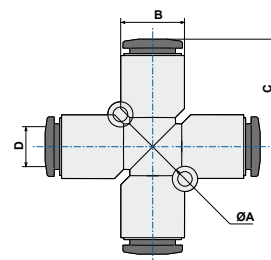


ART. **T11**

**Cross connector**



| COD.    | ØD | ØB   | ØA   | C   |    |       |
|---------|----|------|------|-----|----|-------|
| T110400 | 4  | 9,5  | 17,4 | 3,2 | 25 | 4,02  |
| T110600 | 6  | 11,5 | 21,1 | 3,2 | 25 | 6,20  |
| T110800 | 8  | 13,5 | 23,1 | 3,2 | 25 | 7,79  |
| T111000 | 10 | 17,0 | 26,7 | 4,2 | 10 | 14,06 |
| T111200 | 12 | 21,0 | 29,5 | 4,3 | 10 | 34,38 |

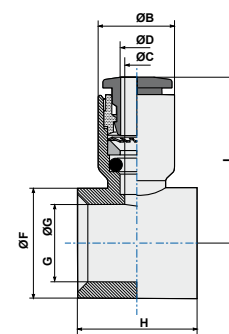


ART. **T13**

**Single banjo body**



| COD.     | ØD | G*  | ØC | ØB   | ØG    | H  | L     | ØF   |    |      |
|----------|----|-----|----|------|-------|----|-------|------|----|------|
| T1304M5  | 4  | M5  | 3  | 9,5  | 5,00  | 10 | 19,65 | 8,0  | 50 | 1,33 |
| T130418  | 4  | 1/8 | 3  | 9,5  | 9,90  | 15 | 21,25 | 14,0 | 50 | 2,37 |
| T130618  | 6  | 1/8 | 5  | 11,5 | 9,90  | 15 | 24,60 | 14,0 | 50 | 2,85 |
| T130614  | 6  | 1/4 | 5  | 11,5 | 13,30 | 17 | 25,80 | 18,0 | 50 | 3,77 |
| T130818  | 8  | 1/8 | 7  | 13,5 | 9,90  | 15 | 24,90 | 14,0 | 50 | 3,09 |
| T130814  | 8  | 1/4 | 7  | 13,5 | 13,30 | 17 | 26,60 | 18,0 | 50 | 3,95 |
| T130838  | 8  | 3/8 | 7  | 13,5 | 16,75 | 20 | 28,10 | 21,3 | 50 | 4,89 |
| T131014  | 10 | 1/4 | 9  | 17,0 | 13,30 | 17 | 28,70 | 18,0 | 50 | 5,36 |
| T131038  | 10 | 3/8 | 9  | 17,0 | 16,75 | 20 | 30,20 | 21,3 | 25 | 6,22 |
| T131012  | 10 | 1/2 | 9  | 17,0 | 13,30 | 24 | 33,20 | 26,0 | 25 | 6,78 |
| T131238  | 12 | 3/8 | 10 | 20,0 | 16,75 | 20 | 31,40 | 21,3 | 25 | 7,51 |
| T131212  | 12 | 1/2 | 10 | 20,0 | 21,00 | 24 | 34,90 | 26,0 | 25 | 9,53 |
| T13R04M5 | 4  | M5  | 3  | 9,5  | 6,00  | 10 | 19,90 | 9,0  | 50 | 1,76 |
| T13R06M5 | 6  | M5  | 5  | 11,5 | 6,00  | 10 | 22,10 | 9,0  | 50 | 1,26 |



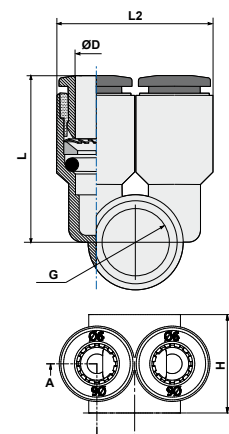
G\* = Stem thread. See page 88 of stem section.

ART. **T13B**

**Single branch body**



| COD.     | ØD | G*  | H  | L    | L2 |    |       |
|----------|----|-----|----|------|----|----|-------|
| T13B04M5 | 4  | M5  | 10 | 19,7 | 19 | 50 | 2,39  |
| T13B0618 | 6  | 1/8 | 15 | 24,6 | 23 | 50 | 4,40  |
| T13B0814 | 8  | 1/4 | 17 | 26,6 | 27 | 50 | 6,06  |
| T13B1038 | 10 | 3/8 | 20 | 30,2 | 34 | 25 | 9,88  |
| T13B1212 | 12 | 1/2 | 24 | 34,9 | 40 | 10 | 15,36 |



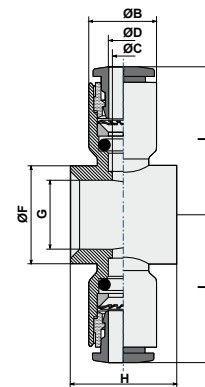
G\* = stem thread. See page 88 of stems section.  
H = stem site length

ART. **T14**

**Double banjo body**



| COD.    | ØD | G*  | ØC | ØB   | H  | ØF    | L    |    |       |
|---------|----|-----|----|------|----|-------|------|----|-------|
| T1404M5 | 4  | M5  | 3  | 9,5  | 10 | 8,00  | 19,5 | 50 | 2,24  |
| T140418 | 4  | 1/8 | 3  | 9,5  | 15 | 14,00 | 21,1 | 50 | 3,33  |
| T140618 | 6  | 1/8 | 5  | 11,5 | 15 | 14,00 | 24,3 | 50 | 5,10  |
| T140838 | 8  | 3/8 | 7  | 13,5 | 20 | 21,30 | 28,0 | 25 | 6,48  |
| T141038 | 10 | 3/8 | 9  | 17,0 | 20 | 21,30 | 29,9 | 25 | 8,89  |
| T141012 | 10 | 1/2 | 9  | 17,0 | 24 | 26,00 | 30,0 | 10 | 11,19 |
| T141238 | 12 | 3/8 | 10 | 20,0 | 20 | 21,30 | 31,4 | 25 | 11,57 |
| T141212 | 12 | 1/2 | 10 | 20,0 | 24 | 26,00 | 34,9 | 10 | 14,21 |



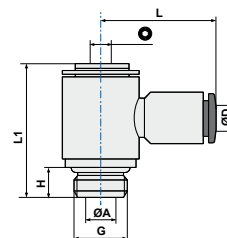
G\*= Stem thread. See page 88 of stem section.

ART. **T15**

**Complete single banjo (rotating under pressure)**



| COD.    | ØD | G   | ØA   | H   | L1   | L     | Ø   |    |       |
|---------|----|-----|------|-----|------|-------|-----|----|-------|
| T1504M5 | 4  | M5  | 2,0  | 4,0 | 17,8 | 19,65 | 2,5 | 50 | 3,54  |
| T1504M6 | 4  | M6  | 2,0  | 5,0 | 18,8 | 19,65 | 2,5 | 50 | 3,96  |
| T150418 | 4  | 1/8 | 5,5  | 5,5 | 24,5 | 21,25 | 3,0 | 50 | 11,87 |
| T150618 | 6  | 1/8 | 5,5  | 5,5 | 24,5 | 24,60 | 3,0 | 50 | 12,29 |
| T150614 | 6  | 1/4 | 7,8  | 6,5 | 27,8 | 25,80 | 4,0 | 50 | 22,36 |
| T150818 | 8  | 1/8 | 5,5  | 5,5 | 24,5 | 24,90 | 3,0 | 50 | 12,67 |
| T150814 | 8  | 1/4 | 7,8  | 6,5 | 27,8 | 26,60 | 4,0 | 50 | 21,89 |
| T150838 | 8  | 3/8 | 10,0 | 7,5 | 32,5 | 28,10 | 5,0 | 25 | 37,40 |
| T151014 | 10 | 1/4 | 7,8  | 6,5 | 27,8 | 28,70 | 4,0 | 25 | 23,86 |
| T151038 | 10 | 3/8 | 10,0 | 7,5 | 32,5 | 30,20 | 5,0 | 25 | 38,54 |
| T151012 | 10 | 1/2 | 12,0 | 9,0 | 38,8 | 33,20 | 8,0 | 10 | 37,55 |
| T151238 | 12 | 3/8 | 10,0 | 7,5 | 32,5 | 31,40 | 5,0 | 10 | 39,91 |
| T151212 | 12 | 1/2 | 12,0 | 9,0 | 38,8 | 34,90 | 8,0 | 10 | 44,50 |

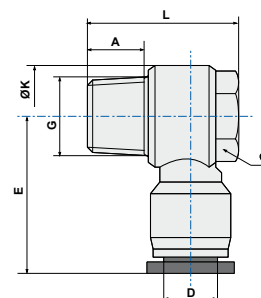


ART. **T15C**

**Complete single banjo tapered**



| COD.     | ØD | G   | A    | L    | ØK   | E     |      |    |       |
|----------|----|-----|------|------|------|-------|------|----|-------|
| T15C0418 | 4  | 1/8 | 7,5  | 23,5 | 14,4 | 22,40 | 12,0 | 50 | 12,22 |
| T15C0618 | 6  | 1/8 | 7,5  | 23,5 | 14,4 | 22,90 | 12,0 | 50 | 12,95 |
| T15C0614 | 6  | 1/4 | 9,5  | 26,5 | 18,3 | 25,00 | 14,0 | 50 | 21,03 |
| T15C0638 | 6  | 3/8 | 10,5 | 32,0 | 22,0 | 26,60 | 19,0 | 25 | 37,28 |
| T15C0818 | 8  | 1/8 | 7,5  | 23,5 | 14,4 | 25,60 | 12,0 | 50 | 13,66 |
| T15C0814 | 8  | 1/4 | 9,5  | 26,5 | 18,3 | 28,70 | 14,0 | 50 | 12,95 |
| T15C0838 | 8  | 3/8 | 10,5 | 32,0 | 22,0 | 29,60 | 19,0 | 25 | 37,97 |
| T15C1014 | 10 | 1/4 | 9,5  | 26,5 | 18,3 | 32,60 | 14,0 | 25 | 25,63 |
| T15C1038 | 10 | 3/8 | 10,5 | 32,0 | 22,0 | 33,10 | 19,0 | 25 | 13,66 |
| T15C1012 | 10 | 1/2 | 13,5 | 38,5 | 28,0 | 36,10 | 24,0 | 10 | 21,84 |
| T15C1238 | 12 | 3/8 | 10,5 | 32,0 | 22,0 | 35,40 | 19,0 | 10 | 37,98 |
| T15C1212 | 12 | 1/2 | 13,5 | 38,5 | 28,0 | 36,40 | 24,0 | 10 | 25,63 |

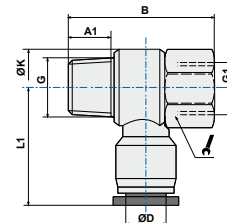


ART. **T15FC**

**Female complete single banjo tapered**



| COD.      | ØD | G/G1 | L1   | A1   | B    | ØK    |      |    |       |
|-----------|----|------|------|------|------|-------|------|----|-------|
| T15FC0418 | 4  | 1/8  | 22,4 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 16,26 |
| T15FC0414 | 4  | 1/4  | 25,0 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 29,78 |
| T15FC0618 | 6  | 1/8  | 22,9 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 16,81 |
| T15FC0614 | 6  | 1/4  | 25,0 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 29,62 |
| T15FC0818 | 8  | 1/8  | 25,6 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 17,68 |
| T15FC0814 | 8  | 1/4  | 28,7 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 30,66 |
| T15FC0838 | 8  | 3/8  | 29,6 | 10,5 | 40,0 | 22,00 | 21,0 | 25 | 46,70 |
| T15FC1014 | 10 | 1/4  | 32,6 | 9,5  | 35,0 | 18,30 | 17,0 | 25 | 33,97 |
| T15FC1038 | 10 | 3/8  | 33,1 | 10,5 | 40,0 | 22,00 | 21,0 | 25 | 49,53 |
| T15FC1012 | 10 | 1/2  | 36,1 | 13,5 | 47,5 | 28,00 | 24,0 | 10 | 67,13 |
| T15FC1238 | 12 | 3/8  | 35,4 | 10,5 | 40,0 | 22,00 | 21,0 | 10 | 51,20 |
| T15FC1212 | 12 | 1/2  | 36,4 | 13,5 | 47,5 | 28,00 | 24,0 | 10 | 69,13 |

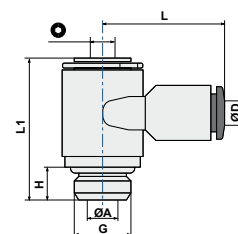


ART. **T15B**

**Single banjo universal male elbow**



| COD.     | ØD | G   | ØA   | H   | L1   | L    | Ø   |    |       |
|----------|----|-----|------|-----|------|------|-----|----|-------|
| T15B04M5 | 4  | M5  | 2,0  | 4,0 | 17,8 | 19,7 | 2,5 | 50 | 4,57  |
| T15B0618 | 6  | 1/8 | 5,5  | 5,5 | 24,5 | 24,6 | 3,0 | 50 | 13,73 |
| T15B0814 | 8  | 1/4 | 7,8  | 6,5 | 27,8 | 26,6 | 4,0 | 50 | 24,51 |
| T15B1038 | 10 | 3/8 | 10,0 | 7,5 | 32,5 | 30,2 | 5,0 | 25 | 44,78 |
| T15B1212 | 12 | 1/2 | 12,0 | 9,0 | 38,8 | 34,9 | 8,0 | 10 | 77,84 |

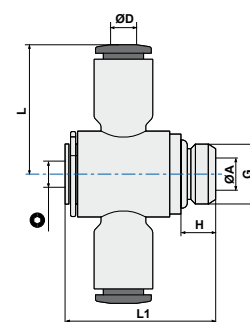


ART. **T16**

**Complete double banjo (rotating under pressure)**



| COD.    | ØD | G   | ØA  | H   | L1   | L    | Ø   |    |       |
|---------|----|-----|-----|-----|------|------|-----|----|-------|
| T1604M5 | 4  | M5  | 2   | 4,0 | 17,8 | 19,5 | 2,5 | 50 | 4,48  |
| T160418 | 4  | 1/8 | 5,5 | 5,5 | 24,5 | 21,1 | 3,0 | 50 | 55,00 |
| T160618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,3 | 3,0 | 50 | 38,55 |
| T160838 | 8  | 3/8 | 7,5 | 7,5 | 32,5 | 28,0 | 5,0 | 25 | 67,55 |
| T161038 | 10 | 3/8 | 7,5 | 7,5 | 32,5 | 30,0 | 5,0 | 25 | 48,90 |
| T161012 | 10 | 1/2 | 9,0 | 9,0 | 38,8 | 30,0 | 8,0 | 10 | 48,65 |
| T161238 | 12 | 3/8 | 7,5 | 7,5 | 32,5 | 31,5 | 5,0 | 25 | 44,10 |
| T161212 | 12 | 1/2 | 9,0 | 9,0 | 38,8 | 35,0 | 8,0 | 10 | 51,16 |

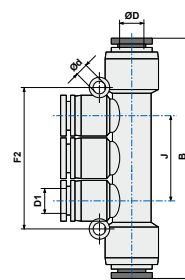


ART. **T18**

**Triple branch union**



| COD.    | ØD | ØD1 | J    | B    | Ød  | F2   |    |       |
|---------|----|-----|------|------|-----|------|----|-------|
| T180604 | 6  | 4   | 26,0 | 60,3 | 3,2 | 42,0 | 25 | 16,05 |
| T180804 | 8  | 4   | 26,0 | 61,7 | 3,2 | 42,0 | 25 | 15,89 |
| T180806 | 8  | 6   | 26,0 | 61,7 | 3,2 | 42,0 | 25 | 15,66 |
| T181006 | 10 | 6   | 29,2 | 83,0 | 4,2 | 48,0 | 10 | 27,15 |
| T181008 | 10 | 8   | 29,2 | 83,0 | 4,2 | 48,0 | 10 | 27,50 |

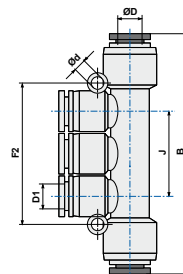


ART. **T18G**

**Male triple branch**



| COD.     | ØD | D1 | G   | A   | B     | J  |    | Ød  |    |        |
|----------|----|----|-----|-----|-------|----|----|-----|----|--------|
| T18G0418 | 4  | 4  | 1/8 | 5,5 | 67,2  | 26 | 14 | 3,2 | 25 | 25,26  |
| T18G0414 | 4  | 4  | 1/4 | 7,5 | 69,7  | 26 | 17 | 3,2 | 25 | 31,01  |
| T18G0438 | 4  | 4  | 3/8 | 7,5 | 69,7  | 26 | 20 | 3,2 | 10 | 152,50 |
| T18G0618 | 6  | 6  | 1/8 | 5,5 | 67,2  | 26 | 14 | 3,2 | 25 | 25,51  |
| T18G0614 | 6  | 6  | 1/4 | 7,5 | 69,7  | 26 | 17 | 3,2 | 25 | 30,52  |
| T18G0638 | 6  | 6  | 3/8 | 7,5 | 70,2  | 26 | 20 | 3,2 | 10 | 157,40 |
| T18G0612 | 6  | 6  | 1/2 | 9   | 72,7  | 26 | 24 | 3,2 | 10 | 207,40 |
| T18G0818 | 8  | 8  | 1/8 | 5,5 | 87,8  | 29 | 14 | 3,2 | 10 | 37,54  |
| T18G0814 | 8  | 8  | 1/4 | 7,5 | 90,3  | 29 | 17 | 3,2 | 10 | 41,48  |
| T18G0838 | 8  | 8  | 3/8 | 7,5 | 90,8  | 29 | 20 | 3,2 | 10 | 47,77  |
| T18G0812 | 8  | 8  | 1/2 | 9,0 | 93,3  | 29 | 24 | 3,2 | 10 | 259,20 |
| T18G1018 | 10 | 10 | 1/8 | 5,5 | 99,0  | 37 | 14 | 4,2 | 10 | 235,00 |
| T18G1014 | 10 | 10 | 1/4 | 7,5 | 101,5 | 37 | 17 | 4,2 | 10 | 58,26  |
| T18G1038 | 10 | 10 | 3/8 | 7,5 | 101,5 | 37 | 20 | 4,2 | 10 | 58,09  |
| T18G1012 | 10 | 10 | 1/2 | 9   | 105,0 | 37 | 24 | 4,2 | 10 | 293,00 |

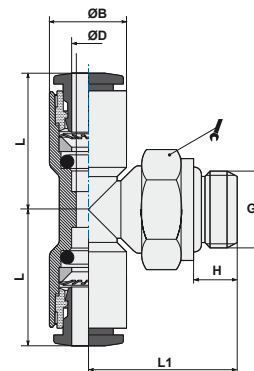


ART. **T20**

**Swivel male stud T parallel**



| COD.    | ØD | G   | ØB   | H    | L     | L1    |    |    |        |
|---------|----|-----|------|------|-------|-------|----|----|--------|
| T2004M3 | 4  | M3  | 9,5  | 3,0  | 17,35 | 15,00 | 8  | 50 | 4,53   |
| T2004M5 | 4  | M5  | 9,5  | 4,0  | 17,35 | 17,00 | 8  | 50 | 4,65   |
| T200418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 50 | 8,56   |
| T200414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 50 | 13,83  |
| T200438 | 4  | 3/8 | 11,0 | 7,5  | 18,60 | 28,50 | 20 | 25 | 25,42  |
| T2006M5 | 6  | M5  | 9,5  | 4,0  | 21,10 | 17,00 | 8  | 50 | 5,71   |
| T200618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,50 | 13 | 50 | 9,48   |
| T200614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 50 | 14,94  |
| T200638 | 6  | 3/8 | 13,0 | 7,5  | 19,60 | 29,50 | 20 | 25 | 28,36  |
| T200612 | 6  | 1/2 | 13,0 | 9,0  | 19,60 | 32,00 | 24 | 10 | 39,55  |
| T200818 | 8  | 1/8 | 13,5 | 5,5  | 23,10 | 20,00 | 13 | 50 | 10,64  |
| T200814 | 8  | 1/4 | 13,5 | 6,5  | 23,10 | 20,55 | 16 | 50 | 14,28  |
| T200838 | 8  | 3/8 | 13,5 | 7,5  | 23,10 | 25,00 | 18 | 25 | 21,66  |
| T200812 | 8  | 1/2 | 15,7 | 10,0 | 22,80 | 34,50 | 24 | 10 | 38,99  |
| T201018 | 10 | 1/8 | 18,4 | 5,5  | 28,50 | 34,50 | 17 | 25 | 38,40  |
| T201014 | 10 | 1/4 | 17,0 | 6,5  | 27,30 | 23,35 | 16 | 25 | 42,85  |
| T201038 | 10 | 3/8 | 18,4 | 7,5  | 28,50 | 37,00 | 20 | 25 | 20,74  |
| T201012 | 10 | 1/2 | 18,4 | 10,0 | 28,50 | 40,50 | 24 | 10 | 225,40 |
| T201218 | 12 | 1/8 | 21,0 | 5,5  | 29,40 | 36,00 | 21 | 10 | 49,05  |
| T201214 | 12 | 1/4 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 47,68  |
| T201238 | 12 | 3/8 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 49,46  |
| T201212 | 12 | 1/2 | 21,0 | 10,0 | 29,40 | 41,50 | 24 | 10 | 54,72  |



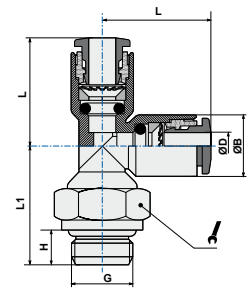


ART. **T21**

**Swivel male branch T (parallel)**



| COD.    | ØD | G   | ØB   | H    | L     | L1    |    |    |       |
|---------|----|-----|------|------|-------|-------|----|----|-------|
| T2104M3 | 4  | M3  | 9,5  | 3,0  | 17,35 | 14,80 | 8  | 50 | 4,52  |
| T2104M5 | 4  | M5  | 9,5  | 4,0  | 17,35 | 15,80 | 8  | 50 | 4,74  |
| T210418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 50 | 8,50  |
| T210414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 50 | 13,96 |
| T210438 | 4  | 3/8 | 11,0 | 7,5  | 18,60 | 28,50 | 20 | 25 | 25,42 |
| T210618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,35 | 13 | 50 | 9,71  |
| T210614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 50 | 14,85 |
| T210638 | 6  | 3/8 | 13,0 | 7,5  | 19,60 | 29,50 | 20 | 25 | 27,71 |
| T210612 | 6  | 1/2 | 13,0 | 10,0 | 19,60 | 32,00 | 24 | 10 | 36,70 |
| T210818 | 8  | 1/8 | 13,5 | 5,5  | 20,65 | 23,00 | 13 | 50 | 10,58 |
| T210814 | 8  | 1/4 | 13,5 | 6,5  | 23,00 | 20,55 | 16 | 50 | 13,97 |
| T210838 | 8  | 3/8 | 13,5 | 7,5  | 23,00 | 25,00 | 18 | 25 | 21,60 |
| T210812 | 8  | 1/2 | 14,5 | 10,0 | 22,80 | 34,50 | 24 | 10 | 38,56 |
| T211018 | 10 | 1/8 | 18,4 | 5,5  | 28,50 | 34,50 | 17 | 25 | 35,67 |
| T211014 | 10 | 1/4 | 18,4 | 7,5  | 28,50 | 37,00 | 17 | 25 | 36,23 |
| T211038 | 10 | 3/8 | 18,4 | 7,5  | 28,50 | 37,00 | 20 | 25 | 40,82 |
| T211012 | 10 | 1/2 | 18,4 | 10,0 | 28,50 | 40,50 | 24 | 10 | 51,01 |
| T211218 | 12 | 1/8 | 21,0 | 5,5  | 29,40 | 38,50 | 21 | 25 | 49,78 |
| T211214 | 12 | 1/4 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 48,31 |
| T211238 | 12 | 3/8 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 51,21 |
| T211212 | 12 | 1/2 | 21,0 | 10,0 | 29,40 | 41,50 | 24 | 10 | 55,38 |

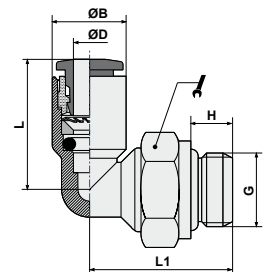


ART. **T22**

**Swivel elbow male adaptor (parallel)**



| COD.    | ØD | G   | ØB   | H    | L     | L1    |    |     |       |
|---------|----|-----|------|------|-------|-------|----|-----|-------|
| T2204M3 | 4  | M3  | 9,5  | 3    | 17,35 | 14,80 | 8  | 50  | 3,64  |
| T2204M5 | 4  | M5  | 9,5  | 4    | 17,35 | 15,80 | 8  | 100 | 3,80  |
| T220418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 100 | 7,77  |
| T220414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 100 | 13,12 |
| T2206M5 | 6  | M5  | 11,5 | 4,0  | 21,10 | 16,10 | 8  | 100 | 4,31  |
| T220618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,35 | 13 | 100 | 8,11  |
| T220614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 100 | 13,82 |
| T220818 | 8  | 1/8 | 13,5 | 5,5  | 23,10 | 20,65 | 13 | 100 | 8,93  |
| T220814 | 8  | 1/4 | 13,5 | 6,5  | 23,10 | 20,55 | 16 | 50  | 12,39 |
| T220838 | 8  | 3/8 | 13,5 | 7,5  | 23,10 | 25,20 | 18 | 50  | 19,93 |
| T220812 | 8  | 1/2 | 15,0 | 10,0 | 24,00 | 25,50 | 24 | 25  | 37,70 |
| T221014 | 10 | 1/4 | 17,0 | 6,5  | 26,70 | 23,35 | 16 | 50  | 14,40 |
| T221038 | 10 | 3/8 | 17,0 | 7,5  | 26,70 | 25,00 | 18 | 50  | 17,63 |
| T221012 | 10 | 1/2 | 17,0 | 9,0  | 26,70 | 29,30 | 21 | 25  | 29,73 |
| T221214 | 12 | 1/4 | 20,0 | 6,5  | 28,90 | 24,35 | 16 | 25  | 17,14 |
| T221238 | 12 | 3/8 | 20,0 | 7,5  | 28,90 | 26,50 | 18 | 25  | 20,51 |
| T221212 | 12 | 1/2 | 20,0 | 9,0  | 28,90 | 29,30 | 21 | 25  | 28,32 |
| T221638 | 16 | 3/8 | 26,5 | 7,5  | 33,00 | 42,50 | 24 | 10  | 66,02 |
| T221612 | 16 | 1/2 | 26,5 | 10,0 | 33,00 | 44,50 | 24 | 10  | 60,38 |

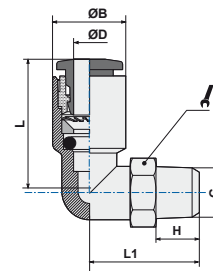


ART. **T22C**

**Swivel elbow male adaptor tapered**



| COD.     | ØD | G   | ØB   | H    | L    | L1   |    |     |       |
|----------|----|-----|------|------|------|------|----|-----|-------|
| T22C0418 | 4  | 1/8 | 11,0 | 7,5  | 19,0 | 20,5 | 10 | 100 | 6,67  |
| T22C0414 | 4  | 1/4 | 11,0 | 9,5  | 19,0 | 20,0 | 14 | 100 | 12,46 |
| T22C0438 | 4  | 3/8 | 11,0 | 10,5 | 19,0 | 21,0 | 17 | 25  | 19,82 |
| T22C0618 | 6  | 1/8 | 13,0 | 7,5  | 19,8 | 21,5 | 10 | 100 | 7,34  |
| T22C0614 | 6  | 1/4 | 13,0 | 9,5  | 19,8 | 21,0 | 14 | 100 | 13,02 |
| T22C0638 | 6  | 3/8 | 13,0 | 10,5 | 19,8 | 22,0 | 17 | 25  | 20,04 |
| T22C0612 | 6  | 1/2 | 13,0 | 13,5 | 19,8 | 25,5 | 21 | 10  | 34,22 |
| T22C0818 | 8  | 1/8 | 14,5 | 7,5  | 23,7 | 22,3 | 10 | 100 | 8,27  |
| T22C0814 | 8  | 1/4 | 14,5 | 9,5  | 23,7 | 21,8 | 14 | 100 | 13,94 |
| T22C0838 | 8  | 3/8 | 14,5 | 10,5 | 23,7 | 22,8 | 17 | 50  | 21,49 |
| T22C0812 | 8  | 1/2 | 14,5 | 13,5 | 23,7 | 26,3 | 21 | 10  | 35,12 |
| T22C1018 | 10 | 1/8 | 18,4 | 7,5  | 27,8 | 26,9 | 14 | 50  | 16,55 |
| T22C1014 | 10 | 1/4 | 18,4 | 9,5  | 27,8 | 28,4 | 14 | 50  | 18,45 |
| T22C1038 | 10 | 3/8 | 18,4 | 10,5 | 27,8 | 24,7 | 17 | 50  | 22,21 |
| T22C1012 | 10 | 1/2 | 19,0 | 13,5 | 27,8 | 28,2 | 21 | 25  | 35,70 |
| T22C1218 | 12 | 1/8 | 21,0 | 7,5  | 29,5 | 28,2 | 15 | 25  | 20,55 |
| T22C1214 | 12 | 1/4 | 21,0 | 9,5  | 29,5 | 29,7 | 15 | 25  | 22,32 |
| T22C1238 | 12 | 3/8 | 21,0 | 10,5 | 29,5 | 26,0 | 17 | 50  | 24,18 |
| T22C1212 | 12 | 1/2 | 21,0 | 13,5 | 29,5 | 29,5 | 21 | 25  | 35,40 |

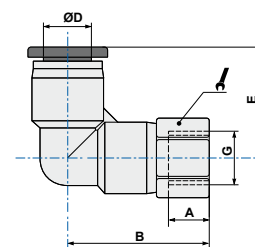


ART. **T22F**

**Female swivel elbow adaptor**



| COD.     | ØD | G   | A    | B    | E    |    |    |       |
|----------|----|-----|------|------|------|----|----|-------|
| T22F04M5 | 4  | M5  | 5,5  | 20,5 | 19,0 | 10 | 50 | 9,17  |
| T22F0418 | 4  | 1/8 | 8,5  | 24,0 | 19,0 | 14 | 50 | 14,80 |
| T22F0414 | 4  | 1/4 | 11,0 | 27,0 | 19,0 | 17 | 50 | 20,24 |
| T22F06M5 | 6  | M5  | 6,0  | 20,7 | 19,2 | 12 | 50 | 13,27 |
| T22F0618 | 6  | 1/8 | 8,5  | 24,2 | 19,2 | 14 | 50 | 16,85 |
| T22F0614 | 6  | 1/4 | 11,0 | 27,2 | 19,2 | 17 | 50 | 21,91 |
| T22F0638 | 6  | 3/8 | 12,0 | 28,7 | 19,2 | 21 | 25 | 26,37 |
| T22F0818 | 8  | 1/8 | 8,0  | 27,0 | 23,0 | 14 | 50 | 19,27 |
| T22F0814 | 8  | 1/4 | 11,0 | 30,5 | 23,0 | 17 | 50 | 23,47 |
| T22F0838 | 8  | 3/8 | 12,0 | 32,0 | 23,0 | 21 | 25 | 32,70 |
| T22F1014 | 10 | 1/4 | 11,0 | 34,3 | 28,2 | 17 | 25 | 34,59 |
| T22F1038 | 10 | 3/8 | 12,0 | 35,8 | 28,2 | 21 | 25 | 38,84 |
| T22F1012 | 10 | 1/2 | 14,0 | 38,8 | 28,2 | 24 | 10 | 47,77 |
| T22F1214 | 12 | 1/4 | 11,0 | 37,0 | 29,5 | 21 | 25 | 57,88 |
| T22F1238 | 12 | 3/8 | 12,0 | 38,0 | 29,5 | 21 | 25 | 45,98 |
| T22F1212 | 12 | 1/2 | 14,0 | 40,5 | 29,5 | 24 | 10 | 52,68 |

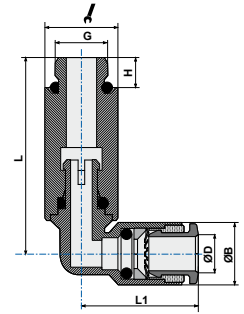


ART. **T22L**

**Swivel longer elbow male adaptor (parallel)**



| COD.     | ØD | G   | ØB   | H   | L    | L1   |    |    |       |
|----------|----|-----|------|-----|------|------|----|----|-------|
| T22L04M5 | 4  | M5  | 11,0 | 3,5 | 34,5 | 18,6 | 10 | 25 | 18,44 |
| T22L0418 | 4  | 1/8 | 9,5  | 5,5 | 35,9 | 17,4 | 13 | 25 | 23,78 |
| T22L06M5 | 6  | M5  | 13,0 | 3,5 | 37,2 | 19,6 | 12 | 25 | 24,07 |
| T22L0618 | 6  | 1/8 | 11,5 | 5,5 | 35,9 | 20,8 | 13 | 25 | 24,21 |
| T22L0818 | 8  | 1/8 | 13,5 | 5,5 | 38,2 | 23,1 | 13 | 25 | 25,17 |
| T22L0814 | 8  | 1/4 | 14,5 | 7,5 | 46,8 | 22,8 | 17 | 25 | 46,55 |

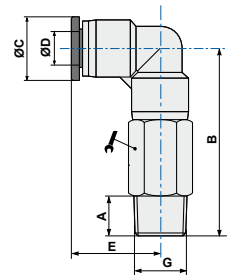


ART. **T22LC**

**Swivel longer elbow male adaptor (parallel)**



| COD.      | ØD | G   | A    | B    | ØC   | E    |    |    |        |
|-----------|----|-----|------|------|------|------|----|----|--------|
| T22LC0418 | 4  | 1/8 | 7,5  | 37,0 | 11,0 | 18,6 | 10 | 25 | 14,74  |
| T22LC0414 | 4  | 1/4 | 9,5  | 40,0 | 11,0 | 18,6 | 14 | 25 | 19,89  |
| T22LC0618 | 6  | 1/8 | 7,5  | 40,5 | 13,0 | 19,6 | 12 | 25 | 22,41  |
| T22LC0614 | 6  | 1/4 | 9,5  | 43,0 | 13,0 | 19,6 | 14 | 25 | 24,74  |
| T22LC0638 | 6  | 3/8 | 10,5 | 44,5 | 13,0 | 19,6 | 17 | 25 | 31,65  |
| T22LC0818 | 8  | 1/8 | 7,5  | 44,8 | 14,5 | 22,8 | 14 | 25 | 34,35  |
| T22LC0814 | 8  | 1/4 | 9,5  | 46,8 | 14,5 | 22,8 | 14 | 25 | 32,40  |
| T22LC0838 | 8  | 3/8 | 10,5 | 48,3 | 14,5 | 22,8 | 17 | 25 | 41,71  |
| T22LC1018 | 10 | 1/8 | 7,5  | 55,0 | 18,5 | 28,5 | 17 | 25 | 35,12  |
| T22LC1014 | 10 | 1/4 | 9,5  | 57,0 | 18,5 | 28,5 | 17 | 25 | 65,78  |
| T22LC1038 | 10 | 3/8 | 10,5 | 58,0 | 18,5 | 28,5 | 17 | 25 | 55,75  |
| T22LC1012 | 10 | 1/2 | 13,5 | 61,5 | 18,5 | 28,5 | 21 | 10 | 57,90  |
| T22LC1214 | 12 | 1/4 | 9,5  | 61,5 | 21,0 | 29,5 | 21 | 10 | 105,46 |
| T22LC1238 | 12 | 3/8 | 10,5 | 62,5 | 21,0 | 29,5 | 21 | 10 | 100,28 |
| T22LC1212 | 12 | 1/2 | 13,5 | 65,5 | 21,0 | 29,5 | 21 | 10 | 92,26  |

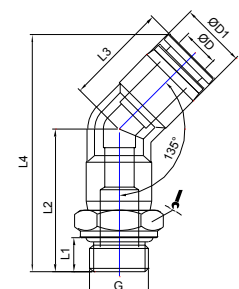


ART. **T45**

**Swivel 45° elbow male adaptor (parallel)**



| COD.    | ØD | G    | L1  | L2   | L3   | L4   | ØD1  |    |   |       |
|---------|----|------|-----|------|------|------|------|----|---|-------|
| T4504M5 | 4  | M5   | 3,5 | 22,5 | 19,0 | 39,5 | 11,3 | 10 | 1 | 8,37  |
| T450418 | 4  | G1/8 | 5,5 | 25,5 | 19   | 42,5 | 11,3 | 14 | 1 | 13,10 |
| T450618 | 6  | G1/8 | 5,5 | 25,5 | 19,2 | 43,5 | 13,3 | 14 | 1 | 14,16 |
| T450614 | 6  | G1/4 | 7,5 | 28   | 19,2 | 46   | 13,3 | 17 | 1 | 19,81 |
| T450818 | 8  | G1/8 | 5,5 | 29   | 22,5 | 49,5 | 14,8 | 14 | 1 | 17,60 |
| T450814 | 8  | G1/4 | 7,5 | 31,5 | 22,5 | 52   | 14,8 | 17 | 1 | 21,83 |
| T451014 | 10 | G1/4 | 7,5 | 36   | 27,8 | 62,5 | 18,7 | 17 | 1 | 30,80 |
| T451038 | 10 | G3/8 | 7,5 | 36   | 27,8 | 62,5 | 18,7 | 20 | 1 | 35,27 |



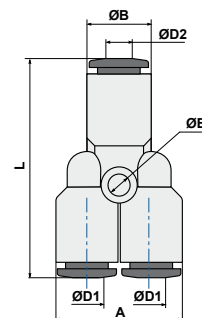


ART. **T23**

**Y connector**



| COD.    | ØD1 | ØD2 | ØE  | ØB   | A    | L    |    |       |
|---------|-----|-----|-----|------|------|------|----|-------|
| T230400 | 4   | 4   | 3,2 | 9,5  | 19,0 | 33,3 | 50 | 2,98  |
| T230406 | 4   | 6   | 3,2 | 11,5 | 19,0 | 36,2 | 50 | 3,56  |
| T230600 | 6   | 6   | 3,2 | 11,5 | 23,0 | 39,2 | 50 | 4,83  |
| T230608 | 6   | 8   | 3,2 | 13,5 | 23,0 | 42,7 | 50 | 5,26  |
| T230800 | 8   | 8   | 3,2 | 13,5 | 27,0 | 42,7 | 50 | 6,29  |
| T230810 | 8   | 10  | 3,2 | 17,0 | 27,0 | 49,0 | 25 | 7,84  |
| T231000 | 10  | 10  | 4,3 | 17,0 | 34,0 | 49,4 | 25 | 11,16 |
| T231012 | 10  | 12  | 4,3 | 20,0 | 34,0 | 50,8 | 10 | 14,12 |
| T231200 | 12  | 12  | 4,2 | 20,0 | 40,0 | 53,2 | 10 | 16,73 |
| T231600 | 16  | 16  | 4,2 | 26,0 | 51,5 | 58,5 | 10 | 41,27 |

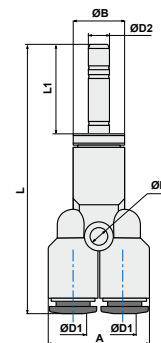


ART. **T23L0**

**Plug-in Y connector**



| COD.    | ØD1 | ØD2 | ØB   | A  | ØE  | L    | L1   |    |       |
|---------|-----|-----|------|----|-----|------|------|----|-------|
| T2304L0 | 4   | 4   | 9,5  | 19 | 3,2 | 50,0 | 16,7 | 50 | 6,69  |
| T2306L0 | 6   | 6   | 11,5 | 23 | 3,2 | 57,6 | 19,5 | 50 | 11,19 |
| T2308L0 | 8   | 8   | 13,5 | 27 | 3,2 | 62,6 | 21,0 | 50 | 15,24 |
| T2310L0 | 10  | 10  | 17,0 | 34 | 4,3 | 72,3 | 24,0 | 25 | 24,64 |
| T2312L0 | 12  | 12  | 20,0 | 40 | 4,2 | 77,1 | 25,0 | 10 | 33,95 |

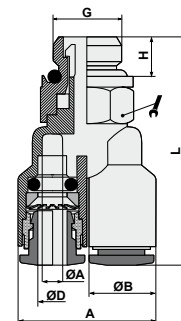


ART. **T23G**

**Y connector with swivel parallel male adapter**



| COD.     | ØD | G   | ØA  | ØB   | H    | A    | L    |    |    |       |
|----------|----|-----|-----|------|------|------|------|----|----|-------|
| T23G04M5 | 4  | M5  | 2,0 | 11,0 | 3,5  | 22,0 | 39,8 | 10 | 50 | 11,09 |
| T23G0418 | 4  | 1/8 | 3,0 | 9,5  | 5,5  | 19,0 | 31,8 | 13 | 50 | 8,57  |
| T23G0414 | 4  | 1/4 | 3,0 | 9,5  | 6,5  | 19,0 | 32,8 | 16 | 50 | 21,04 |
| T23G0438 | 4  | 3/8 | 3,0 | 11,0 | 7,5  | 22,0 | 46,0 | 20 | 25 | 26,95 |
| T23G0618 | 6  | 1/8 | 5,0 | 11,5 | 5,5  | 23,0 | 35,3 | 13 | 50 | 9,66  |
| T23G0614 | 6  | 1/4 | 5,0 | 11,5 | 6,5  | 23,0 | 36,8 | 16 | 50 | 15,12 |
| T23G0638 | 6  | 3/8 | 5,0 | 13,0 | 7,5  | 26,0 | 46,8 | 20 | 25 | 29,25 |
| T23G0818 | 8  | 1/8 | 7,0 | 13,5 | 5,5  | 27,0 | 37,8 | 13 | 50 | 10,71 |
| T23G0814 | 8  | 1/4 | 7,0 | 13,5 | 6,5  | 27,0 | 38,8 | 16 | 50 | 14,38 |
| T23G0838 | 8  | 3/8 | 6,2 | 14,5 | 7,5  | 29,0 | 49,9 | 20 | 25 | 31,11 |
| T23G1014 | 10 | 1/4 | 8,2 | 18,4 | 7,5  | 36,4 | 58,5 | 17 | 25 | 38,11 |
| T23G1038 | 10 | 3/8 | 8,2 | 18,4 | 7,5  | 36,4 | 58,5 | 20 | 25 | 41,81 |
| T23G1012 | 10 | 1/2 | 8,2 | 18,4 | 10,0 | 36,4 | 62,0 | 24 | 10 | 52,32 |
| T23G1214 | 12 | 1/4 | 9,5 | 21,0 | 7,5  | 42,0 | 62,0 | 21 | 10 | 57,62 |
| T23G1238 | 12 | 3/8 | 9,5 | 21,0 | 7,5  | 42,0 | 62,0 | 21 | 10 | 52,03 |
| T23G1212 | 12 | 1/2 | 9,5 | 21,0 | 10,0 | 42,0 | 65,0 | 24 | 10 | 58,58 |

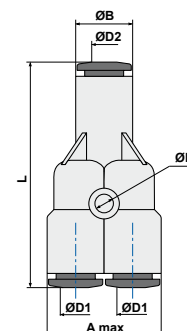


ART. **T24**

**Double Y connector**



| COD.    | ØD1 | ØD2 | ØE  | ØB   | A max | L    |    |       |
|---------|-----|-----|-----|------|-------|------|----|-------|
| T240400 | 4   | 4   | 3,2 | 9,5  | 20,0  | 34,8 | 25 | 5,97  |
| T240406 | 4   | 6   | 3,2 | 11,5 | 20,0  | 37,3 | 25 | 6,39  |
| T240408 | 4   | 8   | 3,2 | 14,5 | 22,0  | 38,4 | 25 | 12,89 |
| T240600 | 6   | 6   | 3,2 | 11,5 | 24,0  | 40,2 | 25 | 9,02  |
| T240608 | 6   | 8   | 3,2 | 14,5 | 26,0  | 39,9 | 25 | 16,81 |
| T240800 | 8   | 8   | 3,2 | 14,5 | 29,5  | 41,6 | 25 | 20,07 |
| T240810 | 8   | 10  | 3,2 | 17,0 | 28,0  | 46,8 | 25 | 13,99 |

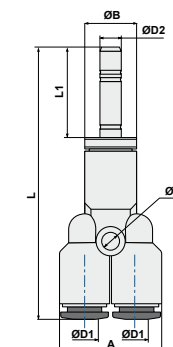


ART. **T24L0**

**Plug-in double Y connector**



| COD.    | ØD1 | ØD2 | ØE  | ØB   | A  | L    | L1   |    |       |
|---------|-----|-----|-----|------|----|------|------|----|-------|
| T2404L0 | 4   | 4   | 3,2 | 9,5  | 19 | 50,3 | 16,7 | 25 | 9,56  |
| T2406L0 | 6   | 6   | 3,2 | 11,5 | 24 | 59,0 | 19,5 | 25 | 14,15 |
| T2408L0 | 8   | 8   | 3,2 | 13,5 | 28 | 64,0 | 21,0 | 25 | 24,65 |

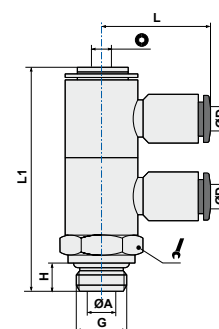


ART. **T33**

**Swivel double banjo stem**



| COD.    | ØD | G   | ØA  | H   | L1   | L    |     |    |    |       |
|---------|----|-----|-----|-----|------|------|-----|----|----|-------|
| T3304M5 | 4  | M5  | 2,0 | 4,0 | 28,0 | 19,7 | 2,5 | 14 | 25 | 5,88  |
| T330418 | 4  | 1/8 | 5,5 | 5,5 | 43,3 | 21,3 | 3   | 14 | 25 | 22,33 |
| T330618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,6 | 3   | 14 | 25 | 23,17 |
| T330614 | 6  | 1/4 | 7,8 | 6,5 | 50,0 | 25,8 | 4   | 18 | 25 | 42,26 |
| T330818 | 8  | 1/8 | 5,5 | 5,5 | 43,3 | 24,9 | 3   | 14 | 25 | 23,66 |
| T330814 | 8  | 1/4 | 7,8 | 6,5 | 50,0 | 26,6 | 4   | 18 | 25 | 44,98 |
| T331014 | 10 | 1/4 | 7,8 | 6,5 | 50,0 | 28,7 | 4   | 18 | 25 | 45,86 |

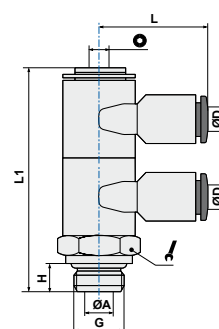


ART. **T33B**

**Double banjo universal male elbow**



| COD.     | ØD | G   | ØA  | H   | L1   | L    |     |    |    |       |
|----------|----|-----|-----|-----|------|------|-----|----|----|-------|
| T33B04M5 | 4  | M5  | 2,0 | 4,0 | 28,0 | 19,7 | 2,5 | 14 | 10 | 7,90  |
| T33B0618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,6 | 3   | 14 | 10 | 19,88 |
| T33B0814 | 8  | 1/4 | 7,8 | 6,5 | 50,0 | 26,6 | 4   | 18 | 10 | 48,50 |

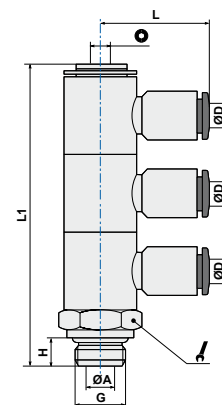


ART. **T34**

Swivel triple banjo stem



| COD.    | ØD | G   | ØA  | H   | L1   | L    | ⊙ | 🔧  | 📦  | 📊     |
|---------|----|-----|-----|-----|------|------|---|----|----|-------|
| T340418 | 4  | 1/8 | 5,5 | 5,5 | 58,4 | 21,3 | 3 | 14 | 10 | 28,50 |
| T340618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,6 | 3 | 14 | 10 | 30,06 |
| T340818 | 8  | 1/8 | 5,5 | 5,5 | 58,4 | 24,9 | 3 | 14 | 10 | 56,19 |
| T340614 | 6  | 1/4 | 7,8 | 6,5 | 67,1 | 25,8 | 4 | 18 | 10 | 30,58 |
| T340814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,6 | 4 | 18 | 10 | 56,63 |
| T341014 | 10 | 1/4 | 7,8 | 6,5 | 67,1 | 28,7 | 4 | 18 | 10 | 60,71 |

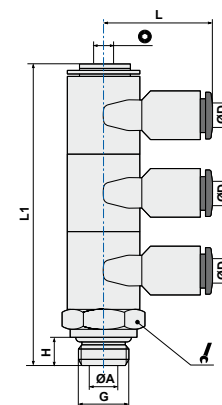


ART. **T34B**

Triple banjo universal male elbow



| COD.     | ØD | G   | ØA  | H   | L1   | L    | ⊙ | 🔧  | 📦  | 📊     |
|----------|----|-----|-----|-----|------|------|---|----|----|-------|
| T34B0618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,6 | 3 | 14 | 10 | 34,58 |
| T34B0814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,6 | 4 | 18 | 10 | 62,84 |

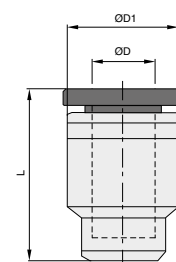


ART. **T90**

Tube blanking cap



| COD.    | ØD | ØD1  | L    | 📦   | 📊    |
|---------|----|------|------|-----|------|
| T900400 | 4  | 11,5 | 17,5 | 100 | 1,97 |
| T900600 | 6  | 13,5 | 17,7 | 100 | 2,56 |
| T900800 | 8  | 15   | 21,3 | 100 | 3,37 |
| T901000 | 10 | 19   | 25,0 | 50  | 6,84 |
| T901200 | 12 | 21,5 | 26,0 | 50  | 8,59 |

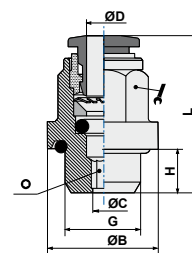


ART. **TB01**

**Straight male adaptor (parallel)**



| COD.     | ØD | G   | ØC  | ØB   | H   | L     | Ø  |     |    |      |
|----------|----|-----|-----|------|-----|-------|----|-----|----|------|
| TB010418 | 4  | 1/8 | 2,5 | 14,0 | 5,5 | 19,65 | 10 | 2,5 | 50 | 2,16 |
| TB010414 | 4  | 1/4 | 2,5 | 17,5 | 6,5 | 21,15 | 10 | 2,5 | 50 | 3,36 |
| TB010618 | 6  | 1/8 | 4,0 | 14,0 | 5,5 | 25,10 | 12 | 4,0 | 50 | 3,10 |
| TB010614 | 6  | 1/4 | 4,0 | 17,5 | 6,5 | 26,60 | 12 | 4,0 | 50 | 4,26 |
| TB010818 | 8  | 1/8 | 5,0 | 14,0 | 5,5 | 26,10 | 14 | 5,0 | 50 | 3,53 |
| TB010814 | 8  | 1/4 | 6,0 | 17,5 | 6,5 | 27,60 | 14 | 6,0 | 50 | 4,58 |
| TB011014 | 10 | 1/4 | 7,0 | 17,5 | 6,5 | 29,20 | 18 | 7,0 | 50 | 6,33 |

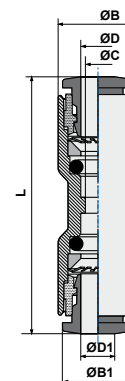


ART. **TB03**

**Straight connector**



| COD.     | ØD | ØD1 | ØC | ØB   | ØB1  | L     |    |      |
|----------|----|-----|----|------|------|-------|----|------|
| TB030400 | 4  | 4   | 3  | 9,5  | 9,5  | 32,30 | 50 | 1,96 |
| TB030406 | 4  | 6   | 3  | 9,5  | 11,5 | 34,25 | 50 | 2,39 |
| TB030600 | 6  | 6   | 5  | 11,5 | 11,5 | 36,70 | 50 | 3,00 |
| TB030608 | 6  | 8   | 5  | 11,5 | 13,5 | 37,70 | 50 | 3,27 |
| TB030800 | 8  | 8   | 7  | 13,5 | 13,5 | 38,20 | 50 | 3,53 |
| TB030810 | 8  | 10  | 7  | 13,5 | 17,0 | 40,75 | 50 | 5,03 |
| TB031000 | 10 | 10  | 9  | 17,0 | 17,0 | 42,90 | 50 | 6,04 |
| TB031012 | 10 | 12  | 9  | 17,0 | 20,0 | 44,50 | 50 | 5,04 |
| TB031200 | 12 | 12  | 10 | 20,0 | 20,0 | 46,20 | 25 | 9,06 |

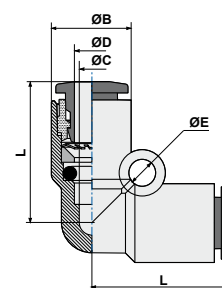


ART. **TB04**

**Elbow connector**



| COD.     | ØD | ØC | ØB   | L     | ØE   |    |       |
|----------|----|----|------|-------|------|----|-------|
| TB040400 | 4  | 3  | 9,5  | 17,35 | 3,20 | 50 | 2,21  |
| TB040600 | 6  | 5  | 11,5 | 21,10 | 3,20 | 50 | 3,28  |
| TB040800 | 8  | 7  | 13,5 | 23,10 | 3,20 | 50 | 4,14  |
| TB041000 | 12 | 10 | 20,0 | 28,90 | 4,20 | 25 | 10,98 |
| TB041200 | 12 | 10 | 20,0 | 28,90 | 4,20 | 25 | 10,98 |

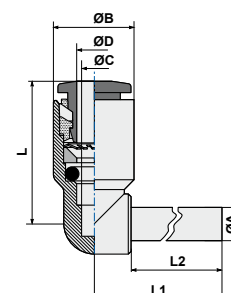


ART. **TB04LO**

**Plug-in elbow connector**



| COD.     | ØD | ØC | ØB   | L     | L1    | ØA | L2   |    |      |
|----------|----|----|------|-------|-------|----|------|----|------|
| TB0404LO | 4  | 3  | 9,5  | 17,35 | 20,75 | 4  | 16,7 | 50 | 1,39 |
| TB0406LO | 6  | 5  | 11,5 | 21,10 | 24,25 | 6  | 19,5 | 50 | 2,18 |
| TB0408LO | 8  | 7  | 13,5 | 23,10 | 27,25 | 8  | 21,0 | 50 | 2,96 |
| TB0410LO | 10 | 9  | 17,0 | 26,70 | 31,80 | 10 | 24,0 | 50 | 5,07 |
| TB0412LO | 12 | 10 | 20,0 | 28,90 | 36,00 | 12 | 25,0 | 25 | 8,00 |

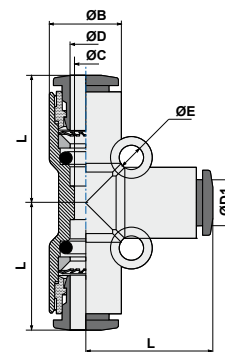


ART. **TB05**

**T connector**



| COD.     | ØD | ØD1 | ØC   | ØB    | L     | ØE  |    |       |
|----------|----|-----|------|-------|-------|-----|----|-------|
| TB050400 | 4  | 4   | 3,0  | 9,50  | 17,35 | 3,2 | 50 | 3,16  |
| TB050604 | 6  | 4   | 5,3  | 13,00 | 19,10 | 3,2 | 50 | 8,20  |
| TB050600 | 6  | 6   | 5,0  | 11,50 | 21,10 | 3,2 | 50 | 4,72  |
| TB050806 | 8  | 6   | 7,1  | 14,40 | 22,70 | 3,2 | 25 | 11,07 |
| TB050800 | 8  | 8   | 7,0  | 13,50 | 23,10 | 3,2 | 50 | 5,96  |
| TB051008 | 10 | 8   | 9,3  | 18,40 | 27,90 | 4,2 | 25 | 21,85 |
| TB051000 | 10 | 10  | 9,0  | 17,00 | 26,70 | 4,3 | 25 | 10,70 |
| TB051210 | 12 | 10  | 10,0 | 21,00 | 29,90 | 4,2 | 10 | 26,78 |
| TB051200 | 12 | 12  | 10,0 | 20,00 | 28,90 | 4,2 | 10 | 26,78 |

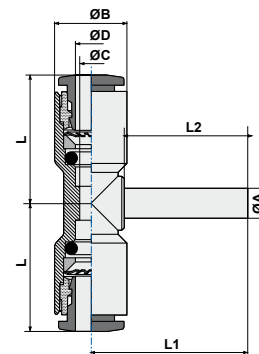


ART. **TB05LO**

**Plug-in T connector (center)**



| COD.     | ØD | ØC | ØB   | L    | L1   | ØA | L2   |    |      |
|----------|----|----|------|------|------|----|------|----|------|
| TB0504L0 | 4  | 3  | 9,5  | 17,2 | 20,8 | 4  | 16,7 | 50 | 2,26 |
| TB0506L0 | 6  | 5  | 11,5 | 20,8 | 24,3 | 6  | 19,5 | 50 | 3,51 |
| TB0508L0 | 8  | 7  | 13,5 | 23,0 | 27,3 | 8  | 21,0 | 50 | 4,66 |
| TB0510L0 | 10 | 9  | 17,0 | 26,4 | 31,8 | 10 | 24,0 | 25 | 5,64 |
| TB0512L0 | 12 | 10 | 20,0 | 28,9 | 36,0 | 12 | 25,0 | 10 | 7,11 |

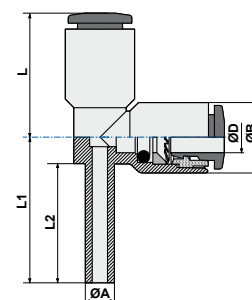


ART. **TB05V0**

**Plug-in T connector (lateral)**



| COD.     | ØD | ØB   | L    | L1   | ØA | L2   |    |      |
|----------|----|------|------|------|----|------|----|------|
| TB0506V0 | 6  | 11,5 | 20,8 | 24,3 | 6  | 19,5 | 50 | 3,42 |
| TB0508V0 | 8  | 13,5 | 23,0 | 27,3 | 8  | 21,0 | 50 | 4,54 |
| TB0510V0 | 10 | 17,0 | 26,4 | 31,8 | 10 | 24,0 | 25 | 7,65 |
| TB0512V0 | 12 | 20,0 | 28,9 | 36,0 | 12 | 25,0 | 10 | 8,10 |

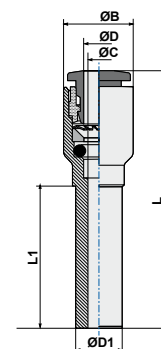


ART. **TB08**

**Reducer**



| COD.     | ØD1 | ØD | ØC | ØB   | L     | L1    |    |      |
|----------|-----|----|----|------|-------|-------|----|------|
| TB080604 | 6   | 4  | 3  | 9,5  | 35,65 | 19,50 | 50 | 1,37 |
| TB080804 | 8   | 4  | 3  | 9,5  | 37,15 | 21,00 | 50 | 1,60 |
| TB081004 | 10  | 4  | 3  | 9,5  | 40,15 | 24,00 | 25 | 1,97 |
| TB081204 | 12  | 4  | 3  | 9,5  | 41,15 | 25,00 | 25 | 2,22 |
| TB080806 | 8   | 6  | 5  | 11,5 | 39,35 | 23,00 | 50 | 2,10 |
| TB081006 | 10  | 6  | 5  | 11,5 | 42,35 | 24,00 | 25 | 2,49 |
| TB081206 | 12  | 6  | 5  | 11,5 | 43,35 | 25,00 | 25 | 2,80 |
| TB081008 | 10  | 8  | 7  | 13,5 | 43,10 | 26,25 | 25 | 2,74 |
| TB081208 | 12  | 8  | 7  | 13,5 | 44,10 | 25,00 | 25 | 3,00 |
| TB081210 | 12  | 10 | 9  | 17,0 | 46,45 | 27,55 | 25 | 4,40 |

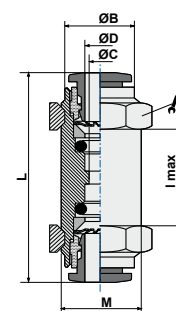


ART. **TB10**

**Bulkhead connector**



| COD.     | ØD | ØB   | ØC | L    | M    | Lmax |    |    |       |
|----------|----|------|----|------|------|------|----|----|-------|
| TB100400 | 4  | 9,5  | 3  | 32,0 | 11x1 | 8    | 14 | 50 | 7,78  |
| TB100600 | 6  | 11,5 | 5  | 36,1 | 14,1 | 12   | 17 | 50 | 11,05 |
| TB100800 | 8  | 13,5 | 7  | 38,0 | 16x1 | 15   | 18 | 50 | 10,93 |
| TB101000 | 10 | 17,5 | 9  | 42,3 | 20x1 | 17   | 24 | 25 | 25,34 |
| TB101200 | 12 | 20   | 10 | 46,2 | 22x1 | 20   | 26 | 25 | 33,12 |

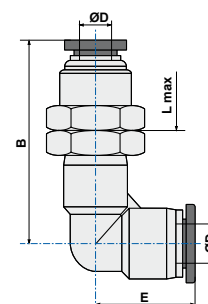


ART. **TB10L**

**L bulkhead**



| COD.      | ØD | M    | B    | E    | H    | Lmax |    |    |       |
|-----------|----|------|------|------|------|------|----|----|-------|
| TB10L0400 | 4  | 12x1 | 28,5 | 19,0 | 14,0 | 6,0  | 14 | 25 | 17,77 |
| TB10L0600 | 6  | 14x1 | 32,1 | 19,2 | 17,0 | 7,0  | 17 | 25 | 28,99 |
| TB10L0800 | 8  | 16x1 | 39,4 | 23,0 | 19,0 | 7,5  | 19 | 25 | 39,23 |
| TB10L1000 | 10 | 20x1 | 48,8 | 28,2 | 24,0 | 9,5  | 24 | 25 | 63,06 |
| TB10L1200 | 12 | 22x1 | 49,5 | 29,5 | 27,0 | 10,0 | 26 | 10 | 79,66 |

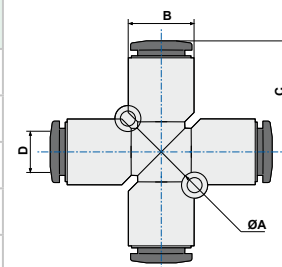


ART. **TB11**

**Cross connector**



| COD.     | ØD | ØB   | C    | ØA  |    |       |
|----------|----|------|------|-----|----|-------|
| TB110400 | 4  | 9,5  | 17,4 | 3,2 | 25 | 4,02  |
| TB110600 | 6  | 11,5 | 21,1 | 3,2 | 25 | 6,20  |
| TB110800 | 8  | 13,5 | 23,1 | 3,2 | 25 | 7,79  |
| TB111000 | 10 | 17,0 | 26,7 | 4,2 | 10 | 14,06 |
| TB111200 | 12 | 21,0 | 29,5 | 4,3 | 10 | 34,38 |

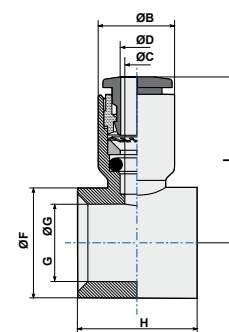


ART. **TB13**

**Single banjo body**



| COD.      | ØD | G*  | ØC | ØB   | ØG    | H  | L     | ØF   |    |      |
|-----------|----|-----|----|------|-------|----|-------|------|----|------|
| TB1304M5  | 4  | M5  | 3  | 9,5  | 5,00  | 10 | 19,65 | 8,0  | 50 | 1,33 |
| TB130418  | 4  | 1/8 | 3  | 9,5  | 9,90  | 15 | 21,25 | 14,0 | 50 | 2,37 |
| TB130618  | 6  | 1/8 | 5  | 11,5 | 9,90  | 15 | 24,60 | 14,0 | 50 | 2,85 |
| TB130614  | 6  | 1/4 | 5  | 11,5 | 13,30 | 17 | 25,80 | 18,0 | 50 | 3,77 |
| TB130818  | 8  | 1/8 | 7  | 13,5 | 9,90  | 15 | 24,90 | 14,0 | 50 | 3,09 |
| TB130814  | 8  | 1/4 | 7  | 13,5 | 13,30 | 17 | 26,60 | 18,0 | 50 | 3,95 |
| TB130838  | 8  | 3/8 | 7  | 13,5 | 16,75 | 20 | 28,10 | 21,3 | 50 | 4,89 |
| TB131014  | 10 | 1/4 | 9  | 17,0 | 13,30 | 17 | 28,70 | 18,0 | 50 | 5,36 |
| TB131038  | 10 | 3/8 | 9  | 17,0 | 16,75 | 20 | 30,20 | 21,3 | 25 | 6,22 |
| TB131012  | 10 | 1/2 | 9  | 17,0 | 13,30 | 24 | 33,20 | 26,0 | 25 | 6,78 |
| TB131238  | 12 | 3/8 | 10 | 20,0 | 16,75 | 20 | 31,40 | 21,3 | 25 | 7,51 |
| TB131212  | 12 | 1/2 | 10 | 20,0 | 21,00 | 24 | 34,90 | 26,0 | 25 | 9,53 |
| TB13R04M5 | 4  | M5  | 3  | 9,5  | 6,00  | 10 | 19,90 | 9,0  | 50 | 1,76 |
| TB13R06M5 | 6  | M5  | 5  | 11,5 | 6,00  | 10 | 22,10 | 9,0  | 50 | 1,26 |



G\* = Stem thread. See page 88 of stem section.

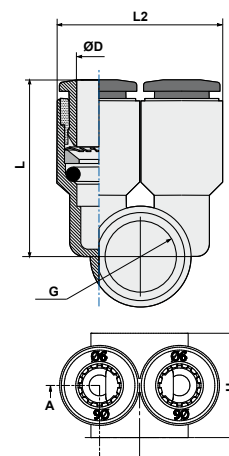
ART. **TB13B**

**Single branch body**



| COD.      | ØD | G*  | H  | L    | L2 |    |       |
|-----------|----|-----|----|------|----|----|-------|
| TB13B04M5 | 4  | M5  | 10 | 19,7 | 19 | 50 | 2,39  |
| TB13B0618 | 6  | 1/8 | 15 | 24,6 | 23 | 50 | 4,40  |
| TB13B0814 | 8  | 1/4 | 17 | 26,6 | 27 | 50 | 6,06  |
| TB13B1038 | 10 | 3/8 | 20 | 30,2 | 34 | 25 | 9,88  |
| TB13B1212 | 12 | 1/2 | 24 | 34,9 | 40 | 10 | 15,36 |

G\* = Stem thread. See page 88 of stem section.  
H = Stem size lenght



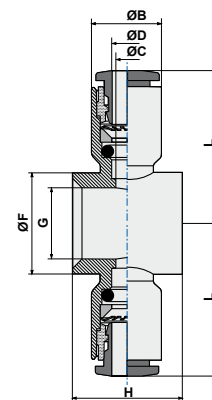
ART. **TB14**

**Double banjo body**



| COD.     | ØD | G*  | ØC | ØB   | H  | ØF    | L    |    |       |
|----------|----|-----|----|------|----|-------|------|----|-------|
| TB1404M5 | 4  | M5  | 3  | 9,5  | 10 | 8,00  | 19,5 | 50 | 2,24  |
| TB140418 | 4  | 1/8 | 3  | 9,5  | 15 | 14,00 | 21,1 | 50 | 3,33  |
| TB140618 | 6  | 1/8 | 5  | 11,5 | 15 | 14,00 | 24,3 | 50 | 5,10  |
| TB140838 | 8  | 3/8 | 7  | 13,5 | 20 | 21,30 | 28,0 | 25 | 6,48  |
| TB141038 | 10 | 3/8 | 9  | 17,0 | 20 | 21,30 | 29,9 | 25 | 8,89  |
| TB141012 | 10 | 1/2 | 9  | 17,0 | 24 | 26,00 | 30,0 | 10 | 11,19 |
| TB141238 | 12 | 3/8 | 10 | 20,0 | 20 | 21,30 | 31,4 | 25 | 11,57 |
| TB141212 | 12 | 1/2 | 10 | 20,0 | 24 | 26,00 | 34,9 | 10 | 14,21 |

G\* = Stem thread. See page 88 of stem section.

