

# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAA000011K**  
Revision No:  
**5**

**This is to certify:**  
**that the Electric Actuator**

with type designation(s)  
**QT250 2.4 EX, QT400 2.4 EX, QT800 2.4 EX, QT1000 2.4 EX, QT250 1.0 Exd, QT800 1.0 Exd, QT2500 1.0 Exd, QT2500 3.0, QT4000 1.0, QT6000 1.0**

issued to  
**Eltorque AS**  
**TRONDHEIM, Norway**

is found to comply with  
**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application:

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

## Location classes:

| Type           | Temperature | Humidity | Vibration | EMC | Enclosure |
|----------------|-------------|----------|-----------|-----|-----------|
| QT250 2.4 EX   | D           | B        | A         | B*  | C/D       |
| QT400 2.4 EX   | D           | B        | A         | B*  | C/D       |
| QT800 2.4 EX   | D           | B        | A         | B*  | C/D       |
| QT1000 2.4 EX  | D           | B        | A         | B*  | C/D       |
| QT250 1.0 Exd  | D           | B        | A         | B   | C/D       |
| QT800 1.0 Exd  | D           | B        | A         | B   | C/D       |
| QT2500 1.0 Exd | D           | B        | A         | B   | C/D       |
| QT2500 3.0     | C           | B        | A         | A   | D         |
| QT4000 1.0     | C           | B        | A         | A   | D         |
| QT6000 1.0     | C           | B        | A         | A   | D         |

\* QT250/400/800/1000 EX require use of power supply filter to fulfill EMC class B requirements. See page 2.

Issued at **Høvik** on **2026-09-30**

for **DNV**

This Certificate is valid until **2030-12-01**.

DNV local unit: **Trondheim**

Approval Engineer: **Sonali Marathe**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

## Product description

Electric quarter turn valve actuator

|                   |               |                       |
|-------------------|---------------|-----------------------|
| Power Supply:     | QT250, QT 800 | 230 V AC 50/60 Hz     |
|                   | QT2500        | 110-240 V AC 50/60 Hz |
|                   | QT1000        | 110-240 V AC 50/60 Hz |
|                   | QT4000        | 110-240 V AC 50/60 Hz |
|                   | QT6000        | 110-240 V AC 50/60 Hz |
| Operating Torque: | QT250         | Max. 250 Nm           |
|                   | QT800         | Max. 800 Nm           |
|                   | QT1000        | Max. 1000 Nm          |
|                   | QT2500 Exd    | Max. 2300 Nm          |
|                   | QT2500        | Max. 2500 Nm          |
|                   | QT4000        | Max. 4000 Nm          |
|                   | QT6000        | Max. 6500Nm           |

Interface options as listed in table below.

