

CERTIFICATE

This certifies that the company

Pneumax S.p.A.
Via Archimede 57
20129 Milano (MI)
Italy

Is authorized to provide the product mentioned below

Description of product: **Pneumatic piloted valve spring return**

- 3/2 spool valve series SA1432#, SA1232#, SA1132#
- 5/2 spool valve series SA1452#, SA1252#, SA1152#
- 3/2 poppet valve series SA771 – SA772 – SA773 - SA776

In accordance with: **EN 61508:2010 Parts 1, 2, 3, 4, 5, 6, 7**

Registration No 20 20058 01
Test Report No PS-20058-20-L-01
File reference 20058-01



TÜV NORD Italia S.r.l. (TÜV NORD Group)
Via Turati, 70 20023 Cerro Maggiore (MI)



Validity
from 2020-12-21
until 2023-12-21

Cerro Maggiore, 2020-12-21
prodotto@tuev-nord.it

Please also pay attention to the information stated overleaf

ANNEX

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To Certificate-Nr. 20 20058 01

Type	A
HFT	0
Safety functions	<ol style="list-style-type: none"> 1. Valve 3/2, de-energize-to-trip operation, normally closed 2. Valve 3/2, de-energize-to-trip operation, normally open 3. Valve 5/2, de-energize-to-trip operation
Mode of operation	Low Demand Mode

Random failure rates				
Configuration	Safety function	λ_{DU} [1/h]	λ_{DD} [1/h]	λ_S [1/h]
3/2 normally closed - No PST	1	1,82E-08	0,00E+00	4,36E-08
3/2 normally closed - With PST	1	1,82E-10	1,80E-08	4,36E-08
3/2 normally open- No PST	2	1,97E-08	0,00E+00	4,36E-08
3/2 normally open - With PST	2	1,97E-10	1,95E-08	4,36E-08
5/2 - No PST	3	7,82E-08	0,00E+00	4,36E-08
5/2 - With PST	3	7,82E-10	7,74E-08	4,36E-08

Systematic capability	3 (Route 1 _S applied)			
Architectural constraints	Route 1_H:	Applied	Route 2_H:	Applied
	The product can be used in: <ul style="list-style-type: none"> • single channel configuration: <ul style="list-style-type: none"> ○ up to SIL 2 without external diagnostic tests ○ up to SIL 3 considering external diagnostic tests • double channel configuration: up to SIL 3 			

Remarks:

- For further details, including environmental conditions, limitations of use, lifetime, failure rates traceability, mean repair times, common cause factors and systematic capability constraints, make reference to Safety Manual P-006-MA/2.

