

TYPE APPROVAL CERTIFICATE No. ELE076325XP

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

Description Cargo monitoring and control system

Type K - Gauge Tank Gauging System

Applicant KONGSBERG MARITIME AS - Kongsberg Maritime AS

Skonnertvegen 1 7053 Trondheim

NORWAY

Manufacturer KONGSBERG MARITIME AS

Place of manufacture Skonnertvegen 1

7053 Ranheim NORWAY

Reference standards Rules for the classification of ships.- Part C - Machinery, systems

and fire protection. - Ch.3, Sect. 6, Table 1.

Issued in GDANSK on May 15, 2025. This Certificate is valid until May 14, 2030

RINA Services S.p.A.
Anna Maria Baranska

This certificate consists of this page and 1 enclosure





TYPE APPROVAL CERTIFICATE No. ELE076325XP Enclosure - Page 1 of 2 K - Gauge Tank Gauging System

Product description:

The Kongsberg K-Gauge is a K-Chief (Type Approval Certificate ELE071124XP) components and software based complex system for level, pressure and temperature alarm and monitoring, typically configured in system types listed below:

K-Gauge CLS

Cargo Level System for monitoring of level, temperature and pressure in cargo tanks for oil, product and chemical cargo. The system includes also level monitoring in ballast and service tanks when operated for same system.

K-Gauge CTS

Custody Transfer System for LNG Tankers

K-Gauge GAS

Cargo Level System for monitoring level, pressure and temperature on gas tankers. Also includes monitoring of tank and pressure related to gas as fuel.

K-Gauge HLA

High Level and Overfill system independent from the CLS system on oil, product and chemical tanks.

K-Gauge RSS

Remote Sounding System for ballast and service tanks, including both electro and electro-pneumatic type.

Documentation:

1. Datasheets

Dwg No. 386440C, K-Gauge CLS Product Sheet, Revision: 1

Dwg No. 386565C, K-Gauge GAS Product Sheet (Tank Monitoring System for LPG Carriers), Revision: 1

Dwg No. 387265B, K-Gauge CTS Product Sheet, Revision: 1

Dwg No. 390749D, K-Gauge HLA Product Sheet, Revision: 1

Dwg No. 394333C, K-Gauge GAS Product Sheet (LNG / LPG / NH3 Fuel Tank Monitoring System),

Revision: 1

2. Manuals

Dwg No. 385541C, K-Gauge CLS 600 Operator Manual, Revision: 1

Dwg No. 387761B, K-Gauge GAS 600 Operator Manual, Revision: 1

Dwg No. 422699A, High Level and Overfill Alarm System Operator Manual, Revision: 1

Dwg No. 448723A, High Level Alarm System Operator Manual, Revision: 1

Dwg No. 458319A, K-Gauge GAS 700 Operator Manual, Revision: 1

Dwg No. 458335A, K-Gauge CLS 700 Operator Manual, Revision: 1

Dwg No. 493992A, Functional Description, Revision: 1

3. Test reports

Dwg No. EMC Report 330633, GLA-300/GL-310, Revision: 1

Dwg No. EMC Report GLK-300, 450658, Revision: 1

Dwg No. EMC Report GLK-300 no.2, E09680, Revision: 1

Dwg No. EMC report, GC-300/GC-306, Revision: 1



TYPE APPROVAL CERTIFICATE No. ELE076325XP Enclosure - Page 2 of 2

K - Gauge Tank Gauging System

Limitations:

EX- certification is not covered by this certificate. Application in hazardous areas is to be approved in each case according to RINA Rules and EX- Certification/ Special Condition for Safe Use listed in relevant EX-certificate.

The following documentation of the actual application is to be submitted for approval by system integrator in each case;

- System block diagram, showing the arrangement of individual parts, input and output devices and interconnection
- Wiring connection diagrams, including details of electrical power supplies, and input and output devices
- System functional description
- Test programs

GDAŃSK May 15, 2025

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