BM20200 Mobile Brake tester

35 YEARS
1977 - 2012
MORE THAN 10,000 UNITS SOLD

The perfect choice if you are looking for...

- A mobile roller brake tester for vehicles with axle loads up to 20 T.
- Proven quality from more than 500 units delivered worldwide since release of BM20200 in 1995.
- 10 minutes setup time by one person.

BM20200 Mobile Roller Brake Tester

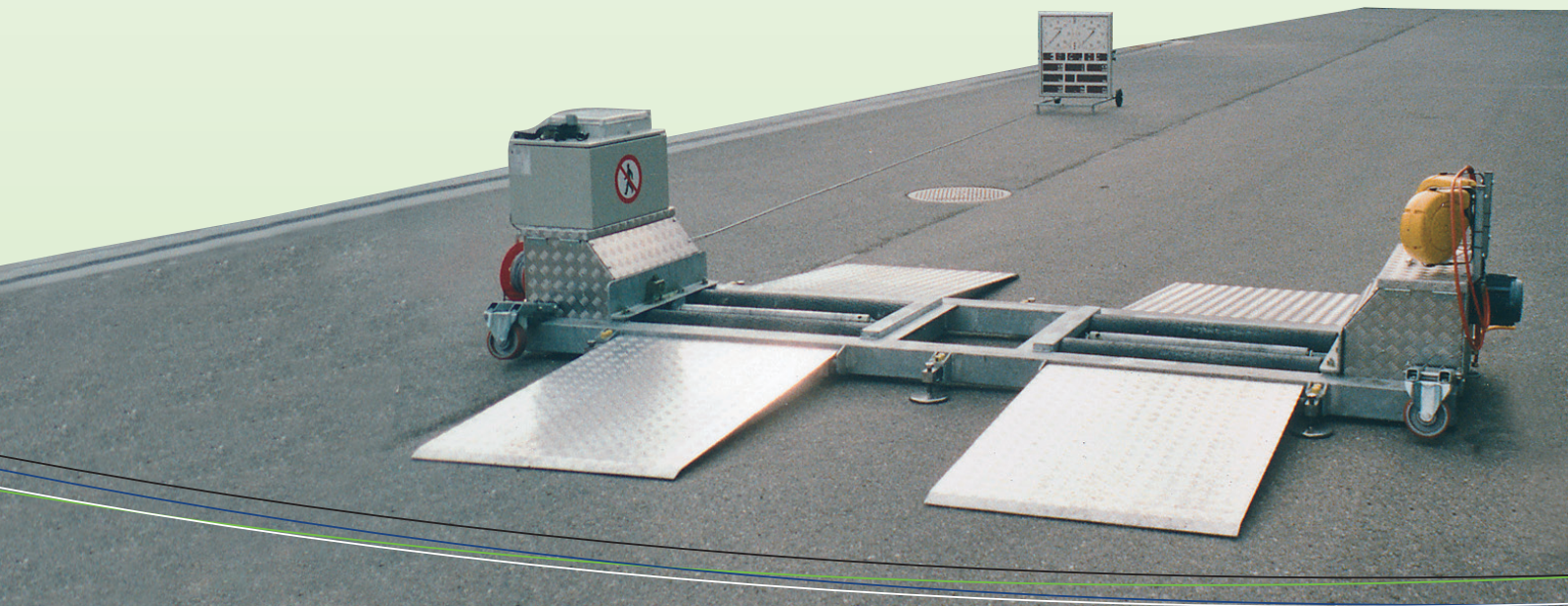
BM20200 is a Mobile Roller Brake Tester, MRBT, for test of all vehicles up to a maximum axle load of 20.000 kg. As standard the BM20200 can be powered by only 3 x 400 VAC + N + G at 25 Amps, which in practice equals a 25 KVA generator.

The BM20200 is approved by several international authorities (such as RWTÜV Germany and BIVV Belgium), complies with the ISO standard, and holds a NATO number.

The BM20200 MRBT is equipped with the same electronics and software as the BM in-ground RBT's BM12200, BM14200 and BM17200 and therefore the BM20200 offers the same high test standard and data processing as these in-ground models.

As for the BM in-ground brake testers, the BM20200 can optionally be supplied with a long range of features which allows for a customization, that meets the exact customer requirements:

- Infrared remote control system.
- PDA display and remote control.
- Radio air pressure system (RTS).
- Diagnostic printout with and without link to PC with BM FlexCheck software.
- Automatic axle weighing and vehicle total weight.
- Tachograph calibration on BM brake tester (11 kW gear motors 2.0 km/h).
- Test of 4x4, 4x6 and 6x8 drive vehicles.
- Test vehicles with a high variation of wheel bases up to 4000 mm.
- Conventional axle load simulation.
- Can be placed directly on the floor indoor or outdoor without need of civil work.

