BM TEST EQUIPMENT
- the safe choice

BM40A INSPECTION LANE
for Light Vehicles

- High quality at competitive prices.
- Savings in capital investment through flexible IT.
- Ensures superior quality assurance and consistency in the vehicle inspection processes.
- Design and manufacturing based on more than 30 years of knowledge and experience.

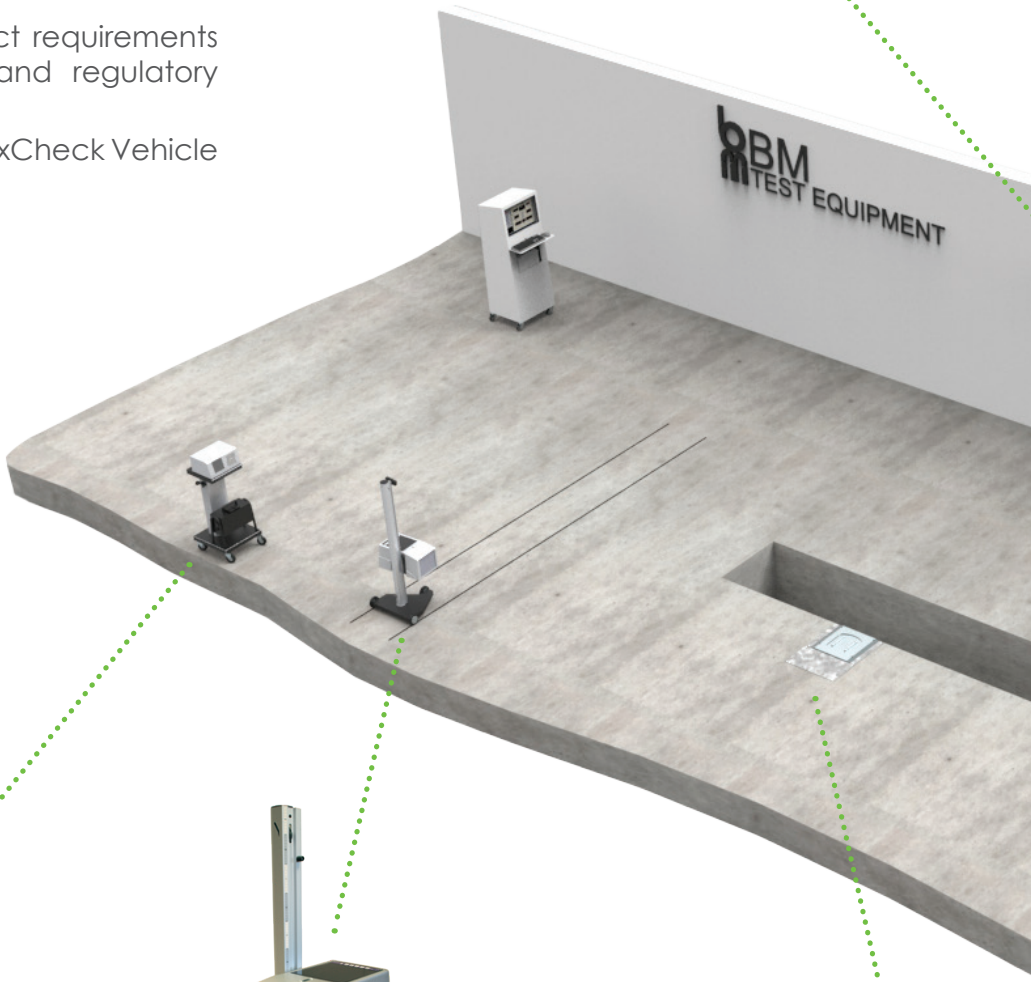
Introduction

The BM40A vehicle inspection lane is fully automated and includes the latest technology for the collection of test data.

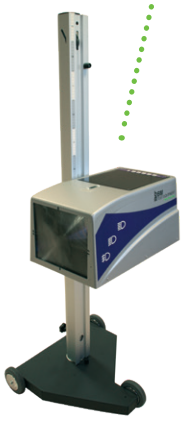
The BM40A is used for vehicle inspection in England, Ireland, Lithuania and Denmark.

- Consists of test equipment, which is approved and used by some of the largest and most well-known vehicle inspection bodies in the world.
- Designed for the heavy use and high throughput experienced in the vehicle inspection environment.
- Fulfils all CEE directives.
- Customised to meet the exact requirements of each individual market and regulatory body.
- Fully automated via the BM FlexCheck Vehicle Inspection IT system.

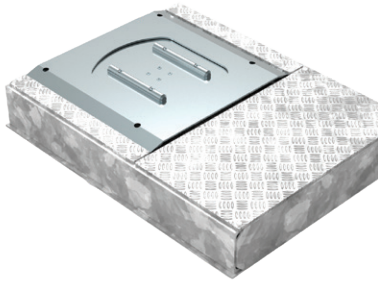
Large easy-to-read display for brake tester, suspension tester and side slip tester