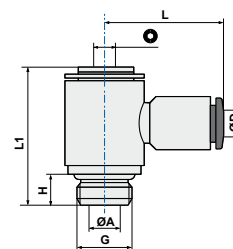


ART. **TB15**

**Complete single banjo (rotating under pressure)**

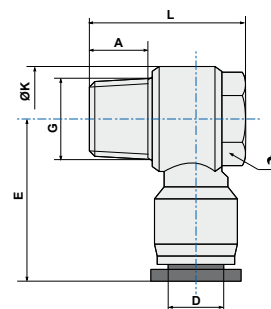


| COD.     | ØD | G   | ØA   | H   | L1   | L     | ○   |    |       |
|----------|----|-----|------|-----|------|-------|-----|----|-------|
| TB1504M5 | 4  | M5  | 2,0  | 4,0 | 17,8 | 19,65 | 2,5 | 50 | 3,54  |
| TB1504M6 | 4  | M6  | 2,0  | 5,0 | 18,8 | 19,65 | 2,5 | 50 | 3,96  |
| TB150418 | 4  | 1/8 | 5,5  | 5,5 | 24,5 | 21,25 | 3,0 | 50 | 11,87 |
| TB150618 | 6  | 1/8 | 5,5  | 5,5 | 24,5 | 24,60 | 3,0 | 50 | 12,29 |
| TB150614 | 6  | 1/4 | 7,8  | 6,5 | 27,8 | 25,80 | 4,0 | 50 | 22,36 |
| TB150818 | 8  | 1/8 | 5,5  | 5,5 | 24,5 | 24,90 | 3,0 | 50 | 12,67 |
| TB150814 | 8  | 1/4 | 7,8  | 6,5 | 27,8 | 26,60 | 4,0 | 50 | 21,89 |
| TB150838 | 8  | 3/8 | 10,0 | 7,5 | 32,5 | 28,10 | 5,0 | 25 | 37,40 |
| TB151014 | 10 | 1/4 | 7,8  | 6,5 | 27,8 | 28,70 | 4,0 | 25 | 23,86 |
| TB151038 | 10 | 3/8 | 10,0 | 7,5 | 32,5 | 30,20 | 5,0 | 25 | 38,54 |
| TB151012 | 10 | 1/2 | 12,0 | 9,0 | 38,8 | 33,20 | 8,0 | 10 | 37,55 |
| TB151238 | 12 | 3/8 | 10,0 | 7,5 | 32,5 | 31,40 | 5,0 | 10 | 39,91 |
| TB151212 | 12 | 1/2 | 12,0 | 9,0 | 38,8 | 34,90 | 8,0 | 10 | 44,50 |

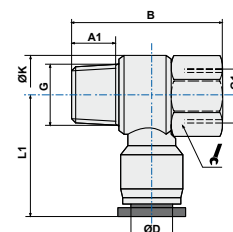


**ART. TB15C**
**Complete single banjo tapered**

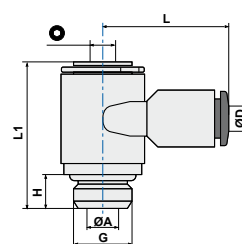

| COD.      | ØD | G   | A    | L    | ØK   | E     |      |    |       |
|-----------|----|-----|------|------|------|-------|------|----|-------|
| TB15C0418 | 4  | 1/8 | 7,5  | 23,5 | 14,4 | 22,40 | 12,0 | 50 | 12,22 |
| TB15C0618 | 6  | 1/8 | 7,5  | 23,5 | 14,4 | 22,90 | 12,0 | 50 | 12,95 |
| TB15C0614 | 6  | 1/4 | 9,5  | 26,5 | 18,3 | 25,00 | 14,0 | 50 | 21,03 |
| TB15C0638 | 6  | 3/8 | 10,5 | 32,0 | 22,0 | 26,60 | 19,0 | 25 | 37,28 |
| TB15C0818 | 8  | 1/8 | 7,5  | 23,5 | 14,4 | 25,60 | 12,0 | 50 | 13,66 |
| TB15C0814 | 8  | 1/4 | 9,5  | 26,5 | 18,3 | 28,70 | 14,0 | 50 | 21,84 |
| TB15C0838 | 8  | 3/8 | 10,5 | 32,0 | 22,0 | 29,60 | 19,0 | 25 | 37,98 |
| TB15C1014 | 10 | 1/4 | 9,5  | 26,5 | 18,3 | 32,60 | 14,0 | 25 | 25,63 |
| TB15C1038 | 10 | 3/8 | 10,5 | 32,0 | 22,0 | 33,10 | 19,0 | 25 | 41,63 |
| TB15C1012 | 10 | 1/2 | 13,5 | 38,5 | 28,0 | 36,10 | 24,0 | 10 | 65,27 |
| TB15C1238 | 12 | 3/8 | 10,5 | 32,0 | 22,0 | 35,40 | 19,0 | 10 | 43,92 |
| TB15C1212 | 12 | 1/2 | 13,5 | 38,5 | 28,0 | 36,40 | 24,0 | 10 | 67,49 |


**ART. TB15FC**
**Female complete single banjo tapered**


| COD.       | ØD | G/G1 | L1   | A1   | B    | ØK    |      |    |       |
|------------|----|------|------|------|------|-------|------|----|-------|
| TB15FC0418 | 4  | 1/8  | 22,4 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 16,26 |
| TB15FC0414 | 4  | 1/4  | 25,0 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 29,78 |
| TB15FC0618 | 6  | 1/8  | 22,9 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 16,81 |
| TB15FC0614 | 6  | 1/4  | 25,0 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 29,62 |
| TB15FC0818 | 8  | 1/8  | 25,6 | 7,5  | 29,0 | 14,40 | 14,0 | 50 | 17,68 |
| TB15FC0814 | 8  | 1/4  | 28,7 | 9,5  | 35,0 | 18,30 | 17,0 | 50 | 30,66 |
| TB15FC0838 | 8  | 3/8  | 29,6 | 10,5 | 40,0 | 22,00 | 21,0 | 25 | 46,70 |
| TB15FC1014 | 10 | 1/4  | 32,6 | 9,5  | 35,0 | 18,30 | 17,0 | 25 | 33,97 |
| TB15FC1038 | 10 | 3/8  | 33,1 | 10,5 | 40,0 | 22,00 | 21,0 | 25 | 49,53 |
| TB15FC1012 | 10 | 1/2  | 36,1 | 13,5 | 47,5 | 28,00 | 24,0 | 10 | 67,13 |
| TB15FC1238 | 12 | 3/8  | 35,4 | 10,5 | 40,0 | 22,00 | 21,0 | 10 | 51,20 |
| TB15FC1212 | 12 | 1/2  | 36,4 | 13,5 | 47,5 | 28,00 | 24,0 | 10 | 69,13 |


**ART. TB15B**
**Single banjo universal male elbow**


| COD.      | ØD | G   | ØA   | H   | L1   | L    |     |     |    |       |
|-----------|----|-----|------|-----|------|------|-----|-----|----|-------|
| TB15B04M5 | 4  | M5  | 2,0  | 4,0 | 17,8 | 19,7 | 2,5 | 2,5 | 50 | 4,57  |
| TB15B0618 | 6  | 1/8 | 5,5  | 5,5 | 24,5 | 24,6 | 3,0 | 3,0 | 50 | 13,73 |
| TB15B0814 | 8  | 1/4 | 7,8  | 6,5 | 27,8 | 26,6 | 4,0 | 4,0 | 50 | 24,51 |
| TB15B1038 | 10 | 3/8 | 10,0 | 7,5 | 32,5 | 30,2 | 5,0 | 5,0 | 25 | 44,78 |
| TB15B1212 | 12 | 1/2 | 12,0 | 9,0 | 38,8 | 34,9 | 8,0 | 8,0 | 10 | 77,84 |



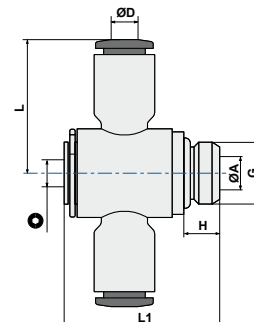


ART. **TB16**

**Complete double banjo (rotating under pressure)**



| COD.     | ØD | G*  | ØA  | H   | L1   | L    | ⊙   |    |       |
|----------|----|-----|-----|-----|------|------|-----|----|-------|
| TB1604M5 | 4  | M5  | 2   | 4,0 | 17,8 | 19,5 | 2,5 | 50 | 4,48  |
| TB160418 | 4  | 1/8 | 5,5 | 5,5 | 24,5 | 21,1 | 3,0 | 50 | 55,00 |
| TB160618 | 6  | 1/8 | 5,5 | 5,5 | 24,5 | 24,3 | 3,0 | 50 | 38,55 |
| TB160838 | 8  | 3/8 | 7,5 | 7,5 | 32,5 | 28,0 | 5,0 | 25 | 67,55 |
| TB161038 | 10 | 3/8 | 7,5 | 7,5 | 32,5 | 30,0 | 5,0 | 25 | 48,90 |
| TB161012 | 10 | 1/2 | 9,0 | 9,0 | 38,8 | 30,0 | 8,0 | 10 | 48,65 |
| TB161238 | 12 | 3/8 | 7,5 | 7,5 | 32,5 | 31,5 | 5,0 | 25 | 44,10 |
| TB161212 | 12 | 1/2 | 9,0 | 9,0 | 38,8 | 35,0 | 8,0 | 10 | 51,16 |

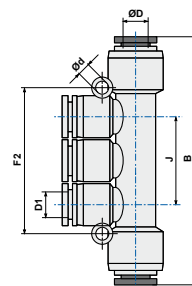


ART. **TB18**

**Triple branch union**



| COD.     | ØD | ØD1 | J    | B    | Ød  | F2   |    |       |
|----------|----|-----|------|------|-----|------|----|-------|
| TB180604 | 6  | 4   | 26,0 | 60,3 | 3,2 | 42,0 | 25 | 16,05 |
| TB180804 | 8  | 4   | 26,0 | 61,7 | 3,2 | 42,0 | 25 | 15,89 |
| TB180806 | 8  | 6   | 26,0 | 61,7 | 3,2 | 42,0 | 25 | 15,66 |
| TB181006 | 10 | 6   | 29,2 | 83,0 | 4,2 | 48,0 | 10 | 27,15 |
| TB181008 | 10 | 8   | 29,2 | 83,0 | 4,2 | 48,0 | 10 | 27,50 |

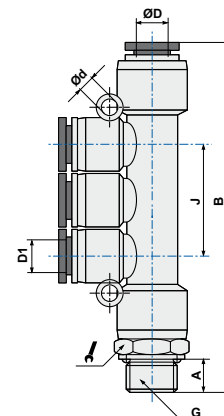


ART. **TB18G**

**Male triple branch**



| COD.      | ØD | D1 | G   | A   | B     | J  |    | Ød  |    |        |
|-----------|----|----|-----|-----|-------|----|----|-----|----|--------|
| TB18G0418 | 4  | 4  | 1/8 | 5,5 | 67,2  | 26 | 14 | 3,2 | 25 | 25,26  |
| TB18G0414 | 4  | 4  | 1/4 | 7,5 | 69,7  | 26 | 17 | 3,2 | 25 | 31,01  |
| TB18G0438 | 4  | 4  | 3/8 | 7,5 | 69,7  | 26 | 20 | 3,2 | 10 | 152,50 |
| TB18G0618 | 6  | 6  | 1/8 | 5,5 | 67,2  | 26 | 14 | 3,2 | 25 | 25,51  |
| TB18G0614 | 6  | 6  | 1/4 | 7,5 | 69,7  | 26 | 17 | 3,2 | 25 | 30,52  |
| TB18G0638 | 6  | 6  | 3/8 | 7,5 | 70,2  | 26 | 20 | 3,2 | 10 | 157,40 |
| TB18G0612 | 6  | 6  | 1/2 | 9   | 72,7  | 26 | 24 | 3,2 | 10 | 207,40 |
| TB18G0818 | 8  | 8  | 1/8 | 5,5 | 87,8  | 29 | 14 | 3,2 | 10 | 37,54  |
| TB18G0814 | 8  | 8  | 1/4 | 7,5 | 90,3  | 29 | 17 | 3,2 | 10 | 41,48  |
| TB18G0838 | 8  | 8  | 3/8 | 7,5 | 90,8  | 29 | 20 | 3,2 | 10 | 47,77  |
| TB18G0812 | 8  | 8  | 1/2 | 9,0 | 93,3  | 29 | 24 | 3,2 | 10 | 259,20 |
| TB18G1018 | 10 | 10 | 1/8 | 5,5 | 99,0  | 37 | 14 | 4,2 | 10 | 235,00 |
| TB18G1014 | 10 | 10 | 1/4 | 7,5 | 101,5 | 37 | 17 | 4,2 | 10 | 58,26  |
| TB18G1038 | 10 | 10 | 3/8 | 7,5 | 101,5 | 37 | 20 | 4,2 | 10 | 58,09  |
| TB18G1012 | 10 | 10 | 1/2 | 9   | 105,0 | 37 | 24 | 4,2 | 10 | 293,00 |

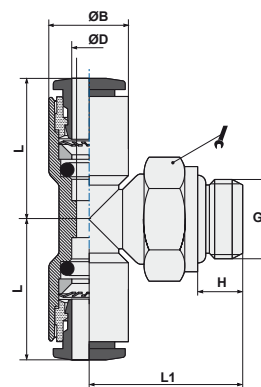


ART. **TB20**

**Swivel male stud T parallel**



| COD.     | ØD | G   | ØB   | H    | L     | L1    |    |    |        |
|----------|----|-----|------|------|-------|-------|----|----|--------|
| TB2004M3 | 4  | M3  | 9,5  | 3,0  | 17,35 | 15,00 | 8  | 50 | 4,53   |
| TB2004M5 | 4  | M5  | 9,5  | 4,0  | 17,35 | 17,00 | 8  | 50 | 4,65   |
| TB200418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 50 | 8,56   |
| TB200414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 50 | 13,83  |
| TB200438 | 4  | 3/8 | 11,0 | 7,5  | 18,60 | 28,50 | 20 | 25 | 25,42  |
| TB2006M5 | 6  | M5  | 9,5  | 4,0  | 21,10 | 17,00 | 8  | 50 | 5,71   |
| TB200618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,50 | 13 | 50 | 9,48   |
| TB200614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 50 | 14,94  |
| TB200638 | 6  | 3/8 | 13,0 | 7,5  | 19,60 | 29,50 | 20 | 25 | 28,36  |
| TB200612 | 6  | 1/2 | 13,0 | 9,0  | 19,60 | 32,00 | 24 | 10 | 39,55  |
| TB200818 | 8  | 1/8 | 13,5 | 5,5  | 23,10 | 20,00 | 13 | 50 | 10,64  |
| TB200814 | 8  | 1/4 | 13,5 | 6,5  | 23,10 | 20,55 | 16 | 50 | 14,28  |
| TB200838 | 8  | 3/8 | 13,5 | 7,5  | 23,10 | 25,00 | 18 | 25 | 21,66  |
| TB200812 | 8  | 1/2 | 15,7 | 10,0 | 22,80 | 34,50 | 24 | 10 | 38,99  |
| TB201018 | 10 | 1/8 | 18,4 | 5,5  | 28,50 | 34,50 | 17 | 25 | 38,40  |
| TB201014 | 10 | 1/4 | 17,0 | 6,5  | 27,30 | 23,35 | 16 | 25 | 42,85  |
| TB201038 | 10 | 3/8 | 18,4 | 7,5  | 28,50 | 37,00 | 20 | 25 | 20,74  |
| TB201012 | 10 | 1/2 | 18,4 | 10,0 | 28,50 | 40,50 | 24 | 10 | 225,40 |
| TB201218 | 12 | 1/8 | 21,0 | 5,5  | 29,40 | 36,00 | 21 | 10 | 49,05  |
| TB201214 | 12 | 1/4 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 47,68  |
| TB201238 | 12 | 3/8 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 49,46  |
| TB201212 | 12 | 1/2 | 21,0 | 10,0 | 29,40 | 41,50 | 24 | 10 | 54,72  |

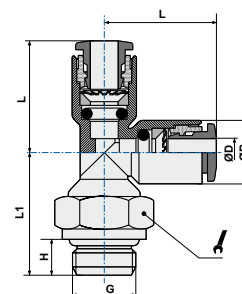


ART. **TB21**

**Swivel male branch T parallel**



| COD.     | ØD | G   | ØB   | H    | L     | L1    |    |    |       |
|----------|----|-----|------|------|-------|-------|----|----|-------|
| TB2104M3 | 4  | M3  | 9,5  | 3,0  | 17,35 | 14,80 | 8  | 50 | 4,52  |
| TB2104M5 | 4  | M5  | 9,5  | 4,0  | 17,35 | 15,80 | 8  | 50 | 4,74  |
| TB210418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 50 | 8,50  |
| TB210414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 50 | 13,96 |
| TB210438 | 4  | 3/8 | 11,0 | 7,5  | 18,60 | 28,50 | 20 | 25 | 25,42 |
| TB210618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,35 | 13 | 50 | 9,71  |
| TB210614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 50 | 14,85 |
| TB210638 | 6  | 3/8 | 13,0 | 7,5  | 19,60 | 29,50 | 20 | 25 | 27,71 |
| TB210612 | 6  | 1/2 | 13,0 | 10,0 | 19,60 | 32,00 | 24 | 10 | 36,70 |
| TB210818 | 8  | 1/8 | 13,5 | 5,5  | 20,65 | 23,00 | 13 | 50 | 10,58 |
| TB210814 | 8  | 1/4 | 13,5 | 6,5  | 23,00 | 20,55 | 16 | 50 | 13,97 |
| TB210838 | 8  | 3/8 | 13,5 | 7,5  | 23,00 | 25,00 | 18 | 25 | 21,60 |
| TB210812 | 8  | 1/2 | 14,5 | 10,0 | 22,80 | 34,50 | 24 | 10 | 38,56 |
| TB211018 | 10 | 1/8 | 18,4 | 5,5  | 28,50 | 34,50 | 17 | 25 | 35,67 |
| TB211014 | 10 | 1/4 | 18,4 | 7,5  | 28,50 | 37,00 | 17 | 25 | 36,23 |
| TB211038 | 10 | 3/8 | 18,4 | 7,5  | 28,50 | 37,00 | 20 | 25 | 40,82 |
| TB211012 | 10 | 1/2 | 18,4 | 10,0 | 28,50 | 40,50 | 24 | 10 | 51,01 |
| TB211218 | 12 | 1/8 | 21,0 | 5,5  | 29,40 | 38,50 | 21 | 25 | 49,78 |
| TB211214 | 12 | 1/4 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 48,31 |
| TB211238 | 12 | 3/8 | 21,0 | 7,5  | 29,40 | 38,50 | 21 | 10 | 51,21 |
| TB211212 | 12 | 1/2 | 21,0 | 10,0 | 29,40 | 41,50 | 24 | 10 | 55,38 |

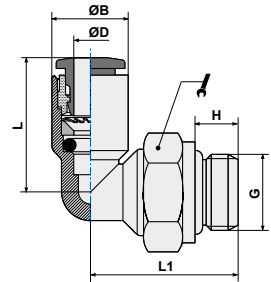


ART. **TB22**

**Swivel elbow male adaptor parallel**



| COD.     | ØD | G   | ØB   | H    | L     | L1    |    |     |       |
|----------|----|-----|------|------|-------|-------|----|-----|-------|
| TB2204M3 | 4  | M3  | 9,5  | 3    | 17,35 | 14,80 | 8  | 50  | 3,64  |
| TB2204M5 | 4  | M5  | 9,5  | 4    | 17,35 | 15,80 | 8  | 100 | 3,80  |
| TB220418 | 4  | 1/8 | 9,5  | 5,5  | 17,35 | 18,35 | 13 | 100 | 7,77  |
| TB220414 | 4  | 1/4 | 9,5  | 6,5  | 17,35 | 20,55 | 16 | 100 | 13,12 |
| TB2206M5 | 6  | M5  | 11,5 | 4,0  | 21,10 | 16,10 | 8  | 100 | 4,31  |
| TB220618 | 6  | 1/8 | 11,5 | 5,5  | 21,10 | 18,35 | 13 | 100 | 8,11  |
| TB220614 | 6  | 1/4 | 11,5 | 6,5  | 21,10 | 20,55 | 16 | 100 | 13,82 |
| TB220818 | 8  | 1/8 | 13,5 | 5,5  | 23,10 | 20,65 | 13 | 100 | 8,93  |
| TB220814 | 8  | 1/4 | 13,5 | 6,5  | 23,10 | 20,55 | 16 | 50  | 12,39 |
| TB220838 | 8  | 3/8 | 13,5 | 7,5  | 23,10 | 25,20 | 18 | 50  | 19,93 |
| TB220812 | 8  | 1/2 | 15,0 | 10,0 | 24,00 | 25,50 | 24 | 25  | 37,70 |
| TB221014 | 10 | 1/4 | 17,0 | 6,5  | 26,70 | 23,35 | 16 | 50  | 14,40 |
| TB221038 | 10 | 3/8 | 17,0 | 7,5  | 26,70 | 25,00 | 18 | 50  | 17,63 |
| TB221012 | 10 | 1/2 | 17,0 | 9,0  | 26,70 | 29,30 | 21 | 25  | 29,73 |
| TB221214 | 12 | 1/4 | 20,0 | 6,5  | 28,90 | 24,35 | 16 | 25  | 17,14 |
| TB221238 | 12 | 3/8 | 20,0 | 7,5  | 28,90 | 26,50 | 18 | 25  | 20,51 |
| TB221212 | 12 | 1/2 | 20,0 | 9,0  | 28,90 | 29,30 | 21 | 25  | 28,32 |

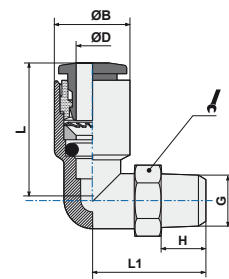


ART. **TB22C**

**Swivel elbow male adaptor tapered**



| COD.      | ØD | G   | ØB   | H    | L    | L1   |    |     |       |
|-----------|----|-----|------|------|------|------|----|-----|-------|
| TB22C0418 | 4  | 1/8 | 11,0 | 7,5  | 19,0 | 20,5 | 10 | 100 | 6,67  |
| TB22C0414 | 4  | 1/4 | 11,0 | 9,5  | 19,0 | 20,0 | 14 | 100 | 12,46 |
| TB22C0438 | 4  | 3/8 | 11,0 | 10,5 | 19,0 | 21,0 | 17 | 25  | 19,82 |
| TB22C0618 | 6  | 1/8 | 13,0 | 7,5  | 19,8 | 21,5 | 10 | 100 | 7,34  |
| TB22C0614 | 6  | 1/4 | 13,0 | 9,5  | 19,8 | 21,0 | 14 | 100 | 13,02 |
| TB22C0638 | 6  | 3/8 | 13,0 | 10,5 | 19,8 | 22,0 | 17 | 25  | 20,04 |
| TB22C0612 | 6  | 1/2 | 13,0 | 13,5 | 19,8 | 25,5 | 21 | 10  | 34,22 |
| TB22C0818 | 8  | 1/8 | 14,5 | 7,5  | 23,7 | 22,3 | 10 | 100 | 8,27  |
| TB22C0814 | 8  | 1/4 | 14,5 | 9,5  | 23,7 | 21,8 | 14 | 100 | 13,94 |
| TB22C0838 | 8  | 3/8 | 14,5 | 10,5 | 23,7 | 22,8 | 17 | 50  | 21,49 |
| TB22C0812 | 8  | 1/2 | 14,5 | 13,5 | 23,7 | 26,3 | 21 | 10  | 35,12 |
| TB22C1018 | 10 | 1/8 | 18,4 | 7,5  | 27,8 | 26,9 | 14 | 50  | 16,55 |
| TB22C1014 | 10 | 1/4 | 18,4 | 9,5  | 27,8 | 28,4 | 14 | 50  | 18,45 |
| TB22C1038 | 10 | 3/8 | 18,4 | 10,5 | 27,8 | 24,7 | 17 | 50  | 22,21 |
| TB22C1012 | 10 | 1/2 | 19,0 | 13,5 | 27,8 | 28,2 | 21 | 25  | 35,70 |
| TB22C1218 | 12 | 1/8 | 21,0 | 7,5  | 29,5 | 28,2 | 15 | 25  | 20,55 |
| TB22C1214 | 12 | 1/4 | 21,0 | 9,5  | 29,5 | 29,7 | 15 | 25  | 22,32 |
| TB22C1238 | 12 | 3/8 | 21,0 | 10,5 | 29,5 | 26,0 | 17 | 50  | 24,18 |
| TB22C1212 | 12 | 1/2 | 21,0 | 13,5 | 29,5 | 29,5 | 21 | 25  | 35,40 |

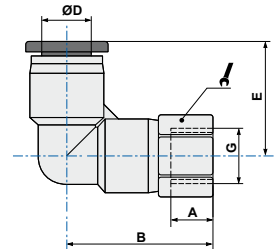


ART. **TB22F**

**Female swivel elbow adaptor**



| COD.      | ØD | G   | A    | B    | E    |    |    |       |
|-----------|----|-----|------|------|------|----|----|-------|
| TB22F04M5 | 4  | M5  | 5,5  | 20,5 | 19,0 | 10 | 50 | 9,17  |
| TB22F0418 | 4  | 1/8 | 8,5  | 24,0 | 19,0 | 14 | 50 | 14,80 |
| TB22F0414 | 4  | 1/4 | 11,0 | 27,0 | 19,0 | 17 | 50 | 20,24 |
| TB22F06M5 | 6  | M5  | 6,0  | 20,7 | 19,2 | 12 | 50 | 13,27 |
| TB22F0618 | 6  | 1/8 | 8,5  | 24,2 | 19,2 | 14 | 50 | 16,85 |
| TB22F0614 | 6  | 1/4 | 11,0 | 27,2 | 19,2 | 17 | 50 | 21,91 |
| TB22F0638 | 6  | 3/8 | 12,0 | 28,7 | 19,2 | 21 | 25 | 26,37 |
| TB22F0818 | 8  | 1/8 | 8,0  | 27,0 | 23,0 | 14 | 50 | 19,27 |
| TB22F0814 | 8  | 1/4 | 11,0 | 30,5 | 23,0 | 17 | 50 | 23,47 |
| TB22F0838 | 8  | 3/8 | 12,0 | 32,0 | 23,0 | 21 | 25 | 32,70 |
| TB22F1014 | 10 | 1/4 | 11,0 | 34,3 | 28,2 | 17 | 25 | 34,59 |
| TB22F1038 | 10 | 3/8 | 12,0 | 35,8 | 28,2 | 21 | 25 | 38,84 |
| TB22F1012 | 10 | 1/2 | 14,0 | 38,8 | 28,2 | 24 | 10 | 47,77 |
| TB22F1214 | 12 | 1/4 | 11,0 | 37,0 | 29,5 | 21 | 25 | 57,88 |
| TB22F1238 | 12 | 3/8 | 12,0 | 38,0 | 29,5 | 21 | 25 | 45,98 |
| TB22F1212 | 12 | 1/2 | 14,0 | 40,5 | 29,5 | 24 | 10 | 52,68 |

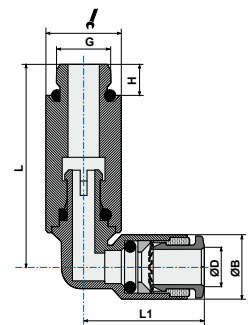


ART. **TB22L**

**Swivel longer elbow male adaptor parallel**



| COD.      | ØD | G   | ØB   | H   | L    | L1   |    |    |       |
|-----------|----|-----|------|-----|------|------|----|----|-------|
| TB22L04M5 | 4  | M5  | 11,0 | 3,5 | 34,5 | 18,6 | 10 | 25 | 18,44 |
| TB22L0418 | 4  | 1/8 | 9,5  | 5,5 | 35,9 | 17,4 | 13 | 25 | 23,78 |
| TB22L06M5 | 6  | M5  | 13,0 | 3,5 | 37,2 | 19,6 | 12 | 25 | 24,07 |
| TB22L0618 | 6  | 1/8 | 11,5 | 5,5 | 35,9 | 20,8 | 13 | 25 | 24,21 |
| TB22L0818 | 8  | 1/8 | 13,5 | 5,5 | 38,2 | 23,1 | 13 | 25 | 25,17 |
| TB22L0814 | 8  | 1/4 | 14,5 | 7,5 | 46,8 | 22,8 | 17 | 25 | 46,55 |

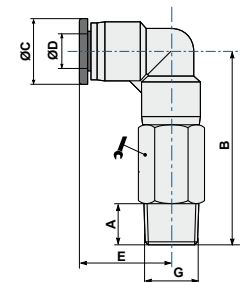


ART. **TB22LC**

**Swivel longer elbow male adaptor parallel**



| COD.       | ØD | G   | A    | B    | ØC   | E    |    |    |        |
|------------|----|-----|------|------|------|------|----|----|--------|
| TB22LC0418 | 4  | 1/8 | 7,5  | 37,0 | 11,0 | 18,6 | 10 | 25 | 14,74  |
| TB22LC0414 | 4  | 1/4 | 9,5  | 40,0 | 11,0 | 18,6 | 14 | 25 | 19,89  |
| TB22LC0618 | 6  | 1/8 | 7,5  | 40,5 | 13,0 | 19,6 | 12 | 25 | 22,41  |
| TB22LC0614 | 6  | 1/4 | 9,5  | 43,0 | 13,0 | 19,6 | 14 | 25 | 24,74  |
| TB22LC0638 | 6  | 3/8 | 10,5 | 44,5 | 13,0 | 19,6 | 17 | 25 | 31,65  |
| TB22LC0818 | 8  | 1/8 | 7,5  | 44,8 | 14,5 | 22,8 | 14 | 25 | 34,35  |
| TB22LC0814 | 8  | 1/4 | 9,5  | 46,8 | 14,5 | 22,8 | 14 | 25 | 32,40  |
| TB22LC0838 | 8  | 3/8 | 10,5 | 48,3 | 14,5 | 22,8 | 17 | 25 | 41,71  |
| TB22LC1018 | 10 | 1/8 | 7,5  | 55,0 | 18,5 | 28,5 | 17 | 25 | 35,12  |
| TB22LC1014 | 10 | 1/4 | 9,5  | 57,0 | 18,5 | 28,5 | 17 | 25 | 65,78  |
| TB22LC1038 | 10 | 3/8 | 10,5 | 58,0 | 18,5 | 28,5 | 17 | 25 | 55,75  |
| TB22LC1012 | 10 | 1/2 | 13,5 | 61,5 | 18,5 | 28,5 | 21 | 10 | 57,90  |
| TB22LC1214 | 12 | 1/4 | 9,5  | 61,5 | 21,0 | 29,5 | 21 | 10 | 105,46 |
| TB22LC1238 | 12 | 3/8 | 10,5 | 62,5 | 21,0 | 29,5 | 21 | 10 | 100,28 |
| TB22LC1212 | 12 | 1/2 | 13,5 | 65,5 | 21,0 | 29,5 | 21 | 10 | 92,26  |

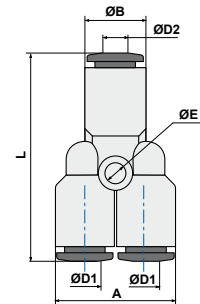


ART. **TB23**

**Y connector**



| COD.     | ØD1 | ØD2 | ØE  | ØB   | A    | L    |    |       |
|----------|-----|-----|-----|------|------|------|----|-------|
| TB230400 | 4   | 4   | 3,2 | 9,5  | 19,0 | 33,3 | 50 | 2,98  |
| TB230406 | 4   | 6   | 3,2 | 11,5 | 19,0 | 36,2 | 50 | 3,56  |
| TB230600 | 6   | 6   | 3,2 | 11,5 | 23,0 | 39,2 | 50 | 4,83  |
| TB230608 | 6   | 8   | 3,2 | 13,5 | 23,0 | 42,7 | 50 | 5,26  |
| TB230800 | 8   | 8   | 3,2 | 13,5 | 27,0 | 42,7 | 50 | 6,29  |
| TB230810 | 8   | 10  | 3,2 | 17,0 | 27,0 | 49,0 | 25 | 7,84  |
| TB231000 | 10  | 10  | 4,3 | 17,0 | 34,0 | 49,4 | 25 | 11,16 |
| TB231012 | 10  | 12  | 4,3 | 20,0 | 34,0 | 50,8 | 10 | 14,12 |
| TB231200 | 12  | 12  | 4,2 | 20,0 | 40,0 | 53,2 | 10 | 16,73 |

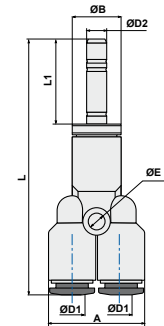


ART. **TB23L0**

**Plug-in Y connector**



| COD.     | ØD1 | ØD2 | ØB   | A  | ØE  | L    | L1   |    |       |
|----------|-----|-----|------|----|-----|------|------|----|-------|
| TB2304L0 | 4   | 4   | 9,5  | 19 | 3,2 | 50,0 | 16,7 | 50 | 6,69  |
| TB2306L0 | 6   | 6   | 11,5 | 23 | 3,2 | 57,6 | 19,5 | 50 | 11,19 |
| TB2308L0 | 8   | 8   | 13,5 | 27 | 3,2 | 62,6 | 21,0 | 50 | 15,24 |
| TB2310L0 | 10  | 10  | 17,0 | 34 | 4,3 | 72,3 | 24,0 | 25 | 24,64 |
| TB2312L0 | 12  | 12  | 20,0 | 40 | 4,2 | 77,1 | 25,0 | 10 | 33,95 |

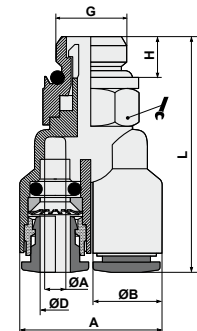


ART. **TB23G**

**Y connector with swivel parallel male adapter**



| COD.      | ØD | G   | ØA  | ØB   | H    | A    | L    |    |    |       |
|-----------|----|-----|-----|------|------|------|------|----|----|-------|
| TB23G04M5 | 4  | M5  | 2,0 | 11,0 | 3,5  | 22,0 | 39,8 | 10 | 50 | 11,09 |
| TB23G0418 | 4  | 1/8 | 3,0 | 9,5  | 5,5  | 19,0 | 31,8 | 13 | 50 | 8,57  |
| TB23G0414 | 4  | 1/4 | 3,0 | 9,5  | 6,5  | 19,0 | 32,8 | 16 | 50 | 21,04 |
| TB23G0438 | 4  | 3/8 | 3,0 | 11,0 | 7,5  | 22,0 | 46,0 | 20 | 25 | 26,95 |
| TB23G0618 | 6  | 1/8 | 5,0 | 11,5 | 5,5  | 23,0 | 35,3 | 13 | 50 | 9,66  |
| TB23G0614 | 6  | 1/4 | 5,0 | 11,5 | 6,5  | 23,0 | 36,8 | 16 | 50 | 15,12 |
| TB23G0638 | 6  | 3/8 | 5,0 | 13,0 | 7,5  | 26,0 | 46,8 | 20 | 25 | 29,25 |
| TB23G0818 | 8  | 1/8 | 7,0 | 13,5 | 5,5  | 27,0 | 37,8 | 13 | 50 | 10,71 |
| TB23G0814 | 8  | 1/4 | 7,0 | 13,5 | 6,5  | 27,0 | 38,8 | 16 | 50 | 14,38 |
| TB23G0838 | 8  | 3/8 | 6,2 | 14,5 | 7,5  | 29,0 | 49,9 | 20 | 25 | 31,11 |
| TB23G1014 | 10 | 1/4 | 8,2 | 18,4 | 7,5  | 36,4 | 58,5 | 17 | 25 | 38,11 |
| TB23G1038 | 10 | 3/8 | 8,2 | 18,4 | 7,5  | 36,4 | 58,5 | 20 | 25 | 41,81 |
| TB23G1012 | 10 | 1/2 | 8,2 | 18,4 | 10,0 | 36,4 | 62,0 | 24 | 10 | 52,32 |
| TB23G1214 | 12 | 1/4 | 9,5 | 21,0 | 7,5  | 42,0 | 62,0 | 21 | 10 | 57,62 |
| TB23G1238 | 12 | 3/8 | 9,5 | 21,0 | 7,5  | 42,0 | 62,0 | 21 | 10 | 52,03 |
| TB23G1212 | 12 | 1/2 | 9,5 | 21,0 | 10,0 | 42,0 | 65,0 | 24 | 10 | 58,58 |

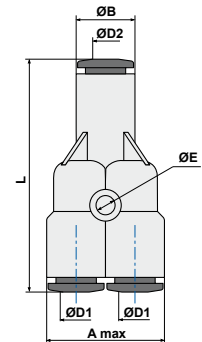


ART. **TB24**

**Double Y connector**



| COD.     | ØD1 | ØD2 | ØE  | ØB   | Amax | L    |    |       |
|----------|-----|-----|-----|------|------|------|----|-------|
| TB240400 | 4   | 4   | 3,2 | 9,5  | 20,0 | 34,8 | 25 | 5,97  |
| TB240406 | 4   | 6   | 3,2 | 11,5 | 20,0 | 37,3 | 25 | 6,39  |
| TB240408 | 4   | 8   | 3,2 | 14,5 | 22,0 | 38,4 | 25 | 12,89 |
| TB240600 | 6   | 6   | 3,2 | 11,5 | 24,0 | 40,2 | 25 | 9,02  |
| TB240608 | 6   | 8   | 3,2 | 14,5 | 26,0 | 39,9 | 25 | 16,81 |
| TB240800 | 8   | 8   | 3,2 | 14,5 | 29,5 | 41,6 | 25 | 20,07 |
| TB240810 | 8   | 10  | 3,2 | 17,0 | 28,0 | 46,8 | 25 | 13,99 |

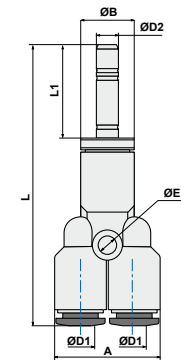


ART. **TB24L0**

**Plug-in double Y connector**



| COD.     | ØD1 | ØD2 | ØE  | ØB   | A  | L    | L1   |    |       |
|----------|-----|-----|-----|------|----|------|------|----|-------|
| TB2404L0 | 4   | 4   | 3,2 | 9,5  | 19 | 50,3 | 16,7 | 25 | 9,56  |
| TB2406L0 | 6   | 6   | 3,2 | 11,5 | 24 | 59,0 | 19,5 | 25 | 14,15 |
| TB2408L0 | 8   | 8   | 3,2 | 13,5 | 28 | 64,0 | 21,0 | 25 | 24,65 |

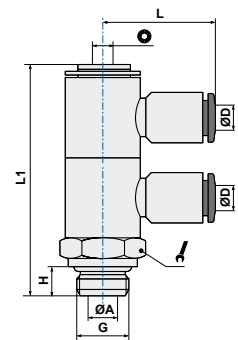


ART. **TB33**

**Swivel double banjo stem**



| COD.     | ØD | G   | ØA  | H   | L1   | L    |     |    |    |       |
|----------|----|-----|-----|-----|------|------|-----|----|----|-------|
| TB3304M5 | 4  | M5  | 2,0 | 4,0 | 28,0 | 19,7 | 2,5 | 14 | 25 | 5,88  |
| TB330418 | 4  | 1/8 | 5,5 | 5,5 | 43,3 | 21,3 | 3   | 14 | 25 | 22,33 |
| TB330618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,6 | 3   | 14 | 25 | 23,17 |
| TB330614 | 6  | 1/4 | 7,8 | 6,5 | 50,0 | 25,8 | 4   | 18 | 25 | 42,26 |
| TB330818 | 8  | 1/8 | 5,5 | 5,5 | 43,3 | 24,9 | 3   | 14 | 25 | 23,66 |
| TB330814 | 8  | 1/4 | 7,8 | 6,5 | 50,0 | 26,6 | 4   | 18 | 25 | 44,98 |
| TB331014 | 10 | 1/4 | 7,8 | 6,5 | 50,0 | 28,7 | 4   | 18 | 25 | 45,86 |

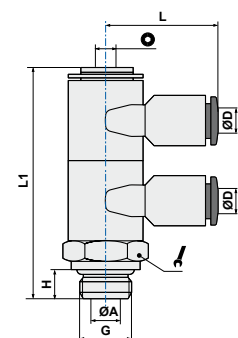


ART. **TB33B**

**Double banjo universal male**



| COD.      | ØD | G   | ØA  | H   | L1   | L    |     |    |    |       |
|-----------|----|-----|-----|-----|------|------|-----|----|----|-------|
| TB33B04M5 | 4  | M5  | 2,0 | 4,0 | 28,0 | 19,7 | 2,5 | 14 | 10 | 7,90  |
| TB33B0618 | 6  | 1/8 | 5,5 | 5,5 | 43,3 | 24,6 | 3   | 14 | 10 | 19,88 |
| TB33B0814 | 8  | 1/4 | 7,8 | 6,5 | 50,0 | 26,6 | 4   | 18 | 10 | 48,50 |

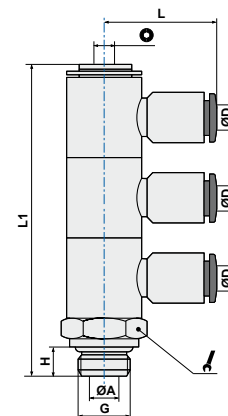


ART. **TB34**

**Swivel triple banjo stem**



| COD.     | ØD | G   | ØA  | H   | L1   | L    | Ø |    |    |       |
|----------|----|-----|-----|-----|------|------|---|----|----|-------|
| TB340418 | 4  | 1/8 | 5,5 | 5,5 | 58,4 | 21,3 | 3 | 14 | 10 | 28,50 |
| TB340618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,6 | 3 | 14 | 10 | 30,06 |
| TB340818 | 8  | 1/8 | 5,5 | 5,5 | 58,4 | 24,9 | 3 | 14 | 10 | 56,19 |
| TB340614 | 6  | 1/4 | 7,8 | 6,5 | 67,1 | 25,8 | 4 | 18 | 10 | 30,58 |
| TB340814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,6 | 4 | 18 | 10 | 56,63 |
| TB341014 | 10 | 1/4 | 7,8 | 6,5 | 67,1 | 28,7 | 4 | 18 | 10 | 60,71 |

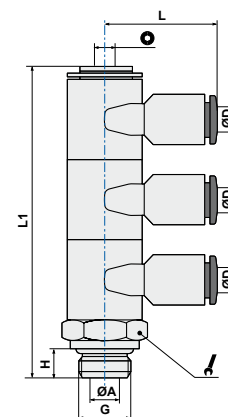


ART. **TB34B**

**Triple banjo universal male L**



| COD.      | ØD | G   | ØA  | H   | L1   | L    | Ø |    |    |       |
|-----------|----|-----|-----|-----|------|------|---|----|----|-------|
| TB34B0618 | 6  | 1/8 | 5,5 | 5,5 | 58,4 | 24,6 | 3 | 14 | 10 | 34,58 |
| TB34B0814 | 8  | 1/4 | 7,8 | 6,5 | 67,1 | 26,6 | 4 | 18 | 10 | 62,84 |

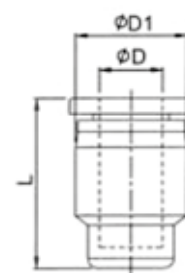


ART. **TB90**

**Tube blanking cap**



| COD.     | ØD | ØD1  | L    |     |      |
|----------|----|------|------|-----|------|
| TB900400 | 4  | 11,5 | 17,5 | 100 | 1,97 |
| TB900600 | 6  | 13,5 | 17,7 | 100 | 2,56 |
| TB900800 | 8  | 15   | 21,3 | 100 | 3,37 |
| TB901000 | 10 | 19   | 25,0 | 50  | 6,84 |
| TB901200 | 12 | 21,5 | 26,0 | 50  | 8,59 |





## Stainless steel push-in fittings

### Series SS



#### Ordering code

**SS C 08 M5**

#### SERIES

**SS** = Stainless steel push-in fittings

#### MODEL TYPE

- C-G** = Straight male adaptor
- C** = Straight male tapered adaptor
- F-G** = Straight female adaptor (parallel thread)
- H** = Complete single banjo tapered
- L-G** = Swivel elbow male parallel adaptor
- L** = Swivel elbow tapered adaptor
- LF** = Female swivel elbow adaptor (parallel thread)
- B-G** = Swivel male stud T parallel
- B** = Swivel male stud T tapered
- GJ** = Plug-in reducer
- M** = Bulkhead connector
- U** = Equal straight connector
- G** = Reducer straight connector
- V** = Elbow connector
- E** = Elbow connector
- Y** = Y connector
- P** = Plug

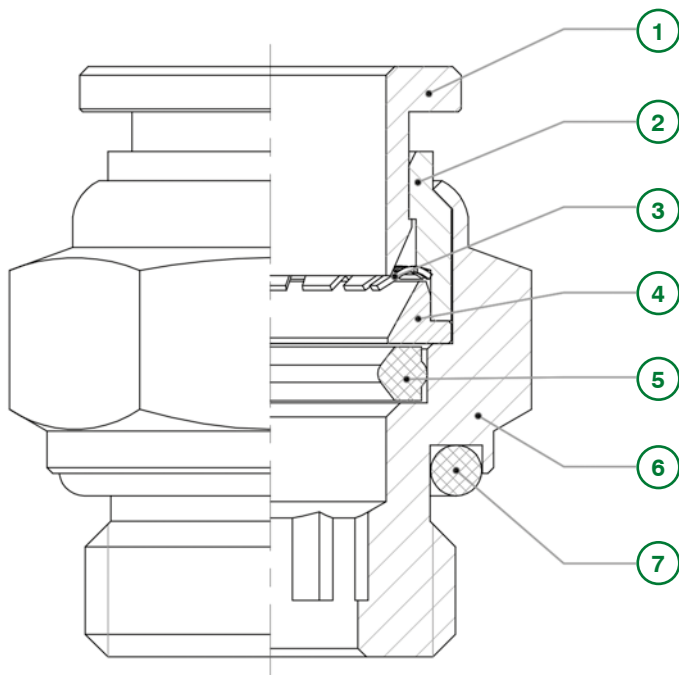
#### TUBE CONNECTION

**04 ... 14** = Tube diameter (mm)

#### THREADED CONNECTION

- |                          |                            |
|--------------------------|----------------------------|
| <b>M5</b> = M5 x 0,8     | <b>G01</b> = 1/8" Parallel |
| <b>01</b> = 1/8" Tapered | <b>G02</b> = 1/4" Parallel |
| <b>02</b> = 1/4" Tapered | <b>G03</b> = 3/8" Parallel |
| <b>03</b> = 3/8" Tapered | <b>G04</b> = 1/2" Parallel |
| <b>04</b> = 1/2" Tapered |                            |

See assembly instructions in the appendix on page 204



#### Components

- 1** Thrust sleeve
- 2** Lock ring
- 3** Crimping gripper
- 4** Supporting ring
- 5** Elastic ring
- 6** Fitting body
- 7** O-Ring seal





## Technical sheet

|                                 |                                    |                                                                                                                                                                                                                                                    |
|---------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                    | Compressed air, water, steam (for different fluid please contact our Technical Dept.)                                                                                                                                                              |
| <b>APPLICATIONS</b>             |                                    | Pneumatic equipments which are applied widely in the range of Industry such as food service industry, chemical industry and medical industry. In general where required to ensure anti-corrosion and acid resistant, or usage at high temperature. |
| <b>SUGGESTED TUBES</b>          |                                    | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                                                                                      |
| <b>TUBES TOLERANCES</b>         |                                    | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                                                                        |
| <b>RECOMMENDED LIMIT VALUES</b> | Temperature                        | The working temperatures range is between -20°C and +140°C                                                                                                                                                                                         |
|                                 | Working pressure                   | The working pressure range is between 0 and 1,5 MPa (0-15 bar)                                                                                                                                                                                     |
|                                 | Max. pressure                      | 1,8 MPa (18 bar)                                                                                                                                                                                                                                   |
|                                 | Note                               | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                                                                          |
| <b>THREAD TYPE</b>              |                                    | BSP paralell UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                                                                  |
| <b>MATERIALS</b>                | Body, sleeve, collar and back ring | Stainless Steel SUS316L                                                                                                                                                                                                                            |
|                                 | Spring                             | Stainless Steel SUS316L                                                                                                                                                                                                                            |
|                                 | Seals                              | FKM/FPM                                                                                                                                                                                                                                            |
| <b>IMPORTANT NOTE</b>           |                                    | The raw material is non-magnetic, however after cold working, a small amount of austenite could be transformed into martensite, which could be very weakly magnetic.                                                                               |

## Test results to FDA specifications compatibility, made by on behalf of the manufacturer

|          | Test report N. | Data       | Period (days) | Item                        | Main material                | Test purpose                                                                                                                                                                               |
|----------|----------------|------------|---------------|-----------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | TRHZ1208110    | 06/08/2012 | 6             | Seal ring                   | Viton FPM fluororubber (FKM) | The compliance with the food and drug administration regulations for determining the amount of chloroform-soluble extractives (ppm) from closures with sealing gaskets for food containers |
| <b>B</b> | TRHZ1208111    | 06/08/2012 | 6             | Elbow fitting mod SSV       | Stainless Steel SUS316L      | To determine total chromium content in the submitted sample                                                                                                                                |
| <b>C</b> | TRHZ1208112    | 06/08/2012 | 6             | Straight Fitting mod. SSC-G | Stainless Steel SUS316L      | To determine total chromium content in the submitted sample                                                                                                                                |

|          | Test method (ref. FDA 21 CFR 177.1210)            | Test result                                      | Conclusion                                                                                                                                                                             |
|----------|---------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Immersion for 2 hours in distilled water at 212°F | Detected value 13,0<br>Max permissible 50,0      | When tested as specified, the test results of the submitted sample comply with the FDA specifications for determining the amount of chloroform-soluble extractives for closures (clos) |
|          | Immersion for 2 hours in alcohol 8% at 212°F      | Detected value 7,0<br>Max permissible 50,0       |                                                                                                                                                                                        |
|          | Immersion for 2 hours in n-heptane at 150°F       | Detected value 11,5<br>Max permissible 50,0      |                                                                                                                                                                                        |
| <b>B</b> | Titration method                                  | Detected value 16,38%<br>Max permissible >=10,5% | When tested as specified, the test results of the submitted sample is suitable for contact with food                                                                                   |
| <b>C</b> | Titration method                                  | Detected value 17,18%<br>Max permissible >=10,5% | When tested as specified, the test results of the submitted sample is suitable for contact with food                                                                                   |

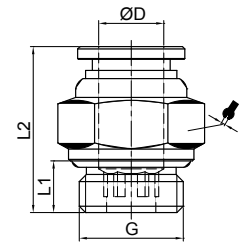


ART. **SSC-G**

**Straight male adaptor (parallel)**



| COD.      | ØD | G   | L1  | L2   | ⊙  | 🔑  | 📦 | 📊     |
|-----------|----|-----|-----|------|----|----|---|-------|
| SSC04-M5  | 4  | M5  | 4   | 19,3 | 2  | 10 | 1 | 6,60  |
| SSC04-G01 | 4  | 1/8 | 5,5 | 17,3 | 3  | 13 | 1 | 9,80  |
| SSC04-G02 | 4  | 1/4 | 6,5 | 21,2 | 3  | 17 | 1 | 16,00 |
| SSC06-M5  | 6  | M5  | 4   | 20,6 | 2  | 12 | 1 | 10,00 |
| SSC06-G01 | 6  | 1/8 | 5,5 | 18,8 | 4  | 13 | 1 | 9,80  |
| SSC06-G02 | 6  | 1/4 | 6,5 | 18,8 | 4  | 16 | 1 | 16,00 |
| SSC08-G01 | 8  | 1/8 | 5,5 | 23,2 | 5  | 14 | 1 | 13,00 |
| SSC08-G02 | 8  | 1/4 | 6,5 | 20,7 | 6  | 16 | 1 | 15,00 |
| SSC08-G03 | 8  | 3/8 | 7,5 | 22,5 | 6  | 21 | 1 | 24,00 |
| SSC10-G02 | 10 | 1/4 | 6,5 | 26,4 | 8  | 17 | 1 | 22,00 |
| SSC10-G03 | 10 | 3/8 | 7,5 | 22,9 | 8  | 20 | 1 | 26,00 |
| SSC10-G04 | 10 | 1/2 | 9,0 | 24   | 8  | 24 | 1 | 38,00 |
| SSC12-G02 | 12 | 1/4 | 6,5 | 31,3 | 8  | 21 | 1 | 34,00 |
| SSC12-G03 | 12 | 3/8 | 7,5 | 25,4 | 10 | 20 | 1 | 28,00 |
| SSC12-G04 | 12 | 1/2 | 9   | 25,4 | 10 | 24 | 1 | 43,60 |
| SSC14-G03 | 14 | 3/8 | 7,5 | 33   | 10 | 22 | 1 | 38,00 |
| SSC14-G04 | 14 | 1/2 | 9,0 | 32   | 10 | 24 | 1 | 43,00 |

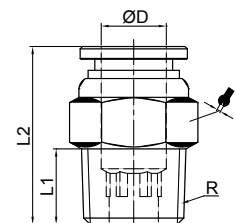


ART. **SSC**

**Straight male adaptor (tapered)**



| COD.     | ØD | R   | L1   | L2   | ⊙  | 🔑  | 📦 | 📊     |
|----------|----|-----|------|------|----|----|---|-------|
| SSC04-01 | 4  | 1/8 | 7,5  | 16,8 | 3  | 10 | 1 | 9,80  |
| SSC04-02 | 4  | 1/4 | 9,5  | 21   | 3  | 14 | 1 | 14,00 |
| SSC06-01 | 6  | 1/8 | 7,5  | 19,3 | 4  | 12 | 1 | 9,80  |
| SSC06-02 | 6  | 1/4 | 9,5  | 19,8 | 4  | 14 | 1 | 16,00 |
| SSC06-03 | 6  | 3/8 | 10,5 | 22   | 4  | 17 | 1 | 22,00 |
| SSC06-04 | 6  | 1/2 | 12,5 | 24   | 4  | 21 | 1 | 42,00 |
| SSC08-01 | 8  | 1/8 | 7,5  | 23,7 | 6  | 14 | 1 | 13,00 |
| SSC08-02 | 8  | 1/4 | 9,5  | 22,2 | 6  | 14 | 1 | 15,00 |
| SSC08-03 | 8  | 3/8 | 10,5 | 22,5 | 6  | 17 | 1 | 20,00 |
| SSC08-04 | 8  | 1/2 | 12,5 | 24   | 6  | 21 | 1 | 38,00 |
| SSC10-02 | 10 | 1/4 | 9,5  | 26,4 | 8  | 17 | 1 | 19,72 |
| SSC10-03 | 10 | 3/8 | 10,5 | 22,9 | 8  | 17 | 1 | 26,00 |
| SSC10-04 | 10 | 1/2 | 12,5 | 25   | 8  | 21 | 1 | 36,00 |
| SSC12-02 | 12 | 1/4 | 9,5  | 31,3 | 8  | 21 | 1 | 36,00 |
| SSC12-03 | 12 | 3/8 | 10,5 | 26,4 | 10 | 20 | 1 | 28,00 |
| SSC12-04 | 12 | 1/2 | 13,5 | 26,4 | 10 | 21 | 1 | 43,60 |
| SSC14-04 | 14 | 1/2 | 12,5 | 33   | 10 | 22 | 1 | 43,00 |

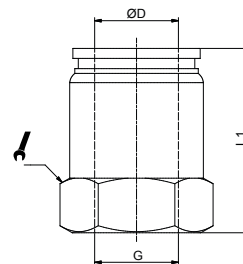


ART. **SSCF-G**

**Straight female adaptor (parallel thread)**



| COD.      | ØD | G   | L1   |    |   |       |
|-----------|----|-----|------|----|---|-------|
| SSCF04-M5 | 4  | M5  | 20,2 | 12 | 1 | 8,00  |
| SSCF04-01 | 4  | 1/8 | 21,2 | 12 | 1 | 8,00  |
| SSCF04-02 | 4  | 1/4 | 21   | 17 | 1 | 18,00 |
| SSCF06-01 | 6  | 1/8 | 21,6 | 14 | 1 | 16,00 |
| SSCF06-02 | 6  | 1/4 | 21   | 17 | 1 | 18,00 |
| SSCF08-01 | 8  | 1/8 | 25   | 17 | 1 | 16,00 |
| SSCF08-02 | 8  | 1/4 | 24,5 | 17 | 1 | 21,00 |

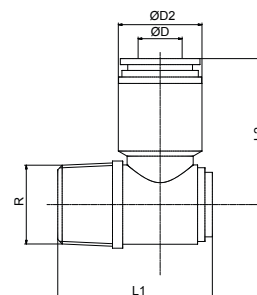


ART. **SSH**

**Complete single banjo tapered**



| COD.     | ØD | R   | L1   | L2   | D2   |   |        |
|----------|----|-----|------|------|------|---|--------|
| SSH04-01 | 4  | 1/8 | 25,5 | 26   | 10,5 | 1 | 24,00  |
| SSH06-01 | 6  | 1/8 | 25,5 | 26   | 12,5 | 1 | 28,00  |
| SSH06-02 | 6  | 1/4 | 28   | 28   | 12,5 | 1 | 38,00  |
| SSH08-01 | 8  | 1/8 | 25,5 | 29   | 14,5 | 1 | 28,00  |
| SSH08-02 | 8  | 1/4 | 28   | 30   | 14,5 | 1 | 40,00  |
| SSH08-03 | 8  | 3/8 | 33,2 | 33   | 14,5 | 1 | 66,00  |
| SSH10-02 | 10 | 1/4 | 28   | 32   | 17,5 | 1 | 46,00  |
| SSH10-03 | 10 | 3/8 | 33,2 | 35   | 17,5 | 1 | 74,00  |
| SSH12-02 | 12 | 1/4 | 28   | 34   | 20,5 | 1 | 56,00  |
| SSH12-03 | 12 | 3/8 | 33,2 | 36,5 | 20,5 | 1 | 84,00  |
| SSH12-04 | 12 | 1/2 | 37,2 | 38   | 20,5 | 1 | 120,00 |

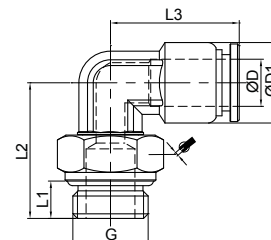


ART. **SSL-G**

**Swivel elbow male parallel adaptor**



| COD.      | ØD | G   | L1  | L2   | L3   | ØD1  |    |   |        |
|-----------|----|-----|-----|------|------|------|----|---|--------|
| SSL04-M5  | 4  | M5  | 4   | 17,5 | 18,3 | 10   | 10 | 1 | 12,00  |
| SSL04-G01 | 4  | 1/8 | 5,5 | 20   | 18,3 | 10   | 13 | 1 | 16,00  |
| SSL04-G02 | 4  | 1/4 | 6,5 | 27,5 | 23   | 10,5 | 14 | 1 | 24,00  |
| SSL06-M5  | 6  | M5  | 4   | 17,5 | 20,3 | 12   | 10 | 1 | 16,00  |
| SSL06-G01 | 6  | 1/8 | 5,5 | 22   | 20,3 | 12   | 13 | 1 | 20,00  |
| SSL06-G02 | 6  | 1/4 | 6,5 | 23   | 20,3 | 12   | 16 | 1 | 26,00  |
| SSL06-G03 | 6  | 3/8 | 7,5 | 28   | 24   | 12,5 | 17 | 1 | 34,00  |
| SSL08-G01 | 8  | 1/8 | 5,5 | 22,5 | 22,3 | 14   | 13 | 1 | 24,00  |
| SSL08-G02 | 8  | 1/4 | 6,5 | 23,5 | 22,3 | 14   | 16 | 1 | 30,00  |
| SSL08-G03 | 8  | 3/8 | 7,5 | 28   | 27   | 14,5 | 17 | 1 | 40,00  |
| SSL10-G01 | 10 | 1/8 | 5,5 | 32,3 | 30,5 | 17,5 | 17 | 1 | 36,00  |
| SSL10-G02 | 10 | 1/4 | 6,5 | 31   | 26,4 | 17   | 17 | 1 | 46,00  |
| SSL10-G03 | 10 | 3/8 | 7,5 | 28,5 | 26,4 | 17   | 20 | 1 | 50,00  |
| SSL10-G04 | 10 | 1/2 | 9   | 31   | 30,5 | 17,5 | 21 | 1 | 48,50  |
| SSL12-G02 | 12 | 1/4 | 6,5 | 30,5 | 34   | 20,5 | 14 | 1 | 56,00  |
| SSL12-G03 | 12 | 3/8 | 7,5 | 30   | 29,4 | 20   | 20 | 1 | 62,00  |
| SSL12-G04 | 12 | 1/2 | 9   | 30,5 | 29,4 | 20   | 24 | 1 | 76,00  |
| SSL14-G03 | 14 | 3/8 | 7,5 | 33   | 37   | 22   | 17 | 1 | 96,00  |
| SSL14-G04 | 12 | 1/2 | 9   | 35   | 37   | 22   | 21 | 1 | 100,00 |

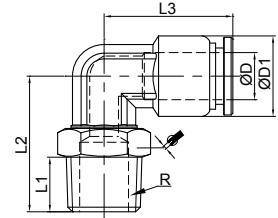


ART. **SSL**

**Swivel elbow tapered adaptor**



| COD.     | ØD | R   | L1   | L2   | L3   | ØD1  |    |   |       |
|----------|----|-----|------|------|------|------|----|---|-------|
| SSL04-01 | 4  | 1/8 | 7,5  | 20   | 18,3 | 10   | 12 | 1 | 14,00 |
| SSL04-02 | 4  | 1/4 | 9,5  | 27,5 | 23   | 10,5 | 14 | 1 | 22,00 |
| SSL06-01 | 6  | 1/8 | 7,5  | 23   | 20,3 | 12   | 12 | 1 | 19,00 |
| SSL06-02 | 6  | 1/4 | 9,5  | 23   | 20,3 | 12   | 14 | 1 | 22,00 |
| SSL06-03 | 6  | 3/8 | 10,5 | 28   | 24   | 12,5 | 17 | 1 | 30,00 |
| SSL08-01 | 8  | 1/8 | 7,5  | 23,5 | 22,3 | 14   | 12 | 1 | 24,20 |
| SSL08-02 | 8  | 1/4 | 9,5  | 23,5 | 22,3 | 14   | 14 | 1 | 27,90 |
| SSL08-03 | 8  | 3/8 | 10,5 | 28   | 27   | 14,5 | 17 | 1 | 34,00 |
| SSL10-02 | 10 | 1/4 | 9,5  | 33   | 26,4 | 17   | 17 | 1 | 46,00 |
| SSL10-03 | 10 | 3/8 | 10,5 | 30   | 26,4 | 17   | 17 | 1 | 46,00 |
| SSL12-02 | 12 | 1/4 | 9,5  | 30,5 | 34   | 20,5 | 14 | 1 | 52,00 |
| SSL12-03 | 12 | 3/8 | 10,5 | 31,5 | 29,4 | 20   | 17 | 1 | 62,00 |
| SSL12-04 | 12 | 1/2 | 13,5 | 33,5 | 29,4 | 20   | 21 | 1 | 74,90 |

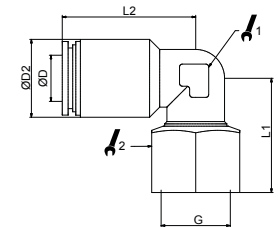


ART. **SSLF**

**Female swivel elbow adaptor (parallel thread)**



| COD.      | ØD | G   | L1   | L2 | D2   |      |    |   |       |
|-----------|----|-----|------|----|------|------|----|---|-------|
| SSLF04-01 | 4  | 1/8 | 25,5 | 23 | 10,5 | 9,2  | 10 | 1 | 24,00 |
| SSLF06-01 | 6  | 1/8 | 27   | 24 | 12,5 | 9,2  | 14 | 1 | 26,00 |
| SSLF06-02 | 6  | 1/4 | 28   | 24 | 12,5 | 9,2  | 17 | 1 | 32,00 |
| SSLF08-01 | 8  | 1/8 | 27   | 27 | 14,5 | 11,2 | 14 | 1 | 30,00 |
| SSLF08-02 | 8  | 1/4 | 28   | 27 | 14,5 | 11,2 | 17 | 1 | 34,00 |

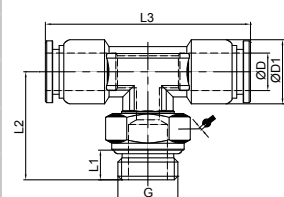


ART. **SSB-G**

**Swivel male stud T parallel**



| COD.      | ØD | G   | L1  | L2   | L3   | ØD1 |    |   |       |
|-----------|----|-----|-----|------|------|-----|----|---|-------|
| SSB04-M5  | 4  | M5  | 4   | 17,5 | 36,6 | 10  | 10 | 1 | 18,00 |
| SSB04-G01 | 4  | 1/8 | 5,5 | 20   | 36,6 | 10  | 13 | 1 | 22,00 |
| SSB06-M5  | 6  | M5  | 4   | 17,5 | 40,6 | 12  | 10 | 1 | 22,00 |
| SSB06-G01 | 6  | 1/8 | 5,5 | 22   | 40,6 | 12  | 13 | 1 | 27,00 |
| SSB06-G02 | 6  | 1/4 | 6,5 | 23   | 40,6 | 12  | 16 | 1 | 34,00 |
| SSB08-G01 | 8  | 1/8 | 5,5 | 22,5 | 44,6 | 14  | 13 | 1 | 34,00 |
| SSB08-G02 | 8  | 1/4 | 6,5 | 23,5 | 44,6 | 14  | 16 | 1 | 39,80 |
| SSB10-G02 | 10 | 1/4 | 6,5 | 31   | 52,8 | 17  | 17 | 1 | 60,00 |
| SSB10-G03 | 10 | 3/8 | 7,5 | 28,5 | 52,8 | 17  | 20 | 1 | 64,00 |
| SSB12-G03 | 12 | 3/8 | 7,5 | 30   | 58,8 | 20  | 20 | 1 | 86,00 |
| SSB12-G04 | 12 | 1/2 | 9   | 30,5 | 58,8 | 20  | 24 | 1 | 98,00 |

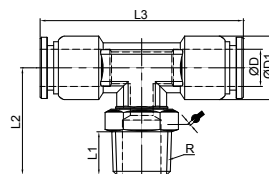


ART. **SSB**

**Swivel male stud T tapered**



| COD.     | ØD | R   | L1   | L2   | L3   | ØD1 |    |   |       |
|----------|----|-----|------|------|------|-----|----|---|-------|
| SSB04-01 | 4  | 1/8 | 7,5  | 20   | 36,6 | 10  | 12 | 1 | 20,00 |
| SSB06-01 | 6  | 1/8 | 7,5  | 23   | 40,6 | 12  | 12 | 1 | 26,00 |
| SSB06-02 | 6  | 1/4 | 9,5  | 23   | 40,6 | 12  | 14 | 1 | 30,00 |
| SSB08-01 | 8  | 1/8 | 7,5  | 23,5 | 44,6 | 14  | 12 | 1 | 22,00 |
| SSB08-02 | 8  | 1/4 | 9,5  | 23,5 | 44,6 | 14  | 14 | 1 | 37,00 |
| SSB10-02 | 10 | 1/4 | 9,5  | 33   | 52,8 | 17  | 17 | 1 | 56,00 |
| SSB10-03 | 10 | 3/8 | 10,5 | 30   | 52,8 | 17  | 17 | 1 | 58,00 |
| SSB12-03 | 12 | 3/8 | 10,5 | 31,5 | 58,8 | 20  | 17 | 1 | 80,00 |
| SSB12-04 | 12 | 1/2 | 13,5 | 33,5 | 58,8 | 20  | 21 | 1 | 96,00 |

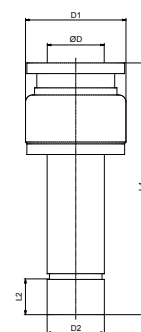


ART. **SSGJ**

**Plug-in reducer**



| COD.      | ØD | D1   | D2 | L1 | L2   |   |       |
|-----------|----|------|----|----|------|---|-------|
| SSGJ06-04 | 4  | 10,5 | 6  | 41 | 6,7  | 1 | 6,00  |
| SSGJ08-06 | 6  | 12,5 | 8  | 44 | 7,0  | 1 | 10,00 |
| SSGJ08-04 | 4  | 10,5 | 8  | 43 | 7,0  | 1 | 8,00  |
| SSGJ10-08 | 8  | 14,5 | 10 | 47 | 8,0  | 1 | 12,00 |
| SSGJ10-06 | 6  | 12,5 | 10 | 47 | 8,0  | 1 | 12,00 |
| SSGJ12-10 | 10 | 17,5 | 12 | 53 | 8,7  | 1 | 20,00 |
| SSGJ12-08 | 8  | 14,5 | 12 | 52 | 8,7  | 1 | 16,00 |
| SSGJ14-10 | 10 | 17,5 | 14 | 56 | 10,0 | 1 | 30,00 |

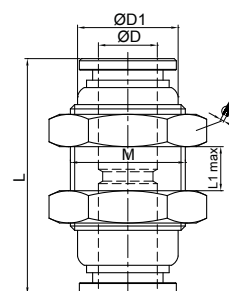


ART. **SSM**

**Bulkhead connector**



| COD.  | ØD | ØD1 | L    | L1 max | M     |    |   |       |
|-------|----|-----|------|--------|-------|----|---|-------|
| SSM04 | 4  | 10  | 27   | 8      | M12x1 | 14 | 1 | 16,00 |
| SSM06 | 6  | 12  | 29,5 | 8      | M14x1 | 17 | 1 | 24,10 |
| SSM08 | 8  | 14  | 32,5 | 8,5    | M16x1 | 19 | 1 | 31,70 |
| SSM10 | 10 | 17  | 36,8 | 9,5    | M20x1 | 24 | 1 | 56,00 |
| SSM12 | 12 | 20  | 39,8 | 11,5   | M22x1 | 26 | 1 | 70,00 |
| SSM14 | 14 | 24  | 42   | 17     | M24x1 | 27 | 1 | 75,00 |

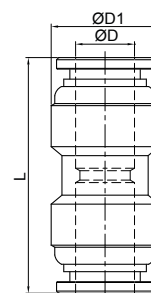


ART. **SSU**

**Equal straight connector**



| COD.  | ØD | ØD1 | L    |   |       |
|-------|----|-----|------|---|-------|
| SSU04 | 4  | 11  | 27   | 1 | 11,40 |
| SSU06 | 6  | 13  | 29,5 | 1 | 15,40 |
| SSU08 | 8  | 15  | 32,5 | 1 | 20,40 |
| SSU10 | 10 | 18  | 36,8 | 1 | 33,00 |
| SSU12 | 12 | 21  | 39,8 | 1 | 47,70 |
| SSU14 | 14 | 22  | 42   | 1 | 46,00 |

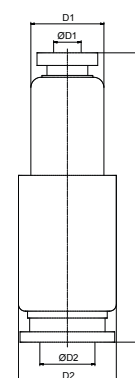


ART. **SSG**

**Reducer straight connector**



| COD.     | ØD1 | ØD2 | D1   | D2   | L1   |   |       |
|----------|-----|-----|------|------|------|---|-------|
| SSG04-06 | 4   | 6   | 10,5 | 12,5 | 30,6 | 1 | 14,00 |
| SSG06-08 | 6   | 8   | 12,5 | 14,5 | 32,8 | 1 | 18,00 |
| SSG08-10 | 8   | 10  | 14,5 | 17,5 | 35   | 1 | 26,00 |
| SSG10-12 | 10  | 12  | 17,5 | 20,5 | 38,2 | 1 | 40,00 |

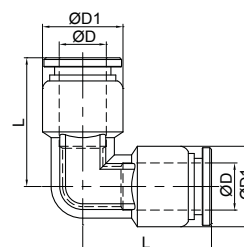


ART. **SSV**

**Elbow connector**



| COD.  | ØD | ØD1 | L    |   |       |
|-------|----|-----|------|---|-------|
| SSV04 | 4  | 10  | 18,3 | 1 | 16,00 |
| SSV06 | 6  | 12  | 20,3 | 1 | 17,10 |
| SSV08 | 8  | 14  | 22,3 | 1 | 23,20 |
| SSV10 | 10 | 17  | 26,4 | 1 | 37,60 |
| SSV12 | 12 | 20  | 29,4 | 1 | 56,00 |
| SSV14 | 14 | 22  | 37   | 1 | 98,00 |

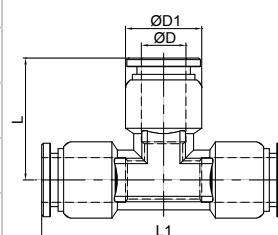


ART. **SSE**

**T connector**



| COD.  | ØD | ØD1 | L    | L1   |   |       |
|-------|----|-----|------|------|---|-------|
| SSE04 | 4  | 10  | 18,3 | 36,6 | 1 | 18,00 |
| SSE06 | 6  | 12  | 20,3 | 40,6 | 1 | 23,70 |
| SSE08 | 8  | 14  | 22,3 | 44,6 | 1 | 31,80 |
| SSE10 | 10 | 17  | 26,4 | 52,8 | 1 | 53,50 |
| SSE12 | 12 | 20  | 29,4 | 58,8 | 1 | 79,00 |
| SSE14 | 14 | 14  | 37   | 74   | 1 | 80,00 |

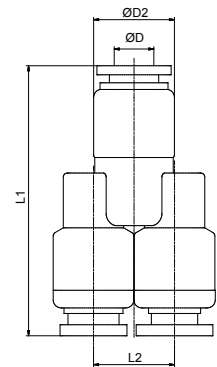


ART. **SSY**

**Y connector**



| COD.  | ØD | L1   | L2 | ØD2 |  |  |
|-------|----|------|----|-----|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| SSY04 | 4  | 36   | 14 | 11  | 1                                                                                  | 24,00                                                                               |
| SSY06 | 6  | 37,5 | 16 | 13  | 1                                                                                  | 34,00                                                                               |
| SSY08 | 8  | 41,3 | 18 | 15  | 1                                                                                  | 38,00                                                                               |
| SSY10 | 10 | 44,3 | 21 | 18  | 1                                                                                  | 56,00                                                                               |
| SSY12 | 12 | 51   | 24 | 21  | 1                                                                                  | 84,00                                                                               |

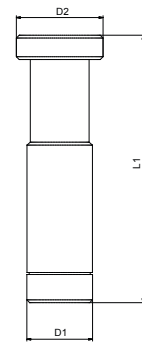


ART. **SSP**

**Plug**

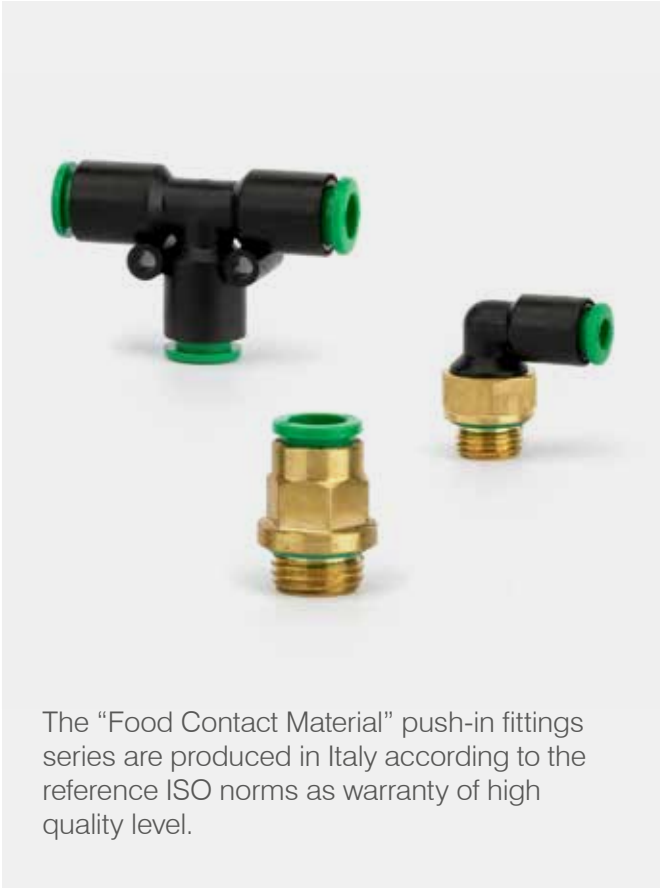


| COD.  | D1 | D2 | L1 |  |  |
|-------|----|----|----|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| SSP04 | 4  | 6  | 28 | 1                                                                                 | 2,00                                                                                |
| SSP06 | 6  | 8  | 33 | 1                                                                                 | 4,00                                                                                |
| SSP08 | 8  | 10 | 37 | 1                                                                                 | 8,00                                                                                |
| SSP10 | 10 | 12 | 42 | 1                                                                                 | 14,00                                                                               |
| SSP12 | 12 | 14 | 44 | 1                                                                                 | 18,00                                                                               |
| SSP14 | 14 | 16 | 46 | 1                                                                                 | 32,00                                                                               |



## Food contact push-in fittings

# Series FCM



### Ordering code

**F 01 4 M5**

#### SERIES

**F** = Food contact push-in fittings FCM

#### MODEL TYPE

- 01** = Straight male adaptor (parallel)
- 01T** = Technopolymer straight male adaptor (parallel)
- 02** = Straight female adaptor
- 03** = Straight connector
- 04** = Elbow connector
- 04LO** = Plug-in elbow connector
- 05** = T connector
- 06** = Adaptor parallel (short)
- 08** = Plug-in reducer
- 20** = Swivel male stud T parallel
- 22** = Swivel T technopolymer male adaptor
- 22T** = Swivel T technopolymer male adaptor
- 23** = Y connector

#### TUBE CONNECTION

**4 ... 10** = Tube diameter

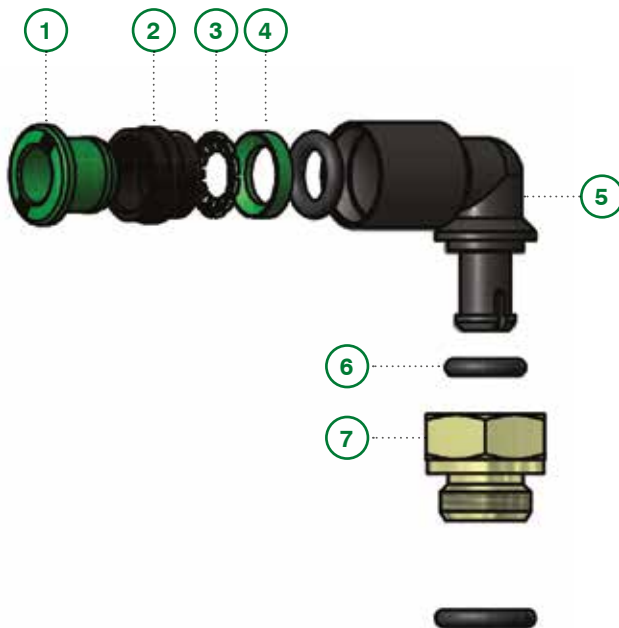
#### THREADED CONNECTION

- M5** = M5 x 0,8
- 18** = G1/8
- 14** = G1/4

#### THRUST SLEEVE COLOUR

**Blank** = Green

See assembly instructions in the appendix on page 204



### Components

- 1** Thrust sleeve
- 2** Lock ring
- 3** Crimping gripper
- 4** Supporting ring
- 5** Fitting body
- 6** O-Ring seal
- 7** Swivel base



## A new mission

In a demanding sector such as “Food & Beverage”, in order to satisfy customers' requests, products must ensure high reliability and compliance with relevant international standards.

In this perspective born the new series of Fcm (Food Contact Material) fittings, suitable for food contact, and drinkable liquid passage, according to the European regulations 1935/2004, 2023/2006, 11/2011 and for contact with drinking according to the Ministerial Decree 174/2004.

The FCM series also complies with NSF/169 regulations for the US market.

The FCM series, manufactured by Titan Engineering Spa, is part of a route based on the conviction that it is increasingly necessary to direct business strategies towards sustainable development, paying the greatest attention to people's health and respect for the environment; these are fundamental beliefs for which the company already acquired the ISO14001 and ISO45001 certifications, which are integrated into the quality management system ISO9001.



## Introduction

Titan Engineering Spa, motivated by the target to innovate and progress and following its studies and research in the field of “food contact”, has committed itself to designing and implementing, in a path of synergic growth with the main partners, both customers and suppliers, a test machine capable of satisfying the requests for compatibility and use of its products in the food sector, with the possibility of using the most varied liquids.

