# BT & NTS
Brake Tester & Test Lane

Organise your own ideal testing station

Using the modular concept, you are able to select the types of testing that is required:

- Either using the repair tests such as brake testing which can also be placed outdoors.
- Or as a pre-service inspection with the suitable lift.
- Or a universal test lane which incorporates the brake test with others such as side slip, play detection and headlight testing.
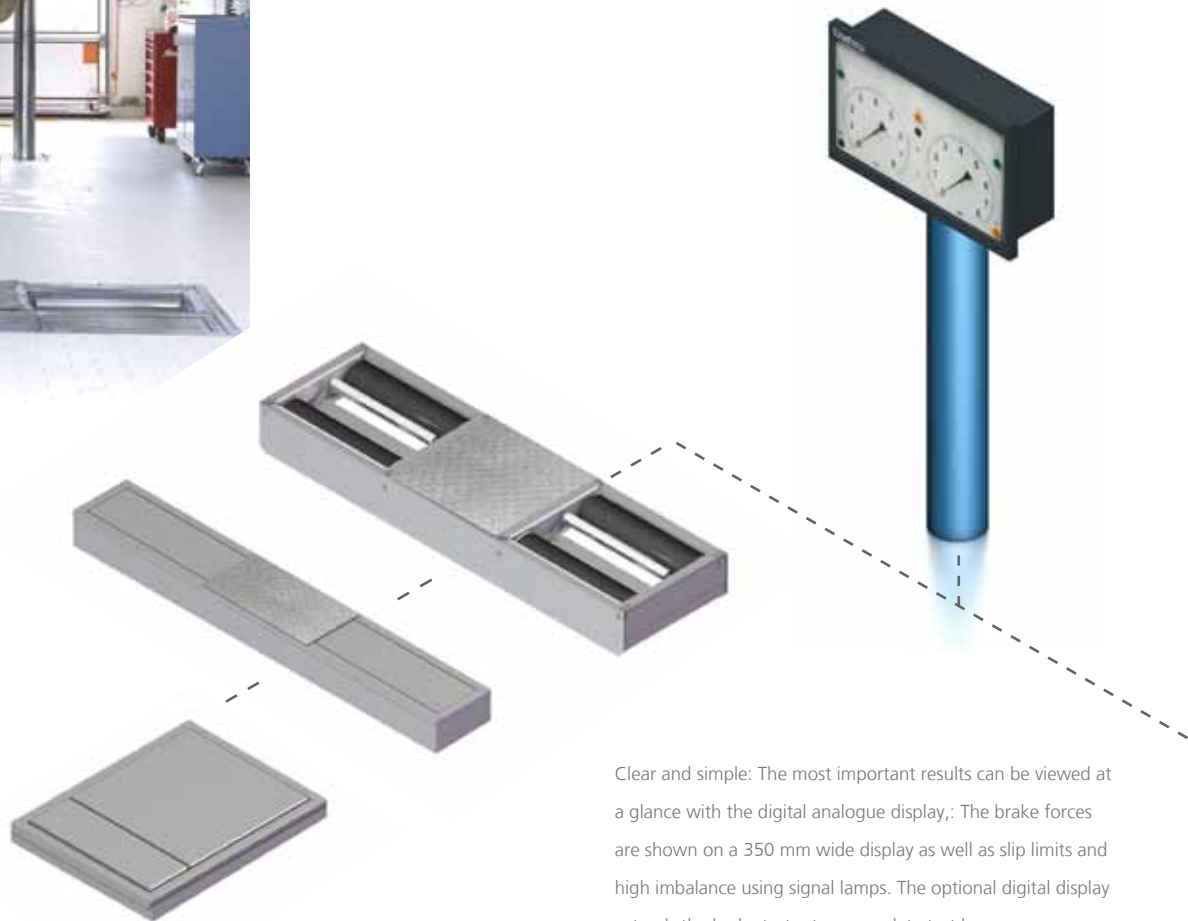
Clear and simple: The most important results can be viewed at a glance with the digital analogue display,: The brake forces are shown on a 350 mm wide display as well as slip limits and high imbalance using signal lamps. The optional digital display extends the brake tester to a complete test lane.

