

# 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 - SAN776

In accordance with:

**EN 61508:2010 Parts 1, 2, 4, 5, 6, 7**



Registration No 20 20058 01  
Test Report No PS-25036-24-M  
File reference 25036-01

Validity  
from 2024-04-03  
until 2027-04-02

A handwritten signature in black ink, appearing to read "Fabiano".

TÜV Nord Italia S.r.l (TÜV NORD Group)  
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Cerro Maggiore, 2024-04-04  
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<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	<ol style="list-style-type: none"> <li>1. Valve 3/2, de-energize-to-trip operation, normally closed</li> <li>2. Valve 3/2, de-energize-to-trip operation, normally open</li> <li>3. Valve 5/2, de-energize-to-trip operation</li> </ol>
<b>Mode of operation</b>	Low Demand Mode

Random failure rates				
Configuration	Safety function	$\lambda_{DU}$ [1/h]	$\lambda_{DD}$ [1/h]	$\lambda_S$ [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

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