## Purpose of the machine and tests

With these assumptions the machine named: **“APC060519TE”** was born, a real test tool developed in collaboration with expert and specialized longtime companies in the “food contact” field, thanks to whose application experience all necessary peculiarities in compliance with the expected regulatory requirements have been ensured, just think that the machine, in all its parts, was built using only components suitable for contact with food and drinking liquids.

The tests that can be performed have the purpose of validating the suitability of the new FCM fittings series made by Titan Engineering Spa, **so not only on contact, but also on the passage of a specific food fluid**. Furthermore, the general test parameters (pressure, duration, type of fluid, etc.) may change according to the end customer's request and to the type of application, with the aim of offering a response as close as possible to the real use conditions.

## Test result and reports

The results obtained from the carried out tests, supported by proper photographic documentation, will be used, where required and thanks to appropriate forms, to accompany the supply, constituting adequate certification of suitability.

With this in mind, Titan Engineering Spa, in a preventive way, is also carrying out a program of tests concerning the fluids among those most used in the food applications, such as: drinking water, wine, beer and carbonated drinks in general, in order to create a documentary base to be made available to customers, leaving them the chance to request targeted tests, even personalized ones, just when their application needs should require it (in this regard, a special access form, which must contain all specifications necessary in order to correctly proceed to the validation tests, has been prepared).



### General technical characteristics

**Dimensions:** 74 x 130 x 100.5 cm

**Weight:** 160 kg

**Testable pressure range:** 0-16 Bar

**Testable piping sizes:** Ø4-Ø14

**Types of testable fluids:** Drinking water and any fluid for food use at the customer's request

**Test temperature:** environment

**Pump type:** NFS 169 food approved

**Pump capacity:** 100 L/H

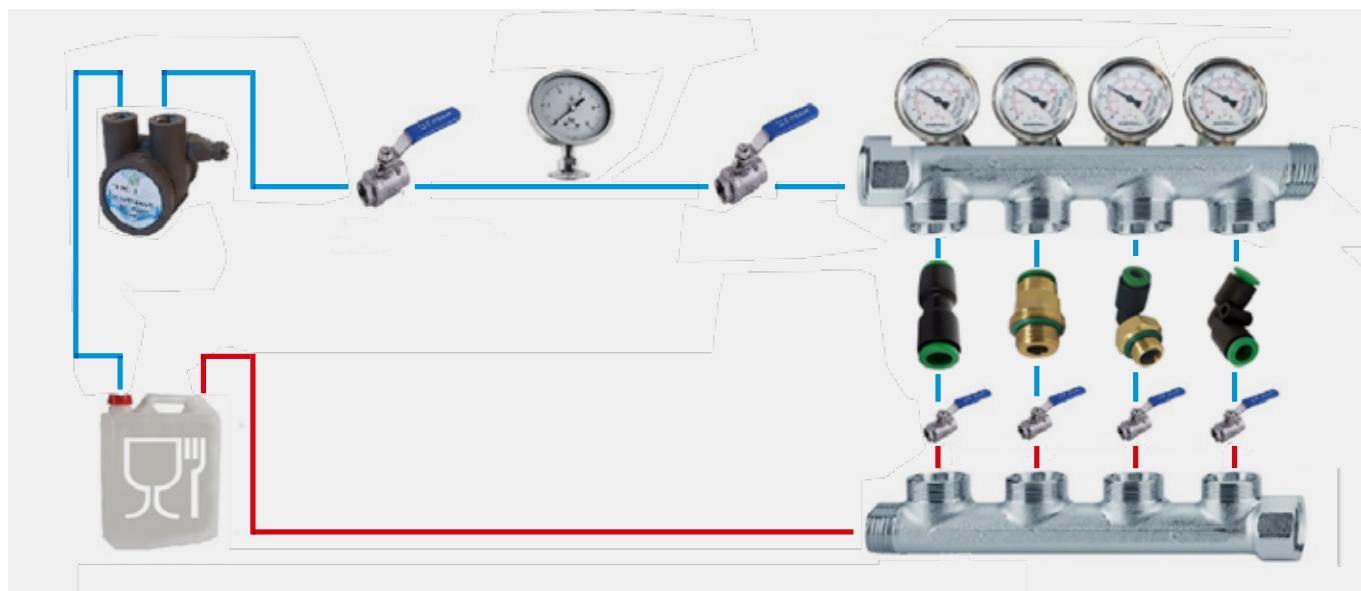
**Plant technical description:** Pipes, fittings, machine, entirely in AISI 316L stainless steel, approved for use with drinking water and food contact

### Machine certifications

Machine compliant with CE standards 2014/35 / UE  
Tests compliant with UNI EN ISO 13846: 2001 and above  
Available documentation:

- CE declaration of conformity
- Use and maintenance manual
- PED non-applicability analysis
- Analysis and machine risks sheet

## Functional tests performed with machine APC060519TE





|                       |             |                       |
|-----------------------|-------------|-----------------------|
| <b>TEST CONDITION</b> | Pressure    | Constant 8 bar        |
|                       | Circuit     | Closed                |
|                       | Temperature | Environment 22°C-30°C |
|                       | Duration    | 2400 h continuously   |



|                     |                | Type of fluid  |      |      |                      |
|---------------------|----------------|----------------|------|------|----------------------|
|                     |                | Drinking water | Wine | Beer | Sparkling soft drink |
| <b>TEST RESULTS</b> | Liquid leakage | NO             | NO   | NO   | NO                   |
|                     | Pressure loss  | NO             | NO   | NO   | NO                   |
|                     | Outcome        |                |      |      |                      |

## Migration test

The global and specific migration tests shown in the table are used to determine the quantities migrated and the subsequent control of re-entry within the limits imposed by the regulations, are carried out to check the migration phenomena of materials in contact with food.

| TYPE OF TEST PERFORMED                                                                                                                              | COMPONENTS                                 | TEST RESULT |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------|
| Global migration, specific migration of dyes, specific migration of metals. Simulants: A, B, D2 + primary aromatic amine migration test simulant B. | Thrus sleeve                               |             |
|                                                                                                                                                     | Fitting body (POM)                         |             |
|                                                                                                                                                     | Fitting body and swivel base (Ixef1022 FC) |             |
| Global migration + Citric acid simulant                                                                                                             | Fitting body and swivel base (CW510L-OT57) |             |
| Specific migration test Cr, Ni, Mn simulant B                                                                                                       | Crimping Gripper                           |             |
| Global migration test simulant rubber A + specific migration test simulant B                                                                        | O-ring seal                                |             |

The specific migration limits are respected in the conditions of use mentioned above.

- A: Ethanol ..... 10%
- B: Acetic acid..... 3%
- C: Ethanol ..... 20%
- D1: Ethanol ..... 50%
- D2: Vegetable oil
- E: Poly (2,6-diphenyl-p-phenylene oxide)



## Technical sheet

|                                 |                              |                                                                                                                                                                                                                                              |
|---------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                              | Compressed air and main food fluids                                                                                                                                                                                                          |
| <b>APPLICATIONS</b>             |                              | Compressed air applied to machines intended for the food and beverage field (boxing, bagging machines, vacuum packaging, oenology, etc.) and machines for the passage of low temperature drinkable fluids (filling, bottling, tapping, etc.) |
| <b>SUGGESTED TUBES</b>          |                              | TPU, PA11/PA12, TPE, TCO for compressed air. PE, PVC, PELD for food fluids.                                                                                                                                                                  |
| <b>TUBES TOLERANCES</b>         |                              | Diam. between 4 and 10 mm +/- 0,05                                                                                                                                                                                                           |
| <b>TEMPERATURE AND PRESSURE</b> | Recommended limit values     | Temperatures and pressures usually depend by the technical features of the employed tubes, anyway it is suggested a limit working pressure of 15 bar and a temperature range between -20°C and +70°C.                                        |
|                                 | Technical testing data       | In the table below there are indicated the load traction resistance values and the main working and breaking limit (Pressure and Temperature) of the main commercial tubing.                                                                 |
|                                 | Note                         | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                                                                    |
| <b>THREAD TYPE</b>              |                              | BSP parallel UNI-ISO 228; Metric ISO/R 262                                                                                                                                                                                                   |
| <b>MATERIALS</b>                | Body and swivel bases        | Brass UNI EN CW510L                                                                                                                                                                                                                          |
|                                 | Sleeve, collar and back ring | POM copolymer ISO1043-1 (REG. UE 10/2011)                                                                                                                                                                                                    |
|                                 | Spring                       | Stainless steel AISI 301 austenitic                                                                                                                                                                                                          |
|                                 | Seals                        | NBR 70 DIN-ISO 1629 (DM 21:1973, FDA 177.2600)                                                                                                                                                                                               |

## Additional technical informations

Each FCM production batch is tested according to severe cyclics "lot breaker" controls along all the production period, which include shape observation, leakage verification, functionality, at the working pressure of 8 bar. Then all samples taken from the lot are tested by a traction machine which simulate a breaking pressure of 50 bar. Here below are indicated the traction loads (in Newton) for each size:

|                      |      |       |       |       |
|----------------------|------|-------|-------|-------|
| <b>TUBE DIAMETER</b> | Ø4   | Ø6    | Ø8    | Ø10   |
| <b>BREAKING LOAD</b> | 63 N | 141 N | 251 N | 393 N |

**Important note:** The values refer to the resistance of the crimping gripper, "core part" of both fittings, the brass and the technopolymer FCM. The breaking experimental values measured, according to the diameter, were from 1.2 to 2.5 times higher.

## Additional information regarding the working temperatures:

Further to all the necessary assessments on the use of the fittings in operating conditions different from how suggested in the initial technical sheet must be considered, with reference to temperatures, the nominal data regarding the type of the used tube and the limit imposed by the most critical component.

SERIES FCM: **-20° +70°**

| <b>WORKING PRESSURE AND BREAKING PRESSURE (BAR) AT DIFFERENT TEMPERATURES</b> |               |                |               |                |               |                |
|-------------------------------------------------------------------------------|---------------|----------------|---------------|----------------|---------------|----------------|
| Example                                                                       | T-20°C        |                | T+23°C        |                | T+60°C        |                |
| Tube 6x4 colored                                                              | working P bar | breaking P bar | working P bar | breaking P bar | working P bar | breaking P bar |
| <b>TPU</b>                                                                    | 18,7          | 74,8           | 10,0          | 40,0           | 5,2           | 20,8           |
| <b>PA11</b>                                                                   | 37,4          | 149,6          | 20,0          | 80,0           | 10,4          | 41,6           |
| <b>PA12</b>                                                                   | 48,6          | 168,3          | 26,0          | 90,0           | 10,4          | 36,0           |
| <b>PE</b>                                                                     | 18,7          | 74,8           | 10,0          | 40,0           | 5,0           | 20,0           |

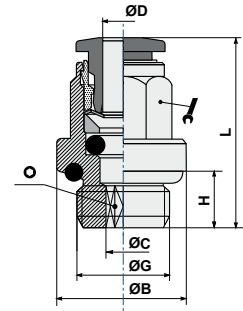
ART. **F01**

**Straight male adaptor (parallel)**



| COD.    | ØD | G   | ØC  | ØB   | H   | L    |    |     |    |       |
|---------|----|-----|-----|------|-----|------|----|-----|----|-------|
| F0104M5 | 4  | M5  | 2,6 | 9    | 4   | 20,5 | *  | 2,5 | 10 | 4,07  |
| F010418 | 4  | 1/8 | 2,6 | 13,5 | 5,5 | 20   | 9  | 2,5 | 5  | 7,42  |
| F010414 | 4  | 1/4 | 2,6 | 17   | 6,5 | 21   | 9  | 2,5 | 5  | 11,02 |
| F0106M5 | 6  | M5  | 2,6 | 11   | 4   | 22,8 | *  | 2,5 | 5  | 6,70  |
| F010618 | 6  | 1/8 | 4,2 | 13,5 | 5,5 | 25,3 | 11 | 4   | 5  | 10,16 |
| F010614 | 6  | 1/4 | 4,2 | 17   | 6,5 | 24,3 | 11 | 4   | 5  | 13,64 |
| F010818 | 8  | 1/8 | 5,2 | 12,8 | 5,5 | 27   | 13 | 5   | 5  | 11,33 |
| F010814 | 8  | 1/4 | 6,2 | 17   | 6,5 | 25,5 | 13 | 6   | 5  | 12,54 |
| F011014 | 10 | 1/4 | 7,3 | 16   | 6,5 | 30,4 | 16 | 7   | 5  | 18,15 |

\* codes without key flats having the following Ø:  
F0104M5 = Ø9  
F0106M5 = Ø11

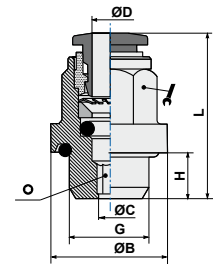


ART. **F01T**

**Straight male adaptor (parallel)**



| COD.     | ØD | G   | ØC  | ØB   | H   | L    |    |     |   |      |
|----------|----|-----|-----|------|-----|------|----|-----|---|------|
| F01T0418 | 4  | 1/8 | 2,5 | 14,0 | 5,5 | 19,0 | 10 | 2,5 | 5 | 2,16 |
| F01T0414 | 4  | 1/4 | 2,5 | 17,5 | 6,5 | 20,8 | 10 | 2,5 | 5 | 3,36 |
| F01T0618 | 6  | 1/8 | 4,0 | 14,0 | 5,5 | 24,5 | 12 | 4,0 | 5 | 3,10 |
| F01T0614 | 6  | 1/4 | 4,0 | 17,5 | 6,5 | 26,0 | 12 | 4,0 | 5 | 4,26 |
| F01T0818 | 8  | 1/8 | 5,0 | 14,0 | 5,5 | 25,7 | 14 | 5,0 | 5 | 3,53 |
| F01T0814 | 8  | 1/4 | 6,0 | 17,5 | 6,5 | 27,2 | 14 | 6,0 | 5 | 4,58 |
| F01T1014 | 10 | 1/4 | 7,0 | 17,5 | 6,5 | 28,7 | 18 | 7,0 | 5 | 6,33 |

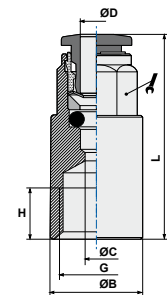


ART. **F02**

**Straight female adaptor**



| COD.    | ØD | G   | ØC | ØB | H   | L    |    |   |       |
|---------|----|-----|----|----|-----|------|----|---|-------|
| F020418 | 4  | 1/8 | 3  | 12 | 6,5 | 26,5 | 9  | 5 | 10,73 |
| F020618 | 6  | 1/8 | 5  | 12 | 6,5 | 28,3 | 11 | 5 | 11,03 |
| F020614 | 6  | 1/4 | 5  | 17 | 10  | 31,3 | 11 | 5 | 16,80 |
| F020818 | 8  | 1/8 | 7  | 12 | 6,5 | 28,5 | 13 | 5 | 10,89 |
| F020814 | 8  | 1/4 | 7  | 17 | 10  | 32,5 | 13 | 5 | 19,15 |

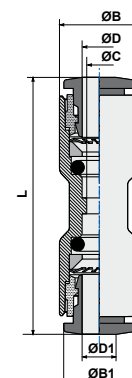


ART. **F03**

**Straight connector**

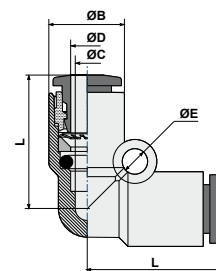


| COD.    | ØD | ØD1 | ØC | ØB   | ØB1  | L    |   |      |
|---------|----|-----|----|------|------|------|---|------|
| F030400 | 4  | 4   | 3  | 9,5  | 9,5  | 32,0 | 5 | 1,96 |
| F030406 | 4  | 6   | 3  | 9,5  | 11,5 | 32,5 | 5 | 2,40 |
| F030600 | 6  | 6   | 5  | 11,5 | 11,5 | 35,6 | 5 | 3,00 |
| F030608 | 6  | 8   | 5  | 11,5 | 13,5 | 36,0 | 5 | 3,27 |
| F030800 | 8  | 8   | 7  | 13,5 | 13,5 | 38,0 | 5 | 3,53 |
| F030810 | 8  | 10  | 7  | 13,5 | 17,0 | 32,5 | 5 | 5,03 |
| F031000 | 10 | 10  | 9  | 17,0 | 17,0 | 42,3 | 5 | 6,04 |

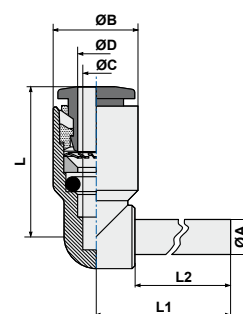


**ART. F04**
**Elbow connector**

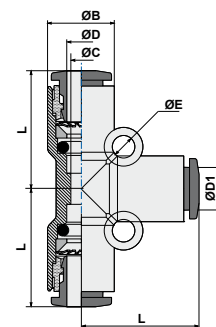

| COD.    | ØD | ØC | ØB   | L    | ØE  |   |      |
|---------|----|----|------|------|-----|---|------|
| F040400 | 4  | 3  | 9,5  | 17,2 | 3,2 | 5 | 2,21 |
| F040600 | 6  | 5  | 11,5 | 20,8 | 3,2 | 5 | 3,28 |
| F040800 | 8  | 7  | 13,5 | 23,0 | 3,2 | 5 | 4,14 |
| F041000 | 10 | 9  | 17,0 | 26,4 | 4,3 | 5 | 7,21 |


**ART. F04L0**
**Plug-in elbow connector**

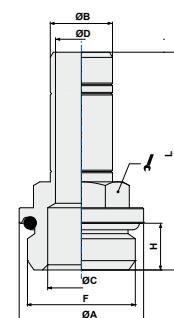

| COD.    | ØD | ØC | ØB   | L    | L1    | ØA | L2   |   |      |
|---------|----|----|------|------|-------|----|------|---|------|
| F0404L0 | 4  | 3  | 9,5  | 17,2 | 20,75 | 4  | 16,7 | 5 | 1,40 |
| F0406L0 | 6  | 5  | 11,5 | 20,8 | 24,25 | 6  | 19,5 | 5 | 2,18 |
| F0408L0 | 8  | 7  | 13,5 | 23,0 | 27,25 | 8  | 21,0 | 5 | 2,96 |
| F0410L0 | 10 | 9  | 17,0 | 26,4 | 31,80 | 10 | 24,0 | 5 | 5,07 |


**ART. F05**
**T connector**


| COD.    | ØD | ØD1 | ØC  | ØB   | L    | ØE  |   |       |
|---------|----|-----|-----|------|------|-----|---|-------|
| F050400 | 4  | 4   | 3,0 | 9,5  | 17,2 | 3,2 | 5 | 3,16  |
| F050600 | 6  | 6   | 5,0 | 11,5 | 20,8 | 3,2 | 5 | 4,72  |
| F050800 | 8  | 8   | 7,0 | 13,5 | 23,0 | 3,2 | 5 | 5,96  |
| F051000 | 10 | 10  | 9,0 | 17,0 | 26,4 | 4,3 | 5 | 10,69 |


**ART. F06**
**Adaptor parallel (short)**


| COD.    | ØB | F   | ØA | ØC  | ØD | H   | L    |    |   |       |
|---------|----|-----|----|-----|----|-----|------|----|---|-------|
| F060418 | 4  | 1/8 | 13 | 5,5 | 2  | 5,5 | 27,7 | 13 | 5 | 9,10  |
| F060618 | 6  | 1/8 | 13 | 5,5 | 4  | 5,5 | 30,5 | 13 | 5 | 9,61  |
| F060614 | 6  | 1/4 | 16 | 7,5 | 4  | 6,5 | 32,0 | 13 | 5 | 11,97 |
| F060818 | 8  | 1/8 | 13 | 6   | 6  | 5,5 | 32,0 | 13 | 5 | 11,05 |
| F060814 | 8  | 1/4 | 16 | 7,5 | 6  | 6,5 | 33,5 | 13 | 5 | 13,12 |
| F061014 | 10 | 1/4 | 16 | 8   | 8  | 6,5 | 36,5 | 13 | 5 | 14,06 |

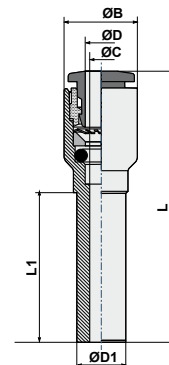


ART. **F08**

**Reducer**



| COD.    | ØD1 | ØD | ØC | ØB   | L     | L1    |   |      |
|---------|-----|----|----|------|-------|-------|---|------|
| F080604 | 6   | 4  | 3  | 9,5  | 35,5  | 19,5  | 5 | 1,37 |
| F080804 | 8   | 4  | 3  | 9,5  | 37,0  | 21,0  | 5 | 1,60 |
| F081004 | 10  | 4  | 3  | 9,5  | 40,0  | 24,0  | 5 | 1,97 |
| F081204 | 12  | 4  | 3  | 9,5  | 41,0  | 25,0  | 5 | 2,22 |
| F080806 | 8   | 6  | 5  | 11,5 | 39,05 | 23,0  | 5 | 2,10 |
| F081006 | 10  | 6  | 5  | 11,5 | 42,05 | 24,0  | 5 | 2,49 |
| F081206 | 12  | 6  | 5  | 11,5 | 43,05 | 25,0  | 5 | 2,80 |
| F081008 | 10  | 8  | 7  | 13,5 | 43,0  | 26,25 | 5 | 2,74 |
| F081208 | 12  | 8  | 7  | 13,5 | 44,0  | 25,0  | 5 | 3,00 |
| F081210 | 12  | 10 | 9  | 17,0 | 46,15 | 27,55 | 5 | 4,40 |

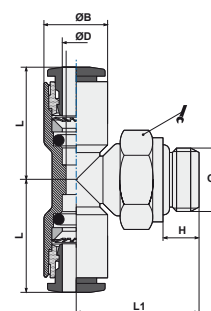


ART. **F20**

**Swivel male stud T parallel**



| COD.    | ØD | G   | ØB   | H   | L    | L1   |    |   |       |
|---------|----|-----|------|-----|------|------|----|---|-------|
| F200418 | 4  | 1/8 | 9,5  | 5,5 | 17,2 | 18,5 | 13 | 5 | 8,56  |
| F200618 | 6  | 1/8 | 11,5 | 5,5 | 20,8 | 18,5 | 13 | 5 | 9,48  |
| F200614 | 6  | 1/4 | 11,5 | 7,5 | 20,8 | 20,4 | 16 | 5 | 14,94 |
| F200818 | 8  | 1/8 | 13,5 | 5,5 | 23,0 | 20,0 | 13 | 5 | 10,64 |
| F200814 | 8  | 1/4 | 13,5 | 6,5 | 23,0 | 20,4 | 16 | 5 | 14,30 |
| F201014 | 10 | 1/4 | 17,0 | 7,5 | 26,4 | 23,2 | 16 | 5 | 42,30 |

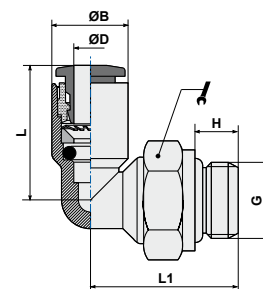


ART. **F22**

**Swivel elbow technopolymer male adaptor**



| COD.    | ØD | G   | ØB   | H   | L    | L1   |    |    |       |
|---------|----|-----|------|-----|------|------|----|----|-------|
| F2204M5 | 4  | M5  | 9,5  | 4   | 17,2 | 17   | 8  | 10 | 3,79  |
| F220418 | 4  | 1/8 | 9,5  | 5,5 | 17,2 | 18,5 | 14 | 10 | 7,80  |
| F220414 | 4  | 1/4 | 9,5  | 6,5 | 17,2 | 20,4 | 16 | 10 | 13,12 |
| F2206M5 | 6  | M5  | 11,5 | 4   | 20,8 | 17   | 8  | 10 | 4,31  |
| F220618 | 6  | 1/8 | 11,5 | 5,5 | 20,8 | 18,5 | 14 | 10 | 8,11  |
| F220614 | 6  | 1/4 | 11,5 | 6,5 | 20,8 | 20,4 | 16 | 10 | 13,82 |
| F220818 | 8  | 1/8 | 13,5 | 5,5 | 23,0 | 20,0 | 14 | 10 | 8,93  |
| F220814 | 8  | 1/4 | 13,5 | 6,5 | 23,0 | 20,4 | 16 | 5  | 12,39 |
| F221014 | 10 | 1/4 | 17,0 | 6,5 | 26,4 | 23,2 | 16 | 5  | 14,40 |

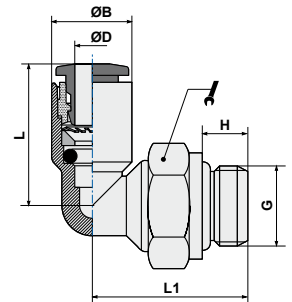


ART. **F22T**

**Swivel elbow technopolymer male adaptor**



| COD.     | ØD | G   | ØB   | H   | L    | L1   |    |    |       |
|----------|----|-----|------|-----|------|------|----|----|-------|
| F22T0418 | 4  | 1/8 | 9,5  | 5,5 | 17,2 | 18,5 | 14 | 10 | 7,76  |
| F22T0414 | 4  | 1/4 | 9,5  | 6,5 | 17,2 | 20,4 | 16 | 10 | 13,11 |
| F22T0618 | 6  | 1/8 | 11,5 | 5,5 | 20,8 | 18,5 | 14 | 10 | 8,10  |
| F22T0614 | 6  | 1/4 | 11,5 | 6,5 | 20,8 | 20,4 | 16 | 10 | 13,81 |
| F22T0818 | 8  | 1/8 | 13,5 | 5,5 | 23,0 | 20,0 | 14 | 10 | 8,92  |
| F22T0814 | 8  | 1/4 | 13,5 | 6,5 | 23,0 | 20,4 | 16 | 10 | 12,99 |
| F22T1014 | 10 | 1/4 | 17,0 | 6,5 | 26,4 | 23,2 | 16 | 10 | 14,40 |

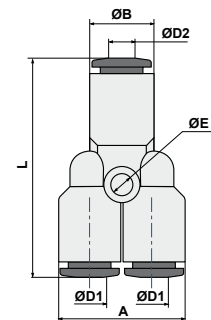


ART. **F23**

**Y connector**



| COD.    | ØD1 | ØD2 | ØE   | ØB   | A  | L    |   |       |
|---------|-----|-----|------|------|----|------|---|-------|
| F230400 | 4   | 4   | 2,40 | 9,5  | 19 | 33,0 | 5 | 2,98  |
| F230406 | 4   | 6   | 2,40 | 11,5 | 19 | 35,8 | 5 | 3,56  |
| F230600 | 6   | 6   | 2,60 | 11,5 | 23 | 38,6 | 5 | 4,83  |
| F230608 | 6   | 8   | 3,20 | 13,5 | 23 | 39,8 | 5 | 5,26  |
| F230800 | 8   | 8   | 2,75 | 16,5 | 27 | 42,5 | 5 | 6,29  |
| F230810 | 8   | 10  | 3,20 | 17,0 | 27 | 44,4 | 5 | 7,84  |
| F231000 | 10  | 10  | 4,30 | 20,0 | 34 | 50,8 | 5 | 11,16 |

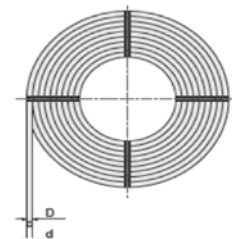


ART. **PELD**

**Polyethylene tube for food applications (low density)**



| COD.   | Dxd<br>mm | P*<br>bar | P1*<br>bar | R*<br>mm |     |
|--------|-----------|-----------|------------|----------|-----|
| PE0402 | 4x2       | 18,5      | 75         | 20       | 100 |
| PE0425 | 4x2,5     | 15        | 60         | 25       | 100 |
| PE0604 | 6x4       | 10        | 40         | 40       | 100 |
| PE0806 | 8x6       | 7,5       | 30         | 50       | 100 |
| PE1008 | 10x8      | 6         | 25         | 120      | 100 |

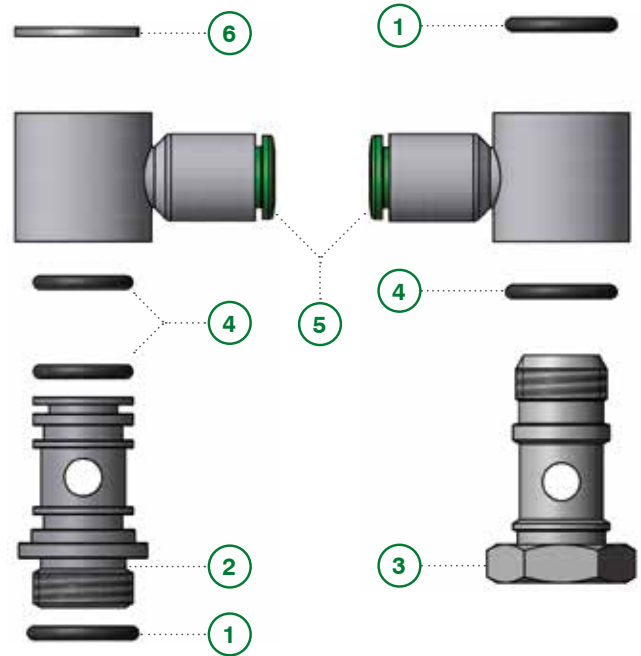


P\* = Working pressure (Bar) 23°C  
P1\* = Breaking pressure (Bar) 23°C  
R\* = Tight bending radius (mm) 23°C



## Stems for push-in fittings

### Series 400-15-33



#### Components

- |                        |                         |
|------------------------|-------------------------|
| 1 External O-ring      | 4 Internal O-ring       |
| 2 Swivel stem 15A type | 5 Swivel banjo T13 type |
| 3 Fix stem 407 type    | 6 Elastic ring          |

## Technical sheet

|                                 |         |                                                                                             |
|---------------------------------|---------|---------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |         | Compressed air, water up to 100 °C (for different fluid please contact our Technical Dept.) |
| <b>APPLICATIONS</b>             |         | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms   |
| <b>TEMPERATURE AND PRESSURE</b> |         | Temperatures and pressures usually depend by the technical features of the employed tubes   |
| <b>THREAD TYPE</b>              |         | BSP parallel UNI-ISO 228 BSP tapered UNI-ISO 7 Metric ISO/R 262                             |
| <b>MATERIALS</b>                | Body    | Brass UNI EN 12164 CW614N                                                                   |
|                                 | Seals   | NBR 70 DWGV-EN549 UL157                                                                     |
|                                 | Washers | Nylon/Aluminium                                                                             |



## Stem - banjo couplings

| Banjo code | Type of stem |      |     |      |     |      |     |      |     |
|------------|--------------|------|-----|------|-----|------|-----|------|-----|
|            | 407          | 407V | 408 | 408V | 15A | 15AL | 33A | 33AL | 34A |

### Push-in fittings - Series RAP - art. 13

|        |   |  |   |  |   |  |   |  |   |
|--------|---|--|---|--|---|--|---|--|---|
| 1304M5 | ● |  |   |  | ● |  |   |  |   |
| 130418 | ● |  | ● |  | ● |  | ● |  | ● |
| 130618 | ● |  | ● |  | ● |  | ● |  | ● |
| 130614 | ● |  | ● |  | ● |  | ● |  | ● |
| 130818 | ● |  | ● |  | ● |  | ● |  | ● |
| 130814 | ● |  | ● |  | ● |  | ● |  | ● |
| 130838 | ● |  | ● |  | ● |  |   |  |   |
| 131014 | ● |  | ● |  | ● |  | ● |  | ● |
| 131038 | ● |  | ● |  | ● |  |   |  |   |
| 131214 | ● |  | ● |  | ● |  | ● |  | ● |
| 131238 | ● |  | ● |  | ● |  |   |  |   |
| 131212 |   |  | ● |  | ● |  |   |  |   |

### Push-in fittings - Series RAP - art. 14

|        |   |  |   |  |   |  |   |  |   |
|--------|---|--|---|--|---|--|---|--|---|
| 140618 | ● |  | ● |  | ● |  | ● |  | ● |
| 140818 | ● |  | ● |  | ● |  | ● |  | ● |
| 140814 | ● |  | ● |  | ● |  | ● |  | ● |
| 140838 | ● |  | ● |  | ● |  |   |  |   |
| 141014 | ● |  | ● |  | ● |  | ● |  | ● |
| 141038 | ● |  | ● |  | ● |  |   |  |   |

### Push-in fittings - Series Tecnorap - art. T13

|          |   |  |   |  |   |   |   |   |   |
|----------|---|--|---|--|---|---|---|---|---|
| T1304M5. |   |  |   |  |   | ● |   | ● |   |
| T130418. | ● |  | ● |  | ● |   | ● |   | ● |
| T130618. | ● |  | ● |  | ● |   | ● |   | ● |
| T130614. | ● |  | ● |  | ● |   | ● |   | ● |
| T130818. | ● |  | ● |  | ● |   | ● |   | ● |
| T130814. | ● |  | ● |  | ● |   | ● |   | ● |
| T130838. | ● |  | ● |  | ● |   |   |   |   |
| T131014. | ● |  | ● |  | ● |   | ● |   | ● |
| T131038. | ● |  | ● |  | ● |   |   |   |   |
| T131214. | ● |  | ● |  | ● |   | ● |   | ● |
| T131238. | ● |  | ● |  | ● |   |   |   |   |
| T131212. |   |  | ● |  | ● |   |   |   |   |

### Push-in fittings - Series Tecnorap - art. T13B

|          |   |  |   |  |   |   |   |   |   |
|----------|---|--|---|--|---|---|---|---|---|
| T13B04M5 |   |  |   |  |   | ● |   | ● |   |
| T13B0618 | ● |  | ● |  | ● |   | ● |   | ● |
| T13B0814 | ● |  | ● |  | ● |   | ● |   | ● |
| T13B1038 | ● |  | ● |  | ● |   |   |   |   |
| T13B1212 |   |  | ● |  | ● |   |   |   |   |

### Push-in fittings - Series Tecnorap - art. T14

|         |   |  |   |  |   |   |   |   |   |
|---------|---|--|---|--|---|---|---|---|---|
| T1404M5 |   |  |   |  |   | ● |   | ● |   |
| T140418 | ● |  | ● |  | ● |   | ● |   | ● |
| T140814 | ● |  | ● |  | ● |   | ● |   | ● |
| T140838 | ● |  | ● |  | ● |   |   |   |   |
| T141038 | ● |  | ● |  | ● |   |   |   |   |
| T141012 |   |  |   |  | ● |   |   |   |   |
| T141238 | ● |  | ● |  | ● |   |   |   |   |
| T141212 |   |  |   |  | ● |   |   |   |   |

| Banjo code | Type of stem |      |      |     |      |      |     |     |     |
|------------|--------------|------|------|-----|------|------|-----|-----|-----|
|            | 407          | 407K | 407V | 408 | 408K | 408V | 15A | 33A | 34A |

### Brass compression fittings - Series 100 - art. 412

|       |   |  |  |   |  |  |   |   |   |
|-------|---|--|--|---|--|--|---|---|---|
| 41218 | ● |  |  | ● |  |  | ● | ● | ● |
| 41214 | ● |  |  | ● |  |  | ● | ● | ● |
| 41238 | ● |  |  | ● |  |  | ● |   |   |
| 41212 |   |  |  | ● |  |  | ● |   |   |

### Brass compression fittings - Series 200 - art. 216

|         |  |   |   |  |   |   |  |  |  |
|---------|--|---|---|--|---|---|--|--|--|
| 2160418 |  |   | ● |  |   | ● |  |  |  |
| 2160618 |  |   | ● |  |   | ● |  |  |  |
| 2160614 |  | ● |   |  | ● |   |  |  |  |
| 2160818 |  |   | ● |  |   | ● |  |  |  |
| 2160814 |  | ● |   |  | ● |   |  |  |  |
| 2161014 |  | ● |   |  | ● |   |  |  |  |

### Brass push-on fittings - Series 300 - art. 405

|         |   |  |   |   |  |   |   |   |   |
|---------|---|--|---|---|--|---|---|---|---|
| 40504M5 | ● |  | ● |   |  |   |   |   |   |
| 4050418 |   |  | ● |   |  | ● |   |   |   |
| 40506M5 | ● |  | ● |   |  | ● |   |   |   |
| 4050618 |   |  | ● |   |  | ● |   |   |   |
| 4050614 | ● |  |   | ● |  |   | ● | ● | ● |
| 4050818 |   |  | ● |   |  | ● |   |   |   |
| 4050814 | ● |  |   | ● |  |   | ● | ● | ● |
| 4051014 | ● |  |   | ● |  |   | ● | ● | ● |

### Brass push-on fittings - Series 300 - art. 406

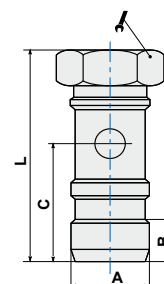
|         |  |   |   |  |   |   |  |  |  |
|---------|--|---|---|--|---|---|--|--|--|
| 4060618 |  |   | ● |  |   | ● |  |  |  |
| 4060614 |  | ● |   |  | ● |   |  |  |  |
| 4060818 |  |   | ● |  |   | ● |  |  |  |
| 4060814 |  | ● |   |  | ● |   |  |  |  |
| 4061014 |  | ● |   |  | ● |   |  |  |  |

ART. **407**

**Banjo stem single with O-Ring**



| COD.  | A    | B   | C     | L  |    |     |       |
|-------|------|-----|-------|----|----|-----|-------|
| 40718 | G1/8 | 4,5 | 13,75 | 25 | 14 | 100 | 11,78 |
| 40714 | G1/4 | 9,9 | 16,7  | 30 | 17 | 50  | 22,89 |
| 40738 | G3/8 | 6   | 18    | 34 | 22 | 25  | 38,58 |

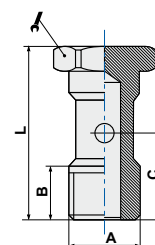


ART. **407K**

**Banjo stem single**



| COD.   | A    | B  | C    | L    |    |    |       |
|--------|------|----|------|------|----|----|-------|
| 407K14 | G1/4 | 11 | 16,5 | 29,5 | 17 | 50 | 22,90 |

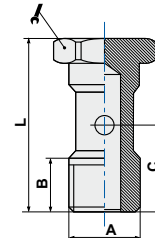


ART. **407V**

**Banjo stem single**



| COD.   | A    | B   | C    | L  |    |     |       |
|--------|------|-----|------|----|----|-----|-------|
| 407M5  | M5   | 5,8 | 9,6  | 18 | 8  | 100 | 2,90  |
| 40718V | G1/8 | 9   | 15   | 28 | 14 | 100 | 13,27 |
| 40714V | G1/4 | 11  | 18   | 33 | 17 | 50  | 26,48 |
| 40738V | G3/8 | 12  | 21,5 | 37 | 22 | 50  | 45,68 |

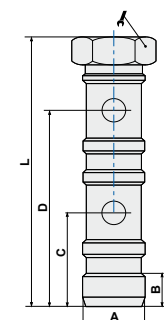


ART. **408**

**Banjo stem double with O-Ring**

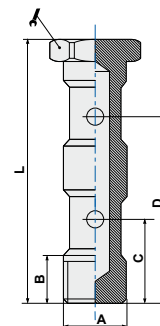


| COD.  | A    | B   | C    | D    | L    |    |    |       |
|-------|------|-----|------|------|------|----|----|-------|
| 40818 | G1/8 | 4,5 | 13   | 29   | 40   | 14 | 50 | 16,95 |
| 40814 | G1/4 | 6   | 16,5 | 33,5 | 47   | 17 | 50 | 33,23 |
| 40838 | G3/8 | 8,5 | 18   | 37,6 | 52,5 | 22 | 25 | 52,14 |
| 40812 | G1/2 | 7,4 | 21,5 | 45   | 63   | 27 | 10 | 99,50 |

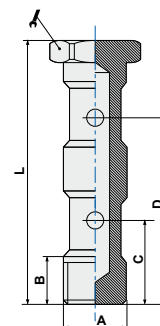


**ART. 408K**
**Banjo stem double**

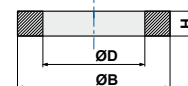

| COD.   | A    | B  | C    | D  | L    |    |    |       |
|--------|------|----|------|----|------|----|----|-------|
| 408K14 | G1/4 | 11 | 16,5 | 33 | 45,5 | 17 | 50 | 36,73 |


**ART. 408V**
**Banjo stem double**


| COD.   | A    | B  | C    | D  | L    |    |    |       |
|--------|------|----|------|----|------|----|----|-------|
| 40818V | G1/8 | 9  | 15   | 31 | 44,5 | 14 | 50 | 11,50 |
| 40814V | G1/4 | 11 | 17   | 36 | 51,5 | 17 | 50 | 36,73 |
| 40838V | G3/8 | 12 | 20,5 | 42 | 58,6 | 22 | 25 | 63,97 |
| 40812V | G1/2 | 14 | 24   | 50 | 68   | 24 | 10 | 78,14 |


**ART. 411**
**Spacer washer**


| COD.   | A    | ØB   | ØD   | H   |     |      |
|--------|------|------|------|-----|-----|------|
| 411PM5 | M5   | 9    | 5,1  | 1,5 | 100 | 0,10 |
| 411P18 | G1/8 | 14   | 9,8  | 1,5 | 100 | 0,13 |
| 411P14 | G1/4 | 18   | 13,5 | 1,5 | 100 | 0,21 |
| 411P38 | G3/8 | 21   | 16,7 | 1,5 | 100 | 0,27 |
| 411P12 | G1/2 | 26   | 21,1 | 2   | 100 | 0,32 |
| 411M5  | M5   | 8,8  | 5,2  | 1   | 100 | 0,14 |
| 41118  | G1/8 | 13,8 | 9,8  | 1,5 | 100 | 0,28 |
| 41114  | G1/4 | 18   | 13,2 | 1,5 | 100 | 0,43 |
| 41138  | G3/8 | 21   | 16,8 | 1,5 | 100 | 0,47 |
| 41112  | G1/2 | 26   | 20,8 | 1,5 | 100 | 0,68 |
| 41134  | G3/4 | 32,8 | 26,8 | 1,5 | 100 | 0,96 |



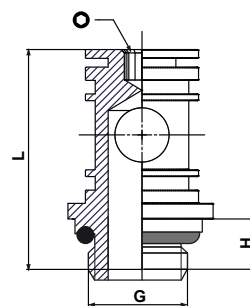
P = Nylon material  
 A = Size

ART. **15A**

Single stem for swivel banjo



| COD.   | G   | L    | Ø   | H    |    |       |
|--------|-----|------|-----|------|----|-------|
| 15AM5  | M5  | 17   | 2,5 | 4,0  | 10 | 2,00  |
| 15AM5L | M5  | 18   | 2,5 | 4,0  | 10 | 2,13  |
| 15AM6L | M6  | 19   | 2,5 | 5,0  | 10 | 2,47  |
| 15A18  | 1/8 | 24,5 | 3   | 5,5  | 10 | 11,16 |
| 15A14  | 1/4 | 28   | 4   | 6,5  | 10 | 17,59 |
| 15A38  | 3/8 | 32,5 | 5   | 7,5  | 10 | 31,24 |
| 15A12  | 1/2 | 39   | 8   | 10,0 | 10 | 61,31 |

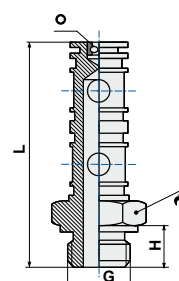


ART. **33A**

Double stem for swivel banjo



| COD.   | G   | H   | L    |      | Ø   |    |       |
|--------|-----|-----|------|------|-----|----|-------|
| 33AM5L | M5  | 4,0 | 28,0 | N.C. | 2,5 | 50 | 3,00  |
| 33A18  | 1/8 | 5,5 | 43,3 | 14   | 3   | 50 | 16,92 |
| 33A14  | 1/4 | 6,5 | 50,0 | 18   | 4   | 50 | 20,62 |

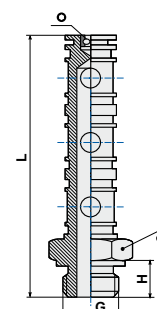


ART. **34A**

Triple stem for swivel banjo



| COD.  | G   | H   | L    |    | Ø |    |       |
|-------|-----|-----|------|----|---|----|-------|
| 34A18 | 1/8 | 5,5 | 58,4 | 14 | 3 | 50 | 21,50 |
| 34A14 | 1/4 | 6,5 | 67,1 | 18 | 4 | 25 | 20,62 |





# Standard fittings

Standard fittings in different configurations with auxiliary functions made of nickel-plated brass and AISI 316 stainless steel according to the reference ISO norms.

- **Brass standard fittings**
- **Stainless steel standard fittings**



## Brass standard fittings

# Series 100



## Technical sheet

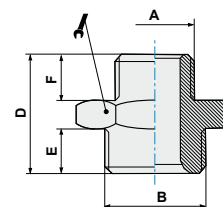
|                                 |         |                                                                                                                           |
|---------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |         | Compressed air, water up to 100 °C<br>(for different fluid please contact our Technical Dept.)                            |
| <b>APPLICATIONS</b>             |         | Pneumatic, oleodynamic and hydraulic circuits.                                                                            |
| <b>TEMPERATURE AND PRESSURE</b> |         | Temperatures and pressures usually depend by the technical features of the employed tubes. Max pressure suggested 60 bar. |
| <b>THREAD TYPE</b>              |         | BSP parallell UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                        |
| <b>MATERIALS</b>                | Body    | Brass UNI EN 12164 CW614N (bar); UNI EN 12165 CW617N (molded)                                                             |
|                                 | Seals   | NBR 70 DWGV-EN549 UL157                                                                                                   |
|                                 | Washers | Aluminium/Nylon                                                                                                           |

ART. **101**

**Parallel nipple**



| COD.    | A    | B    | D    | E  | F  |    |     |       |
|---------|------|------|------|----|----|----|-----|-------|
| 101M5M5 | M5   | M5   | 11,5 | 4  | 4  | 8  | 100 | 2,35  |
| 101M518 | M5   | G1/8 | 14,5 | 6  | 4  | 14 | 100 | 8,58  |
| 1011818 | G1/8 | G1/8 | 16,5 | 6  | 6  | 14 | 100 | 8,83  |
| 1011814 | G1/8 | G1/4 | 19,0 | 8  | 6  | 17 | 100 | 14,62 |
| 1011838 | G1/8 | G3/8 | 20,0 | 9  | 6  | 19 | 100 | 19,94 |
| 1011414 | G1/4 | G1/4 | 21,0 | 8  | 8  | 17 | 100 | 18,96 |
| 1011438 | G1/4 | G3/8 | 22,0 | 9  | 8  | 19 | 100 | 23,72 |
| 1011412 | G1/4 | G1/2 | 23,5 | 10 | 8  | 24 | 100 | 32,44 |
| 1013838 | G3/8 | G3/8 | 23,0 | 9  | 9  | 19 | 50  | 23,46 |
| 1013812 | G3/8 | G1/2 | 24,5 | 10 | 9  | 24 | 50  | 37,61 |
| 1011212 | G1/2 | G1/2 | 25,5 | 10 | 10 | 24 | 50  | 41,00 |
| 1011234 | G1/2 | G3/4 | 27,5 | 11 | 10 | 30 | 25  | 74,00 |
| 1013434 | G3/4 | G3/4 | 28,5 | 11 | 11 | 30 | 25  | 72,00 |

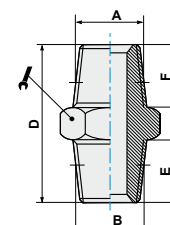


ART. **102**

**Taper nipple**



| COD.    | A    | B    | D    | E    | F    |    |     |        |
|---------|------|------|------|------|------|----|-----|--------|
| 1021818 | G1/8 | G1/8 | 20,0 | 8,0  | 8,0  | 12 | 100 | 8,85   |
| 1021814 | G1/8 | G1/4 | 24,0 | 11,0 | 8,0  | 14 | 100 | 14,89  |
| 1021838 | G1/8 | G3/8 | 24,5 | 11,5 | 8,0  | 17 | 100 | 20,73  |
| 1021812 | G1/8 | G1/2 | 27,5 | 14,0 | 8,0  | 22 | 50  | 37,08  |
| 1021414 | G1/4 | G1/4 | 27,0 | 11,0 | 11,0 | 14 | 100 | 17,90  |
| 1021438 | G1/4 | G3/8 | 27,5 | 11,5 | 11,0 | 17 | 100 | 23,83  |
| 1021412 | G1/4 | G1/2 | 30,5 | 14,0 | 11,0 | 22 | 50  | 36,50  |
| 1023838 | G3/8 | G3/8 | 28,0 | 11,5 | 11,5 | 17 | 100 | 25,51  |
| 1023812 | G3/8 | G1/2 | 31,0 | 14,0 | 11,5 | 22 | 50  | 37,42  |
| 1021212 | G1/2 | G1/2 | 33,5 | 14,0 | 14,0 | 22 | 50  | 41,91  |
| 1021234 | G1/2 | G3/4 | 37,5 | 16,5 | 14,0 | 27 | 25  | 69,40  |
| 1023434 | G3/4 | G3/4 | 40,0 | 16,5 | 16,5 | 27 | 25  | 79,08  |
| 1023401 | G3/4 | G1'  | 42,5 | 19,0 | 16,5 | 34 | 10  | 122,00 |
| 1020101 | G1'  | G1'  | 45,0 | 19,0 | 19,0 | 34 | 10  | 113,54 |

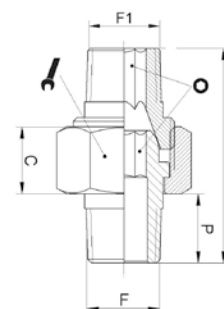


ART. **102P3**

**Taper nipple - 3 pieces**



| COD.      | F   | F1  | P    | L    | C    |    |    |    |       |
|-----------|-----|-----|------|------|------|----|----|----|-------|
| 10218P3   | 1/8 | 1/8 | 9,0  | 27,0 | 8,6  | 15 | 5  | 50 | 47,14 |
| 10214P3   | 1/4 | 1/4 | 11,5 | 33,5 | 9,6  | 19 | 6  | 50 | 49,00 |
| 10238P3   | 3/8 | 3/8 | 13,0 | 36,0 | 10,0 | 22 | 8  | 50 | 55,26 |
| 10212P3   | 1/2 | 1/2 | 15,5 | 45,0 | 12,0 | 27 | 12 | 25 | 55,00 |
| 10234P3   | 3/4 | 3/4 | 18,0 | 53,0 | 17,0 | 36 | 14 | 25 | 84,62 |
| 10201P3   | 1"  | 1"  | 22,0 | 64,0 | 20,0 | 46 | 19 | 5  | 37,60 |
| 1021814P3 | 1/8 | 1/4 | 9,0  | 30,0 | 8,5  | 15 | 5  | 50 | 23,49 |
| 1021438P3 | 1/4 | 3/8 | 11,5 | 36,0 | 9,5  | 19 | 6  | 50 | 22,84 |
| 1023812P3 | 3/8 | 1/2 | 13,0 | 39,0 | 10,0 | 22 | 8  | 25 | 39,32 |



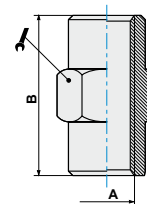


ART. **103**

**Sleeve**



| COD.  | A    | B  |    |     |       |
|-------|------|----|----|-----|-------|
| 103M5 | M5   | 11 | 8  | 100 | 2,00  |
| 10318 | G1/8 | 15 | 14 | 100 | 10,95 |
| 10314 | G1/4 | 22 | 17 | 100 | 18,97 |
| 10338 | G3/8 | 23 | 22 | 50  | 33,96 |
| 10312 | G1/2 | 30 | 26 | 25  | 49,35 |
| 10334 | G3/4 | 32 | 32 | 10  | 76,00 |

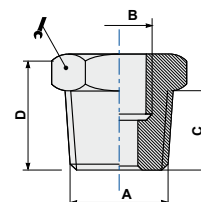


ART. **104**

**Taper M/F reducer**



| COD.    | A    | B    | C    | D    |    |     |        |
|---------|------|------|------|------|----|-----|--------|
| 1041418 | G1/4 | G1/8 | 11,0 | 16,0 | 14 | 100 | 9,99   |
| 1043818 | G3/8 | G1/8 | 11,5 | 16,5 | 17 | 100 | 20,90  |
| 1041218 | G1/2 | G1/8 | 14,0 | 19,5 | 22 | 50  | 44,22  |
| 1043814 | G3/8 | G1/4 | 11,5 | 16,5 | 17 | 100 | 13,06  |
| 1041214 | G1/2 | G1/4 | 14,0 | 19,5 | 22 | 50  | 30,54  |
| 1041238 | G1/2 | G3/8 | 14,0 | 19,5 | 22 | 50  | 28,43  |
| 1043412 | G3/4 | G1/2 | 16,5 | 23,0 | 27 | 25  | 42,38  |
| 1043438 | G3/4 | G3/8 | 16,5 | 23,0 | 27 | 10  | 55,86  |
| 1040112 | G1'  | G1/2 | 17,0 | 25,0 | 34 | 10  | 126,52 |
| 1040134 | G1'  | G3/4 | 17,0 | 25,0 | 34 | 10  | 73,07  |

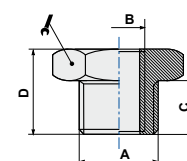


ART. **104Z**

**Parallel M/F reducer**



| COD.     | A    | B    | C    | D    |    |     |       |
|----------|------|------|------|------|----|-----|-------|
| 104Z18M5 | G1/8 | M5   | 6,0  | 10,5 | 14 | 100 | 8,00  |
| 104Z1418 | G1/4 | G1/8 | 8,0  | 13,0 | 17 | 100 | 10,74 |
| 104Z3818 | G3/8 | G1/8 | 9,0  | 14,0 | 19 | 100 | 19,13 |
| 104Z3814 | G3/8 | G1/4 | 9,0  | 14,0 | 19 | 100 | 13,00 |
| 104Z1218 | G1/2 | G1/8 | 10,0 | 15,5 | 24 | 50  | 39,06 |
| 104Z1214 | G1/2 | G1/4 | 10,0 | 15,5 | 24 | 50  | 32,42 |
| 104Z1238 | G1/2 | G3/8 | 10,0 | 15,5 | 24 | 50  | 21,48 |
| 104Z3412 | G3/4 | G1/2 | 12,5 | 18,0 | 30 | 25  | 41,24 |
| 104Z3438 | G3/4 | G3/8 | 12,5 | 18,0 | 30 | 10  | 53,72 |

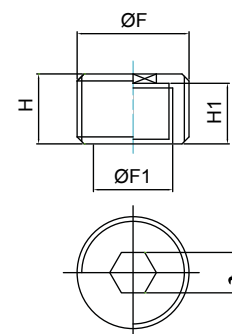


ART. **104S**

**Disapparence parallel reducer**

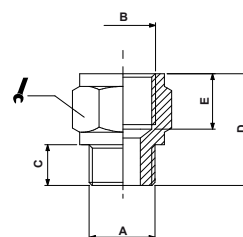


| COD.     | ØF  | ØF1 | H  | H1   |    |    |       |
|----------|-----|-----|----|------|----|----|-------|
| 104S1418 | 1/4 | 1/8 | 8  | 7    | 6  | 50 | 4,16  |
| 104S3814 | 3/8 | 1/4 | 9  | 7    | 8  | 50 | 13,06 |
| 104S1238 | 1/2 | 3/8 | 10 | 9    | 10 | 25 | 65,00 |
| 104S3412 | 3/4 | 1/2 | 14 | 11   | 12 | 10 | 41,38 |
| 104S0134 | 1"  | 3/4 | 20 | 12,5 | 17 | 10 | 73,07 |

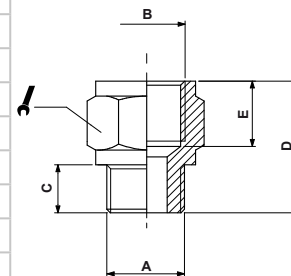


**ART. 105**
**Taper M/F extension**

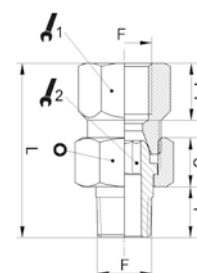

| COD.    | A    | B    | C    | D    | E    |    |     |       |
|---------|------|------|------|------|------|----|-----|-------|
| 1051818 | G1/8 | G1/8 | 8,0  | 18,0 | 8,0  | 14 | 100 | 10,85 |
| 1051814 | G1/8 | G1/4 | 8,0  | 21,5 | 11,0 | 17 | 100 | 17,75 |
| 1051838 | G1/8 | G3/8 | 8,0  | 22,5 | 11,5 | 22 | 50  | 30,26 |
| 1051414 | G1/4 | G1/4 | 11,0 | 24,5 | 11,0 | 17 | 100 | 21,07 |
| 1051438 | G1/4 | G3/8 | 11,0 | 24,5 | 11,5 | 22 | 50  | 31,86 |
| 1051412 | G1/4 | G1/2 | 11,0 | 29,0 | 14,0 | 24 | 50  | 50,38 |
| 1053838 | G3/8 | G3/8 | 11,5 | 26,0 | 11,5 | 22 | 50  | 38,16 |
| 1053812 | G3/8 | G1/2 | 11,5 | 29,5 | 14,0 | 24 | 25  | 40,04 |
| 1051212 | G1/2 | G1/2 | 14,0 | 32,0 | 14,0 | 26 | 25  | 53,33 |
| 1051234 | G1/2 | G3/4 | 14,0 | 35,0 | 16,5 | 32 | 10  | 77,70 |
| 1051201 | G1/2 | G1   | 14,0 | 37,0 | 18,0 | 38 | 10  | 104   |


**ART. 105Z**
**Parallel M/F extension**

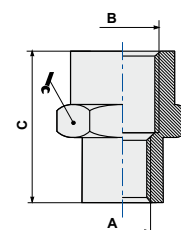

| COD.     | A    | B    | C  | D    | E    |    |     |       |
|----------|------|------|----|------|------|----|-----|-------|
| 105ZM5M5 | M5   | M5   | 5  | 14,0 | 7,0  | 9  | 100 | 4,39  |
| 105ZM518 | M5   | G1/8 | 4  | 14,5 | 8,0  | 14 | 100 | 9,54  |
| 105ZM618 | M6   | G1/8 | 6  | 16,0 | 8,0  | 14 | 100 | 9,67  |
| 105Z1818 | G1/8 | G1/8 | 6  | 16,0 | 8,0  | 14 | 100 | 10,06 |
| 105Z1814 | G1/8 | G1/4 | 6  | 19,5 | 11,0 | 17 | 100 | 17,58 |
| 105Z1838 | G1/8 | G3/8 | 6  | 20,5 | 11,5 | 22 | 50  | 30,98 |
| 105Z1414 | G1/4 | G1/4 | 8  | 21,5 | 11,0 | 17 | 100 | 19,07 |
| 105Z1438 | G1/4 | G3/8 | 8  | 22,5 | 11,5 | 22 | 50  | 32,12 |
| 105Z1412 | G1/4 | G1/2 | 8  | 26,0 | 14,0 | 24 | 50  | 36,08 |
| 105Z3838 | G3/8 | G3/8 | 9  | 23,5 | 11,5 | 22 | 50  | 34,23 |
| 105Z3812 | G3/8 | G1/2 | 9  | 27,0 | 14,0 | 24 | 25  | 52,04 |
| 105Z1212 | G1/2 | G1/2 | 10 | 28,0 | 14,0 | 26 | 25  | 53,54 |
| 105Z1234 | G1/2 | G3/4 | 10 | 30,0 | 16,5 | 32 | 10  | 2,00  |


**ART. 105P3**
**Extension M/F - 3 pieces**


| COD.    | F   | P    | P1   | L    | C    |    |    |    |    |       |
|---------|-----|------|------|------|------|----|----|----|----|-------|
| 10518P3 | 1/8 | 9,0  | 10,0 | 30,5 | 8,5  | 14 | 15 | 5  | 50 | 12,41 |
| 10514P3 | 1/4 | 12,0 | 12,0 | 37,0 | 9,5  | 17 | 19 | 6  | 50 | 21,07 |
| 10538P3 | 3/8 | 12,0 | 12,0 | 40,0 | 10,0 | 21 | 22 | 8  | 25 | 38,16 |
| 10512P3 | 1/2 | 15,0 | 15,0 | 48,0 | 12,0 | 25 | 27 | 12 | 10 | 53,33 |


**ART. 106**
**Reducing sleeve**


| COD.    | A    | B    | C    |    |     |       |
|---------|------|------|------|----|-----|-------|
| 106M518 | M5   | G1/8 | 13,5 | 14 | 100 | 9,58  |
| 1061814 | G1/8 | G1/4 | 19,0 | 17 | 100 | 16,39 |
| 1061838 | G1/8 | G3/8 | 20,0 | 22 | 25  | 27,57 |
| 1061812 | G1/8 | G1/2 | 24,0 | 26 | 50  | 57,96 |
| 1061438 | G1/4 | G3/8 | 23,0 | 22 | 50  | 30,55 |
| 1061412 | G1/4 | G1/2 | 25,0 | 26 | 50  | 32,94 |
| 1063812 | G3/8 | G1/2 | 27,5 | 26 | 25  | 38,93 |
| 1061234 | G1/2 | G3/4 | 30,0 | 32 | 10  | 36,00 |

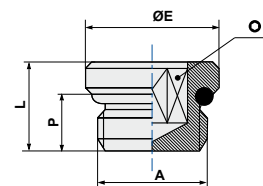


ART. **107**

**Parallel male plug + O-Ring**



| COD.  | A    | P    | L    | ØE | ○    | 📦   | 📊     |
|-------|------|------|------|----|------|-----|-------|
| 107M5 | M5   | 4,0  | 5,5  | 8  | 2,5  | 100 | 0,81  |
| 10718 | G1/8 | 5,5  | 7,5  | 14 | 4,0  | 100 | 4,39  |
| 10714 | G1/4 | 6,5  | 8,5  | 17 | 6,0  | 100 | 7,68  |
| 10738 | G3/8 | 7,5  | 10,5 | 20 | 8,0  | 100 | 15,21 |
| 10712 | G1/2 | 9,0  | 12,0 | 24 | 10,0 | 50  | 25,00 |
| 10734 | G3/4 | 15,0 | 20,0 | 32 | 12,0 | 10  | 27,00 |



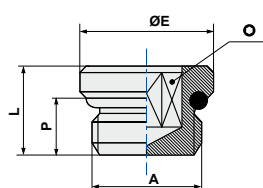
ART. **107P**

**Parallel male plug + OR (Technopolymer)**



| COD.   | A    | P   | L   | ØE | Nm* | ○ | 📦   | 📊    |
|--------|------|-----|-----|----|-----|---|-----|------|
| 107P18 | G1/8 | 5,3 | 8,2 | 14 | 1,2 | 4 | 100 | 1,13 |
| 107P14 | G1/4 | 6,5 | 9,2 | 18 | 1,5 | 6 | 100 | 2,11 |

Nm\* = Tightening torque  
Note: Product made of Technopolymer IXEF 1022

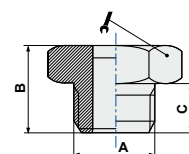


ART. **107Z**

**Parallel male plug**



| COD.   | A    | B    | C  | 🔧  | 📦   | 📊      |
|--------|------|------|----|----|-----|--------|
| 107Z18 | G1/8 | 10,5 | 6  | 14 | 100 | 7,07   |
| 107Z14 | G1/4 | 13,0 | 8  | 17 | 100 | 13,99  |
| 107Z38 | G3/8 | 14,0 | 9  | 19 | 50  | 17,82  |
| 107Z12 | G1/2 | 15,5 | 10 | 24 | 50  | 31,44  |
| 107Z34 | G3/4 | 16,5 | 11 | 30 | 25  | 48,70  |
| 107Z01 | G1"  | 19,0 | 13 | 38 | 10  | 152,71 |

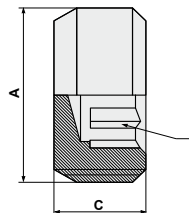


ART. **E100**

**Disappearance tapered plug**



| COD.     | A    | C  | ○  | 📦   | 📊     |
|----------|------|----|----|-----|-------|
| E10018   | G1/8 | 8  | 5  | 100 | 3,04  |
| E10018L5 | G1/8 | 5  | 5  | 100 | 2,88  |
| E10014   | G1/4 | 10 | 6  | 100 | 6,83  |
| E10038   | G3/8 | 11 | 8  | 50  | 9,00  |
| E10012   | G1/2 | 13 | 10 | 50  | 14,00 |

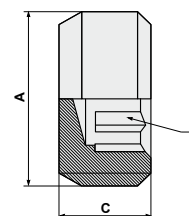


ART. **E200**

**Disappearance parallel plug**



| COD.   | A    | C  | ○  | 📦   | 📊     |
|--------|------|----|----|-----|-------|
| E20018 | G1/8 | 8  | 5  | 100 | 2,80  |
| E20014 | G1/4 | 10 | 6  | 100 | 6,86  |
| E20038 | G3/8 | 11 | 8  | 50  | 13,58 |
| E20012 | G1/2 | 13 | 10 | 50  | 23,11 |

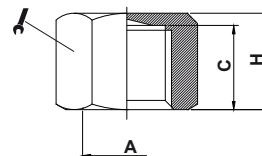


ART. **108**

**Female plug**



| COD.  | A    | C    | H    |    |     |       |
|-------|------|------|------|----|-----|-------|
| 10818 | G1/8 | 8,0  | 10,0 | 14 | 100 | 9,52  |
| 10814 | G1/4 | 11,0 | 13,5 | 17 | 100 | 16,28 |
| 10838 | G3/8 | 11,5 | 14,0 | 20 | 50  | 30,18 |
| 10812 | G1/2 | 14,0 | 16,5 | 24 | 50  | 31,50 |

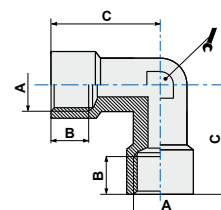


ART. **109**

**F/F elbow**



| COD.  | A    | B  | C    |    |     |        |
|-------|------|----|------|----|-----|--------|
| 10918 | G1/8 | 7  | 20,0 | 10 | 100 | 20,25  |
| 10914 | G1/4 | 8  | 25,5 | 13 | 50  | 39,05  |
| 10938 | G3/8 | 10 | 29,0 | 17 | 25  | 62,56  |
| 10912 | G1/2 | 11 | 35,0 | 20 | 10  | 105,15 |
| 10934 | G3/4 | 16 | 36,0 | 25 | 5   | 143,00 |
| 10901 | G1'  | 19 | 44,0 | 30 | 5   | 236,97 |

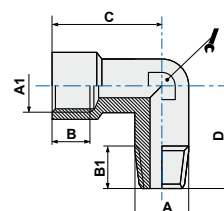


ART. **110**

**M/F elbow**



| COD.      | A    | A1   | B  | B1   | C    | D    |    |     |        |
|-----------|------|------|----|------|------|------|----|-----|--------|
| 110M5     | M5   | M5   | 4  | *    | 11,0 | 11,5 | 9  | 100 | 7,01   |
| 11018     | G1/8 | G1/8 | 7  | 8    | 20,0 | 19,0 | 10 | 50  | 16,30  |
| 11014     | G1/4 | G1/4 | 8  | 11   | 25,5 | 24,0 | 13 | 50  | 33,90  |
| 11038     | G3/8 | G3/8 | 10 | 11,5 | 29,0 | 26,5 | 17 | 25  | 53,01  |
| 11012     | G1/2 | G1/2 | 11 | 14   | 35,0 | 31,5 | 20 | 20  | 88,06  |
| 11034     | G3/4 | G3/4 | 16 | 16   | 35,0 | 34,5 | 25 | 10  | 121,63 |
| 11001     | G1'  | G1'  | 19 | 16   | 44,0 | 51,0 | 30 | 5   | 119,02 |
| 11014F18M | G1/8 | G1/4 | 8  | 8    | 25,5 | 23,0 | 13 | 50  | 32,28  |

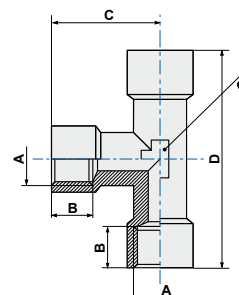


ART. **111**

**F/F T**



| COD.  | A    | B  | C    | D  |    |    |        |
|-------|------|----|------|----|----|----|--------|
| 11118 | G1/8 | 7  | 20,0 | 40 | 10 | 50 | 28,79  |
| 11114 | G1/4 | 8  | 25,5 | 51 | 13 | 25 | 57,04  |
| 11138 | G3/8 | 10 | 29,0 | 58 | 17 | 10 | 83,55  |
| 11112 | G1/2 | 11 | 35,0 | 70 | 20 | 10 | 145,94 |
| 11134 | G3/4 | 16 | 31,0 | 73 | 25 | 5  | 196,05 |
| 11101 | G1'  | 19 | 49,5 | 90 | 30 | 5  | 346,23 |

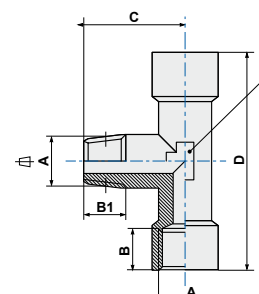


ART. **112**

**F/M/F T**



| COD.  | A    | B  | B1   | C    | D  |    |    |        |
|-------|------|----|------|------|----|----|----|--------|
| 11218 | G1/8 | 7  | 8,0  | 19,0 | 40 | 10 | 50 | 22,42  |
| 11214 | G1/4 | 8  | 11,0 | 24,0 | 51 | 13 | 25 | 50,84  |
| 11238 | G3/8 | 10 | 13,6 | 26,5 | 58 | 17 | 25 | 74,67  |
| 11212 | G1/2 | 11 | 15,5 | 31,5 | 72 | 20 | 10 | 127,43 |
| 11234 | G3/4 | 16 | 15,0 | 31,0 | 73 | 25 | 5  | 290,76 |
| 11201 | G1'  | 19 | 16,0 | 38,0 | 90 | 30 | 5  | 340,00 |

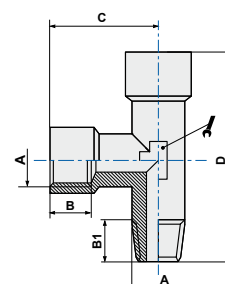


ART. **113**

M/F/F T



| COD.  | A    | B  | B1   | C    | D    |    |    |        |
|-------|------|----|------|------|------|----|----|--------|
| 11318 | G1/8 | 7  | 8,0  | 20,0 | 39,0 | 10 | 50 | 24,94  |
| 11314 | G1/4 | 8  | 11,0 | 25,5 | 49,5 | 13 | 25 | 50,68  |
| 11338 | G3/8 | 10 | 13,6 | 29,0 | 55,5 | 17 | 25 | 74,46  |
| 11312 | G1/2 | 11 | 15,5 | 35,0 | 65,0 | 20 | 10 | 127,29 |
| 11334 | G3/4 | 16 | 15,0 | 31,0 | 67,0 | 25 | 5  | 290,76 |
| 11301 | G1"  | 19 | 16,0 | 44,0 | 84,0 | 30 | 5  | 340    |

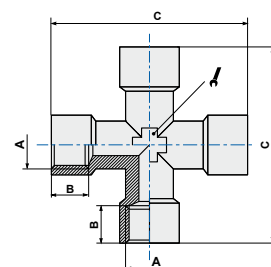


ART. **114**

F.F.F.F. cross



| COD.  | A    | B  | C  |    |    |        |
|-------|------|----|----|----|----|--------|
| 11418 | G1/8 | 7  | 40 | 10 | 25 | 37,69  |
| 11414 | G1/4 | 8  | 51 | 13 | 25 | 73,04  |
| 11438 | G3/8 | 10 | 58 | 17 | 10 | 108,34 |
| 11412 | G1/2 | 11 | 72 | 20 | 5  | 185,92 |

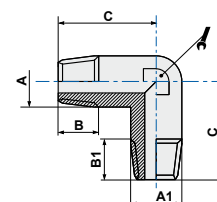


ART. **115**

M/M elbow



| COD.    | A    | B    | C    | A1   | B1   |    |     |        |
|---------|------|------|------|------|------|----|-----|--------|
| 11518   | G1/8 | 8,0  | 19,0 | G1/8 | 8,0  | 10 | 100 | 12,44  |
| 11514   | G1/4 | 12,5 | 24,0 | G1/4 | 12,5 | 13 | 50  | 27,87  |
| 11538   | G3/8 | 13,6 | 26,5 | G3/8 | 26,5 | 17 | 25  | 41,66  |
| 11512   | G1/2 | 15,5 | 31,5 | G1/2 | 15,5 | 20 | 25  | 70,62  |
| 11534   | G3/4 | 15,0 | 35,5 | G3/4 | 15,0 | 25 | 5   | 98,63  |
| 11501   | G1"  | 16,0 | 51,0 | G1"  | 51,0 | 30 | 5   | 151,16 |
| 1151814 | G1/8 | 8,0  | 22,0 | G1/4 | 12,5 | 13 | 100 | 16,10  |

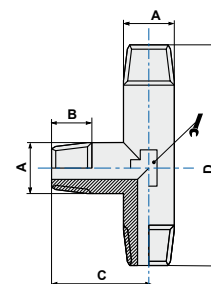


ART. **116**

M/M/M T



| COD.  | A    | B    | C    | D  |    |     |        |
|-------|------|------|------|----|----|-----|--------|
| 11618 | G1/8 | 8,0  | 19,0 | 38 | 10 | 100 | 19,07  |
| 11614 | G1/4 | 12,5 | 24,0 | 48 | 13 | 50  | 32,72  |
| 11638 | G3/8 | 13,6 | 26,5 | 53 | 17 | 25  | 54,98  |
| 11612 | G1/2 | 15,5 | 31,5 | 63 | 20 | 10  | 91,05  |
| 11634 | G3/4 | 15,0 | 35,5 | 66 | 25 | 5   | 127,06 |
| 11601 | G1"  | 16,0 | 40,5 | 78 | 30 | 5   | 209,77 |

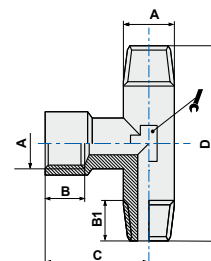


ART. **117**

M/F/M T



| COD.  | A    | B  | B1   | C    | D  |    |     |        |
|-------|------|----|------|------|----|----|-----|--------|
| 11718 | G1/8 | 7  | 8,0  | 20,0 | 38 | 10 | 100 | 19,90  |
| 11714 | G1/4 | 8  | 12,5 | 25,5 | 48 | 13 | 50  | 43,69  |
| 11738 | G3/8 | 10 | 13,6 | 29,0 | 53 | 17 | 25  | 68,01  |
| 11712 | G1/2 | 11 | 15,5 | 36,0 | 63 | 17 | 10  | 111,33 |
| 11734 | G3/4 | 16 | 15,0 | 34,5 | 66 | 25 | 5   | 205,44 |
| 11701 | G1"  | 19 | 16,0 | 46,5 | 78 | 30 | 5   | 205,12 |

