CCM Gas portable

multi cylinder combustion monitoring system for gas engines

CCM Gas Engine portable is a comprehensive system which can be rapidly installed onsite to enable acquisition of cylinder pressure data on spark ignited- and dual fuel engines.

Characteristics

- Optimised adjustment of vibration knock detection system
- Spark ignited– and dual fuel Engines
- Optimised engine balancing
- Designed for service application
- HTT-04® , FPS-02 or CPS-01® cylinder pressure

Application:

- 4 stroke Gas Engines 250...1500 RPM

Technical data

Central unit	
CCM Combustion control unit	Max. 12 analog inputs (option: extension to 20 analog inputs) Sampling rate: 110 kSPS Interface: Fast Ethernet LAN 100 Mbits/s Wide range power supply 90...264VAC Opticl Pickup for TDC position
Cylinder pressure sensor HTT-04® FPS-02 and CPS-01®	
Measuring range pressure	0...300 bar
Over pressure static	1200 bar (1500 bar on request)
Thermal shock 1500 RPM pmi=9bar	< +/- 0,5 bar
Accuracy	≤ 1% Full scale
Max. temperature at measuring cell	300 °C (short time 350 °C)
Temperature range of SCU	-40 °C ... + 75 °C
Output signal range	4...20 mA

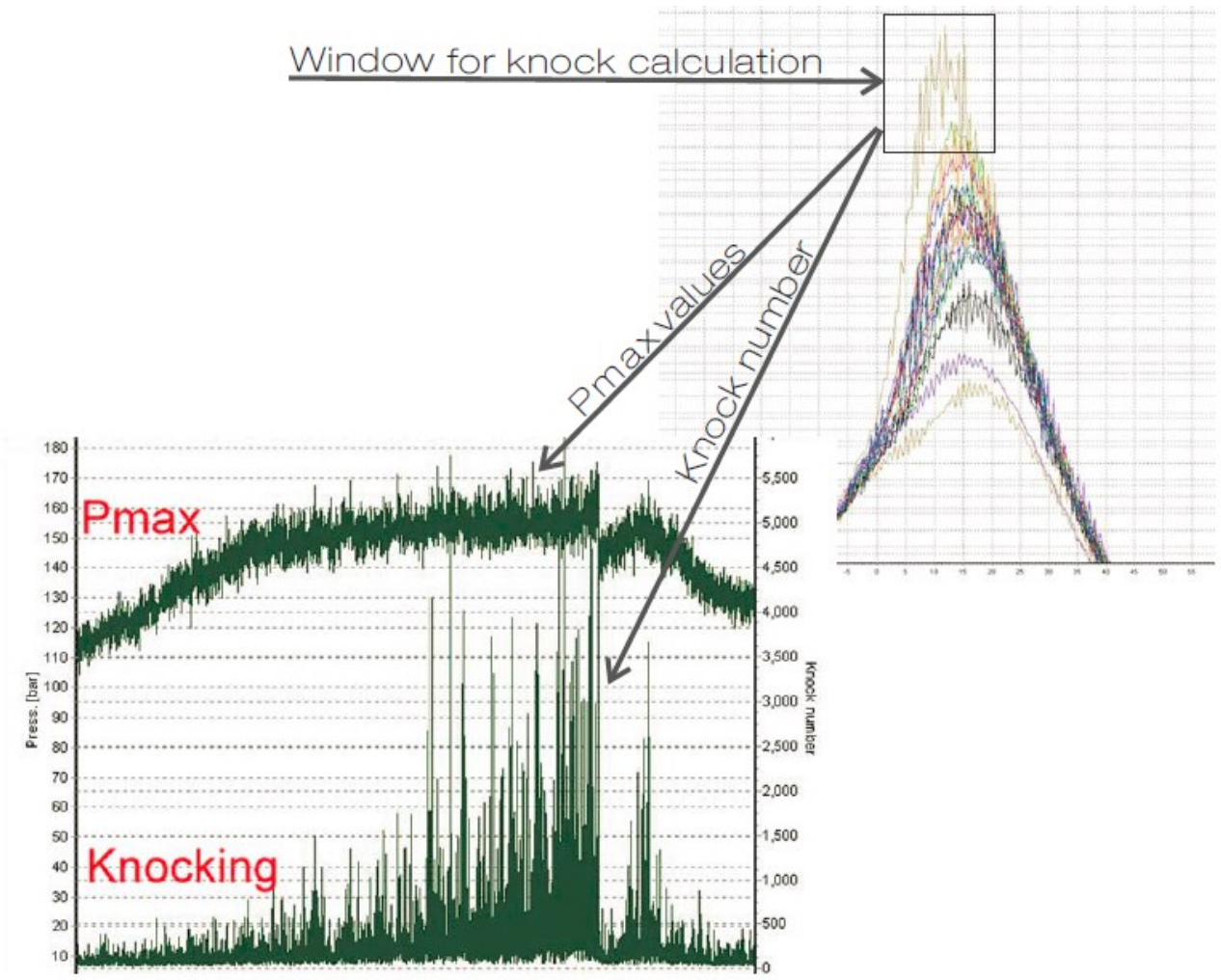
The HTT-04® or CPS-01® cylinder pressure sensors are installed near to combustion chamber.

The traditional method of knock detection system adjustment needs highly skilled staff. The adjustment is done acoustically on the engine.

Using CCM for the adjustment of the knock detection system is both easier and more accurate. The engine specific knock parameters are permanently stored in the manufacturer's engine settings.

The knock detection limits of a knock detection system with acceleration sensors and can be calibrated by using knocksignal trends from the CCM.

HTT-04 sensor installed on a gas engine



Scope of supply

	Product No.
CCM portable box (small) incl. the following:	IW–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:	IW–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 4-stroke (1...20 cylinder license)	IW-8059
- Diagrams: pressure/CA, p/v , Pmax, Pmax balance, Event, Engine report	
- Supported operating system: Microsoft WIN 7, WIN 10	

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Scope of supply

	Product No.
Sensors, cables and accessories	
- HTT-04 cylinder pressure sensor	IW-6237
- CPS-01 cylinder pressure sensor	IW-5934
- FPS-01 cylinder pressure sensor	IW-6280
- FPS-02 cylinder pressure sensor	IW-6224
- 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
Option:	
- Portable box for sensors and cables	IW-7990
- Industrial notebook PC WINDOWS 10 en	IW-6310

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