



Brake Tester & Test Lanes

BT 610 / BT 612 / BT 640 / BT 642

BT 620 / BT 622 / BT 650 / BT 652

Truck, car and motorcycle

NUSSBAUM BT – The heart of the test lane

An investment for the future. The new brake tester generation BT offers the highest amount of flexibility and is fully tailored to the individual requirements of the user.



The brake tester BT by Nussbaum guides the user automatically through the complete testing program. The rollers start up as soon as the front wheels are located in position and measures the rolling friction, ovality and brake force, which are all displayed on the large analogue display and registered on the control board. The 50 mm elevated rear rollers enable testing with even higher brake forces.

The extensive selection of Nussbaum BT accessories rounds off the scope of possibilities nicely and leaves no requirements unfulfilled.

The new electronics and innovative design, combined with the proven sophisticated technology guarantees not only an efficient and economic business but also the opportunity to progressively upgrade through modular extensions to a complete test lane with a PC-connection.



Roller set 13t, 18t - motors underneath opt. with motors aside, as well as rollers mounted on floor level



Analogue display with large double scale opt. with LC-display

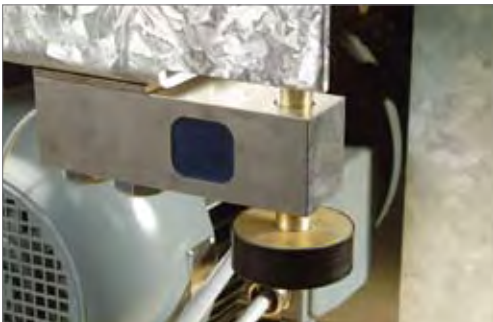


Analogue display „Design“ opt. with LC-display

Technical data & accessoires



Pneumatic pressure sensors



Weighing device



Roller set with lifting device

At a glance

- Fully automatic time delayed start of the rollers after driving onto the test stand
- Automatic re-start of the rollers for exit of vehicle
- Single wheel testing (optional)
- Program controlled evaluation of all values
- Networking capable test bench with modular extension capability to upgrade to a PC based test lane
- TÜV-approved

Hardware

- Galvanised roller set for optimal corrosion protection
- 1100 mm plastic coated rollers for protection of tyres
- Testing width 800 mm – 2800 mm
- Splash proof roller drive motors (IP54)
- Motors can be chosen mounted either each side of the roller or below floor
- Drive off aid through self locking worm gear transmission
- Industrially tested CAN-BUS-System
- Maintenance free, top precision
- DMS measuring system
- Large clear double analogue display [350 mm
- Version 45x / 46x are available with floor level mounted rollers (reversal of roller rotation direction)

Accessories

- Mounting column, Wall mounting bracket
- Display and control cabinet heating
- LC-display, 14 digits
- IR remote control
- Printer
- Weighing device
- Pedal force meter
- Load simulator
- Lifting device
- Roller cover plates up to 8 tons wheel weight capacity
- Installation frame
- Safety device for pit
- Radio controlled pressure sensors
- Safety checking with (SP) data bank system
- Reversal of roller rotation direction

BT 610 / 612 / 620 / 622

BT 640 / 642 / 650 / 652

Permissible axle weight	13 t	18 t
Max. break force per wheel	30 kN	40 kN
Braking force display	2 x 8 / 40 kN 350 mm Ø	2 x 8 / 40 kN 350 mm Ø
Test speed BT 620 / BT 612	2,5 km/h	2,5 km/h
Test speed BT 640 / BT 642	2,5 und 5,0 km/h	2,5 und 5,0 km/h
Roller diameter	282 mm	282 mm
Driver roller elevated by	50 mm	50 mm
Drive roller mounted on floor level	no / no / yes / yes	no / no / yes / yes
Roller coating	Plastic & SiC	Plastic & SiC
Max. motor power	2 x 9 kW	2 x 11 kW
Smallest effective axle width	800 mm	800 mm
Largest effective axle width	2800 mm	2800 mm

Modular extension to a complete test lane with PC-connection



Extendability to a test lane

It has been a normal procedure to use test lanes at car dealerships but now this concept is becoming more popular at commercial dealerships.

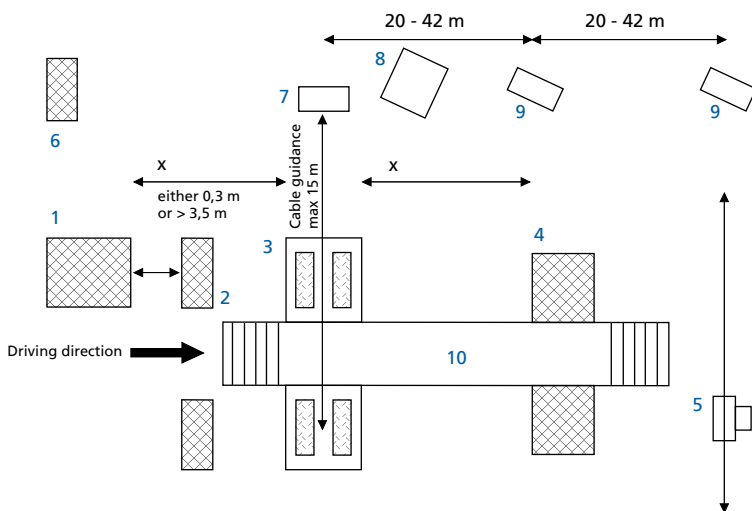
During the reception of a vehicle, the most important factor is to communicate to the customer jobs that are required while he is there watching. This portrays technical know how and generates a degree of transparency and trust between all parties.

