AutoChief® 600

KONGSBERG

Propulsion Control System

AutoChief® 600

Back in 1967 we developed the first generation remote control system for low speed propulsion plants, the AutoChief® I.
By 2025 more than 13.000 remote control systems have been delivered to vessels all over the world, including approximately 10.000 AutoChief® generation C20/600. AutoChief® has become a trademark for safe and efficient propulsion control.

AutoChief® 600 is suitable for:

- Low speed engines from WinGD and Everllence B&W, conventional and dual fuel
- Low speed engines with controllable and fixed pitch propellers
- Low speed engines for single- and twin propulsion line
- Single and twin propulsion line with gearbox

Key features

AutoChief® main components are:

- Touch screen Control Panel
- Engine Telegraph Unit
- Engine Safety System
- Marine Based Processing System
- Option: Manoeuvring Recorder
- Option: Governor Control System
- Option: Remote Connection

Highlights

- Simple installation
- Reliable operation
- Easy to use
- Few moving parts ensure that little maintenance is required

Optional

- Fuel and Speed Pilot
- Constant Power Mode
- Dynamic Combinator mode (CPP)
- Remote Services

AutoChief® operator console

AutoChief® Control Panel

The AutoChief® Control Panel and Engine Telegraph is designed for easy operation and can be installed into any standard console. An advanced, yet simple to use touch screen computer offer easy access to all system functions, providing the information you need only when you need it. Main variables such as RPM, pitch, start air and scavenging air pressure, engine state etc. are shown. Coloring standards and dimming function adapt the user interface to changing ambient lighting conditions. Several levels of control are available to distinguish between user groups.

The system can operate stand-alone, and/or integrated with our K-Chief automation system or K-Thrust. In systems with shaft generators the Power Management System can communicate with the AutoChief® system for smooth operation. Open architecture allow seamless integration

Bridge Wing Unit

The Bridge Wing Panel BWU21 is designed for outdoor use with AutoChief® remote control.

The screen gives good visibility in night and daylight. The illuminated Lever has 11 telegraph positions with well defined notch in each position.
Emergency Stop Switch is independent of panel and connected directly to Main Engine Safety System. Communication with the rest of AutoChief® is by CAN bus.

Engine Telegrap Unit

A lever type Engine Telegraph is used on the bridge and in the engine control room. A Push-Button Telegraph is normally used in the engine room

Telegraph positions:.

- Ahead: Dead slow, Slow, Half, Full, Navigation full
- Stop
- Astern: Dead slow, Slow, Half, Full, Emergency astern

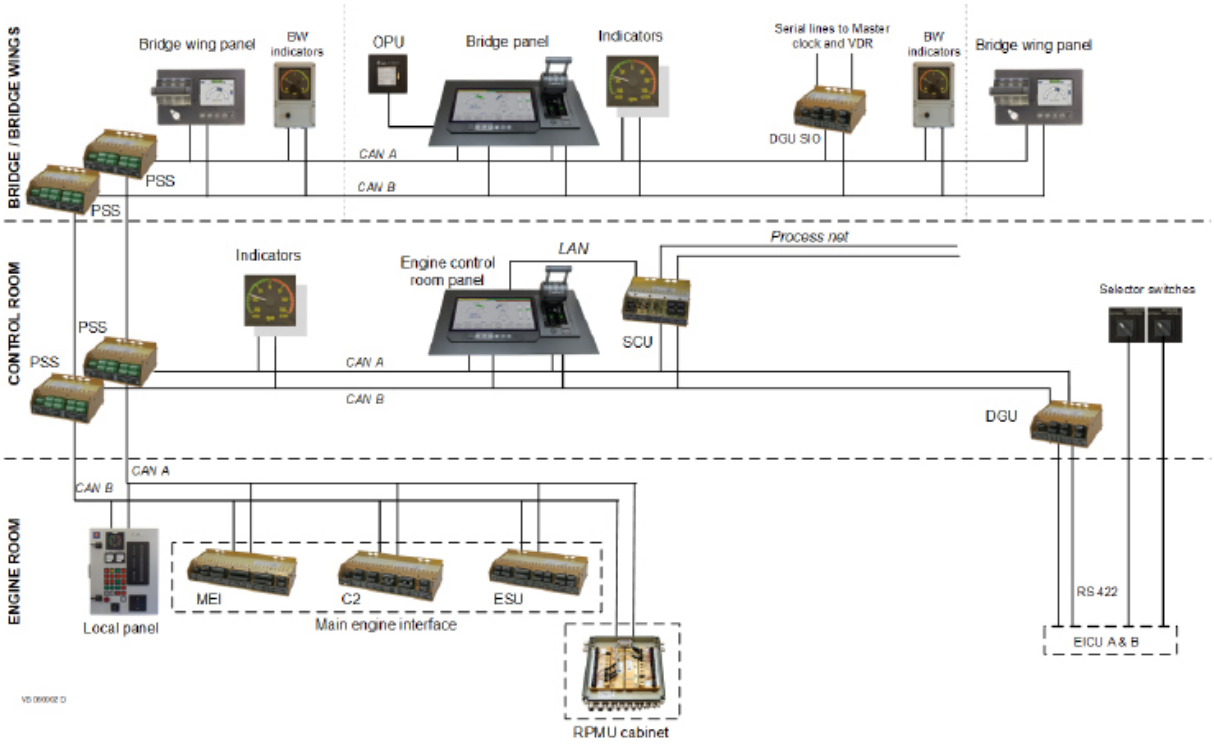
Sub telegraph modes:

