

## C E R T I F I C A T E

This certifies, that the company

### L&T Valves

L&T Campus, TC1 – 2nd Floor, Mount – Poonamallee Road  
Manapakkam, Chennai – 600 089  
India

Is authorized to provide the product mentioned below

Description of product: **Globe Valves 0.25" ≤ DN ≤ 24" (Class 150 to 2500), -196 Deg C to 649 Deg C, Oil and Gas**

In accordance with: **EN 61508:2010 Parts 2, 4**

Registration No 21 22370 01  
Test Report No PS-26895-25-M  
File reference 26895-01



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

[www.tuev-nord.it](http://www.tuev-nord.it)



Validity  
from 2025-05-29  
until 2028-05-29

Cerro Maggiore, 2025-05-29  
[prodotto@tuev-nord.it](mailto:prodotto@tuev-nord.it)

|                   |                                                                                                     |
|-------------------|-----------------------------------------------------------------------------------------------------|
| Type              | A                                                                                                   |
| HFT               | 0                                                                                                   |
| Safety functions  | 1. Close upon the demand of the actuation system<br>2. Open upon the demand of the actuation system |
| Mode of operation | Low Demand Mode                                                                                     |

| Random failure rates                       |                 |                      |                      |                   |
|--------------------------------------------|-----------------|----------------------|----------------------|-------------------|
| Configuration                              | Safety function | $\lambda_{DU}$ [1/h] | $\lambda_{DD}$ [1/h] | $\lambda_S$ [1/h] |
| Bellow Seal – G1                           | 1               | 6,16E-07             | 2,20E-07             | 0,00E+00          |
| Bolted Bonnet_Forged – G2                  | 1               | 1,84E-09             | 6,58E-10             | 0,00E+00          |
| Bolted Bonnet_Cast – G3                    | 1               | 2,45E-08             | 8,76E-09             | 0,00E+00          |
| Bolted Bonnet Y-Globe Valve Extension – G4 | 1               | 1,05E-08             | 3,77E-09             | 0,00E+00          |
| Caged Type – G5                            | 1               | 1,91E-06             | 6,85E-07             | 0,00E+00          |
| Cryogenic Extension Bonnet – G6            | 1               | 3,51E-08             | 1,26E-08             | 0,00E+00          |
| Pressure Seal – G7                         | 1               | 1,85E-08             | 6,62E-09             | 0,00E+00          |
| Screwed Bonnet T_Forged – G8               | 1               | 8,82E-09             | 3,16E-09             | 0,00E+00          |
| Bellow Seal – G1                           | 2               | 6,28E-07             | 2,08E-07             | 0,00E+00          |
| Bolted Bonnet_Forged – G2                  | 2               | 1,88E-09             | 6,21E-10             | 0,00E+00          |
| Bolted Bonnet_Cast – G3                    | 2               | 2,50E-08             | 8,26E-09             | 0,00E+00          |
| Bolted Bonnet Y-Globe Valve Extension – G4 | 2               | 1,07E-08             | 3,55E-09             | 0,00E+00          |
| Caged Type – G5                            | 2               | 1,95E-06             | 6,46E-07             | 0,00E+00          |
| Cryogenic Extension Bonnet – G6            | 2               | 3,58E-08             | 1,18E-08             | 0,00E+00          |
| Pressure Seal – G7                         | 2               | 1,89E-08             | 6,24E-09             | 0,00E+00          |
| Screwed Bonnet T_Forged – G8               | 2               | 9,00E-09             | 2,98E-09             | 0,00E+00          |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                |             |                        |         |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|---------|
| Systematic capability     | 3 (Route 1 <sub>S</sub> applied)                                                                                                                                                                                                                                                                                                                                                                               |             |                        |         |
| Architectural constraints | Route 1 <sub>H</sub> :                                                                                                                                                                                                                                                                                                                                                                                         | Not Applied | Route 2 <sub>H</sub> : | Applied |
|                           | <ul style="list-style-type: none"> <li>See the relevant assessment report for the max SIL achievable</li> </ul>                                                                                                                                                                                                                                                                                                |             |                        |         |
| Remarks:                  | <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 FSM-004, R0. <math>\lambda_{dd}</math> is only accountable if partial valve stroke is implemented as external diagnostics.</li> </ul> |             |                        |         |