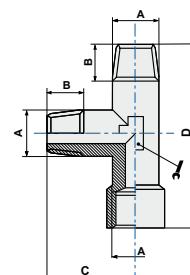


ART. **118**

M/M/F T



| COD.  | A    | B    | C    | D    |    |     |        |
|-------|------|------|------|------|----|-----|--------|
| 11818 | G1/8 | 8,0  | 19,0 | 39,0 | 10 | 100 | 20,84  |
| 11814 | G1/4 | 12,5 | 24,0 | 49,5 | 13 | 50  | 44,09  |
| 11838 | G3/8 | 13,6 | 26,5 | 55,5 | 17 | 25  | 64,58  |
| 11812 | G1/2 | 15,5 | 31,5 | 67,5 | 20 | 10  | 109,27 |
| 11834 | G3/4 | 15,0 | 34,5 | 69,0 | 25 | 5   | 157,53 |
| 11801 | G1"  | 16,0 | 38,0 | 84,0 | 30 | 5   | 245,53 |

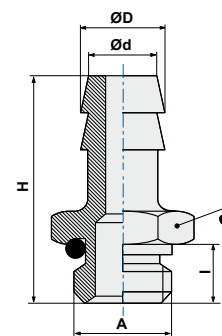


ART. **119**

Male hose adapter + O-Ring



| COD.    | ØD  | A    | I  | H    | Ød   |    |     |       |
|---------|-----|------|----|------|------|----|-----|-------|
| 11945M5 | 4,5 | M5   | 4  | 31,5 | 2,2  | 11 | 100 | 2,00  |
| 1190718 | 7   | G1/8 | 6  | 31,5 | 4    | 13 | 100 | 9,00  |
| 1190714 | 7   | G1/4 | 8  | 34,0 | 4    | 16 | 100 | 15,06 |
| 1190818 | 8   | G1/8 | 6  | 31,5 | 5,30 | 13 | 100 | 16,21 |
| 1190918 | 9   | G1/8 | 6  | 31,5 | 5,5  | 13 | 100 | 11,77 |
| 1190914 | 9   | G1/4 | 8  | 34,0 | 5,5  | 16 | 100 | 19,34 |
| 1190938 | 9   | G3/8 | 9  | 35,0 | 5,5  | 17 | 50  | 22,18 |
| 1191014 | 10  | G1/4 | 8  | 34,0 | 6    | 16 | 50  | 21,82 |
| 1191038 | 10  | G3/8 | 9  | 35,0 | 6    | 17 | 50  | 23,12 |
| 1191214 | 12  | G1/4 | 8  | 34,0 | 8    | 16 | 50  | 21,27 |
| 1191238 | 12  | G3/8 | 9  | 36,0 | 8    | 17 | 50  | 25,12 |
| 1191212 | 12  | G1/2 | 11 | 37,0 | 8    | 22 | 50  | 35,50 |
| 1191738 | 17  | G3/8 | 9  | 36,0 | 11   | 17 | 50  | 28,53 |
| 1191712 | 17  | G1/2 | 11 | 37,0 | 12   | 22 | 50  | 42,18 |

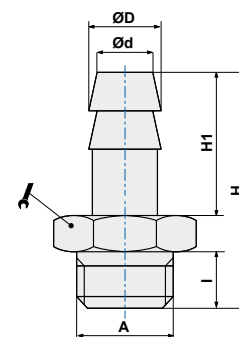


ART. **119Z**

**Male hose adapter**



| COD.     | ØD  | A    | I  | H    | H1   | Ød   |    |     |       |
|----------|-----|------|----|------|------|------|----|-----|-------|
| 119Z04M5 | 4,5 | M5   | 4  | 22,5 | 15,0 | 2    | 8  | 100 | 3,00  |
| 119Z0618 | 6   | G1/8 | 6  | 29,5 | 19,0 | 3    | 12 | 100 | 8,23  |
| 119Z0614 | 6   | G1/4 | 8  | 32,0 | 19,0 | 3    | 14 | 100 | 14,66 |
| 119Z0718 | 7   | G1/8 | 6  | 29,5 | 19,0 | 4    | 12 | 100 | 10,02 |
| 119Z0714 | 7   | G1/4 | 8  | 32,0 | 19,0 | 4    | 14 | 100 | 16,06 |
| 119Z0818 | 8   | G1/8 | 6  | 29,5 | 19,0 | 5    | 12 | 100 | 9,02  |
| 119Z0814 | 8   | G1/4 | 8  | 32,0 | 19,0 | 5    | 14 | 100 | 13,55 |
| 119Z0838 | 8   | G3/8 | 9  | 33,0 | 19,0 | 5    | 19 | 100 | 21,64 |
| 119Z0918 | 9   | G1/8 | 6  | 29,5 | 19,0 | 6    | 12 | 100 | 11,24 |
| 119Z0914 | 9   | G1/4 | 8  | 32,0 | 19,0 | 6    | 14 | 100 | 17,66 |
| 119Z0938 | 9   | G3/8 | 9  | 33,0 | 19,0 | 6    | 19 | 100 | 21,78 |
| 119Z0912 | 9   | G1/2 | 10 | 35,5 | 19,0 | 6    | 24 | 25  | 32,76 |
| 119Z1018 | 10  | G1/8 | 6  | 30,5 | 20,0 | 7    | 12 | 100 | 10,26 |
| 119Z1014 | 10  | G1/4 | 8  | 33,0 | 20,0 | 7    | 14 | 50  | 19,74 |
| 119Z1038 | 10  | G3/8 | 9  | 34,0 | 20,0 | 7    | 19 | 100 | 23,98 |
| 119Z1012 | 10  | G1/2 | 10 | 36,0 | 20,0 | 7    | 24 | 50  | 32,46 |
| 119Z1214 | 12  | G1/4 | 8  | 33,0 | 20,0 | 9    | 14 | 50  | 16,19 |
| 119Z1238 | 12  | G3/8 | 9  | 34,0 | 20,0 | 9    | 19 | 50  | 23,22 |
| 119Z1212 | 12  | G1/2 | 10 | 35,5 | 20,0 | 9    | 22 | 50  | 31,72 |
| 119Z1414 | 14  | G1/4 | 8  | 33,0 | 20,0 | 10   | 14 | 25  | 33,61 |
| 119Z1438 | 14  | G3/8 | 9  | 36,0 | 22,0 | 10,5 | 19 | 50  | 26,34 |
| 119Z1412 | 14  | G1/2 | 10 | 37,5 | 22,0 | 10,5 | 22 | 50  | 33,73 |
| 119Z1638 | 16  | G3/8 | 9  | 38,0 | 24,0 | 12   | 19 | 50  | 29,76 |
| 119Z1612 | 16  | G1/2 | 10 | 38,0 | 22,0 | 12,5 | 24 | 25  | 34,18 |
| 119Z1738 | 17  | G3/8 | 9  | 38,0 | 24,0 | 13   | 19 | 50  | 31,05 |
| 119Z1712 | 17  | G1/2 | 10 | 39,5 | 24,0 | 13   | 22 | 50  | 44,64 |
| 119Z2012 | 20  | G1/2 | 10 | 39,5 | 24,0 | 14   | 24 | 25  | 40,26 |
| 119Z2034 | 20  | G3/4 | 10 | 39,5 | 24,0 | 16   | 24 | 25  | 60,00 |

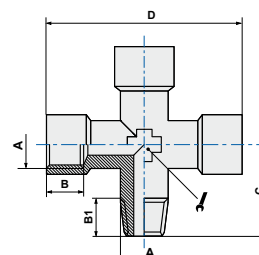


ART. **120**

**M.F.F.cross**



| COD.  | A    | B  | B1   | C    | D  |    |    |        |
|-------|------|----|------|------|----|----|----|--------|
| 12018 | G1/8 | 7  | 8,0  | 19,0 | 40 | 10 | 25 | 30,06  |
| 12014 | G1/4 | 8  | 12,5 | 24,0 | 51 | 13 | 25 | 68,02  |
| 12038 | G3/8 | 10 | 13,6 | 26,5 | 58 | 17 | 10 | 98,03  |
| 12012 | G1/2 | 11 | 15,5 | 31,5 | 72 | 20 | 5  | 166,23 |

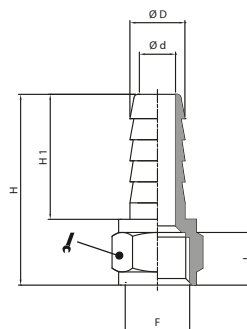


ART. **122**

**Female hose adapter**



| COD.    | ØD | F    | Ød  | I    | H    | H1 |    |     |       |
|---------|----|------|-----|------|------|----|----|-----|-------|
| 1220618 | 6  | G1/8 | 3,5 | 8    | 28,5 | 19 | 12 | 100 | 12,01 |
| 1220718 | 7  | G1/8 | 4,5 | 8    | 28,5 | 19 | 12 | 100 | 27,00 |
| 1220714 | 7  | G1/4 | 4,5 | 11   | 31,5 | 19 | 15 | 100 | 23,98 |
| 1220818 | 8  | G1/8 | 5,5 | 8    | 28,5 | 19 | 12 | 100 | 10,00 |
| 1220814 | 8  | G1/4 | 5,5 | 11   | 31,5 | 19 | 15 | 100 | 20,74 |
| 1220914 | 9  | G1/4 | 6,5 | 11   | 31,5 | 19 | 15 | 100 | 25,01 |
| 1221014 | 10 | G1/4 | 7,5 | 11   | 32,5 | 20 | 15 | 100 | 14,00 |
| 1221038 | 10 | G3/8 | 7,5 | 11,5 | 33   | 20 | 19 | 100 | 28,09 |
| 1221238 | 12 | G3/8 | 9,5 | 11,5 | 33   | 20 | 19 | 100 | 30,26 |
| 1221212 | 12 | G1/2 | 9,5 | 14   | 36   | 20 | 24 | 100 | 45,02 |
| 1221438 | 14 | G3/8 | 11  | 11,5 | 35   | 22 | 19 | 100 | 22,00 |
| 1221412 | 14 | G1/2 | 11  | 14   | 38   | 22 | 24 | 25  | 40,00 |

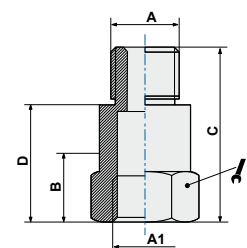


ART. **123**

**Extension**



| COD.     | A    | A1   | B | C  | D  |    |     |       |
|----------|------|------|---|----|----|----|-----|-------|
| 12318L22 | G1/8 | G1/8 | 6 | 22 | 16 | 14 | 100 | 14,71 |
| 12318L32 | G1/8 | G1/8 | 6 | 32 | 26 | 14 | 100 | 21,57 |
| 12318L42 | G1/8 | G1/8 | 6 | 42 | 36 | 14 | 100 | 20,44 |
| 12318L51 | G1/8 | G1/8 | 6 | 51 | 45 | 14 | 50  | 36,30 |
| 12314L28 | G1/4 | G1/4 | 8 | 28 | 20 | 17 | 50  | 25,20 |
| 12314L35 | G1/4 | G1/4 | 8 | 35 | 27 | 17 | 50  | 31,32 |
| 12314L51 | G1/4 | G1/4 | 8 | 51 | 43 | 17 | 25  | 44,72 |

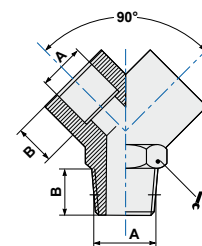


ART. **125**

**Male Y**



| COD.  | A    | B    |    |    |        |
|-------|------|------|----|----|--------|
| 12518 | G1/8 | 8,0  | 13 | 50 | 21,52  |
| 12514 | G1/4 | 11,0 | 17 | 25 | 38,07  |
| 12538 | G3/8 | 11,5 | 20 | 25 | 52,03  |
| 12512 | G1/2 | 14,0 | 25 | 10 | 100,72 |

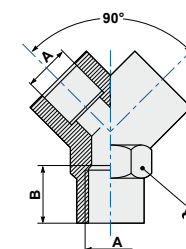


ART. **126**

**Female Y**



| COD.  | A    | B  |    |    |       |
|-------|------|----|----|----|-------|
| 12618 | G1/8 | 8  | 13 | 50 | 19,34 |
| 12614 | G1/4 | 11 | 17 | 25 | 33,84 |
| 12638 | G3/8 | 11 | 20 | 25 | 45,38 |
| 12612 | G1/2 | 14 | 25 | 10 | 84,53 |



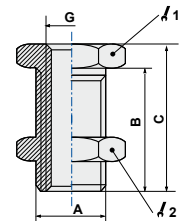


ART. **127**

**Female bulkhead (nickel plated)**



| COD.  | G    | A       | B    | C  |    |    |     |       |
|-------|------|---------|------|----|----|----|-----|-------|
| 127M5 | M5   | M10x1,0 | 10,5 | 14 | 14 | 14 | 100 | 11,86 |
| 12718 | G1/8 | M16x1,5 | 14,0 | 18 | 22 | 19 | 50  | 29,97 |
| 12714 | G1/4 | M20x1,5 | 21,0 | 24 | 27 | 24 | 25  | 53,78 |
| 12738 | G3/8 | M26x1,5 | 21,0 | 26 | 32 | 30 | 25  | 95,70 |
| 12712 | G1/2 | M28x1,5 | 27,0 | 33 | 36 | 32 | 10  | 11,01 |

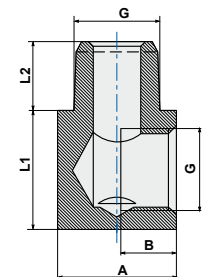


ART. **RLB100**

**M/F elbow tapered**



| COD.     | G   | A  | B   | L1 | L2   |     |       |
|----------|-----|----|-----|----|------|-----|-------|
| RLB100M5 | M5  | 9  | 4,5 | 9  | 4,5  | 100 | 5,03  |
| RLB10018 | 1/8 | 14 | 6,5 | 14 | 8    | 100 | 17,21 |
| RLB10014 | 1/4 | 18 | 9   | 18 | 10   | 100 | 37,13 |
| RLB10038 | 3/8 | 19 | 11  | 19 | 11,5 | 50  | 50,00 |

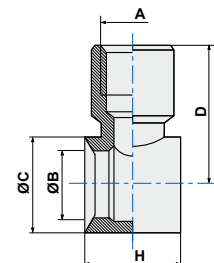


ART. **412**

**Female single banjo body**



| COD.  | A    | ØB   | ØC | D      | H  |    |       |
|-------|------|------|----|--------|----|----|-------|
| 41218 | G1/8 | 9,9  | 14 | 20     | 15 | 50 | 17,40 |
| 41214 | G1/4 | 13,3 | 18 | 24     | 17 | 50 | 29,14 |
| 41238 | G3/8 | 16,8 | 21 | 28,5   | 20 | 25 | 41,00 |
| 41212 | G1/2 | 21   | 26 | 34,524 | 24 | 25 | 60,15 |





## Stainless steel standard fittings

### Series RX-100



The stainless steel accessory fittings “RX” series are “oil free” and manufactured according to the ISO norms of reference as warranty of high quality and reliability.

### Technical sheet

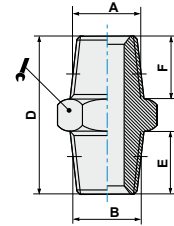
|                                 |                          |                                                                                                                                                                                                                                                    |
|---------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                          | Compressed air, some liquids (for different fluid please contact our Technical Dept.)                                                                                                                                                              |
| <b>APPLICATIONS</b>             |                          | Pneumatic equipments which are applied widely in the range of Industry such as food service industry, chemical industry and medical industry. In general where required to ensure anti-corrosion and acid resistant, or usage at high temperature. |
| <b>RECOMMENDED LIMIT VALUES</b> | <b>TEMPERATURE</b>       | The working temperatures range is between -20°C and +120°C                                                                                                                                                                                         |
|                                 | <b>WORKING PRESSURES</b> | Maximum value 25 bar                                                                                                                                                                                                                               |
| <b>THREAD TYPE</b>              |                          | BSP parallel UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                                                                  |
| <b>MATERIALS</b>                | <b>Body</b>              | Stainless steel SUS316; O-Ring FKM                                                                                                                                                                                                                 |
| <b>IMPORTANT NOTE</b>           |                          | The raw material is non-magnetic, however after cold working, a small amount of austenite could be transformed into martensite, which could be very weakly magnetic.                                                                               |

ART. **RX102**

**Taper nipple**



| COD.      | A    | B    | D    | E    | F    |    |   |       |
|-----------|------|------|------|------|------|----|---|-------|
| RX1021818 | G1/8 | G1/8 | 21   | 7,5  | 7,5  | 14 | 1 | 8,00  |
| RX1021814 | G1/8 | G1/4 | 23   | 7,5  | 9,5  | 14 | 1 | 12,00 |
| RX1021414 | G1/4 | G1/4 | 25   | 9,5  | 9,5  | 17 | 1 | 16,00 |
| RX1021438 | G1/4 | G3/8 | 25   | 9,5  | 10,5 | 17 | 1 | 22,00 |
| RX1021412 | G1/4 | G1/2 | 26,5 | 13   | 9,5  | 24 | 1 | 30,00 |
| RX1023838 | G3/8 | G3/8 | 26,5 | 10,5 | 10,5 | 21 | 1 | 24,00 |
| RX1023812 | G3/8 | G1/2 | 29   | 10,5 | 13   | 24 | 1 | 38,00 |
| RX1021212 | G1/2 | G1/2 | 31   | 13   | 13   | 21 | 1 | 38,00 |

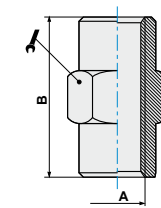


ART. **RX103**

**Sleeve**



| COD.    | A    | B  |    |   |       |
|---------|------|----|----|---|-------|
| RX10318 | G1/8 | 17 | 14 | 1 | 10,00 |
| RX10314 | G1/4 | 23 | 17 | 1 | 18,00 |
| RX10338 | G3/8 | 25 | 21 | 1 | 28,00 |
| RX10312 | G1/2 | 28 | 24 | 1 | 30,00 |

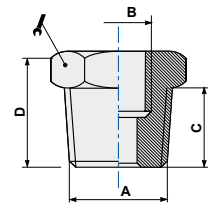


ART. **RX104**

**Taper M/F reducer**



| COD.      | A    | B    | C    | D  |    |   |       |
|-----------|------|------|------|----|----|---|-------|
| RX1041418 | G1/4 | G1/8 | 10   | 16 | 17 | 1 | 8,00  |
| RX1043818 | G3/8 | G1/8 | 11,5 | 18 | 17 | 1 | 18,00 |
| RX1041218 | G1/2 | G1/8 | 12   | 18 | 21 | 1 | 36,00 |
| RX1043814 | G3/8 | G1/4 | 11,5 | 18 | 21 | 1 | 12,00 |
| RX1041214 | G1/2 | G1/4 | 12   | 18 | 24 | 1 | 28,00 |
| RX1041238 | G1/2 | G3/8 | 12   | 18 | 24 | 1 | 18,00 |

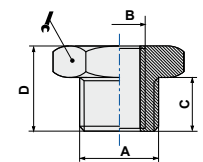


ART. **RX104Z**

**Parallel M/F reducer with O-Ring**



| COD.       | A    | B    | C   | D    |    |   |       |
|------------|------|------|-----|------|----|---|-------|
| RX104Z18M5 | G1/8 | M5   | 5,5 | 12,5 | 14 | 1 | 8,00  |
| RX104Z1418 | G1/4 | G1/8 | 6,5 | 13,5 | 17 | 1 | 12,00 |
| RX104Z3814 | G3/8 | G1/4 | 7,5 | 14,5 | 21 | 1 | 18,00 |

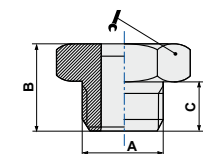


ART. **RX107Z**

**Parallel male plug with O-Ring**



| COD.     | A    | B    | C   |    |   |       |
|----------|------|------|-----|----|---|-------|
| RX107Z18 | G1/8 | 12,5 | 5,5 | 14 | 1 | 8,00  |
| RX107Z14 | G1/4 | 13,5 | 6,5 | 17 | 1 | 16,00 |
| RX107Z38 | G3/8 | 14,5 | 7,5 | 21 | 1 | 24,00 |
| RX107Z12 | G1/2 | 16   | 9   | 24 | 1 | 38,00 |

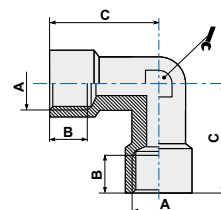


ART. **RX109**

**F/F elbow**



| COD.    | A    | B    | C    |      |   |       |
|---------|------|------|------|------|---|-------|
| RX10918 | G1/8 | 9,5  | 22,5 | 11   | 1 | 24,00 |
| RX10914 | G1/4 | 11,5 | 25   | 13   | 1 | 36,00 |
| RX10938 | G3/8 | 12,5 | 28   | 15,6 | 1 | 54,00 |
| RX10912 | G1/2 | 15   | 31,5 | 20,6 | 1 | 90,00 |

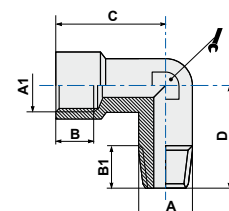


ART. **RX110**

**M/F elbow**



| COD.    | A    | A1   | B    | B1   | C    | D    |      |   |       |
|---------|------|------|------|------|------|------|------|---|-------|
| RX11018 | G1/8 | G1/8 | 9,5  | 7,5  | 22,5 | 18,5 | 11   | 1 | 18,00 |
| RX11014 | G1/4 | G1/4 | 11,5 | 10   | 25   | 22,5 | 13   | 1 | 32,00 |
| RX11038 | G3/8 | G3/8 | 12,5 | 11,5 | 28   | 25   | 15,6 | 1 | 46,00 |
| RX11012 | G1/2 | G1/2 | 15   | 12   | 31,5 | 29,5 | 20,6 | 1 | 88,00 |

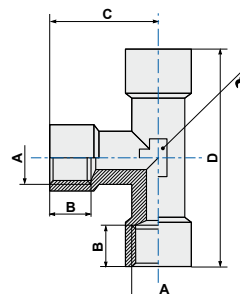


ART. **RX111**

**F/F/F T**



| COD.    | A    | B    | C   | D    |      |   |        |
|---------|------|------|-----|------|------|---|--------|
| RX11118 | G1/8 | 7,5  | 7,5 | 18,5 | 11   | 1 | 32,00  |
| RX11114 | G1/4 | 10   | 25  | 50   | 13   | 1 | 52,00  |
| RX11138 | G3/8 | 11,5 | 27  | 58,5 | 15   | 1 | 78,00  |
| RX11112 | G1/2 | 12   | 31  | 67   | 20,6 | 1 | 120,00 |

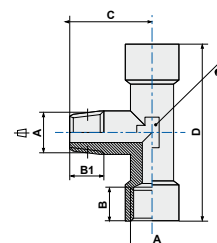


ART. **RX112**

**F/M/F T**



| COD.    | A    | B    | B1   | C    | D    |      |   |        |
|---------|------|------|------|------|------|------|---|--------|
| RX11218 | G1/8 | 7,5  | 9,5  | 18,5 | 45   | 11   | 1 | 26,00  |
| RX11214 | G1/4 | 10   | 11,5 | 22,5 | 50   | 13   | 1 | 46,00  |
| RX11238 | G3/8 | 11,5 | 12,5 | 25   | 58,5 | 15,6 | 1 | 68,00  |
| RX11212 | G1/2 | 12   | 15   | 29,5 | 67   | 20,6 | 1 | 116,00 |

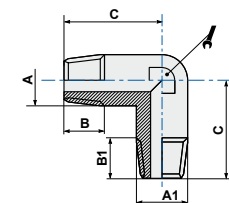


ART. **RX115**

**M/M elbow**



| COD.    | A    | B    | C    | A1   | B1   |      |   |       |
|---------|------|------|------|------|------|------|---|-------|
| RX11218 | G1/8 | 7,5  | 17   | 8,5  | 7,5  | 9    | 1 | 10,00 |
| RX11214 | G1/4 | 10   | 21   | 10,5 | 10   | 11   | 1 | 32,00 |
| RX11238 | G3/8 | 11,5 | 23,5 | 12,5 | 10,5 | 13   | 1 | 32,00 |
| RX11212 | G1/2 | 13   | 26,7 | 15   | 13   | 15,6 | 1 | 54,00 |



# Compression fittings

Compression fittings guarantee the clamping of the tube and the consequent pneumatic/hydraulic seal thanks to the compression of a ring called 'ogive' on the tube.

- **Brass compression fittings**



## Brass compression fittings

### Series 200



The compressed 200 series fittings are produced in Italy according to the reference ISO/DIN norms as warranty of high quality level.

### Technical sheet

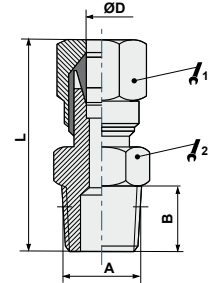
|                         |                |                                                                                                                                                |
|-------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>           |                | Compressed air, water up to 100 °C<br>(for different fluid please contact our Technical Dept.)                                                 |
| <b>APPLICATIONS</b>     |                | Pneumatic, oleodynamic and hydraulic circuits.                                                                                                 |
| <b>CONNECTING TUBES</b> | <b>plastic</b> | TPU, PE, PA, PET, PVC braided, PTFE, FEP<br>(with internal reinforcement included)                                                             |
|                         | <b>metal</b>   | Copper, brass, steel, aluminium, etc.                                                                                                          |
| <b>WORKING PRESSURE</b> |                | The operating pressure generally depends on the characteristics of the hose used, and in any case a maximum pressure of 60 Bar is recommended. |
| <b>THREAD TYPE</b>      |                | BSP parallel UNI-ISO 228; BSPT tapered UNI-ISO 7-DIN2999                                                                                       |
| <b>MATERIALS</b>        | <b>bodies</b>  | Brass UNI EN 12164 CW614N (bar); UNI EN 12165 CW617N (molded)                                                                                  |
|                         | <b>seals</b>   | NBR 70 DWGV-EN549 UL157                                                                                                                        |
|                         | <b>washers</b> | Aluminium/Nylon                                                                                                                                |

ART. **201**

**Taper straight male adaptor**



| COD.    | ØD | A    | B    | L    | 🔧1 | 🔧2 | 📦   | 📊      |
|---------|----|------|------|------|----|----|-----|--------|
| 2010418 | 4  | G1/8 | 8    | 27   | 10 | 10 | 100 | 11,46  |
| 2010618 | 6  | G1/8 | 8    | 28   | 12 | 12 | 100 | 15,02  |
| 2010614 | 6  | G1/4 | 11   | 32,5 | 12 | 14 | 100 | 20,76  |
| 2010818 | 8  | G1/8 | 8    | 29,5 | 14 | 12 | 100 | 18,62  |
| 2010814 | 8  | G1/4 | 11   | 33   | 14 | 14 | 100 | 22,80  |
| 2010838 | 8  | G3/8 | 11,5 | 33   | 14 | 17 | 50  | 35,39  |
| 2011014 | 10 | G1/4 | 11   | 37,5 | 19 | 17 | 50  | 43,04  |
| 2011038 | 10 | G3/8 | 11,5 | 38   | 19 | 17 | 50  | 49,48  |
| 2011012 | 10 | G1/2 | 14   | 40,5 | 19 | 22 | 25  | 73,02  |
| 2011238 | 12 | G3/8 | 11,5 | 39   | 22 | 19 | 25  | 58,01  |
| 2011212 | 12 | G1/2 | 14   | 41   | 22 | 22 | 25  | 68,80  |
| 2011412 | 14 | G1/2 | 14   | 42,5 | 27 | 22 | 25  | 100,05 |
| 2011512 | 15 | G1/2 | 14   | 42,5 | 27 | 22 | 25  | 95,04  |
| 2011612 | 16 | G1/2 | 14   | 42   | 30 | 24 | 10  | 124,08 |
| 2011812 | 18 | G1/2 | 14   | 43   | 32 | 26 | 10  | 131,06 |

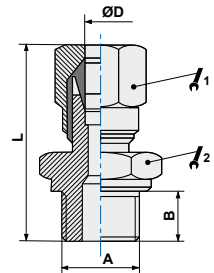


ART. **201Z**

**Parallel straight male adaptor**



| COD.     | ØD | A    | B | L    | 🔧1 | 🔧2 | 📦   | 📊     |
|----------|----|------|---|------|----|----|-----|-------|
| 201Z0418 | 4  | G1/8 | 6 | 25   | 10 | 14 | 100 | 14,00 |
| 201Z0618 | 6  | G1/8 | 6 | 26   | 12 | 14 | 100 | 16,35 |
| 201Z0614 | 6  | G1/4 | 8 | 29,5 | 12 | 17 | 100 | 22,00 |
| 201Z0814 | 8  | G1/8 | 6 | 27,5 | 14 | 14 | 100 | 25,08 |
| 201Z0818 | 8  | G1/4 | 8 | 30   | 14 | 17 | 50  | 17,36 |
| 201Z0838 | 8  | G3/8 | 9 | 30,5 | 14 | 19 | 50  | 42,00 |
| 201Z1014 | 10 | G1/4 | 8 | 34,5 | 19 | 17 | 50  | 43,62 |

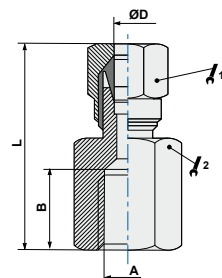


ART. **202**

**Female straight adaptor**



| COD.    | ØD | A    | B    | L    | 🔧1 | 🔧2 | 📦   | 📊     |
|---------|----|------|------|------|----|----|-----|-------|
| 2020418 | 4  | G1/8 | 8    | 24,5 | 10 | 14 | 100 | 15,02 |
| 2020618 | 6  | G1/8 | 8    | 26   | 12 | 14 | 100 | 19,03 |
| 2020614 | 6  | G1/4 | 11   | 30,5 | 12 | 17 | 100 | 23,48 |
| 2020818 | 8  | G1/8 | 8    | 26,5 | 14 | 14 | 50  | 22,66 |
| 2020814 | 8  | G1/4 | 11   | 31   | 14 | 17 | 50  | 27,09 |
| 2020838 | 8  | G3/8 | 11,5 | 31   | 14 | 20 | 50  | 31,26 |
| 2021014 | 10 | G1/4 | 11   | 35,5 | 19 | 17 | 50  | 36,56 |
| 2021038 | 10 | G3/8 | 11,5 | 36,5 | 19 | 20 | 25  | 49,28 |

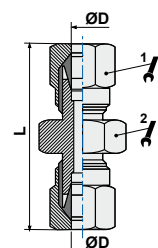


ART. **203**

**Straight connector**



| COD.    | ØD | L    | 🔧1 | 🔧2 | 📦  | 📊      |
|---------|----|------|----|----|----|--------|
| 2030400 | 4  | 33,5 | 10 | 10 | 50 | 15,62  |
| 2030600 | 6  | 36,5 | 12 | 12 | 50 | 21,38  |
| 2030800 | 8  | 38,5 | 14 | 14 | 50 | 27,94  |
| 2031000 | 10 | 47,5 | 19 | 17 | 25 | 66,22  |
| 2031200 | 12 | 50,5 | 22 | 19 | 25 | 85,34  |
| 2031400 | 14 | 55,5 | 27 | 24 | 10 | 148,83 |
| 2031500 | 15 | 55,5 | 27 | 24 | 10 | 139,43 |

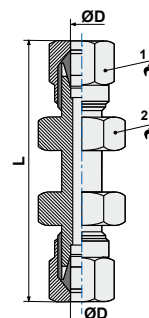


ART. **204**

**Bulkhead adaptor**



| COD.    | ØD | L    | 🔧1 | 🔧2 | 📦  | ⚖️     |
|---------|----|------|----|----|----|--------|
| 2040600 | 6  | 51,5 | 12 | 14 | 50 | 32,22  |
| 2040800 | 8  | 55,5 | 14 | 16 | 50 | 44,43  |
| 2041000 | 10 | 62,5 | 19 | 19 | 25 | 88,09  |
| 2041200 | 12 | 64,5 | 22 | 22 | 10 | 69,32  |
| 2041400 | 14 | 69,5 | 27 | 25 | 5  | 192,00 |
| 2041500 | 15 | 69,5 | 27 | 25 | 5  | 72,88  |

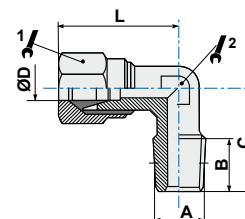


ART. **205**

**Elbow male adaptor**



| COD.    | ØD | A    | B    | C    | L    | 🔧1 | 🔧2 | 📦   | ⚖️     |
|---------|----|------|------|------|------|----|----|-----|--------|
| 2050418 | 4  | G1/8 | 8    | 16   | 21   | 10 | 9  | 100 | 14,13  |
| 2050618 | 6  | G1/8 | 8    | 16   | 22   | 12 | 9  | 100 | 15,60  |
| 2050614 | 6  | G1/4 | 11   | 20   | 24,5 | 12 | 11 | 100 | 23,92  |
| 2050818 | 8  | G1/8 | 8    | 17   | 24   | 14 | 11 | 100 | 20,32  |
| 2050814 | 8  | G1/4 | 11   | 20   | 24   | 14 | 11 | 100 | 28,04  |
| 2050838 | 8  | G3/8 | 11,5 | 24   | 27   | 14 | 13 | 50  | 36,02  |
| 2051014 | 10 | G1/4 | 11   | 23,5 | 32   | 19 | 13 | 50  | 47,58  |
| 2051038 | 10 | G3/8 | 11,5 | 24   | 32   | 19 | 13 | 25  | 66,06  |
| 2051012 | 10 | G1/2 | 14   | 28,5 | 34   | 19 | 15 | 25  | 73,87  |
| 2051238 | 12 | G3/8 | 11,5 | 25,5 | 34,5 | 22 | 15 | 25  | 55,42  |
| 2051212 | 12 | G1/2 | 14   | 28,5 | 34,5 | 22 | 15 | 25  | 74,84  |
| 2051412 | 14 | G1/2 | 14   | 30   | 38   | 27 | 17 | 25  | 105,46 |
| 2051512 | 15 | G1/2 | 14   | 30   | 38   | 27 | 17 | 10  | 99,05  |
| 2051612 | 16 | G1/2 | 14   | 31,5 | 39,5 | 30 | 19 | 10  | 124,02 |
| 2051812 | 18 | G1/2 | 14   | 34   | 44   | 32 | 22 | 10  | 152,93 |

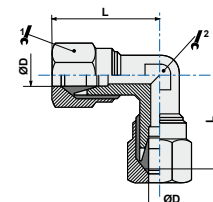


ART. **206**

**Elbow connector**



| COD.    | ØD | L    | 🔧1 | 🔧2 | 📦   | ⚖️     |
|---------|----|------|----|----|-----|--------|
| 2060400 | 4  | 21   | 10 | 9  | 100 | 18,68  |
| 2060600 | 6  | 23   | 12 | 9  | 50  | 21,27  |
| 2060800 | 8  | 24   | 14 | 11 | 50  | 29,55  |
| 2061000 | 10 | 32   | 19 | 13 | 25  | 56,93  |
| 2061200 | 12 | 34,5 | 22 | 15 | 10  | 94,04  |
| 2061400 | 14 | 38   | 27 | 17 | 10  | 148,03 |
| 2061500 | 15 | 38   | 27 | 17 | 10  | 143,03 |
| 2061600 | 16 | 39,5 | 30 | 19 | 10  | 252,56 |



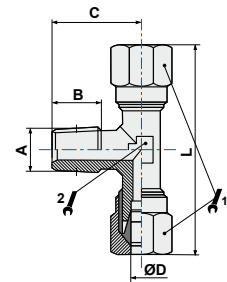


ART. **207**

**Centre male T adaptor**



| COD.    | ØD | A    | B    | C    | L  | 1  | 2  | 📦   | 📊      |
|---------|----|------|------|------|----|----|----|-----|--------|
| 2070418 | 4  | G1/8 | 8    | 16   | 42 | 10 | 9  | 100 | 22,58  |
| 2070618 | 6  | G1/8 | 8    | 16   | 46 | 12 | 9  | 50  | 26,09  |
| 2070614 | 6  | G1/4 | 11   | 20   | 48 | 12 | 11 | 50  | 35,23  |
| 2070818 | 8  | G1/8 | 8    | 17   | 48 | 14 | 11 | 50  | 35,03  |
| 2070814 | 8  | G1/4 | 11   | 20   | 48 | 14 | 11 | 25  | 38,01  |
| 2070838 | 8  | G3/8 | 11,5 | 24   | 54 | 14 | 13 | 25  | 51,74  |
| 2071014 | 10 | G1/4 | 11   | 23,5 | 64 | 19 | 13 | 25  | 54,68  |
| 2071038 | 10 | G3/8 | 11,5 | 24   | 64 | 19 | 13 | 25  | 75,04  |
| 2071238 | 12 | G3/8 | 11,5 | 25,5 | 69 | 22 | 15 | 10  | 78,08  |
| 2071212 | 12 | G1/2 | 14   | 28,5 | 69 | 22 | 15 | 10  | 112,01 |

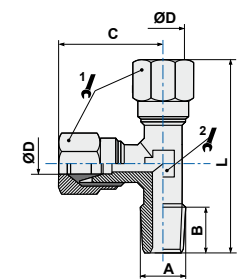


ART. **208**

**Off-set male T adaptor**



| COD.    | ØD | A    | B    | C    | L    | 1  | 2  | 📦   | 📊      |
|---------|----|------|------|------|------|----|----|-----|--------|
| 2080418 | 4  | G1/8 | 8    | 37   | 21   | 10 | 9  | 100 | 21,48  |
| 2080618 | 6  | G1/8 | 8    | 39   | 23   | 10 | 9  | 50  | 25,82  |
| 2080614 | 6  | G1/4 | 11   | 44,5 | 24,5 | 12 | 11 | 50  | 35,18  |
| 2080818 | 8  | G1/8 | 8    | 41   | 24   | 14 | 11 | 50  | 38,22  |
| 2080814 | 8  | G1/4 | 11   | 44   | 24   | 14 | 11 | 25  | 40,03  |
| 2080838 | 8  | G3/8 | 11,5 | 51   | 27   | 14 | 13 | 25  | 52,16  |
| 2081014 | 10 | G1/4 | 11   | 55,5 | 32   | 19 | 13 | 25  | 65,80  |
| 2081038 | 10 | G3/8 | 11,5 | 56   | 32   | 19 | 13 | 25  | 84,06  |
| 2081238 | 12 | G3/8 | 11,5 | 60   | 34,5 | 22 | 15 | 10  | 100,65 |
| 2081212 | 12 | G1/2 | 14   | 63   | 34,5 | 22 | 15 | 10  | 118,05 |

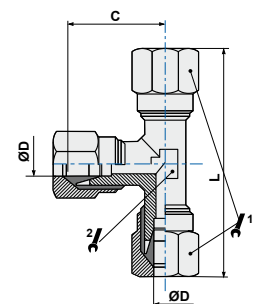


ART. **209**

**T connector**



| COD.    | ØD | C    | L  | 1  | 2  | 📦  | 📊      |
|---------|----|------|----|----|----|----|--------|
| 2090400 | 4  | 21   | 42 | 10 | 9  | 50 | 26,12  |
| 2090600 | 6  | 23   | 46 | 12 | 9  | 50 | 25,50  |
| 2090800 | 8  | 24   | 48 | 14 | 11 | 25 | 42,08  |
| 2091000 | 10 | 32   | 64 | 19 | 13 | 25 | 102,00 |
| 2091200 | 12 | 34,5 | 69 | 22 | 15 | 10 | 136,00 |

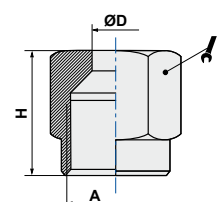


ART. **210**

**Nut**

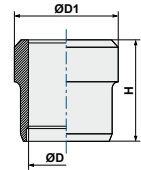


| COD.    | ØD | A       | H    | 🔧  | 📦   | 📊     |
|---------|----|---------|------|----|-----|-------|
| 2100400 | 4  | M8x1    | 11   | 10 | 100 | 4,00  |
| 2100600 | 6  | M10x1   | 11,5 | 12 | 100 | 6,00  |
| 2100800 | 8  | M12x1   | 12   | 14 | 100 | 8,00  |
| 2101000 | 10 | M16x1,5 | 15,5 | 19 | 100 | 18,00 |
| 2101200 | 12 | M18x1,5 | 15,5 | 22 | 100 | 25,00 |
| 2101400 | 14 | M22x1,5 | 17,5 | 27 | 10  | 44,00 |
| 2101500 | 15 | M22x1,5 | 17   | 27 | 10  | 42,00 |
| 2101600 | 16 | M24x1,5 | 17,5 | 30 | 10  | 56,00 |
| 2101800 | 18 | M26x1,5 | 18,5 | 32 | 10  | 64,00 |

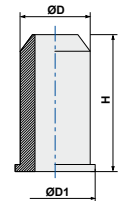


**ART. 211**
**Ogive**

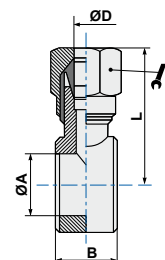

| COD.    | ØD | ØD1 | H    |     |      |
|---------|----|-----|------|-----|------|
| 2110400 | 4  | 6   | 6    | 100 | 0,10 |
| 2110600 | 6  | 8   | 7    | 100 | 0,89 |
| 2110800 | 8  | 10  | 7    | 100 | 2,00 |
| 2111000 | 10 | 13  | 10   | 100 | 3,26 |
| 2111200 | 12 | 15  | 10   | 100 | 4,00 |
| 2111400 | 14 | 17  | 10   | 10  | 5,00 |
| 2111500 | 15 | 18  | 10   | 10  | 4,70 |
| 2111600 | 16 | 19  | 10   | 10  | 5,00 |
| 2111800 | 18 | 21  | 10,5 | 10  | 6,00 |


**ART. 212**
**Support bush**


| COD.    | ØD   | ØD1  | H  |     |      |
|---------|------|------|----|-----|------|
| 2120200 | 2    | 3,5  | 8  | 100 | 0,20 |
| 2120250 | 2,5  | 3,9  | 10 | 100 | 0,20 |
| 2120400 | 4    | 5,5  | 12 | 100 | 0,60 |
| 2120600 | 6    | 7,5  | 13 | 100 | 0,20 |
| 2120800 | 8    | 9,5  | 14 | 100 | 0,30 |
| 2121000 | 10   | 11,5 | 16 | 100 | 0,40 |
| 2121200 | 12   | 13,5 | 16 | 100 | 0,50 |
| 2121250 | 12,5 | 14,5 | 17 | 100 | 2,80 |
| 2121400 | 14   | 15,5 | 18 | 100 | 0,6  |


**ART. 216**
**Single banjo body**


| COD.    | ØD | G*  | ØA   | B    | L    |    |    |       |
|---------|----|-----|------|------|------|----|----|-------|
| 2160418 | 4  | 1/8 | 9,8  | 14,5 | 24,5 | 10 | 50 | 18,00 |
| 2160618 | 6  | 1/8 | 9,8  | 14,5 | 26,5 | 12 | 50 | 20,00 |
| 2160614 | 6  | 1/4 | 13,2 | 14,5 | 28,5 | 12 | 50 | 24,00 |
| 2160818 | 8  | 1/8 | 9,8  | 14,5 | 25,5 | 14 | 50 | 22,00 |
| 2160814 | 8  | 1/4 | 13,2 | 14,5 | 28   | 14 | 50 | 26,00 |
| 2161014 | 10 | 1/4 | 13,3 | 14,5 | 32   | 17 | 25 | 30,00 |



G\* = Stem thread. See page 88 of stems section

# Push-on fittings

The shape of push-on fittings ensures a perfect pneumatic seal once the tube is clamped and the nut tightened properly. Available in nickel-plated brass and AISI 316 stainless steel.

- **Brass push-on fittings**
- **Stainless steel push-on fittings**





## Brass push-on fittings

### Series 300



The push-on 300 series fittings are produced in Italy according to the reference ISO norms as warranty of high quality level.

### Technical sheet

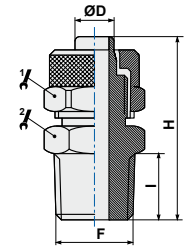
|                         |                |                                                                                                                |
|-------------------------|----------------|----------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>           |                | Compressed air, water up to 100 °C<br>(for different fluid please contact our Technical Dept.)                 |
| <b>APPLICATIONS</b>     |                | Pneumatic, oleodynamic and hydraulic circuits.                                                                 |
| <b>CONNECTING TUBES</b> | <b>plastic</b> | TPU, PE, PA, PET, PVC braided, PTFE, FEP                                                                       |
|                         | <b>metal</b>   | Copper, brass, steel, aluminium, etc.                                                                          |
| <b>WORKING PRESSURE</b> |                | The pressure usually depend by the technical features of the employed tubes.<br>Max pressure suggested 18 bar. |
| <b>THREAD TYPE</b>      |                | BSP paralell UNI-ISO 228; BSPT tapered UNI-ISO 7-DIN2999;<br>tapered ISO R/262                                 |
| <b>MATERIALS</b>        | <b>bodies</b>  | Brass UNI EN 12164 CW614N (bar); UNI EN 12165 CW617N (molded)                                                  |
|                         | <b>seals</b>   | NBR 70 DWGV-EN549 UL157                                                                                        |
|                         | <b>washers</b> | Aluminium/Nylon                                                                                                |

ART. **301**

**Taper straight male adaptor**



| COD.    | ØD      | F    | I    | H    | 🔑1 | 🔑2 | 📦   | 📊     |
|---------|---------|------|------|------|----|----|-----|-------|
| 3010418 | 4/2,7   | G1/8 | 8    | 25,5 | 9  | 12 | 100 | 9,40  |
| 3010518 | 5/3     | G1/8 | 8    | 25   | 8  | 12 | 100 | 10,00 |
| 3010618 | 6/4     | G1/8 | 8    | 26,5 | 12 | 12 | 100 | 26,00 |
| 3010614 | 6/4     | G1/4 | 11   | 30   | 12 | 14 | 100 | 26,00 |
| 3010638 | 6/4     | G3/8 | 11,5 | 30,5 | 12 | 17 | 100 | 28,00 |
| 3010818 | 8/6     | G1/8 | 8    | 26,5 | 14 | 12 | 100 | 27,00 |
| 3010814 | 8/6     | G1/4 | 11   | 30   | 14 | 14 | 100 | 23,50 |
| 3010838 | 8/6     | G3/8 | 11,5 | 30,5 | 14 | 17 | 50  | 30,00 |
| 3010812 | 8/6     | G1/2 | 14   | 33,5 | 14 | 22 | 50  | 44,00 |
| 3011018 | 10/8    | G1/8 | 8    | 29   | 16 | 14 | 50  | 26,00 |
| 3011014 | 10/8    | G1/4 | 11   | 32   | 16 | 14 | 50  | 30,00 |
| 3011038 | 10/8    | G3/8 | 11,5 | 32,5 | 16 | 17 | 50  | 33,65 |
| 3011012 | 10/8    | G1/2 | 14   | 35,5 | 16 | 22 | 50  | 45,75 |
| 3011238 | 12/10   | G3/8 | 11,5 | 35,5 | 18 | 17 | 50  | 38,00 |
| 3011212 | 12/10   | G1/2 | 14   | 38,5 | 18 | 22 | 25  | 48,85 |
| 3011512 | 15/12,5 | G1/2 | 14   | 40   | 22 | 22 | 25  | 61,80 |

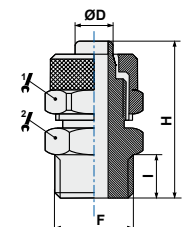


ART. **301Z**

**Parallel straight male adaptor**

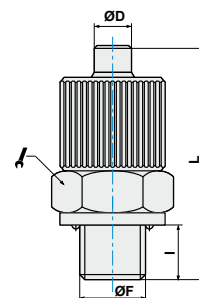


| COD.     | ØD      | F    | I   | H    | 🔑1 | 🔑2 | 📦   | 📊     |
|----------|---------|------|-----|------|----|----|-----|-------|
| 301Z0418 | 4/2,7   | G1/8 | 6   | 21,5 | 8  | 13 | 100 | 12,00 |
| 301Z05M5 | 5/3     | M5   | 4   | 20   | 8  | 8  | 100 | 4,00  |
| 301Z05M6 | 5/3     | M6   | 4   | 22,1 | 8  | 8  | 100 | 6,00  |
| 301Z0518 | 5/3     | G1/8 | 6   | 24,1 | 8  | 13 | 100 | 10,00 |
| 301Z06M5 | 6/4     | M5   | 3,8 | 21,8 | 8  | 8  | 100 | 6,00  |
| 301Z0618 | 6/4     | G1/8 | 6   | 24,5 | 12 | 14 | 100 | 16,83 |
| 301Z0614 | 6/4     | G1/4 | 8   | 27   | 12 | 17 | 100 | 24,00 |
| 301Z0638 | 6/4     | G3/8 | 9   | 28   | 12 | 19 | 50  | 28,00 |
| 301Z0818 | 8/6     | G1/8 | 6   | 24,5 | 14 | 14 | 100 | 20,00 |
| 301Z0814 | 8/6     | G1/4 | 8   | 27   | 14 | 17 | 50  | 26,00 |
| 301Z0838 | 8/6     | G3/8 | 9   | 28   | 14 | 19 | 50  | 32,00 |
| 301Z1014 | 10/8    | G1/4 | 8   | 29   | 16 | 17 | 50  | 30,00 |
| 301Z1038 | 10/8    | G3/8 | 9   | 30   | 16 | 19 | 25  | 34,00 |
| 301Z1238 | 12/10   | G3/8 | 9   | 33   | 18 | 19 | 25  | 38,00 |
| 301Z1212 | 12/10   | G1/2 | 10  | 35   | 18 | 24 | 25  | 48,00 |
| 301Z1512 | 15/12,5 | G1/2 | 10  | 35   | 22 | 24 | 25  | 56,00 |

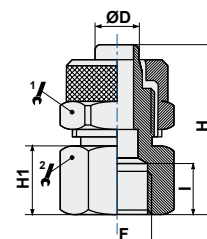


**ART. TC0**
**Parallel straight male adaptor (compact)**

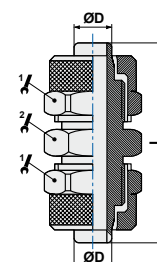

| COD.   | ØD | ØF     | I   | L    |    |     |       |
|--------|----|--------|-----|------|----|-----|-------|
| TC04M5 | 4  | M5x0,8 | 4   | 17,0 | 8  | 100 | 4,00  |
| TC0418 | 4  | G1/8   | 5,5 | 20,0 | 14 | 100 | 9,00  |
| TC06M5 | 6  | M5x0,8 | 4   | 20,8 | 10 | 100 | 8,00  |
| TC06M6 | 6  | M6x1   | 4   | 20,8 | 10 | 100 | 8,00  |
| TC0618 | 6  | G1/8   | 5,5 | 23,0 | 14 | 100 | 12,00 |


**ART. 302**
**Straight female adaptor**

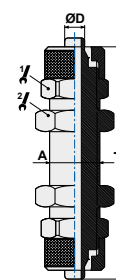

| COD.    | ØD    | F    | I    | H    | H1   |    |    |     |       |
|---------|-------|------|------|------|------|----|----|-----|-------|
| 3020618 | 6/4   | G1/8 | 8    | 25   | 10   | 12 | 14 | 100 | 18,00 |
| 3020614 | 6/4   | G1/4 | 11   | 29   | 14   | 12 | 17 | 100 | 26,00 |
| 3020638 | 6/4   | G3/8 | 11,5 | 29,5 | 14,5 | 12 | 22 | 50  | 30,00 |
| 3020818 | 8/6   | G1/8 | 8    | 25   | 10   | 14 | 14 | 100 | 20,00 |
| 3020814 | 8/6   | G1/4 | 11   | 29   | 14   | 14 | 17 | 100 | 28,00 |
| 3020838 | 8/6   | G3/8 | 11,5 | 29,5 | 14,5 | 14 | 22 | 50  | 32,00 |
| 3021014 | 10/8  | G1/4 | 11   | 30,5 | 14   | 16 | 17 | 50  | 32,00 |
| 3021038 | 10/8  | G3/8 | 11,5 | 31   | 14,5 | 16 | 22 | 50  | 36,00 |
| 3021238 | 12/10 | G3/8 | 11,5 | 32,5 | 14,5 | 18 | 22 | 50  | 40,00 |


**ART. 303**
**Straight connector**


| COD.    | ØD      | L    |    |    |     |       |
|---------|---------|------|----|----|-----|-------|
| 3030500 | 5/3     | 28,5 | 8  | 8  | 100 | 8,00  |
| 3030600 | 6/4     | 32   | 12 | 12 | 100 | 22,00 |
| 3030800 | 8/6     | 32   | 14 | 12 | 100 | 28,00 |
| 3031000 | 10/8    | 37   | 16 | 14 | 50  | 36,00 |
| 3031200 | 12/10   | 43   | 18 | 17 | 50  | 48,00 |
| 3031500 | 15/12,5 | 46,5 | 22 | 22 | 25  | 78,00 |


**ART. 304**
**Bulkhead connector**


| COD.    | ØD      | A     | L  |    |    |     |        |
|---------|---------|-------|----|----|----|-----|--------|
| 3040600 | 6/4     | M10x1 | 45 | 12 | 14 | 100 | 34,00  |
| 3040800 | 8/6     | M12x1 | 48 | 14 | 17 | 50  | 42,00  |
| 3041000 | 10/8    | M14x1 | 54 | 16 | 17 | 50  | 55,45  |
| 3041200 | 12/10   | M16x1 | 57 | 18 | 19 | 25  | 69,00  |
| 3041500 | 15/12,5 | M20x1 | 59 | 22 | 24 | 10  | 110,00 |

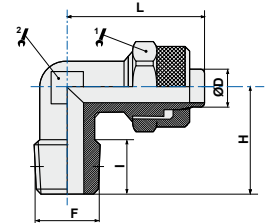


ART. **305**

**Elbow taper male adaptor**



| COD.    | ØD      | F    | I    | H    | L    | 🔧1 | 🔧2 | 📦   | 📊      |
|---------|---------|------|------|------|------|----|----|-----|--------|
| 30504M5 | 4/2     | M5   | 8    | 13   | 20,0 | 9  | 9  | 100 | 6,00   |
| 3050418 | 4/2     | G1/8 | 8    | 17   | 20,0 | 9  | 9  | 100 | 13,42  |
| 3050518 | 5/3     | G1/8 | 8    | 17   | 21,5 | 8  | 8  | 100 | 10,00  |
| 3050618 | 6/4     | G1/8 | 8,5  | 17   | 20,5 | 12 | 10 | 100 | 16,00  |
| 3050614 | 6/4     | G1/4 | 12,5 | 21   | 20,5 | 12 | 8  | 100 | 22,00  |
| 3050638 | 6/4     | G3/8 | 15,5 | 23   | 20,5 | 12 | 8  | 50  | 30,00  |
| 3050818 | 8/6     | G1/8 | 8    | 17   | 20,5 | 14 | 10 | 100 | 19,85  |
| 3050814 | 8/6     | G1/4 | 12,5 | 21,5 | 20,5 | 14 | 10 | 100 | 23,00  |
| 3050838 | 8/6     | G3/8 | 15,3 | 23,8 | 20,5 | 14 | 10 | 50  | 32,00  |
| 3051018 | 10/8    | G1/8 | 8    | 17   | 24,5 | 16 | 12 | 50  | 27,254 |
| 3051014 | 10/8    | G1/4 | 12,5 | 22   | 24,5 | 16 | 12 | 50  | 31,17  |
| 3051038 | 10/8    | G3/8 | 14,8 | 24,3 | 24,5 | 16 | 12 | 50  | 34,00  |
| 3051012 | 10/8    | G1/2 | 14   | 28   | 28   | 16 | 17 | 25  | 56,00  |
| 3051238 | 12/10   | G3/8 | 14   | 26   | 29   | 18 | 14 | 50  | 48,00  |
| 3051212 | 12/10   | G1/2 | 16   | 28   | 29   | 18 | 14 | 25  | 60,00  |
| 3051512 | 15/12,5 | G1/2 | 15   | 28   | 24   | 22 | 16 | 25  | 70,00  |

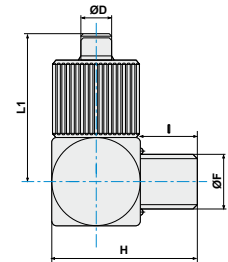


ART. **TL**

**Elbow parallel male adaptor**



| COD.   | ØD | ØF     | I   | H    | L1   | 📦  | 📊     |
|--------|----|--------|-----|------|------|----|-------|
| TL04M5 | 4  | M5x0,8 | 4,0 | 13,0 | 13,5 | 50 | 6,00  |
| TL0418 | 4  | G1/8   | 5,0 | 19,5 | 16,5 | 50 | 20,00 |
| TL06M5 | 6  | M5x0,8 | 4,9 | 13,9 | 16,3 | 50 | 12,00 |
| TL06M6 | 6  | M6x1   | 4,0 | 14,2 | 17,5 | 50 | 12,00 |
| TL0618 | 6  | G1/8   | 5,0 | 19,5 | 19,3 | 50 | 16,00 |

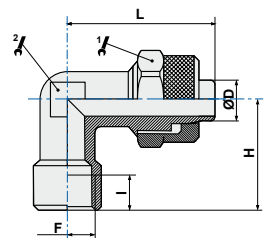


ART. **305F**

**Female elbow adaptor**



| COD.     | ØD    | F    | I  | H    | L    | 🔧1 | 🔧2 | 📦   | 📊     |
|----------|-------|------|----|------|------|----|----|-----|-------|
| 305F0618 | 6/4   | G1/8 | 7  | 20,5 | 20,5 | 12 | 10 | 100 | 22,00 |
| 305F0614 | 6/4   | G1/4 | 8  | 22,5 | 20,5 | 12 | 12 | 50  | 29,00 |
| 305F0818 | 8/6   | G1/8 | 7  | 20,5 | 20,5 | 14 | 10 | 100 | 22,00 |
| 305F0814 | 8/6   | G1/4 | 8  | 23,5 | 20,5 | 14 | 11 | 50  | 32,00 |
| 305F1014 | 10/8  | G1/4 | 8  | 24   | 24,5 | 16 | 13 | 50  | 38,00 |
| 305F1038 | 10/8  | G3/8 | 10 | 27   | 24,5 | 16 | 17 | 25  | 60,00 |
| 305F1238 | 12/10 | G3/8 | 10 | 29   | 29   | 18 | 14 | 25  | 70,00 |

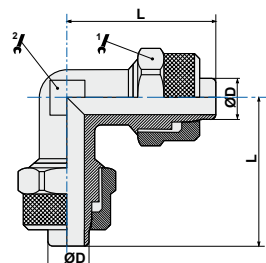


ART. **306**

**Elbow connector**



| COD.    | ØD      | L    | 🔧1 | 🔧2 | 📦   | 📊      |
|---------|---------|------|----|----|-----|--------|
| 3060600 | 6/4     | 20,5 | 12 | 8  | 100 | 11,00  |
| 3060800 | 8/6     | 20,5 | 14 | 10 | 100 | 28,00  |
| 3061000 | 10/8    | 24,5 | 16 | 11 | 50  | 38,00  |
| 3061200 | 12/10   | 29   | 18 | 14 | 25  | 78,00  |
| 3061500 | 15/12,5 | 34   | 22 | 16 | 25  | 124,00 |

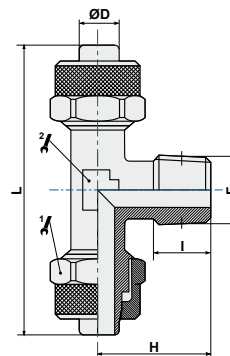


ART. **307**

**Central T adaptor**



| COD.    | ØD      | F    | I    | H    | L  | 🔧 <sup>1</sup> | 🔧 <sup>2</sup> | 📦   | 🔒      |
|---------|---------|------|------|------|----|----------------|----------------|-----|--------|
| 3070618 | 6/4     | G1/8 | 8,5  | 17   | 41 | 12             | 8              | 100 | 26,00  |
| 3070614 | 6/4     | G1/4 | 13   | 21,5 | 41 | 12             | 8              | 50  | 34,00  |
| 3070818 | 8/6     | G1/8 | 8    | 16,5 | 41 | 14             | 10             | 50  | 34,00  |
| 3070814 | 8/6     | G1/4 | 12,5 | 21   | 41 | 14             | 10             | 50  | 36,00  |
| 3070838 | 8/6     | G3/8 | 15,3 | 23,8 | 41 | 14             | 10             | 25  | 44,00  |
| 3071018 | 10/8    | G1/8 | 8    | 18,5 | 49 | 16             | 12             | 50  | 44,00  |
| 3071014 | 10/8    | G1/4 | 11,8 | 22,3 | 49 | 16             | 12             | 50  | 48,00  |
| 3071038 | 10/8    | G3/8 | 14,7 | 25,2 | 49 | 16             | 12             | 25  | 50,00  |
| 3071238 | 12/10   | G3/8 | 14,1 | 26   | 58 | 18             | 14             | 25  | 70,00  |
| 3071212 | 12/10   | G1/2 | 15   | 27   | 58 | 18             | 14             | 25  | 86,00  |
| 3071512 | 15/12,5 | G1/2 | 14,4 | 27,4 | 68 | 22             | 16             | 10  | 100,00 |

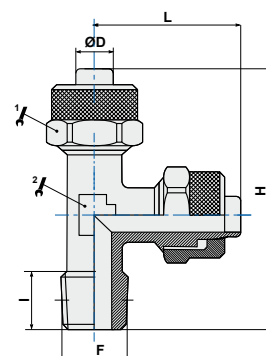


ART. **308**

**Off-set T adaptor**



| COD.    | ØD      | F    | I    | H    | L    | 🔧 <sup>1</sup> | 🔧 <sup>2</sup> | 📦   | 🔒      |
|---------|---------|------|------|------|------|----------------|----------------|-----|--------|
| 3080618 | 6/4     | G1/8 | 8,5  | 37,5 | 20,5 | 12             | 8              | 100 | 26,00  |
| 3080614 | 6/4     | G1/4 | 13   | 42   | 20,5 | 12             | 8              | 50  | 34,00  |
| 3080818 | 8/6     | G1/8 | 8    | 37   | 20,5 | 14             | 10             | 50  | 34,00  |
| 3080814 | 8/6     | G1/4 | 12,5 | 41,5 | 20,5 | 14             | 10             | 50  | 38,00  |
| 3080838 | 8/6     | G3/8 | 15,3 | 44,3 | 20,5 | 14             | 10             | 25  | 44,00  |
| 3081018 | 10/8    | G1/8 | 8    | 44   | 25,5 | 16             | 12             | 50  | 44,00  |
| 3081014 | 10/8    | G1/4 | 11,8 | 46,8 | 24,5 | 16             | 12             | 50  | 48,00  |
| 3081038 | 10/8    | G3/8 | 14,7 | 49,7 | 24,5 | 16             | 12             | 25  | 50,00  |
| 3081238 | 12/10   | G3/8 | 14,1 | 55,1 | 29   | 18             | 14             | 25  | 70,00  |
| 3081212 | 12/10   | G1/2 | 15   | 56   | 29   | 18             | 14             | 25  | 86,00  |
| 3081512 | 15/12,5 | G1/2 | 14,4 | 61,4 | 34   | 22             | 16             | 10  | 108,00 |

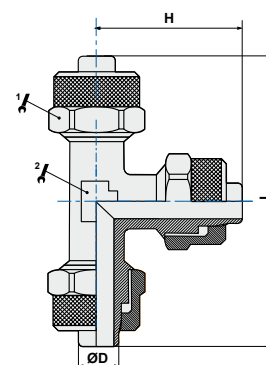


ART. **309**

**T connector**



| COD.    | ØD      | H    | L  | 🔧 <sup>1</sup> | 🔧 <sup>2</sup> | 📦  | 🔒      |
|---------|---------|------|----|----------------|----------------|----|--------|
| 3090600 | 6/4     | 20,5 | 41 | 12             | 8              | 50 | 33,71  |
| 3090800 | 8/6     | 20,5 | 41 | 14             | 10             | 50 | 42,00  |
| 3091000 | 10/8    | 24,5 | 49 | 16             | 12             | 25 | 56,00  |
| 3091200 | 12/10   | 29   | 58 | 18             | 14             | 25 | 78,00  |
| 3091500 | 15/12,5 | 34   | 68 | 22             | 17             | 10 | 124,00 |

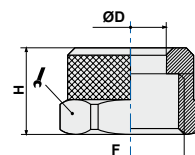


ART. **310**

**Locking nut**



| COD.    | ØD      | F       | H    | 🔧  | 📦   | 🔒     |
|---------|---------|---------|------|----|-----|-------|
| 3100400 | 4/2,7   | M7x0,75 | 8,1  | 9  | 100 | 1,50  |
| 3100500 | 5/3     | M7x0,75 | 8,5  | 8  | 100 | 1,34  |
| 31006M8 | 6/4     | M8x0,75 | 9    | 9  | 100 | 1,51  |
| 3100610 | 6/4     | M10x1   | 10,5 | 12 | 100 | 4,64  |
| 3100800 | 8/6     | M12x1   | 10,5 | 14 | 100 | 5,57  |
| 3101000 | 10/8    | M14x1   | 11,5 | 16 | 100 | 7,09  |
| 3101200 | 12/10   | M16x1   | 13   | 18 | 100 | 9,36  |
| 3101500 | 15/12,5 | M20x1   | 15,5 | 22 | 50  | 15,04 |



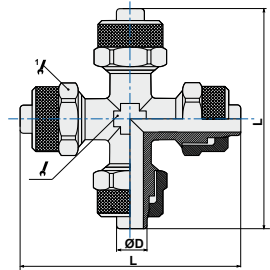


ART. **311**

**Cross adaptor**



| COD.    | ØD   | L  |    |    |    |       |
|---------|------|----|----|----|----|-------|
| 3110600 | 6/4  | 41 | 8  | 12 | 50 | 42,00 |
| 3110800 | 8/6  | 41 | 10 | 14 | 25 | 52,00 |
| 3111000 | 10/8 | 49 | 12 | 16 | 25 | 70,00 |

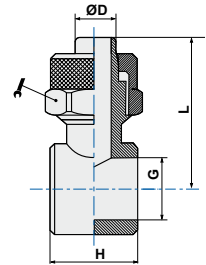


ART. **405**

**Single banjo body**



| COD.    | ØD    | G*   | H  | L    |    |     |       |
|---------|-------|------|----|------|----|-----|-------|
| 40504M5 | 4/2   | M5   | 9  | 16,5 | 8  | 100 | 6,00  |
| 4050418 | 4/2,7 | G1/8 | 9  | 16,5 | 8  | 100 | 14,00 |
| 40506M5 | 6/4   | M5   | 9  | 18   | 9  | 100 | 8,00  |
| 4050618 | 6/4   | G1/8 | 15 | 23,5 | 12 | 100 | 20,00 |
| 4050614 | 6/4   | G1/4 | 17 | 25,5 | 12 | 100 | 24,00 |
| 4050818 | 8/6   | G1/8 | 15 | 22,5 | 14 | 100 | 22,00 |
| 4050814 | 8/6   | G1/4 | 17 | 24,5 | 14 | 50  | 26,00 |
| 4051014 | 10/8  | G1/4 | 17 | 25,5 | 14 | 50  | 30,00 |



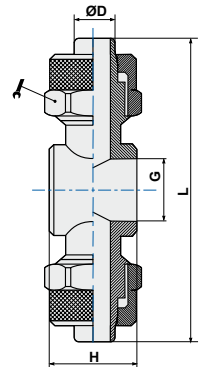
G\*= Stem thread. See page 88 of stems section

ART. **406**

**Double banjo body**



| COD.    | ØD   | G*   | H    | L  |    |     |       |
|---------|------|------|------|----|----|-----|-------|
| 4060618 | 6/4  | G1/8 | 14,5 | 48 | 12 | 100 | 30,00 |
| 4060614 | 6/4  | G1/4 | 14,5 | 52 | 12 | 50  | 34,00 |
| 4060818 | 8/6  | G1/8 | 14,5 | 48 | 14 | 50  | 32,00 |
| 4060814 | 8/6  | G1/4 | 14,5 | 52 | 14 | 50  | 38,00 |
| 4061014 | 10/8 | G1/4 | 14,5 | 55 | 16 | 50  | 44,00 |



G\*= Stem thread. See page 88 of stems section



## Stainless steel push-on fittings

### Series RX300



The "RX" fittings series are "oil free" and manufactured according to the ISO norms of reference, and suitable for the following technical and applicative specifications.

### Technical sheet

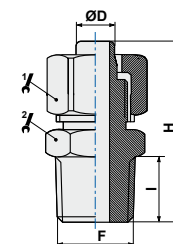
|                                             |                          |                                                                                                                                                                                                                                                    |
|---------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                               |                          | Compressed air, some liquids (for different fluid please contact our Technical Dept.)                                                                                                                                                              |
| <b>APPLICATIONS</b>                         |                          | Pneumatic equipments which are applied widely in the range of Industry such as food service industry, chemical industry and medical industry. In general where required to ensure anti-corrosion and acid resistant, or usage at high temperature. |
| <b>SUGGESTED TUBES FOR THE QUICK SERIES</b> |                          | 4x2,5; 6x4; 8x6; 10x8; 12x10; 14x11; 16x13                                                                                                                                                                                                         |
| <b>RECOMMENDED LIMIT VALUES</b>             | <b>TEMPERATURE</b>       | The working temperatures range is between -20°C and +120°C                                                                                                                                                                                         |
|                                             | <b>WORKING PRESSURES</b> | The working pressure depends on the type of employed pipe, maximum value 25bar                                                                                                                                                                     |
| <b>THREAD TYPE</b>                          |                          | BSP parallel UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                                                                  |
| <b>MATERIALS</b>                            | <b>Nut</b>               | Stainless steel SUS316                                                                                                                                                                                                                             |
|                                             | <b>Body</b>              | Stainless steel SUS316                                                                                                                                                                                                                             |
| <b>IMPORTANT NOTE</b>                       |                          | The raw material is non-magnetic, however after cold working, a small amount of austenite could be transformed into martensite, which could be very weakly magnetic.                                                                               |

ART. **RX301**

**Taper straight male adaptor**



| COD.      | ØD   | F    | I   | H    | 🔑1 | 🔑2 | 📦 | ⚖️    |
|-----------|------|------|-----|------|----|----|---|-------|
| RX30106M5 | 6/4  | M5   | 4   | 23,7 | 12 | 12 | 1 | 14,76 |
| RX3010618 | 6/4  | G1/8 | 7,5 | 25   | 12 | 12 | 1 | 14,00 |
| RX3010614 | 6/4  | G1/4 | 9,5 | 27   | 12 | 14 | 1 | 18,00 |
| RX3010818 | 8/6  | G1/8 | 7,5 | 26,2 | 14 | 14 | 1 | 20,00 |
| RX3010814 | 8/6  | G1/4 | 9,5 | 30,5 | 17 | 17 | 1 | 20,00 |
| RX3011014 | 10/8 | G1/4 | 10  | 31,5 | 17 | 17 | 1 | 32,00 |

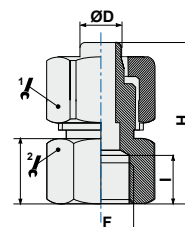


ART. **RX302**

**Straight female adaptor**



| COD.       | ØD  | F    | I    | H  | 🔑1 | 🔑2 | 📦 | ⚖️    |
|------------|-----|------|------|----|----|----|---|-------|
| RX3020618  | 6/4 | G1/8 | 9,5  | 23 | 12 | 14 | 1 | 16,00 |
| RX30206146 | 6/4 | G1/4 | 11,5 | 25 | 12 | 17 | 1 | 20,00 |
| RX30208188 | 8/6 | G1/8 | 9,5  | 24 | 14 | 14 | 1 | 20,00 |
| RX30208148 | 8/6 | G1/4 | 11,5 | 26 | 14 | 17 | 1 | 26,00 |

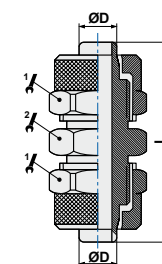


ART. **RX303**

**Straight connector**



| COD.      | ØD    | L  | 🔑1 | 🔑2 | 📦 | ⚖️    |
|-----------|-------|----|----|----|---|-------|
| RX3030600 | 6/4   | 30 | 12 | 12 | 1 | 22,00 |
| RX3030800 | 8/6   | 32 | 14 | 14 | 1 | 28,00 |
| RX3031000 | 10/8  | 37 | 17 | 17 | 1 | 48,00 |
| RX3031200 | 12/10 | 41 | 19 | 19 | 1 | 61,44 |

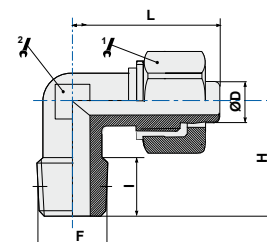


ART. **RX305**

**Elbow taper male adaptor**



| COD.      | ØD    | F    | I   | H    | L  | 🔑1 | 🔑2 | 📦 | ⚖️    |
|-----------|-------|------|-----|------|----|----|----|---|-------|
| RX3050418 | 4/2,5 | G1/8 | 8,5 | 17   | 16 | 8  | 9  | 1 | 12,00 |
| RX3050618 | 6/4   | G1/8 | 11  | 21   | 21 | 12 | 9  | 1 | 18,00 |
| RX3050614 | 6/4   | G1/4 | 11  | 21   | 21 | 12 | 11 | 1 | 24,00 |
| RX3050818 | 8/6   | G1/8 | 8,5 | 18   | 23 | 14 | 11 | 1 | 24,00 |
| RX3050814 | 8/6   | G1/4 | 11  | 22,3 | 23 | 14 | 11 | 1 | 26,00 |
| RX3051014 | 10/8  | G1/4 | 11  | 23,5 | 25 | 17 | 13 | 1 | 38,00 |
| RX3051038 | 10/8  | G3/8 | 14  | 25   | 25 | 17 | 13 | 1 | 42,00 |

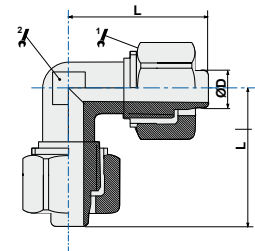


ART. **RX306**

**Elbow connector**



| COD.      | ØD    | L    |    |      |   |       |
|-----------|-------|------|----|------|---|-------|
| RX3060600 | 6/4   | 21   | 12 | 9    | 1 | 24,00 |
| RX3060800 | 8/6   | 22,5 | 14 | 11   | 1 | 34,00 |
| RX3061000 | 10/8  | 25   | 17 | 13   | 1 | 52,00 |
| RX3061200 | 12/10 | 27,5 | 19 | 15,5 | 1 | 72,14 |

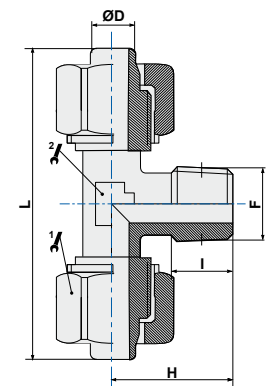


ART. **RX307**

**Central T adaptor**



| COD.      | ØD   | F    | I    | H  | L    |    |    |   |       |
|-----------|------|------|------|----|------|----|----|---|-------|
| RX3070618 | 6/4  | G1/8 | 11,5 | 22 | 41,5 | 12 | 9  | 1 | 30,00 |
| RX3070614 | 6/4  | G1/4 | 9    | 22 | 41,5 | 12 | 9  | 1 | 36,00 |
| RX3070818 | 8/6  | G1/8 | 8,5  | 18 | 44,5 | 14 | 11 | 1 | 38,00 |
| RX3070814 | 8/6  | G1/4 | 12   | 24 | 44   | 14 | 11 | 1 | 38,00 |
| RX3071014 | 10/8 | G1/4 | 11,5 | 24 | 50,5 | 17 | 13 | 1 | 58,00 |

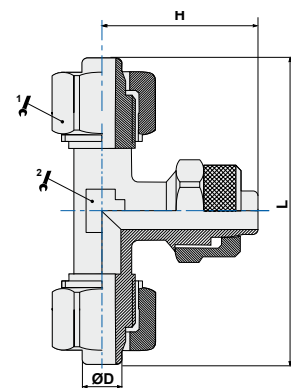


ART. **RX309**

**T connector**



| COD.      | ØD    | H    | L    |    |    |   |       |
|-----------|-------|------|------|----|----|---|-------|
| RX3090600 | 6/4   | 20,5 | 41   | 12 | 9  | 1 | 36,00 |
| RX3090800 | 8/6   | 23,5 | 44,5 | 14 | 11 | 1 | 48,00 |
| RX3091000 | 10/8  | 26,5 | 50,7 | 17 | 13 | 1 | 74,00 |
| RX3091200 | 12/10 | 27,5 | 55,4 | 19 | 13 | 1 | 88,00 |

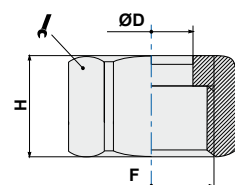


ART. **RX310**

**Locking nut**



| COD.      | ØD   | F     | H  |    |   |       |
|-----------|------|-------|----|----|---|-------|
| RX3100600 | 6/4  | M10x1 | 10 | 12 | 1 | 6,00  |
| RX3100800 | 8/6  | M12x1 | 10 | 14 | 1 | 6,00  |
| RX3101000 | 10/8 | M14x1 | 12 | 17 | 1 | 12,00 |



# Flow regulators

Flow regulators unidirectional and bidirectional made of nickel-plated brass, technopolymer and AISI 316L stainless steel.