| Range  | Actuator          |                         | Description                         | Firmware |
|--------|-------------------|-------------------------|-------------------------------------|----------|
|        | Basic             | Hybrid Cable Connection |                                     |          |
| QT250  | EXD250.125.1[.xx] | EXD250.125.1H[.xx]      | QT250 1.0 CANopen EXD Actuator      | 1.1.x    |
|        | EXD250.135.1[.xx] | N/A                     | QT250 1.0 Analogue EXD Actuator     | 1.1.x    |
|        | EXD250.115.1[.xx] | N/A                     | QT250 1.0 Digital EXD Actuator      | 1.1.x    |
|        | EX250.125.4[.xx]  | EX250.125.4H[.xx]       | QT250 2.4 CANopen EX Actuator */**  | 1.1.x    |
| QT400  | EX400.125.4[.xx]  | EX400.125.4H[.xx]       | QT400 2.4 CANopen EX Actuator */**  | 1.1.x    |
| QT800  | EXD800.125.1[.xx] | EXD800.125.1H[.xx]      | QT800 1.0 CANopen EXD Actuator      | 1.1.x    |
|        | EXD800.135.1[.xx] | N/A                     | QT800 1.0 Analogue EXD Actuator     | 1.1.x    |
|        | EXD800.115.1[.xx] | N/A                     | QT800 1.0 Digital EXD Actuator      | 1.1.x    |
|        | EX800.125.4[.xx]  | EX800.125.4H[.xx]       | QT800 2.4 CANopen EX Actuator */**  | 1.1.x    |
| QT1000 | EX1000.125.4[.xx] | EX1000.125.4H[.xx]      | QT1000 2.4 CANopen EX Actuator */** | 1.1.x    |
| QT2500 | 2500.120.3[.xx]   | 2500.120.3H[.xx]        | QT2500 3.0 CANopen Actuator         | 1.0.x    |
|        | 2500.140.3[.xx]   | 2500.140.3H[.xx]        | QT2500 3.0 Modbus Actuator          | 1.0.x    |
|        | 2500.130.3[.xx]   | N/A                     | QT2500 3.0 Analogue Actuator        | 1.0.x    |
|        | 2500.110.3[.xx]   | N/A                     | QT2500 3.0 Digital Actuator         | 1.0.x    |
|        | EXD2500.125.1     | EXD2500.125.1H          | QT2500 1.0 CANopen EXD Actuator     | 1.1.x    |
|        | EXD2500.135.1     | N/A                     | QT2500 1.0 Analogue EXD Actuator    | 1.1.x    |
| QT4000 | EXD2500.115.1     | N/A                     | QT2500 1.0 Digital EXD Actuator     | 1.1.x    |
|        | 4000.120.1[.xx]   | 4000.120.1H[.xx]        | QT4000 1.0 CANopen Actuator         | 1.0.x    |
|        | 4000.140.1[.xx]   | 4000.140.1H[.xx]        | QT4000 1.0 Modbus Actuator          | 1.0.x    |
|        | 4000.130.1[.xx]   | N/A                     | QT4000 1.0 Analogue Actuator        | 1.0.x    |
| QT6000 | 4000.110.1[.xx]   | N/A                     | QT4000 1.0 Digital Actuator         | 1.0.x    |
|        | 6000.120.1[.xx]   | 6000.120.3H             | QT6000 1.0 CANopen Actuator         | 1.1.x    |
|        | 6000.140.1[.xx]   | 6000.140.3H             | QT6000 1.0 Modbus Actuator          | 1.1.x    |
|        | 6000.130.1[.xx]   | N/A                     | QT6000 1.0 Analogue Actuator        | 1.1.x    |
|        | 6000.110.1[.xx]   | N/A                     | QT6000 1.0 Digital Actuator         | 1.1.x    |

\* Suitable for use on open deck

\*\* EMC class A is OK without ELTORQUE PSF. Each actuator is to be powered through the ELTORQUE PSF to satisfy the EMC class B requirements.

[.xx] Denotes the actuator colour, the default is black.

## Place of manufacture

### Eltorque AS

Verkstedvegen 4  
 7125 Vanvikan  
 Norway

### Eltorque Automation (Xiamen) Co., Ltd.

201, 2nd floor, Building 2, No. 9 Xinle East Road, Haicang District,  
 Xiamen City, Fujian Province,  
 China

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Ex installations to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV.

| Information on Ex-Certification received from manufacturer |                         |                                  |                                        |
|------------------------------------------------------------|-------------------------|----------------------------------|----------------------------------------|
| Basic                                                      | Hybrid Cable Connection | Certified                        | Certificate No.                        |
| EX250.125.4[.xx]                                           | EX250.125.4H[.xx]       | QT250 2.4 CANopen EX Actuator    | IECEX NEM 13.0042<br>(Valid issue)     |
| EX400.125.4[.xx]                                           | EX400.125.4H[.xx]       | QT400 2.4 CANopen EX Actuator    |                                        |
| EX800.125.4[.xx]                                           | EX800.125.4H[.xx]       | QT800 2.4 CANopen EX Actuator    |                                        |
| EX1000.125.4[.xx]                                          | EX1000.125.4H[.xx]      | QT1000 2.4 CANopen EX Actuator   |                                        |
| EX110.0066_00[.xx]                                         | -                       | Eltorque PSF                     |                                        |
| EXD250.125.1[.xx]                                          | EXD250.125.1H[.xx]      | QT250 1.0 CANopen EXD Actuator   | IECex PRE<br>14.0056X<br>(Valid issue) |
| EXD800.125.1[.xx]                                          | EXD800.125.1H[.xx]      | QT800 1.0 CANopen EXD Actuator   |                                        |
| EXD2500.125.1                                              | EXD2500.125.1H[.xx]     | QT2500 1.0 CANopen EXD Actuator  |                                        |
| EXD250.135.1[.xx]                                          | N/A                     | QT250 1.0 Analogue EXD Actuator  |                                        |
| EXD800.135.1[.xx]                                          | N/A                     | QT800 1.0 Analogue EXD Actuator  |                                        |
| EXD2500.135.1[.xx]                                         | N/A                     | QT2500 1.0 Analogue EXD Actuator |                                        |
| EXD250.115.1[.xx]                                          | N/A                     | QT250 1.0 Digital EXD Actuator   |                                        |
| EXD800.115.1[.xx]                                          | N/A                     | QT800 1.0 Digital EXD Actuator   |                                        |
| EXD2500.115.1[.xx]                                         | N/A                     | QT2500 1.0 Digital EXD Actuator  |                                        |

