

# CERTIFICATE

This certifies, that the company

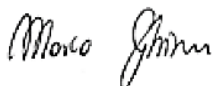
**Valland S.p.A.**  
**Corso Giacomo Matteotti, 8/A**  
**23900 Lecco (LC)**  
**Italy**

Is authorized to provide the product mentioned below

Description of product: **Slab gate valves series B11**  
**Double expanding gate valves series B21**

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

Registration No 20 20156 04  
Test Report No PS-23657-23-M  
File reference 23657-01



TÜV NORD Italia S.r.l. (TÜV NORD Group)  
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Validity  
from 2023-04-19  
until 2026-04-19

Cerro Maggiore, 2023-04-19  
[prodotto@tuev-nord.it](mailto:prodotto@tuev-nord.it)

Please also pay attention to the information stated overleaf

TNI-QF(IND-SIL-01)-14-Rev00\_01\_03\_2020-Certificate\_Type A

# ANNEX

Annex 1, Page 2 of 2

To Certificate-Nr. 23 23657 01

<b>Type</b>	A
<b>HFT</b>	0
<b>Safety functions</b>	1. Close / Open upon the demand of the actuation system 2. Close upon the demand of the actuation system, with inline tightness when in closed position
<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]
Series B11 - No PST	1	1,49E-07	0,00E+00	0,00E+00
Series B11 - With PST	1	1,35E-08	1,36E-07	0,00E+00
Series B11 - No PST	2	1,92E-07	0,00E+00	0,00E+00
Series B11 - With PST	2	5,58E-08	1,36E-07	0,00E+00
Series B21 - No PST	1	1,30E-07	0,00E+00	0,00E+00
Series B21 - With PST	1	1,17E-08	1,18E-07	0,00E+00
Series B21 - No PST	2	1,70E-07	0,00E+00	0,00E+00
Series B21 - With PST	2	5,16E-08	1,18E-07	0,00E+00

<b>Systematic capability</b>	3 (Route 1 <sub>S</sub> 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>			
<b>Remarks:</b>	<ul style="list-style-type: none"> <li>• 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 GV</li> </ul>			