- **Brass flow regulators**
- **Technopolymer flow regulators**
- **Stainless steel flow regulators**



## Brass flow regulator

# Series RAP - RAP BLACK - OT



### Ordering code

**B 29OT12 14 P**

#### THRUST SLEEVE COLOUR

**blank** = Green  
**B** = Black  
**S** = Grey  
**A** = Blue

#### ADJUSTING STEM

**28** = For valve  
**29** = For cylinder  
**30** = Bidirectional

#### VERSION

**OT** = Nickel-plated brass thrust sleeve

#### TUBE CONNECTION

**4 ... 12** = Tube diameter (mm)

#### THREADED CONNECTION

**M5; 18; 14; 38; 12** = Thread size (M5; 1/8; 1/4; 3/8; 1/2)

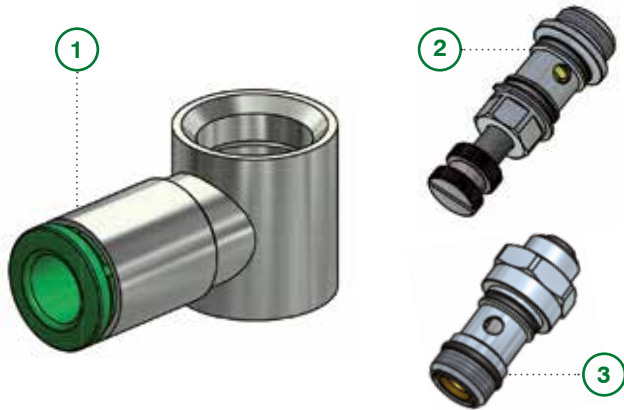
#### TYPE

**blank** = Orientable type with screwdriver nut  
**P** = Swivel type with adjusting knob

See assembly instructions in the appendix on page 204.

## Technical sheet

|                                 |                                               |                                                                                                                                                                                                       |
|---------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                               | Compressed air (for different fluid please contact our Technical Dept.)                                                                                                                               |
| <b>APPLICATIONS</b>             |                                               | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms.                                                                                                            |
| <b>SUGGESTED TUBES</b>          |                                               | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                                         |
| <b>TUBES TOLERANCES</b>         |                                               | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                           |
| <b>TEMPERATURE AND PRESSURE</b> | <b>Recommended limit values</b>               | Temperatures and pressures usually depend by the technical features of the employed tubes, anyway it is suggested a limit working pressure of 15 bar and a temperature range between -20°C and +70°C. |
|                                 | <b>Technical testing data</b>                 | At page 14 there are indicated the load traction resistance values and the main working and breaking limit (Pressure and Temperature) of the main commercial tubing.                                  |
|                                 | <b>Note</b>                                   | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                             |
| <b>THREAD TYPE</b>              |                                               | BSP parallel UNI-ISO 228                                                                                                                                                                              |
| <b>MATERIALS</b>                | <b>RAP body, regulation stem, "OT" sleeve</b> | Brass UNI EN 12164 CW614N                                                                                                                                                                             |
|                                 | <b>Sleeve, collar and back ring</b>           | POM copolymer ISO1043-1                                                                                                                                                                               |
|                                 | <b>Spring</b>                                 | Stainless steel AISI 301 austenitic                                                                                                                                                                   |
|                                 | <b>Seals</b>                                  | NBR 70 DWGV-EN549 UL157                                                                                                                                                                               |



### Components

- 1 Swivel banjo - "13" "13 R/\*"
  - 2 Adjusting stem with knob  
28A (for valve)  
29A (for cylinder)  
30A (bidirectional)
  - 3 Adjusting stem with screwdriver cut  
28A (for valve)  
29A (for cylinder)  
30A (bidirectional)
- (\* ) For M5 stem

## Additional technical informations

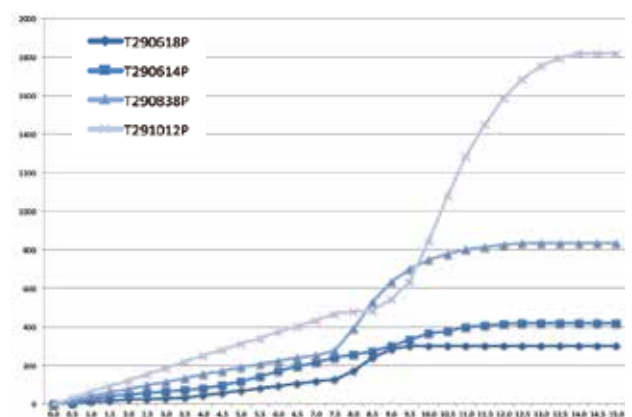
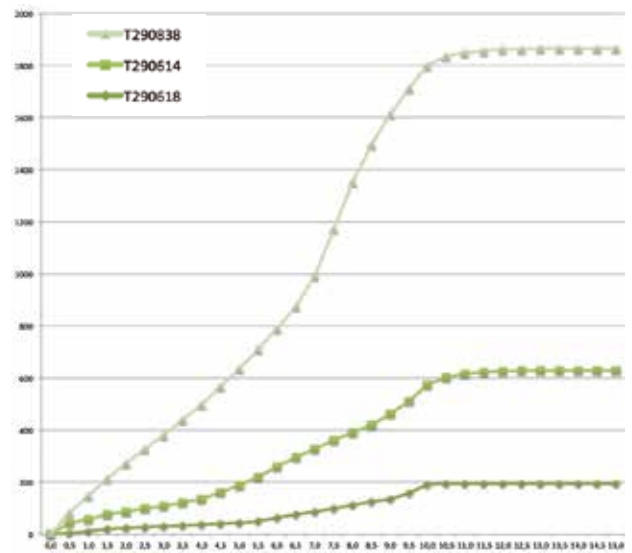
### Flow tests

Test carried out at the Pneumax laboratory on a flow regulators sample under the following conditions:

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 6 bar        |

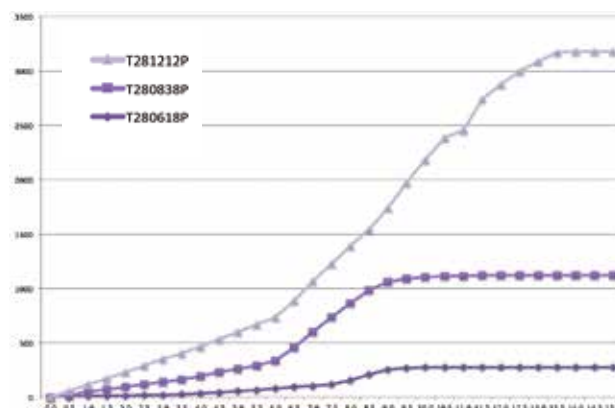
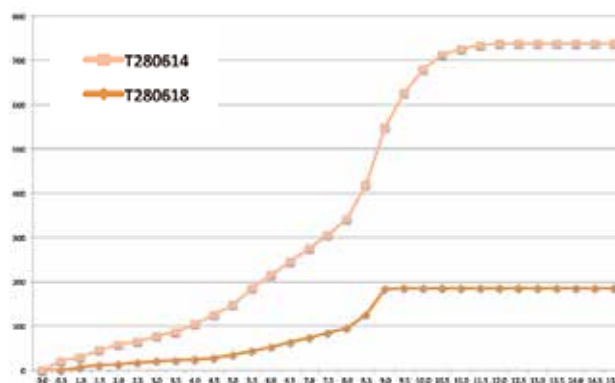
## Tests results

| N° Needle turns | Flow (ltr/min) |          |         |          |         |          |          |
|-----------------|----------------|----------|---------|----------|---------|----------|----------|
|                 | T290618        | T290618P | T290614 | T290614P | T290838 | T290838P | T291012P |
| 0,0             | 0              | 0        | 0       | 0        | 0       | 0        | 0        |
| 0,5             | 5              | 5        | 38      | 2        | 40      | 21       | 30       |
| 1,0             | 10             | 10       | 48      | 23       | 92      | 40       | 63       |
| 1,5             | 20             | 16       | 55      | 41       | 139     | 59       | 94       |
| 2,0             | 23             | 22       | 65      | 50       | 185     | 78       | 123      |
| 2,5             | 27             | 25       | 72      | 58       | 230     | 96       | 156      |
| 3,0             | 30             | 28       | 80      | 64       | 272     | 115      | 186      |
| 3,5             | 34             | 33       | 88      | 73       | 318     | 135      | 220      |
| 4,0             | 37             | 43       | 100     | 81       | 361     | 153      | 251      |
| 4,5             | 40             | 55       | 121     | 97       | 405     | 171      | 282      |
| 5,0             | 44             | 68       | 145     | 118      | 447     | 190      | 312      |
| 5,5             | 52             | 80       | 170     | 142      | 489     | 207      | 343      |
| 6,0             | 64             | 93       | 196     | 169      | 530     | 224      | 375      |
| 6,5             | 75             | 105      | 220     | 193      | 580     | 240      | 404      |
| 7,0             | 88             | 118      | 241     | 217      | 664     | 251      | 437      |
| 7,5             | 101            | 127      | 260     | 238      | 811     | 276      | 466      |
| 8,0             | 113            | 172      | 277     | 255      | 963     | 392      | 480      |
| 8,5             | 126            | 240      | 294     | 273      | 1075    | 530      | 485      |
| 9,0             | 136            | 283      | 325     | 300      | 1154    | 635      | 543      |
| 9,5             | 158            | 300      | 355     | 334      | 1200    | 700      | 635      |
| 10,0            | 191            |          | 383     | 364      | 1228    | 750      | 845      |
| 10,5            | 195            |          | 408     | 379      | 1235    | 778      | 1083     |
| 11,0            |                |          | 421     | 400      |         | 802      | 1288     |
| 11,5            |                |          | 427     | 407      |         | 814      | 1454     |
| 12,0            |                |          | 432     | 414      |         | 824      | 1588     |
| 12,5            |                |          | 434     | 417      |         | 833      | 1685     |
| 13,0            |                |          | 436     | 418      |         | 835      | 1754     |
| 13,5            |                |          |         |          |         |          | 1795     |
| 14,0            |                |          |         |          |         |          | 1820     |
| 14,5            |                |          |         |          |         |          |          |
| 15,0            |                |          |         |          |         |          |          |





| N° Needle turns | Flow (ltr/min) |          |         |          |          |           |           |           |
|-----------------|----------------|----------|---------|----------|----------|-----------|-----------|-----------|
|                 | T280618        | T280618P | T280614 | T280838P | T281212P | T290838-V | T290838-B | T290838-C |
| 0,0             | 0              | 0        | 0       | 0        | 0        | 0         | 0         | 0         |
| 0,5             | 0              | 0        | 20      | 22       | 35       | 42        | 39        | 88        |
| 1,0             | 6              | 10       | 24      | 40       | 70       | 82        | 79        | 185       |
| 1,5             | 12             | 13       | 34      | 59       | 100      | 124       | 122       | 280       |
| 2,0             | 14             | 16       | 43      | 78       | 138      | 159       | 163       | 375       |
| 2,5             | 17             | 20       | 48      | 100      | 171      | 200       | 205       | 480       |
| 3,0             | 20             | 22       | 57      | 120      | 207      | 236       | 244       | 582       |
| 3,5             | 22             | 25       | 65      | 141      | 240      | 272       | 282       | 680       |
| 4,0             | 24             | 32       | 80      | 160      | 274      | 307       | 320       | 780       |
| 4,5             | 27             | 44       | 98      | 184      | 306      | 342       | 357       | 880       |
| 5,0             | 34             | 55       | 115     | 207      | 338      | 377       | 392       | 1110      |
| 5,5             | 44             | 69       | 142     | 226      | 370      | 411       | 425       | 1428      |
| 6,0             | 53             | 81       | 162     | 255      | 402      | 445       | 460       | 1628      |
| 6,5             | 64             | 94       | 182     | 360      | 433      | 478       | 496       | 1720      |
| 7,0             | 74             | 106      | 202     | 498      | 464      | 529       | 546       | 1767      |
| 7,5             | 84             | 120      | 221     | 614      | 494      | 640       | 642       | 1798      |
| 8,0             | 95             | 155      | 247     | 712      | 525      | 800       | 793       | 1820      |
| 8,5             | 125            | 207      | 294     | 778      | 560      | 970       | 983       | 1825      |
| 9,0             | 184            | 250      | 365     | 808      | 678      | 1088      | 1129      |           |
| 9,5             | 185            | 269      | 442     | 823      | 877      | 1145      | 1222      |           |
| 10,0            |                | 275      | 495     | 830      | 1079     | 1185      |           |           |
| 10,5            |                |          | 528     | 835      | 1280     | 1187      |           |           |
| 11,0            |                |          | 541     | 838      | 1340     |           |           |           |
| 11,5            |                |          | 549     | 843      | 1623     |           |           |           |
| 12,0            |                |          | 552     |          | 1760     |           |           |           |
| 12,5            |                |          | 553     |          | 1880     |           |           |           |
| 13,0            |                |          |         |          | 1970     |           |           |           |
| 13,5            |                |          |         |          | 2055     |           |           |           |
| 14,0            |                |          |         |          | 2060     |           |           |           |
| 14,5            |                |          |         |          |          |           |           |           |
| 15,0            |                |          |         |          |          |           |           |           |



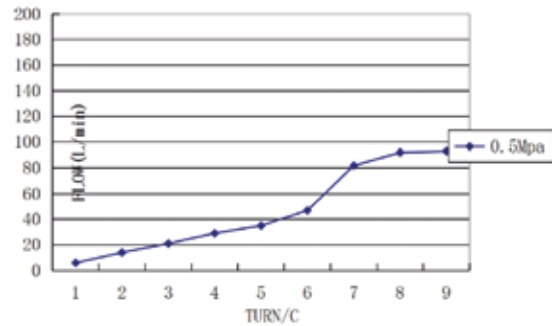
| Stems G1/8" banjo diam. 4 | 1    | 2    | 3    | 4    | 5    | m/a  | um |
|---------------------------|------|------|------|------|------|------|----|
| Clamping OK               | 2,5  | 2,5  | 2,5  | 2,5  |      | 2,5  | Nm |
| Ring crushed              | 3,5  | 3,5  | 3,0  | 3,3  |      | 3,5  | Nm |
| Deformed ring             | 5,0  | 5,5  | 4,5  | 5,0  |      | 5,0  | Nm |
| Stem breakage             | 16,4 | 16,4 | 15,3 | 14,5 |      | 16,0 | Nm |
| Stems G1/4" banjo diam. 6 | 1    | 2    | 3    | 4    | 5    | m/a  | um |
| Clamping OK               | 2,5  | 3,0  | 2,5  | 2,5  | 3,0  | 3,0  | Nm |
| Ring crushed              | 4,0  | 5,0  | 5,5  | 6,0  | 6,0  | 5,5  | Nm |
| Deformed ring             | 7,0  | 7,5  | 8,0  | 8,5  | 9,0  | 8,0  | Nm |
| Stem breakage             | 33,0 | 32,1 | 30,1 | 32,4 | 33,4 | 32,0 | Nm |
| Stems G3/8" banjo diam. 8 | 1    | 2    | 3    | 4    | 5    | m/a  | um |
| Clamping OK               | 4,0  | 5,0  |      |      |      | 4,5  | Nm |
| Ring crushed              | 8,0  | 8,5  |      |      |      | 8,0  | Nm |
| Deformed ring             | 15,0 | 16,0 |      |      |      | 16,0 | Nm |
| Stem breakage             | 41,9 | 44,3 |      |      |      | 43,0 | Nm |

| Regulator code | Flow (ltr/min)     |                        |
|----------------|--------------------|------------------------|
|                | 6 bar Δp=1 Nominal | 6 bar max free exhaust |
| 2804M5P        | 64                 | 118                    |
| T280618        | 120                | 185                    |
| T280618P       | 170                | 280                    |
| T280614        | 320                | 550                    |
| T280838P       | 505                | 840                    |
| T281212P       | 1230               | 2060                   |
| T290618        | 120                | 195                    |
| T290618P       | 175                | 300                    |
| T290614        | 260                | 435                    |
| T290614P       | 245                | 420                    |
| T290838        | 790                | 1235                   |
| T290838P       | 525                | 835                    |
| T291012P       | 1120               | 1820                   |
| T300618        | 200                | 330                    |
| T301014        | 365                | 655                    |
| T290838-V      | 705                | 1185                   |
| T290838-B      | 775                | 1070                   |
| T291212-C      | 1160               | 1825                   |



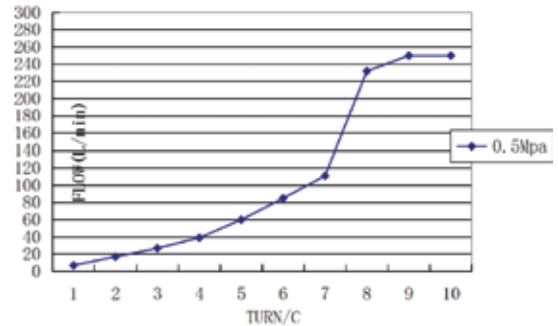
ART. **T310400**  
ART. **TB310400**  
In-Line Flow Regulator

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |



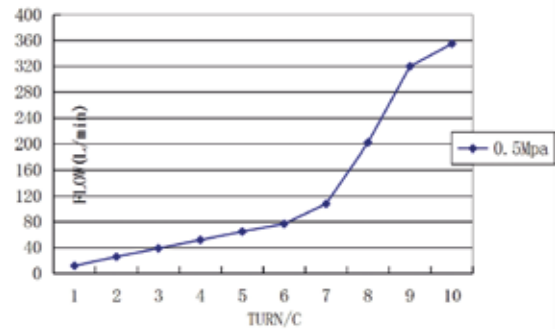
ART. **T310600**  
ART. **TB310600**  
In-Line Flow Regulator

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |



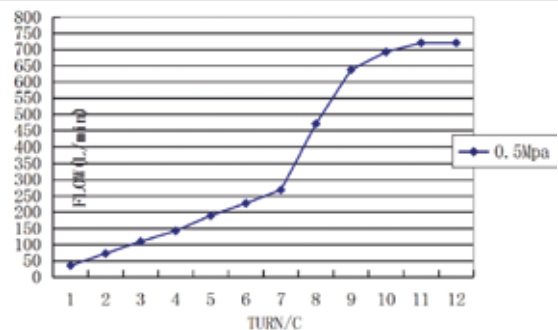
ART. **T310800**  
ART. **TB310800**  
In-Line Flow Regulator

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |



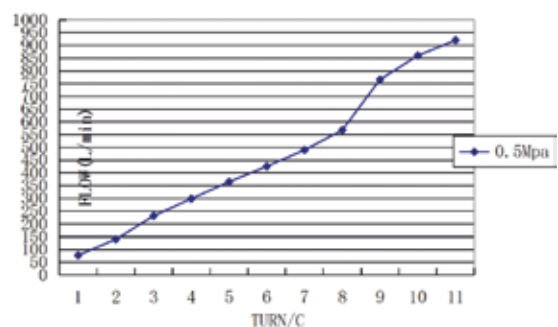
ART. **T311000**  
ART. **TB311000**  
In-Line Flow Regulator

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |



ART. **T311200**  
ART. **TB311200**  
In-Line Flow Regulator

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 6 bar        |

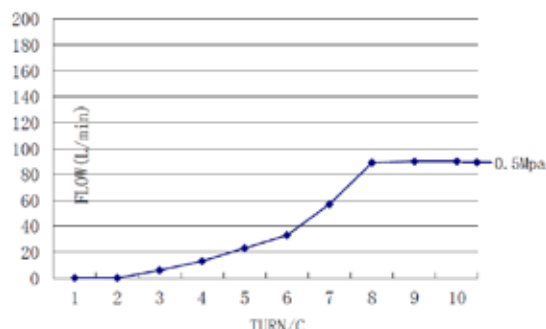


ART. **T29GS04M5**

ART. **T29GS06M5**

Speed controller for cylinders with lock cap

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |



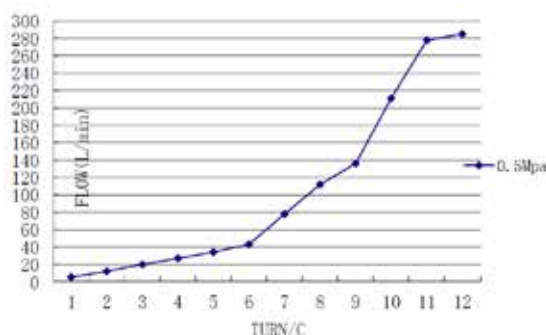
ART. **T29GS0418**

ART. **T29GS0618**

ART. **T29GS0818**

Speed controller for cylinders with lock cap

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |

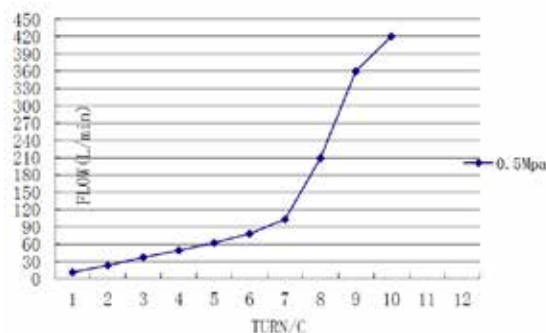


ART. **T29GS0614**

ART. **T29GS0618**

Speed controller for cylinders with lock cap

|             |              |
|-------------|--------------|
| Fluid       | Filtered air |
| Temperature | 20°C         |
| Pression    | 5 bar        |

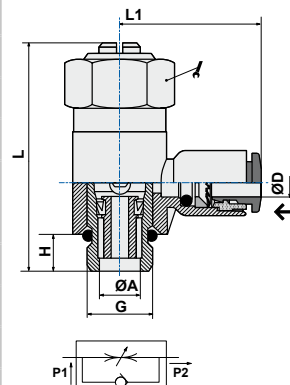


ART. **28**

**Orientable flow regulator for valve**



| COD.   | ØD | G   | ØA  | H   | L1   | L    |    |    |       |
|--------|----|-----|-----|-----|------|------|----|----|-------|
| 2804M5 | 4  | M5  | 1,9 | 4,0 | 19,5 | 24,0 | 8  | 25 | 10,28 |
| 280418 | 4  | 1/8 | 5,5 | 5,5 | 21,1 | 34,0 | 14 | 25 | 33,86 |
| 2806M5 | 6  | M5  | 1,9 | 4,0 | 21,0 | 24,0 | 8  | 25 | 11,29 |
| 280618 | 6  | 1/8 | 5,5 | 5,5 | 24,3 | 34,0 | 14 | 25 | 35,00 |
| 280614 | 6  | 1/4 | 6,0 | 6,5 | 25,5 | 42,0 | 17 | 25 | 59,68 |
| 280818 | 8  | 1/8 | 5,5 | 5,5 | 24,8 | 34,0 | 14 | 25 | 34,96 |
| 280814 | 8  | 1/4 | 6,0 | 6,5 | 26,5 | 42,0 | 17 | 25 | 60,44 |
| 280838 | 8  | 3/8 | 8,0 | 7,5 | 28,0 | 52,0 | 20 | 10 | 94,87 |
| 281014 | 10 | 1/4 | 6,0 | 6,5 | 28,4 | 42,0 | 17 | 25 | 65,86 |
| 281038 | 10 | 3/8 | 8,0 | 7,5 | 29,9 | 52,0 | 20 | 10 | 78,13 |
| 281238 | 12 | 3/8 | 8,0 | 7,5 | 31,4 | 52,0 | 20 | 10 | 99,38 |

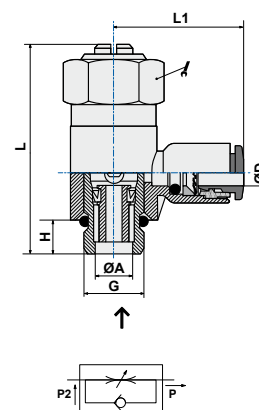


ART. **29**

**Orientable flow regulator for cylinder**



| COD.   | ØD | G   | ØA   | H   | L1   | L    |    |    |        |
|--------|----|-----|------|-----|------|------|----|----|--------|
| 2904M5 | 4  | M5  | 1,9  | 4,0 | 19,5 | 24,0 | 8  | 25 | 10,50  |
| 290418 | 4  | 1/8 | 5,0  | 5,5 | 21,1 | 34,0 | 14 | 25 | 33,93  |
| 2906M5 | 6  | M5  | 1,9  | 4,0 | 21,0 | 24,0 | 8  | 25 | 11,29  |
| 290618 | 6  | 1/8 | 5,0  | 5,5 | 24,3 | 34,0 | 14 | 25 | 34,72  |
| 290614 | 6  | 1/4 | 6,0  | 6,5 | 25,5 | 42,0 | 17 | 25 | 60,00  |
| 290818 | 8  | 1/8 | 5,0  | 5,5 | 24,8 | 34,0 | 14 | 25 | 35,31  |
| 290814 | 8  | 1/4 | 6,0  | 6,5 | 26,5 | 42,0 | 17 | 25 | 69,97  |
| 290838 | 8  | 3/8 | 6,5  | 7,5 | 28,0 | 52,0 | 20 | 10 | 95,17  |
| 291014 | 10 | 1/4 | 6,0  | 6,5 | 28,4 | 42,0 | 17 | 25 | 65,89  |
| 291038 | 10 | 3/8 | 6,5  | 7,5 | 29,9 | 52,0 | 20 | 10 | 97,53  |
| 291238 | 12 | 3/8 | 6,5  | 7,5 | 31,4 | 52,0 | 20 | 10 | 99,65  |
| 291212 | 12 | 1/2 | 10,0 | 9   | 34,9 | 61,0 | 26 | 10 | 160,80 |

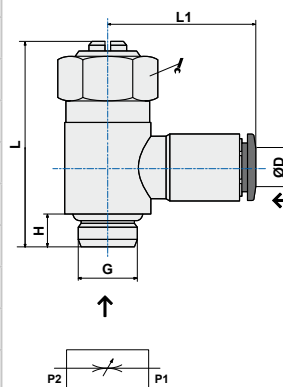


ART. **30**

**Orientable bidirectional flow regulator**



| COD.   | ØD | G   | H   | L1   | L  |    |    |        |
|--------|----|-----|-----|------|----|----|----|--------|
| 3004M5 | 4  | M5  | 4,0 | 19,5 | 24 | 8  | 25 | 10,50  |
| 300418 | 4  | 1/8 | 5,5 | 21,1 | 34 | 14 | 25 | 33,92  |
| 3006M5 | 6  | M5  | 4,0 | 21,0 | 24 | 8  | 25 | 11,30  |
| 300618 | 6  | 1/8 | 5,5 | 24,3 | 34 | 14 | 25 | 35,89  |
| 300614 | 6  | 1/4 | 6,5 | 25,5 | 42 | 17 | 25 | 61,44  |
| 300818 | 8  | 1/8 | 5,5 | 24,8 | 34 | 14 | 25 | 36,32  |
| 300814 | 8  | 1/4 | 6,5 | 26,5 | 42 | 17 | 25 | 62,28  |
| 300838 | 8  | 3/8 | 7,5 | 28,0 | 52 | 20 | 10 | 94,34  |
| 301014 | 10 | 1/4 | 6,5 | 28,4 | 42 | 17 | 25 | 65,89  |
| 301038 | 10 | 3/8 | 7,5 | 29,9 | 52 | 20 | 10 | 97,53  |
| 301238 | 12 | 3/8 | 7,5 | 31,4 | 52 | 20 | 10 | 99,00  |
| 301212 | 12 | 1/2 | 9   | 34,9 | 61 | 26 | 10 | 160,00 |

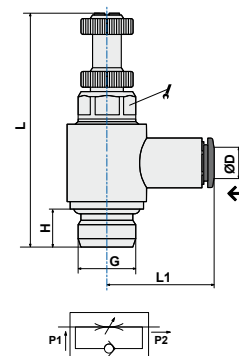


ART. **28P**

**Swivel flow regulator for valve**



| COD.    | ØD | G   | H   | L1   | L    |    |    |       |
|---------|----|-----|-----|------|------|----|----|-------|
| 2804M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,50 |
| 280418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 28,09 |
| 2806M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 12,60 |
| 280618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 29,09 |
| 280614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 51,13 |
| 280818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 30,08 |
| 280814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 51,69 |
| 281014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 56,18 |

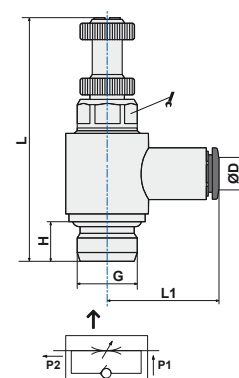


ART. **29P**

**Swivel flow regulator for cylinder**



| COD.    | ØD | G   | H   | L1   | L    |    |    |       |
|---------|----|-----|-----|------|------|----|----|-------|
| 2904M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,60 |
| 290418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 28,13 |
| 2906M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 12,60 |
| 290618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 29,50 |
| 290614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 50,55 |
| 290818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 29,51 |
| 290814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 51,43 |
| 291014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 56,20 |

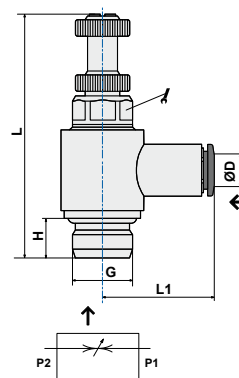


ART. **30P**

**Swivel bidirectional flow regulator**



| COD.    | ØD | G   | H   | L1   | L    |    |    |       |
|---------|----|-----|-----|------|------|----|----|-------|
| 3004M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,60 |
| 300418P | 4  | 1/8 | 5,5 | 43   | 21,1 | 9  | 25 | 28,13 |
| 3006M5P | 6  | M5  | 4   | 21   | 35,0 | 8  | 25 | 13,00 |
| 300618P | 6  | 1/8 | 5,5 | 43   | 24,3 | 9  | 25 | 29,50 |
| 300614P | 6  | 1/4 | 6,5 | 50   | 25,5 | 12 | 25 | 50,55 |
| 300818P | 8  | 1/8 | 5,5 | 43   | 24,8 | 9  | 25 | 29,51 |
| 300814P | 8  | 1/4 | 6,5 | 50   | 26,5 | 12 | 25 | 51,43 |
| 301014P | 10 | 1/4 | 6,5 | 50   | 28,4 | 12 | 25 | 56,20 |

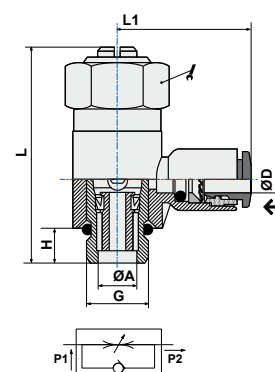


ART. **B28**

**Unidirectional flow regulator for valve**



| COD.    | ØD | G   | ØA  | H   | L1   | L    |    |    |       |
|---------|----|-----|-----|-----|------|------|----|----|-------|
| B2804M5 | 4  | M5  | 1,9 | 4,0 | 19,5 | 24,0 | 8  | 25 | 10,28 |
| B280418 | 4  | 1/8 | 5,5 | 5,5 | 21,1 | 34,0 | 14 | 25 | 33,86 |
| B2806M5 | 6  | M5  | 1,9 | 4,0 | 21,0 | 24,0 | 8  | 25 | 11,29 |
| B280618 | 6  | 1/8 | 5,5 | 5,5 | 24,3 | 34,0 | 14 | 25 | 35,00 |
| B280614 | 6  | 1/4 | 6,0 | 6,5 | 25,5 | 42,0 | 17 | 25 | 59,68 |
| B280818 | 8  | 1/8 | 5,5 | 5,5 | 24,8 | 34,0 | 14 | 25 | 34,96 |
| B280814 | 8  | 1/4 | 6,0 | 6,5 | 26,5 | 42,0 | 17 | 25 | 60,44 |
| B280838 | 8  | 3/8 | 8,0 | 7,5 | 28,0 | 52,0 | 20 | 10 | 94,87 |
| B281014 | 10 | 1/4 | 6,0 | 6,5 | 28,4 | 42,0 | 17 | 25 | 65,86 |
| B281038 | 10 | 3/8 | 8,0 | 7,5 | 29,9 | 52,0 | 20 | 10 | 78,13 |
| B281238 | 12 | 3/8 | 8,0 | 7,5 | 31,4 | 52,0 | 20 | 10 | 99,38 |

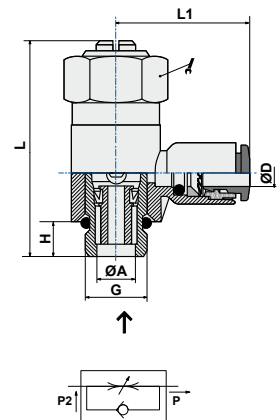


ART. **B29**

**Unidirectional flow regulator for cylinder**



| COD.    | ØD | G   | ØA   | H   | L1   | L    |    |    |        |
|---------|----|-----|------|-----|------|------|----|----|--------|
| B2904M5 | 4  | M5  | 1,9  | 4,0 | 19,5 | 24,0 | 8  | 25 | 10,50  |
| B290418 | 4  | 1/8 | 5,0  | 5,5 | 21,1 | 34,0 | 14 | 25 | 33,93  |
| B2906M5 | 6  | M5  | 1,9  | 4,0 | 21,0 | 24,0 | 8  | 25 | 11,29  |
| B290618 | 6  | 1/8 | 5,0  | 5,5 | 24,3 | 34,0 | 14 | 25 | 34,72  |
| B290614 | 6  | 1/4 | 6,0  | 6,5 | 25,5 | 42,0 | 17 | 25 | 60,00  |
| B290818 | 8  | 1/8 | 5,0  | 5,5 | 24,8 | 34,0 | 14 | 25 | 35,31  |
| B290814 | 8  | 1/4 | 6,0  | 6,5 | 26,5 | 42,0 | 17 | 25 | 69,97  |
| B290838 | 8  | 3/8 | 6,5  | 7,5 | 28,0 | 52,0 | 20 | 10 | 95,17  |
| B291014 | 10 | 1/4 | 6,0  | 6,5 | 28,4 | 42,0 | 17 | 25 | 65,89  |
| B291038 | 10 | 3/8 | 6,5  | 7,5 | 29,9 | 52,0 | 20 | 10 | 97,53  |
| B291238 | 12 | 3/8 | 6,5  | 7,5 | 31,4 | 52,0 | 20 | 10 | 99,65  |
| B291212 | 12 | 1/2 | 10,0 | 9   | 34,9 | 61,0 | 26 | 10 | 160,80 |

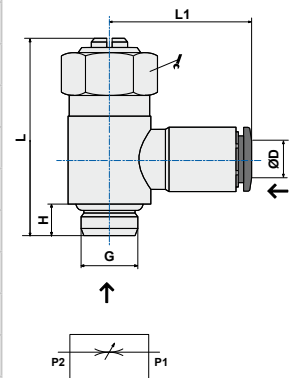


ART. **B30**

**Bidirectional flow regulator**



| COD.    | ØD | G   | H   | L1   | L  |    |    |        |
|---------|----|-----|-----|------|----|----|----|--------|
| B3004M5 | 4  | M5  | 4,0 | 19,5 | 24 | 8  | 25 | 10,50  |
| B300418 | 4  | 1/8 | 5,5 | 21,1 | 34 | 14 | 25 | 33,92  |
| B3006M5 | 6  | M5  | 4,0 | 21,0 | 24 | 8  | 25 | 11,30  |
| B300618 | 6  | 1/8 | 5,5 | 24,3 | 34 | 14 | 25 | 35,89  |
| B300614 | 6  | 1/4 | 6,5 | 25,5 | 42 | 17 | 25 | 61,44  |
| B300818 | 8  | 1/8 | 5,5 | 24,8 | 34 | 14 | 25 | 36,32  |
| B300814 | 8  | 1/4 | 6,5 | 26,5 | 42 | 17 | 25 | 62,28  |
| B300838 | 8  | 3/8 | 7,5 | 28,0 | 52 | 20 | 10 | 94,34  |
| B301014 | 10 | 1/4 | 6,5 | 28,4 | 42 | 17 | 25 | 65,89  |
| B301038 | 10 | 3/8 | 7,5 | 29,9 | 52 | 20 | 10 | 97,53  |
| B301238 | 12 | 3/8 | 7,5 | 31,4 | 52 | 20 | 10 | 99,00  |
| B301212 | 12 | 1/2 | 9   | 34,9 | 61 | 26 | 10 | 160,00 |

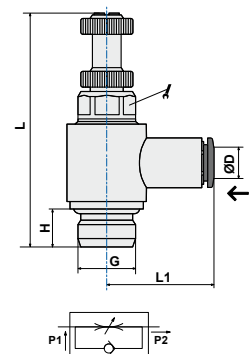


ART. **B28P**

**Swivel flow regulator for valve**



| COD.     | ØD | G   | H   | L    | L1   |    |    |       |
|----------|----|-----|-----|------|------|----|----|-------|
| B2804M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,50 |
| B280418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 28,09 |
| B2806M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 12,60 |
| B280618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 29,09 |
| B280614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 51,13 |
| B280818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 30,08 |
| B280814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 51,69 |
| B281014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 56,18 |

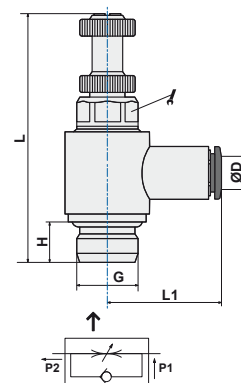


ART. **B29P**

**Swivel flow regulator for cylinder**



| COD.     | ØD | G   | H   | L    | L1   |    |    |       |
|----------|----|-----|-----|------|------|----|----|-------|
| B2904M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,60 |
| B290418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 28,13 |
| B2906M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 12,60 |
| B290618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 29,50 |
| B290614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 50,55 |
| B290818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 29,51 |
| B290814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 51,43 |
| B291014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 56,20 |

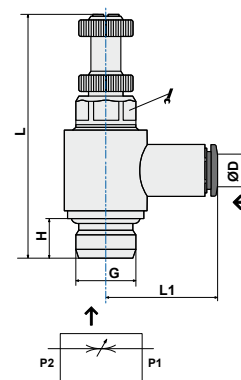


ART. **B30P**

**Bidirectional flow regulator**



| COD.     | ØD | G   | H   | L    | L1   |    |    |       |
|----------|----|-----|-----|------|------|----|----|-------|
| B3004M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 11,60 |
| B300418P | 4  | 1/8 | 5,5 | 43   | 21,1 | 9  | 25 | 28,13 |
| 3006M5P  | 6  | M5  | 4   | 21   | 35,0 | 8  | 25 |       |
| B300618P | 6  | 1/8 | 5,5 | 43   | 24,3 | 9  | 25 | 29,50 |
| B300614P | 6  | 1/4 | 6,5 | 50   | 25,5 | 12 | 25 | 50,55 |
| B300818P | 8  | 1/8 | 5,5 | 43   | 24,8 | 9  | 25 | 29,51 |
| B300814P | 8  | 1/4 | 6,5 | 50   | 26,5 | 12 | 25 | 51,43 |
| B301014P | 10 | 1/4 | 6,5 | 50   | 28,4 | 12 | 25 | 56,20 |

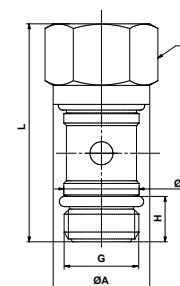


ART. **28/29/30A**

**Positioned flow regulator stem**



| COD.          | L    | G   | H  | ØB   | ØA   |    |    |        |
|---------------|------|-----|----|------|------|----|----|--------|
| 28/29/30AM5*  | 24,0 | M5  | 4  | 6,0  | 5,0  | 8  | 10 | 4,9    |
| 28/29/30A18   | 31,5 | 1/8 | 7  | 9,8  | 13,5 | 14 | 10 | 20,69  |
| 28/29/30A14   | 38,0 | 1/4 | 8  | 13,0 | 17,0 | 17 | 10 | 39,85  |
| 28/29/30A38   | 46,5 | 3/8 | 9  | 16,5 | 21,0 | 21 | 10 | 67,08  |
| 29A12 / 30A12 | 53,0 | 1/2 | 10 | 20,5 | 26   | 26 | 5  | 112,46 |



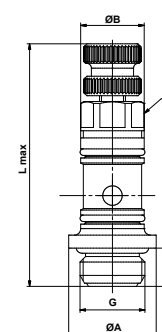
\*Compatible only with versions 13R - T13R

ART. **28/29/30AP**

**Swivel flow regulator stem**



| COD.          | L max | G   | H   | ØB   | ØA   |    |    |       |
|---------------|-------|-----|-----|------|------|----|----|-------|
| 28/29/30AM5P* | 35,0  | M5  | 4,2 | 6,0  | 5,0  | 8  | 10 | 4,9   |
| 28/29/30A18P  | 37,5  | 1/8 | 5,9 | 9,8  | 13,5 | 9  | 10 | 15,00 |
| 28/29/30A14P  | 44,0  | 1/4 | 7,0 | 13,0 | 17,0 | 12 | 10 | 31,00 |



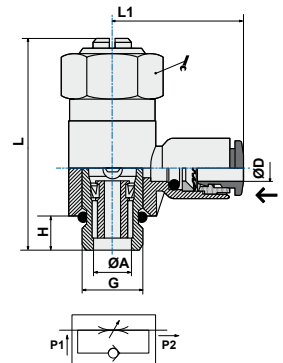
\*Compatible only with versions 13R - T13R

ART. **280T**

**Orientable flow regulator for valve**



| COD.     | ØD | G   | ØA  | H   | L1   | L  |    |    |        |
|----------|----|-----|-----|-----|------|----|----|----|--------|
| 280T04M5 | 4  | M5  | 1,9 | 4,0 | 19,5 | 24 | 8  | 25 | 11,48  |
| 280T0418 | 4  | 1/8 | 5,5 | 5,5 | 21,1 | 34 | 14 | 25 | 35,06  |
| 280T06M5 | 6  | M5  | 1,9 | 4,0 | 21,0 | 24 | 8  | 25 | 36,50  |
| 280T0618 | 6  | 1/8 | 5,5 | 5,5 | 24,3 | 34 | 14 | 25 | 36,50  |
| 280T0614 | 6  | 1/4 | 6,0 | 6,5 | 25,5 | 42 | 17 | 25 | 61,18  |
| 280T0818 | 8  | 1/8 | 5,5 | 5,5 | 24,8 | 34 | 14 | 25 | 36,77  |
| 280T0814 | 8  | 1/4 | 6,0 | 6,5 | 26,5 | 42 | 17 | 25 | 62,24  |
| 280T0838 | 8  | 3/8 | 8,0 | 7,5 | 28,0 | 52 | 20 | 10 | 96,67  |
| 280T1014 | 10 | 1/4 | 6,0 | 6,5 | 28,4 | 42 | 17 | 25 | 69,86  |
| 280T1038 | 10 | 3/8 | 8,0 | 7,5 | 29,9 | 52 | 20 | 10 | 82,13  |
| 280T1238 | 12 | 3/8 | 8,0 | 7,5 | 31,4 | 52 | 20 | 10 | 103,88 |

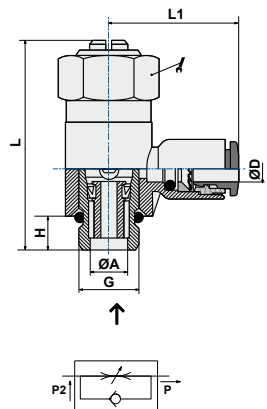


ART. **290T**

**Orientable flow regulator for cylinder**



| COD.     | ØD | G   | ØA   | H   | L  | L1   |    |    |        |
|----------|----|-----|------|-----|----|------|----|----|--------|
| 290T04M5 | 4  | M5  | 1,9  | 4,0 | 24 | 19,5 | 8  | 25 | 11,48  |
| 290T0418 | 4  | 1/8 | 5,0  | 5,5 | 34 | 21,1 | 14 | 25 | 35,06  |
| 290T06M5 | 6  | M5  | 1,9  | 4,0 | 24 | 21,0 | 8  | 25 | 36,50  |
| 290T0618 | 6  | 1/8 | 5,0  | 5,5 | 34 | 24,3 | 14 | 25 | 36,50  |
| 290T0614 | 6  | 1/4 | 6,0  | 6,5 | 42 | 25,5 | 17 | 25 | 61,18  |
| 290T0818 | 8  | 1/8 | 5,0  | 5,5 | 34 | 24,8 | 14 | 25 | 36,77  |
| 290T0814 | 8  | 1/4 | 6,0  | 6,5 | 42 | 26,5 | 17 | 25 | 62,24  |
| 290T0838 | 8  | 3/8 | 6,5  | 7,5 | 52 | 28,0 | 20 | 10 | 96,67  |
| 290T1014 | 10 | 1/4 | 6,0  | 6,5 | 42 | 28,4 | 17 | 25 | 69,86  |
| 290T1038 | 10 | 3/8 | 6,5  | 7,5 | 52 | 29,9 | 20 | 10 | 82,13  |
| 290T1238 | 12 | 3/8 | 6,5  | 7,5 | 52 | 31,4 | 20 | 10 | 103,88 |
| 290T1212 | 12 | 1/2 | 10,0 | 9   | 61 | 34,9 | 26 | 10 | 165,30 |

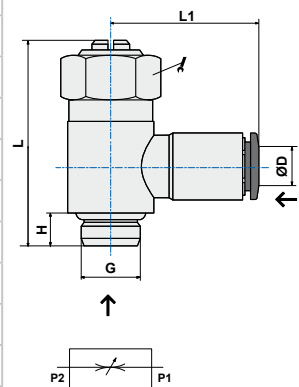


ART. **300T**

**Orientable bidirectional flow regulator**



| COD.     | ØD | G   | H   | L  | L1   |    |    |        |
|----------|----|-----|-----|----|------|----|----|--------|
| 300T04M5 | 4  | M5  | 4,0 | 24 | 19,5 | 8  | 25 | 11,48  |
| 300T0418 | 4  | 1/8 | 5,5 | 34 | 21,1 | 14 | 25 | 35,06  |
| 300T06M5 | 6  | M5  | 4,0 | 24 | 21,0 | 8  | 25 | 36,50  |
| 300T0618 | 6  | 1/8 | 5,5 | 34 | 24,3 | 14 | 25 | 36,50  |
| 300T0614 | 6  | 1/4 | 6,5 | 42 | 25,5 | 17 | 25 | 61,18  |
| 300T0818 | 8  | 1/8 | 5,5 | 34 | 24,8 | 14 | 25 | 36,77  |
| 300T0814 | 8  | 1/4 | 6,5 | 42 | 26,5 | 17 | 25 | 62,24  |
| 300T0838 | 8  | 3/8 | 7,5 | 52 | 28,0 | 20 | 10 | 96,67  |
| 300T1014 | 10 | 1/4 | 6,5 | 42 | 28,4 | 17 | 25 | 69,86  |
| 300T1038 | 10 | 3/8 | 7,5 | 52 | 29,9 | 20 | 10 | 82,13  |
| 300T1238 | 12 | 3/8 | 7,5 | 52 | 31,4 | 20 | 10 | 103,88 |
| 300T1212 | 12 | 1/2 | 9   | 61 | 34,9 | 26 | 10 | 165,30 |

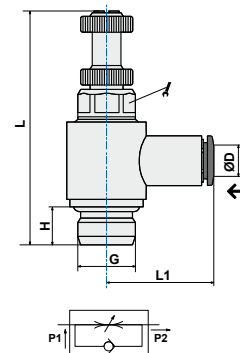


ART. **280T-P**

**Swivel flow regulator for valve**



| COD.      | ØD | G   | H   | L    | L1   |    |    |       |
|-----------|----|-----|-----|------|------|----|----|-------|
| 280T04M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 12,70 |
| 280T0418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 29,29 |
| 280T06M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 13,80 |
| 280T0618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 30,59 |
| 280T0614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 52,63 |
| 280T0818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 31,88 |
| 280T0814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 53,49 |
| 280T1014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 60,18 |

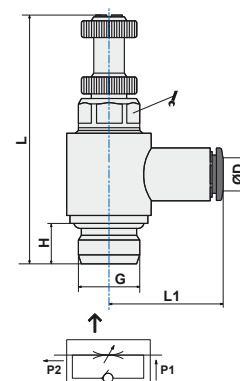


ART. **290T-P**

**Swivel flow regulator for cylinder**



| COD.      | ØD | G   | H   | L    | L1   |    |    |       |
|-----------|----|-----|-----|------|------|----|----|-------|
| 290T04M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 12,70 |
| 290T0418P | 4  | 1/8 | 5,5 | 43,0 | 21,1 | 9  | 25 | 29,29 |
| 290T06M5P | 6  | M5  | 4   | 21,0 | 35,0 | 8  | 25 | 13,80 |
| 290T0618P | 6  | 1/8 | 5,5 | 43,0 | 24,3 | 9  | 25 | 30,59 |
| 290T0614P | 6  | 1/4 | 6,5 | 50,0 | 25,5 | 12 | 25 | 52,63 |
| 290T0818P | 8  | 1/8 | 5,5 | 43,0 | 24,8 | 9  | 25 | 31,88 |
| 290T0814P | 8  | 1/4 | 6,5 | 50,0 | 26,5 | 12 | 25 | 53,49 |
| 290T1014P | 10 | 1/4 | 6,5 | 50,0 | 28,4 | 12 | 25 | 60,18 |

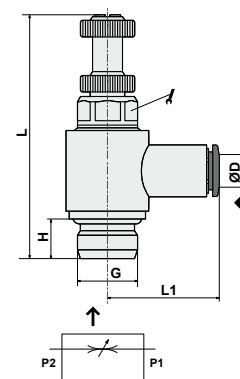


ART. **300T-P**

**Swivel bidirectional flow regulator**



| COD.      | ØD | G   | H   | L    | L1   |    |    |       |
|-----------|----|-----|-----|------|------|----|----|-------|
| 300T04M5P | 4  | M5  | 4   | 19,5 | 35,0 | 8  | 25 | 12,70 |
| 300T0418P | 4  | 1/8 | 5,5 | 43   | 21,1 | 9  | 25 | 29,29 |
| 300T06M5P | 6  | M5  | 4   | 21   | 35,0 | 8  | 25 | 13,80 |
| 300T0618P | 6  | 1/8 | 5,5 | 43   | 24,3 | 9  | 25 | 30,59 |
| 300T0614P | 6  | 1/4 | 6,5 | 50   | 25,5 | 12 | 25 | 52,63 |
| 300T0818P | 8  | 1/8 | 5,5 | 43   | 24,8 | 9  | 25 | 31,88 |
| 300T0814P | 8  | 1/4 | 6,5 | 50   | 26,5 | 12 | 25 | 53,49 |
| 300T1014P | 10 | 1/4 | 6,5 | 50   | 28,4 | 12 | 25 | 60,18 |





## Technopolymer flow regulators

# Series TECNORAP - TECNORAP BLACK



The Tecnorap flow regulators series are produced in Italy according to the reference ISO norms as warranty of high quality level.

### Ordering code

**T 29 06 18 P**

#### COLOUR (FITTING BODY + THRUST SLEEVE)

**T** = Grey body Green thrust sleeve  
**TN** = Grey body Black thrust sleeve  
**TS** = Grey body Grey thrust sleeve  
**TA** = Grey body Blue thrust sleeve  
**TB** = Black body Black thrust sleeve  
**TBV** = Black body Green thrust sleeve  
**TBS** = Black body Grey thrust sleeve  
**TBA** = Black body Blue thrust sleeve

#### ADJUSTING STEM WITH KNOB

**28** = For valve  
**29** = For cylinder  
**30** = Bidirectional

#### TUBE DIAMETER

**04 ... 12** = For tube Ø4; Ø6; Ø8; Ø10, Ø12 mm

#### THREADED CONNECTION

**M5** = M5  
**18** = G1/8"  
**14** = G1/4"  
**38** = G3/8"  
**12** = G1/2"

#### TYPE

**blank** = Orientable type with screwdriver nut  
**P** = Swivel type with adjusting knob

## Technical sheet

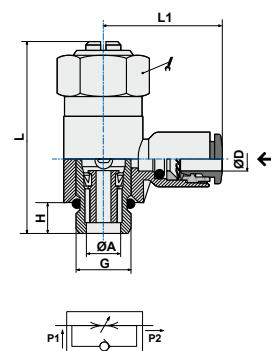
|                                 |                                                |                                                                                                                                                                                                      |
|---------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                                | Compressed air (for different fluid please contact our Technical Dept.)                                                                                                                              |
| <b>APPLICATIONS</b>             |                                                | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms.                                                                                                           |
| <b>SUGGESTED TUBES</b>          |                                                | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                                        |
| <b>TUBES TOLERANCES</b>         |                                                | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                          |
| <b>TEMPERATURE AND PRESSURE</b> | <b>Recommended limit values</b>                | Temperatures and pressures usually depend by the technical features of the employed tubes, anyway it is suggested a limit working pressure of 15 bar and a temperature range between -20°C and +70°C |
|                                 | <b>Technical testing data</b>                  | At page 44 there are indicated the load traction resistance values and the main working and breaking limit (Pressure and Temperature) of the main commercial tubing.                                 |
|                                 | <b>Note</b>                                    | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                            |
| <b>THREAD TYPE</b>              |                                                | BSP paralell UNI-ISO 228                                                                                                                                                                             |
| <b>MATERIALS</b>                | <b>Regulation stem</b>                         | Brass UNI EN 12164 CW614N                                                                                                                                                                            |
|                                 | <b>TRAP body, sleeve, collar and back ring</b> | POM copolymer ISO1043-1                                                                                                                                                                              |
|                                 | <b>Spring</b>                                  | Stainless steel AISI 301 austenitic                                                                                                                                                                  |
|                                 | <b>Seals</b>                                   | NBR 70 DWGV-EN549 UL157                                                                                                                                                                              |

ART. **T28**

**Orientable flow regulator for valve**



| COD.    | ØD | G   | ØA  | H   | L    | L1   |    |    |       |
|---------|----|-----|-----|-----|------|------|----|----|-------|
| T2804M5 | 4  | M5  | 2,0 | 4   | 22,5 | 19,0 | 8  | 25 | 6,15  |
| T280418 | 4  | 1/8 | 5,0 | 5,5 | 34,0 | 21,1 | 14 | 25 | 22,96 |
| T2806M5 | 6  | M5  | 2,0 | 4   | 22,5 | 22,0 | 8  | 25 | 6,00  |
| T280618 | 6  | 1/8 | 5,0 | 5,5 | 34,0 | 24,3 | 14 | 25 | 23,41 |
| T280614 | 6  | 1/4 | 6,0 | 6,5 | 42,0 | 25,5 | 17 | 25 | 43,38 |
| T280818 | 8  | 1/8 | 5,0 | 5,5 | 34,0 | 24,8 | 14 | 25 | 23,65 |
| T280814 | 8  | 1/4 | 6,0 | 6,5 | 42,0 | 26,5 | 17 | 25 | 44,10 |
| T280838 | 8  | 3/8 | 6,5 | 7,5 | 52,0 | 28,0 | 20 | 10 | 72,00 |
| T281014 | 10 | 1/4 | 6,0 | 6,5 | 42,0 | 28,4 | 17 | 25 | 44,00 |
| T281038 | 10 | 3/8 | 6,5 | 7,5 | 52,0 | 29,9 | 20 | 10 | 72,00 |
| T281238 | 12 | 3/8 | 6,5 | 7,5 | 52,0 | 31,4 | 20 | 10 | 74,00 |

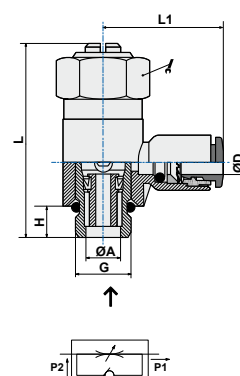


ART. **T29**

**Orientable flow regulator for cylinder**



| COD.    | ØD | G   | ØA   | H   | L    | L1   |    |    |        |
|---------|----|-----|------|-----|------|------|----|----|--------|
| T2904M5 | 4  | M5  | 2,0  | 4   | 22,5 | 19,0 | 8  | 25 | 6,15   |
| T290418 | 4  | 1/8 | 5,0  | 4   | 34,0 | 21,1 | 14 | 25 | 22,96  |
| T2906M5 | 6  | M5  | 2,0  | 4   | 22,5 | 22,0 | 8  | 25 | 6,00   |
| T290618 | 6  | 1/8 | 5,0  | 5,5 | 34,0 | 24,3 | 14 | 25 | 23,41  |
| T290614 | 6  | 1/4 | 6,0  | 6,5 | 42,0 | 25,5 | 17 | 25 | 43,38  |
| T290818 | 8  | 1/8 | 5,0  | 5,5 | 34,0 | 24,8 | 14 | 25 | 23,65  |
| T290814 | 8  | 1/4 | 6,0  | 6,5 | 42,0 | 26,5 | 17 | 25 | 44,10  |
| T290838 | 8  | 3/8 | 6,5  | 7,5 | 52,0 | 28,0 | 20 | 10 | 72,00  |
| T291014 | 10 | 1/4 | 6,0  | 6,5 | 42,0 | 28,4 | 17 | 25 | 44,00  |
| T291038 | 10 | 3/8 | 6,5  | 7,5 | 52,0 | 29,9 | 20 | 10 | 72,00  |
| T291012 | 10 | 1/2 | 10,0 | 9   | 61,0 | 30,0 | 26 | 10 | 12,00  |
| T291238 | 12 | 3/8 | 6,5  | 7,5 | 52,0 | 31,4 | 20 | 10 | 7,40   |
| T291212 | 12 | 1/2 | 10,0 | 9   | 61,0 | 34,9 | 26 | 10 | 122,00 |

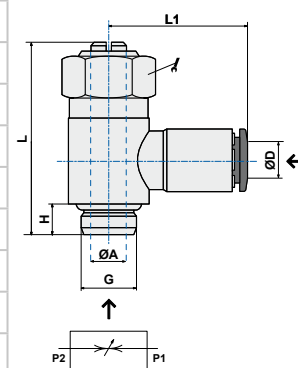


ART. **T30**

**Orientable bidirectional flow regulator**



| COD.    | ØD | G   | ØA   | H   | L    | L1   |    |    |       |
|---------|----|-----|------|-----|------|------|----|----|-------|
| T3004M5 | 4  | M5  | 2,0  | 4   | 22,5 | 19,0 | 8  | 25 | 6,15  |
| T300418 | 4  | 1/8 | 5,0  | 4   | 34,0 | 21,1 | 14 | 25 | 22,96 |
| T3006M5 | 6  | M5  | 2,0  | 4   | 22,5 | 22,0 | 8  | 5  | 6,00  |
| T300618 | 6  | 1/8 | 5,0  | 5,5 | 34,0 | 24,3 | 14 | 25 | 23,41 |
| T300614 | 6  | 1/4 | 6,0  | 6,5 | 42,0 | 25,5 | 17 | 25 | 43,38 |
| T300818 | 8  | 1/8 | 5,0  | 5,5 | 34,0 | 24,8 | 14 | 25 | 23,65 |
| T300814 | 8  | 1/4 | 6,0  | 6,5 | 42,0 | 26,5 | 17 | 25 | 44,10 |
| T300838 | 8  | 3/8 | 6,5  | 7,5 | 52,0 | 28,0 | 20 | 10 | 72,00 |
| T301014 | 10 | 1/4 | 6,0  | 6,5 | 42,0 | 28,4 | 17 | 25 | 44,00 |
| T301038 | 10 | 3/8 | 6,5  | 7,5 | 52,0 | 29,9 | 20 | 10 | 72,00 |
| T301238 | 12 | 3/8 | 6,5  | 7,5 | 52,0 | 31,4 | 20 | 10 | 74,00 |
| T301212 | 12 | 1/2 | 10,0 | 9   | 61,0 | 34,9 | 26 | 10 | 74,00 |

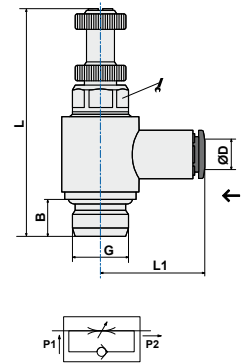


ART. **T28P**

Swivel flow regulator for valve



| COD.     | ØD | G   | B    | L  | L1   |      |    |        |
|----------|----|-----|------|----|------|------|----|--------|
| T2804M5P | 4  | M5  | 4    | 34 | 19,0 | 8,0  | 25 | 7,58   |
| T280418P | 4  | 1/8 | 5,5  | 43 | 21,1 | 9,0  | 25 | 17,26  |
| T2806M5P | 6  | M5  | 4    | 34 | 22,0 | 8,0  | 25 | 8,00   |
| T280618P | 6  | 1/8 | 5,5  | 43 | 24,3 | 9,0  | 25 | 17,91  |
| T280614P | 6  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 34,79  |
| T280638P | 6  | 3/8 | 9,5  | 53 | 29,5 | 13,0 | 10 | 63,40  |
| T280612P | 6  | 1/2 | 12,0 | 61 | 30,2 | 13,0 | 10 | 104,00 |
| T280818P | 8  | 1/8 | 5,5  | 43 | 24,8 | 9,0  | 25 | 18,23  |
| T280814P | 8  | 1/4 | 6,5  | 50 | 26,5 | 12,0 | 25 | 34,76  |
| T280838P | 8  | 3/8 | 9,5  | 53 | 30,0 | 14,4 | 10 | 68,00  |
| T280812P | 8  | 1/2 | 12,0 | 61 | 35,8 | 14,4 | 10 | 104,20 |
| T281018P | 10 | 1/8 | 6,5  | 42 | 30,7 | 18,4 | 10 | 24,00  |
| T281014P | 10 | 1/4 | 6,5  | 50 | 28,4 | 12,0 | 25 | 35,50  |
| T281038P | 10 | 3/8 | 9,5  | 53 | 33,5 | 18,4 | 10 | 68,40  |
| T281012P | 10 | 1/2 | 12,0 | 61 | 36,5 | 18,4 | 10 | 108,00 |
| T281214P | 12 | 1/4 | 8,5  | 48 | 33,7 | 21,0 | 10 | 45,40  |
| T281238P | 12 | 3/8 | 9,5  | 53 | 35,5 | 19,0 | 10 | 70,40  |
| T281212P | 12 | 1/2 | 12,0 | 61 | 36,5 | 21,0 | 10 | 110,10 |

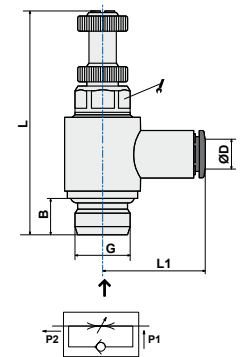


ART. **T29P**

Swivel flow regulator for cylinder



| COD.     | ØD | G   | B    | L  | L1   |      |    |        |
|----------|----|-----|------|----|------|------|----|--------|
| T2904M5P | 4  | M5  | 4    | 34 | 19,0 | 8,0  | 25 | 7,58   |
| T290418P | 4  | 1/8 | 5,5  | 43 | 21,1 | 9,0  | 25 | 17,26  |
| T290414P | 4  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 33,96  |
| T2906M5P | 6  | M5  | 4    | 34 | 22,0 | 8,0  | 25 | 8,00   |
| T290618P | 6  | 1/8 | 5,5  | 43 | 24,3 | 9,0  | 25 | 17,72  |
| T290614P | 6  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 33,96  |
| T290638P | 6  | 3/8 | 9,5  | 53 | 29,5 | 13,0 | 10 | 63,40  |
| T290612P | 6  | 1/2 | 12,0 | 61 | 30,2 | 13,0 | 10 | 104,00 |
| T290818P | 8  | 1/8 | 5,5  | 43 | 24,8 | 9,0  | 25 | 18,04  |
| T290814P | 8  | 1/4 | 6,5  | 50 | 26,5 | 12,0 | 25 | 34,31  |
| T290838P | 8  | 3/8 | 9,5  | 53 | 30,0 | 14,4 | 10 | 68,00  |
| T290812P | 8  | 1/2 | 12,0 | 61 | 35,8 | 14,4 | 10 | 104,20 |
| T291018P | 10 | 1/8 | 6,5  | 42 | 30,7 | 18,4 | 10 | 24,00  |
| T291014P | 10 | 1/4 | 6,5  | 50 | 28,4 | 12,0 | 25 | 35,50  |
| T291038P | 10 | 3/8 | 9,5  | 53 | 33,5 | 18,4 | 10 | 68,40  |
| T291012P | 10 | 1/2 | 12,0 | 61 | 36,5 | 18,4 | 10 | 108,00 |
| T291214P | 12 | 1/4 | 8,5  | 48 | 33,7 | 21,0 | 10 | 45,40  |
| T291238P | 12 | 3/8 | 9,5  | 53 | 35,5 | 19,0 | 10 | 70,40  |
| T291212P | 12 | 1/2 | 12,0 | 61 | 36,5 | 21,0 | 10 | 110,10 |

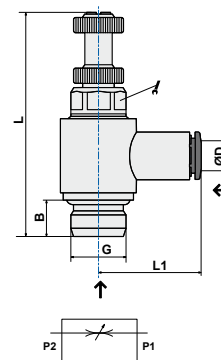


ART. **T30P**

**Swivel bidirectional flow regulator**



| COD.     | ØD | G   | B   | L  | L1   |    |    |        |
|----------|----|-----|-----|----|------|----|----|--------|
| T3004M5P | 4  | M5  | 4   | 34 | 19,0 | 8  | 25 | 750    |
| T300418P | 4  | 1/8 | 5,5 | 43 | 21,1 | 9  | 25 | 17,31  |
| T3006M5P | 6  | M5  | 4   | 34 | 22,0 | 8  | 25 | 8,00   |
| T300618P | 6  | 1/8 | 5,5 | 43 | 24,3 | 9  | 25 | 178,91 |
| T300614P | 6  | 1/4 | 6,5 | 50 | 25,5 | 12 | 25 | 34,79  |
| T300818P | 8  | 1/8 | 5,5 | 43 | 24,8 | 9  | 25 | 18,03  |
| T300814P | 8  | 1/4 | 6,5 | 50 | 26,5 | 12 | 25 | 34,31  |
| T301014P | 10 | 1/4 | 6,5 | 50 | 28,4 | 12 | 25 | 35,50  |

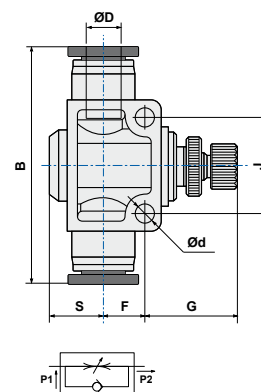


ART. **T31**

**Flat flow regulator**



| COD.    | ØD | B    | G    | F    | S    | Ød  | J  |    |        |
|---------|----|------|------|------|------|-----|----|----|--------|
| T310400 | 4  | 40,5 | 14,4 | 6,5  | 6,5  | 3,2 | 14 | 25 | 11,74  |
| T310600 | 6  | 48,7 | 25,3 | 8,5  | 11,0 | 4,3 | 20 | 25 | 28,00  |
| T310800 | 8  | 54,4 | 25,1 | 9,5  | 12,0 | 4,3 | 22 | 25 | 40,00  |
| T311000 | 10 | 64,3 | 28,8 | 10,5 | 12,5 | 4,3 | 26 | 10 | 66,00  |
| T311200 | 12 | 74,6 | 26,1 | 13,0 | 16,0 | 4,3 | 32 | 10 | 106,00 |

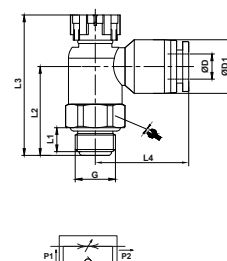


ART. **T29GS**

**Speed controller for cylinders with lock cap**



| COD.      | ØD | G    | L1  | L2   | L3   | L4   | ØD1  |    |    |       |
|-----------|----|------|-----|------|------|------|------|----|----|-------|
| T29GS04M5 | 4  | M5   | 3,5 | 18,0 | 28,0 | 18,0 | 9,5  | 9  | 25 | 4,00  |
| T29GS0418 | 4  | G1/8 | 5,5 | 21,5 | 33,5 | 24,0 | 13,0 | 13 | 25 | 12,00 |
| T29GS06M5 | 6  | M5   | 3,5 | 17,6 | 28,0 | 19,0 | 11,5 | 9  | 25 | 4,00  |
| T29GS0618 | 6  | G1/8 | 5,5 | 21,5 | 33,5 | 22,3 | 13,0 | 13 | 25 | 12,00 |
| T29GS0614 | 6  | G1/4 | 7,5 | 24,5 | 38,7 | 24,0 | 13,0 | 17 | 25 | 30,00 |
| T29GS0818 | 8  | G1/8 | 5,5 | 21,5 | 33,5 | 25,5 | 14,5 | 13 | 25 | 16,00 |
| T29GS0814 | 8  | G1/4 | 7,5 | 24,5 | 38,7 | 27,0 | 14,5 | 17 | 25 | 26,00 |

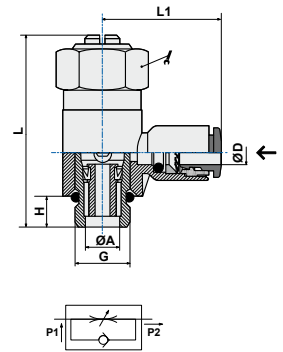


ART. **TB28**

**Orientable flow regulator for valve**



| COD.     | ØD | G   | ØA  | H   | L    | L1   |    |    |       |
|----------|----|-----|-----|-----|------|------|----|----|-------|
| TB2804M5 | 4  | M5  | 2,0 | 4   | 22,5 | 19,0 | 8  | 25 | 6,15  |
| TB280418 | 4  | 1/8 | 5,0 | 5,5 | 34,0 | 21,1 | 14 | 25 | 22,96 |
| TB2806M5 | 6  | M5  | 2,0 | 4   | 22,5 | 22,0 | 8  | 25 | 6,00  |
| TB280618 | 6  | 1/8 | 5,0 | 5,5 | 34,0 | 24,3 | 14 | 25 | 23,41 |
| TB280614 | 6  | 1/4 | 6,0 | 6,5 | 42,0 | 25,5 | 17 | 25 | 43,42 |
| TB280818 | 8  | 1/8 | 5,0 | 5,5 | 34,0 | 24,8 | 14 | 25 | 23,65 |
| TB280814 | 8  | 1/4 | 6,0 | 6,5 | 42,0 | 26,5 | 17 | 25 | 43,72 |
| TB280838 | 8  | 3/8 | 6,5 | 7,5 | 52,0 | 28,0 | 20 | 10 | 72,00 |
| TB281014 | 10 | 1/4 | 6,0 | 6,5 | 42,0 | 28,4 | 17 | 25 | 44,00 |
| TB281038 | 10 | 3/8 | 6,5 | 7,5 | 52,0 | 29,9 | 20 | 10 | 72,00 |
| TB281238 | 12 | 3/8 | 6,5 | 7,5 | 52,0 | 31,4 | 20 | 10 | 74,00 |

