



**TYPE APPROVAL CERTIFICATE**  
No. ELE133723XP

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

<i>Description</i>	<b>Electronic Ship Automation Equipment</b>
<i>Type</i>	<b>AutoChief C20 &amp; C600 Remote Control System Propulsion and; K-Thrust 600 / K-Steering 600 Thruster and Steering Control</b>
<i>Applicant</i>	<b>KONGSBERG MARITIME AS BEKKAJORDET 8A N 3194 HORTEN NORWAY</b>
<i>Manufacturer</i>	<b>KONGSBERG MARITIME AS</b>
<i>Place of manufacture</i>	<b>BEKKAJORDET 8A N 3194 HORTEN NORWAY</b>
<i>Reference standards</i>	<b>Rules for the classification of ships.- Part C - Machinery, systems and fire protection. - Ch.3, Sect. 6, Table 1.</b>

Issued in **Gdansk** on **December 1, 2023**. This Certificate is valid until **November 30, 2028**



*Perenista*  
RINA Services S.p.A.  
Anna Maria Baranska

This certificate consists of this page and 1 enclosure



## TYPE APPROVAL CERTIFICATE

No. ELE133723XP

Enclosure - Page 1 of 1

### AutoChief C20 & C600 Remote Control System Propulsion and K-Thrust 600 / K-Steering 600 Thruster and Steering Control

#### Product description:

The AutoChief C20 & C600 and K-Thrust 600 / K-Steering 600 is an integrated computer control system based on dual CAN protocol network architecture, configurable as: Main Propulsion Control; Tunnel and Azimuth Thrusters Control

#### Control Function:

Remote Control System for FPP and CPP  
Engine Telegraph System  
Engine Safety System  
Digital Governor System  
Thruster Control System  
Steering Control System

#### Technical Data:

The AutoChief C20 & C600 and K-Thrust 600 / K-Steering 600 system comprises the following modules:

Type	Item no.	Designation
ABE11	355146	Touch Screen Panel
ACP	307939; 348100	AutoChief Control Panel
BW21	486233, 486200	Bridge Wing Unit
Dual LAN	4604654	Dual Redundant Local Area Network
DGU	8100272	Digital Governor Unit
DPSC	8100183	Dual Process Segment Controller
DCEG	316335, 4604600	Dual two Channel CAN gateway
DSU38	468770	Digital Servo Unit
Dual CAN-Bus	301992, 302235, 338621, 4604392	Dual Redundant CAN-Bus
ELACT 3812 & 0516	468750 - 442400	Electric Actuator
ESS	303260, 331916, 8100282	Electric Shaft System
ESU	8100275, 8100307	Engine Safety Unit
ESU-12	366666, 366539	Engine Safety Unit
L2C	404654	LAN to CAN gateway
LOS	8100255	Local Operator Station (alphanumeric user interface)
LTU	8100279, ..80, ..81, 364330	Lever Telegraph Unit
LTU11	364330	Lever Telegraph Unit
LTU11 ME	389505	Engine Telegraph Unit
MEI	8100276	Main Engine Interface
MPD	8100292; 8100293	Multi purpose Display
MPP	8100290; 8100291	Multi purpose Panel
MSI-12	8100222	Multi Serial Interface
NQB100	352445	Metapower shaft power meter light fork

## TYPE APPROVAL CERTIFICATE

No. ELE132723XP

Enclosure - Page 2 of 3

### AutoChief C20 & C600 Remote Control System Propulsion and K-Thrust 600 / K-Steering 600 Thruster and Steering Control