BM3201 combined emission tester

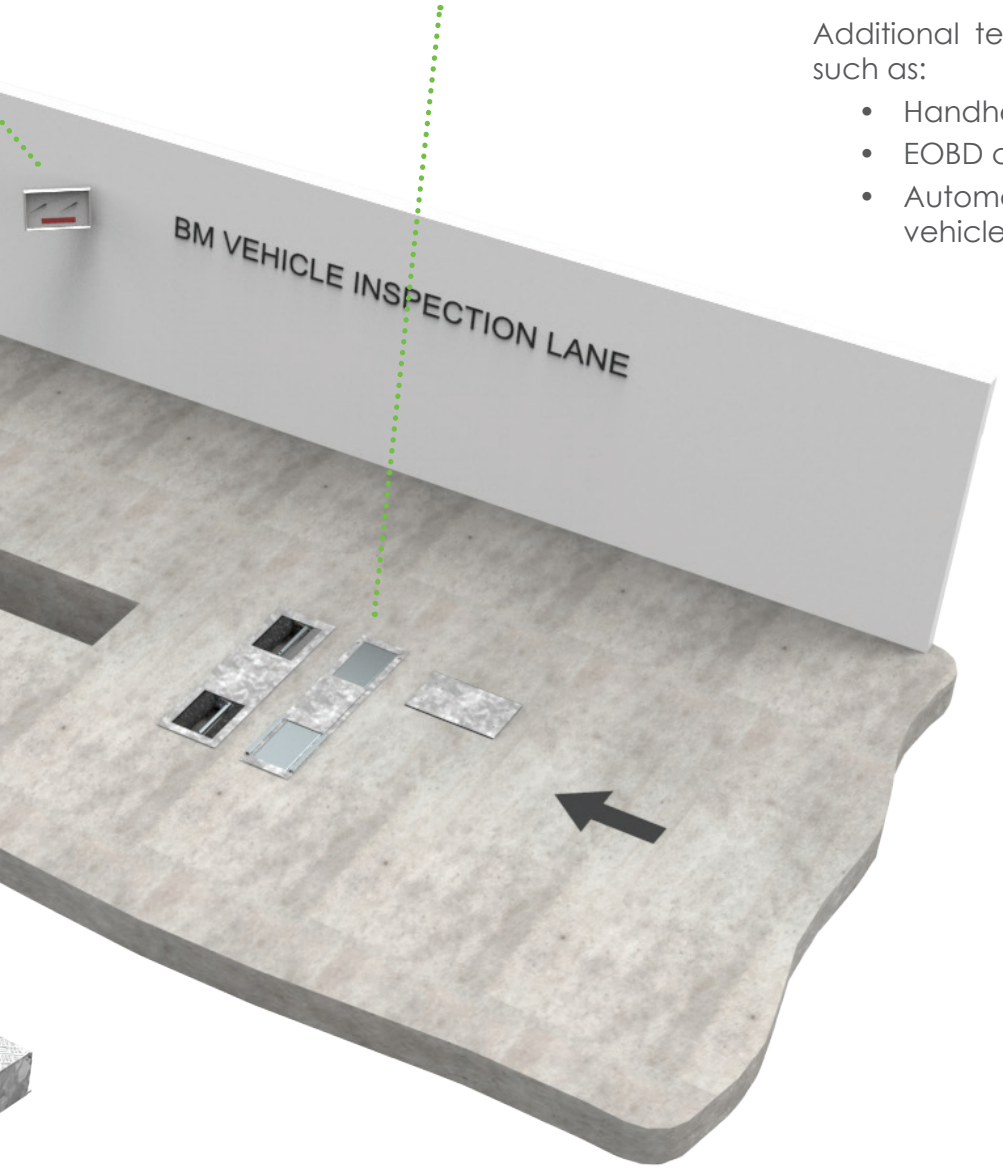


BM2500 headlight tester



BM250 wheel play detector

BM4010 roller brake tester, BM40010 suspension tester and BM810 side slip tester



The BM40A vehicle inspection lane includes: Page

Additional test equipment can be added such as:

- Handheld decelerometer
- EOBD check
- Automatic camera solution with vehicle photo on inspection printout

BM FlexCheck IT system

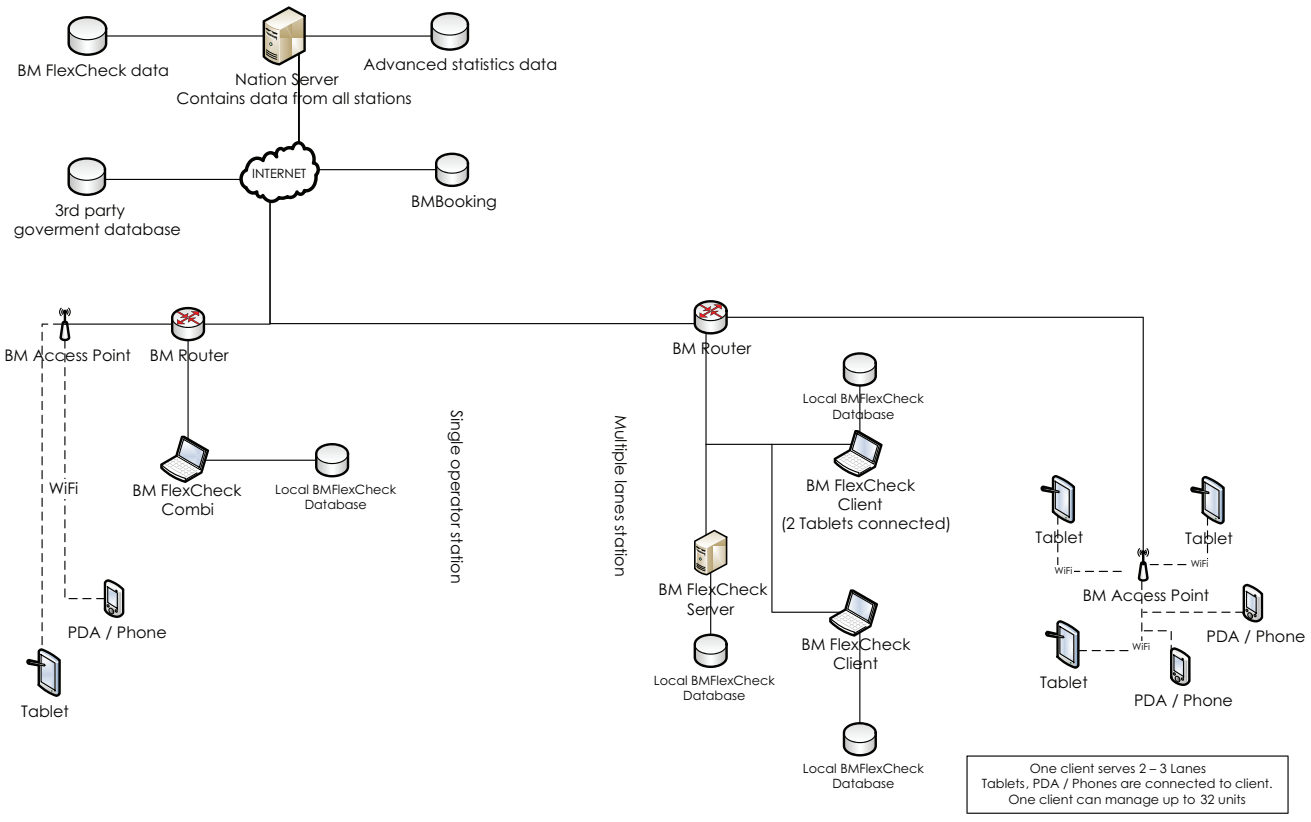
BM FlexCheck is a proven IT system for the vehicle inspection business and is designed to collect all data from the vehicle inspection process and store this data in central databases for further processing.