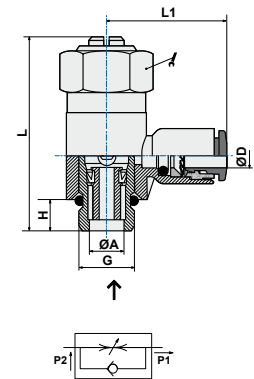


ART. **TB29**

**Orientable flow regulator for cylinder**



| COD.     | ØD | G   | ØA   | H   | L1   | L    |    |    |        |
|----------|----|-----|------|-----|------|------|----|----|--------|
| TB2904M5 | 4  | M5  | 2,0  | 4   | 19,0 | 22,5 | 8  | 25 | 6,15   |
| TB290418 | 4  | 1/8 | 5,0  | 4   | 21,1 | 34,0 | 14 | 25 | 22,96  |
| TB2906M5 | 6  | M5  | 2,0  | 4   | 22,0 | 22,5 | 8  | 25 | 6,00   |
| TB290618 | 6  | 1/8 | 5,0  | 5,5 | 24,3 | 34,0 | 14 | 25 | 23,41  |
| TB290614 | 6  | 1/4 | 6,0  | 6,5 | 25,5 | 42,0 | 17 | 25 | 43,42  |
| TB290818 | 8  | 1/8 | 5,0  | 5,5 | 24,8 | 34,0 | 14 | 25 | 23,65  |
| TB290814 | 8  | 1/4 | 6,0  | 6,5 | 26,5 | 42,0 | 17 | 25 | 43,72  |
| TB290838 | 8  | 3/8 | 6,5  | 7,5 | 28,0 | 52,0 | 20 | 10 | 72,00  |
| TB291014 | 10 | 1/4 | 6,0  | 6,5 | 28,4 | 42,0 | 17 | 25 | 44,00  |
| TB291038 | 10 | 3/8 | 6,5  | 7,5 | 29,9 | 52,0 | 20 | 10 | 72,00  |
| TB291012 | 10 | 1/2 | 10,0 | 9   | 30,0 | 61,0 | 26 | 10 | 120,00 |
| TB291238 | 12 | 3/8 | 6,5  | 7,5 | 31,4 | 52,0 | 20 | 10 | 74,00  |
| TB291212 | 12 | 1/2 | 10,0 | 9   | 34,9 | 61,0 | 26 | 10 | 122,00 |

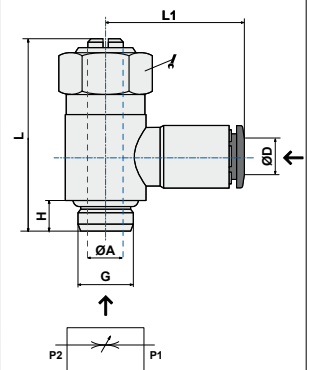


ART. **TB30**

**Orientable bidirectional flow regulator**



| COD.     | ØD | G   | ØA   | H   | L1   | L    |    |    |        |
|----------|----|-----|------|-----|------|------|----|----|--------|
| TB3004M5 | 4  | M5  | 2,0  | 4   | 19,0 | 22,5 | 8  | 25 | 6,15   |
| TB300418 | 4  | 1/8 | 5,0  | 4   | 21,1 | 34,0 | 14 | 25 | 22,96  |
| TB3006M5 | 6  | M5  | 2,0  | 4   | 22,0 | 22,5 | 8  | 5  | 6,00   |
| TB300618 | 6  | 1/8 | 5,0  | 5,5 | 24,3 | 34,0 | 14 | 25 | 23,41  |
| TB300614 | 6  | 1/4 | 6,0  | 6,5 | 25,5 | 42,0 | 17 | 25 | 43,42  |
| TB300818 | 8  | 1/8 | 5,0  | 5,5 | 24,8 | 34,0 | 14 | 25 | 23,65  |
| TB300814 | 8  | 1/4 | 6,0  | 6,5 | 26,5 | 42,0 | 17 | 25 | 43,72  |
| TB300838 | 8  | 3/8 | 6,5  | 7,5 | 28,0 | 52,0 | 20 | 10 | 72,00  |
| TB301014 | 10 | 1/4 | 6,0  | 6,5 | 28,4 | 42,0 | 17 | 25 | 44,00  |
| TB301038 | 10 | 3/8 | 6,5  | 7,5 | 29,9 | 52,0 | 20 | 10 | 72,00  |
| TB301238 | 12 | 3/8 | 6,5  | 7,5 | 31,4 | 52,0 | 20 | 10 | 74,00  |
| TB301212 | 12 | 1/2 | 10,0 | 9   | 34,9 | 61,0 | 26 | 10 | 122,00 |

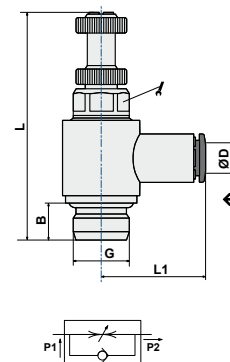


ART. **TB28P**

**Swivel flow regulator for valve**



| COD.      | ØD | G   | B    | L  | L1   |      |    |        |
|-----------|----|-----|------|----|------|------|----|--------|
| TB2804M5P | 4  | M5  | 4    | 34 | 19,0 | 8,0  | 25 | 7,58   |
| TB280418P | 4  | 1/8 | 5,5  | 43 | 21,1 | 9,0  | 25 | 17,26  |
| TB2806M5P | 6  | M5  | 4    | 34 | 22,0 | 8,0  | 25 | 8,00   |
| TB280618P | 6  | 1/8 | 5,5  | 43 | 24,3 | 9,0  | 25 | 17,91  |
| TB280614P | 6  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 34,79  |
| TB280638P | 6  | 3/8 | 9,5  | 53 | 29,5 | 13,0 | 10 | 63,40  |
| TB280612P | 6  | 1/2 | 12,0 | 61 | 30,2 | 13,0 | 10 | 104,00 |
| TB280818P | 8  | 1/8 | 5,5  | 43 | 24,8 | 9,0  | 25 | 18,23  |
| TB280814P | 8  | 1/4 | 6,5  | 50 | 26,5 | 12,0 | 25 | 34,76  |
| TB280838P | 8  | 3/8 | 9,5  | 53 | 30,0 | 14,4 | 10 | 68,00  |
| TB280812P | 8  | 1/2 | 1,2  | 61 | 35,8 | 14,4 | 10 | 104,20 |
| TB281018P | 10 | 1/8 | 6,5  | 42 | 30,7 | 18,4 | 10 | 24,00  |
| TB281014P | 10 | 1/4 | 6,5  | 50 | 28,4 | 12,0 | 25 | 35,50  |
| TB281038P | 10 | 3/8 | 9,5  | 53 | 33,5 | 18,4 | 10 | 68,40  |
| TB281012P | 10 | 1/2 | 12,0 | 61 | 36,5 | 18,4 | 10 | 108,00 |
| TB281214P | 12 | 1/4 | 8,5  | 48 | 33,7 | 21,0 | 10 | 45,40  |
| TB281238P | 12 | 3/8 | 9,5  | 53 | 35,5 | 19,0 | 10 | 70,40  |
| TB281212P | 12 | 1/2 | 12,0 | 61 | 36,5 | 21,0 | 10 | 110,10 |

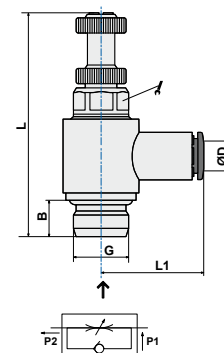


ART. **TB29P**

**Swivel flow regulator for cylinder**



| COD.      | ØD | G   | B    | L  | L1   |      |    |        |
|-----------|----|-----|------|----|------|------|----|--------|
| TB2904M5P | 4  | M5  | 4    | 34 | 15,0 | 8,0  | 25 | 7,58   |
| TB290418P | 4  | 1/8 | 5,5  | 43 | 21,1 | 9,0  | 25 | 17,26  |
| TB290414P | 4  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 33,96  |
| TB2906M5P | 6  | M5  | 4    | 34 | 22,0 | 8,0  | 25 | 8,00   |
| TB290618P | 6  | 1/8 | 5,5  | 43 | 24,3 | 9,0  | 25 | 17,91  |
| TB290614P | 6  | 1/4 | 6,5  | 50 | 25,5 | 12,0 | 25 | 34,79  |
| TB290638P | 6  | 3/8 | 9,5  | 53 | 29,5 | 13,0 | 10 | 63,40  |
| TB290612P | 6  | 1/2 | 12,0 | 61 | 30,2 | 13,0 | 10 | 104,00 |
| TB290818P | 8  | 1/8 | 5,5  | 43 | 24,8 | 9,0  | 25 | 18,23  |
| TB290814P | 8  | 1/4 | 6,5  | 50 | 26,5 | 12,0 | 25 | 34,76  |
| TB290838P | 8  | 3/8 | 9,5  | 53 | 30,0 | 14,4 | 10 | 68,00  |
| TB290812P | 8  | 1/2 | 1,2  | 61 | 35,8 | 14,4 | 10 | 104,20 |
| TB291018P | 10 | 1/8 | 6,5  | 42 | 30,7 | 18,4 | 10 | 24,00  |
| TB291014P | 10 | 1/4 | 6,5  | 50 | 28,4 | 12,0 | 25 | 35,50  |
| TB291038P | 10 | 3/8 | 9,5  | 53 | 33,5 | 18,4 | 10 | 68,40  |
| TB291012P | 10 | 1/2 | 12,0 | 61 | 36,5 | 18,4 | 10 | 108,00 |
| T2B91214P | 12 | 1/4 | 8,5  | 48 | 33,7 | 21,0 | 10 | 45,40  |
| TB291238P | 12 | 3/8 | 9,5  | 53 | 35,5 | 19,0 | 10 | 70,40  |
| TB291212P | 12 | 1/2 | 12,0 | 61 | 36,5 | 21,0 | 10 | 110,10 |

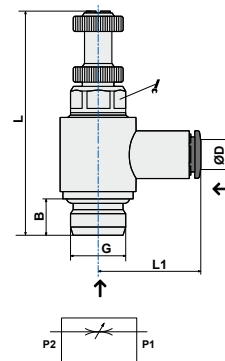


ART. **TB30P**

**Swivel bidirectional flow regulator**



| COD.      | ØD | G   | B   | L  | L1   |    |    |       |
|-----------|----|-----|-----|----|------|----|----|-------|
| TB3004M5P | 4  | M5  | 4   | 34 | 19,0 | 8  | 25 | 16,15 |
| TB300418P | 4  | 1/8 | 5,5 | 43 | 21,1 | 9  | 25 | 22,96 |
| TB3006M5P | 6  | M5  | 4   | 34 | 22,0 | 8  | 25 | 6,00  |
| TB300618P | 6  | 1/8 | 5,5 | 43 | 24,3 | 9  | 25 | 23,41 |
| TB300614P | 6  | 1/4 | 6,5 | 50 | 25,5 | 12 | 25 | 43,42 |
| TB300818P | 8  | 1/8 | 5,5 | 43 | 24,8 | 9  | 25 | 23,65 |
| TB300814P | 8  | 1/4 | 6,5 | 50 | 26,5 | 12 | 25 | 43,72 |
| TB301014P | 10 | 1/4 | 6,5 | 50 | 28,4 | 12 | 25 | 44,00 |

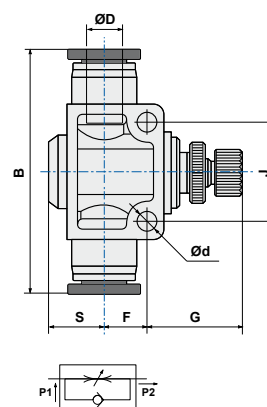


ART. **TB31**

**Flat flow regulator**



| COD.     | ØD | B    | G    | F    | S    | Ød  | J  |    |        |
|----------|----|------|------|------|------|-----|----|----|--------|
| TB310400 | 4  | 40,5 | 14,4 | 6,5  | 6,5  | 3,2 | 14 | 25 | 11,74  |
| TB310600 | 6  | 48,7 | 25,3 | 8,5  | 11,0 | 4,3 | 20 | 25 | 28,00  |
| TB310800 | 8  | 54,4 | 25,1 | 9,5  | 12,0 | 4,3 | 22 | 25 | 40,00  |
| TB311000 | 10 | 64,3 | 28,8 | 10,5 | 12,5 | 4,3 | 26 | 10 | 66,00  |
| TB311200 | 12 | 74,6 | 26,1 | 13,0 | 16,0 | 4,3 | 32 | 10 | 106,00 |



## Stainless steel flow regulators

### Series SSN-G



The Stainless steel flow regulators are “oil free” and manufactured according to the ISO norms.

### Technical sheet

|                                 |                        |                                                                                                                                                                                                                                                    |
|---------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                        | Compressed air, water, steam<br>(for different fluid please contact our Technical Dept.)                                                                                                                                                           |
| <b>APPLICATIONS</b>             |                        | Pneumatic equipments which are applied widely in the range of Industry such as food service industry, chemical industry and medical industry. In general where required to ensure anti-corrosion and acid resistant, or usage at high temperature. |
| <b>SUGGESTED TUBES</b>          |                        | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                                                                                      |
| <b>TUBES TOLERANCES</b>         |                        | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                                                                                        |
| <b>RECOMMENDED LIMIT VALUES</b> | <b>Temperature</b>     | The working temperatures range is between -20°C and +120°C                                                                                                                                                                                         |
|                                 | <b>Pression</b>        | The working pressure range is between 0 and 1,2MPa (0-12Bar)                                                                                                                                                                                       |
|                                 | <b>Note</b>            | For more complete informations please read the technical catalogue of your tube supplier.                                                                                                                                                          |
| <b>THREAD TYPE</b>              |                        | BSP paralell UNI-ISO 228; BSP tapered UNI-ISO 7; Metric ISO/R 262                                                                                                                                                                                  |
| <b>MATERIALS</b>                | <b>Regulation stem</b> | Stainless Steel SUS316L UNI EN 12164 CW614N                                                                                                                                                                                                        |
|                                 | <b>Spring</b>          | Stainless Steel SUS316L                                                                                                                                                                                                                            |
|                                 | <b>Seals</b>           | FKM                                                                                                                                                                                                                                                |
| <b>IMPORTANT NOTE</b>           |                        | The raw material is non-magnetic, however after cold working, a small amount of austenite could be transformed into martensite, which could be very weakly magnetic.                                                                               |

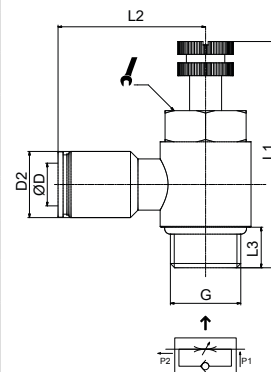


ART. **SSN-G**

Swivel flow regulator for cylinder



| COD.      | ØD | G   | L1   | L2   | L3   | D2   |    |    |        |
|-----------|----|-----|------|------|------|------|----|----|--------|
| SSN04-G01 | 4  | 1/8 | 34,5 | 28   | 7,5  | 10,5 | 12 | 10 | 30,00  |
| SSN04-G02 | 4  | 1/4 | 43   | 28   | 9,5  | 10,5 | 14 | 10 | 48,00  |
| SSN06-G01 | 6  | 1/8 | 34,5 | 28   | 7,5  | 12,5 | 12 | 10 | 34,00  |
| SSN06-G02 | 6  | 1/4 | 43   | 28   | 9,5  | 12,5 | 14 | 10 | 52,00  |
| SSN08-G01 | 8  | 1/8 | 34,5 | 30   | 7,5  | 14,5 | 12 | 10 | 34,00  |
| SSN08-G02 | 8  | 1/4 | 43   | 30   | 9,5  | 14,5 | 14 | 10 | 52,00  |
| SSN08-G03 | 8  | 3/8 | 47,3 | 33   | 10,5 | 14,5 | 19 | 10 | 92,00  |
| SSN08-G04 | 8  | 1/2 | 51   | 33   | 12,5 | 14,5 | 22 | 10 | 126,00 |
| SSN10-G02 | 10 | 1/4 | 43   | 32,5 | 9,5  | 17,5 | 14 | 10 | 68,00  |
| SSN10-G03 | 10 | 3/8 | 47,3 | 35   | 10,5 | 17,5 | 19 | 10 | 90,00  |
| SSN10-G04 | 10 | 1/2 | 51   | 35   | 12,5 | 17,5 | 22 | 10 | 130,00 |
| SSN12-G02 | 12 | 1/4 | 43   | 36   | 9,5  | 20,5 | 14 | 10 | 100,00 |
| SSN12-G03 | 12 | 3/8 | 47,3 | 38   | 10,5 | 20,5 | 19 | 10 | 102,00 |
| SSN12-G04 | 12 | 1/2 | 51   | 38   | 12,5 | 20,5 | 22 | 10 | 134,00 |



# Valves and function fittings

Function fittings incorporate a specific pneumatic function. They include flow regulators, pressure regulators, one-way valves and much more. Made of nickel-plated brass or technopolymer.

- **Function fittings**

- **Manual valves**



## Function fittings

# Series TECNOFUN



New compact line of different logic functions that can be used in any place of the secondary pneumatic circuit, developed to be installed directly onto the main pneumatic components (distributors or cylinders).

Thanks to the modular design it is possible to easily join together multiple logic functions without the need of using pipes to connect them; it is also possible to choose the type and style of each connection. The connections available are the following: straight cartridge; Banjo PL cartridge; male cartridge threaded 1/8" or 1/4" and female cartridge threaded 1/8". Function fittings can also be assembled side by side in order to be assembled on the DIN EN 50022 rail (using the relevant kit).

## Technical sheet

|                                 |                                            |                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                            | Compressed air (for different fluid please contact our Technical Dept.)                                                                                                              |
| <b>APPLICATIONS</b>             |                                            | Pneumatic circuits according to DIN 3861-3870 norms.                                                                                                                                 |
| <b>SUGGESTED TUBES</b>          |                                            | TPU (Polyurethane), PA11/PA12 (Polyamide), TPE (Polyethylene), TPA (Polyurethane/Copolyester)                                                                                        |
| <b>TUBES TOLERANCES</b>         |                                            | Diam. between 4 and 10 mm +/- 0,05 Diam. from 12 mm +/- 0,1                                                                                                                          |
| <b>TEMPERATURE AND PRESSURE</b> |                                            | Temperatures and pressures usually depend by the technical features of the employed tubes, for more complete informations please read the technical catalogue of your tube supplier. |
| <b>THREAD TYPE</b>              |                                            | BSP paralell UNI-ISO 228                                                                                                                                                             |
| <b>MATERIALS</b>                | Main body                                  | IXEF 1022, technopolymer glass-fiber reinforced                                                                                                                                      |
|                                 | Fitting body, sleeve, collar and back ring | POM copolymer ISO1043-1                                                                                                                                                              |
|                                 | Adjustment screw and fitting               | Brass UNI EN 12164 CW614N                                                                                                                                                            |
|                                 | Cartridge body                             | Alluminium                                                                                                                                                                           |
|                                 | Spring                                     | Stainless steel AISI 301 austenitic                                                                                                                                                  |
|                                 | Seals                                      | NBR 70 DWGV-EN549 UL157                                                                                                                                                              |

## Additional technical informations

**Input/output connection**  
directly integrated into the body

**In line or 90° connection**

**Possibility to build a manifold -parallel mounting-**

**Different connection options:**

- Tube Ø4 Ø6 Ø8 (elbow version as well)
- G1/8" G1/4" male straight cartridge
- G1/8" female cartridge, in line or 90°

**Different mounting options:**

- Wall fixing through the holes in the body
- By means of the fixing bracket
- Panel mounting (for those function that include such possibility)
- On DIN rail EN 50022 (using the DIN rail adapter kit)

**Available functions:**

- Flow control valve (FCV)
- Pressure regulator (PR)
- Block valve (BV)
- Quick exhaust valve (QEV)
- OR gate (CSV-OR)
- AND gate (CSV-AND)
- Pressure gauge (PI)
- Pressure regulator + pressure gauge (PR+PI)
- Block valve + Flow control valve (BV+FCV)
- Block valve + quick exhaust valve (BV+QEV)

### ART. 551.11T.A.B.XX

### Flow regulator

#### TYPE

**T** 1 = Unidirectional  
2 = Bidirectional

**A** Connection A - see connections list

**B** Connection B - see connections list

#### SEE CONNECTIONS LIST

**00** = None

**D4** = Straight Ø4

**D6** = Straight Ø6

**D8** = Straight Ø8

**L1** = Female banjo G1/8"

**G4** = Rotating banjo Ø4

**G6** = Rotating banjo Ø6

**G8** = Rotating banjo Ø8

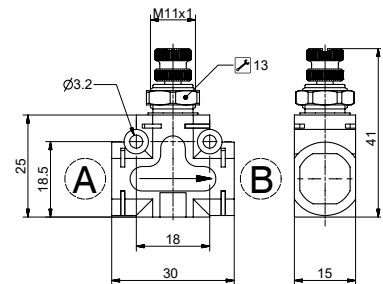
**M1** = G1/8" male

**M2** = G1/4" male

**F1** = G1/8" female

#### Note

Example: 551.111.D6.D6.XX  
Flow control valve unidirectional,  
connections "A" and "B" Tube Ø6.  
For the dimension including cartridges  
see page Accessories - Function fittings



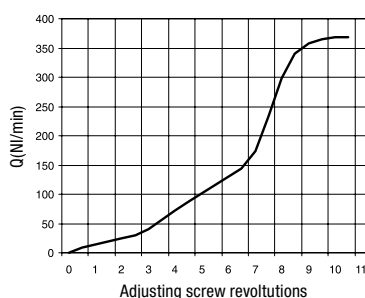
#### Technical characteristics

- The flow control valve is normally used to regulate the air flow and, as a consequence, for example, the speed of a cylinder. Two types of flow control valves are available: unidirectional and bidirectional.
- In the unidirectional valve the flow is regulated only in one direction while is free to move in the opposite direction; in the bidirectional valve the flow is regulated in both directions.
- Panel mounting using the lock nut supplied as standard.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

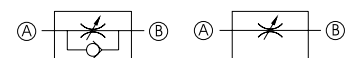
#### Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **26 g**
- Orifice size: **Ø3 mm**
- Free exhaust flow rate in the opposite side of the regulation: **800 NI/min (for unidirectional version)**

#### Flow rates curves 6 bar



#### Pneumatic symbols



ART. **551.12T.A.B.XX**

In line pressure regulator

TYPE

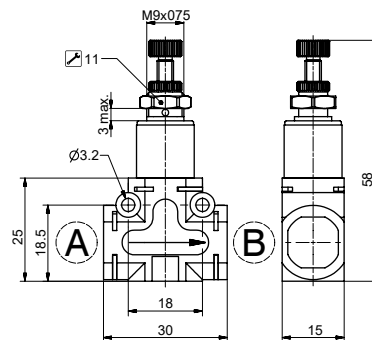
|          |                                     |
|----------|-------------------------------------|
| <b>T</b> | 2 = 0 - 2 bar                       |
|          | 4 = 0 - 4 bar                       |
|          | 8 = 0 - 8 bar                       |
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

Note

Example: 551.128.D8.D8.XX  
In line pressure regulator, pressure range (bar) 0-8 bar. Connections "A" and "B" Tube Ø8.  
For the dimension including cartridges see page Accessories - Function fittings



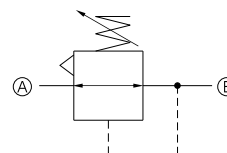
Technical characteristics

- The pressure regulator is a device which is used to reduce, regulate and stabilize their pressure in a conduit in order to adapt it to the needs of the equipments to be supplied. The pressure regulator incorporates the relieving function.
- Panel mounting using the lock nut supplied as standard.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **31 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **180 NI/min**
- Pressure range: **0 ... 2 / 0 ... 4 / 0 ... 8 bar**

Pneumatic symbols



ART. **551.22T.A.B.XX**

90° pressure regulator

TYPE

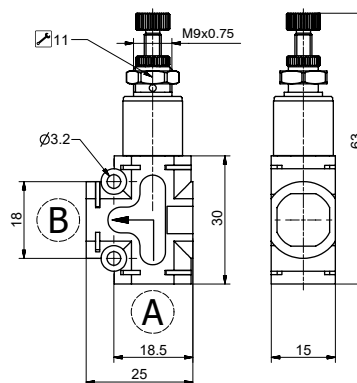
|          |                                     |
|----------|-------------------------------------|
| <b>T</b> | 2 = 0 - 2 bar                       |
|          | 4 = 0 - 4 bar                       |
|          | 8 = 0 - 8 bar                       |
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

Note

Example: 551.224.M1.D6.XX  
90° pressure regulator, pressure range (bar) 0 - 4 bar. Connections "A" Male G1/8 and "B" Tube Ø6.  
For the dimension including cartridges see page Accessories - Function fittings



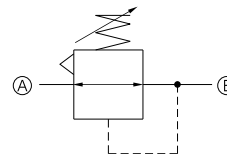
Technical characteristics

- The pressure regulator is a device which is used to reduce, regulate and stabilize the air pressure in a conduit in order to adapt it to the needs of the equipments to be supplied. The pressure regulator incorporates the relieving function.
- Panel mounting using the lock nut supplied as standard.
- On DIN rail using the relevant adaptor kit (see accessories).
- On DIN rail using the relevant adaptor kit (see accessories).
- Directly on the support plate thanks to two through holes on the body.

Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **31 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **180 NI/min**
- Pressure range: **0 ... 2 / 0 ... 4 / 0 ... 8 bar**

Pneumatic symbols



**ART. 551.13T.A.B.XX**

**Blocking valve**

**TYPE**

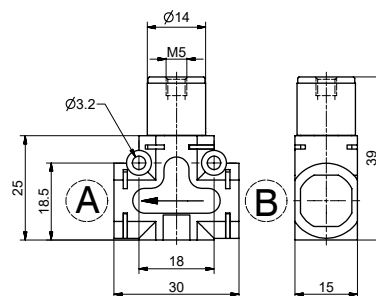
|          |                                         |
|----------|-----------------------------------------|
| <b>T</b> | 1 = Unidirectional<br>2 = Bidirectional |
| <b>A</b> | Connection A - see connections list     |
| <b>B</b> | Connection B - see connections list     |

**SEE CONNECTIONS LIST**

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

**Note:**

Example: 551.131.D4.D4.XX  
In line blocking valve, unidirectional.  
Connections "A" and "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings



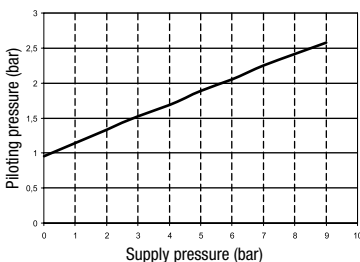
**Technical characteristics**

- The blocking valve function is to maintain the circuit downstream pressure in the event of loss of supply pressure. It is normally fitted directly onto the cylinder connections ports in order to ensure that, in case of accidental loss of the supply pressure, the units positions is maintained. This is achieved as the blocking valve preserves the pressure inside the pressurised chamber. Blocking valves can be unidirectional or bidirectional.
- In the unidirectional version the air flow is free in one direction while in order to allow the flow in the opposite direction is necessary to send a pneumatic signal to the unit connection 12.
- The bidirectional version requires a pneumatic signal on connection 12 to allow the flow in any of the two directions.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

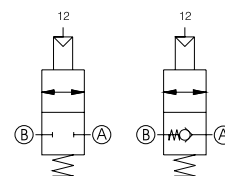
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **26 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Flow rate at 6 bar with free exhaust: **450 NI/min**

**Piloting curves**



**Pneumatic symbols**



ART. **551.23T.A.B.XX**

**90° blocking valve**

**TYPE**

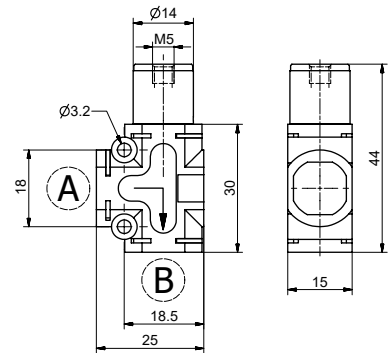
|          |                                         |
|----------|-----------------------------------------|
| <b>T</b> | 1 = Unidirectional<br>2 = Bidirectional |
| <b>A</b> | Connection A - see connections list     |
| <b>B</b> | Connection B - see connections list     |

**SEE CONNECTIONS LIST**

|           |                    |
|-----------|--------------------|
| <b>00</b> | None               |
| <b>D4</b> | Straight Ø4        |
| <b>D6</b> | Straight Ø6        |
| <b>D8</b> | Straight Ø8        |
| <b>L1</b> | Female banjo G1/8" |
| <b>G4</b> | Rotating banjo Ø4  |
| <b>G6</b> | Rotating banjo Ø6  |
| <b>G8</b> | Rotating banjo Ø8  |
| <b>M1</b> | G1/8" male         |
| <b>M2</b> | G1/4" male         |
| <b>F1</b> | G1/8" female       |

**Note:**

Example: 551.231.D6.M1.XX  
90° blocking valve. Connections "A" Male G1/8 and "B" Tube Ø6.  
For the dimension including cartridges see page Accessories - Function fittings



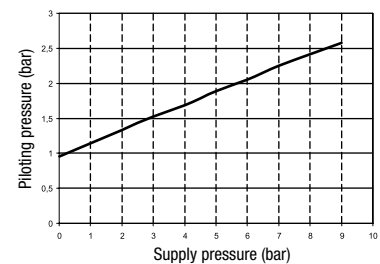
**Technical characteristics**

- The blocking valve function is to maintain the circuit downstream pressure in the event of loss of supply pressure. It is normally fitted directly onto the cylinder connections ports in order to ensure that, in case of accidental loss of the supply pressure, the units positions is maintained. This is achieved as the blocking valve preserves the pressure inside the pressurised chamber.
- Unidirectional and bidirectional version are both available.
- In the unidirectional version the air flow is free in one direction while in order to allow the flow in the opposite direction is necessary to send a pneumatic signal to the unit connection 12.
- The bidirectional version requires a pneumatic signal on connection 12 to allow the flow in any of the two directions.
- On DIN rail using the relevant adaptor kit (see accessories)
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

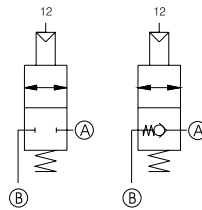
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **26 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Flow rate at 6 bar with free exhaust: **450 NI/min**

**Piloting curves**



**Pneumatic symbols**



ART. **551.141.A.B.C**

**Circuit selector valve-OR**

**TYPE**

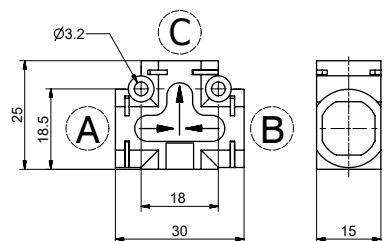
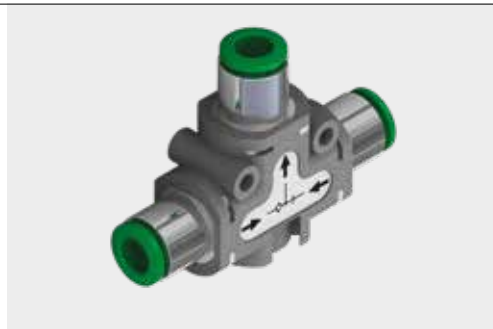
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |
| <b>C</b> | Connection C - see connections list |

**SEE CONNECTIONS LIST**

|           |                    |
|-----------|--------------------|
| <b>00</b> | None               |
| <b>D4</b> | Straight Ø4        |
| <b>D6</b> | Straight Ø6        |
| <b>D8</b> | Straight Ø8        |
| <b>L1</b> | Female banjo G1/8" |
| <b>G4</b> | Rotating banjo Ø4  |
| <b>G6</b> | Rotating banjo Ø6  |
| <b>G8</b> | Rotating banjo Ø8  |
| <b>M1</b> | G1/8" male         |
| <b>M2</b> | G1/4" male         |
| <b>F1</b> | G1/8" female       |

**Note**

Example: 551.141.D8.D8.D8  
Circuit selector valve - OR.  
Connections "A", "B" and "C" Tube Ø8.  
For the dimension including cartridges see page Accessories - Function fittings



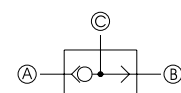
**Technical characteristics**

- These valves have two inlets and one output connection and are normally called high pressure selector valves as, when receiving two separate pressure supply, only allow the passage of the highest pressure. The most common application is to operate a component from two separate positions.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **10 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **600 NI/min**

**Pneumatic symbols**



ART. **551.151A.B.C**

**Circuit selector valve-AND**

**TYPE**

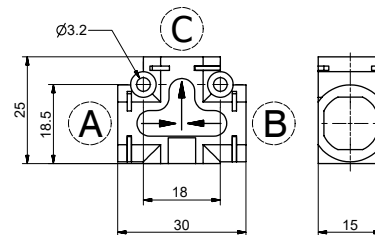
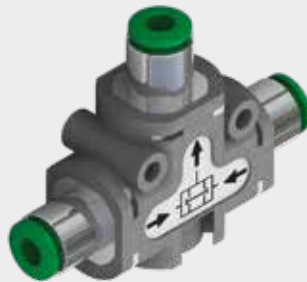
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |
| <b>C</b> | Connection C - see connections list |

**SEE CONNECTIONS LIST**

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

**Note**

Example: 551.151.D6.D6.D6  
Circuit selector valve AND.  
Connections "A", "B" and "C" Tube Ø6.  
For the dimension including cartridges  
see page Accessories - Function fittings



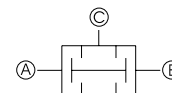
**Technical characteristics**

- These valves have two inlets and one output connection and are normally called low pressure selector valves as, when receiving two separate pressure supply, only allow the passage of the lowest pressure. The most common application is to operate a component from two separate positions.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **10 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **550 NI/min**

**Pneumatic symbols**



ART. **551.161.A.B.XX**

**Quick exhaust valve**

**TYPE**

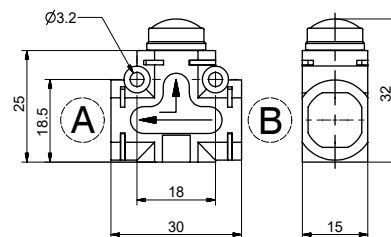
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

**SEE CONNECTIONS LIST**

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

**Note**

Example: 551.161.D8.D8.XX  
Quick exhaust valve. Connections "A"  
and "B" Tube Ø8.  
For the dimension including cartridges see  
page Accessories - Function fittings



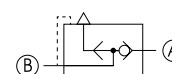
**Technical characteristics**

- These are 3 ways, two positions valves which can be directly mounted onto the actuator or between the actuator and the control valve. Their function is to discharge the air directly into the atmosphere without going through the pneumatic circuit enabling the actuator to reach the maximum speed.
- On DIN rail using the relevant adaptor kit (see accessories).
- With 90° bracket (see accessories).
- Directly on the support plate thanks to two through holes on the body.

**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **15 g**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **250 NI/min**
- Flow rate at 6 bar with free exhaust (NI/min): **500 NI/min**

**Pneumatic symbols**





ART. **551.178.A.B.XX**

Pressure indicator

TYPE

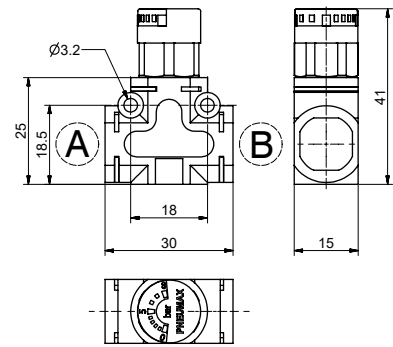
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

SEE CONNECTIONS LIST

|           |                    |
|-----------|--------------------|
| <b>00</b> | None               |
| <b>D4</b> | Straight Ø4        |
| <b>D6</b> | Straight Ø6        |
| <b>D8</b> | Straight Ø8        |
| <b>L1</b> | Female banjo G1/8" |
| <b>G4</b> | Rotating banjo Ø4  |
| <b>G6</b> | Rotating banjo Ø6  |
| <b>G8</b> | Rotating banjo Ø8  |
| <b>M1</b> | G1/8" male         |
| <b>M2</b> | G1/4" male         |
| <b>F1</b> | G1/8" female       |

Note

Example: 551.178.D6.D4.XX  
Pressure indicator. Connections "A" Tube Ø6, "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings



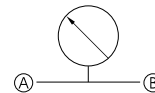
Technical characteristics

- The pressure visual indicator is a device which measures the pressure inside a pneumatic circuit. The 0 to 8 bar visual indicator makes very easy to monitor the pressure state inside the circuit. It can be use on its own or can be coupled with another device.
- It can be use on its own or can be coupled with another device.
- On DIN rail using the relevant adaptor kit (see accessories)
- With 90° bracket (see accessories)
- Directly on the support plate thanks to two through holes on the body

Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **8 bar**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **20,5 g**
- Visualization scale: **0 - 8 bar**

Pneumatic symbols



ART. **551.181A.B.XX**

In line progressive start-up valve

TYPE

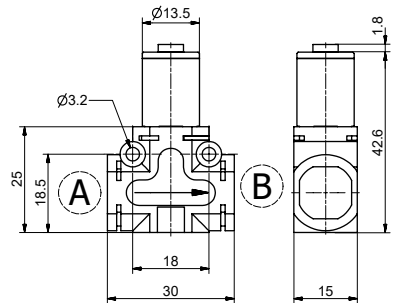
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

SEE CONNECTIONS LIST

|           |                    |
|-----------|--------------------|
| <b>00</b> | None               |
| <b>D4</b> | Straight Ø4        |
| <b>D6</b> | Straight Ø6        |
| <b>D8</b> | Straight Ø8        |
| <b>L1</b> | Female banjo G1/8" |
| <b>G4</b> | Rotating banjo Ø4  |
| <b>G6</b> | Rotating banjo Ø6  |
| <b>G8</b> | Rotating banjo Ø8  |
| <b>M1</b> | G1/8" male         |
| <b>M2</b> | G1/4" male         |
| <b>F1</b> | G1/8" female       |

Note

Example: 551.181.D6.D4.XX  
In line progressive start-up valve.  
Connections "A" Tube Ø6, "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings



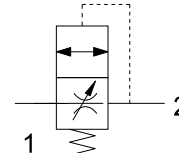
Technical characteristics

- The soft start valve is a device designed to gradually pressurise the downstream circuit until 50% of the upstream pressure value is reached.
- Once the 50% of the upstream pressure value is reached in the down stream circuit the valve fully opens allowing full air passage.
- The filling time can be adjusted thanks to the built in flow regulator.
- This device is used in order to ensure that during the pneumatic circuit start up the cylinders will return to theirs home position slowly avoiding collisions or sudden movements.

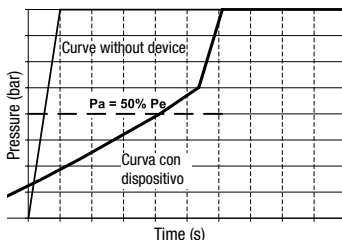
Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Opening pressure (Pa): **50% of the inlet pressure (Pe)**
- Flow rate at 6 bar with free exhaust (NI/min) from 1 to 2 with opening circuit: **350 NI/min**
- Flow rate at 6 bar with  $\Delta p=1$  from 1 to 2 with opening circuit: **600 NI/min**
- Flow rate at 6 bar with  $\Delta p=1$  from 2 to 1 with opening pin: **650 NI/min**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **31 g**

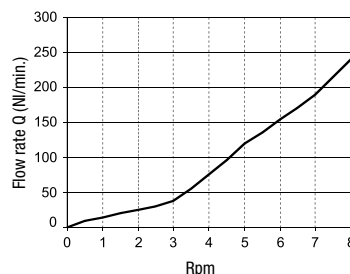
Pneumatic symbols



Piloting curves



Adjustment curve



**ART. 551.281A.B.XX**

**90° progressive start-up valve**

**TYPE**

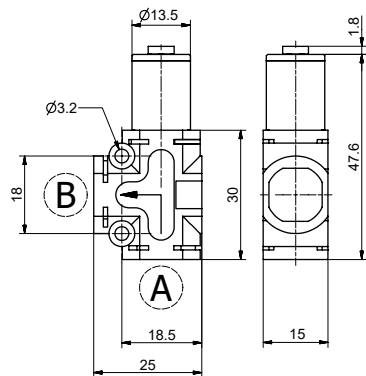
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

**SEE CONNECTIONS LIST**

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

**Note**

Example: 551.281.M1.D4.XX  
90° progressive start-up valve. Connections "A" Male G1/8", "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings



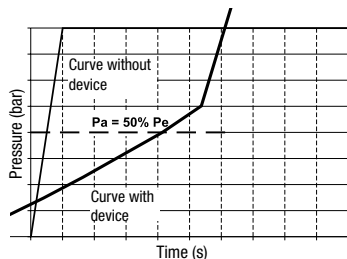
**Technical characteristics**

- The soft start valve is a device designed to gradually pressurise the downstream circuit until 50% of the upstream pressure value is reached.
- Once the 50% of the upstream pressure value is reached in the down stream circuit the valve fully opens allowing full air passage.
- The filling time can be adjusted thanks to the built in flow regulator.
- This device is used in order to ensure that during the pneumatic circuit start up the cylinders will return to theirs home position slowly avoiding collisions or sudden movements.

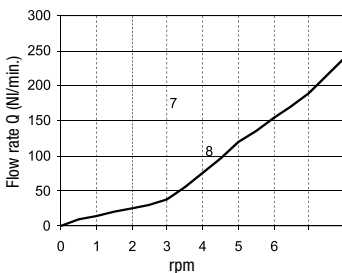
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Opening pressure (Pa): **50% of the inlet pressure (Pi)**
- Flow rate at 6 bar with free exhaust (NI/min) from 1 to 2 with opening circuit: **350 NI/min**
- Flow rate at 6 bar with  $\Delta p=1$  from 1 to 2 with opening circuit: **600 NI/min**
- Flow rate at 6 bar with  $\Delta p=1$  from 2 to 1 with opening pin: **650 NI/min**
- Temperature: **-5 °C ... + 50 °C**
- Weight: **31 g**

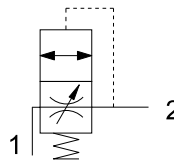
**Piloting curves**



**Adjustment curve**



**Pneumatic symbols**



ART. **551.1FT.A.B.XX**

In line blocking valve with flow control valve

TYPE

|          |                                                                              |
|----------|------------------------------------------------------------------------------|
| <b>T</b> | <b>1</b> = Unidirectional blocking valve + unidirectional flow control valve |
|          | <b>2</b> = Bidirectional blocking valve + bidirectional flow control valve   |
|          | <b>3</b> = Unidirectional blocking valve + bidirectional flow control valve  |
|          | <b>4</b> = Bidirectional blocking valve + unidirectional flow control valve  |

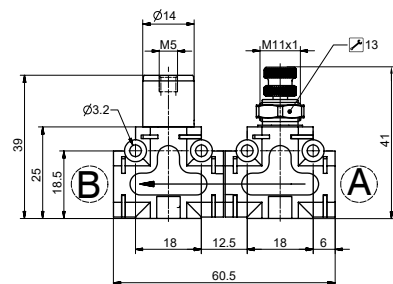
|          |                                     |
|----------|-------------------------------------|
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

Note

Example: 551.1F1.00.00.XX  
In line blocking valve + flow control valve.  
Without connections "A" and "B".  
For the dimension including cartridges  
see page Accessories - Function fittings



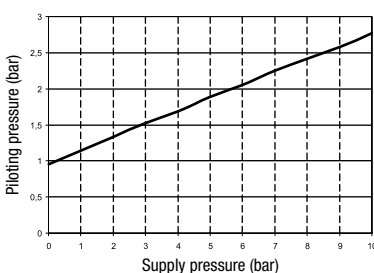
Technical characteristics

- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time grants the possibility to regulate the circuit flow rate. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to regulate the exhaust flow rate when the blocking valve is actuated.
- The possible combinations are the following:
  - Unidirectional blocking valve + unidirectional flow control valve
  - Bidirectional blocking valve + bidirectional flow control valve
  - Bidirectional blocking valve + unidirectional flow control valve
  - Unidirectional blocking valve + bidirectional flow control valve

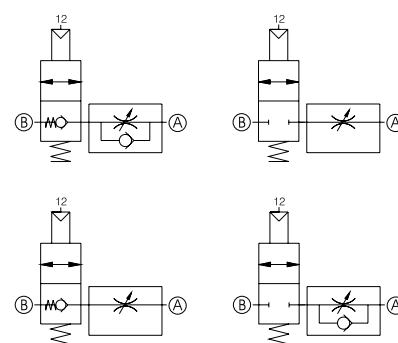
Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Orifice size: **Ø3 mm**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Weight: **62 g**

Piloting pressure



Pneumatic symbols



**ART. 551.2FT.A.B.XX**

**90° blocking valve + flow control valve**

**TYPE**

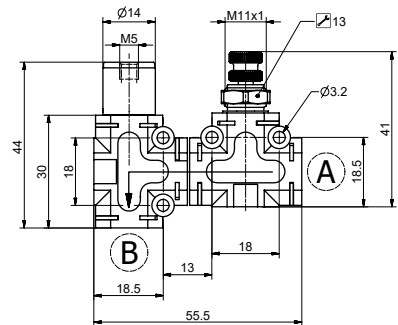
|          |                                                                                  |
|----------|----------------------------------------------------------------------------------|
| <b>T</b> | <b>1</b> = 90° unidirectional blocking valve + unidirectional flow control valve |
|          | <b>2</b> = 90° bidirectional blocking valve + bidirectional flow control valve   |
|          | <b>3</b> = 90° unidirectional blocking valve + bidirectional flow control valve  |
|          | <b>4</b> = 90° bidirectional blocking valve + unidirectional flow control valve  |
| <b>A</b> | Connection A - see connections list                                              |
| <b>B</b> | Connection B - see connections list                                              |

**SEE CONNECTIONS LIST**

|                                |
|--------------------------------|
| <b>00</b> = None               |
| <b>D4</b> = Straight Ø4        |
| <b>D6</b> = Straight Ø6        |
| <b>D8</b> = Straight Ø8        |
| <b>L1</b> = Female banjo G1/8" |
| <b>G4</b> = Rotating banjo Ø4  |
| <b>G6</b> = Rotating banjo Ø6  |
| <b>G8</b> = Rotating banjo Ø8  |
| <b>M1</b> = G1/8" male         |
| <b>M2</b> = G1/4" male         |
| <b>F1</b> = G1/8" female       |

**Note**

Example: 5512F1.00.00.XX  
90° blocking valve + flow control valve.  
Without connections "A" and "B".  
For the dimension including cartridges see page Accessories - Function fittings



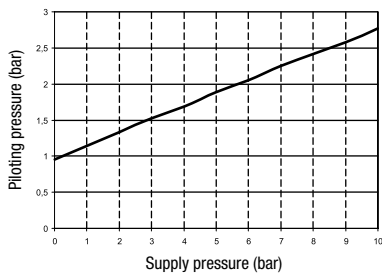
**Technical characteristics**

- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time grants the possibility to regulate the circuit flow rate. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to regulate the exhaust flow rate when the blocking valve is actuated.
- The possible combinations are the following:
  - 90° unidirectional blocking valve + unidirectional flow control valve
  - 90° bidirectional blocking valve + bidirectional flow control valve
  - 90° bidirectional blocking valve + unidirectional flow control valve
  - 90° unidirectional blocking valve + bidirectional flow control valve

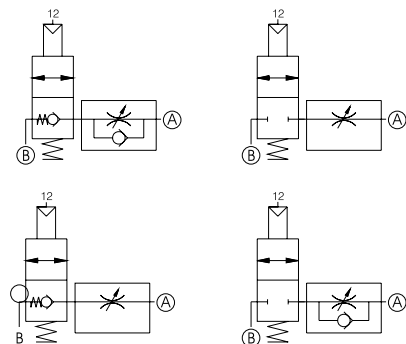
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Orifice size: **Ø3 mm**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Weight: **62 g**

**Piloting curves**



**Pneumatic symbols**



ART. **551.1GT.A.B.XX**

In line blocking valve + quick exhaust valve

TYPE

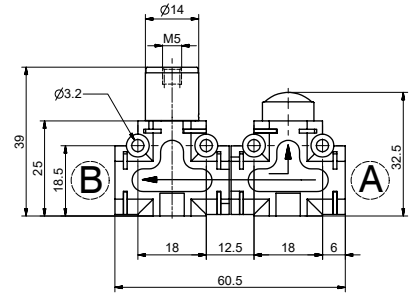
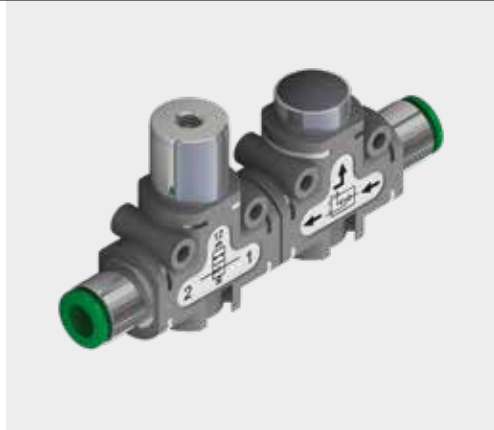
|          |                                                                                                                                 |
|----------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>T</b> | <b>1</b> = Unidirectional blocking valve + quick exhaust valve<br><b>2</b> = Bidirectional blocking valve + quick exhaust valve |
| <b>A</b> | Connection A - see connections list                                                                                             |
| <b>B</b> | Connection B - see connections list                                                                                             |

SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

**Note:**

Example: 5511G1.00.00.XX  
In line blocking valve + quick exhaust valve. Without connections "A" and "B".  
For the dimension including cartridges see page Accessories - Function fittings



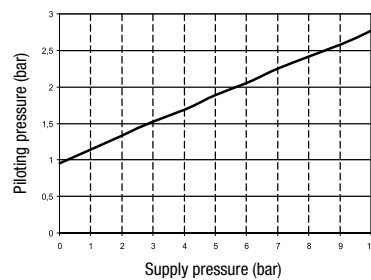
**Technical characteristics**

- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time allows for the air to be directly discharged into the atmosphere without going through the pneumatic circuit. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to quickly discharge the same chamber when the blocking valve is actuated.
- The possible combinations are the following:
  - Unidirectional blocking valve + quick exhaust valve
  - Bidirectional blocking valve + quick exhaust valve

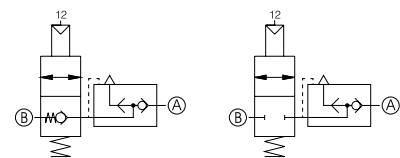
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Weight: **51 g**

**Piloting curves**



**Pneumatic symbols**



**ART. 551.2GT.A.B.XX**

**90° blocking valve + quick exhaust valve**

**TYPE**

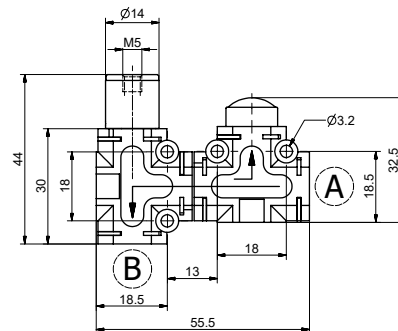
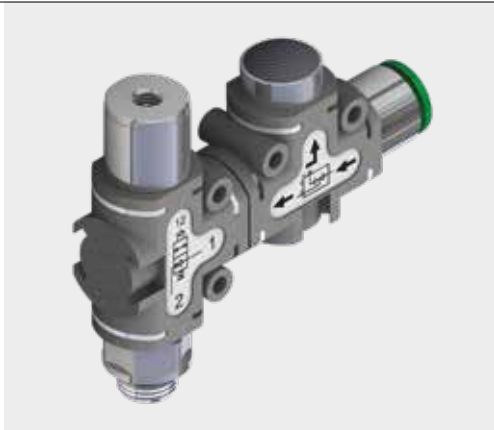
|          |                                                                    |
|----------|--------------------------------------------------------------------|
| <b>T</b> | <b>1</b> = 90° unidirectional blocking valve + quick exhaust valve |
|          | <b>2</b> = 90° bidirectional blocking valve + quick exhaust valve  |
| <b>A</b> | Connection A - see connections list                                |
| <b>B</b> | Connection B - see connections list                                |

**SEE CONNECTIONS LIST**

|                                |
|--------------------------------|
| <b>00</b> = None               |
| <b>D4</b> = Straight Ø4        |
| <b>D6</b> = Straight Ø6        |
| <b>D8</b> = Straight Ø8        |
| <b>L1</b> = Female banjo G1/8" |
| <b>G4</b> = Rotating banjo Ø4  |
| <b>G6</b> = Rotating banjo Ø6  |
| <b>G8</b> = Rotating banjo Ø8  |
| <b>M1</b> = G1/8" male         |
| <b>M2</b> = G1/4" male         |
| <b>F1</b> = G1/8" female       |

**Note:**

Example: 5512G1.00.00.XX  
90° bidirectional blocking valve + quick exhaust valve. Without connections "A" and "B".  
For the dimension including cartridges see page Accessories - Function fittings



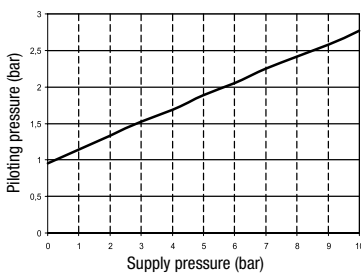
**Technical characteristics**

- The combination of this two functions ensures that the downstream pressure is maintained in case of accidental loss of supply pressure and at the same time allows for the air to be directly discharged into the atmosphere without going through the pneumatic circuit. A typical application of this combination is close to or directly assembled onto the actuator connection ports. This allows to keep pressurised the cylinder chamber in case of accidental loss of supply pressure and to quickly discharge the same chamber when the blocking valve is actuated.
- The possible combinations are the following:
  - 90° unidirectional blocking valve + quick exhaust valve
  - 90° bidirectional blocking valve + quick exhaust valve

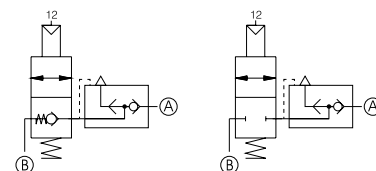
**Technical characteristics**

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **0,5 ... 10 bar**
- Temperature: **-5 °C ... + 50 °C**
- Flow rate at 6 bar with  $\Delta p=1$  (NI/min): **285 NI/min**
- Weight: **51 g**

**Piloting curves**



**Pneumatic symbols**



## 551.1HT.A.B.XX

### TYPE

|          |                                     |
|----------|-------------------------------------|
| <b>T</b> | 2 = 0 - 2 bar                       |
|          | 4 = 0 - 4 bar                       |
|          | 8 = 0 - 8 bar                       |
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

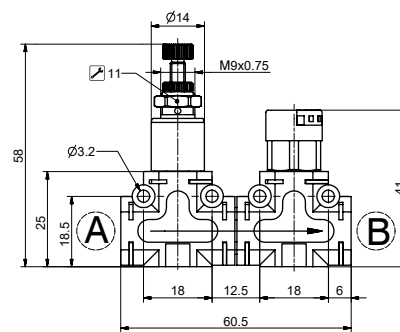
### SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

### Note

Example: 551.1H2.M1.D4.XX  
In line pressure regulator, adjusting range 0 - 2 bar + pressure indicator. Connections "A" Male G 1/8 and "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings

## In line pressure regulator + pressure indicator



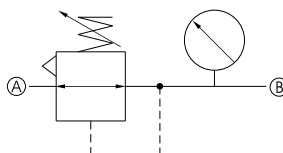
### Technical characteristics

- The combination of this two functions ensures the possibility to regulate the downstream pressure while directly visualising the adjusted pressure value.
- The possible combinations are the following:
  - 0 to 2 bar pressure regulator + pressure visual indicator
  - 0 to 4 bar pressure regulator + pressure visual indicator
  - 0 to 8 bar pressure regulator + pressure visual indicator
  - The visual indicator Pressure range (bar) is always 0 to 8 bar

### Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **8 bar**
- Temperature: **-5 °C ... + 50 °C**
- Visualization scale: **0 ... 8 bar**
- Pressure range: **0 ... 2 - 0 ... 4 - 0 ... 8 bar**
- Weight: **62 g**

### Pneumatic symbols



## ART. 551.2HT.A.B.XX

### TYPE

|          |                                     |
|----------|-------------------------------------|
| <b>T</b> | 2 = 0 - 2 bar                       |
|          | 4 = 0 - 4 bar                       |
|          | 8 = 0 - 8 bar                       |
| <b>A</b> | Connection A - see connections list |
| <b>B</b> | Connection B - see connections list |

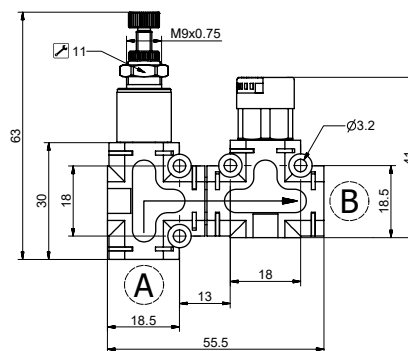
### SEE CONNECTIONS LIST

|           |                      |
|-----------|----------------------|
| <b>00</b> | = None               |
| <b>D4</b> | = Straight Ø4        |
| <b>D6</b> | = Straight Ø6        |
| <b>D8</b> | = Straight Ø8        |
| <b>L1</b> | = Female banjo G1/8" |
| <b>G4</b> | = Rotating banjo Ø4  |
| <b>G6</b> | = Rotating banjo Ø6  |
| <b>G8</b> | = Rotating banjo Ø8  |
| <b>M1</b> | = G1/8" male         |
| <b>M2</b> | = G1/4" male         |
| <b>F1</b> | = G1/8" female       |

### Note

Example: 551.2H2.M1.D4.XX  
90° pressure regulator, adjusting range 0 - 2 bar + pressure indicator. Connections "A" Male G 1/8 and "B" Tube Ø4.  
For the dimension including cartridges see page Accessories - Function fittings

## 90° pressure regulator + pressure indicator



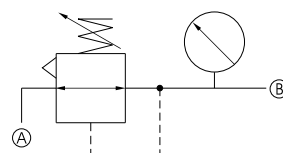
### Technical characteristics

- The combination of this two functions ensures the possibility to regulate the downstream pressure while directly visualising the adjusted pressure value.
- The possible combinations are the following:
  - 0 to 2 bar pressure regulator + pressure visual indicator
  - 0 to 4 bar pressure regulator + pressure visual indicator
  - 0 to 8 bar pressure regulator + pressure visual indicator
  - The visual indicator Pressure range (bar) is always 0 to 8 bar

### Technical characteristics

- Fluid: **Filtered and lubricated air or non**
- Working ports size: **see connections list**
- Max working pressure: **8 bar**
- Temperature: **-5 °C ... + 50 °C**
- Visualization scale: **0 ... 8 bar**
- Pressure range: **0 ... 2 - 0 ... 4 - 0 ... 8 bar**
- Weight: **62 g**

### Pneumatic symbols

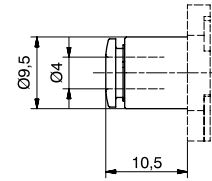


ART. **551KD4**

**Straight cartridge Ø4**



• Weight: 7,5 g

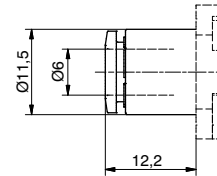


ART. **551KD6**

**Straight cartridge Ø6**

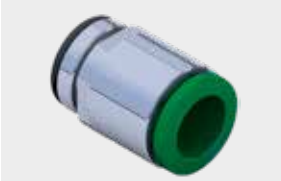


• Weight: 7,3 g

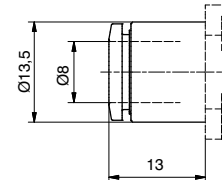


ART. **551KD8**

**Straight cartridge Ø8**



• Weight: 7 g

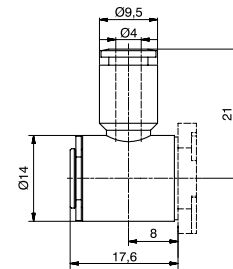


ART. **551KG4**

**Banjo PL cartridge Ø4**



• Weight: 13,6 g

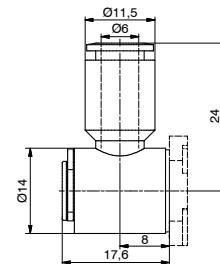


ART. **551KG6**

**Banjo PL cartridge Ø6**



• Weight: 14 g

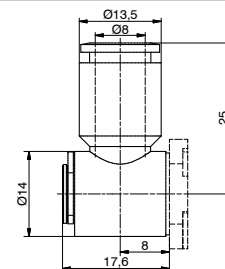


ART. **551KG8**

**Banjo PL cartridge Ø8**



• Weight: 13,3 g

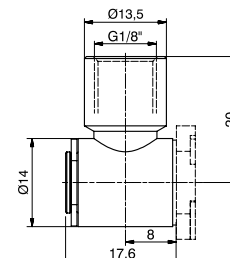


ART. **551KL1**

**Banjo PL cartridge G1/8"**



• Weight: 30 g



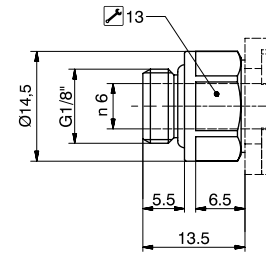


ART. **551KM1**

**G1/8" male straight cartridge**



- Weight: 14 g

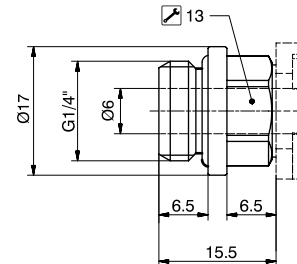


ART. **551KM2**

**G1/4" male straight cartridge**



- Weight: 20 g

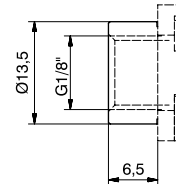


ART. **551KF1**

**G1/8" female straight cartridge**



- Weight: 9 g



ART. **551KUU**

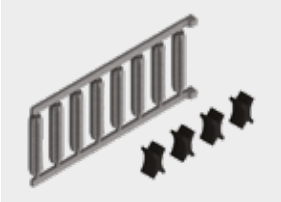
**Connection for multiple function**



- Weight: 14 g

ART. **55160**

**Coupling kit (pins and forks)**



- Weight: 2,5 g

The kit, which includes a series of pins and forks, enables to join together in a fast and safe way the function fittings. The pins, once inserted in the front holes, ensure resistance against forces applied perpendicularly and sideways (for example the insertion of the tube in the cartridges). The forks, once located in the profiled housing ensures that the parts are held together tightly. The kit allows for 5 function fittings to be mounted together.

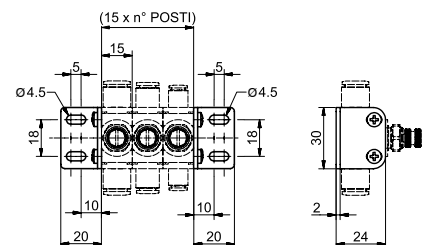
ART. **55150**

**Fixing brackets**



- Weight: 18 g

The kit comprises two fixing brackets and screws



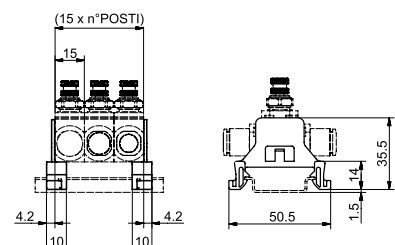
ART. **55116**

**DIN rail adapter**



- Weight: 4 g

The kit comprises two adapters



## Function fittings

# Series ISP



### Ordering code

**ISPC 04 G04**

#### MODEL TYPE

- ISPC** = Straight male tapered "stop fitting"
- ISPC-G** = Straight male parallel "stop fitting"
- ISPU** = Stop fitting straight connector
- ISPL** = Elbow male tapered "stop fitting"
- ISPL-G** = Elbow male parallel "stop fitting"

#### TUBE CONNECTION

4 ... 12 = Tube Diameter Ø 4; 6; 8; 10; 12 mm

#### THREADED CONNECTION

- M5** = M5x0,8
- M6** = M6x1
- 01** = R1/8" tapered
- 02** = R1/4" tapered
- 03** = R3/8" tapered
- 04** = R1/2" tapered
- G01** = G1/8" parallel
- G02** = G1/4" parallel
- G03** = G3/8" parallel
- G04** = G1/2" parallel

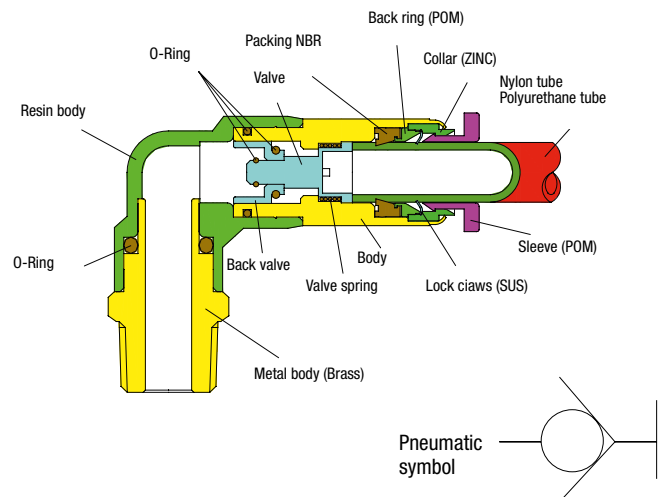
## Characteristics

Air flows is stopped from the tube if it is released, the air flows again only after the tube is connected

## Applications

Used in the place where tube frequently changes

## Structure chart



## Technical sheet

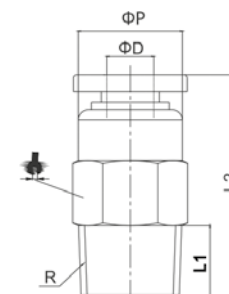
|                       |                                    |
|-----------------------|------------------------------------|
| FLUID                 | Air                                |
| OPERATION PRESSURE    | 0,1-1,0Mpa (150psi)                |
| NEGATIVE PRESSURE     | Please contact our Technical Dept. |
| OPERATING TEMPERATURE | 0-60 °C (32-140 °F)                |
| APPLICABLE TUBE       | Polyurethane, Polyamide and Nylon  |

ART. **ISPC**

**Straight male tapered stop fitting**



| COD.      | ØD | R   | L1   | L2   | ØP |    |   |       |
|-----------|----|-----|------|------|----|----|---|-------|
| ISPC04-01 | 4  | 1/8 | 7,5  | 27,5 | 10 | 10 | 1 | 9,30  |
| ISPC06-01 | 6  | 1/8 | 7,5  | 27,0 | 12 | 12 | 1 | 11,20 |
| ISPC06-02 | 6  | 1/4 | 9,5  | 27,0 | 12 | 14 | 1 | 13,50 |
| ISPC08-01 | 8  | 1/8 | 7,5  | 29,0 | 14 | 14 | 1 | 14,40 |
| ISPC08-02 | 8  | 1/4 | 9,5  | 29,0 | 14 | 14 | 1 | 16,10 |
| ISPC08-03 | 8  | 3/8 | 10,5 | 29,0 | 14 | 17 | 1 | 20,40 |
| ISPC10-02 | 10 | 1/4 | 9,5  | 37,0 | 17 | 17 | 1 | 18,80 |
| ISPC10-03 | 10 | 3/8 | 10,5 | 37,0 | 17 | 17 | 1 | 24,60 |
| ISPC10-04 | 10 | 1/2 | 13,5 | 37,0 | 17 | 21 | 1 | 28,50 |
| ISPC12-02 | 12 | 1/4 | 9,5  | 38,0 | 20 | 21 | 1 | 30,20 |
| ISPC12-03 | 12 | 3/8 | 10,5 | 38,0 | 20 | 21 | 1 | 31,70 |
| ISPC12-04 | 12 | 1/2 | 13,5 | 38,0 | 20 | 21 | 1 | 35,50 |

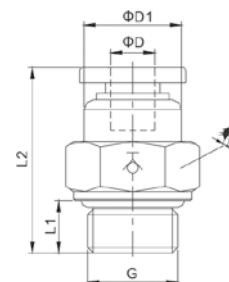


ART. **ISPC-G**

**Straight male parallel stop fitting**



| COD.       | ØD | G   | ØD1 | L1  | L2   |    |   |       |
|------------|----|-----|-----|-----|------|----|---|-------|
| ISPC04-G01 | 4  | 1/8 | 10  | 5,5 | 27,5 | 14 | 1 | 9,30  |
| ISPC06-G01 | 6  | 1/8 | 12  | 5,5 | 27   | 14 | 1 | 11,20 |
| ISPC06-G02 | 6  | 1/4 | 12  | 7,5 | 27   | 17 | 1 | 13,50 |
| ISPC08-G01 | 8  | 1/8 | 14  | 5,5 | 29   | 14 | 1 | 14,40 |
| ISPC08-G02 | 8  | 1/4 | 14  | 7,5 | 29   | 17 | 1 | 16,10 |
| ISPC08-G03 | 8  | 3/8 | 14  | 7,5 | 29   | 20 | 1 | 20,40 |
| ISPC10-G02 | 10 | 1/4 | 17  | 7,5 | 37   | 17 | 1 | 18,80 |
| ISPC10-G03 | 10 | 3/8 | 17  | 7,5 | 37   | 20 | 1 | 24,60 |
| ISPC10-G04 | 10 | 1/2 | 17  | 10  | 37   | 24 | 1 | 28,50 |
| ISPC12-G02 | 12 | 1/4 | 20  | 7,5 | 38   | 21 | 1 | 30,20 |
| ISPC12-G03 | 12 | 3/8 | 20  | 7,5 | 38   | 21 | 1 | 31,70 |
| ISPC12-G04 | 12 | 1/2 | 20  | 10  | 38   | 24 | 1 | 35,50 |

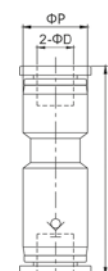


ART. **ISPU**

**Stop fitting straight connector**



| COD.   | ØD | ØP   | L    |   |       |
|--------|----|------|------|---|-------|
| ISPU04 | 4  | 13,0 | 47,0 | 1 | 16,50 |
| ISPU06 | 6  | 13,0 | 45,0 | 1 | 13,50 |
| ISPU08 | 8  | 15,0 | 49,5 | 1 | 17,00 |
| ISPU10 | 10 | 19,0 | 63,0 | 1 | 35,00 |
| ISPU12 | 12 | 21,5 | 66,5 | 1 | 42,00 |

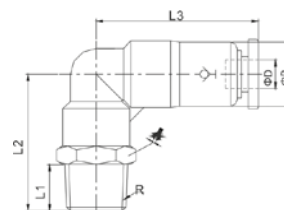


ART. **ISPL**

**Elbow male tapered stop fitting**



| COD.      | ØD | R   | L1   | L2   | L3   | ØP   |    |   |       |
|-----------|----|-----|------|------|------|------|----|---|-------|
| ISPL04-M5 | 4  | M5  | 3,5  | 21,3 | 31,0 | 13,0 | 10 | 1 | 12,00 |
| ISPL04-M6 | 4  | M6  | 4,0  | 21,8 | 31,0 | 13,0 | 10 | 1 | 12,00 |
| ISPL04-01 | 4  | 1/8 | 7,5  | 26,5 | 31,0 | 13,0 | 10 | 1 | 14,00 |
| ISPL06-M5 | 6  | M5  | 3,5  | 21,7 | 29,4 | 13,0 | 12 | 1 | 13,00 |
| ISPL06-M6 | 6  | M6  | 4,0  | 22,2 | 29,4 | 13,0 | 12 | 1 | 13,00 |
| ISPL06-01 | 6  | 1/8 | 7,5  | 26,5 | 30,0 | 13,0 | 12 | 1 | 20,20 |
| ISPL06-02 | 6  | 1/4 | 9,5  | 29,0 | 30,0 | 13,0 | 14 | 1 | 22,40 |
| ISPL08-01 | 8  | 1/8 | 7,5  | 29,5 | 33,5 | 14,5 | 14 | 1 | 24,60 |
| ISPL08-02 | 8  | 1/4 | 9,5  | 31,5 | 33,5 | 14,5 | 14 | 1 | 29,00 |
| ISPL08-03 | 8  | 3/8 | 10,5 | 33,0 | 33,5 | 14,5 | 17 | 1 | 31,00 |
| ISPL10-02 | 10 | 1/4 | 9,5  | 37,0 | 43,2 | 18,4 | 17 | 1 | 33,00 |
| ISPL10-03 | 10 | 3/8 | 10,5 | 38,0 | 43,2 | 18,4 | 17 | 1 | 35,00 |
| ISPL10-04 | 10 | 1/2 | 13,5 | 41,5 | 43,2 | 18,4 | 21 | 1 | 37,40 |
| ISPL12-02 | 12 | 1/4 | 9,5  | 38,5 | 46,7 | 21,0 | 21 | 1 | 42,00 |
| ISPL12-03 | 12 | 3/8 | 10,5 | 39,5 | 46,7 | 21,0 | 21 | 1 | 45,00 |
| ISPL12-04 | 12 | 1/2 | 13,5 | 42,5 | 46,7 | 21,0 | 21 | 1 | 49,00 |

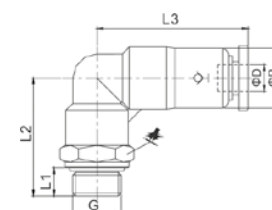


ART. **ISPL-G**

**Elbow male parallel stop fitting**



| COD.       | ØD | R   | L1   | L2   | L3   | ØP   |    |   |       |
|------------|----|-----|------|------|------|------|----|---|-------|
| ISPL04-G01 | 4  | 1/8 | 5,5  | 26,5 | 31,7 | 13,0 | 14 | 1 | 14,00 |
| ISPL06-G01 | 6  | 1/8 | 5,5  | 26,5 | 30,0 | 13,0 | 14 | 1 | 20,20 |
| ISPL06-G02 | 6  | 1/4 | 7,5  | 29,0 | 30,0 | 13,0 | 17 | 1 | 22,40 |
| ISPL08-G01 | 8  | 1/8 | 5,5  | 29,0 | 33,5 | 14,5 | 14 | 1 | 24,60 |
| ISPL08-G02 | 8  | 1/4 | 7,5  | 31,5 | 33,5 | 14,5 | 17 | 1 | 29,00 |
| ISPL08-G03 | 8  | 3/8 | 7,5  | 32,0 | 33,5 | 14,5 | 20 | 1 | 31,00 |
| ISPL10-G02 | 10 | 1/4 | 7,5  | 37,0 | 43,2 | 18,4 | 17 | 1 | 33,00 |
| ISPL10-G03 | 10 | 3/8 | 7,5  | 37,0 | 43,2 | 18,4 | 20 | 1 | 35,00 |
| ISPL10-G04 | 10 | 1/2 | 10,0 | 40,5 | 43,2 | 18,4 | 24 | 1 | 37,40 |
| ISPL12-G02 | 12 | 1/4 | 7,5  | 38,5 | 46,7 | 21,0 | 21 | 1 | 42,00 |
| ISPL12-G03 | 12 | 3/8 | 7,5  | 38,5 | 46,7 | 21,0 | 21 | 1 | 45,00 |
| ISPL12-G04 | 12 | 1/2 | 10,0 | 41,5 | 46,7 | 21,0 | 24 | 1 | 49,00 |



## Function fittings

# Series IPC



### Ordering code

**IPCVC 04 G04 B**

#### MODEL TYPE

- IPCVC** = Straight male tapered unidirectional fitting
- IPCVC-G** = Straight male parallel unidirectional fitting
- IPCVF** = Tapered male/female unidirectional fitting
- IPCVF-G** = Parallel male/female unidirectional fitting
- IPCVCU** = Unidirectional straight connector

#### TUBE CONNECTION

**4 ... 12** = Tube diameter Ø 4; 6; 8; 10; 12 mm

#### THREADED CONNECTION

- 01** = R1/8" Tapered thread
- 02** = R1/4" Tapered thread
- 03** = R3/8" Tapered thread
- 04** = R1/2" Tapered thread
- G01** = G1/8" Parallel thread
- G02** = G1/4" Parallel thread
- G03** = G3/8" Parallel thread
- G04** = G1/2" Parallel thread

#### FLOW RATE DIRECTION

- BLANK** = from thread to tube
- B** = from tube to thread

## Features

Allow the airflow in one direction but stops in the opposite direction.