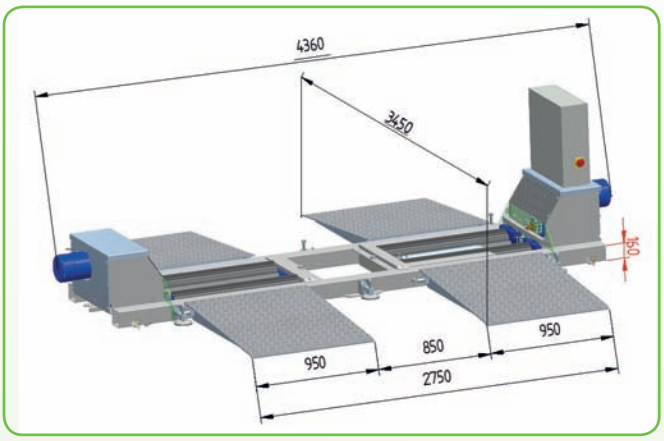


Unique features

Compared to other mobile roller brake testers, the BM20200 has the following unique features:

Extremely low clearance
The rollerset height is only 160 mm, which ensures against bottom out when passing with very low vehicles such as coaches and cars.

Low floor space requirement
Due to the low height of the rollerset, the length of the ramps are only 1.25 meter on each side i.e. a total setup length of only 3.5 meter.

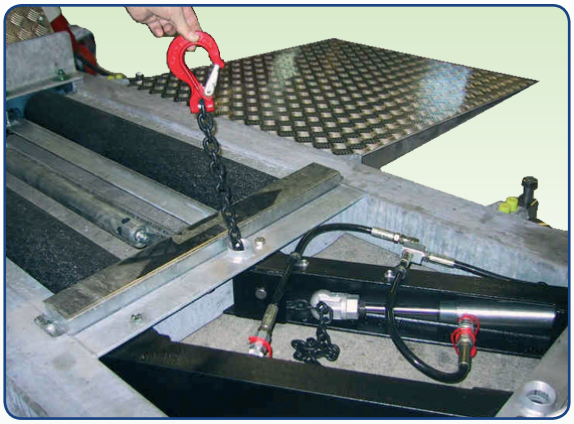


Insensitive to testing area surface

The BM20200 design is simple with strong and flexible mechanical solutions. The benefit is that there are no particular requirements to the testing area surface. The BM20200 can be placed on asphalt or concrete floor, but also on uneven gravel ground, sand and dirt.

Axle Load Simulation

The BM20200 can optionally be supplied with an Axle Load Simulation system, which can simulate up to 8 ton. The system can be supplied with a compressed air powered foot pump or an integrated electrical power unit.



Display on trolley

The display can be delivered on a trolley with a robust network cable of up to 100 meters. Hereby the display can be placed a convenient long distance from the rollerbed and hereby be monitored even when the last axle of a vehicle combination is tested.

Handheld PDA control and BM FlexCheck software

The BM20200 can be supplied with a PC Windows program, BM FlexCheck, which can be installed on a PC table integrated with a BM20200.

In conjunction with BM FlexCheck, the BM20200 can be supplied with a handheld PDA unit which communicates wirelessly (WLAN) with the BM20200. The PDA has a virtual display which shows all the readings of the brake test and together with the integrated touch screen based remote control feature, the operator can fully control the brake test from the PDA unit in all situations.

Practical advantages of the PDA unit

In many applications, the location of the traditional physical display or traditional PC console prevents an optimal use of the brake tester by the operator. One reason can be that vehicle cabin passes the display or PC console when testing the last axles of the vehicle and trailer - a problem which has increased due to introduction of long modular vehicle combinations. Another reason can be that vehicles needs to be reversed over the brake tester in non-drive through lanes, and then the operator cannot see the Display or PC console.

The PDA is a solution to these problems and can easily be stored in a jacket pocket when not used.

Operator brake test guide - BMAssist

Another distinct feature of the PDA unit compared to a traditional infrared remote control is the integrated BM Assist, which is a menu based software that guides the operator safely and correctly through the complete brake test. BM Assist is available both on the PDA unit and PC program.

PC table

The BM20200 can be supplied with an integrated PC table and power connectors, so a PC notebook can be placed directly next to the brake tester.

Together with a printer placed inside the integrated printer cabinet, the operator has a full "office" environment onboard the BM20200.