Nussbaum logo (header)

The analogue display has the advantage of clear and quick presentation of the results. A PC system can graphically display the values and results to present to your customer and save them in a databank. The test lane can also be connected via a workshop network system.

The flexibility of the NTS 8 xx-B series enables a complete test lane to be configured. You choose the applicable test stand and receive the results via the control unit and test lane software. The PC and monitor can be placed wherever you want as the PC and control unit are connected either via a serial cable or a cableless remote control connection.

BT & NTS – Short and efficient

- The modular system offers standard solutions as well as additional configuration possibilities to enable the set up of an ideal test lane.
- All floor units are hot dip galvanized, thus optimally protecting them from corrosion.
- All brake testers are fitted with worm gears enabling rollers to self block assisting the exit of vehicles from the rollers.
- EUSAMA- , BOGE- or THETA-Tester*. All methods are dependent on country or manufacturers specifications as well as individual requirements. You can decide which system you require.
- Engineered and manufactured in Germany
- Our own development branch for software, measurement and control technology as well as electronics, mechanics and in house production, ensure flexibility, innovation and quality.
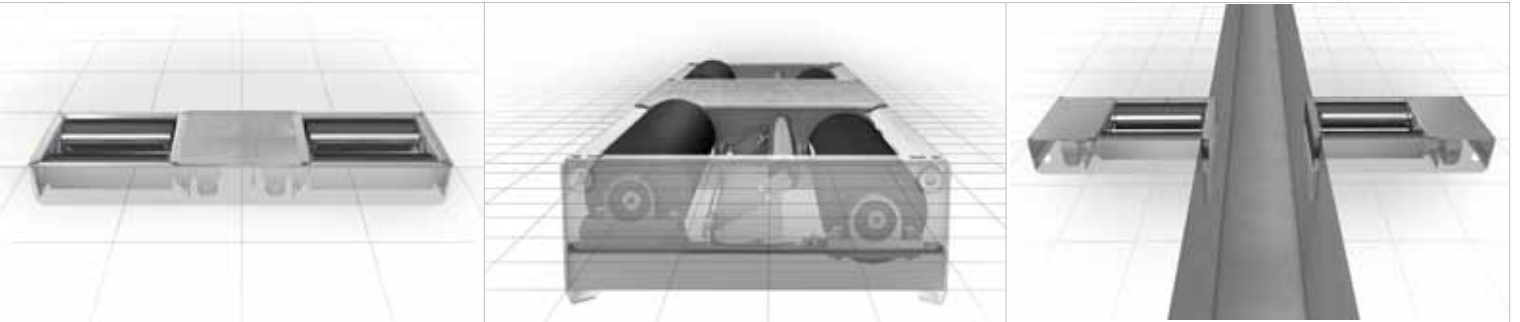
The pre-connected tes lane: NTS 8xxx
You have the freedom to configure your ideal test lane: select the most suitable roller set with various options, Eusama-, Boge- or Theta tester and side slip. The measurement and control electronics, PC and printer are situated together in the control cabinet.