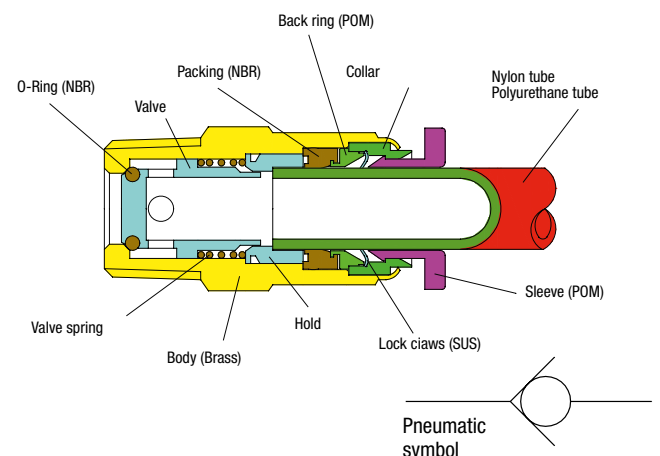
## Notes

Tight the thread according to the rule.  
It won't work if too tight.

## Applications

Check valves allow airflow in one direction

## Structure chart



## Technical sheet

|                              |                                 |
|------------------------------|---------------------------------|
| <b>FLUID</b>                 | Air (no other gases or liquids) |
| <b>OPERATION PRESSURE</b>    | 0,05-1,0Mpa (150psi)            |
| <b>NEGATIVE PRESSURE</b>     | Please contact technical Dept.  |
| <b>OPERATING TEMPERATURE</b> | 0-60 °C (32-140 °F)             |
| <b>APPLICABLE TUBE</b>       | Polyurethane and Nylon          |

## Control method

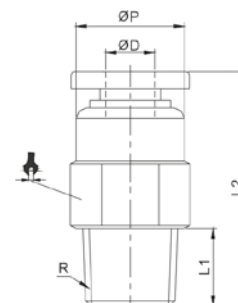
| AIR FLOW        | METER IN       | METER OUT (B)  |
|-----------------|----------------|----------------|
| <b>AIR FLOW</b> | Thread to tube | Tube to thread |
| <b>PCVC</b>     |                |                |
| <b>PCVF</b>     |                |                |

ART. **IPCVC**

**Straight male tapered unidirectional fitting**



| COD.       | ØD | R   | L1   | L2   | ØP |    |   |       |
|------------|----|-----|------|------|----|----|---|-------|
| IPCVC04-M5 | 4  | M5  | 3,5  | 29,2 | 10 | 10 | 1 | 10,40 |
| IPCVC04-M6 | 4  | M6  | 4,0  | 28,2 | 10 | 10 | 1 | 10,40 |
| IPCVC04-01 | 4  | 1/8 | 7,5  | 25,0 | 10 | 10 | 1 | 9,20  |
| IPCVC06-01 | 6  | 1/8 | 7,5  | 26,0 | 12 | 12 | 1 | 10,20 |
| IPCVC06-02 | 6  | 1/4 | 9,5  | 37,0 | 12 | 14 | 1 | 19,50 |
| IPCVC08-01 | 8  | 1/8 | 7,5  | 28,5 | 14 | 14 | 1 | 13,70 |
| IPCVC08-02 | 8  | 1/4 | 9,5  | 39,0 | 14 | 14 | 1 | 27,50 |
| IPCVC08-03 | 8  | 3/8 | 10,5 | 35,2 | 14 | 17 | 1 | 30,40 |
| IPCVC10-02 | 10 | 1/4 | 9,5  | 42,9 | 17 | 17 | 1 | 30,70 |
| IPCVC10-03 | 10 | 3/8 | 10,5 | 41,6 | 17 | 17 | 1 | 45,80 |
| IPCVC10-04 | 10 | 1/2 | 13,5 | 43,7 | 17 | 21 | 1 | 48,90 |
| IPCVC12-02 | 12 | 1/4 | 9,5  | 44,2 | 20 | 21 | 1 | 50,00 |
| IPCVC12-03 | 12 | 3/8 | 10,5 | 42,5 | 20 | 21 | 1 | 54,50 |
| IPCVC12-04 | 12 | 1/2 | 13,5 | 44,5 | 20 | 21 | 1 | 60,70 |

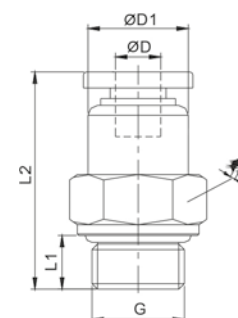


ART. **IPCVC-G**

**Straight male parallel unidirectional fitting**



| COD.        | ØD | G   | ØD1  | L1   | L2   |    |   |       |
|-------------|----|-----|------|------|------|----|---|-------|
| IPCVC04-G01 | 4  | 1/8 | 10,0 | 5,5  | 24,4 | 10 | 1 | 9,20  |
| IPCVC06-G01 | 6  | 1/8 | 12,0 | 5,5  | 26,0 | 12 | 1 | 10,20 |
| IPCVC06-G02 | 6  | 1/4 | 12,0 | 7,5  | 33,0 | 12 | 1 | 19,50 |
| IPCVC08-G01 | 8  | 1/8 | 14,0 | 5,5  | 28,5 | 14 | 1 | 13,70 |
| IPCVC08-G02 | 8  | 1/4 | 14,0 | 7,5  | 34,8 | 14 | 1 | 27,50 |
| IPCVC08-G03 | 8  | 3/8 | 14,0 | 7,5  | 34,8 | 14 | 1 | 30,40 |
| IPCVC10-G02 | 10 | 1/4 | 17,0 | 7,5  | 39,5 | 17 | 1 | 30,60 |
| IPCVC10-G03 | 10 | 3/8 | 17,0 | 7,5  | 41,6 | 20 | 1 | 45,80 |
| IPCVC10-G04 | 10 | 1/2 | 17,0 | 10,0 | 43,7 | 24 | 1 | 48,90 |
| IPCVC12-G02 | 12 | 1/4 | 20,0 | 7,5  | 40,3 | 21 | 1 | 50,00 |
| IPCVC12-G03 | 12 | 3/8 | 20,0 | 7,5  | 42,3 | 21 | 1 | 54,50 |
| IPCVC12-G04 | 12 | 1/2 | 20,0 | 10,0 | 44,4 | 24 | 1 | 60,70 |

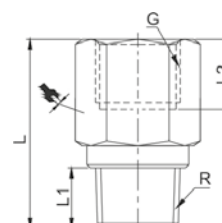


ART. **IPCVF**

**Tapered male/female unidirectional fitting**



| COD.        | R   | G   | L1   | L2   | L    |    |   |       |
|-------------|-----|-----|------|------|------|----|---|-------|
| IPCVF-01-01 | 1/8 | 1/8 | 7,5  | 8,5  | 23,0 | 14 | 1 | 12,50 |
| IPCVF-02-02 | 1/4 | 1/4 | 9,5  | 11,0 | 36,0 | 17 | 1 | 14,70 |
| IPCVF-03-03 | 3/8 | 3/8 | 10,5 | 12,0 | 32,9 | 21 | 1 | 16,80 |
| IPCVF-04-04 | 1/2 | 1/2 | 13,5 | 14,0 | 37,0 | 24 | 1 | 18,80 |

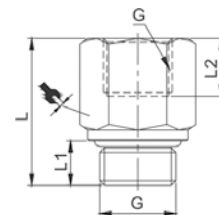


ART. **IPCVF-G**

**Parallel male/female unidirectional fitting**



| COD.         | G   | L1   | L2   | L    |    |   |       |
|--------------|-----|------|------|------|----|---|-------|
| IPCVF-01-G01 | 1/8 | 5,5  | 8,5  | 23,0 | 14 | 1 | 12,50 |
| IPCVF-02-G02 | 1/4 | 7,5  | 11,0 | 32,0 | 17 | 1 | 14,70 |
| IPCVF-03-G03 | 3/8 | 7,5  | 12,0 | 32,9 | 21 | 1 | 16,80 |
| IPCVF-04-G04 | 1/2 | 10,0 | 14,0 | 37,0 | 24 | 1 | 18,80 |

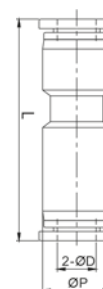


ART. **IPCVU**

**Unidirectional straight connector**



| COD.    | ØD | ØP   | L    |   |       |
|---------|----|------|------|---|-------|
| IPCVU04 | 4  | 11,0 | 40,4 | 1 | 5,70  |
| IPCVU06 | 6  | 13,0 | 41,2 | 1 | 6,50  |
| IPCVU08 | 8  | 14,5 | 52,6 | 1 | 9,90  |
| IPCVU10 | 10 | 21,0 | 62,2 | 1 | 49,40 |
| IPCVU12 | 12 | 21,0 | 63,3 | 1 | 46,00 |



## Quick exhaust valves

# Series VSR



The quick exhaust valves and the manual valves, 503 series, are produced in Italy according to the reference ISO norms as warranty of high quality level.

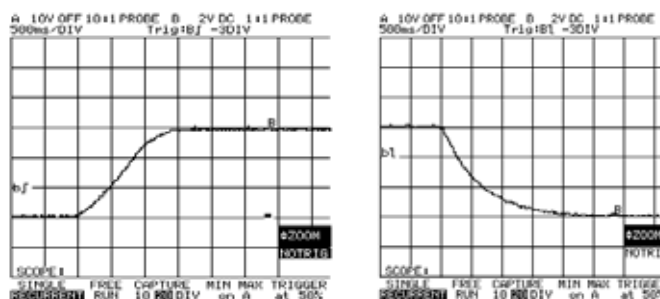
## Technical characteristics

### General test conditions and life test:

Fluid: Filtered air                      Temperature: 20 ° C  
Pressure: 6 bar                              Tank capacity: 5 liters

### Test Results

The technopolymer valves have the same flow rate as the brass version, the time of pressurization and emptying of the tank is the same. The opening and the exhaust time of the valves do not change by varying the operating temperature, from -20 ° C to +50 ° C. The breakout of the threads, for the technopolymer version, is inversely proportional to the temperature rise. Subjecting the valves to 50,000 charge/discharge continuous cycles, at a constant pressure of 7 bar, the functioning was showing none irregularities.



| VALVE                  | FLOW RATE (L/MIN) |      |      |
|------------------------|-------------------|------|------|
|                        | PA                | AR   |      |
| <b>50314<br/>brass</b> | 6 bar p=1         | 1070 | 1590 |
|                        | 6 bar max         | 2050 | 2360 |

## Technical sheet

|                              |                                                                                    |
|------------------------------|------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                | Compressed air (for different fluid please contact our Technical Dept.)            |
| <b>OPERATION PRESSURE</b>    | From 0,30 to 10 bar                                                                |
| <b>OPERATING TEMPERATURE</b> | From -20° to +50° °C                                                               |
| <b>THREAD TYPE</b>           | BSPP pipe thread ISO 228                                                           |
| <b>MATERIALS</b>             | Brass UNI EN 12165 CW617N (body, plug)<br>Polyurethane elastomer (sealing element) |

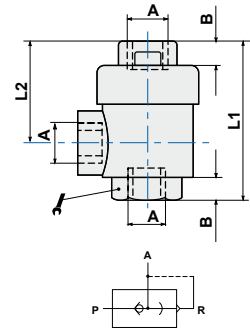


ART. **503**

Quick exhaust valve



| COD.  | A    | B  | L1   | L2   |    |    |        |
|-------|------|----|------|------|----|----|--------|
| 50318 | G1/8 | 8  | 42   | 28   | 14 | 25 | 84,63  |
| 50314 | G1/4 | 11 | 53,3 | 34,5 | 19 | 10 | 148,00 |
| 50338 | G3/8 | 12 | 58   | 36   | 21 | 10 | 150,00 |
| 50312 | G1/2 | 14 | 71   | 44   | 26 | 10 | 316,00 |
| 50334 | G3/4 | 18 | 86   | 52   | 32 | 2  | 450,00 |
| 50301 | G1"  | 19 | 94   | 56   | 38 | 1  | 525,00 |

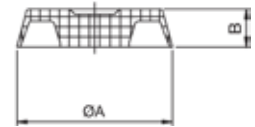


ART. **UR**

Tablet for exhaust valve



| COD. | per valvola   | A    | B   | Materiale |
|------|---------------|------|-----|-----------|
| UR08 | 50318         | 20,5 | 5   | PU        |
| UR17 | 50314 - 50318 | 25,5 | 5,8 | PU        |
| UR35 | 50312         | 35,5 | 8,2 | PU        |
| UR44 | 50334 - 50301 | 40,5 | 9   | PU        |

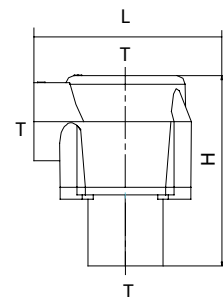


ART. **JXQ**

Heavy duty quick exhaust valve



| COD.       | T   | H   | L  |   |        |
|------------|-----|-----|----|---|--------|
| JXQ2000-06 | 3/4 | 112 | 92 | 1 | 781,66 |
| JXQ2500-10 | 1"  | 112 | 92 | 1 | 691,70 |

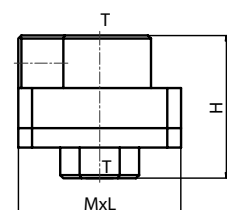


ART. **JAQ**

Cube quick exhaust valve



| COD.       | T   | Mx | L  | H  |   |        |
|------------|-----|----|----|----|---|--------|
| JAQ2000-01 | 1/8 | 45 | 45 | 40 | 1 | 114,50 |
| JAQ2000-02 | 1/4 | 45 | 45 | 40 | 1 | 107,08 |
| JAQ3000-02 | 1/4 | 56 | 56 | 50 | 1 | 215,78 |
| JAQ3000-03 | 3/8 | 56 | 56 | 50 | 1 | 304,16 |
| JAQ5000-04 | 1/2 | 85 | 85 | 75 | 1 | 675,19 |
| JAQ5000-06 | 3/4 | 85 | 85 | 75 | 1 | 652,44 |



## Quick exhaust valves

# Series ISE

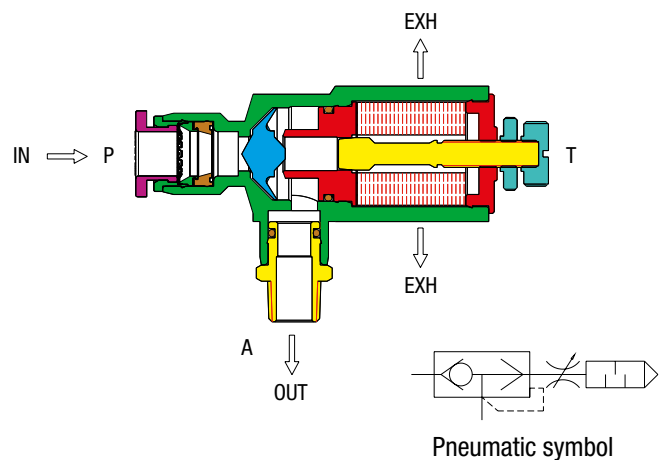


The quick exhaust valve always used to the shuttle valve and cylinder, the air can be exhaust quickly and not through the shuttle valve, which fast the reciprocating motion on the cylinder and short the work period. The exhaust side T have the function with throttling and noise elimination. It can control the high-speed cylinder, at the same time also can reduce the exhaust noise.

## Characteristics

- Used to the high-speed cylinders.
- The exhaust valve with a quick fittings to fix the tube easily.
- The valve have the function of the shuttle valve
- The exhaust side have the function with throttling and noise elimination.
- It can control the high-speed cylinder, at the same time also con reduce the exhaust noise.

## Structure chart



## Technical sheet

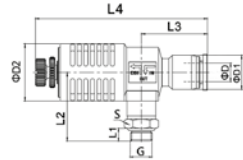
|                              |                                   |
|------------------------------|-----------------------------------|
| <b>FLUIDS</b>                | Air                               |
| <b>OPERATION PRESSURE</b>    | 0,05-1,0Mpa (150psi)              |
| <b>OPERATING TEMPERATURE</b> | 0-60 °C (32-140 °F)               |
| <b>APPLICABLE TUBE</b>       | Polyurethane, Polyamide and Nylon |

ART. **ISE**

**VSR + RFV taper thread**



| COD.     | ØD | R   | L1   | L2   | L3 | L4<br>Max | ØD1 | ØD2 | S  |   |       |
|----------|----|-----|------|------|----|-----------|-----|-----|----|---|-------|
| ISE08-01 | 8  | 1/8 | 7,5  | 31   | 29 | 83        | 15  | 25  | 12 | 1 | 57,20 |
| ISE08-02 | 8  | 1/4 | 9,5  | 34   | 29 | 83        | 15  | 25  | 14 | 1 | 61,70 |
| ISE08-03 | 8  | 3/8 | 10,5 | 35,5 | 29 | 83        | 15  | 25  | 17 | 1 | 68,00 |
| ISE10-01 | 10 | 1/8 | 7,5  | 31   | 32 | 86        | 19  | 25  | 12 | 1 | 62,10 |
| ISE10-02 | 10 | 1/4 | 9,5  | 34   | 32 | 86        | 19  | 25  | 14 | 1 | 64,80 |
| ISE10-03 | 10 | 3/8 | 10,5 | 35,5 | 32 | 86        | 19  | 25  | 17 | 1 | 71,10 |

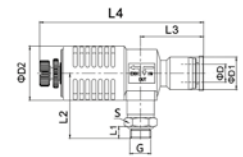


ART. **ISE-G**

**VSR + RFV parallel thread**



| COD.      | ØD | G   | L1  | L2   | L3 | L4<br>Max | ØD1 | ØD2 | S  |   |       |
|-----------|----|-----|-----|------|----|-----------|-----|-----|----|---|-------|
| ISE08-G01 | 8  | 1/8 | 5,5 | 30   | 29 | 83        | 15  | 25  | 13 | 1 | 57,20 |
| ISE08-G02 | 8  | 1/4 | 6,5 | 31,5 | 29 | 83        | 15  | 25  | 16 | 1 | 61,70 |
| ISE08-G03 | 8  | 3/8 | 7,5 | 33   | 29 | 83        | 15  | 25  | 20 | 1 | 68,00 |
| ISE10-G01 | 10 | 1/8 | 5,5 | 30   | 32 | 86        | 19  | 25  | 13 | 1 | 62,10 |
| ISE10-G02 | 10 | 1/4 | 6,5 | 31,5 | 32 | 86        | 19  | 25  | 16 | 1 | 64,80 |
| ISE10-G03 | 10 | 3/8 | 7,5 | 33   | 32 | 86        | 19  | 25  | 20 | 1 | 71,10 |



## Manual valves

# Series 500



The manual valves, 504-505 series, are produced in Italy according to the reference ISO norms as warranty of high quality level.

## Technical sheet

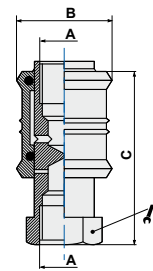
|                                 |                                                  |                                                                                       |
|---------------------------------|--------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>CONNECTING TUBES</b>         |                                                  | Normally not applied directly to pipes, however defined according to the applications |
| <b>TEMPERATURE AND PRESSURE</b> | <b>Working temperature</b>                       | from -20° to +70° °C                                                                  |
|                                 | <b>Max. working pressure</b>                     | 10 bar                                                                                |
| <b>THREAD TYPE</b>              |                                                  | BSP parallel UNI-ISO 228                                                              |
| <b>MATERIALS</b>                | <b>Series 505 body</b>                           | Brass UNI EN 12165 CW617N                                                             |
|                                 | <b>Series 504 body<br/>Series 504-505 slider</b> | Anodized aluminum                                                                     |
|                                 | <b>Seals gasket</b>                              | NBR 70 DWGV-EN549 UL157                                                               |

ART. **504**

**Hand slide valve**



| COD.  | A    | B  | C  |    |    |        |
|-------|------|----|----|----|----|--------|
| 50418 | G1/8 | 25 | 40 | 14 | 10 | 42,00  |
| 50414 | G1/4 | 30 | 46 | 17 | 10 | 74,00  |
| 50438 | G3/8 | 35 | 52 | 21 | 10 | 122,00 |
| 50412 | G1/2 | 40 | 62 | 26 | 10 | 170,00 |

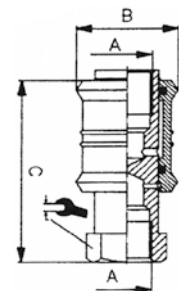


ART. **505**

**Brass hand slide valve**



| COD.  | A    | B  | C    |    |    |        |
|-------|------|----|------|----|----|--------|
| 505M5 | M5   | 14 | 30,5 | 10 | 10 | 11,80  |
| 50518 | G1/8 | 25 | 48   | 14 | 10 | 50,50  |
| 50514 | G1/4 | 30 | 58   | 19 | 10 | 95,50  |
| 50538 | G3/8 | 35 | 70   | 22 | 10 | 154,00 |
| 50512 | G1/2 | 40 | 75   | 27 | 10 | 210,00 |
| 50534 | G3/4 | 50 | 83   | 32 | 10 | 187,00 |



# Ball taps

Compact ball valves, ideal for use in pneumatic, hydraulic and medium/low vacuum circuits. Made of nickel-plated brass with technopolymer operating lever.

- **Ball taps - MINI**



## Ball taps - MINI

# Series VSTT



The mini ball valves with handle are produced in Italy according to the reference ISO norms as warranty of high quality level.

## Technical sheet

|                                 |                                             |                                                                                       |
|---------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                             | Compressed air (for different fluid please contact our Technical Dept.)               |
| <b>APPLICATIONS</b>             |                                             | Pneumatic, oleodynamic and hydraulic circuits                                         |
| <b>SUGGESTED TUBES</b>          |                                             | Plastic: TPU, PA, PE, ecc. Metal: copper, aluminium, steel                            |
| <b>TEMPERATURE AND PRESSURE</b> | <b>Working temperature</b>                  | From -20°C to +80°C                                                                   |
|                                 | <b>Max working pressure</b>                 | 20 bar                                                                                |
| <b>THREAD TYPE</b>              |                                             | POM Copolymer ISO 10433-1<br>BSPP pipe thread ISO 228 - BSPT tapered ISO 7 - DIN 2999 |
| <b>MATERIALS</b>                | <b>Ball, ogive, nut, ring nut and shaft</b> | Brass UNI EN 12164 CW614N ((nickel plated)                                            |
|                                 | <b>Sleeve, collar and back ring</b>         | POM Copolymer ISO 10433-1                                                             |
|                                 | <b>Spring</b>                               | Stainless steel AISI 301 austenitic                                                   |
|                                 | <b>Washer ball seat</b>                     | PTFE                                                                                  |
|                                 | <b>O-Ring</b>                               | NBR 70                                                                                |

## Additional technical informations

Each VSTT taps series batch is tested according to severe cyclics “lot breaker” controls along all the production period, which include shape observation, leakage verification, functionality, at the working pressure of 8 bar. Then all samples taken from the lot are tested by a traction machine which simulate a breaking pressure of 50 bar. Here below are indicated the traction loads (in Newton) for each size:

| Tube diameter | Breaking load |
|---------------|---------------|
| <b>Ø4</b>     | <b>63 N</b>   |
| <b>Ø6</b>     | <b>141 N</b>  |
| <b>Ø8</b>     | <b>251 N</b>  |

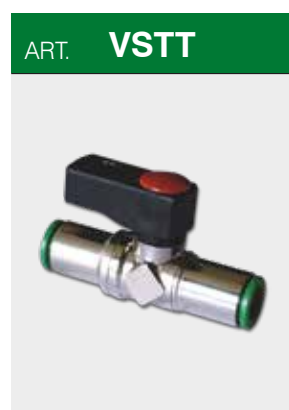
## Important note

The values refer to the resistance of the crimping gripper, “core part” as per the two fittings series, the brass RAP and the technopolymer Tecno-RAP, whereby homogeneous. The breaking experimental values measured, according to the diameter, were from 1.2 to 2.5 times higher.

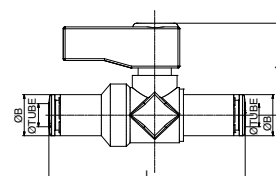
## Additional information regarding the working temperatures:

| Working pressure and breaking pressure (bar) at different temperatures |               |                |               |                |               |                |
|------------------------------------------------------------------------|---------------|----------------|---------------|----------------|---------------|----------------|
| Example                                                                | T-20°C        | T-20°C         | T+23°C        | T+23°C         | T+60°C        | T+60°C         |
| Tube 6x4 colored                                                       | Working P bar | Breaking P bar | Working P bar | Breaking P bar | Working P bar | Breaking P bar |
| <b>TPU</b>                                                             | <b>18,7</b>   | <b>74,8</b>    | <b>10,0</b>   | <b>40,0</b>    | <b>5,2</b>    | <b>20,8</b>    |
| <b>PA11</b>                                                            | <b>37,4</b>   | <b>149,6</b>   | <b>20,0</b>   | <b>80,0</b>    | <b>10,4</b>   | <b>41,6</b>    |
| <b>PA12</b>                                                            | <b>48,6</b>   | <b>168,3</b>   | <b>26,0</b>   | <b>90,0</b>    | <b>10,4</b>   | <b>36,0</b>    |
| <b>PE</b>                                                              | <b>18,7</b>   | <b>74,8</b>    | <b>10,0</b>   | <b>40,0</b>    | <b>5,0</b>    | <b>20,0</b>    |

Further to all the necessary assessments on the use of the VSTT taps in operating conditions different from how suggested in the initial technical sheet must be considered, with reference to temperatures, the nominal data regarding the type of the used tube and the limit imposed by the most critical component. Acetal resins with which some components are made, and the O-ring itself, suggest precise range of usage. Specifically to the NBR O-rings the supplier declares a fork between -25°C and +100°C.


**ART. VSTT**
**Tube/tube ball valve**

| COD.     | A  | L  | Ø TUBE | ØB |   |       |
|----------|----|----|--------|----|---|-------|
| VSTT0404 | 23 | 46 | 4      | 9  | 1 | 39,50 |
| VSTT0606 | 23 | 50 | 6      | 11 | 1 | 37,50 |
| VSTT0808 | 23 | 52 | 8      | 13 | 1 | 39,30 |





## Ball taps - MINI

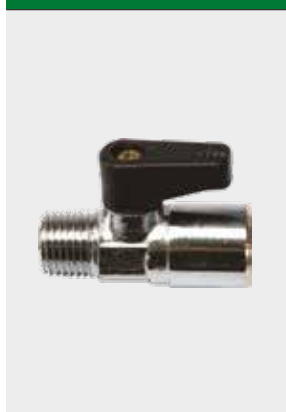
# Series 4000



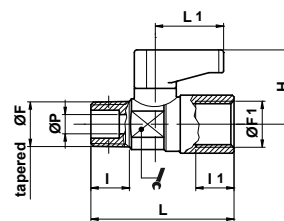
The mini ball valves with handle are produced in Italy according to the reference ISO norms as warranty of high quality level.

## Technical sheet

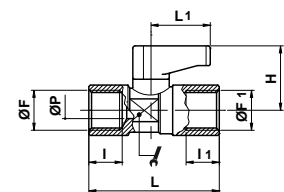
|                                 |                                             |                                                                         |
|---------------------------------|---------------------------------------------|-------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                             | Compressed air (for different fluid please contact our Technical Dept.) |
| <b>APPLICATIONS</b>             |                                             | Pneumatic, oleodynamic and hydraulic circuits                           |
| <b>SUGGESTED TUBES</b>          |                                             | Plastic: TPU, PA, PE, ecc. Metal: copper, aluminium, steel              |
| <b>TEMPERATURE AND PRESSURE</b> | <b>Working temperature</b>                  | from -20°C to +80°C                                                     |
|                                 | <b>Max working pressure</b>                 | 20 bar                                                                  |
| <b>THREAD TYPE</b>              |                                             | BSPP pipe thread ISO 228 - BSPT tapered ISO 7 - DIN 2999                |
| <b>MATERIALS</b>                | <b>Ball, ogive, nut, ring nut and shaft</b> | Brass UNI EN 12164 CW614N (nickel plated)                               |
|                                 | <b>Body</b>                                 | Brass UNI EN 12165 CW617N (nickel plated)                               |
|                                 | <b>Handle</b>                               | PA66 plastic material                                                   |
|                                 | <b>Washer ball seat</b>                     | PTFE                                                                    |
|                                 | <b>O-Ring</b>                               | NBR 70                                                                  |

**ART. 4010**
**Tapered male/female ball valve**


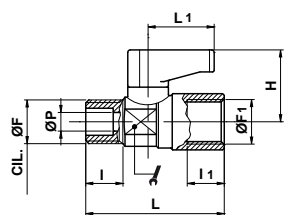
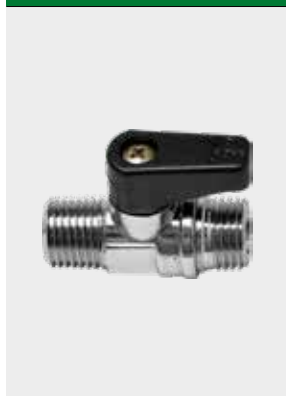
| COD.     | ØF  | ØF1 | ØP  | I    | I1 | L    | L1 | H    |    |   |        |
|----------|-----|-----|-----|------|----|------|----|------|----|---|--------|
| 40100900 | 1/8 | 1/8 | 5,5 | 8    | 8  | 35,5 | 19 | 21,5 | 14 | 1 | 34,00  |
| 40101800 | 1/4 | 1/8 | 5,5 | 11   | 8  | 38   | 19 | 21,5 | 14 | 1 | 38,00  |
| 40101900 | 1/4 | 1/4 | 5,5 | 11   | 11 | 40,5 | 19 | 21,5 | 14 | 1 | 44,50  |
| 40102800 | 3/8 | 1/4 | 5,5 | 11,5 | 11 | 41,5 | 19 | 21,5 | 14 | 1 | 48,00  |
| 40102900 | 3/8 | 3/8 | 7   | 13   | 16 | 48   | 19 | 22,5 | 18 | 1 | 66,00  |
| 40103900 | 3/8 | 1/2 | 10  | 17   | 23 | 58   | 25 | 25   | 22 | 1 | 128,00 |


**ART. 4000**
**Female/female ball valve**

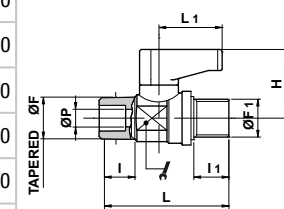

| COD.     | ØF  | ØF1 | ØP  | I    | I1 | L    | L1 | H    |    |   |        |
|----------|-----|-----|-----|------|----|------|----|------|----|---|--------|
| 40000900 | 1/8 | 1/8 | 5,5 | 8    | 8  | 36,5 | 19 | 21,5 | 14 | 1 | 36,00  |
| 40001900 | 1/4 | 1/4 | 5,5 | 11   | 11 | 43   | 19 | 21,5 | 14 | 1 | 48,00  |
| 40002900 | 3/8 | 3/8 | 7   | 11,5 | 16 | 48   | 19 | 22,5 | 18 | 1 | 74,00  |
| 40003900 | 1/2 | 1/2 | 10  | 16   | 23 | 59   | 25 | 32   | 32 | 1 | 138,00 |


**ART. 4020**
**Parallel male/female ball valve**


| COD.     | ØF  | ØF1 | ØP  | I   | I1 | L    | L1 | H    |    |   |        |
|----------|-----|-----|-----|-----|----|------|----|------|----|---|--------|
| 40200900 | 1/8 | 1/8 | 5,5 | 7   | 8  | 34,5 | 19 | 21,5 | 14 | 1 | 32,00  |
| 40201800 | 1/4 | 1/8 | 5,5 | 8   | 8  | 35,5 | 19 | 21,5 | 14 | 1 | 36,00  |
| 40201900 | 1/4 | 1/4 | 5,5 | 8   | 11 | 37,5 | 19 | 21,5 | 14 | 1 | 40,00  |
| 40202800 | 3/8 | 1/4 | 5,5 | 5,5 | 9  | 11   | 19 | 21,5 | 14 | 1 | 46,00  |
| 40202900 | 3/8 | 3/8 | 7   | 10  | 16 | 43   | 19 | 22,5 | 18 | 1 | 86,00  |
| 40203900 | 1/2 | 1/2 | 10  | 15  | 23 | 58   | 25 | 32   | 22 | 1 | 128,00 |


**ART. 4030**
**Tapered/parallel male ball valve**


| COD.     | ØF  | ØF1 | ØP  | I    | I1  | L    | L1 | H    |    |   |        |
|----------|-----|-----|-----|------|-----|------|----|------|----|---|--------|
| 40300900 | 1/8 | 1/8 | 5,5 | 8    | 7   | 33   | 19 | 21,5 | 14 | 1 | 30,00  |
| 40301000 | 1/8 | 1/4 | 5,5 | 8    | 7,5 | 33,5 | 19 | 21,5 | 14 | 1 | 32,00  |
| 40301800 | 1/4 | 1/8 | 5,5 | 11   | 7   | 35,5 | 19 | 21,5 | 14 | 1 | 34,00  |
| 40301900 | 1/4 | 1/4 | 5,5 | 11   | 7,5 | 37,5 | 19 | 21,5 | 14 | 1 | 36,00  |
| 40302800 | 3/8 | 1/4 | 5,5 | 11,5 | 7,5 | 37   | 19 | 21,5 | 14 | 1 | 40,00  |
| 40302900 | 3/8 | 3/8 | 7   | 13   | 10  | 48   | 19 | 22,5 | 18 | 1 | 44,00  |
| 40303900 | 1/2 | 1/2 | 10  | 17   | 23  | 58   | 25 | 32   | 22 | 1 | 128,00 |

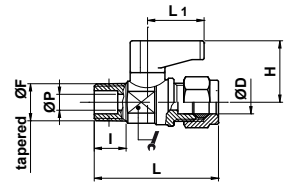


ART. **4050**

**Tapered male ball valve bicone connection**



| COD.     | ØF  | ØD | ØP  | I    | L  | L1   | H    |    |   |       |
|----------|-----|----|-----|------|----|------|------|----|---|-------|
| 40501570 | 1/8 | 6  | 5,5 | 8    | 39 | 19,5 | 21,5 | 14 | 1 | 38,00 |
| 40501580 | 1/4 | 6  | 5,5 | 11   | 42 | 19,5 | 21,5 | 14 | 1 | 42,00 |
| 40501660 | 1/8 | 8  | 5,5 | 8    | 39 | 19,5 | 21,5 | 14 | 1 | 42,00 |
| 40501660 | 1/4 | 8  | 5,5 | 11   | 42 | 19,5 | 21,5 | 14 | 1 | 46,00 |
| 40501680 | 3/8 | 8  | 5,5 | 11,5 | 43 | 19,5 | 21,5 | 14 | 1 | 50,00 |

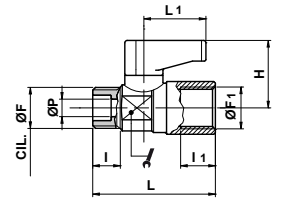


ART. **4070**

**Parallel male/female ball valve (short series)**



| COD.     | ØF  | ØF1 | ØP  | I  | I1 | L    | L1   | H    |    |   |       |
|----------|-----|-----|-----|----|----|------|------|------|----|---|-------|
| 40700900 | 1/8 | 1/8 | 5,5 | 7  | 7  | 33,5 | 19,5 | 21,5 | 14 | 1 | 30,00 |
| 40701800 | 1/4 | 1/8 | 5,5 | 8  | 7  | 34   | 19,5 | 21,5 | 14 | 1 | 32,00 |
| 40701900 | 1/4 | 1/4 | 5,5 | 8  | 8  | 35   | 19,5 | 21,5 | 14 | 1 | 38,00 |
| 40702900 | 3/8 | 3/8 | 7   | 8  | 16 | 41   | 19,5 | 23   | 18 | 1 | 64,00 |
| 40703900 | 1/2 | 1/2 | 10  | 10 | 23 | 50   | 26,5 | 33   | 22 | 1 | 72,00 |

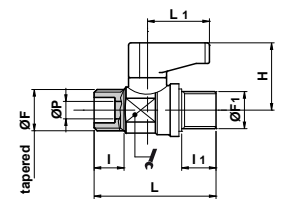


ART. **4080**

**Parallel/parallel male ball valve**



| COD.     | ØF  | ØF1 | ØP  | I    | I1  | L    | L1   | H    |    |   |       |
|----------|-----|-----|-----|------|-----|------|------|------|----|---|-------|
| 40800900 | 1/8 | 1/8 | 5,5 | 7    | 7   | 32   | 19,5 | 21,5 | 14 | 1 | 30,00 |
| 40801600 | 1/8 | 1/4 | 5,5 | 7    | 8   | 32,5 | 19,5 | 21,5 | 14 | 1 | 32,00 |
| 40801900 | 1/4 | 1/4 | 5,5 | 8    | 8   | 33   | 19,5 | 21,5 | 14 | 1 | 34,00 |
| 40802800 | 3/8 | 1/4 | 5,5 | 9    | 8   | 34   | 19,5 | 21,5 | 14 | 1 | 40,00 |
| 40802900 | 3/8 | 3/8 | 8   | 13,5 | 9   | 45,5 | 19,5 | 23   | 18 | 1 | 43,00 |
| 40803900 | 1/2 | 1/2 | 10  | 15   | 8,5 | 51   | 26,5 | 33   | 22 | 1 | 47,00 |

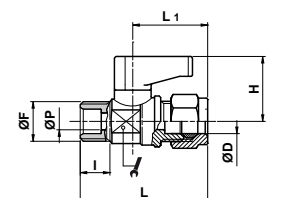


ART. **4100**

**Parallel male ball valve bicone connection**



| COD.     | ØF  | ØD | ØP  | I | L    | L1   | H    |    |   |       |
|----------|-----|----|-----|---|------|------|------|----|---|-------|
| 41001570 | 1/8 | 6  | 5,5 | 7 | 39,5 | 19,5 | 21,5 | 14 | 1 | 36,00 |
| 41001580 | 1/4 | 6  | 5,5 | 8 | 40,5 | 19,5 | 21,5 | 14 | 1 | 40,00 |
| 41001660 | 1/8 | 8  | 5,5 | 7 | 40,5 | 19,5 | 21,5 | 14 | 1 | 40,00 |
| 41001670 | 1/4 | 8  | 5,5 | 8 | 41,5 | 19,5 | 21,5 | 14 | 1 | 44,00 |
| 41001680 | 3/8 | 8  | 5,5 | 9 | 42,5 | 19,5 | 21,5 | 14 | 1 | 48,00 |

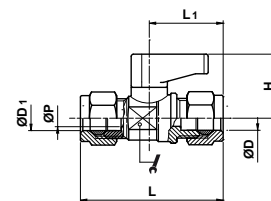


ART. **4110**

**Bicone - bicone ball valve**



| COD.     | D1 | ØD | ØP  | L    | L1   | H    |    |   |       |
|----------|----|----|-----|------|------|------|----|---|-------|
| 41105900 | 6  | 6  | 5,5 | 47,0 | 19,0 | 21,5 | 14 | 1 | 42,00 |
| 41106000 | 6  | 8  | 5,5 | 48,0 | 19,0 | 21,5 | 14 | 1 | 48,00 |
| 41106100 | 8  | 8  | 5,5 | 49,0 | 19,0 | 21,5 | 14 | 1 | 54,00 |

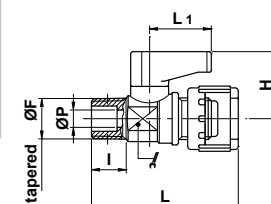


ART. **4120**

**Tapered male ball valve bayonet connection with nut**

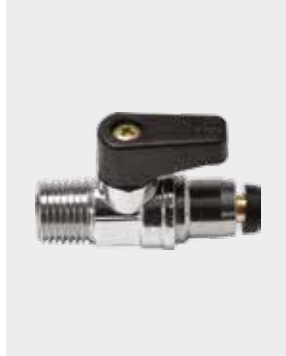


| COD.     | ØF  | ØP  | I    | L    | L1   | H    |    |   |       |
|----------|-----|-----|------|------|------|------|----|---|-------|
| 41201000 | 1/8 | 5,5 | 8,0  | 38,5 | 19,0 | 21,5 | 14 | 1 | 44,00 |
| 41201900 | 1/4 | 5,5 | 11,0 | 41,0 | 19,0 | 21,5 | 14 | 1 | 54,00 |

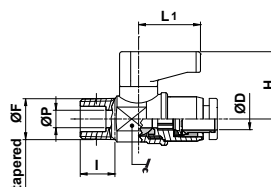


ART. **4160**

**Tapered male ball valve with automatic tube connection**



| COD.     | ØD | ØF  | ØP  | I    | L    | L1 | H    |    |   |       |
|----------|----|-----|-----|------|------|----|------|----|---|-------|
| 41601490 | 4  | 1/8 | 5,5 | 8,5  | 41,0 | 19 | 21,5 | 14 | 1 | 36,00 |
| 41601500 | 4  | 1/4 | 5,5 | 11,5 | 44,0 | 19 | 21,5 | 14 | 1 | 40,00 |
| 41601570 | 6  | 1/8 | 5,5 | 8,5  | 41,0 | 19 | 21,5 | 14 | 1 | 38,00 |
| 41601580 | 6  | 1/4 | 5,5 | 11,5 | 44,0 | 19 | 21,5 | 14 | 1 | 42,00 |
| 41601590 | 6  | 3/8 | 5,5 | 12,0 | 45,0 | 19 | 21,5 | 14 | 1 | 46,00 |
| 41601670 | 8  | 1/4 | 5,5 | 11,5 | 48,0 | 19 | 21,5 | 14 | 1 | 48,00 |
| 41601680 | 8  | 3/8 | 5,5 | 12,0 | 48,5 | 19 | 21,5 | 14 | 1 | 52,00 |

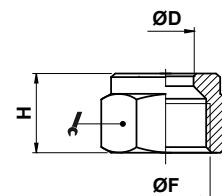


ART. **4190**

**Ball valve nut with bicone**

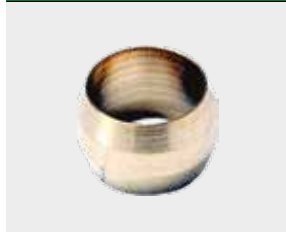


| COD.     | ØF  | ØD | H    |    |    |      |
|----------|-----|----|------|----|----|------|
| 41901570 | 1/8 | 6  | 11,5 | 12 | 10 | 6,00 |
| 41201900 | 1/4 | 8  | 12,0 | 15 | 10 | 8,00 |

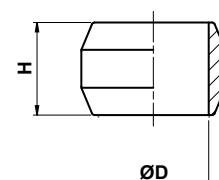


ART. **4200**

**Brass bicone for ball valve**



| COD.     | ØD | H   |    |      |
|----------|----|-----|----|------|
| 42007500 | 6  | 6,6 | 10 | 0,80 |
| 42008300 | 8  | 6,6 | 10 | 1,60 |



## Ball taps

# Series 600



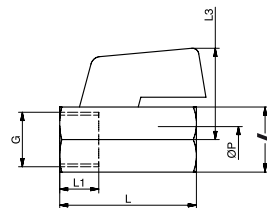
Ball taps made of brass alloy CW164N (nickel-plated) from hexagonal bar. Suitable for a wide range of regulation: pneumatic/oleodynamic, hydraulic and medium/low vacuum systems.

## Technical sheet

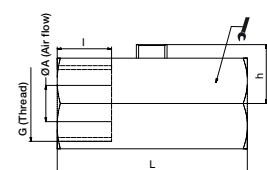
|                                 |                                      |                                                                         |
|---------------------------------|--------------------------------------|-------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                                      | Compressed air (for different fluid please contact our Technical Dept.) |
| <b>APPLICATIONS</b>             |                                      | Pneumatic, oleodynamic and hydraulic circuits                           |
| <b>SUGGESTED TUBES</b>          |                                      | Plastic: TPU, PA, PE, etc. Metal: copper, aluminium, steel              |
| <b>TEMPERATURE AND PRESSURE</b> | Working temperature                  | from -20°C to +80°C                                                     |
|                                 | Max working pressure                 | 20 bar                                                                  |
| <b>THREAD TYPE</b>              |                                      | BSPP pipe thread ISO 228                                                |
| <b>MATERIALS</b>                | Ball, ogive, nut, ring nut and shaft | Brass UNI EN 12164 CW614N (nickel plated)                               |
|                                 | Body                                 | Brass UNI EN 12165 CW617N (nickel plated)                               |
|                                 | Handle                               | PA66 plastic material                                                   |
|                                 | Washer ball seat                     | PTFE                                                                    |
|                                 | O-Ring                               | NBR 70                                                                  |

**ART. 600**
**F/F ball tap with lever**

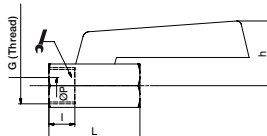

| COD.    | G   | ØP   | L  | L1   | L3   |    |   |        |
|---------|-----|------|----|------|------|----|---|--------|
| 6001818 | 1/8 | 8    | 39 | 9    | 27,2 | 20 | 1 | 80,04  |
| 6001414 | 1/4 | 8    | 39 | 9    | 27,2 | 20 | 1 | 81,13  |
| 6003838 | 3/8 | 8    | 42 | 9,9  | 27,1 | 20 | 1 | 73,65  |
| 6001212 | 1/2 | 10   | 47 | 11,7 | 29,4 | 24 | 1 | 109,35 |
| 6003434 | 3/4 | 13,5 | 54 | 12   | 32   | 30 | 1 | 188,85 |


**ART. 601**
**F/F screwdriver cut ball tap**

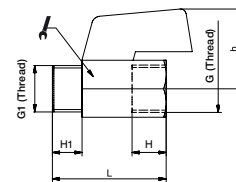

| COD.    | G   | I    | L  | ØA   | h    |    |   |        |
|---------|-----|------|----|------|------|----|---|--------|
| 6011818 | 1/8 | 9    | 39 | 8    | 13   | 20 | 1 | 83,99  |
| 6011414 | 1/4 | 9    | 39 | 8    | 13   | 20 | 1 | 88,50  |
| 6013838 | 3/8 | 9,9  | 42 | 8    | 13   | 20 | 1 | 81,72  |
| 6011212 | 1/2 | 11,7 | 47 | 10   | 15,4 | 24 | 1 | 124,00 |
| 6013434 | 3/4 | 12   | 54 | 13,5 | 18   | 30 | 1 | 190,00 |


**ART. 602**
**Long lever F/F ball tap**

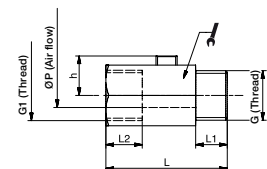

| COD.    | G   | I    | L  | ØP   | h    |    |   |        |
|---------|-----|------|----|------|------|----|---|--------|
| 6021818 | 1/8 | 9    | 39 | 8    | 31,3 | 20 | 1 | 83,26  |
| 6021414 | 1/4 | 9    | 39 | 8    | 31,3 | 20 | 1 | 95,52  |
| 6023838 | 3/8 | 9,9  | 42 | 8    | 31,3 | 20 | 1 | 88,75  |
| 6021212 | 1/2 | 11,7 | 47 | 10   | 33,8 | 24 | 1 | 131,03 |
| 6023434 | 3/4 | 12   | 54 | 13,5 | 36,4 | 30 | 1 | 197,00 |


**ART. 605**
**M/F ball tap with lever**


| COD.    | G   | G1  | H1   | H    | L  | h    |    |   |        |
|---------|-----|-----|------|------|----|------|----|---|--------|
| 6051818 | 1/8 | 1/8 | 9    | 10   | 39 | 27,2 | 20 | 1 | 80,11  |
| 6051414 | 1/4 | 1/4 | 9,2  | 11   | 39 | 27,2 | 20 | 1 | 80,79  |
| 6053838 | 3/8 | 3/8 | 10,2 | 9,8  | 40 | 27,2 | 20 | 1 | 72,34  |
| 6051212 | 1/2 | 1/2 | 12,2 | 11,6 | 45 | 29,5 | 24 | 1 | 116,56 |
| 6053434 | 3/4 | 3/4 | 14   | 12,2 | 51 | 32   | 30 | 1 | 172,63 |


**ART. 606**
**M/F screwdriver cut ball tap**


| COD.    | G   | G1   | L1   | L2   | L    | P    | h  |    |   |        |
|---------|-----|------|------|------|------|------|----|----|---|--------|
| 6061818 | 1/8 | 9,0  | 10,0 | 39,0 | 8,0  | 13,0 | 20 | 20 | 1 | 83,32  |
| 6061414 | 1/4 | 9,2  | 11,0 | 39,0 | 8,0  | 13,0 | 20 | 20 | 1 | 79,52  |
| 6063838 | 3/8 | 10,2 | 9,8  | 40,0 | 8,0  | 13,0 | 20 | 20 | 1 | 77,55  |
| 6061212 | 1/2 | 12,2 | 11,6 | 45,0 | 10,0 | 15,4 | 24 | 24 | 1 | 100,51 |
| 6063434 | 3/4 | 14,0 | 12,2 | 51,0 | 13,5 | 17,9 | 30 | 30 | 1 | 170,00 |

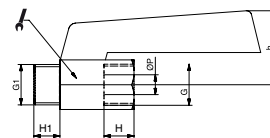


ART. **607**

Long lever M/F ball tap



| COD.    | G   | G1  | H1   | H    | ØP   | h  |    |   |        |
|---------|-----|-----|------|------|------|----|----|---|--------|
| 6071818 | 1/8 | 1/8 | 9,0  | 10   | 8    | 20 | 20 | 1 | 83,32  |
| 6071414 | 1/4 | 1/4 | 9,2  | 11   | 8    | 20 | 20 | 1 | 79,52  |
| 6073838 | 3/8 | 3/8 | 10,2 | 10   | 8    | 20 | 20 | 1 | 77,55  |
| 6071212 | 1/2 | 1/2 | 12,2 | 11,6 | 10   | 24 | 24 | 1 | 100,51 |
| 6073434 | 3/4 | 3/4 | 14,0 | 14   | 13,5 | 30 | 30 | 1 | 180,00 |

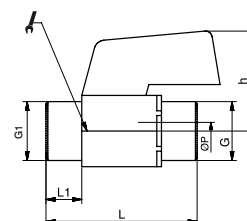


ART. **610**

M/M ball tap with lever



| COD.    | G   | G1  | L1   | L    | P    | h    |    |   |        |
|---------|-----|-----|------|------|------|------|----|---|--------|
| 6101414 | 1/4 | 1/4 | 9,0  | 40,4 | 8,0  | 27,2 | 20 | 1 | 65,15  |
| 6103838 | 3/8 | 3/8 | 10,0 | 42,4 | 8,0  | 27,4 | 20 | 1 | 70,32  |
| 6101212 | 1/2 | 1/2 | 11,6 | 49,7 | 10,0 | 29,4 | 24 | 1 | 106,07 |

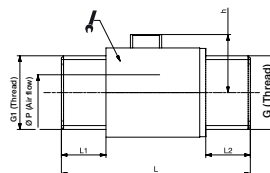


ART. **611**

M/M screwdriver cut ball tap



| COD.    | G   | G1  | L1   | L2   | L    | ØP   | h    |    |   |       |
|---------|-----|-----|------|------|------|------|------|----|---|-------|
| 6111414 | 1/4 | 1/4 | 9,0  | 9,0  | 40,4 | 8,0  | 12,9 | 20 | 1 | 64,35 |
| 6113838 | 3/8 | 3/8 | 10,0 | 10,0 | 42,4 | 8,0  | 12,9 | 20 | 1 | 64,94 |
| 6111212 | 1/2 | 1/2 | 11,6 | 11,6 | 49,7 | 10,0 | 15,4 | 24 | 1 | 99,44 |

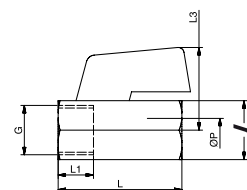


ART. **650**

F/F ball tap with lever



| COD.    | G   | L1  | L    | ØP   | L3   |    |   |       |
|---------|-----|-----|------|------|------|----|---|-------|
| 6501414 | 1/4 | 9,0 | 35,0 | 5,5  | 26,1 | 18 | 1 | 53,69 |
| 6503838 | 3/8 | 7,0 | 38,5 | 8,0  | 27,0 | 20 | 1 | 64,94 |
| 6501212 | 1/2 | 8,5 | 42,0 | 10,0 | 28,9 | 24 | 1 | 99,44 |

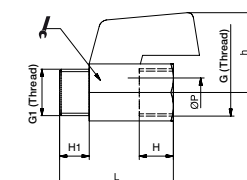


ART. **655**

M/F ball tap with lever



| COD.    | G   | G1  | H1   | H   | L    | P    | h    |    |   |       |
|---------|-----|-----|------|-----|------|------|------|----|---|-------|
| 6551414 | 1/4 | 1/4 | 9,0  | 7,0 | 35,0 | 5,5  | 26,1 | 18 | 1 | 51,00 |
| 6553838 | 3/8 | 3/8 | 10,0 | 7,0 | 38,5 | 8,0  | 27,0 | 20 | 1 | 64,09 |
| 6551212 | 1/2 | 1/2 | 9,0  | 9,3 | 32,0 | 10,0 | 28,9 | 24 | 1 | 86,62 |



# Silencers and flow nozzles

Silencers are made of different materials: stainless steel, bronze, brass and technopolymer. They reduce the noise generated by valves and solenoid valves during the operating cycle in a pneumatic system.

Pneumatic nozzles are used to spread air or steam in a straight, concentrated jet. They generally have a flat, solid or round radial spray jet. When using conventional pneumatic nozzles, air is blown through a single hole.

Made of technopolymer and anodised aluminium, they can be used in a variety of applications: purification systems, fluid cooling and noise abatement.

- **Silencers**

- **Flow nozzle**





## Silencers

# Series S



The silencers metal wire stainless steel, bronze, brass, bronze powder and stainless steel are produced in Italy in accordance with ISO 9002 and are the solution to every need, from the purification of fluids (liquids and gases) to shock and noise absorption of liquids and gases.

## Technical sheet

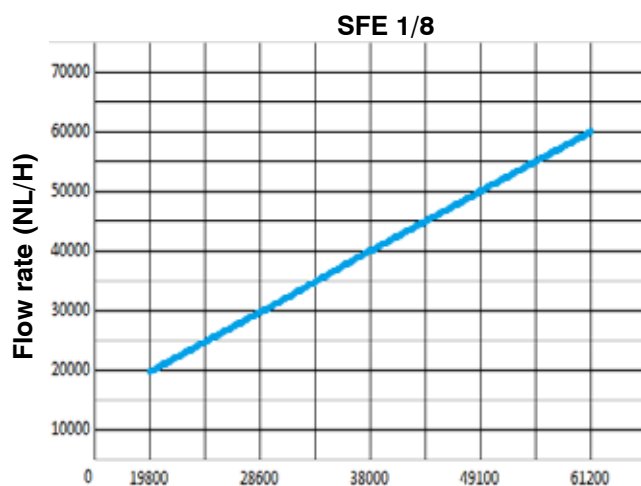
|                                 |                |                                                                                                                                                                                          |
|---------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                | Liquids and gases, compressed air (for information please contact our technical Dept.)                                                                                                   |
| <b>APPLICATIONS</b>             |                | Pneumatic equipment, filtration systems, reduction, abatement and protection related to the use of fluids.                                                                               |
| <b>SUGGESTED TUBES</b>          |                | Normally not applied directly to pipes, however defined according to the applications.                                                                                                   |
| <b>TEMPERATURE AND PRESSURE</b> |                | In pneumatic applications they follow the requirements of other similar components, such as fittings, the salient element, the maximum noise level, is anyway determined at 4 and 6 bar. |
| <b>THREAD TYPE</b>              |                | BSP pipe thread no nickel                                                                                                                                                                |
| <b>MATERIALS</b>                | <b>Bodies</b>  | Brass, stainless steel AISI 304, AISI 316, copper-plated steel, acetal resin and nylon                                                                                                   |
|                                 | <b>Seals</b>   | Acetal resin and nylon AISI 304, AISI 316                                                                                                                                                |
|                                 | <b>Filters</b> | Sintered bronze                                                                                                                                                                          |

## Additional technical informations

All silencers for air compressed illustrated ON the catalog have been classified according to objective evidence got as a result of flow tests and noise tests to which they were subjected by the manufacturer. The flow tests were carried out by varying the pressure upstream via the pressure regulator. The noise tests have been performed in the work environment at two pressure levels: 6 bar and 4 bar.

As an example is shown below the flow chart for the model SFE18 and a summary table of the levels of noise measured at a pressure of 6 bar on the main models (consider that at 4 bar such values fall on average values of about 3-6% depending on the model and size).

| Model | Noise level at 6 BAR (dB) |     |     |     |     |    |
|-------|---------------------------|-----|-----|-----|-----|----|
|       | 1/8                       | 1/4 | 3/8 | 1/2 | 3/4 | 1" |
| SBE   | 75                        | 81  | 82  | 85  |     |    |
| SEB   | 79                        | 78  | 82  | 85  | 94  | 95 |
| SEP   | 73                        | 74  | 85  | 89  | 89  | 90 |
| SFE   | 74                        | 72  | 88  | 90  | 90  | 92 |
| SP    | 72                        | 73  | 84  | 88  | 88  | 89 |
| SVE   | 72                        | 73  | 84  | 88  | 88  | 89 |
| SPL   | 87                        | 84  | 90  | 90  | 91  | 90 |
| SPLF  | 87                        | 90  | 92  | 92  |     |    |

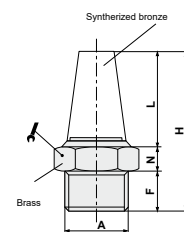


### ART. **SBE**

#### Conical-shaped silencer on hexagonal base



| COD.     | A            | N  | F  | L  | H  |    |     |       |
|----------|--------------|----|----|----|----|----|-----|-------|
| SBE18    | 1/8" BSP     | 8  | 6  | 15 | 29 | 13 | 50  | 8,80  |
| SBE14    | 1/4" BSP     | 8  | 7  | 17 | 32 | 16 | 50  | 14,35 |
| SBE38    | 3/8" BSP     | 7  | 8  | 25 | 40 | 19 | 25  | 22,88 |
| SBE12    | 1/2" BSP     | 9  | 9  | 27 | 45 | 24 | 25  | 41,38 |
| SBE34    | 3/4" BSP     | 10 | 9  | 37 | 56 | 30 | 5   | 82,90 |
| SBE01    | 1" BSP       | 10 | 11 | 45 | 66 | 36 | 5   | 94,30 |
| SBE5MA   | M5"          | 4  | 4  | 9  | 17 | 8  | 100 | 2,40  |
| SBE18FEM | 1/8" FEM BSP | 8  | 7  | 15 | 30 | 13 | 50  | 15,50 |

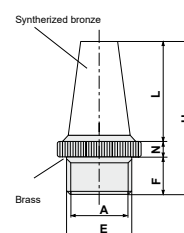


### ART. **SBT**

#### Conical-shaped silencer on a circular base



| COD.  | A        | E  | F  | L  | H    | N   |     |        |
|-------|----------|----|----|----|------|-----|-----|--------|
| SBT18 | 1/8" BSP | 12 | 6  | 15 | 25   | 4   | 100 | 8,83   |
| SBT14 | 1/4" BSP | 16 | 7  | 20 | 30   | 3   | 50  | 13,23  |
| SBT38 | 3/8" BSP | 19 | 8  | 27 | 38   | 3   | 25  | 21,30  |
| SBT12 | 1/2" BSP | 23 | 10 | 28 | 42   | 4   | 25  | 44,50  |
| SBT34 | 3/4" BSP | 29 | 10 | 38 | 52   | 4   | 5   | 81,00  |
| SBT01 | 1" BSP   | 36 | 12 | 46 | 65,5 | 7,5 | 5   | 118,00 |

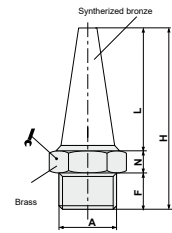


ART. **SAC**

**Thin conical silencer on hexagonal base**



| COD.     | A            | N  | F  | L  | H  |    |     |        |
|----------|--------------|----|----|----|----|----|-----|--------|
| SAC18    | 1/8" BSP     | 8  | 6  | 30 | 44 | 13 | 100 | 10,10  |
| SAC14    | 1/4" BSP     | 8  | 7  | 35 | 50 | 16 | 50  | 20,00  |
| SAC38    | 3/8" BSP     | 7  | 8  | 39 | 54 | 19 | 25  | 30,00  |
| SAC12    | 1/2" BSP     | 9  | 9  | 49 | 67 | 24 | 25  | 62,00  |
| SAC34    | 3/4" BSP     | 10 | 9  | 46 | 65 | 30 | 5   | 95,00  |
| SAC01    | 1" BSP       | 10 | 11 | 56 | 77 | 36 | 5   | 170,00 |
| SAC5MA   | M5"          | 4  | 4  | 18 | 26 | 8  | 100 | 2,00   |
| SAC18FEM | 1/8" FEM BSP | 8  | 7  | 30 | 45 | 13 | 50  | 10,00  |

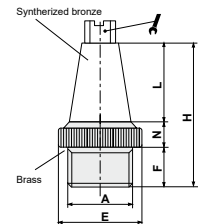


ART. **SBTE-SBTT**

**Silencer with screwdriver cut on a circular base**



| COD.   | A        | E  | F  | L  | H    | N   |    |     |        |
|--------|----------|----|----|----|------|-----|----|-----|--------|
| SBTT18 | 1/8" BSP | 12 | 6  | 15 | 25   | 4   | 6  | 100 | 8,30   |
| SBTT14 | 1/4" BSP | 16 | 7  | 20 | 30   | 3   | 7  | 50  | 13,30  |
| SBTT38 | 3/8" BSP | 19 | 8  | 27 | 38   | 3   | 10 | 25  | 22,50  |
| SBTT12 | 1/2" BSP | 23 | 10 | 28 | 42   | 4   | 13 | 25  | 40,50  |
| SBTT34 | 3/4" BSP | 29 | 10 | 38 | 52   | 4   | 17 | 10  | 73,00  |
| SBTT01 | 1" BSP   | 36 | 12 | 46 | 65,5 | 7,5 | 22 | 10  | 123,00 |
| SBTE18 | 1/8" BSP | 12 | 6  | 15 | 25   | 4   | 6  | 100 | 8,40   |
| SBTE14 | 1/4" BSP | 16 | 7  | 20 | 30   | 3   | 7  | 50  | 13,40  |
| SBTE38 | 3/8" BSP | 19 | 8  | 27 | 38   | 3   | 10 | 25  | 22,70  |
| SBTE12 | 1/2" BSP | 23 | 10 | 28 | 42   | 4   | 13 | 25  | 40,70  |
| SBTE34 | 3/4" BSP | 29 | 10 | 38 | 52   | 4   | 17 | 5   | 73,50  |
| SBTE01 | 1" BSP   | 36 | 12 | 46 | 65,5 | 7,5 | 22 | 5   | 124,00 |

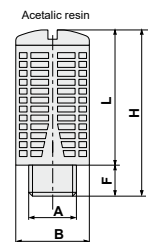


ART. **SPL**

**Dynamic self-cleaning silencer**



| COD.  | A        | B    | F  | L  | H   |     |        |
|-------|----------|------|----|----|-----|-----|--------|
| SPL18 | 1/8" BSP | 15   | 8  | 27 | 35  | 100 | 4,04   |
| SPL14 | 1/4" BSP | 19,5 | 9  | 36 | 45  | 50  | 5,86   |
| SPL38 | 3/8" BSP | 24,5 | 11 | 47 | 58  | 50  | 13,10  |
| SPL12 | 1/2" BSP | 24,5 | 11 | 47 | 58  | 50  | 15,86  |
| SPL34 | 3/4" BSP | 48   | 18 | 96 | 114 | 10  | 98,00  |
| SPL01 | 1" BSP   | 48   | 18 | 96 | 114 | 10  | 117,50 |

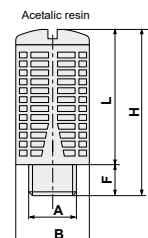


ART. **SPLB**

**Dynamic self-cleaning silencer - Black**



| COD.   | A        | B    | F  | L  | H   |     |        |
|--------|----------|------|----|----|-----|-----|--------|
| SPLB18 | 1/8" BSP | 15   | 8  | 27 | 35  | 100 | 4,04   |
| SPLB14 | 1/4" BSP | 19,5 | 9  | 36 | 45  | 50  | 5,86   |
| SPLB38 | 3/8" BSP | 24,5 | 11 | 47 | 58  | 50  | 13,10  |
| SPLB12 | 1/2" BSP | 24,5 | 11 | 47 | 58  | 50  | 15,86  |
| SPLB34 | 3/4" BSP | 48   | 18 | 96 | 114 | 10  | 98,00  |
| SPLB01 | 1" BSP   | 48   | 18 | 96 | 114 | 10  | 117,50 |



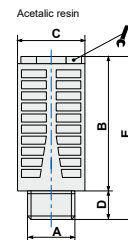
ART. **SPLF**

**Static felt silencer**



| COD.   | A        | B    | C    | D   | E   |     |     |       |
|--------|----------|------|------|-----|-----|-----|-----|-------|
| SPLF18 | 1/8" BSP | 28   | 16   | 6   | 34  | 10  | 100 | 2,24  |
| SPLF14 | 1/4" BSP | 36,5 | 19,5 | 6,5 | 43  | 13  | 50  | 3,96  |
| SPLF38 | 3/8" BSP | 46   | 24   | 10  | 56  | 17  | 50  | 8,02  |
| SPLF12 | 1/2" BSP | 46   | 24   | 10  | 56  | 17  | 50  | 9,38  |
| SPLF34 | 3/4" BSP | 95   | 48   | 16  | 111 | (*) | 10  | 65,00 |
| SPLF01 | 1" BSP   | 95   | 48   | 16  | 111 | (*) | 10  | 70,00 |

(\*) Screwdriver cut

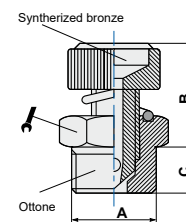


ART. **SVE**

**Silencer with regulating valve**



| COD.  | A        | B min | B max | C  |    |    |        |
|-------|----------|-------|-------|----|----|----|--------|
| SVE18 | 1/8" BSP | 20    | 22    | 6  | 13 | 50 | 16,20  |
| SVE14 | 1/4" BSP | 22    | 24    | 8  | 15 | 50 | 23,52  |
| SVE38 | 3/8" BSP | 25    | 28    | 10 | 22 | 25 | 57,00  |
| SVE12 | 1/2" BSP | 26    | 29    | 11 | 22 | 25 | 57,55  |
| SVE34 | 3/4" BSP | 32    | 37    | 12 | 30 | 5  | 136,50 |
| SVE01 | 1" BSP   | 32    | 37    | 12 | 36 | 5  | 195,00 |

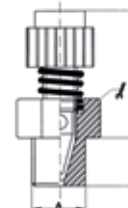


ART. **SVEX-316**

**Stainless steel AISI 316 silencer with regulating valve**



| COD.       | A        | B min | B max | C |    |   |       |
|------------|----------|-------|-------|---|----|---|-------|
| SVE18X-316 | 1/8" BSP | 20    | 22    | 6 | 13 | 1 | 14,70 |
| SVE14X-316 | 1/4" BSP | 22    | 24    | 8 | 15 | 1 | 21,90 |

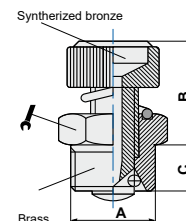


ART. **RBP**

**Silencer with regulating valve**



| COD.  | A        | B min | B max | C    |    |    |       |
|-------|----------|-------|-------|------|----|----|-------|
| RBP18 | 1/8" BSP | 14    | 19    | 6    | 12 | 50 | 10,85 |
| RBP14 | 1/4" BSP | 17    | 22    | 8    | 15 | 50 | 17,50 |
| RBP38 | 3/8" BSP | 18    | 24    | 9    | 19 | 25 | 34,80 |
| RBP12 | 1/2" BSP | 18    | 24    | 10,5 | 22 | 10 | 50,00 |

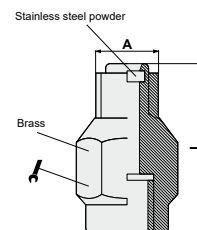


ART. **SM**

**Pressure damper**



| COD.   | A        | L  |    |    |        |
|--------|----------|----|----|----|--------|
| SM1018 | 1/8" BSP | 30 | 14 | 50 | 17,00  |
| SM2014 | 1/4" BSP | 36 | 19 | 25 | 43,00  |
| SM3038 | 3/8" BSP | 45 | 27 | 25 | 120,00 |
| SM4012 | 1/2" BSP | 50 | 20 | 25 | 130,00 |

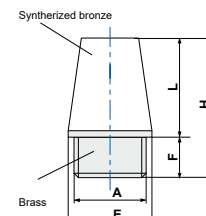


ART. **SC**

**Conical-shaped silencer on a circular base**



| COD.  | A        | E  | F   | L   | H  |     |        |
|-------|----------|----|-----|-----|----|-----|--------|
| SC18  | 1/8" BSP | 12 | 6   | 15  | 21 | 100 | 6,19   |
| SC14  | 1/4" BSP | 15 | 6   | 19  | 25 | 50  | 11,40  |
| SC38  | 3/8" BSP | 19 | 8   | 28  | 36 | 25  | 26,60  |
| SC12  | 1/2" BSP | 23 | 10  | 33  | 43 | 25  | 41,00  |
| SC34  | 3/4" BSP | 29 | 13  | 40  | 53 | 5   | 75,50  |
| SC01  | 1" BSP   | 36 | 15  | 48  | 63 | 5   | 133,00 |
| SC5MA | M5"      | 6  | 4,5 | 8,5 | 13 | 100 | 1,46   |

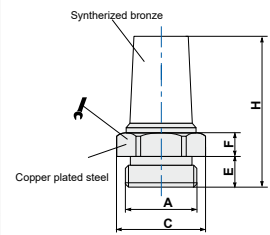


ART. **SEB**

**Conical-shaped silencer on hexagonal base**



| COD.   | A        | C    | E   | F   | H    |    |     |         |
|--------|----------|------|-----|-----|------|----|-----|---------|
| SEB18  | 1/8" BSP | 12,6 | 4,5 | 3,8 | 20,5 | 12 | 100 | 47,00   |
| SEB14  | 1/4" BSP | 16   | 6   | 4,5 | 26,5 | 15 | 50  | 88,00   |
| SEB38  | 3/8" BSP | 20   | 7   | 5,4 | 33,9 | 19 | 25  | 22,20   |
| SEB12  | 1/2" BSP | 24,5 | 8   | 7   | 40,5 | 23 | 25  | 311,00  |
| SEB34  | 3/4" BSP | 32   | 9   | 7,5 | 51,5 | 30 | 5   | 619,00  |
| SEB01  | 1" BSP   | 38,5 | 11  | 9   | 66   | 36 | 5   | 1283,00 |
| SEB5MA | M5"      | 8    | 5,5 | 3,5 | 17   | 7  | 100 | 17,00   |

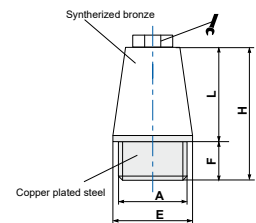


ART. **SET**

**Hexagonal head silencer**



| COD.   | A        | E    | F   | L  | H    |    |     |         |
|--------|----------|------|-----|----|------|----|-----|---------|
| SET18  | 1/8" BSP | 11,5 | 4,5 | 13 | 17,5 | 8  | 100 | 53,00   |
| SET14  | 1/4" BSP | 15   | 6   | 18 | 24   | 10 | 50  | 92,00   |
| SET38  | 3/8" BSP | 19   | 7   | 24 | 31   | 13 | 25  | 201,00  |
| SET12  | 1/2" BSP | 23   | 8   | 29 | 37   | 14 | 25  | 321,00  |
| SET34  | 3/4" BSP | 30   | 9   | 41 | 50   | 19 | 5   | 640,00  |
| SET01  | 1" BSP   | 37   | 11  | 51 | 62   | 24 | 5   | 1157,00 |
| SET5MA | M5"      | 8,5  | 5   | 15 | 20   | 27 | 100 | 28,00   |

