



**Certificate no. TAI-FS-C-24-0018**

WE HEREBY CERTIFY THAT

**Product description** PNEUMATIC BOOSTER

**Models** SERIES 2P271KXXYZ

**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

**Summary Report no.** TAI-FS-R-24-0036

**Expiry date** 07.03.2027

**Issue date** 08.03.2024

TUV AUSTRIA ITALIA  
08.03.2024, 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@tuvaustriaitalia.com - tuvaustriaitalia@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.tuvaustriaitalia.com

## Annex to certificate no. TAI-FS-C-24-0018

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	<ol style="list-style-type: none"> <li>1. De-energize-to-trip operation: to discharge a chamber of a single acting or double acting pneumatic actuator</li> <li>2. Energize-to-trip operation: to charge a chamber of a double acting pneumatic actuator</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]
2P271KXXYZ - No PST	1	6,00E-09	0,00E+00	4,79E-07
2P271KXXYZ - With PST	1	6,00E-11	5,94E-09	4,79E-07
2P271KXXYZ - No PST	2	9,84E-09	0,00E+00	0,00E+00
2P271KXXYZ - With PST	2	9,84E-11	9,74E-09	0,00E+00

<b>Systematic capability</b>	3 (Route 1s applied)			
<b>Architectural constraints</b>	<b>Route 1<sub>H</sub>:</b>	Applied	<b>Route 2<sub>H</sub>:</b>	Applied
	<p>The product can be used in:</p> <ul style="list-style-type: none"> <li>• single channel configuration: <ul style="list-style-type: none"> <li>○ Safety Function 1 (DETT): up to SIL 3</li> <li>○ Safety Function 2 (ETT): <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> </ul> </li> <li>• double channel configuration: up to SIL 3</li> </ul>			

**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 005

END OF CERTIFICATE

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