



**Certificate no. TAI-FS-C-22-0013**

WE HEREBY CERTIFY THAT

**Product description** HYDRAULIC LINEAR SPRING RETURN AND DOUBLE ACTING ACTUATOR

**Models** SERIES LH/S, LH/D

**Manufacturer** ROTORK FLUID SYSTEMS S.r.l.  
Via Padre Jacques Hamel 138/B  
I-55016 Porcari (LU)

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-22-0027**

**Expiry date 04.05.2025**

**Issue date 05.05.2022**

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
05.05.2022, Monte Roberto (AN)

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Ing. Crescenzo Di Fratta

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
Sede operativa: Via dell'Industria, 14 - 25030 Erbusco - Brescia, Italy  
Phone +39 030 9821049 Fax +39 030 9822253 [info.bs@tuvaustritalia.com](mailto:info.bs@tuvaustritalia.com)  
Sede legale: Via del Commercio, 6/A - 60030 Monte Roberto - Ancona, Italy  
Cap. Soc. i.v. EUR 10.000,00; R.I. Ancona - C.F. - P. IVA 02217380423  
Cod. Id. CEE IT02217380423 REA AN n. 170070  
A socio unico, soggetta a controllo e coordinamento di:  
TÜV AUSTRIA HOLDING AG, Deutschstrasse 10, 1230, Vienna, Austria  
[www.tuvaustriaitalia.com](http://www.tuvaustriaitalia.com) [www.tuv.at](http://www.tuv.at)

## Annex to certificate no. TAI-FS-C-22-0013

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	1. Stem extended upon the demand of the actuation system 2. Stem retracted upon the demand of the actuation system
<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]
LH/SD - No PST	1	2,38E-08	0,00E+00	0,00E+00
LH/SD - With PST	1	2,38E-09	2,15E-08	0,00E+00
LH/SU - No PST	2	2,41E-08	0,00E+00	0,00E+00
LH/SU - With PST	2	2,41E-09	2,17E-08	0,00E+00
LH/FD - No PST	1	4,94E-08	0,00E+00	0,00E+00
LH/FD - With PST	1	4,94E-09	4,44E-08	0,00E+00
LH/FU - No PST	2	4,82E-08	0,00E+00	0,00E+00
LH/FU - With PST	2	4,82E-09	4,34E-08	0,00E+00

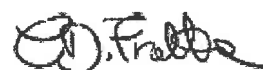
<b>Systematic capability</b>	3 (Route 1s applied)			
<b>Architectural constraints</b>	<b>Route 1<sub>H</sub>:</b>	Applied	<b>Route 2<sub>H</sub>:</b>	Applied
	The product can be used in:			
	<ul style="list-style-type: none"> <li>• single channel configuration:               <ul style="list-style-type: 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>			

**Remarks:**

- The above random failure rates values are worst-case values for all the possible configurations.
- 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-LH-A-01-E.

END OF CERTIFICATE

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
05.05.2022, Monte Roberto (AN)



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