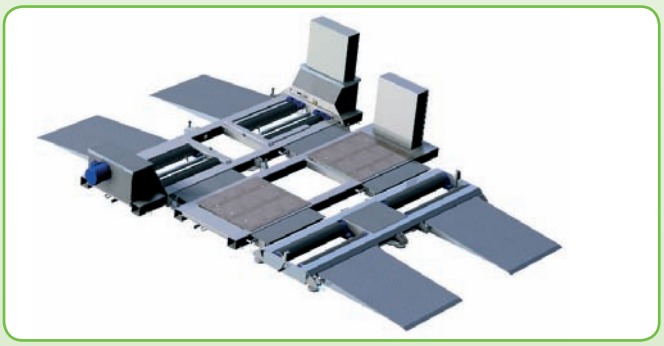
Expanding BM20200 into an On-ground Test Line

The additional on-ground test equipment has the same height (approx. 160 mm) as BM20200 and they can therefore share the drive on and off ramps.

The additional on-ground equipment can optionally be supplied with integrated wheels and the operator can therefore move this equipment around as easy as the BM20200. Complete setup time for one person is less than 15 minutes.

The BM20200 can be used in conjunction with the hydraulic BM53000 mobile play detector with capacity of testing axle loads up to 20 Ton.

Both the BM20200 brake tester and the BM53000 wheel play detector can easily be town to their correct positions or stored by one person.



This test lane concept can be further expanded with speedometer BM605.

Flexible means of transportation

Since the BM20200 can be completely folded up and minimized sizewise several means of customized transport options can be offered:

Remote Periodic Technical Inspection by VTNZ - New Zealand.

Roadside enforcement by VOSA - Great Britain.

BM Trailer solution

BM has developed a unique transport frame system, which can be mounted onto a standard trailer with tilt function. The transport system is modularly designed and covers means of transportation of generator, BM20200 brake tester, BM53000 wheel play detector and BM901 side slip meter including electrical winches and battery.

The transport system has a number of important benefits including ensuring equal distribution of weight onto the full area of the trailer bed, fixation of equipment during transport and correct angle for avoiding bottom out when loading and unloading the equipment.

Trailer parked.

Towing vehicle arrives to site and trailer is opened.

Trailer is tilted and ramp is folded down.

Special unload rails are placed and equipment is rolled down using the integrated electrical winch.

The BM53000 wheel play detector unit is rolled down using the electrical winch. Rails are then moved to the top of the transport rail system whereafter the BM20200 mobile brake tester is rolled down using the electrical winch.

Both the BM20200 and BM52000 are supplied with small wheels so one person can easily place the equipment on the preferred location for vehicle testing.

The drive on and off ramps are quickly fitted to the equipment without use of tools.

The equipment has strong feet with high resistant contact path. All feet can be adjusted in height to offset uneven ground.

The equipment is connected to - and powered from - the onboard generator located inside the trailer.

Final adjustments before vehicle is called forward. Approximate setup time for two persons is 5-10 minutes.

First axle of the vehicle is being tested on the BM20200 mobile roller brake tester.

The vehicle is driven forward so the first axle is on top of the BM53000 wheel play detector. The operator uses a remote control to move the hydraulically powered plates and detect for steering system problems such as wear etc.

Container solution

BM can supply a 20' container solution with purpose built rails for load/unload and special storage design inside the container. Following shows the management and setup of BM20200 when transported in a 10' container. Note the special rails used for rolling the BM20200 in and out of the container.

Customer: US Army in Afghanistan.

HIGH QUALITY
VEHICLE TEST EQUIPMENT

BM TEST EQUIPMENT
- the safe choice

Worldwide supplier
of Mobile Vehicle Inspection Test Equipment

Technical data for BM20200 mobile brake tester

Description	Dimension
Roller bed L x W x H	3465 x 4240/4740 x 505 mm
Roller diameter and length	150 mm, 1000/1250 mm
Friction coefficient of roller from factory dry/wet	Min 0.7/0.6
Wheel span (can be customized)	800 to 2800/3300 mm
Distance between roller centers	430 mm
Maximum test axle weight	16000/20000 kg
Gearmotor size	4.8/11/15 kW
Max brake force measurement	0 – 4000/6000 daN
Test speed	1.0/2.0/2.0 km/h
Display L x W x H	930 x 820 x 100 mm
Control box L x W x H	600 x 600 x 210 mm
Display brake force scale	0 – 4000/6000 daN
Brake force measuring accuracy	0 – 100 daN : ± 2 daN -> 100 daN : ± 2% FS
Pedal force measurement accuracy	0 – 100 daN : ± 1 daN
Power and fuses	3 x 400 VAC + N + E Minimum 25/63/80 Amp

Approvals

BM Autoteknik A/S is proud to have obtained approvals for the BM20200 mobile roller brake tester in the following countries:

- TÜV Germany
- BIVV Belgium
- GEA England
- NZTA New Zealand
- Russia and Kazakhstan

BM20200 is in compliance with ISO21069

BM Autoteknik A/S
Erhvervsparken 7
DK-9632 Møldrup
Denmark
Tel.: +45 8669 2022

Visit us at www.bmtest.dk

...to find more info about BM Autoteknik A/S

BM20200.B0001.02.V02. 06 - 2012