BM FlexCheck includes two principle features:

1. Collecting and processing of vehicle inspection data.
2. Data exchange and integration between inspection centres and 3rd party databases such as government controlled vehicle databases and the ERP system of the vehicle inspection company.

The design of BM FlexCheck provides an all-in-one network solution. All vehicle inspection centres are linked through the BM FC National Database, which holds data from all the vehicle inspection stations in the network.

BM FlexCheck Diagram for Periodic Technical Inspection



The BM FlexCheck National Database ensures that an inspection result from one station can be downloaded by another station. This feature allows the customer a free choice of inspection station, when they need a retest.

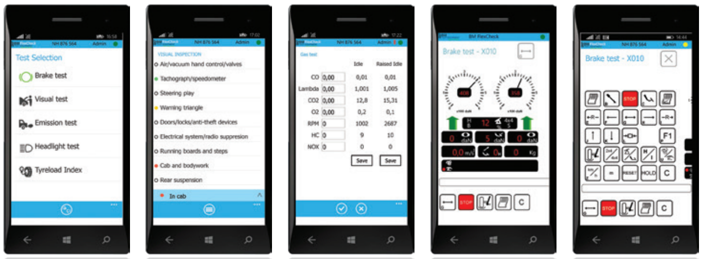
All communication outside the actual vehicle inspection station is done via the internet using secure web services. Due to replication of databases on all BM FlexCheck versions in the architecture, BM FlexCheck ensures that vehicle inspection can continue even if the internet is temporarily down.

Collecting and Processing Vehicle Inspection Data

BM FlexCheck is designed for testing of all types of vehicles. All data is collected using Windows phone or tablet units and wireless transmission technology (WLAN and Bluetooth).

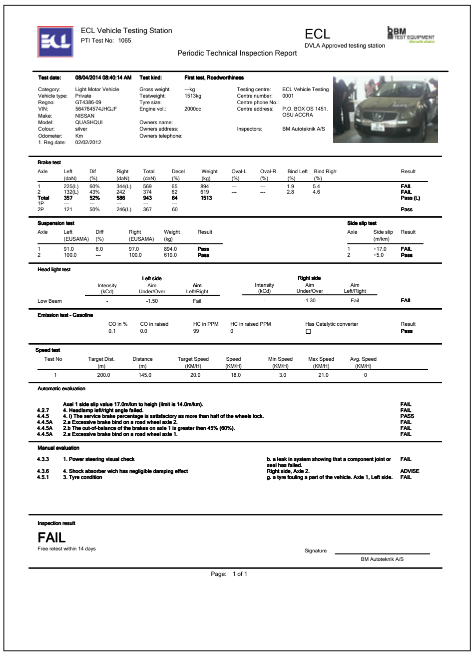
Data is transferred from the electronic test equipment (i.e. brake testers, emission testers, headlight testers etc.) via the Windows phone or tablet, it is automatically captured and stored on the test lane PC. Data from the visual inspection is entered into the Windows phone or tablet and then automatically sent and stored on the test lane PC.

The inspector prints the inspection report from the test lane PC including automatic PASS/FAIL evaluation on all inspection data. PASS/FAIL criteria follows the rules and legislation of the individual country.



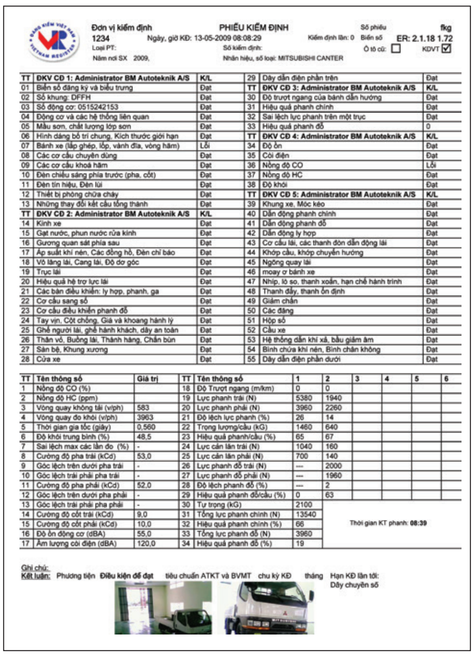
Key Feature

Electronic test equipment can be connected to BM FlexCheck via **Bluetooth**


ECL Vehicle Testing Station

Periodic Technical Inspection Report

FAIL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Examples on inspection reports

Key Benefits

- Nationwide network concept
- Linking to government databases
- Online booking module
- Drive-in possibilities
- Connection to equipment of different make and model
- Online maintenance and updates
- Automatic PASS/FAIL
- Flexible lane design and layout
- Production reliability
- Quality assurance

