BM TEST EQUIPMENT
- the safe choice

BM EMISSION TESTERS

- BM3101 - BM3201

- Accurate and consistent measurements.
- Latest technology and software meeting authority requirements.
- Robust with long lifetime and low maintenance costs.

BM Emission Testers

The BM3201 range includes changing automobile technology; it is both an anti-pollution control tool (gas analyser & smoke meter) and a diagnostic tool. The BM3201 range can be supplied with Windows phone or tablet, which allows the operator to operate the emission tester from inside the vehicle.

BM3201 4 Gas Analyser

- Graphic screen and 5-key keyboard.
- Guided test procedure on LCD display and Windows phone or tablet.
- Thermal integrated printer (or Matrix Dot on demand).
- Intelligent control of gas pump via Windows phone or tablet to ensure long pump lifetime.
- Compatible with the OIML R99 Class 0 and ISO 3930 standards.
- Multi-gas analysis mode.
- Vehicle inspection mode.
- Guided test procedure on LCD display and Windows phone or tablet.
- Automatic condensation extraction.

TECHNICAL DATA - BM3201 4 GAS ANALYSER			
Size of display unit L x W x H	400 x 380 x 200 mm		
Preheating time	< 5 minutes at 20°C (1 minute minimum)		
Response time	13 seconds for HC, CO, CO_2, 28 seconds for oxygen (transition from 20.9% to 0.1% for a gas with 0% O_2)		
Nominal pump delivery	6 l/min.		
Minimum pump delivery	3.5 l/min.		
Hose length for gas sampling probe	7.5 m		
Air pressure variation	Automatic correction by integrated absolute pressure sensor		
Zero point and sensitivity	Automatic compensation		
Automatic pump standby and automatic zeroing			
Power supply x 1	1.5 A / 115 Vac 0.9 A / 230 Vac (+10-15%)		
	MEASUREMENT RANGES	ACCURACY	RESOLUTION
HC	Normal resolution: 0 to 20000 ppm Propane	10 ppm	Normal res.: 10 ppm vol. High res.: 1 ppm vol.
CO	-0.03 à 10.5 %	0.03 %*	Normal res.: 0.01 % vol. High res.: 0.001 % vol.
CO_2	-0.4 à 21.0 %	0.5 %*	Normal res.: 0.1 % vol.
O_2	-0.5 à 21.7 %	0.1 %*	If O_2<4 % vol. high res.: 0.01 % vol. Otherwise normal res.: 0.1 % vol.
Nox	0 à 5000 ppm	N/A	1 ppm vol.
Engine speed	0 à 9999 RPM	+- 10 RPM	1 tours/min
Oil temperature	-5 à 150 °C	+- 1 °C	1 °C
Corrected CO	0 à 10 %	0.03 %	0.01 %
Air/fuel coefficient (Lambda)	0.600 to 1.200	0.03	0.001 or 0.01, selectable

BM3201 Combined Emission Tester

- Graphic screen and 5-key keyboard.
- Guided test procedure on LCD display and Windows phone or tablet.
- Thermal integrated printer (or Matrix Dot on demand).
- Intelligent control of gas pump via Windows phone or tablet to ensure long pump lifetime.
- Petrol and diesel rev-counter.

BM3201 Smoke Tester

- Graphic screen and 5-key keyboard.
- Guided test procedure on LCD display and Windows phone or tablet.
- Thermal integrated printer (or Matrix Dot on demand).
- It is in complete compliance with the opacity control procedure for vehicle inspection centres and with the procedure for determining the opacity applicable to repair workshops.
- Linearity check.

