

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>Emerson Process Management- Valve Automation</b>
<b>Address</b>	19200 NW Freeway, Houston, TX, 77065, United States
<b>Place of Production</b>	Emerson Process Management (Tianjin) Valves Co., Ltd No 15, Xingwang Road, Wuqing Development Area, Tianjin 301700 People's Republic of China
<b>Type</b>	Actuator  G01, G2, G3, G4, G5, G7, G8, G10 and G13 series
<b>Description</b>	Quarter turn, scotch yoke, pneumatic or hydraulic actuators, flanged and external tie bar, spring return or double acting
<b>Trade Name</b>	G Series
<b>Application</b>	Quarter turn valve actuators for Offshore and Industrial Applications
<b>Specified Standard</b>	UK Department of Energy Statutory Instruments No. 978:1989 Statutory Instrument No. 825:1996
<b>Ratings</b>	See Appendix 1
<b>Additional Tests</b>	Testing in accordance with Lloyd's Register TA procedure for Actuators

1330 Enclave Parkway, Houston, Texas, 77077,  
United States

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**Gopal Nair**

Americas Design Appraisal Manager to  
Lloyd's Register Quality Assurance Inc  
A member of the Lloyd's Register group

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## Other Conditions

1. This type approval may contribute to the requirement of a verification scheme established by a Duty Holder.
2. Below minus 20 o C, materials of pressure retaining components and torque transmitting components are to be impact tested.
3. Seal compound is to be suitable for the working temperature, refer to manufacturer.
4. For applications on ESD valves the following are the limitations: -
  - (i) The actuators are to be fire proofed to the same rating of the valves and are to be protected against explosion or impact.
  - (ii) The actuators are to be spring return self-closing type.
  - (iii) Suitable local controls are to be provided at the installation to release the hydraulic/pneumatic supply inlet for local closing of the spring return actuators.
  - (iv) The manual/hydraulic overrides are not to be provided.
  - (v) The evaluation of the leakage rate of the valve is not part of the actuator approval and is to be verified by the owner/operator.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Quality Assurance Inc of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document 96/60075(E8)-04 and its supplementary Type Approval Terms and Conditions form part of this Certificate.