

To whom it may concern.

<b>Reference</b>	<b>Telephone</b>	<b>Telefax</b>	<b>Capelle a/d IJssel</b>
RV/1322	010 284 13 22		17.07.2017

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## Declaration of compliance

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We herewith declare that the ECON actuators fig. 7901 & fig. 7902 are suitable for the use in safety related systems up to and including SIL 2, under consideration of the minimum required hardware fault tolerance HFT = 1 the valves may be used in a redundant architecture up to SIL 3.

Based on the results of the analysis of our Manufacturer's field experience the below mentioned results can be achieved (ref. V 550.01/17 & V 545.01/16)

	<b>Fig. 7901</b>	<b>Fig. 7902</b>
Route of Assessment	2 <sub>H</sub> / 1 <sub>S</sub>	2 <sub>H</sub> / 1 <sub>S</sub>
Type of Sub-system	Type A	Type A
Mode of operation	Low Demand	Low Demand
Hardware Fault Tolerance (HFT)	0	0
Lambda dangerous confidence level of calculation ( $\lambda_D$ )	2.23 E-07 / h	1.90 E-07 / h
1- $\alpha$ = 95%		
Lambda dangerous undetected assumed diagnostic coverage DC = 0% ( $\lambda_{Du}$ )	2.23 E-07 / h	1.90 E-07 / h
Mean time to dangerous failure (MTTF <sub>D</sub> )	4.49 E+06 h	5.26 E+06 h
Average probability of failure on demand 1oo1 assumed test interval T <sub>1</sub> = 1 year PFD <sub>avg</sub> (T1)	9.76 E-04	8.33 E-04
Average probability of failure on demand 1oo2 assumed $\beta_{1oo2}$ = 10% PFD <sub>avg</sub> (T1)	9.76 E-04	8.33 E-04

Econosto Nederland bv

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