

CERTIFICATE

This certifies, that the company

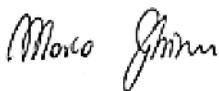
Valland S.p.A.
Corso Giacomo Matteotti, 8/A
23900 Lecco (LC)
Italy

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, 3, 4, 5, 6, 7**

Registration No 20 20156 04
Test Report No PS-20156-20-L-04
File reference 20156-04



TÜV NORD Italia S.r.l. (TÜV NORD Group)
Via Turati, 70 - 20023 Cerro Maggiore (MI)



Validity
from 2020-03-25
until 2023-03-24

Cerro Maggiore, 2020-03-25
prodotto@tuev-nord.it

ANNEX

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To Certificate-Nr. 20 20156 04

Type	A
HFT	0
Safety functions	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
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 B11 - No PST	1	1,65E-07	0,00E+00	0,00E+00
Series B11 - With PST	1	1,48E-08	1,50E-07	0,00E+00
Series B11 - No PST	2	2,18E-07	0,00E+00	0,00E+00
Series B11 - With PST	2	6,77E-08	1,50E-07	0,00E+00
Series B21 - No PST	1	1,41E-07	0,00E+00	0,00E+00
Series B21 - With PST	1	1,27E-08	1,28E-07	0,00E+00
Series B21 - No PST	2	1,89E-07	0,00E+00	0,00E+00
Series B21 - With PST	2	6,09E-08	1,28E-07	0,00E+00

Systematic capability	3 (Route 1 _S applied)			
Architectural constraints	Route 1_H:	Applied	Route 2_H:	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:	<ul style="list-style-type: none"> • 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. 			

