

# CERTIFICATE

compliance with the requirements of the standard:



## IEC 61508:2010

Parts 1-7 - Functional safety of electrical/electronic/programmable electronic safety-related systems

### GHIBSON ITALIA S.r.l.


Via Dozza, 2 - 40069 Zola Predosa Bologna (BO) - Italy

### Applicable to:

Design and production of industrial butterfly valves  
(up to and including SIL 3 ref. Report n° 66150-1-R rev.0 and annex):

1. Series HD
2. Series TT
3. Series KI, KA, KX, PD

NACE: 28.12

Certificate reg. №	SIL-21100NA	
Date of initial certification:	09/04/2021	
Date of issue:	09/04/2021	CEO
Valid to:	08/04/2024	<b>Ing. Sergio Müller</b>
Place of issue:	Sofia	

This certification is issued and maintained following audits conducted at the organization with the sampling criterion pursuant to the UNI CEI EN ISO / IEC 17065 standard and therefore does not exclude the possibility of situations that do not comply with the voluntary standard or with the applicable mandatory laws, for which EURO CERTIFICATIONS EOOD declines all responsibility as of now. For clarification on the details relating to the limitations of the Management System, refer to the Organization Manual

The validity of this certificate can be verified by contacting us at: [info@eurocertifications-bg.com](mailto:info@eurocertifications-bg.com)

The evaluation of the management system is in line with the procedures of the management system certification body of "EURO CERTIFICATIONS" EOOD.

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# ANNEX

manufacturer:

**GHIBSON ITALIA S.r.l.**

Via Dozza, 2 - 40069 Zola Predosa Bologna (BO) – Italy

referring to product(s):

<i>Description</i>	INDUSTRIAL BUTTERFLY VALVES
<i>Types</i>	1. Series HD 2. Series TT 3. Series KI, KA, KX, PD
<i>Safety Function</i>	When an unsafe condition is detected, the controller (outside the subsystem) drives the actuator to close (open) the valve.
<i>Test Result</i>	The devices of the above mentioned series are suitable for use in safety related systems as a single safety related subsystem according to IEC 61508-1/7:2010 for up to and including SIL 3 and the hardware meets the requirements of IEC 61508. For detailed results see test report n° 66150-1-R rev. 00 of 9/4/2021

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		PFD estimation					
		Test Interval frequency (months)					
		6	12	24	36	48	
<b>Butterfly Valves HD</b>	Partial Stroke frequency (months)	1	2,1945E-04	4,3653E-04	8,7068E-04	1,3048E-03	1,7390E-03
		2	2,1945E-04	4,3653E-04	8,7068E-04	1,3048E-03	1,7390E-03
		3	2,1945E-04	4,3653E-04	8,7068E-04	1,3048E-03	1,7390E-03
		6		4,3653E-04	8,7068E-04	1,3048E-03	1,7390E-03
		9				1,3048E-03	
		12			8,7068E-04	1,3048E-03	1,7390E-03
$\lambda_{DD}$	-						
$\lambda_{DU}$	9,9121E-08						
$\lambda_S$	-						
$\lambda_{TOT}$	9,9121E-08						
<b>MRT</b>	24h						
<b>MTTR</b>	40h						
<b>SFF</b>	>90%						
$\beta$	0,05						
$\beta_D$	0,05						
		Test Interval frequency (months)					
		6	12	24	36	48	
Partial Stroke frequency (months)	1	SIL3	SIL3	SIL3	SIL2	SIL2	
	2	SIL3	SIL3	SIL3	SIL2	SIL2	
	3	SIL3	SIL3	SIL3	SIL2	SIL2	
	6		SIL3	SIL3	SIL2	SIL2	
	9				SIL2		
	12			SIL3	SIL2	SIL2	
		Test Interval frequency (months)					
		6	12	24	36	48	
NO Partial Stroke Test		SIL2	SIL3	SIL3	SIL2	SIL2	

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	HD	TT	KI, KA, KX, PD
PFH	9,9E-08	3E-07	8,2E-08
SFF	>90%	>90%	>90%
SIL	SIL 3	SIL 2	SIL 3

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