Advantages

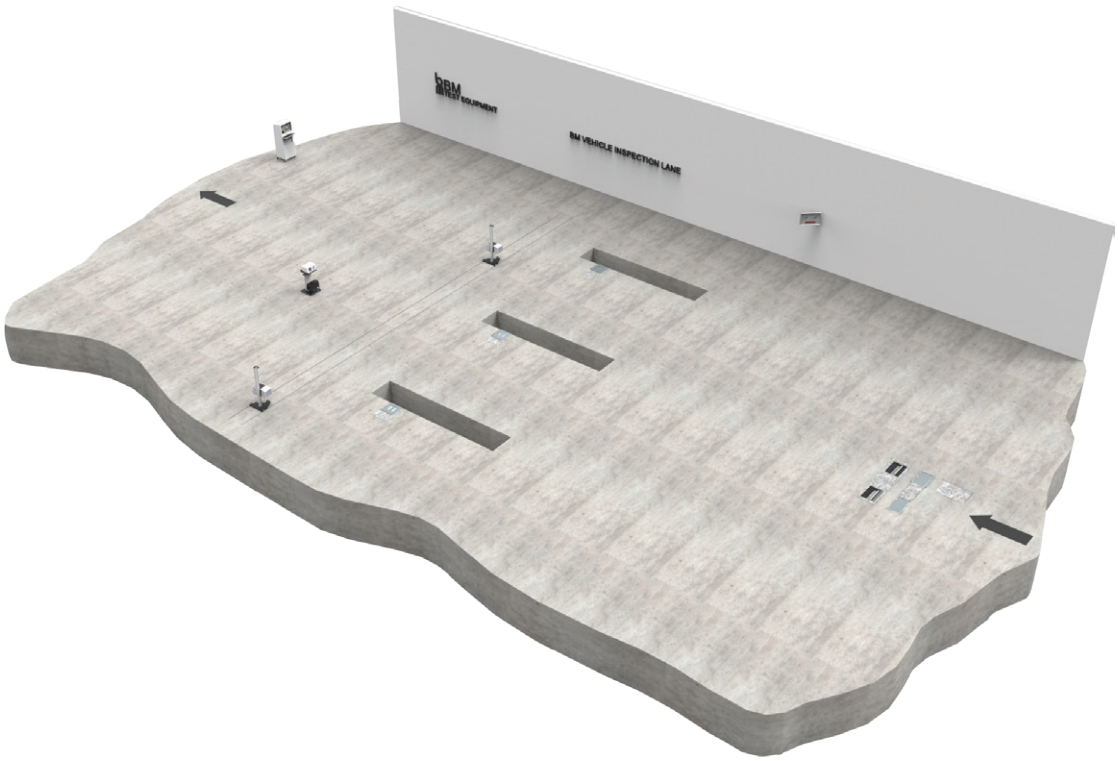
A key feature of BM FlexCheck is that different makes and models of electronic test equipment can be connected to BM FlexCheck via Bluetooth. This feature provides a number of important advantages:

- The vehicle inspection company or agency will always have a choice, when purchasing such electronic test equipment (such as brake testers, headlight testers, emission testers, speed testers etc), which will effectively ensure competitive purchase prices now and in the future.
- In case the vehicle inspection company has already purchased electronic test equipment, then BM FlexCheck can most likely be connected to this equipment and ensure, that additional and unnecessary capital investment is reduced or avoided.

Cost savings

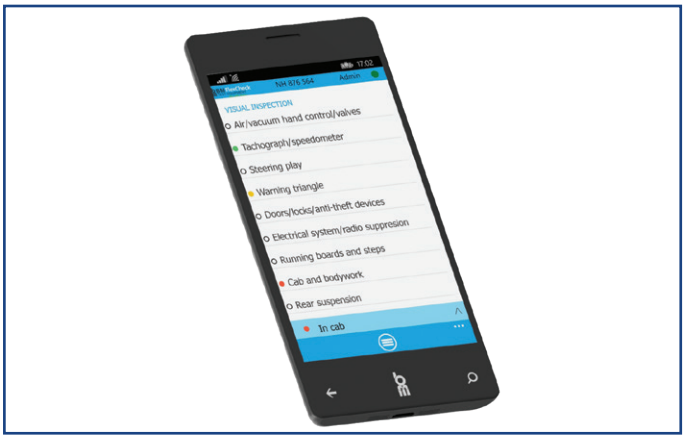
As BM FlexCheck is based on a wireless design between computers and electronic test equipment additional cost savings are obtained:

- The installation of BM FlexCheck does not require expensive cabling between the various products to the test lane PC. This is also an advantage, if for instance the emission equipment is installed outdoor due to health and safety regulations.
- Virtual inspection lanes can easily be implemented, where several lanes share only one piece of electronic test equipment. For example two or three lanes can share one brake tester, one emission tester, one suspension tester and one headlight tester, but each lane is equipped with separate inspection pits and/or vehicle lifts.

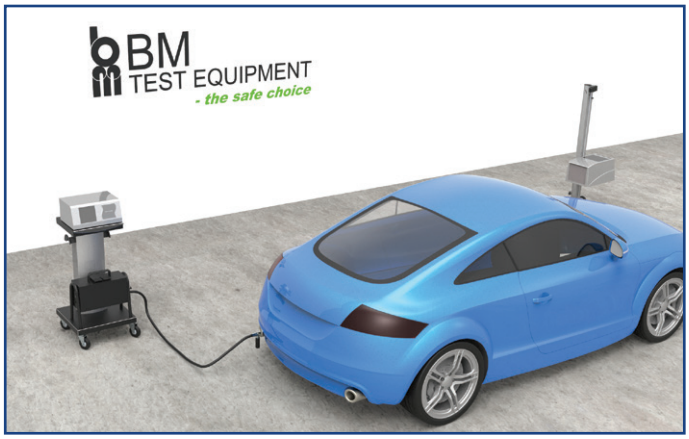


Principle of Usage

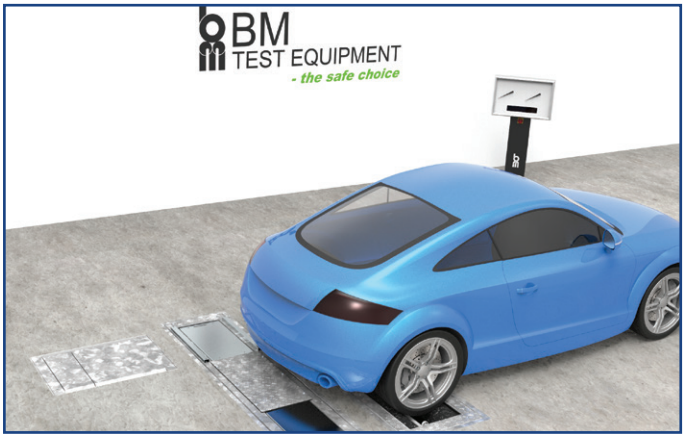
The vehicle is registered either at lane entry, reception office or via internet booking. If the vehicle has previously been inspected then only entry of registration (license plate) number is required.



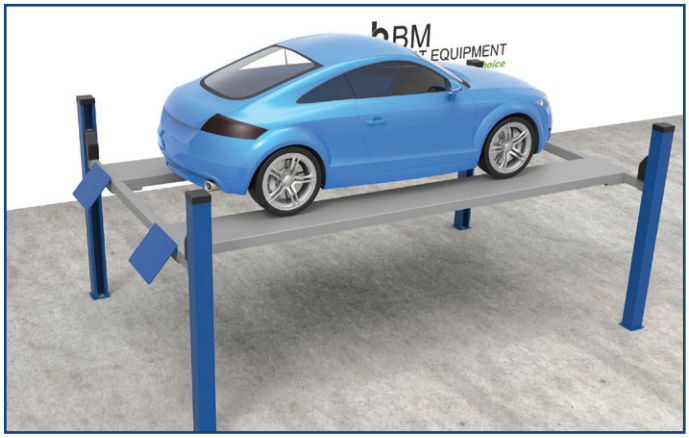
1. The inspector selects the vehicle from the queuing list on the Windows phone or tablet. This list will be generated by BM FlexCheck when the vehicle is registered.



2. Test results from brake tester, headlight tester, emission testers and other electronic test equipment are automatically sent to the Windows phone or tablet via Bluetooth.



3. The inspector uses the Windows phone or tablet to control the BM brake tester and other electronic test equipment.



4. The inspector enters visual inspection points following the inspection guide on the Windows phone or tablet.

5. Data is automatically and continuously transferred to the test lane PC. Printing of test report can be done from this test lane PC or to a printer in the reception office.

Key Feature

With BM FlexCheck you can create lane designs with **less test equipment** than with conventional vehicle inspection IT systems.

Windows Phone or Tablet

The visual vehicle inspection procedure consists of a number of inspection points to be assessed by the inspector.

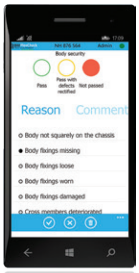
BM FlexCheck offers a unique and flexible solution for electronic storage of these visual observations based on Windows phone or tablet. The inspection points, which are relevant for the vehicle being inspected, are presented to the inspector on the Windows phone or tablet.

1. The Windows phone or tablet presents a vehicle queuing list to the inspector, which is continuously updated from the lane PC. The inspector selects the vehicle from this list prior to commencing the inspection.

2. The inspector can then select what type of inspection he wants to apply to the vehicle including brake test, emission test, visual inspection etc. These types of tests can be selected randomly i.e. the inspector does not have to follow any particular sequence, which can be an advantage if for example the emission tester is placed outside the building due to environmental rules.

3. When the inspector selects visual inspection, the Windows phone or tablet displays all inspection points organised into logical groups. The inspector can randomly select any such group and see each individual inspection point under this group.

4. When an inspection point is selected, the inspector is prompted for the location of fault observed. Subsequently, the inspector is prompted for his evaluation. The preset evaluation levels are often “pass”, “pass with defects rectified” or “not passed”. However, the Windows phone or tablet system allows for any defining of preset evaluation levels for each individual inspection point.



5. Finally, the Windows phone or tablet will prompt the inspector for his reason for failing the item. The inspector will choose from a "reason for failure" list, which is preset individually for each inspection item.

Remote Control

The Windows phone or tablet can also be used as a remote control unit for the electronic equipment such as brake tester, suspension tester, speedometer tester, subject to the protocol features of this equipment.

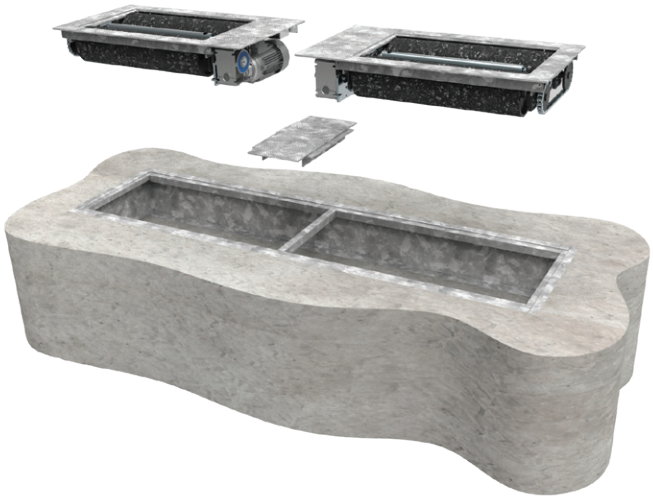
Other Test Equipment

Data from other equipment such as headlight tester and emission testers are also shown on the Windows phone or tablet when such tests are conducted.

BM4010 Roller Brake Tester

The BM4010 is a strong and durable roller brake tester designed for testing of light vehicles up to 4 ton axle load. The design allows for flexible configurations so the unit can meet customer requirements from both the repair industry and vehicle inspection industry.

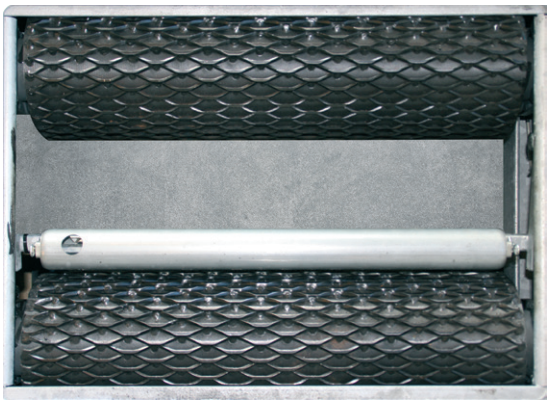
As such the BM4010 is being used by vehicle inspection companies in several countries worldwide including more than 600 units in Great Britain, 150 units in Denmark and 80 units in New Zealand.



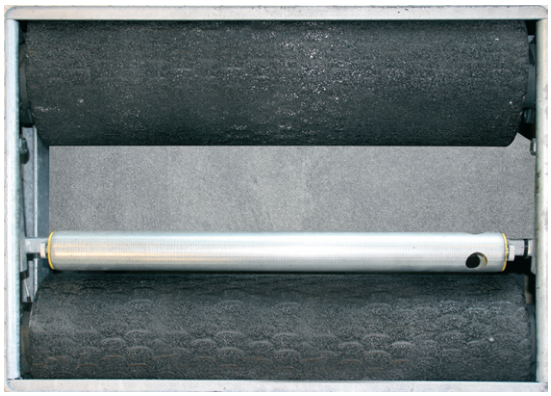
Roller coating

The rollers can be coated with either steel mesh, which allows for test of both winter tires (spike tires) and summer tires or steel mesh plus a compound mix of nontoxic epoxy and flintstone for test of only summer tires.