## Type Approval documentation

- [I-1] Doc. no. 1000.127.1, dated 2005-07-08, ringbinder containing following documents:
  - DNV test report no. 2005-3200, ID 1329, dated 2005-06-06
  - DNV test report no. 2005-3296, ID 2152, dated 2005-06-24
  - Test report Electromagnetic Compatibility, Nemko 43316, ID 2154, dated 2005-06-30
- [I-2] Firmware release notes, ID 3689
- [I-8] Nemko test report no. 10122.03, ID 2153, dated 2010-11-10
- [I-23] User manual, Doc.ID EX150.0001 rev. 5: QT250 2.2/2.3 EX & QT800 2.2/2.3 EX Electrical Part-turn Valve Actuators, ID 1193 dated 2016-04-26
- [I-25] Nemko test report no. E14019.01 (for PSF, QT250 2.2 EX, QT800 2.2 EX), ID 1335, dated 2014-02-06
- [I-38] Manual PSF, Doc.ID EX150.0003 rev. 3, ID 1865, dated 2014-08-18
- [I-43] Technical manual: Control interfaces for Eltorque QT2500 and QT4000..., ID 1716, dated 2014-12-09
- [I-50] Nemko test report no. E14136.01 (for QT 250 2.3 EX), ID 1336, dated 2014-11-21
- [I-53] Ex Instructions Manual QT250/800 Exd: Doc.ID EX150.0004 rev.7, ID 1376
- [I-54] Assembly drawing EXD250.800 rev.1: EXD250.800\_01 Main assy. EXD QT 250,800, ID 3703
- [I-55] Assembly drawing EXD800.125 rev.1: EXD 800 with CAN Open interface, ID 3704
- [I-56] Nemko test report no. E14172.02 (for QT 250 EXD), ID 1337, dated 2015-03-24
- [I-66] Nemko Statement of Conformity (IPx8 10m/72h for QT250 1.0 /QT250 2.0), ID 2159, dated 2011-03-28
- [I-68] Certificate renewal Notes, ID 2379, dated 2019-09-18
- [I-69] Nemko test report no. E17134.02, ID 1914, dated 2018-05-04
- [I-71] Product Data - QT2500 quarter turn actuator, ID 2137
- [I-75] User Manual - QT250 and QT800 2.4 Ex actuator, ID 1193
- [I-76] Nemko test report no. E21250.00, ID 3613, dated 2021-12-16
- [I-77] Technical note - QT70/400/1000 Ex, ID 2419, rev.1.0
- [I-78] Guidelines for name and versioning of firmware/software, ID 1557, rev.1.1
- [I-79] Checklist for release of firmware/software to Operations, ID 1638, rev.1.0
- [I-80] Procedure for release of firmware/software to Operations, ID 1549, rev.1.4
- [I-81] Guidelines for use of firmware and software versions, ID 1474, rev.2.12
- [I-83] User manual - QT250/800/2500 Exd, Doc.ID 601-070, rev. 1.1
- [I-85] User Manual - QT2500/QT4000/QT6000, Doc.ID 635-035, rev. 1.1
- [I-87] Product Data - QT6000, rev. 1.1
- [I-88] Product Data - QT2500 Exd
- [I-92] Technical assessment to include QT6000
- [I-93] Technical assessment to include Exd2500

Type approval renewal assessment report for TAA000011K, Trondheim, 2025-10-23

Type approval renewal assessment report TAA000011K, Guangzhou 2025-10-30

## Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

QT2500 3.0 and QT4000 1.0 tested for IP68 down to 10 m for 30 min. according to IEC 60529:2001.

QT250/800 1.0 EXD tested for IP6x, IPx6 and IPx8 down to 10 m for 72 h according to IEC 60529:2001.

All other models tested for IP6x, IPx6 and IPx8 down to 10 m for 100 h according to IEC 60529:2001.

## Marking of product

- Actuator model name
- Interface type
- Manufacturer name
- Serial number
- Input power ratings

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE