

CCM Marine portable

multi cylinder combustion monitoring system for Marine Diesel Engines

The CCM Marine portable is a comprehensive system which can be rapidly installed on-site to enable acquisition of cylinder pressure data on 2- and 4-stroke Marine Diesel Engines.

Characteristics

- Optimise performance
- Advanced engine balancing
- Save fuel
- Reduce emissions
- Event recording of last 40 pressure cycles

Application:

- 4 stroke Diesel engines 350...1800 RPM
- 2 stroke Diesel engines 50 900 RPM



Technical data

CCM portable	
Combustion control unit	Max. 12 analog inputs (option: extension to 20 analog inputs) Resolution: 0.1°CA Interface: Fast Ethernet LAN 100 Mbits/s Wide range power supply 90...264VAC Optical- or magnetic pick-up for TDC position
Pressure sensors HTT-06	
Measuring range pressure	0...300 bar
Over pressure static	1200 bar
Thermal shock 1500 RPM pmi=9bar	< +/- 0,5 bar
Accuracy	≤1% Full scale
Frequency	10 kHz
Temperature range of SCU	-40 °C ... + 75 °C
Output signal range	4...20 mA

Mounting:

The HTT-06 cylinder pressure sensors are installed on special designed indicator valves for reducing operating temperature of 250—300 °C on measuring element. This allows perfect conditions for online monitoring of combustion pressure.



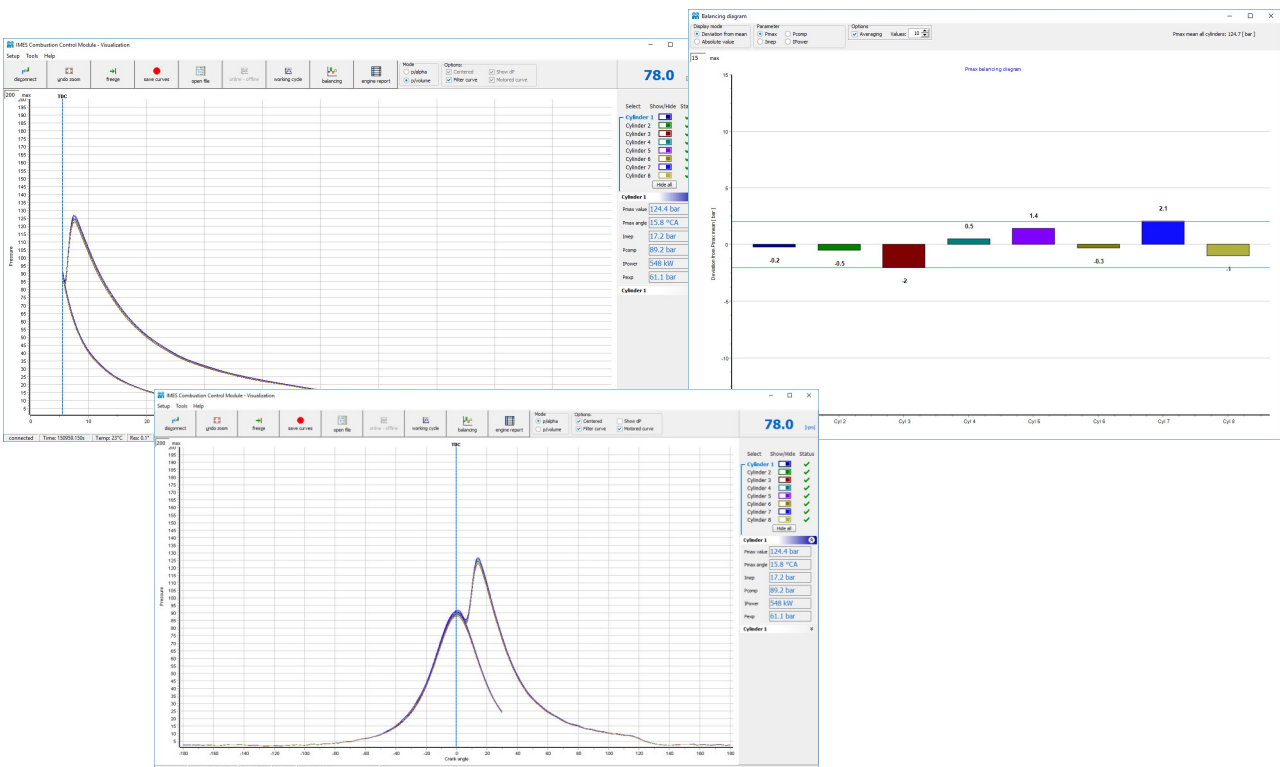
HTT-06 sensor mounted on a special designed indicator valve at a Wärtsilä 9L32 diesel engine



HTT-06 sensor mounted on a special designed indicator valve at a MAN 48/60 diesel engine.

CCM Marine portable PC software

The CCM Marine PC software is a modernised version for online combustion monitoring on two- and four stroke diesel engines.



Scope of supply

Product No.

CCM portable box (small) incl. the following:

W-8110

- Central unit incl. multi channel data acquisition unit 1...12 cylinder
- incl. front panel with connectors for power supply, pick-up signal, pressure signal from terminal box, LAN/Ethernet
- incl. wide range power supply 90...264VAC
- Firmware: Resolution 0.1°CA @ 1800 RPM incl. Event storing of 40 cycles/cylinder
- Calculation per cylinder: Pmax, Pcomp, Ipower and IMEP
- Communication: Fast Ethernet LAN Interface 100mBits/s
- Dimension and weight: 405 mm x 330 mm x 165 mm;
- Weight: 4,6 kg

CCM portable box (big) incl. the following:

W-8105

- Central unit incl. multi channel data acquisition unit 1...20 cylinder
- incl. front panel with connectors for power supply, pick-up signal, pressure signal from terminal box, LAN/Ethernet
- incl. wide range power supply 90...264VAC
- Firmware: Resolution 0.1°CA @ 1800 RPM incl. Event storing of 40 cycles/cylinder
- Calculation per cylinder: Pmax, Pcomp, Ipower and IMEP
- Communication: Fast Ethernet LAN Interface 100mBits/s
- Dimension and weight: 543 mm x 419 mm x 218 mm;
- Weight: 10,3 kg

Visualisation software 2- and 4-stroke (1...20 cylinder license)

W-8051

- Diagrams: pressure/CA, p/v , Pmax, Pmax balance, Event storing, Engine report
- Supported operating system: Microsoft WIN 7, WIN 10

Scope of supply

	Product no.
Sensors, cables and accessories	
- HTT-06 cylinder pressure sensor	IW-6408
- Terminal box for 12 sensors incl. 10m connecting cable to CCM	IW-8129
- Sensor connecting cable 5 m	IW-4108
- Sensor connecting cable 10 m	IW-4109
- Ethernet cable 10m	IW-8131
- Optical pick-up sensor	IW-1240
- Variable friction arm for optical pick-up sensor	IW-1243
- Magnetic pick-up sensor	IW-1239
- Sensor connecting cable 10 m	IW-4109
- Special indicator valve	
Option:	
- Portable box for sensors and cables	IW-7990
- Industrial notebook PC WINDOWS 10 en	IW-6310