

# CERTIFICATE OF CONFORMITY

## CERTIFICATO DI CONFORMITA'

### FUNCTIONAL SAFETY

### SICUREZZA FUNZIONALE

Certificate Number  
*Certificato numero* : 350386200.01

Issued to  
*Rilasciato a* : **Starline S.p.a.**

Manufacturer  
*Costruttore* : **Starline S.p.a.**  
Via dei Livelli di Sopra, 11,  
I-24060 Costa di Mezzate Bergamo  
Italy

Product Type  
*Tipo prodotto* : **Ball Valves**

Model reference  
*Riferimento Modello* : **Floating Series : LT, M, SOFT**  
**Trunnion Series : SOFT, HT, LT, DPE**

Technical report No.  
*Rapporto Tecnico Nr.* : **350386200.50**  
**Revision 1 of April 12, 2016**

Requirements  
*Requisiti* : **IEC 61508 ed. 2.0; Functional safety of electrical/electronic/programmable electronic safety-related systems**

Safety Function  
*Funzione di sicurezza* : **The Ball Valve will move to the designed safe position within the specified safety time.**

**SIL3 capable - HFT=0 - Type A Subsystem**

The undersigned declares that the above described product meets the above mentioned technical specification. This attestation of conformity is issued based on the results of the assessment as laid down in the referred Technical Report.

*Il sottoscritto dichiara che il prodotto di cui sopra è conforme ai requisiti tecnici menzionati. Questo attestato di conformità è rilasciato sulla base dei risultati delle valutazioni riferite nel rapporto sopra menzionato.*


This certificate has one attachment page  
*Questo certificato include una pagina di allegato*

Date of issue  
*Emesso in data* : 09/04/2015      Revised  
*Revisione:* 12/04/2016

Expires on  
*Scade il* : 08/04/2018

DEKRA Testing and Certification S.r.l.  
Phone.: +39 02 6901 5526

Sede legale: Via Fratelli Gracchi 27, Torre Nord, 20092 Cinisello Balsamo (MI)  
Fax: +39 02 6001 5766      www.dekra.it      Italy.quality@dekra.com



Franco Vasta  
Executive Product Testing and Certification,  
DEKRA Testing and Certification S.r.l.



Attachment to  
Certificate Number  
*Allegato al*  
*Certificato numero* : **350386200.01**

The certification includes the following test segments successfully completed:

- Functional safety management (FSM) und safety lifecycle
- Hardware fault behaviour
- Safety-related clauses of the user manual
- Quality assurance in production and product care / maintenance

Failure rates for TRUNNION AND FLOATING SERIES without diagnostic test:

- TRUNNION SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10<sup>9</sup> hours):

Application	$\lambda_s$	$\lambda_{DU}$
<b>Metal Seated High Temperature</b>	978	580
<b>Low Temperature Cryogenic</b>	257	906
<b>Double Piston Effect</b>	1095	380
<b>SOFT</b>	1076	380

- FLOATING SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10<sup>9</sup> hours):

Application	$\lambda_s$	$\lambda_{DU}$
<b>Low Temperature Cryogenic</b>	469	139
<b>Metal Seated High Temperature</b>	987	20
<b>SOFT</b>	567	56

Temperature range, DN, PN and other quantitative conditions are listed on Technical Report.

Failure rates for TRUNNION AND FLOATING SERIES with Test interval 1 year:

- TRUNNION SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10<sup>9</sup> hours):

Application	$\lambda_s$	$\lambda_{DU}$
<b>Metal Seated High Temperature</b>	978	579
<b>Low Temperature Cryogenic</b>	257	901
<b>Double Piston Effect</b>	1095	378
<b>SOFT</b>	1076	378

- FLOATING SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10<sup>9</sup> hours):

Application	$\lambda_s$	$\lambda_{DU}$
<b>Low Temperature Cryogenic</b>	469	138
<b>Metal Seated High Temperature</b>	987	19
<b>SOFT</b>	567	48

**Remarks: This certificate replaces DEKRA certificate dated 30/10/2014 and having same number**

END