

# CERTIFICATE

This certifies, that the company

## Starline S.p.A.

Via dei Livelli di Sopra, 11  
24060 Costa di Mezzate (BG)  
Italy

Is authorized to provide the product mentioned below

Description of product: **2-ways floating side entry ball valve series T110, T210, 110, 210, 120, 220, 130, 230, 140, 240, 150, 250, 160, 170, 270**

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



Registration No 21 21753 02  
Test Report No PS-26127-24-M-02  
File reference 26127-02

Validity  
from 2024-12-12  
until 2027-12-11

A handwritten signature in black ink, appearing to read "Fobidam".

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)

Cerro Maggiore, 2024-12-12  
[prodotto@tuev-nord.it](mailto:prodotto@tuev-nord.it)

<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]
2-ways floating - No PST	1	9,07E-09	0,00E+00	0,00E+00
2-ways floating - With PST	1	8,16E-10	8,25E-09	0,00E+00
2-ways floating - No PST	2	1,19E-08	0,00E+00	0,00E+00
2-ways floating - With PST	2	3,62E-09	8,25E-09	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 (only for Safety Function 1)</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 ST-SM-SIL-F</li> </ul>			

# CERTIFICATE

This certifies, that the company

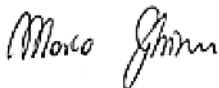
**Starline S.p.A.**  
**Via dei Livelli di Sopra, 11**  
**24060 Costa di Mezzate (BG)**  
**Italy**

Is authorized to provide the product mentioned below

Description of product: **2-ways floating top entry ball valve series TE-100, TE-210, TE-140, TE-240, TE-150, TE-250, TE-160, TE-260, TE-170, TE-270**

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

Registration No 22 22515 01  
Test Report No PS-22515-22-L  
File reference 22515-01



TÜV NORD Italia S.r.l. (TÜV NORD Group)  
Via Turati, 70 20023 Cerro Maggiore (MI) [www.tuev-nord.it](http://www.tuev-nord.it)



Validity  
from 2022-03-22  
until 2025-03-22

Cerro Maggiore, 2022-03-22  
[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. 22 22515 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]
2-ways floating - No PST	1	1,46E-08	0,00E+00	0,00E+00
2-ways floating - With PST	1	1,31E-09	1,33E-08	0,00E+00
2-ways floating - No PST	2	1,93E-08	0,00E+00	0,00E+00
2-ways floating - With PST	2	6,04E-09	1,33E-08	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 ST-SM-SIL-FL-TE.</li> </ul>			