Both types of coating ensures high friction with a long lifetime.



Steel mesh



Steel mesh plus epoxy-flintstone

Dimensions

The length of rollers is as standard 600 mm, which allows for a minimum and maximum wheel span of vehicles to be tested of 880 mm to 2080 mm. However, due to the flexibility of the roller bed design, the BM4010 can also be supplied with roller length 750 mm (880 – 2580 mm) or 1000 mm (880 - 2880 mm). In all situations, it is possible to swop the roller bed around to change these dimensions as seen in figure 1 for the 1000 mm version.

Roller brake functionality

The BM4010 is as standard supplied with worm gear, which has a high turning torque when not powered. This characteristic features as a semi-brake of rollers, which assists the exit of drive axles from the roller bed. This "roller brake functionality" can be increased by adding electrical motor brake.

BM4000 installation possibilities

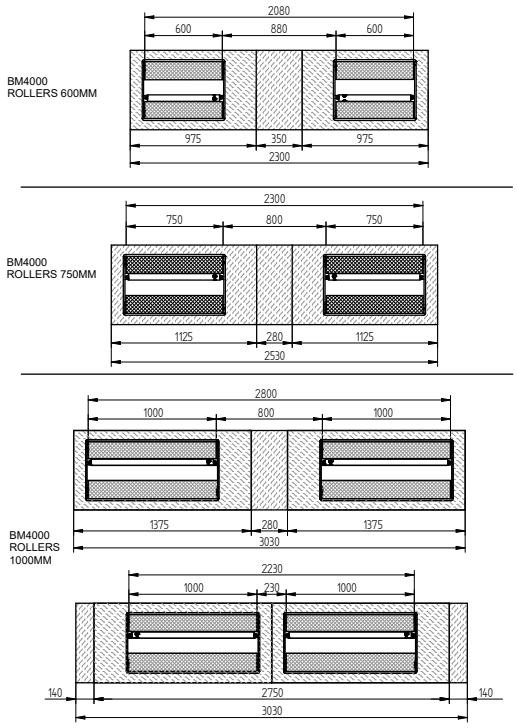


Figure 1

BM4010 TECHNICAL DATA		
Roller bed (600 mm rollers)	L x W x H	2300 x 715 x 250 mm
Roller bed (750 mm rollers)	L x W x H	2530 x 715 x 250 mm
Roller bed (1000 mm rollers)	L x W x H	3030 x 715 x 250 mm
Roller diameter		182/204 mm
Roller length		600/750/1000 mm
Friction coefficient of roller from factory	dry/wet	Min 0.7/0.6
Min. wheel span (can be customised)		880/800/800 mm
Max. wheel span (can be customised)		2080/2300/2800 mm
Distance between roller centres		354 mm
Maximum test axle weight		3500 kg / 4000 kg
Gear motor size		2.2 / 5.0 kW
Max brake force measurement		625/1250 daN
Test speed		2.5/5.0 km/h
Display	L x W x H	735 x 500 x 140 mm
Display brake force scale		0 – 620 daN
Brake force measuring accuracy		0 – 100 daN : ± 1 daN > 100 daN : ± 1 % FS
Weight measuring accuracy		0 – 100 kg : ± 2 kg > 100 kg : ± 2 % FS
Pedal force measurement accuracy		0 – 100 daN : ± 1 daN
Power and fuses		3 x 400 Vac + N + PE Minimum 13/20 Amp 3 x 230 Vac + PE Minimum 20/35 Amp

BM40010 Suspension Tester

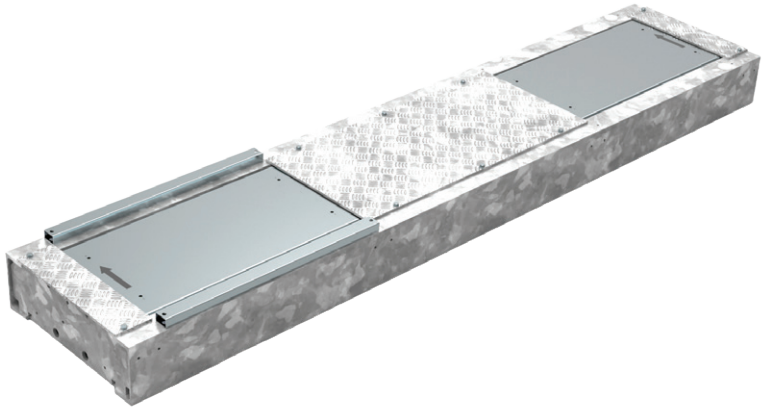
The BM40010 suspension tester is hot galvanized with large aluminum vibration plates. The suspension tester can be used to test light vehicles and vans with axle weight up to 3000 kg.

The unit allows for "drive over" of axles with maximum 4000 kg without special cover plates and vehicles with up to 20000 kg axle load can drive over the suspension tester with special cover plates.

The measuring method is EUSAMA, where the suspension system of the vehicle is tested effectively over a frequency variation of 25 Hz down to 0 Hz. On the Windows phone or tablet the test sequence is shown live and graphically.

The weight value at the resonance frequency is determined as being the EUSAMA value – also known as the "road adhesion value". The value is determined as a percentage relative to the static wheel weight. The EUSAMA values of the left and right wheels are presented on the display of the suspension tester together with the percentage difference between left and right wheel.

The vibration plates are built in aluminum in order to reduce their weight impact on the measurement and thus to increase accuracy of the EUSAMA value.



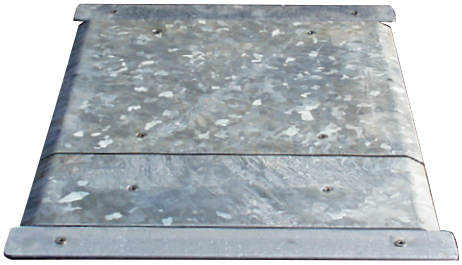
BM40010 TECHNICAL DATA		
Subframes	L x W x H	2456 x 595 x 173 mm
Subframes, split bed per side	L x W x H	922 x 595 x 173 mm
Suspension tester	L x W x H	2360 x 500 x 170 mm
Suspension tester, split bed per side	L x W x H	865 x 500 x 300 mm
Plate dimension	L x W	660 x 350 mm
Wheel span (can be customised on split bed model)		840 to 2150 mm
Maximum test axle load		Standard 2 Tonne, optional 3 Tonne
Maximum drive over axle load without cover plates		4 Tonne (optional)
Maximum drive over axle load with cover plates (optional)		13 Tonne
Measuring range		0 – 25 Hz / 0 - 100%
Power and fuses		3 x 400 Vac + N + PE Minimum 13 Amp Minimum 20 Amp for split bed (sync) 3 x 230 Vac + PE Minimum 20 Amp Minimum 35 Amp for split bed (sync) Can be powered from the brake tester.

