



Marine & Offshore

Certificate number: 26022/C0 BV

File number: AP 4245

Product code: 3932H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Eltorque AS**

Trondheim - NORWAY

*for the type of product*

**ELECTRICAL ACTUATORS**

Quarter-turn Electric Valve Actuators

Types: QT70, QT250, QT400, QT800, QT1000, QT2500 & QT4000

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships and Offshore Units.

EC Code: 21, 41S

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 27 Apr 2027**

**For Bureau Veritas Marine & Offshore,**

At BV OSLO, on 27 Apr 2022,

Rune MARSTEIN

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

- Product model or type designation :  
**QT70, QT250, QT400, QT800, QT1000, QT2500 & QT4000**

- Product description:  
Quarter-turn Electric Valve Actuators

#### **1.1 - Main Characteristics of QT70, QT250, QT400, QT800 & QT1000 (2.5):**

	<b>QT70</b>	<b>QT250</b>	<b>QT400</b>	<b>QT800</b>	<b>QT1000</b>
Max Torque (Nm)	70	250	400	800	1000
Opening Angle	0 - 360 deg (Electronically adjustable)				
Power Supply	110V - 240V AC/DC ; 50/60 Hz ; 24V DC*				
Ingress Protection Index	IP68 (10m - 100h)				
Working Temperature	-25°C to 55 °C**				
Remote Control Interface	4-20 mA, Digital (Open-Close), CANopen				
Option	Failsafe, Dual CAN, Dual Power, CANOnly				
Enclosure	Aluminium				
Firmware / Software	1.0.x (Common firmware for all interfaces/options)				

\* Valid only for Dual Power option

\*\* Failsafe option has temperature limitation from 0°C to 45°C

#### **1.2 - Main Characteristics of QT2500 & QT4000:**

	<b>QT2500</b>	<b>QT4000</b>
Max Torque (Nm)	2500	4000
Opening Angle	0 - 360 deg (Electronically adjustable)	
Power Supply	110V - 240V AC/DC ; 50/60 Hz**	
Ingress Protection Index	IP68 (10 m - 0.5h)	
Working Temperature	-25°C to 55 °C	
Remote Control Interface	4-20 mA, Digital (Open-Close), CANopen, Modbus	
Enclosure	Aluminium and Steel	
Firmware / Software	0.1.x (For all Control Interface versions)	

\*\* For installation in Deck zone, a Schaffner Filter FN2010-3-06 is to be installed on AC Power Port.

### 2. DOCUMENTS AND DRAWINGS:

User Manual QT series generation 2.5 N° 2021, rev. 3.2, dated 14 Jan 2022.

User Manual QT2500 & QT4000 N° 1373, rev. 8.6, dated 18 Mar 2022.

Datasheet QT70, rev. 1.1, dated 15 Apr 2022.

Datasheet QT250 N° 1237, rev. 2.3, dated 10 Nov 2021.

Datasheet QT400 N° 2522, rev. 1, dated 01 Mar 2021.

Datasheet QT800, rev. 1, dated 29 Aug 2017.

Datasheet QT1000 N° 2523, rev. 1, dated 01 Mar 2021.

Datasheet QT2500, rev. 2, dated 24 Jun 2016.

Datasheet QT4000, rev. 2, dated 24 Jun 2016.

Quality plan N° 1638, rev. 1.0, dated 18 Apr 2017.

Software versions N° 1474, rev. 2.6, dated 21 Jan 2022.

Guideline - development process N° 2358, rev. 1, dated 05 Mar 2020.

Main development process N° 2184, rev. 1.1, dated 15 Sep 2021.

CANOnly Long-Time Test N° 2517, rev. 1, dated 04 Mar 2021.

CANOnly Production test specification N° 2450, rev. 1.1, dated 02 Feb 2021.

**3. TEST REPORTS:****Nemko:**

Test Report (QT250) - Electromagnetic Compatibility, Order No. 43316 issued on 2005-06-30  
 Test Report (QT2500), Report No. 10122.03 issued on 2010-11-10  
 Statement of Conformity (IP), Order No. 171756 issued on 2011-03-28  
 Statement of Conformity (HV Test), Order No. 175904 issued on 2011-05-12.  
 Test report N° E14136.01, dated 21 Nov 2014.  
 Test report N° E15208.01, dated 11 Feb 2016.  
 Test report N° E17134.02, dated 04 May 2018.  
 Test report N° E17134.03, dated 13 Dec 2021.  
 Test report N° E18015.00, dated 09 Mar 2018.  
 Test report N° E18105.00, dated 26 Apr 2018.  
 Test report N° E21153.01, dated 17 Aug 2021.

**DNV:**

Technical Report, Environmental testing of electrical actuator, QT250, Report No. 2005-3200, Rev. 01 issued on 2005-06-06.

**4. APPLICATION / LIMITATION:**

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships and Offshore Units.  
 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**  
 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 21, 41S** (version 2.0 only).  
 4.4 - The equipment fulfils the EMC requirements for installation on Deck (with Schaffner Filter FN2010-3-06 for QT2500) and in General power Distribution Zones.  
 4.5 - Remote controlled valves whose failure could impair essential services are to be provided with a secondary means for operating them which may be manual control.  
 4.6 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Regulations under the supervision of a Society's Surveyor.  
 4.7 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.  
 4.8- Ex-certification is not covered by this certificate. Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.  
 4.9 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7  
 4.10 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:  
 - Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.  
 - Inspection and testing before installation onboard is to be performed under the surveillance of the Society.

**5. PRODUCTION SURVEY REQUIREMENTS:**

- 5.1 - The above products are to be supplied by **Eltorque AS** in compliance with the type described in this certificate.  
 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.  
 5.3 - **Eltorque AS** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.  
 5.4 - For information, **Eltorque AS** has declared to Bureau Veritas the following production site:

**ELTORQUE AS**  
**Verkstedveien 4**  
**7125 VANVIKAN**  
**NORWAY**

**ELTORQUE AUTOMATION (XIAMEN) LTD.**  
**2/F, 1# Building, No.168 Huizuo Rd, Xin Yang Industrial Area,**  
**Xiamen City, Fujian Province**  
**CHINA**

**6. MARKING OF PRODUCT:**

- Maker's name or trade mark.
- Serial number of the units.
- Equipment type number or model identification under which it was type-tested.

**7. OTHERS:**

7.1 - It is **Eltorque AS**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 26022/B0 BV issued on 07 Feb 2017 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***