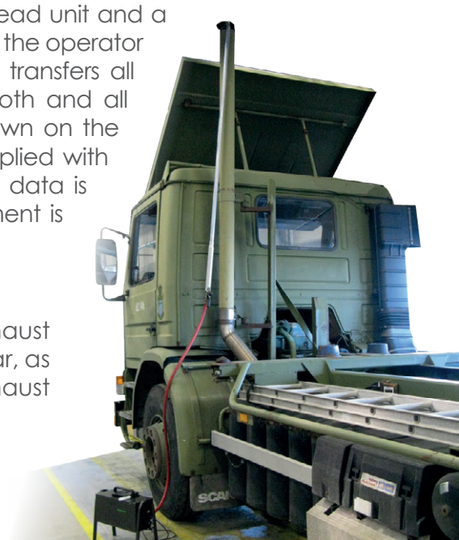
TECHNICAL DATA - BM3201 SMOKE TESTER		
Effective length of the measuring chamber	215 mm ±0.05 cm	
Hose length for opacity probe	0.5/2/4 m	
Size L x W x H	500 x 250 x 415 mm	
Size of display unit L x W x H	400 x 380 x 200 mm	
Preheating time	From 3 to 6 min depending on ambient temperature	
Zero adjustment and calibration before use	Automatic	
Control of zero adjustment	Automatic by electrical filter centred at 50%	
Humidity	30% to 90%	
Temperatures	Ambient temp. range for operation	+5 to +40°C
	Storage temp.	-32°C to +55°C
Measurement range of the measured value	Opacity Resolution	0.00 to 9.99 m-1 0.01 m-1
Maximum relative error under standard conditions	• Temperature +20 °C • Atmospheric pressure 1013 hPa	• Relative humidity 60% ±15% • Opacity error below 0.15 m-1
Measurement range of influencing factors (which allows correction of the opacity value)	Temperature of the gas being measured	0-256 C (resolution 1°C)
	Physical response time 10% to 90%	Less than 0.2 sec. for gas at 75L/min
	Electrical response time	0.9 sec
Power supply	1.5 A / 115 Vac 0.9 A / 230 Vac (+10% -15%)	50-60 Hz (±2%)

BM3101 Smoke Meter

BM can offer a cost effective smoke meter solution, which only consists of the measuring head unit and a handheld unit with software that guides the operator through the test. The measuring head transfers all data to the handheld unit via Bluetooth and all measured and calculated data is shown on the unit. Optionally this model can be supplied with a Bluetooth printer solution, where the data is printed in a simple format. This equipment is available in selected countries only.

Pipe Extension for High Exhaust Smoke Tests

A special pipe solution for testing heavy vehicles with high tail exhaust pipes. The solution removes the need of ladders or other lifting gear, as the operator can easily place the measuring probe into the exhaust pipe while standing on the floor.
The solution is designed so the smoke meter can remain on the floor instead of having to be lifted. The solution thus meets work requirements from many national Health and Safety Authorities.



- the safe choice

BM8530 RPM & Temperature Unit

TECHNICAL DATA	
Automatic initialisation	
Measurement range	400 - 9 999 rpm
Maximum error	<20 rpm at speeds below 2000 rpm
Resolution	10 RPM and 1°C
	<2 % in other cases
	-13°C to 150 °C (oil temperature).
Oil temperature	+/- 1°C.
Response time	<1 second
Measurement update rate	10 times per second
Initialisation time	<17 seconds

Covers almost all vehicle types: Petrol, Diesel, GLP / LDV, HDV, 2-wheelers. The unit provides guided test procedure on LCD display.

- Keyboard for cylinder selection and mode settings.
- Cables for battery clamps, cigar lighter and vibration sensor.
- Oil temperature probe.
- Lithium battery and charger.

BM4220 EOBD Scantool

The scantool is a tool that gives access to internal data from on-board systems. It is connected to the vehicle's OBDII auto diagnostic port and scans the stored data and current data available using one of the 5 standard protocols: J1850 PWM, J1850 VPW, ISO9141-2, ISO14230-1,2, ISO15765 and J1939.

- Multi-make and easy to use.
- Access to measurements made by the calculator (RPM, speed, pressure, temperature, advance, ...).
- Readings and launch of the tests: catalyst, EGR, O2 sensor.
- Stored fault codes (injection, emissions, ...).
- Reinitialisation of fault codes.
- Bluetooth.

Integration with BM FlexCheck

BM emission testers are prepared for integration with the BM FlexCheck vehicle inspection IT system, which allows for establishing fully automated one or multilane test facilities.

One of the unique advantages of BM FlexCheck is that the test equipment of a multilane station can be shared across the lanes - including BM emission and headlight testers. This way a multilane test facility can have more lanes with less test equipment.

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BM TEST EQUIPMENT

Texts and photos may present optional equipment available at additional cost. All functionality, features, specifications and other product information provided in this document including, but not limited to, the benefits, design, pricing, components, performance, availability, and capabilities of the product are subject to change without notice or obligation.

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