Gravimetric Measurement System GMS 141

Gravimetric Measurement System GMS 141 with absolute filter holder for blank sheets and cartridges

Oily blow-by gases out of the crankcase affect the life time of parts of the engine and of the intake as well as the emission of a motor vehicle. Therefore, oil mist separators are basic components of a crank case ventilation system.

The Topas gravimetric measurement system GMS 141 allows the comfortable detection of oil content in blow-by after oil mist separators with a filter blank sheet or filter cartridge directly on engines or engine test stands.

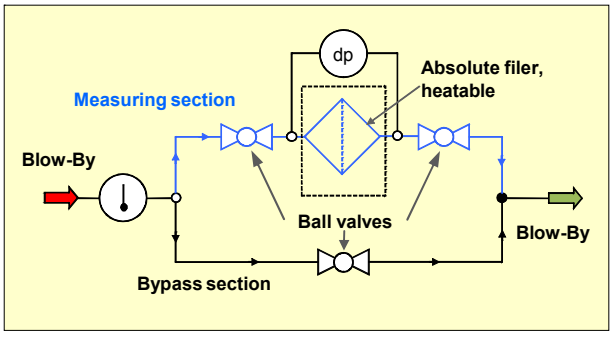
The measuring device combines a simple and rugged assembly with an economic low-cost manual application and handling. The device is controlled in a web browser.

Applications

- Determination of the blow-by oil content
- Gravimetric benchmark of oil mist separators for crank case ventilations in combustion engines
- Calibration of aerosol generators and aerosol photometers

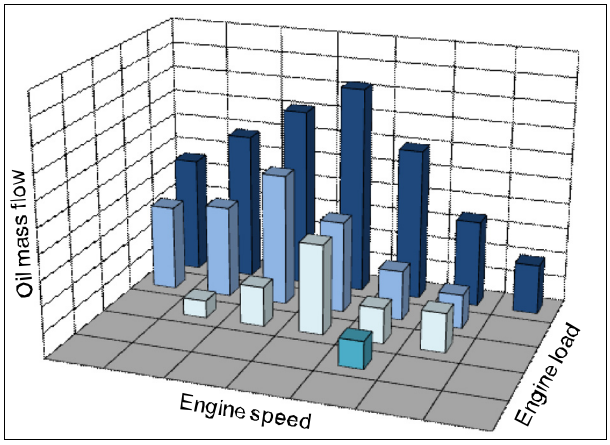
Special Advantages

- Time-saving reproducible detection of oil content after oil mist separator in blow-by of combustion engines
- Heatable absolute filter box in order to avoid condensation (up to 120 °C)
- Installation of different absolute filters possible. Selection by flow rate and filter charging:
  - Filter blank sheet with d = 110 mm or
  - Filter cartridge with d = 65 mm, L = 93 mm
- Two independent sections: bypass and measuring. Running up to the working point over bypass section and measuring over measuring section. Prevention of undesirable filter charging.
- Switching between both sections with pneumatic ball valves;
  feature: manual or automatic switching (by default time or differential pressure)
- Display of blow-by measuring data
  - Differential pressure at absolute filter (information about filter charging)
  - Blow-by and absolute filter temperature
- Easy to use, rugged, space-saving design
- Convenient device control with web browser
- Monitoring of measuring values by TCP/IP interface

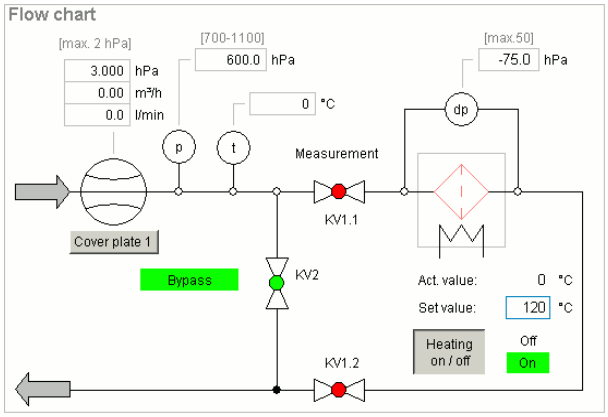


Schematic diagram of the GMS 141

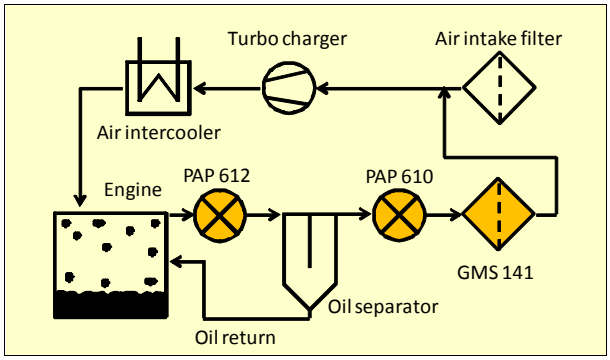
Specifications



Example: oil mass flow after oil mist separator



User interface of the GMS 141 in a web browser



Example: integration of the GMS 141 and the photometers PAP 610 and PAP 612 in an engine test stand

Technical Data

Flow rate	up to 300 l/min (18 m³/h)
Installation	In-line
Differential pressure measuring range at filter box	-50…50 hPa
Pipe connection diameter	DN 28 mm
Dimensions of absolute filter	Filter blank sheet: ∅ 110 mm (effective ∅ 100 mm / filter area: 78,5 cm²) Filter cartridge: ∅ 65 mm, L= 93 mm filter area: 679 cm²
Aerosol contacted materials	Stainless steel, aluminium, Viton (FKM)
Heatable filter box	< 120 °C (adjustable)
I/O-System	Analog and digital out-/ input, PC connection via TCP/IP
Compressed air supply	5…8 bar
Power supply	230 V AC, 50/60 Hz, 3 x 200 W, 3 A
Dimensions W x D x H	520 x 240 x 350 mm
Weight	14 kg

QMS certified to DIN EN ISO 9001.

12 100 11908 TMS

For more information please visit our website at www.topas-gmbh.de

Specifications are subject to change without notice.

© Copyright 2014 Topas GmbH.

Topas GmbH
Technologie-orientierte
Partikel-, Analysen- und Sensortechnik
Oskar-Röder-Str. 12 · D-01237 Dresden

Phone +49 (351) 21 66 43 - 0
Fax +49 (351) 21 66 43 55
E-mail office@topas-gmbh.de
Internet www.topas-gmbh.de