

## 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.

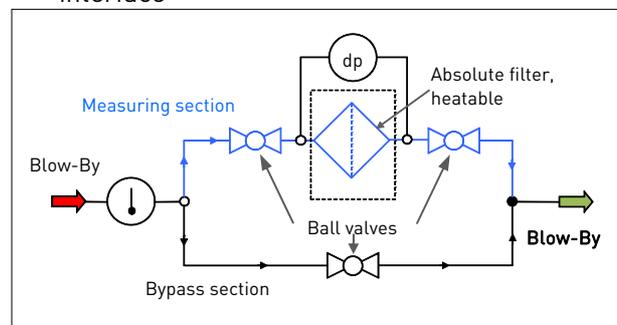
The measuring device combines a simple and rugged assembly with an economic low-cost manual application and handling. The device is controlled in a web browser.

### 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

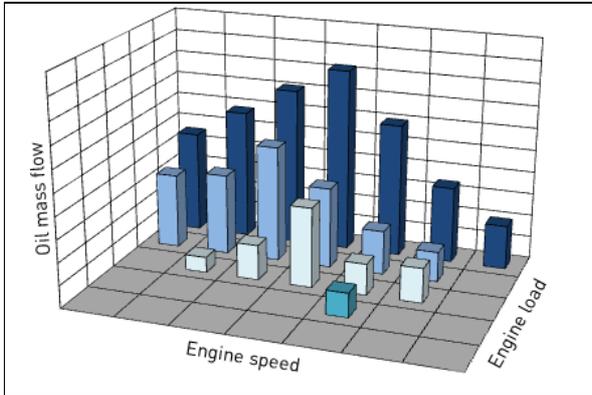
- Time-saving reproducible detection of oil content after oil mist separator in blow-by of combustion engines
- Heatable absolute filter box in order to avoid condensation (up to 120 °C)
- Installation of different absolute filters possible. Selection by flow rate and filter charging:
  - Filter blank sheet with  $d = 110 \text{ mm}$  or
  - Filter cartridge with  $d = 65 \text{ mm}$ ,  $L = 93 \text{ mm}$
- 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



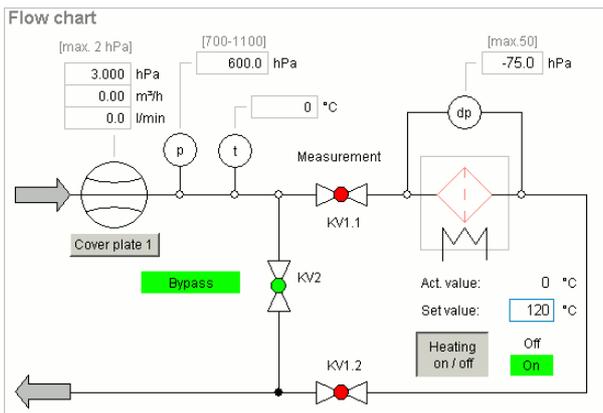
Schematic diagram of the GMS 141



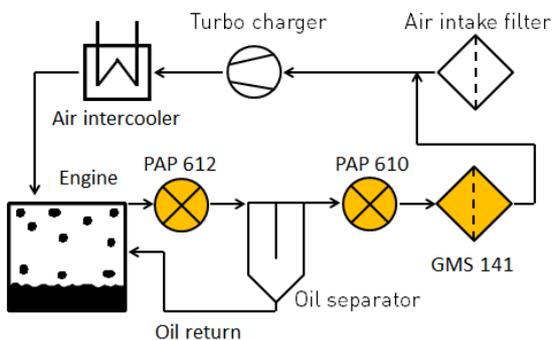
## Specifications



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: Ø 110 mm (effective Ø 100 mm / filter area: 78,5 cm²)
	Filter cartridge: Ø 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.



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For more information please  
visit our website at  
[www.topas-gmbh.de](http://www.topas-gmbh.de)

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