After repairs, the customer can observe the difference in readings thus promoting customer satisfaction and increasing the prospect of him returning again.

The general- and safety inspections (GI, SI) can all be completed using a test lane as well as having the added bonus of it being fast and reliable.

Dialogue with the customer:

- Enables transparency and cultivates trust with your customers
- Relays professionalism to your customers
- Increases the workshop efficiency
- Decreases doubt and reduces complaints
- Through the satisfaction of customers, promotes them to return



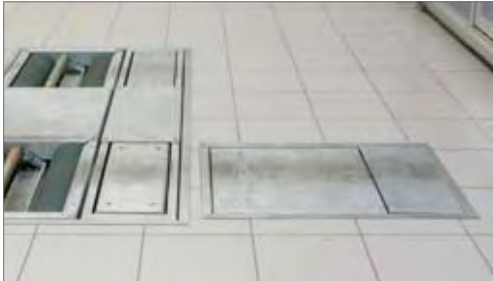
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|----------------------|----------------------------------|
| 1 Side slip tester | 6 Emission tester |
| 2 Suspension tester | 7 Control cabinet |
| 3 Brake tester | 8 PC-display / Analogue display |
| 4 Axle play detector | 9 Monitor / Simultaneous display |
| 5 Headlight tester | 10 Pit with safety device |

Length of hall ideal ca. 50m

	Distance X
Ideal	16 m
Trailer, oversized busses	9,10 m
Truck	7,90 m

All measurements without obligation. Definition of distances on the basis of vehicles being tested.

Upgrade components



Side slip tester and suspension tester



Roller set 13t, 18t



Axle play detector

Safety of investment:

- Modular extendable to a complete service diagnostic system
- Higher amount of vehicles through per shift
- SP linked (electronic test report, management of approval stamps, defect statistics, appointment schedules, documentation)
- ASA network capable
- Possibility to connect to country specific networks (MCTC-NET, GIEGNET etc.)

Side slip tester For truck and car up to 18t axle weight

After driving over the measuring plates the side slip will be measured and displayed on the 14 digit LC-display (optional) in m/km. You receive the run out of each axle in the shortest amount of time.

Suspension tester Car (for truck testing put cover plates on suspension tester)

Through vibration of the measuring plates the unevenness of the road at various speeds can be simulated. The road holding of the vehicle can then be measured permanently, which will be displayed using the Eusama principle. These values will correspond to the overall safety of the vehicle.

Brake tester Truck / car / motorcycle

The rollers start to rotate after the vehicle has driven into them. The rolling resistance will be measured before braking begins. Afterwards ovality, brake force, brake force difference and deceleration (with optional weighing device) are measured and calculated.

Axle play detector

The hydraulic axle play detector is suited to the checking of wear on bearings and steering components of the vehicle. The vehicle wheels can be moved laterally and longitudinally on the sunken plates to localise any play in the vehicle components.

Visual inspection and Headlight adjustment

All tests can be visually entered and displayed using a checklist integrated into the software together with the axle play detector. The robust headlight tester SOL is able to test Halogen, Xenon and standard filament headlights (Luxmeter optional).

Emission tester

The emissions tester POLLUX is able to test Otto- and Diesel engines according to the latest specifications. Above all the emission guide makes it possible to carry out detailed tests with assessment of the emission results. The step by step guide through the diagnostics function enables the user to easily and quickly select vehicle-specific engine settings.

PC-visualization

PC- connection „Visio,, for more efficiency in your workshop. The test lane can be connected to a PC to transform it into a communications and network platform.



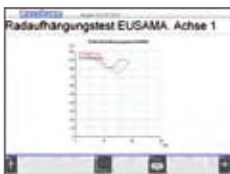
The type of vehicle you would like to test are just a mouse click away i.e. trucks, cars or even motorcycle.

All results are consistently saved and administered in the customer and data base and can be recalled via the history-function when desired.

Further to this it also guarantees the connection capabilities to workshop networking and compatibility to business software such as ASA network, MCTC-NET etc. to reduce errors, save time and lower costs thanks to the central data acquisition.

The detailed customer protocol enables clear and precise diagnosis evaluations. Through these test-results you are able to recommend eventual repairs that would be required.

Clearly laid out graphics enables easy interpretation of results, which quickly and completely documents your competent interpretation of the customer's vehicle.



All results can be displayed in graphs in order to analyse any faults.



