



**Certificate no. TAI-FS-C-22-0022**

WE HEREBY CERTIFY THAT

**Product description** HYDRAULIC RACK AND PINION SPRING RETURN AND DOUBLE ACTING ACTUATOR

**Models** SERIES RH/S, RH/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-22-0045**

**Expiry date** 15.05.2025

**Issue date** 16.05.2022

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
16.05.2022, Monte Roberto (AN)

Page 1 of 2

Ing. Crescenzo Di Fratta

## Annex to certificate no. TAI-FS-C-22-0022

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

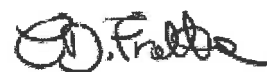
Random failure rates				
Configuration	Safety function	$\lambda_{DU}$ [1/h]	$\lambda_{DD}$ [1/h]	$\lambda_S$ [1/h]
RH/S - No PST	1	5,70E-08	0,00E+00	0,00E+00
RH/S - With PST	1	5,13E-09	5,19E-08	0,00E+00
RH/D - No PST	1	5,71E-08	0,00E+00	0,00E+00
RH/D - With PST	1	5,13E-09	5,19E-08	0,00E+00

<b>Systematic capability</b>	3 (Route 1s applied)			
<b>Architectural constraints</b>	<b>Route 1H:</b>	Applied	<b>Route 2H:</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>○ 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:**
- 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-RH-A-01-E.

END OF CERTIFICATE

TÜV AUSTRIA ITALIA - Blu Solutions s.r.l.  
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