



Certificate no. TAI-FS-C-24-0076

WE HEREBY CERTIFY THAT

Product description

Pneumatic rack and pinion spring return and double acting actuator

Models

Series RPS, RPS-C, RPD, RPD-C

Manufacturer

**BIFFI ITALIA S.r.l.
Strada Biffi 165
I-29017 Fiorenzuola d'Arda (PC)**

IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE STANDARDS

IEC 61508 Parts 1–7:2010

AS RESULT OF THE ASSESSMENT ACCORDING TO THE PROVISION SET OUT IN THE ABOVE-MENTIONED STANDARDS

Assessment report no. TAI-FS-R-24-0147

Expiry date 23.10.2027

Issue date 24.10.2024

TUV AUSTRIA ITALIA
24.10.2024, Monte Roberto (AN)

Ing. Crescenzo Di Fratta

TUV AUSTRIA ITALIA S.p.A.
Via del Commercio, 6/A 60030 Monte Roberto (AN)
+39 0731 22781 - info@tuvaustraliaitalia.com - tuvaustraliaitalia@pec.it
C.F./P. IVA IT01055750333 - Cap. Soc. i.v. € 400.000,00 - REA AN n. 211030
Società a socio unico, soggetta a controllo e coordinamento di:
TUV AUSTRIA HOLDING AG Deutschstrasse 10, A-1230, Vienna, Austria
www.tuvaustraliaitalia.com

Annex to certificate no. TAI-FS-C-24-0076

Type	A
HFT	0
Safety functions	<u>Spring return actuators:</u> 1. Delivery of a full stroke ($90^\circ \pm$ tolerance) driven by the spring, with power fluid exhausted from the cylinder through the control system <u>Double acting actuators:</u> 1. Delivery of a full stroke ($90^\circ \pm$ tolerance) driven by the piston of cylinder, powered by the specified medium working pressure
Mode of operation	Low Demand Mode

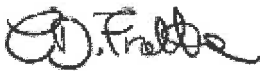
Random failure rates				
Configuration	Safety function	λ_{DU} [1/h]	λ_{DD} [1/h]	λ_S [1/h]
Series RPS, RPS-C - No PST	1	1,20E-08	0,00E+00	0,00E+00
Series RPS, RPS-C - With PST	1	1,08E-09	1,09E-08	0,00E+00
Series RPD, RPD-C - No PST	1	1,58E-08	0,00E+00	0,00E+00
Series RPD, RPD-C - With PST	1	1,43E-09	1,44E-08	0,00E+00

Systematic capability	3 (Route 1s applied)			
Architectural constraints	Route 1H:	Applied	Route 2H:	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 SM 023, SM 002

END OF CERTIFICATE

TUV AUSTRIA ITALIA
24.10.2024, Monte Roberto (AN)


 Ing. Crescenzo Di Fratta

TUV AUSTRIA ITALIA S.p.A.
 Via del Commercio, 6/A 60030 Monte Roberto (AN)
 +39 0731 22781 - info@tuvaustraiitalia.com - tuvaustraiitalia@pec.it
 C.F./P. IVA IT01055750333 - Cap. Soc. i.v. € 400.000,00 - REA AN n. 211030
 Società a socio unico, soggetta a controllo e coordinamento di:
 TÜV AUSTRIA HOLDING AG Deutschstrasse 10, A-1230, Vienna, Austria
 www.tuvaustraiitalia.com