BM810 Side Slip Tester

The BM810 side slip tester is designed for testing of light vehicles. The capacity of the unit is toe in/out values of +/- 12 mm/m and the value is shown in the digital IMBALANCE window of the display. At the same time the point meters of the display will indicate if the value is a toe-in or a toe-out.

The side slip meter is equipped with a "release plate" before the actual measuring plate. This plate releases the tension in the rubber of the tires and increase the accuracy and repeatability of the test result.

BM810 TECHNICAL DATA		
Subframe	L x W x H	916 x 650 x 40 mm
Side slip unit	L x W x H	880 x 615 x 37 mm
Plate dimension	L x W	528 x 615 mm
Maximum wheel load		2000 kg
Measuring range		+/- 15 mm/m (+/- 15 m/km)
Resolution		0.1 mm/m (0.1 m/km)
Accuracy		+/- 0.5 mm/m (+/- 0.5 m/km)
Power and fuses		1 x 230 Vac + N + PE Minimum 4 Amp or powered from brake tester



Display

The test results from BM40010 and BM810 are shown on the physical display in the following way:

- The display is equipped with a double scale for left and right side. First scale is used for presenting the brake test data. The second scale is used for presenting the suspension test data. The digital imbalance window shows the difference between EUSAMA values of left and right wheel in percentage.
- The point meters indicate if the side slip value is a toe-in or a toe-out value. The digital imbalance read out display is used for showing the side slip value.

Suspension:
Imbalance digital window shows the difference between EUSAMA values on left and right wheel in percentage.

Side slip:
Imbalance digital window shows the actual value in m/km.

Suspension:
Pointers show the suspension result from left and right wheel using the second scale.

Side slip:
Pointers show if measurement is toe-in or toe-out.

BM250 Wheel Play Detector

The BM250 WPD is developed in conjunction with the Swedish vehicle inspection authorities, AB Svensk Bilprovning, and consists of only one plate and therefore there is no restrictions regarding wheel-span for all types of light vehicles.

The BM250 play detector is pneumatic operated equipment used for detecting play on vehicles up to 1000 kg wheel load.

The pneumatically operated plate can be installed either on the left or right hand side of an inspection pit. A handheld integrated 24VDC flashlight and control unit is used to move the plate in different directions, which enables the operator to detect play.

The control system is powered by 240 VAC and the required air pressure source must be an ¼" air tube and a 10 bar air reservoir.

Operating the BM250

The control unit (flashlight) is used to move the plate in two different ways: sideways and twisting.

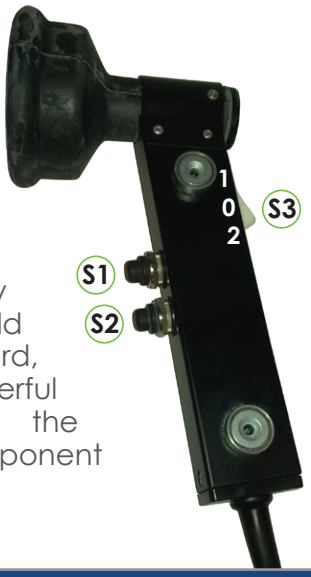
The control unit is equipped with three operation buttons, S1, S2 and S3. Button S3 can be placed in position 1, 0 or 2 (these marks cannot be seen on the unit), which allows selection of operation mode:

Sideways - inward
With S3 in position 1, the plate moves inward, when S2 is pressed. This movement is often sufficient for inspecting load-carrying links (inclusive McPherson type) with radial play.

Sideways - forth and back
With S3 in position 1, the plate moves sideways forth and back, with S2 activated constantly and S1 sequently pressed.

Twisting
With S3 in position 2 a twisting movement is obtained, when S2 and S1 is controlled as above. Twist movements are used for inspection of steering system and even some types of non-carrying links of McPherson type.

The speed of the plate is stepless adjustable using the speed-regulator unit. High speed allows rocking of the vehicle to overcome loads that can hide possible play. Low speed, which should be used as standard, provides sufficient powerful movements enabling the operator to detect component play easily.



BM250 TECHNICAL DATA		
Subframe per side	L x W x H	850 x 650 x 130 mm
Max. test wheel load		1000 kg
Max. drive over axle weight		1000 kg
Plate dimension		330 x 280 mm
Working air pressure		Max. 10 bar
Power and fuses		24 Vac or 1 x 230 Vac + N + PE Minimum 4 Amp

BM Emission Testers

The BM3201 range includes changing automobile technology, it is both an anti-pollution control tool (gas analyser & smokemeter) 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 unit.
- 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	ACCU-RACY	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 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%	
Display (optional)	PDA, smartphone or tablet	
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%)

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.

BM8530 RPM & Temperature Unit

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.

TECHNICAL DATA - BM8530 RPM & TEMPERATURE UNIT	
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

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.

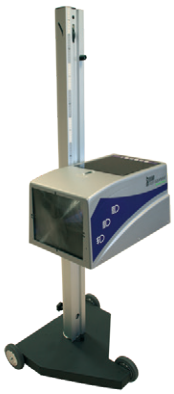
- Multi-make and easy to use.
- Access to measurements made by the calculator (RPM, speed, pressure, temperature, advance, ...).
- Readings and launch of the tests: catalyst, EGR, O2 sensor.
- Stored fault codes (injection, emissions, ...).
- Reinitialisation of fault codes.
- Bluetooth.

BM Headlight Testers

The headlight tester range includes three kinds of devices: mechanical BM2100, electronic photodiode BM2500 and electronic camera BM2600.