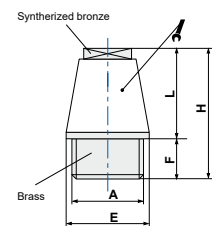


ART. **SCQ**

**Square head silencer**



| COD.  | A        | E  | F  | L  | H  |    |     |        |
|-------|----------|----|----|----|----|----|-----|--------|
| SCQ18 | 1/8" BSP | 12 | 6  | 15 | 21 | 7  | 100 | 7,60   |
| SCQ14 | 1/4" BSP | 15 | 6  | 19 | 25 | 9  | 50  | 14,50  |
| SCQ38 | 3/8" BSP | 19 | 8  | 28 | 38 | 10 | 25  | 25,00  |
| SCQ12 | 1/2" BSP | 23 | 10 | 33 | 43 | 14 | 25  | 47,00  |
| SCQ34 | 3/4" BSP | 29 | 13 | 40 | 53 | 17 | 5   | 102,00 |
| SCQ01 | 1" BSP   | 36 | 15 | 48 | 63 | 23 | 5   | 166,50 |

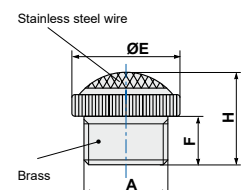


ART. **SFT**

**Square head silencer**



| COD.   | A        | F  | H  | ØE |     |       |
|--------|----------|----|----|----|-----|-------|
| SFT18  | 1/8" BSP | 6  | 13 | 12 | 100 | 5,30  |
| SFT14  | 1/4" BSP | 7  | 14 | 16 | 50  | 9,50  |
| SFT38  | 3/8" BSP | 8  | 18 | 19 | 25  | 12,60 |
| SFT12  | 1/2" BSP | 10 | 19 | 23 | 25  | 23,50 |
| SFT34  | 3/4" BSP | 10 | 22 | 29 | 5   | 31,50 |
| SFT01  | 1" BSP   | 12 | 23 | 36 | 5   | 53,70 |
| SFT5MA | M5"      | 5  | 12 | 11 | 100 | 4,50  |

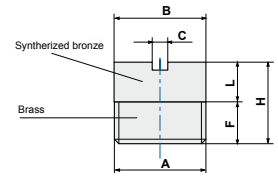


ART. **STT**

**Cap silencer with screwdriver cut**



| COD.  | A        | B  | F  | L  | H  | C   |     |       |
|-------|----------|----|----|----|----|-----|-----|-------|
| STT18 | 1/8" BSP | 10 | 6  | 6  | 12 | 1,5 | 100 | 4,20  |
| STT14 | 1/4" BSP | 13 | 6  | 6  | 12 | 1,5 | 50  | 7,40  |
| STT38 | 3/8" BSP | 17 | 7  | 8  | 15 | 1,5 | 25  | 14,80 |
| STT12 | 1/2" BSP | 21 | 10 | 8  | 18 | 1,5 | 25  | 21,70 |
| STT34 | 3/4" BSP | 26 | 13 | 9  | 22 | 1,5 | 5   | 32,20 |
| STT01 | 1" BSP   | 33 | 14 | 11 | 25 | 1,5 | 5   | 68,00 |

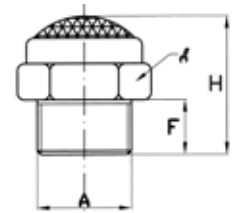


ART. **SFE**

**Cap silencer with screwdriver cut**



| COD.     | A            | F  | H  |    |     |       |
|----------|--------------|----|----|----|-----|-------|
| SFE18    | 1/8" BSP     | 6  | 15 | 13 | 100 | 6,18  |
| SFE14    | 1/4" BSP     | 7  | 18 | 16 | 50  | 11,97 |
| SFE38    | 3/8" BSP     | 8  | 20 | 19 | 50  | 15,36 |
| SFE12    | 1/2" BSP     | 10 | 22 | 24 | 25  | 23,95 |
| SFE34    | 3/4" BSP     | 10 | 26 | 30 | 25  | 34,19 |
| SFE01    | 1" BSP       | 12 | 28 | 36 | 10  | 58,00 |
| SFE5MA   | M5"          | 4  | 8  | 8  | 100 | 1,76  |
| SFE18FEM | 1/8" FEM BSP | 7  | 18 | 14 | 50  | 8,60  |

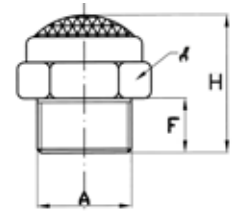


ART. **SFEX**

**Stainless steel AISI 304 cap silencer on hexagonal base**



| COD.   | A        | F  | H  |    |     |       |
|--------|----------|----|----|----|-----|-------|
| SFEXM5 | M5       | 4  | 8  | 8  | 100 | 1,70  |
| SFEX18 | 1/8" BSP | 6  | 15 | 13 | 50  | 5,70  |
| SFEX14 | 1/4" BSP | 7  | 18 | 16 | 50  | 11,40 |
| SFEX38 | 3/8" BSP | 8  | 20 | 19 | 50  | 16,00 |
| SFEX12 | 1/2" BSP | 10 | 22 | 24 | 25  | 24,30 |
| SFEX34 | 3/4" BSP | 10 | 26 | 30 | 5   | 35,00 |
| SFEX01 | 1" BSP   | 12 | 28 | 36 | 5   | 54,40 |

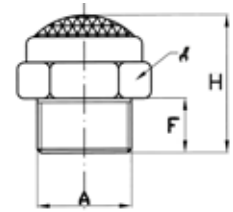


ART. **SFEX NPT-316**

**Stainless steel AISI 316, NPT thread, cap silencer on hexagonal base**



| COD.          | A        | F  | H  |    |   |        |
|---------------|----------|----|----|----|---|--------|
| SFE18XNPT-316 | 1/8" NPT | 10 | 18 | 13 | 1 | 7,60   |
| SFE14XNPT-316 | 1/4" NPT | 15 | 25 | 16 | 1 | 14,80  |
| SFE38XNPT-316 | 3/8" NPT | 15 | 26 | 19 | 1 | 19,80  |
| SFE12XNPT-316 | 1/2" NPT | 19 | 33 | 24 | 1 | 36,80  |
| SFE34XNPT-316 | 3/4" NPT | 20 | 35 | 30 | 1 | 50,60  |
| SFE01XNPT-316 | 1" NPT   | 24 | 45 | 36 | 1 | 118,10 |

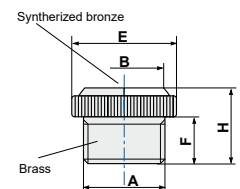


ART. **SBP**

**Flat silencer on circular base**



| COD.   | A        | B  | E  | F  | H    |     |       |
|--------|----------|----|----|----|------|-----|-------|
| SBP18  | 1/8" BSP | 11 | 12 | 6  | 12   | 100 | 5,60  |
| SBP14  | 1/4" BSP | 14 | 16 | 7  | 13   | 50  | 10,00 |
| SBP38  | 3/8" BSP | 17 | 19 | 8  | 17   | 25  | 15,00 |
| SBP12  | 1/2" BSP | 22 | 23 | 10 | 18   | 25  | 25,40 |
| SBP34  | 3/4" BSP | 28 | 29 | 10 | 20   | 5   | 32,80 |
| SBP01  | 1" BSP   | 35 | 36 | 12 | 21   | 5   | 56,50 |
| SBP5MA | M5"      | 11 | 12 | 5  | 11,5 | 100 | 4,50  |

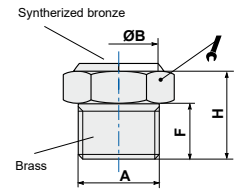


ART. **SEP**

**Flat silencer on hexagonal base**



| COD.     | A            | B  | F  | H  |    |     |        |
|----------|--------------|----|----|----|----|-----|--------|
| SEP18    | 1/8" BSP     | 11 | 6  | 14 | 13 | 100 | 52,00  |
| SEP14    | 1/4" BSP     | 14 | 7  | 17 | 16 | 50  | 86,00  |
| SEP38    | 3/8" BSP     | 17 | 8  | 18 | 19 | 25  | 130,00 |
| SEP12    | 1/2" BSP     | 22 | 10 | 20 | 24 | 25  | 203,00 |
| SEP34    | 3/4" BSP     | 28 | 10 | 23 | 30 | 5   | 285,00 |
| SEP01    | 1" BSP       | 35 | 12 | 25 | 36 | 5   | 475,00 |
| SEP5MA   | M5"          | 7  | 5  | 12 | 8  | 100 | 15,00  |
| SEP18FEM | 1/8" FEM BSP | 11 | 7  | 17 | 14 | 50  | 6,00   |

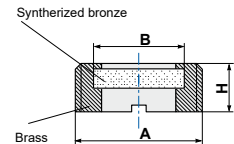


ART. **SP**

**Retractable flat silencer**



| COD. | A        | B  | H  |     |       |
|------|----------|----|----|-----|-------|
| SP18 | 1/8" BSP | 6  | 5  | 100 | 11,00 |
| SP14 | 1/4" BSP | 8  | 6  | 50  | 26,00 |
| SP38 | 3/8" BSP | 10 | 7  | 25  | 50,00 |
| SP12 | 1/2" BSP | 15 | 8  | 25  | 10,70 |
| SP34 | 3/4" BSP | 20 | 9  | 5   | 14,00 |
| SP01 | 1" BSP   | 26 | 10 | 5   | 26,50 |

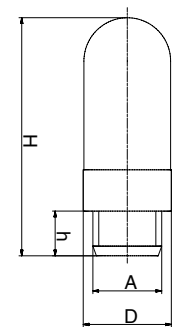


ART. **SPL-P**

**Polyethylene silencer with threaded base**



| COD.    | A   | D    | H     | h    |    |       |
|---------|-----|------|-------|------|----|-------|
| SPLP-M5 | M5  | 6,5  | 21,5  | 4,0  | 50 | 0,30  |
| SPLP-18 | 1/8 | 12,5 | 34,5  | 5,5  | 50 | 1,81  |
| SPLP-14 | 1/4 | 15,5 | 42,5  | 8,0  | 50 | 3,07  |
| SPLP-38 | 3/8 | 18,5 | 67,5  | 11,5 | 50 | 6,34  |
| SPLP-12 | 1/2 | 23,5 | 79,0  | 11,0 | 50 | 14,00 |
| SPLP-34 | 3/4 | 38,5 | 139,8 | 16,0 | 50 | 49,50 |
| SPLP-1  | 1"  | 49,0 | 154,0 | 21,0 | 50 | 82,66 |

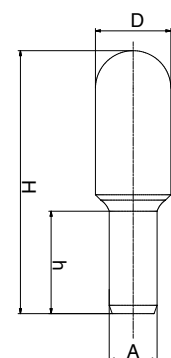


ART. **SPL-R**

**Plug-in polyethylene silencer**



| COD.    | A    | D    | H    | h    |    |      |
|---------|------|------|------|------|----|------|
| SPLR-04 | 4,0  | 7,0  | 32,0 | 16,0 | 50 | 3,30 |
| SPLR-06 | 6,0  | 12,5 | 45,0 | 20,5 | 50 | 1,65 |
| SPLR-08 | 8,0  | 13,5 | 43,5 | 21,5 | 50 | 1,85 |
| SPLR-10 | 10,0 | 15,5 | 57,5 | 26,5 | 50 | 3,19 |
| SPLR-12 | 12,0 | 18,5 | 83,0 | 29,0 | 50 | 6,35 |



## Flow nozzles

### Series U



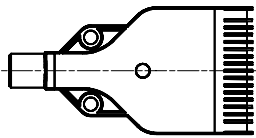
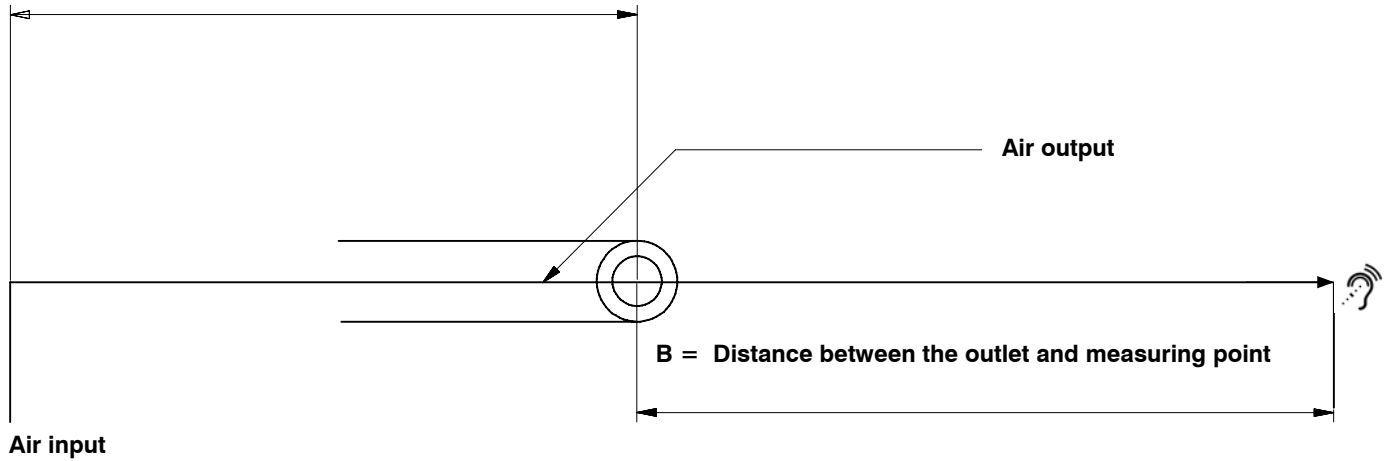
### Technical sheet

|                                 |                         |                                                                                                                                                                                                                                    |
|---------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   |                         | Liquids and gases, compressed air (for information contact our Technical Dept. )                                                                                                                                                   |
| <b>APPLICATIONS</b>             |                         | Cleaning and fluid cooling systems, noise abatement, uses as air curtains, irrigation systems                                                                                                                                      |
| <b>SUGGESTED TUBES</b>          |                         | Normally not applied directly to pipes, however defined according to the applications.                                                                                                                                             |
| <b>TEMPERATURE AND PRESSURE</b> |                         | In pneumatic applications they follow the requirements of other similar components,, stesso materiale, quali la raccorderia. . In the POM versions indeformability is guaranteed up to +90°C while impact resistance down to -40°C |
| <b>THREAD TYPE</b>              |                         | BSPP 1/4 pipe thread                                                                                                                                                                                                               |
| <b>MATERIALS</b>                | <b>Flat body</b>        | ABS-GP40 norme ASTM/IEC/UL                                                                                                                                                                                                         |
|                                 | <b>Round body</b>       | POM shockproof                                                                                                                                                                                                                     |
|                                 | <b>Round model (AL)</b> | Alluminium                                                                                                                                                                                                                         |



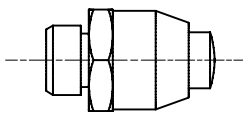
## Noise level test

A = Distance between the air inlet and outlet point



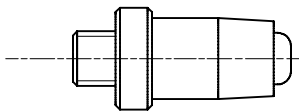
| Multi channels flat nozzle |               |
|----------------------------|---------------|
| Input pressure (Bar)       | Max peak (dB) |
| 2                          | 61            |
| 4                          | 66            |
| 6                          | 71            |
| 8                          | 75            |

A = 270 mm  
B = 400 mm



| Aluminium round nozzle |               |
|------------------------|---------------|
| Input pressure (Bar)   | Max peak (dB) |
| 2                      | 65            |
| 4                      | 69            |
| 6                      | 75            |
| 8                      | 79            |

A = 200 mm  
B = 400 mm



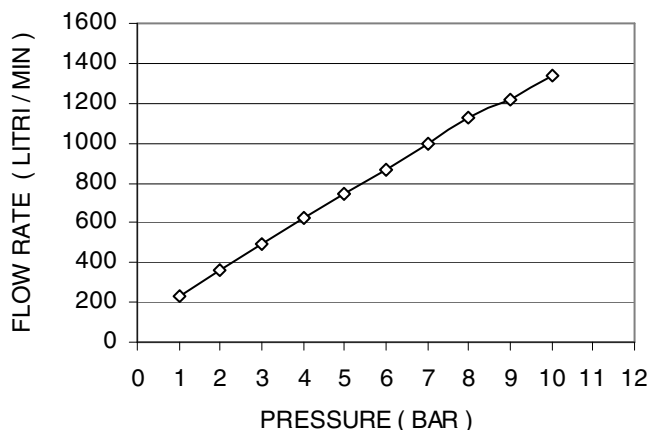
| Plastic round nozzle |               |
|----------------------|---------------|
| Input pressure (Bar) | Max peak (dB) |
| 2                    | 65            |
| 4                    | 69            |
| 6                    | 75            |
| 8                    | 79            |

A = 240 mm  
B = 400 mm

## Technical sheet

### General test conditions:

Fluid: Filtered air - Temperature: 20 ° C - Pressure: 1 ... 10 bar



| Pressure (bar) | Flow rate (l/min) |
|----------------|-------------------|
| 1              | 228               |
| 2              | 360               |
| 3              | 490               |
| 4              | 620               |
| 5              | 740               |
| 6              | 870               |
| 7              | 1000              |
| 8              | 1130              |
| 9              | 1220              |
| 10             | 1340              |

### ART. 83892600

#### Circular multi-channel nozzle ABS

##### Circular multi-channel nozzle POM.

This model combines the undisputed advantages of the flat jet nozzle with a broader range of application and is ideal for stationary tasks. Note: the blowing force was measured 50 mm in front of the nozzle. The sound levels were measured in compliance with DIN 45635. When installing the multi-channel nozzles, the full thread length should be used.

##### Dimensions:

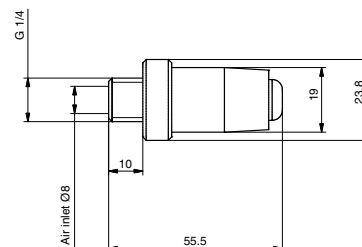
55 x 23 x 10  
(length x ext. diam. x thread length)

##### Tube connection:

R1/4" (external thread on air inlet)

##### Characteristics:

Impact-resistant down to -40°C  
Dimensional stability up to +90°C  
Resistant to fuels, mineral oils, lubricants and commonly used solvents.  
Cod. 838.926



### ART. 923702

#### Circular multi-channel nozzle AL

##### Circular multi-channel nozzle in aluminum.

Recommended for particularly harsh operating conditions, such as high temperatures (foundries, etc.)  
Principle application: blow guns.

**Note:** the blowing force was measured 50 mm in front of the nozzle. The sound levels were measured in compliance with DIN 45635.

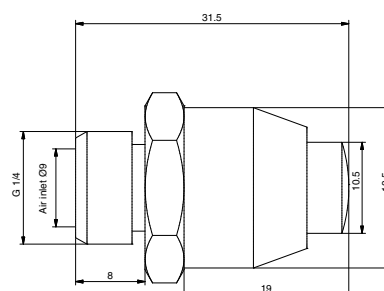
##### Dimensions:

31,5 x 18,5 x 8  
(length x ext. diam. x thread length)

##### Tube connection:

R1/4" (external thread on air inlet)

Cod.923.702



ART. **06952300T**

**Multi-channel flat jet nozzle**

**Titan jet**



**Dimensions:**

90 x 47 x 14.5  
(length x width x height)

**Tube connection:**

R1/4" (external thread on air inlet)

**Characteristics:**

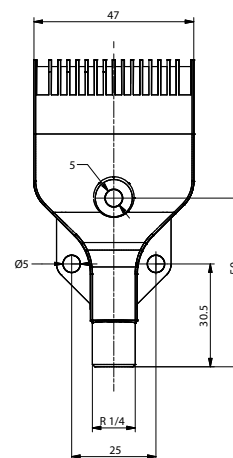
Impact-resistant down to -40°C  
Dimensional stability up to +90°C  
Resistant to fuels, mineral oils, lubricants  
and commonly used solvents.

**Form of delivery:**

Multi-channel flat jet nozzle

**Concentrated blowing power:**

The parallel arrangement of the component air streams gives an optimum blow-out width for work piece conveyance. Even the smallest finished parts, e.g. on lathes, can be accurately and efficiently blown out. The new design enables the interchangeability with the main models available on the market and grant a larger blow-out line.



# Tubes and accessories

Polyurethane, Polyamide and Polyurethane/Copolyester hoses together with terminal blocks will help you realise your applications. A series of distribution manifolds made of anodised aluminium complete the line-up.

- **Plastic hoses**
- **Terminals and tube cutter**
- **Aluminium manifolds**



## Plastic hoses

# Series AC



The polyurethane, polyamide and copolyester tubes are produced in Italy according to the reference ISO norms as warranty of high quality level and answer to the followings technical specifications and applications.

## Technical sheet

|                                 |                                                                                                                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>                   | Liquids and gases, compressed air (for information contact our Technical Dept.)                                    |
| <b>APPLICATIONS</b>             | Pneumatic circuits, low pressure hydraulic applications, according to DIN 3861-3870 norms.                         |
| <b>CONNECTING FITTINGS</b>      | Normally not applied directly to pipes, however present in installations and defined according to application.     |
| <b>TEMPERATURE AND PRESSURE</b> | Temperatures and pressures usually depend by the features of the employed tubes and are detailed on the next pages |
| <b>MATERIALS</b>                | Polyuerathane TPU<br>Polyamide PA12<br>Polyuerathane / Copolyester TPA                                             |



## POLYURETHANE TUBE

A material with exceptional mechanical properties, this tube is designed to solve the problems associated with particularly heavy-duty applications.

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Technical property:</b> | <i>Hardness Shore A:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 98               |
|                            | <i>Temperature working range:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -20°C +70°C      |
|                            | <i>Breaking Elongation:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 540% (DIN 53504) |
|                            | <i>Density (gr./cm<sup>3</sup>):</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.18 (DIN 53479) |
|                            | <i>Abrasion loss (mm<sup>3</sup>):</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 55 (DIN 53516)   |
|                            | <i>Tensile strenght (KN/m):</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 120 (DIN 53515)  |
| <b>Technical features:</b> | <p>Excelent resistance at the abrasion.<br/>High flexibility at the lowest temperatures.<br/>Good resistance at the atmospheric effects.<br/>Good ageing process<br/>Extremely endeavor resistance.<br/>Very low "click" and "stress cracking" effects.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |
| <b>Other features:</b>     | <p><i>Tolerances:</i> Outer diameter +/- 0,1 mm Thickness +/-0,1 mm<br/><i>Available colours:</i> Light blue, Red, Black, Green, Yellow, Neutral, Grey, Cristal blue, Cristal<br/><i>Packing:</i> 100 mt. Rolls in plastic film</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
| <b>Main application:</b>   | Pneumatic, Robotic, agriculture, garage, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |
| <b>General notices:</b>    | <p>Polyurethane tube material has excelent mechanical features and it is particularly addressed to mostly solve the heavy applications. Anyway polyurethanes, although they are much resistant at the endeavor and at the flexion stress, tend to keep heat when working with continuous variable pressure and in case of high atmosphere temperature it could bring to the swelling or breaking of the tubing itself, specially on sizes 8x6, 10x8, 14x12. Polyurethane is normally also resistant to ozone, hydrocarbon, oils and greases, fuel and moderate chemical solutions. It is not, or very low, resistant to concentrated acids, ketons, esters and chlhoride hydrocarbons.</p> <p>The int. x ext. diameter, material type and batch number are marked on the tube for traceability.<br/>Each batch of material is accompanied by a certificate of conformity.</p> |                  |

## POLYAMIDE TUBE

The polyamide is the most diffused material among the technical applications for its characteristics of flexibility and mechanical performances.

|                         |                                                                                                                                                                                                                                                                   |                     |                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|
| <b>Characteristics:</b> | High mechanical properties to traction and to continuous & alternate flexion, notable flexibility, good stability to heat, notable resistance to ageing, low water absorption, notable resistance to hydrocarbons and oils and good inertness to chemical agents. |                     |                       |
|                         | <b>Mechanical/physical properties</b>                                                                                                                                                                                                                             | <b>Trial method</b> | <b>Value</b>          |
|                         | <i>Density:</i>                                                                                                                                                                                                                                                   | ASTM D-792          | 1,03g/cm <sup>3</sup> |
|                         | <i>Hardness :</i>                                                                                                                                                                                                                                                 | ASTM D-2240         | 65ShD                 |
|                         | <i>Elongation at break:</i>                                                                                                                                                                                                                                       | ASTM-D638           | >300%                 |
|                         | <i>Elastic modulus:</i>                                                                                                                                                                                                                                           | ASTM D-790          | 410MPa                |
|                         | <i>Working temperature:</i>                                                                                                                                                                                                                                       | -                   | -40°C/+70°C           |
|                         | <p><i>Tolerances:</i> Outer diameter +/- 0,1 mm Thickness +/-0,1 mm<br/><i>Available colours:</i> Light blue, black and neutral.<br/><i>Packing:</i> 100 mt. Rolls in plastic film</p>                                                                            |                     |                       |
| <b>Application:</b>     | This kind of material is particularly indicated for the realization of tubing for pneumatic, robotic, steel, industrial machineries, ecc..., when there is the necessity of notable flexibility.                                                                  |                     |                       |
| <b>Reference norms:</b> | ISO 1874 - DIN 73378 - DIN 74324                                                                                                                                                                                                                                  |                     |                       |

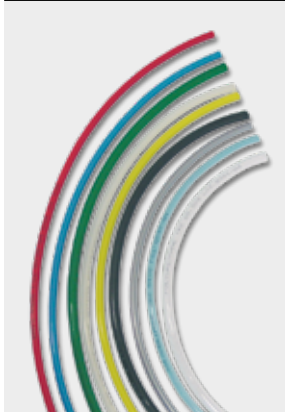
## POLYURETHANE TUBE/COPOLYESTER

The "coex", copolyester coated with polyurethane, is a material that has made its entry into the pneumatic applications in the recent years, in particular to meet the needs of applications and availability. Today is a good alternative for both, technical and economic reasons, to the tubes storially used.

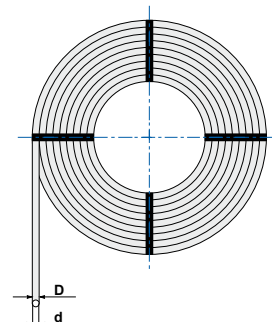
|                         |                                                                                                                                                                                                                                                                                                                                                              |                     |                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------|
| <b>Characteristics:</b> | Very high flexibility also at low temperatures, excellent elastic return, low sensibility to "click" and "stress cracking" effect, excellent resistance to abrasion, good resistance to atmospheric agents, good aging, extremely resistant to fatigue, good chemical resistance, excellent resistance to cut and lubrication oil at low/medium temperature. |                     |                        |
|                         | <b>Mechanical/physical properties</b>                                                                                                                                                                                                                                                                                                                        | <b>Trial method</b> | <b>Value</b>           |
|                         | <i>Hardness:</i>                                                                                                                                                                                                                                                                                                                                             | DIN 53505 - ISO868  | 95 ShA                 |
|                         | <i>Water absorption:</i>                                                                                                                                                                                                                                                                                                                                     | a 23°C 50% r.h.     | <1%                    |
|                         | <i>Density:</i>                                                                                                                                                                                                                                                                                                                                              | DIN 53479 - ISO1183 | 1,20 g/cm <sup>2</sup> |
|                         | <i>Elongation at break:</i>                                                                                                                                                                                                                                                                                                                                  | DIN 53504 - ISO37   | 500%                   |
|                         | <i>Flexural elastic modulus:</i>                                                                                                                                                                                                                                                                                                                             | ASTN D790           | 110 Mpa                |
|                         | <i>Abrasion loss:</i>                                                                                                                                                                                                                                                                                                                                        | DIN 53516 - ISO4649 | 25 mm3                 |
|                         | <i>Break resistance:</i>                                                                                                                                                                                                                                                                                                                                     | DIN 53504 - ISO37   | 55 Mpa                 |
|                         | <i>Working temperature:</i>                                                                                                                                                                                                                                                                                                                                  | -                   | 40°C - +65°C           |
|                         | <p><i>Tolerances:</i> External diameter +/- 0,1 mm (+/- 0,15 from diam. 10mm).<br/>Internal diameter +/- 0,2 mm (+/- 0,3 from diam. 7,5mm).<br/><i>Available colours:</i> See technical page 197<br/><i>Packing:</i> 100 mt. Rolls in plastic film</p>                                                                                                       |                     |                        |
| <b>Application:</b>     | Tubes made with this row material have all the credentials to fit in pneumatics, agriculture, in general when is required resistance with grease, emulsified oils, lubrication. The use with continuous pulsating pressures can create heat accumulation.                                                                                                    |                     |                        |

ART. **TPU**

**Polyurethane tube**



| COD.    | Dxd mm   | P bar  | P1 bar  | R mm | ☉   |
|---------|----------|--------|---------|------|-----|
| TPU0315 | 3 x 1,5  | 13,5   | 54      | 7,5  | 100 |
| TPU0402 | 4 x 2    | 15     | 60      | 11   | 100 |
| TPU0425 | 4 x 2,5  | 10(10) | 40(40)  | 15   | 100 |
| TPU0604 | 6 x 4    | 10     | 40(36)  | 18   | 100 |
| TPU0805 | 8 x 5    | 13     | 52      | 25   | 100 |
| TPU0855 | 8 x 5,5  | 9 (8)  | 37 (34) | 30   | 100 |
| TPU0806 | 8 x 6    | 7      | 28      | 35   | 100 |
| TPU1065 | 10 x 6,5 | 10(7)  | 40(28)  | 30   | 100 |
| TPU1075 | 10 x 7,5 | 6,5(6) | 27(25)  | 40   | 100 |
| TPU1008 | 10 x 8   | 5,5    | 22      | 45   | 100 |



**Ordering code**

**TPU 0315 B**

**TYPE**

TPU = Polyurethane tube 98 Shore

**EXTERNAL DIAMETER - INTERNAL DIAMETER**

- 0315** = 3 x 1,5
- 0402** = 4 x 2
- 0425** = 4 x 2,5
- 0604** = 6 x 4
- 0505** = 8 x 5
- 0855** = 8 x 5,5
- 0806** = 8 x 6
- 1065** = 10 x 6,5
- 1075** = 10 x 7,5
- 1008** = 10 x 8

**COLOURS**

- Blank** = Neutral
- B** = Black
- BU** = Light Blue
- G** = Green
- R** = Red
- GR** = Grey
- T** = Transparent/Crystal
- Y** = Yellow

For other colours please contact our sales department

**Adjusting scale on atmospheric temperature basis**

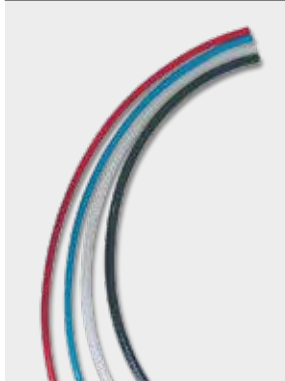
**Correction value scale for working pressure in consideration of the temperature variation**

| Temp °C            | -20    | 0     | +23 | +30    | +40    | +50    | +60    | +70    |
|--------------------|--------|-------|-----|--------|--------|--------|--------|--------|
| <b>Coefficient</b> | x 1,87 | x 1,4 | x 1 | x 0,84 | x 0,70 | x 0,60 | x 0,52 | x 0,47 |

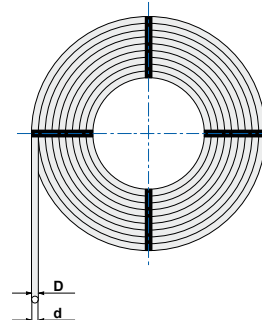
**Legend**

- D** = External diameter
- d** = Internal diameter
- P** = Working pressure
- P1** = Breaking pressure
- R** = Bending radius
- ☉ = Roll packing (mt)

In the application choice the user must keep in mind the different use variables (pressure, temperature, environment conditions) and all the things that can interfere with the application. These information must be considered only as a general indication. The validation of the application is always at the user charge. Medify keeps the right to modify or adjourn the technical data in any moment without notify duty. This document has no contract value.

**ART. PA12**
**Polyamide tube**


| COD.         | Dxd mm  | P bar | P1 bar | R mm |     |
|--------------|---------|-------|--------|------|-----|
| PA120402 (*) | 4 x 2   | 37    | 130    | 20   | 100 |
| PA120425     | 4 x 2,5 | 32    | 112    | 20   | 100 |
| PA120427     | 4 x 2,7 | 23    | 80     | 25   | 100 |
| PA120604     | 6 x 4   | 26    | 90     | 30   | 100 |
| PA120806     | 8 x 6   | 20    | 70     | 40   | 100 |
| PA121007 (*) | 10 x 7  | 25    | 88     | 70   | 100 |
| PA121008     | 10 x 8  | 15    | 52     | 60   | 100 |
| PA121210     | 12 x 10 | 12    | 42     | 85   | 100 |
| PA121412     | 14 x 12 | 11    | 33     | 90   | 100 |



Note: = sizes only available on request.

**Ordering code**
**PA12 0402 B**
**TYPE**
**PA12** = Polyamide tube PA12

**EXTERNAL DIAMETER - INTERNAL DIAMETER**

**0402** = 4 x 2  
**0425** = 4 x 2,5  
**0427** = 4 x 2,7  
**0604** = 6 x 4  
**0806** = 8 x 6  
**1007** = 10 x 7\*  
**1008** = 10 x 8  
**1210** = 12 x 10  
**1210** = 14 x 12

**COLOURS**

**Blank** = Neutral  
**B** = Black  
**BU** = Light Blue

\*Only available on request

For other colours please contact our sales department

**Adjusting scale on atmospheric temperature basis**
**Correction value scale for working pressure in consideration of the temperature variation**

| Temp °C            | -20    | 0     | +23 | +30    | +40    | +50    | +60    |
|--------------------|--------|-------|-----|--------|--------|--------|--------|
| <b>Coefficient</b> | x 1,87 | x 1,4 | x 1 | x 0,90 | x 0,80 | x 0,70 | x 0,60 |

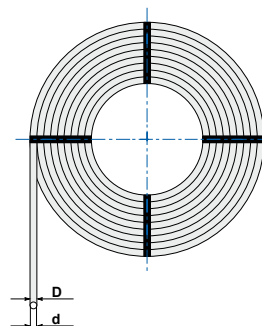
**Legend**

**D** = External diameter  
**d** = Internal diameter  
**P** = Working pressure  
**P1** = Breaking pressure  
**R** = Bending radius  
 = Roll packing (mt)

In the application choice the user must keep in mind the different use variables (pressure, temperature, environment conditions) and all the things that can interfere with the application. These information must be considered only as a general indication. The validation of the application is always at the user charge. Medify keeps the right to modify or adjourn the technical data in any moment without notify duty. This document has no contract value.

**ART. TPA**
**Polyurethane tube/Copolyester ALLOY SOFT**


| COD.        | Dxd mm  | P bar | P1 bar | R mm |     |
|-------------|---------|-------|--------|------|-----|
| TPA0425     | 4 x 2,5 | 18    | 72     | 12   | 100 |
| TPA0604     | 6 x 4   | 14    | 56     | 15   | 100 |
| TPA0806 (*) | 8 x 6   | 10    | 40     | 25   | 100 |
| TPA1008 (*) | 10 x 8  | 8     | 34     | 35   | 100 |
| TPA1209     | 12 x 9  | 8     | 34     | 45   | 100 |
| TPA1411     | 14 x 11 | 6     | 24     | 120  | 100 |
| TPA1412     | 14 x 12 | 3     | 12     | 160  | 100 |
| TPA1612     | 16 x 12 | 5,5   | 22     | 150  | 100 |



Note: the sizes marked with an asterisk are also available in the PLUS version with an inner diameter reduced by 0.3 mm. Available in light blue. For other colours please contact our sales department.

**Adjusting scale on atmospheric temperature basis**
**Correction value scale for working pressure in consideration of the temperature variation**

| Temp °C            | -20    | 0     | +23 | +30    | +40    | +60    | +70    | +70    |
|--------------------|--------|-------|-----|--------|--------|--------|--------|--------|
| <b>Coefficient</b> | x 1,87 | x 1,4 | x 1 | x 0,90 | x 0,80 | x 0,70 | x 0,50 | x 0,47 |

**Legend**

**D** = External diameter  
**d** = Internal diameter  
**P** = Working pressure  
**P1** = Breaking pressure  
**R** = Bending radius  
 = Roll packing (mt)





## Terminals and tube cutter

### Series AC



The tube cutters, made in Italy in the metal version, and imported, in the plastic version, are designed to be used with all air hoses and measures shown in this catalog, they ensure precision cuts. A perfect pneumatic seal of the fitting requires a clean cut without burrs of the pipe; this is why the new “TPT” pipe cutter has been realized, equipped with a “made in Germany” quality steel blade for thousands of guaranteed cuts, a single tool for cutting perfectly and with minimal effort plastic pipes up to 20 mm in diameter.

### Technical sheet

|                           |                                                                                                                                                                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>PRECAUTIONS</b></p> | <p>Cut the tube at right angles to the axis, with a resolute operation, having the attention to avoid abnormal inclinations of the cut that may compromise the proper insertion of the tube into the fitting and consequently result in air leakage. Eliminate possible internal and external burrs.</p> |
| <p><b>MATERIALS</b></p>   | <p>Body in chrome metal die-cast<br/>Body in plastic material (PA66-50%FV - POM)<br/>Blade (interchangeable) hardened high strenght steel.</p>                                                                                                                                                           |

**ART.**
**PSVA**
**Metal tube cutter**

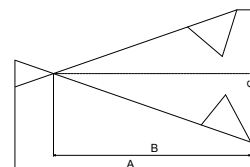

| COD.    | A   | B  | C  |   |        |
|---------|-----|----|----|---|--------|
| PSVA853 | 130 | 40 | 63 | 1 | 292,50 |
| PSVA854 | 185 | 55 | 88 | 1 | 104,88 |

**ART.**
**TPT**
**Technopolymer tube cutter**


| COD.      | A   | B  | C  |   |       |
|-----------|-----|----|----|---|-------|
| TPT0318AV | 140 | 90 | 50 | 1 | 43,63 |

**ART.**
**TC**
**Plastic tube cutter**


| COD.    | Colour     | A    | B  | V  |   |       |
|---------|------------|------|----|----|---|-------|
| TC (BU) | Light blue | 80.5 | 35 | 61 | 1 | 31,29 |


**MORS**
**Terminals**


| COD.    | Ø mm | Length mm | Width mm | Height mm |    |       |
|---------|------|-----------|----------|-----------|----|-------|
| 706.004 | 4    | 185       | 14       | 9         | 10 | 13,40 |
| 706.006 | 6    | 215       | 14       | 13        | 10 | 20,00 |
| 706.008 | 8    | 235       | 14       | 15        | 10 | 24,00 |
| 706.010 | 10   | 275       | 14       | 17        | 10 | 33,00 |
| 706.012 | 12   | 305       | 14       | 19        | 10 | 38,90 |
| 706.015 | 15   | 276       | 14       | 21        | 8  | 44,60 |

## Aluminium manifolds

### Series AC



The aluminum manifolds are inserted in the pneumatic circuitry as a compact and modular element for the distribution of compressed air.

### Technical sheet

|                            |                                   |                                                                                                                                                            |
|----------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FLUIDS</b>              |                                   | Compressed air (for different fluid please contact our Technical Dept.)                                                                                    |
| <b>APPLICATIONS</b>        |                                   | Pneumatic circuits                                                                                                                                         |
| <b>SUGGESTED TUBES</b>     |                                   | Plastic: TPU, PA, PE, etc. Metal: copper, aluminium, steel                                                                                                 |
| <b>TECHNICAL FEATURES</b>  | <b>Temperature and pressure</b>   | The temperatures are within the range of the working environment (from -20° C to + 100° C), the maximum operating pressure is <12 bar.                     |
|                            | <b>Thread type</b>                | BSP parallel ISO 228                                                                                                                                       |
|                            | <b>Material</b>                   | EN-AW-6005-T6 alloy extruded according to UNI EN 755-2: 2016                                                                                               |
| <b>MECHANICAL FEATURES</b> | <b>Rm (Minimum breaking load)</b> | 255 Mpa                                                                                                                                                    |
|                            | <b>Rp 0,2 (yield strenght)</b>    | 215 Mpa                                                                                                                                                    |
|                            | <b>Minimum elongation %</b>       | 8mm                                                                                                                                                        |
|                            | <b>Typical hardness</b>           | 85 HBW (brinell)                                                                                                                                           |
|                            | <b>1 Mpa</b>                      | =10,1972 Kg/cm2                                                                                                                                            |
| <b>NOTE</b>                |                                   | These values, indicated in the 755-2 standard, refer to a profile subject to mechanical traction, not to a differently applied load (lateral, at the tip). |

ART.

**RIPUL**

**In-line output manifolds**

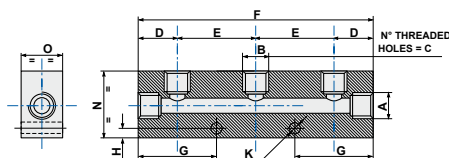


FIGURE 1

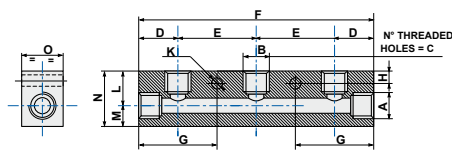


FIGURE 2

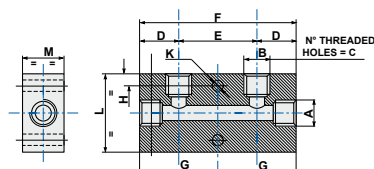


FIGURE 3

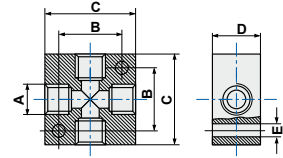
| COD.      | FIG. | A    | B    | C | D  | E  | F   | G  | H   | K    | L  | M  | N  | O  | THREAD               |   |        |
|-----------|------|------|------|---|----|----|-----|----|-----|------|----|----|----|----|----------------------|---|--------|
| RIPUL1512 | 3    | 1/4" | 1/8" | 2 | 15 | 30 | 60  | 30 | 4,5 | 5,25 | 30 | 20 | /  | /  | 4 WAYS 2-1/4" 2-1/8" | 5 | 75,76  |
| RIPUL1513 | 1    | 1/4" | 1/8" | 3 | 15 | 30 | 90  | 30 | 4,5 | 5,25 | /  | /  | 30 | 20 | 5 WAYS 2-1/4" 3-1/8" | 5 | 116,29 |
| RIPUL1514 | 1    | 1/4" | 1/8" | 4 | 15 | 30 | 120 | 30 | 4,5 | 5,25 | /  | /  | 30 | 20 | 6 WAYS 2-1/4" 4-1/8" | 5 | 156,50 |
| RIPUL1515 | 1    | 1/4" | 1/8" | 5 | 15 | 30 | 150 | 30 | 4,5 | 5,25 | /  | /  | 30 | 20 | 7 WAYS 2-1/4" 5-1/8" | 5 | 196,50 |
| RIPUL1516 | 1    | 1/4" | 1/8" | 6 | 15 | 30 | 180 | 30 | 4,5 | 5,25 | /  | /  | 30 | 20 | 8 WAYS 2-1/4" 6-1/8" | 5 | 236,44 |
| RIPUL1522 | 3    | 3/8" | 1/4" | 4 | 18 | 36 | 72  | 36 | 6   | 6,5  | 40 | 20 | /  | /  | 4 WAYS 2-3/8" 2-1/4" | 5 | 116,00 |
| RIPUL1523 | 2    | 3/8" | 1/4" | 3 | 18 | 36 | 108 | 36 | 6   | 6,5  | 19 | 11 | 30 | 20 | 5 WAYS 2-3/8" 3-1/4" | 5 | 120,50 |
| RIPUL1524 | 2    | 3/8" | 1/4" | 4 | 18 | 36 | 144 | 36 | 6   | 4,5  | 19 | 11 | 30 | 20 | 6 WAYS 2-3/8" 4-1/4" | 5 | 163,90 |
| RIPUL1525 | 2    | 3/8" | 1/4" | 5 | 18 | 36 | 180 | 36 | 6   | 6,5  | 19 | 11 | 30 | 20 | 7 WAYS 2-3/8" 5-1/4" | 5 | 207,50 |
| RIPUL1526 | 2    | 3/8" | 1/4" | 6 | 18 | 36 | 216 | 36 | 6   | 6,5  | 19 | 11 | 30 | 20 | 8 WAYS 2-3/8" 6-1/4" | 5 | 251,50 |
| RIPUL1542 | 3    | 1/2" | 1/4" | 2 | 22 | 36 | 80  | 40 | 6   | 6,5  | 40 | 28 | /  | /  | 4 WAYS 2-1/2" 2-1/4" | 5 | 165,80 |
| RIPUL1543 | 1    | 1/2" | 1/4" | 3 | 22 | 36 | 116 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 5 WAYS 2-1/2" 3-1/4" | 5 | 243,85 |
| RIPUL1544 | 1    | 1/2" | 1/4" | 4 | 22 | 36 | 152 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 6 WAYS 2-1/2" 4-1/4" | 5 | 323,13 |
| RIPUL1545 | 1    | 1/2" | 1/4" | 5 | 22 | 36 | 188 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 7 WAYS 2-1/2" 5-1/4" | 5 | 402,24 |
| RIPUL1546 | 1    | 1/2" | 1/4" | 6 | 22 | 36 | 224 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 8 WAYS 2-1/2" 6-1/4" | 5 | 478,56 |
| RIPUL1552 | 3    | 1/2" | 3/8" | 2 | 22 | 36 | 80  | 40 | 6   | 6,5  | 40 | 20 | /  | /  | 4 WAYS 2-1/2" 2-3/8" | 5 | 161,00 |
| RIPUL1553 | 1    | 1/2" | 3/8" | 3 | 22 | 36 | 116 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 5 WAYS 2-1/2" 3-3/8" | 5 | 236,75 |
| RIPUL1554 | 1    | 1/2" | 3/8" | 4 | 22 | 36 | 152 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 6 WAYS 2-1/2" 4-3/8" | 5 | 311,50 |
| RIPUL1555 | 1    | 1/2" | 3/8" | 5 | 22 | 36 | 188 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 7 WAYS 2-1/2" 5-3/8" | 5 | 386,66 |
| RIPUL1556 | 1    | 1/2" | 3/8" | 6 | 22 | 36 | 224 | 40 | 6   | 6,5  | /  | /  | 40 | 28 | 8 WAYS 2-1/2" 6-3/8" | 5 | 463,36 |

ART. **RIP4V**

Aluminium cross manifold



| COD.      | A    | B  | C  | D  | E   |    |        |
|-----------|------|----|----|----|-----|----|--------|
| RIP4V1815 | 1/8" | 17 | 25 | 15 | 4,5 | 25 | 17,02  |
| RIP4V1816 | 1/8" | 23 | 30 | 16 | 4,5 | 25 | 29,69  |
| RIP4V1418 | 1/4" | 23 | 30 | 18 | 4,5 | 25 | 26,01  |
| RIP4V1420 | 1/4" | 26 | 40 | 20 | 5,5 | 25 | 61,00  |
| RIP4V3820 | 3/8" | 30 | 40 | 20 | 5,5 | 10 | 47,38  |
| RIP4V3825 | 3/8" | 33 | 50 | 25 | 5,5 | 10 | 124,96 |
| RIP4V1230 | 1/2" | 33 | 50 | 30 | 5,5 | 10 | 131,73 |



ART. **RIPUC**

Opposite output manifolds

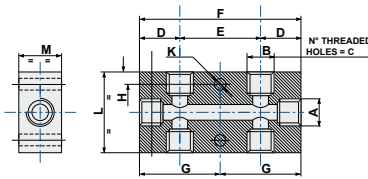


FIGURE 1

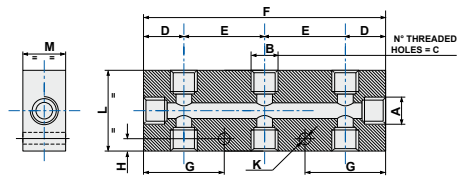


FIGURE 2

| COD.       | FIG. | A    | B    | C  | D  | E  | F   | G  | H   | K    | L  | M  | THREAD                 |   |        |
|------------|------|------|------|----|----|----|-----|----|-----|------|----|----|------------------------|---|--------|
| RIPUC15122 | 1    | 1/4" | 1/8" | 4  | 15 | 30 | 60  | 30 | 4,5 | 5,25 | 30 | 20 | 6 WAYS 2-1/4" 4-1/8"   | 5 | 72,00  |
| RIPUC15133 | 2    | 1/4" | 1/8" | 6  | 15 | 30 | 90  | 30 | 4,5 | 5,25 | 30 | 20 | 8 WAYS 2 1/4" 6-1/8"   | 5 | 110,00 |
| RIPUC15144 | 2    | 1/4" | 1/8" | 8  | 15 | 30 | 120 | 30 | 4,5 | 5,25 | 30 | 20 | 10 WAYS 2-1/4" 8-1/8"  | 5 | 148,62 |
| RIPUC15155 | 2    | 1/4" | 1/8" | 10 | 15 | 30 | 150 | 30 | 4,5 | 5,25 | 30 | 20 | 12 WAYS 2-1/4" 10-1/8" | 5 | 186,84 |
| RIPUC15222 | 1    | 3/8" | 1/4" | 4  | 18 | 36 | 72  | 36 | 6   | 6,5  | 40 | 20 | 6 WAYS 2-3/8" 4-1/4"   | 5 | 105,38 |
| RIPUC15233 | 2    | 3/8" | 1/4" | 6  | 18 | 36 | 108 | 36 | 6   | 6,5  | 40 | 20 | 8 WAYS 2-3/8" 6-1/4"   | 5 | 163,17 |
| RIPUC15244 | 2    | 3/8" | 1/4" | 8  | 18 | 36 | 144 | 36 | 6   | 6,5  | 40 | 20 | 10 WAYS 2-3/8" 8-1/4"  | 5 | 218,81 |
| RIPUC15255 | 2    | 3/8" | 1/4" | 10 | 18 | 36 | 180 | 36 | 6   | 6,5  | 40 | 20 | 12 WAYS 2-3/8" 10-1/4" | 5 | 280,50 |
| RIPUC15422 | 1    | 1/2" | 1/4" | 4  | 22 | 36 | 80  | 40 | 6   | 6,5  | 40 | 28 | 6 WAYS 2-1/2" 4-1/4"   | 5 | 158,70 |
| RIPUC15433 | 2    | 1/2" | 1/4" | 6  | 22 | 36 | 116 | 40 | 6   | 6,5  | 40 | 28 | 8 WAYS 2-1/2" 6-1/4"   | 5 | 233,50 |
| RIPUC15444 | 2    | 1/2" | 1/4" | 8  | 22 | 36 | 152 | 40 | 6   | 6,5  | 40 | 28 | 10 WAYS 2-1/2" 8-1/4"  | 5 | 307,31 |
| RIPUC15455 | 2    | 1/2" | 1/4" | 10 | 22 | 36 | 188 | 40 | 6   | 6,5  | 40 | 28 | 12 WAYS 2-1/2" 10-1/4" | 5 | 381,30 |
| RIPUC15522 | 1    | 1/2" | 3/8" | 4  | 22 | 36 | 80  | 40 | 6   | 6,5  | 40 | 28 | 6 WAYS 2-1/2" 4-3/8"   | 5 | 148,65 |
| RIPUC15533 | 2    | 1/2" | 3/8" | 6  | 22 | 36 | 116 | 40 | 6   | 6,5  | 40 | 28 | 8 WAYS 2-1/2" 6-3/8"   | 5 | 218,93 |
| RIPUC15544 | 2    | 1/2" | 3/8" | 8  | 22 | 36 | 152 | 40 | 6   | 6,5  | 40 | 28 | 10 WAYS 2-1/2" 8-3/8"  | 5 | 286,50 |
| RIPUC15555 | 2    | 1/2" | 3/8" | 10 | 22 | 36 | 188 | 40 | 6   | 6,5  | 40 | 28 | 12 WAYS 2-1/2" 10-3/8" | 5 | 356,67 |

# Appendix

For maximum product performance, installation instructions must be properly followed and chemical compatibility charts for materials must be adhered to.

- **Fittings instructions**
- **Tightening torque**
- **Chemical compatibility chart**

## Fittings instructions

### Before the insertion

- The type of employed pipe must be declared as suitable by the manufacturer to be used with push-in fittings
- The cutting of the pipe must be at a right angle using a dedicated tube cutter (See our blueline catalogue)
- Do not cut the hose with scissors, pincers or other tools may cause non-linear surface to the end of the tube

### Correct insertion of the tube in the fitting

#### During the insertion

- Turn the tube slightly so to make it easier to get in, make sure the pipe reach the inside stop.

#### Hose extraction

- To extract the tube, or realising it, press the sleeve until it stops and keeping it pressed remove the tube from the fitting (the operation can be done easier using an appropriate fork).
- Make sure that the inserted tube is not under traction and that the sleeve does not run the risk of accidental contacts which may cause unintentional extraction or releasing.



Tube before insertion



Inserted tube



Tube cut at 90° with plastic tube cutter



Correct tube cut with metal tube cutter



Fitting with inserted tube, in tension

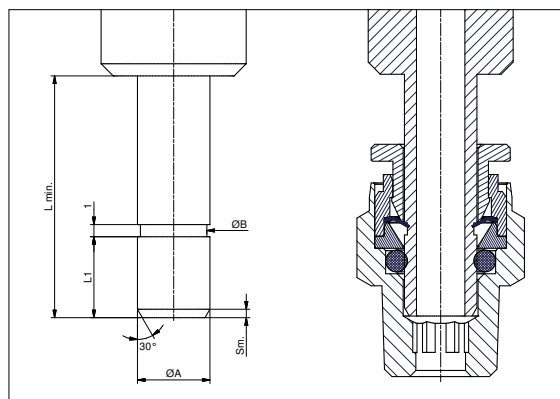


Fitting with tube inserted, having a tight bending radius



## Fittings instructions of rigid tube on series SS

| ØA | ØB <sup>+0.1</sup> | L min. | L1 <sup>+0.1</sup> | Sm. |
|----|--------------------|--------|--------------------|-----|
| 4  | 3.7                | 18     | 6.7                | 0.7 |
| 6  | 5.7                | 19     | 6.7                | 0.7 |
| 8  | 7.7                | 20     | 7                  | 1   |
| 10 | 9.7                | 22.5   | 8                  | 1   |
| 12 | 11.7               | 24     | 8.7                | 1   |
| 14 | 13.6               | 29     | 10                 | 1   |



## Fittings instructions of rigid tube on series RAP and TECNO-RAP

- NO surface scratches
- NO dents
- Ovalities as required tolerances
- Pay attention to the straightness of the pipe
- (in the sealing area)



- Remove burrs that may damage the O-ring during insertion



# Pneumatic fittings

## Chemical compatibility chart

| SUBSTANCE                 | SEALS |     |      | FITTINGS |     |               | HOSES |     |      |    |         |
|---------------------------|-------|-----|------|----------|-----|---------------|-------|-----|------|----|---------|
|                           | NBR   | FPM | EPDM | OTTONE   | POM | INOX AISI316L | PA12  | PA6 | LDPE | PU | P.T.F.E |
| Acetaldehyde              | X     | X   | ●    | X        | ○   | ●             | ●     | ○   | X    | ?  | ○       |
| Acetylene                 | ●     | ●   | ●    | ●        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Vi negar                  | ○     | ●   | ●    | ●        | ○   | ●             | ●     | ○   | ○    | ?  | ?       |
| Acetone                   | X     | X   | ●    | ○        | ○   | ○             | ●     | ○   | ●    | ?  | ○       |
| Acetic Acid (5%)          | ●     | ●   | ●    | X        | ○   | ●             | ○     | ○   | ○    | ●  | ○       |
| Acetic Acid (20%)         | X     | X   | ●    | X        | ●   | ○             | ?     | ?   | ?    | ?  | ?       |
| Acetic Acid (50%)         | X     | X   | ●    | X        | X   | ○             | ?     | ?   | ?    | ?  | ?       |
| Arsenic Acid              | ○     | ○   | ○    | X        | X   | ●             | ?     | ?   | ●    | ?  | ○       |
| Borie Acid                | ●     | ●   | ●    | ●        | X   | ○             | ○     | X   | ○    | ?  | ○       |
| Hydrochloric Acid (10%)   | ●     | ●   | ●    | X        | X   | X             | X     | X   | ○    | X  | ○       |
| Chromic Acid (10%)        | X     | ○   | X    | X        | X   | ●             | X     | X   | X    | ?  | ○       |
| Citric Acid               | ●     | ●   | ●    | ●        | ●   | ○             | ○     | ○   | ○    | X  | ○       |
| Formic Acid               | X     | X   | ●    | X        | X   | ○             | X     | X   | ○    | X  | ○       |
| Hydrofluoric Acid (10%)   | X     | ○   | ○    | X        | X   | ●             | X     | X   | ●    | ?  | ○       |
| Phosphoric Acid (30%)     | X     | ●   | ●    | X        | X   | ●             | ●     | X   | ●    | ●  | ?       |
| Glycolic Acid             | ●     | ●   | ●    | ●        | X   | ●             | ?     | X   | ?    | ?  | ?       |
| Lactic Acid (20 °C)       | ●     | ●   | ●    | ●        | ○   | ○             | ○     | X   | ●    | ?  | ○       |
| Nitric Acid (10%)         | X     | ●   | ○    | X        | X   | ●             | X     | X   | ●    | X  | ○       |
| Nitrous Acid              | ?     | ○   | ○    | ?        | X   | ○             | ?     | ?   | ?    | ?  | ?       |
| Oleic Acid                | ●     | ○   | ○    | X        | ○   | ●             | ○     | ○   | ●    | ?  | ○       |
| Palmitic Acid             | ○     | ○   | ○    | X        | ○   | ●             | ?     | ○   | ?    | ?  | ?       |
| Perchloric Acid (10%)     | X     | ●   | ○    | ?        | X   | ●             | ?     | ?   | ○    | ?  | ○       |
| Salicylic Acid            | ○     | ●   | ●    | ?        | X   | ○             | ●     | X   | ○    | ?  | ○       |
| Sulfuric Acid (30%)       | ●     | ○   | ○    | X        | X   | X             | X     | X   | ●    | ?  | ○       |
| Sulfurous Acid            | ●     | ○   | ●    | ?        | X   | ○             | ?     | ?   | ?    | ?  | ?       |
| Stearic Acid              | ○     | ●   | ○    | ●        | X   | ●             | ○     | ●   | ●    | ?  | ○       |
| Trichloroacetic Acid      | ○     | X   | ○    | ?        | X   | ●             | ?     | ?   | X    | ?  | ?       |
| Urie Acid                 | ?     | ?   | ?    | ?        | ?   | ○             | ○     | ○   | ○    | ?  | ?       |
| Fresh Water               | ○     | ○   | ○    | ○        | ○   | ●             | ○     | ○   | ○    | ○  | ?       |
| Sea Water                 | ○     | ○   | ○    | X        | ○   | ○             | ○     | ○   | ○    | ○  | ?       |
| Hydrogen Peroxide (1 %)   | ○     | ●   | ○    | X        | ○   | ○             | ●     | ?   | ●    | ?  | ?       |
| Hydrogen Peroxide (30%)   | ●     | ●   | ○    | X        | X   | ○             | ?     | ?   | ?    | ?  | ?       |
| Acqua Regia               | X     | ○   | ●    | X        | X   | X             | ?     | ?   | ?    | ?  | ?       |
| Butyl Alcohol             | ●     | ●   | ○    | ○        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Ethyl Alcohol (Ethanol)   | ●     | ●   | ●    | ○        | ○   | ○             | ●     | ○   | ○    | ○  | ○       |
| Methyl Alcohol (Methanol) | ●     | X   | ●    | ○        | ○   | ○             | X     | ○   | ○    | ?  | ○       |
| Isopropyl Alcohol         | ○     | ●   | ●    | ?        | ○   | ○             | X     | X   | ○    | ?  | ○       |
| Ammonia (10%)             | ○     | X   | ●    | X        | X   | ●             | ○     | ○   | ●    | ?  | ?       |
| Ammonium Acetate          | ○     | ●   | ●    | ●        | ?   | ●             | ●     | X   | ○    | ?  | ○       |
| Ammonium Carbonate        | ○     | ●   | ●    | X        | X   | ○             | ●     | X   | ○    | ?  | ○       |
| Ammonium Chloride         | ○     | ●   | ●    | ●        | X   | ○             | ○     | X   | ○    | ?  | ○       |
| Ammonium Nitrate          | ●     | ●   | ●    | X        | ○   | ●             | ○     | X   | ○    | ?  | ○       |
| Ammonium Sulfate          | ●     | ●   | ●    | X        | X   | ○             | ○     | X   | ○    | ?  | ○       |
| Carbon Dioxide            | ●     | ●   | ○    | ○        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Sulfur Dioxide            | X     | ●   | ●    | X        | X   | ●             | X     | X   | X    | ?  | ?       |
| Aniline                   | X     | ●   | ○    | ●        | ●   | ○             | ●     | ?   | ●    | ?  | ○       |
| Nitrogen                  | ●     | ●   | ●    | ●        | ○   | ●             | ●     | ?   | ?    | ?  | ?       |
| Gasoline                  | ○     | ●   | X    | ○        | ○   | ●             | ●     | ○   | ●    | ○  | ○       |

● Very Good    ○ Good    ● Limited resistance    X Not recommended    ? Information not available





| SUBSTANCE                              | SEALS |     |      | FITTINGS |     |               | HOSES |     |      |    |         |
|----------------------------------------|-------|-----|------|----------|-----|---------------|-------|-----|------|----|---------|
|                                        | NBR   | FPM | EPDM | OTTONE   | POM | INOX AISI316L | PA12  | PA6 | LDPE | PU | P.T.F.E |
| Benzene                                | X     | ●   | X    | ●        | ○   | ○             | ●     | ?   | X    | ?  | ○       |
| Sodium Bicarbonate                     | ●     | ●   | ●    | ●        | ○   | ○             | ○     | ●   | ○    | ?  | ○       |
| Methyl Bromide                         | ○     | ●   | X    | ?        | X   | ?             | ●     | ●   | ?    | ?  | ?       |
| Methylene Bromide                      | ○     | ●   | X    | ?        | X   | ?             | ?     | ?   | ?    | ?  | ?       |
| Butane                                 | ●     | ●   | X    | ●        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Diesel Fuel                            | ●     | ●   | X    | ?        | ○   | ●             | ○     | ○   | ●    | ?  | ○       |
| Jet Fuel/Kerosene                      | ●     | ●   | X    | ●        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Cyclohexane                            | ○     | ●   | X    | ?        | ○   | ●             | ○     | ○   | ●    | X  | ?       |
| Chorine (dry)                          | X     | ●   | ●    | ○        | ?   | ○             | X     | ?   | X    | ?  | ○       |
| Chorine, Anhydrous liquid              | X     | ●   | ○    | X        | ?   | X             | X     | X   | X    | ?  | ○       |
| Chloroform                             | X     | ●   | ●    | ○        | ●   | ?             | X     | X   | X    | X  | ○       |
| Calcium Chloride (10%)                 | ●     | ●   | ●    | ●        | ○   | ○             | ○     | ○   | ○    | ○  | ○       |
| Ethyl Chloride                         | ●     | ●   | ●    | ●        | ?   | ●             | ●     | ●   | X    | ?  | ○       |
| Ethylene Chloride                      | X     | ●   | X    | ?        | X   | ?             | ?     | ?   | ?    | ?  | ?       |
| Methyl Chloride                        | X     | ○   | ●    | ○        | ●   | ?             | ●     | ○   | X    | ?  | ○       |
| Methylene Chloride                     | X     | ●   | X    | ?        | ●   | ?             | X     | ?   | X    | X  | ○       |
| Sodium Chloride (10%)                  | ●     | ●   | ●    | X        | ○   | ○             | ○     | ○   | ○    | ○  | ○       |
| Sulfur Chloride                        | X     | ●   | X    | ●        | ●   | ○             | ?     | ?   | ?    | ?  | ○       |
| Detergents                             | ●     | ●   | ●    | ?        | ○   | ○             | ?     | ?   | ?    | ?  | ?       |
| Dibutyl Phthalate                      | X     | ○   | ○    | ●        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Dichloroethane                         | X     | X   | X    | ●        | ?   | ●             | ?     | ?   | ?    | ?  | ?       |
| Dimethyl Phthalate                     | X     | ●   | ○    | ?        | ○   | ?             | ?     | ?   | X    | ?  | ○       |
| Dioxane                                | X     | X   | ○    | ●        | ●   | ●             | ○     | ○   | ●    | ?  | ○       |
| Heptane                                | ●     | ●   | X    | ●        | ○   | ●             | ○     | ?   | ●    | ?  | ?       |
| Hexane                                 | ●     | ●   | X    | ○        | ○   | ●             | ○     | ?   | ●    | ?  | ?       |
| Ethyl Ether                            | X     | X   | X    | ○        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Phenol                                 | X     | ●   | X    | ●        | X   | ●             | X     | ?   | X    | ?  | ○       |
| Brake Fluid                            | X     | ?   | ●    | ?        | ○   | ?             | ○     | ?   | ?    | ?  | ?       |
| Formaldehyde (37%)                     | ●     | ●   | ●    | ●        | ○   | ●             | ●     | ?   | ?    | ?  | ?       |
| Freon 12                               | ○     | ○   | ○    | ○        | ?   | ○             | ●     | ○   | X    | ?  | ●       |
| Freon 22                               | X     | X   | ●    | ○        | ?   | ○             | ●     | ○   | X    | ?  | ?       |
| Chiarine Gas                           | X     | ○   | X    | ○        | X   | ○             | X     | ?   | X    | ?  | ?       |
| Nitrous gases                          | X     | ○   | ?    | X        | X   | ○             | ?     | ?   | ?    | ?  | ?       |
| Glycerine                              | ○     | ○   | ○    | ●        | ○   | ●             | ●     | ○   | ○    | ?  | ○       |
| Glycols                                | ○     | ○   | ○    | ○        | ○   | ●             | ●     | ○   | ○    | ●  | ○       |
| Ethylene glycol                        | ●     | ●   | ●    | ○        | ○   | ●             | ○     | ?   | ○    | ○  | ?       |
| Glucose                                | ●     | ●   | ●    | ○        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Hydrazine                              | ○     | X   | ●    | ●        | ○   | ●             | ?     | X   | X    | ?  | ○       |
| Hydrogen (gas)                         | ●     | ●   | ●    | ●        | ○   | ●             | ○     | ○   | ○    | ?  | ?       |
| Hydrogen Sulfide                       | X     | X   | ○    | ●        | X   | ●             | ?     | ?   | ?    | ?  | ?       |
| Sodium Hydroxide( 10%)<br>Caustic Soda | X     | X   | ○    | ●        | X   | ●             | ●     | X   | ○    | ?  | ○       |
| Insecticide (D.D.T.)                   | ?     | ?   | ○    | ?        | ○   | ?             | ●     | ○   | ○    | ?  | ?       |
| Iadine                                 | ○     | ●   | ○    | X        | ?   | ●             | ?     | X   | X    | ?  | ○       |
| Calcium Hypochlorite (10%)             | ○     | ●   | ●    | X        | X   | ○             | ?     | X   | ○    | ?  | ○       |
| Sodium Hypochlorite (5%)               | ●     | ○   | ●    | X        | X   | ?             | X     | ?   | X    | ?  | ?       |
| Isooctane                              | ○     | ○   | X    | ○        | ○   | ●             | ●     | ?   | X    | ?  | ?       |
| Methane                                | ●     | ●   | X    | ●        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Methyl Ethyl Ketone                    | X     | X   | ○    | ?        | ●   | ●             | ●     | ○   | X    | ?  | ○       |

● Very Good   ○ Good   ● Limited resistance   X Not recommended   ? Information not available



# Pneumatic fittings

## Chemical compatibility chart and tightening torque

| SUBSTANCE                    | SEALS |     |      | FITTINGS |     |               | HOSES |     |      |    |         |
|------------------------------|-------|-----|------|----------|-----|---------------|-------|-----|------|----|---------|
|                              | NBR   | FPM | EPDM | BRASS    | POM | INOX AISI316L | PA12  | PA6 | LDPE | PU | P.T.F.E |
| Ammonium Nitrate             | ●     | ●   | ●    | ✗        | ○   | ●             | ○     | ✗   | ○    | ?  | ○       |
| Calcium Nitrate              | ●     | ●   | ●    | ●        | ○   | ●             | ○     | ?   | ○    | ?  | ?       |
| Sodium Nitrate               | ●     | ●   | ●    | ●        | ○   | ●             | ?     | ?   | ○    | ?  | ○       |
| Food Oils (vegetable)        | ●     | ●   | ?    | ○        | ○   | ●             | ●     | ○   | ●    | ○  | ○       |
| Fuel Oil                     | ●     | ●   | ✗    | ●        | ○   | ●             | ●     | ○   | ✗    | ?  | ?       |
| Motor Oil                    | ●     | ●   | ✗    | ○        | ○   | ○             | ?     | ?   | ?    | ?  | ○       |
| Lubricating Oil              | ●     | ●   | ✗    | ○        | ○   | ○             | ○     | ○   | ✗    | ?  | ?       |
| Mineral Oil                  | ●     | ●   | ✗    | ●        | ○   | ●             | ○     | ○   | ✗    | ?  | ○       |
| Carbon Monoxide              | ○     | ○   | ○    | ●        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Nitrous Oxide                | ○     | ✗   | ○    | ○        | ✗   | ○             | ?     | ?   | ?    | ?  | ?       |
| Oxygen (Cold)                | ●     | ○   | ○    | ○        | ?   | ●             | ○     | ?   | ?    | ✗  | ○       |
| Ozone                        | ○     | ●   | ●    | ○        | ●   | ●             | ✗     | ?   | ✗    | ○  | ○       |
| Paraffin                     | ○     | ○   | ✗    | ○        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Perchloroethylene            | ●     | ●   | ✗    | ●        | ○   | ●             | ✗     | ○   | ✗    | ?  | ○       |
| Potassium Permanganate (10%) | ?     | ●   | ?    | ?        | ○   | ?             | ✗     | ✗   | ○    | ?  | ○       |
| Petroleum Oil                | ●     | ●   | ✗    | ○        | ○   | ○             | ○     | ○   | ✗    | ?  | ○       |
| Propane (liquefied)          | ○     | ○   | ✗    | ○        | ○   | ○             | ○     | ○   | ?    | ?  | ○       |
| Nickel Sulfate (10%)         | ○     | ●   | ●    | ✗        | ○   | ○             | ?     | ?   | ?    | ?  | ?       |
| Copper Sulfate (10%)         | ●     | ●   | ●    | ●        | ○   | ●             | ?     | ?   | ?    | ?  | ?       |
| Calcium Sulfide              | ●     | ●   | ●    | ?        | ○   | ?             | ?     | ?   | ?    | ?  | ?       |
| Fruit Juice                  | ○     | ○   | ?    | ✗        | ○   | ○             | ?     | ?   | ○    | ○  | ?       |
| Carbon Tetrachloride         | ●     | ●   | ✗    | ●        | ○   | ○             | ✗     | ○   | ✗    | ?  | ○       |
| Tetrahydrofuran              | ✗     | ✗   | ●    | ?        | ●   | ●             | ?     | ○   | ✗    | ?  | ○       |
| Toulene (Toulol)             | ●     | ○   | ✗    | ●        | ○   | ●             | ○     | ○   | ?    | ?  | ○       |
| Turpentine                   | ○     | ○   | ✗    | ○        | ○   | ●             | ✗     | ?   | ✗    | ?  | ○       |
| Trichloroethane              | ✗     | ○   | ✗    | ?        | ○   | ○             | ✗     | ○   | ✗    | ?  | ?       |
| Trichloroethylene            | ●     | ●   | ✗    | ○        | ●   | ○             | ✗     | ○   | ✗    | ?  | ○       |
| Urea (5%)                    | ○     | ●   | ●    | ●        | ○   | ○             | ○     | ○   | ○    | ●  | ○       |
| Steam (< 150 °C)             | ✗     | ○   | ●    | ○        | ✗   | ●             | ?     | ?   | ?    | ?  | ?       |
| Steam (> 150 °C)             | ✗     | ✗   | ✗    | ○        | ✗   | ●             | ?     | ?   | ?    | ?  | ?       |
| Wine                         | ●     | ✗   | ●    | ●        | ?   | ●             | ●     | ○   | ●    | ?  | ○       |
| Xylene                       | ✗     | ●   | ✗    | ●        | ○   | ○             | ?     | ○   | ?    | ?  | ?       |

● Very Good    ○ Good    ● Limited resistance    ✗ Not recommended    ? Information not available

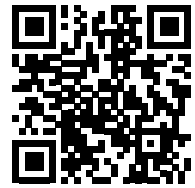
| THREAD TYPE                                   | NORM REFERENCE    | TIGHTENING TORQUE |        |      |      |      |       |          |         |       |     |     |     |     |     |
|-----------------------------------------------|-------------------|-------------------|--------|------|------|------|-------|----------|---------|-------|-----|-----|-----|-----|-----|
|                                               |                   | M3x0,5            | M5x0,8 | M6x1 | M7x1 | M8x1 | M10x1 | M12x1,25 | M12x1,5 | 10-32 | 1/8 | 1/4 | 3/8 | 1/2 |     |
| Gas taper PTFE-coated                         | UNI EN 10226-1    | -                 | -      | -    | -    | -    | -     | -        | -       | -     | -   | 2,5 | 3,5 | 6   | 12  |
| NPTF PTFE-coated                              | ANSI/ASME B1.20.3 | -                 | -      | -    | -    | -    | -     | -        | -       | -     | -   | 3,5 | 4,5 | 7   | 12  |
| Gas parallel with O-Ring                      | UNI EN ISO 228-1  | -                 | -      | -    | -    | -    | -     | -        | -       | -     | -   | 1,2 | 1,5 | 2,5 | 3,5 |
| Gas parallel acetal resin threads with O-Ring | UNI EN ISO 228-1  | -                 | -      | -    | -    | -    | -     | -        | -       | -     | -   | 1,2 | 1,5 | 2,5 | -   |
| Gas parallel with plastic ring                | UNI EN ISO 228-1  | -                 | -      | -    | -    | -    | -     | -        | -       | -     | -   | 2   | 3   | 4   | 8   |
| UNF with O-Ring                               | ANSI/ASME B1.1    | -                 | -      | -    | -    | -    | -     | -        | -       | 0,8   | -   | -   | -   | -   | -   |
| Metric with O-Ring                            | UNI EN ISO 965-1  | 0,8               | 0,8    | 0,8  | 0,8  | -    | -     | 1,5      | 1,5     | -     | -   | -   | -   | -   | -   |
| Metric taper with PTFE-coated                 | UNI 7707          | -                 | -      | 2,5  | -    | 2,5  | 2,5   | -        | -       | -     | -   | -   | -   | -   | -   |



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