- Finished with engine (FWE)
- Stand-by
- At sea

Available control locations:

- Bridge
- Bridge wing(s)
- Engine control room (ECR)
- Engine local stand (Local)
- Other locations (optional)

Emergency telegraph



Process controller and IO

AutoChief®use processing controllers and IO modules specifically designed for maritime use. These are installed on the engine og in the Engine Control Room (ECR).
All signals to and from the units are transmitted on dual redundant CAN lines.

All nonessential sensors can be shared with the K-Chief alarm and monitoring system, requiring only one interface to the main engine. This principle drastically reduces the installation and cabling cost.

Main features:

- Redundant field bus (CAN)
- Signal interfacing to sensors and actuators
- Alarm detection and process control
- Time stamping of alarms and events
- Design focused on EMC compatibility
- Local control cabinets and RPM pickups created for engine room environment

AutoChief® technical data

Temperature	Operating temperature -25 °C to +70 °C
Electrical	Dual 230 V AC input power Distributed 230 V AC and 24 V DC power Communication on redundant CAN bus UPS capacity for 30 minutes operation

Engine Safety System

The Engine Safety System is both a stand-alone and a fully integrated part of the AutoChief®.

Main features:

- Overspeed detection system
- Automatic shutdown of main engine, both cancellable and non-cancellable, will stop the engine by activating solenoid valves. The sensors may be analogue or digital.
- Configurable shutdown inputs with backup and double power supply.
- Automatic slowdowns, both cancellable and non-cancellable, reduces engine speed to a safe level if technical problems arise on the main engine.
- Engine RPM detection system with two independent systems, including automatic change over
- RPM indicators on redundant CAN network
- All sensors and valves are monitored for cable failure.
- Settings may be altered and values may be inspected on any control panel.
- Redundant power supply

Manoeuvring Recorder

The Manoeuvring Recorder (or Order Printer Unit, OPU) is designed to continuosly log specific events related to the propulsion plant and commands from the bridge, and to provide a paper printout.

- Engine-telegraph Command
- Propulsion-system Modes
- Propulsion-system States
- Control Location and Transfer
- Alarms

Type approval:

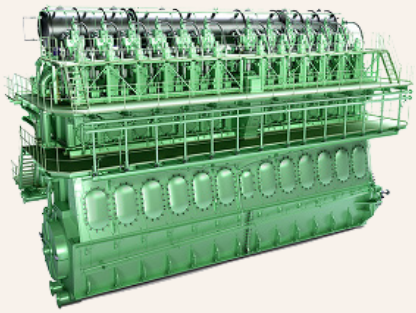
Designed in accordance with the requirements of:
DNV, LR, BV, RINA, Class NK, ABS, KR, CCS, PRS

Cyber Security:

Type approval by
DNV, LR, BV, RINA, Class NK, ABS, KR, CCS, PR

Environmental specs:

- IACS E10 Rev8:2021 + Cort:2008
- IACS E27
- IEC/EN 60945:2002:2008
- DNV-CG-0339:2021



Standard Motortypes:

- Everllence B&W ME-C
- Everllence B&W ME-GI
- Everllence B&W ME-LGIM
- Everllence B&W ME-LGIP
- Everllence B&W MC
- WinGD X
- WinGD X-DF
- WinGD X-DF-A
- WinGD X-DF-M
- WinGD RT-Flex
- Mitsubishi UE

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