Type	Item no.	Designation
PB4	400992	Push Button 4
PBT	8100278; ..318, ..333	Push Button Telegraph
RPMU - RPMC	8100274	RPM Units
RPMe	8100289	RPM Units
PSS	8100184	Process Segment Star Coupler
RAi-10tc, 10txce	334895, 8100161	10 ch. thermo - couple input
RAi-16xe	329714	16 ch. analog input
RAo-8xe	333505	8 ch. analog Input
RDi-32xe	333823	32 ch. digital input
RDi-32Axe	333824	32 ch. digital input - individual galvanic isol.
RDo-16xe	329699	16 ch. digital Ouput
RFU	402007	Rudder Feedback Unit
RIO-C1	8100181	21 analog or digital input and output channels
C2xe	333346	16 digital input or output channels
C3xe	334393	Generator protection module
C4xe	334894	Generator control module
RPC	393831	Pick up Unit
RTixe, RTi-2xel	345304, 351792	Remote Torque Interface Output Module
SCU	329785	Segment Controller Unit
SIU, SIUxe	343294, 350928	Sensor Interface Unit Input Module
SSDU	393267	Speed Set Dial Unit
TMI	398644	Torque Motor Interface
VCC440, VCC690	8100242, 8100269	Voltage Converter Controller
WCC600	373860	Watch Bridge Units

Item no.	Designation	HW version
416532	Lever K-Thrust Dual	B
416531	Lever K-Thrust Single	B
416534	Lever K-Thrust Display	A
405844	Lever K-Thrust Dual w/Display	B
405842	Lever K-Thrust Single w/Display	B
405846	Lever K-Thrust Azimuth w/Display	B
416533	Lever K-Thrust Azimuth	B
412364	Mini Wheel K-Thrust w/Display	A
417835	Mini Wheel K-Thrust	A
406412	Thruster Command Panel	A1

#### Documents:

- Instruction Manual AutoChief C20 AA - 00363 - P; Type Approval Test Procedure AO-14125-B Rev.B dated 9-June-2004;
- AA-00378-A dated 17-July-2004; AA-00372-A dated 23-June-2004;
- 311246; 386083; 331519/B; 351385/A; 367938/D; 398092/A; 322851/A; 405886/A; 406171/A; 406806/A; 409453/A;
- 409590/A; 409612/A; 412948/A dated February 2017; 419577/A; 419578/A; 419579/A; 419580/A; 425396/A;

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**TYPE APPROVAL CERTIFICATE**

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**Enclosure - Page 3 of 3**

**AutoChief C20 & C600 Remote Control System Propulsion and  
K-Thrust 600 / K-Steering 600 Thruster and Steering Control**

**Test Reports:**

**Danak:** - 195838 dated 13-November-2001; 197561 dated 09-August-2004; 197309 dated 19-January-2004;  
- 197316 dated 27-January-2004; 197322 dated 30-January-2004; 197329 dated 30-January-2004;  
- 1911137 dated of 23 Nov. 2010; 1913963; 1914404; 1914407; 1915712; 1915815; 1915862; 1916085  
**NEMKO AS:** - 142846; E16203.00 dated 2017-03-29; E21088.03 dated 2021-10-28; E21239.00 dated 2022-06-09  
E19116.02 dated 2019-12-18; E21017.03 dated 2021-11-23;

**Remarks:**

- The K-Thrust components fulfill EC-Code: EC31 and Thruster command Panel fulfill EC-Code: EC31/41.
- The EMC requirements for installation on the Bridge and Deck Zones will be fulfilled by the equipment.
- For each configuration, the following documentation is to be submitted for approval:
  - + System description / scope of supply
  - + System block diagram
  - + External connection block diagram
  - + Power supply block diagram
  - + Factory Acceptance Test procedure
- Factory acceptance test is to be carried out in order to verify the correct function of the whole system.
- Evidence of the software version installed is to be recorded.
- Compass safe distance is to be considered at installation on bridge zone.

**Additional manufacturing location:**

Kongsberg Maritime Ltd  
136 North Fute Road  
China (Shanghai) Pilot Free Trade Zone, 200131 Shanghai  
P.R. China

*This certificate annuls and replaces the previous one N° ELE349021XG.*

**Gdansk December 1, 2023**