Benefits

- Simple, intuitive and quick to use.
- Easy to handle thanks to the counter-weighted raising and lowering system.
- Robust mechanics with superior stability needed for precision measurement.
- A total weight of 25 kg, making it easy to move.
- Able to adjust and control all types of lamps (halogen, xenon and leds).
- Powerful and timed lateral positioning laser with stand by function.
- Wheels mounted on bearings, guaranteeing the accuracy of measurements over time.
- Capacity to adapt to current national standards and available in different languages.
- Availability and reactivity of the support teams: remote maintenance, hotline, training, updating of appliances, maintenance software.



BM2100

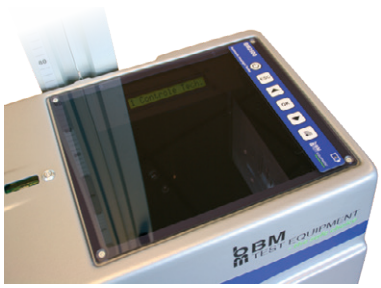
Specially designed for applications that do not need data transmission and for which a visual control is sufficient.

- Mechanical headlight tester.
- Economical and robust product.

BM2500

Excellent compromise between economy and efficiency.

- Patented electronic photodiode measurement system.
- Easy to use thanks to its positioning assistance.
- High autonomy for over 100 inspections per day.
- Data transmission.
- Accurate measurement of the beam angle.
- Available in garage mode for headlamp adjustment.



BM2600

Electronic headlight tester with camera based on the most advanced technology.

- Measurement and adjustment of low beam high and fog lamps.
- Used to automatically and quickly control and measure the pitch angle, yaw angle, break point, roll angle light intensity and dazzling.
- Suitable to all types of vehicles (European, American and Japanese).
- Compatible with both left and right hand drive.
- Easy to use thanks to its positioning assistance.
- Data transmission using all types of protocols.
- Simple, user friendly interface on a colour touch screen.

BM Headlight Testers Comparison

	BM2100	BM2500	BM2600
DIPPED BEAM LAMPS			
Beam angle measurement	👁	✓	✓
Lateral angle measurement	👁	🔍	✓
Intensity measurement	–	✓	✓
Dazzling measurement	–	✓	✓
MAIN BEAM LAMPS			
Beam angle measurement	👁	🔍	✓
Lateral angle measurement	👁	🔍	✓
Intensity measurement	–	✓	✓
FOG LAMPS			
Beam angle measurement	👁	✓	✓
Lateral angle measurement	–	✓	✓
Intensity	–	✓	✓
COMPUTER LINKS			
RS 232 cable connections	–	✓	✓
Wireless (bluetooth)	–	✓	✓
Contact us for protocols	–	✓	✓
PRINTING	–	✓	✓
EQUIPMENT			
Battery option	–	✓	Option
Positioning laser	✓	✓	✓
Electronic positioning assistance	–	✓	✓
Counter-weighted raising and lowering system	✓	✓	✓

👁 Visual 🔍 Diagnostic ✓ OK

OPTIONS

RS 232 /Bluetooth printer

Protective cover

Handle

OPTIONS SELECTION

- Wheel base
- Rail base
- Bluetooth
- HGV

COMPLIANCE

- R48 recommandation
- CE Conformity

TECHNICAL DATA	BM2100	BM2500	BM2600
Size - L x W x H	590 x 670 x 1550 mm	590 x 670 x 1550 mm	590 x 670 x 1900 mm
Weight	25 kg	25 kg	25 kg
Autonomy on battery in continuous operation	N/A	15 h	15 h
Recharge	N/A	3h30 with automatic stop	4h with automatic stop
OPERATING CONDITIONS			
Batteries	N/A	4 x rechargeable accumulator R14	Rechargeable lithium iron batteries
Charger power supply	N/A	9V, 2A	15.2V, 2.3A
Surrounding temperature	5°C to 40°C	5°C to 40°C	5°C to 40°C
Storage temperature	-15°C to 55°C	-15°C to 55°C	-15°C to 55°C
Relative humidity	98 % non condensed	< 98 % non condensed	98 % non condensed
MEASUREMENT			
Cut-off measurement	N/A	In %	N/A
Range of measurement	N/A	+2 to -4%	N/A
Accuracy	N/A	+/- 0.2%	N/A
Measurement of the angle (headlamp dipped angle)	N/A	N/A	In %
Dip angle measurement range	N/A	N/A	+6 to -6%
Lateral measurement range	N/A	N/A	+10 to -10%
Accuracy	N/A	N/A	+/- 0.2%
Light intensity measurement	N/A	in Candela	in Candela
Measurement range	N/A	0 to 125kcd	0 to 125kcd
Accuracy	N/A	10%	10%

Noise Level Meter 2240

Assessing noise levels is not always a simple matter; regardless of whether it is environmental or workplace noise you must measure.
Fortunately, well-established standards and practices have determined common criteria for nearly all kinds of noise assessment making it easier to measure, report and evaluate sound pressure levels.

For example, nearly all measurements must apply the 'A' frequency-weighting and, in most cases where time-weighting (or time constant) is relevant, the 'F' time-weighting is used. In workplace situations, it is also often required to use the 'C' frequency-weighting to measure peak sound pressure levels for assessing hearing damage risks. Type 2240 from Burel and Kjær provides all of these measurement parameters in one easy-to-use package.

Type 2240 is a very simple to use sound level meter, which complies with all the latest sound level meter standards.
As an integrating-averaging sound level meter, it measures the equivalent, or average, sound pressure level.
In addition, it measures the instantaneous, maximum and peak sound pressure levels at the same time.

Operation of the instrument could not be simpler – just point and measure. All parameters are measured simultaneously, there is no setup necessary.

If any doubt should arise, a quick guide is readily available under the instrument's sliding cover.

Type 2240 fulfils the rigid Class 1 (previous Type 1) tolerances of the latest sound level meter standards.

NOISE LEVEL METER 2240 TECHNICAL DATA	
Standards	IEC61672 – 1:2002 Class 1 IEC60651 Type 1 (1979) with amendments 1 and 2 IEC60804 Type 1 (2000) ANSIS1.4 – 1983 Type S1 ANSIS1.43 – 1997 Type 1

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BM TEST EQUIPMENT

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