During the brake test, the brake force, brake force difference and deceleration, as well as the optional pedal force are permanently displayed.



Entering, saving and managing customer- and vehicle data on the central database.



Easy understandable presentation for the directional stability of the vehicle.



Customer specific definition and default setting of test sequences.

- User friendly Windows operating system
- Fully automatic, visual test procedure
- Easy to configure test sequences for truck, car and motorcycles
- PC supported graphical analysis program
- Truck trailer adjustment with ingraph integrated EG-brake bands
- Analysis, management and printouts of all test results
- Central saving and management of customer and vehicle data
- History function
- Fully integrated emissions testing of diesel and petrol engines
- Communications and network platform

Specifications & accessories



14 digit LC-display

The 14 digit LC-display as an accessory to the analogue display enables an optimal visualisation of the results without the necessity of a PC.



Lifting device

As an alternative to the load simulator the one or two speed lifting device enables the desired axle to be lifted by up to 200 mm to aid testing.



Rug board

The mobile touch screen offers you extra freedom and flexibility during your daily work. All test lane modules can be completely controlled very easily by using the rug board.



Radio pressure sensors

Up to eight radio controlled pressure sensors can be used at the same time and retrieve various brake pressures and so enable fast results.



Weighing device

The weighing cells measure the axial and vehicle weight in static and dynamic modes in order to evaluate the deceleration of the vehicle.



Pit safety device

The pivoted pit safety device protects against use of rollers when the light barriers are interrupted by someone in the pit during operation of the test lane.

TV-monitor system

This system serves as an extra display system for the PC test lane and offers extra comfort.

Load simulator

The load simulator is a simple device to aid testing even with three axles. It also offers the possibility to simulate loads on vehicles using the weighing device as an extension.

Tachograph testing

Compatibility to the Semmler – Tachocontrol and Siemens VDO guarantees that the testing of the tachometer and tachometer readings conform to the latest legal requirements.

Sensor roller 100mm

A larger sensor roller allows better contact to vehicles with rough or chunky tyres and enables easier testing of communal and agricultural vehicles.

Technische Daten

Technical data	BT 610 / BT 612 / BT 620 / BT 622	BT 640 / BT 642 / BT 650 / BT 652
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Test speed BT 610 / BT 612	2,5 km/h	2,5 km/h
Test speed BT 640 / 642	2,5 und 5,0 km/h	2,5 und 5,0 km/h
Max. motor power	2 x 9 kW	2 x 11 kW
Electrical connection (Ph. / V / AT / Hz)	3 / 400 / 63 / 50	3 / 400 / 63 / 50
Measurement system	electrical (DMS)	electrical (DMS)
Transmission factor	>0,5 wet >0,7 dry	>0,5 wet >0,7 dry

Measuring range of display instruments

Braking force display	2 x 8 / 40 kN 350 mm Ø	2 x 8 / 40 kN 350 mm Ø
Range of regulated pm / pz	pneumatic 0 - 20 bar	pneumatic 0 - 20 bar

Dimensions and weights

Indicator cabinet conventional (H / W / D)	580 x 900 x 275 mm	580 x 900 x 275 mm
Indicator cabinet conventional (weight)	40 kg	40 kg
Indicator cabinet Design (H / W / D)	770 x 980 x 280 mm	770 x 980 x 280 mm
Control cabinet conventional (H / W / D)	1060 x 880 x 240 mm	1060 x 880 x 240 mm
Control cabinet Design (H / W / D)	1140 x 600 x 200 mm	1140 x 600 x 200 mm
Smallest effective axle width	800 mm	800 mm
Biggest effective axle width	2800 mm	2800 mm
Roller diameter	282 mm	282 mm
Roller length	1100 mm	1100 mm
Driver roller installed raised by	50 mm	50 mm
Drive roller mounted on floor level	no / no / yes / yes	no / no / yes / yes
Roller coating	plastic and SiC	plastic and SiC
Smallest wheel size suitable for testing	440 mm	440 mm
Biggest wheel size suitable for testing	1400 mm	1400 mm
Weight per roller set	ca. 600 kg	ca. 600 kg
Measuring accuracy in temperature range	-25 bis 55°C	-25 bis 55°C

Technical data

Side slip tester

Max. axle load	18 t
Values (m/km deviation)	- 15 bis + 15
Resolution (m/km)	0,1

Technical data

Suspension tester

Max. axle load	2 t
Measured values (road grip)	0 - 100 %
Oscillating travel	6 mm
Oscillating frequency	25 Hz

Technical data

Axle play detector

Max. axle load	20 t
Max. movement per side	+/- 50 mm
Oil amount for hydraulic aggregate	ca. 11 l (interior installation hydraulic oil SAE 5) (outside installation hydraulic oil HVL P 32 330)
Installation depth	220 mm
Max. shearing force per side	30 000 N
Max. pressure of hydraulic aggregate per side	160 bar
Electrical connection (Ph. / V / AT / Hz)	3 / 400 / 16 / 50