

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: **Volume booster / Filter booster series SA17, SS17**

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

Registration No 20 20059 01
Test Report No PS-24640-23-M
File reference 24640-01



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

www.tuev-nord.it



Validity
from 2023-12-06
until 2026-12-05

Cerro Maggiore, 2023-12-06
prodotto@tuev-nord.it

Type	A
HFT	0
Safety functions	<ol style="list-style-type: none"> 1. De-energize-to-trip operation: to discharge a chamber of a single acting or double acting pneumatic actuator 2. Energize-to-trip operation: to charge a chamber of a double acting pneumatic actuator
Mode of operation	Low Demand Mode

Random failure rates				
Configuration	Safety function	λ_{DU} [1/h]	λ_{DD} [1/h]	λ_S [1/h]
Volume booster / Filter booster - No PST	1	9,20E-08	0,00E+00	1,65E-07
Volume booster / Filter booster - With PST	1	9,20E-10	9,11E-08	1,65E-07
Volume booster / Filter booster - No PST	2	1,84E-07	0,00E+00	$\cong 0,00E+00$
Volume booster / Filter booster - With PST	2	1,84E-09	1,82E-07	$\cong 0,00E+00$

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:	<ul style="list-style-type: none"> • 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-001-MA 			

