

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 0 of October , 05th , 2014

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.

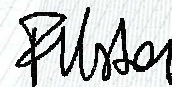
If a DEKRA Authorization to apply the DEKRA VERIFIED Seal has been issued by DEKRA on the subject product, this attestation of conformity authorizes the manufacturer to make reference to the "Requirements" object of this attestation, inside the DEKRA VERIFIED seal .

Se il prodotto in oggetto è licenziatario di un' autorizzazione DEKRA all'uso del Sigillo DEKRA VERIFIED, il presente attestato di conformità autorizza il costruttore a fare riferimento ai "Requisiti " in questo attestato, all'interno del Sigillo DEKRA VERIFIED.

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

Date of issue
Emesso in data : 09/04/2015

Expires on
Scade il : 08/04/2018



Franco Vasta
Certification manager

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 with Test interval 1 year:

- TRUNNION SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10⁹ hours):

Application	λ_s	λ_{DU}
Metal Seated High Temperature	978	580
Low Temperature Cryogenic	257	906
Double Piston Effect	1095	380
SOFT	1076	380

- FLOATING SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10⁹ hours):

Application	λ_s	λ_{DU}
Low Temperature Cryogenic	469	139
Metal Seated High Temperature	987	20
SOFT	567	56

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

Failure rates for TRUNNION AND FLOATING SERIES without diagnostic test:

- TRUNNION SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10⁹ hours):

Application	λ_s	λ_{DU}
Metal Seated High Temperature	978	579
Low Temperature Cryogenic	257	901
Double Piston Effect	1095	378
SOFT	1076	378

- FLOATING SERIES per IEC 61508 ed.2.0 - year 2010 (FIT=1failure/10⁹ hours):

Application	λ_s	λ_{DU}
Low Temperature Cryogenic	469	138
Metal Seated High Temperature	987	19
SOFT	567	48

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