*under development
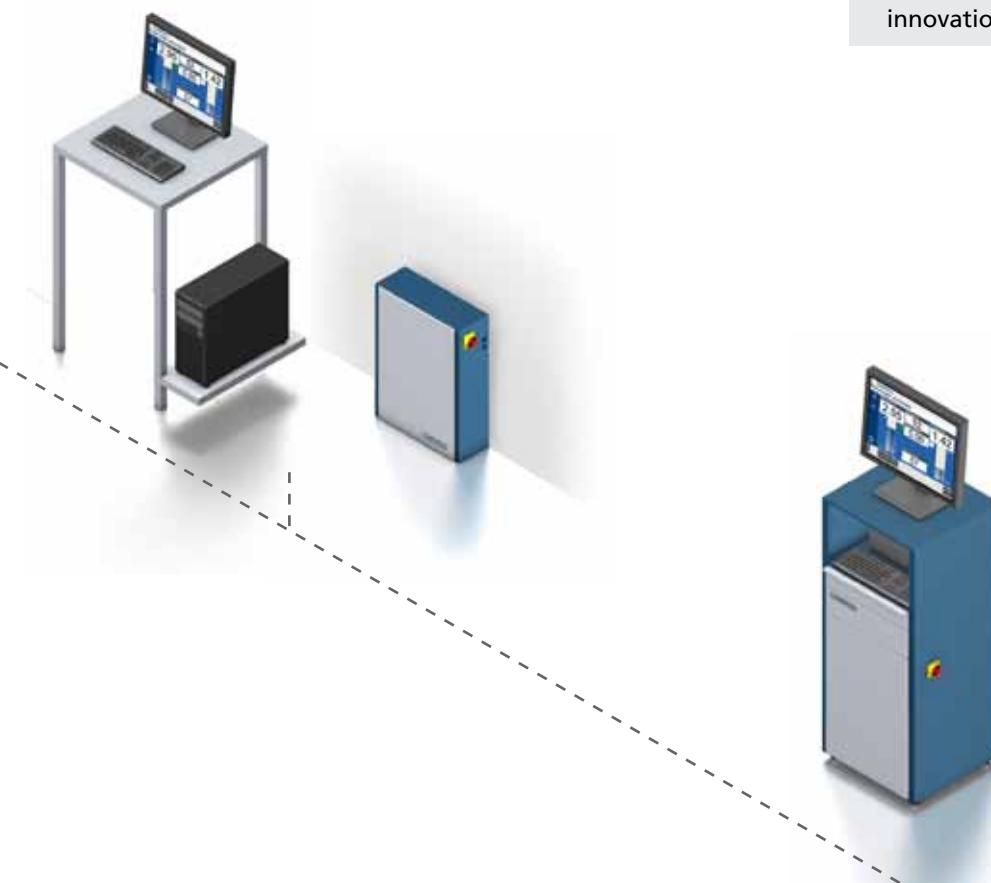
BT roller set
Which roller set is the most suitable?

Roller set with the standard testing width of 800 – 2200 mm and level rollers.

Raised rollers

Separated rollers for installation either side of a pit

If you need to carry out periodical vehicle testing, then most countries use the testing speed of 5 km/h whereas loaded transporters usually use the maximum brake force range of 8 kN.
You can choose a roller surface coating of either welded construction or plastic corundum and both fulfil the international requirements for the coefficients of adhesion.
Braking efficiency calculations require the assistance of an optional weighing device fitted under the rollers or, in the case of a test lane, by acquisitioning the weight from the suspension tester. If you have a single brake tester, the weighing device is required.

Choose your roller surface coating :
• Plastic corundum
• Welded design

## You can choose between 3 different power ranges

Testing speed	Max. brakeforce	Weight capacity	Upgradeable for PTI in Germany
3,3 km/h	5 kN	3 t	no
5 km/h	6 kN	4 t	yes
5 km/h	8 kN	4 t	yes

All test stands with plastic corudum have a roller diameter of more than 200mm and a traction value of more than 0,7 im dry and more than 0,6 in wet conditions. As option for more accurate slip measurement (requirement in some countries) an additional rotational sensor is available.
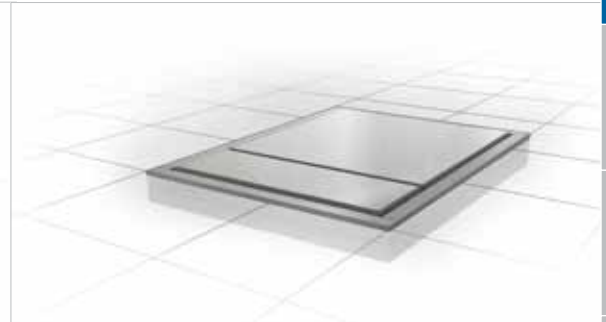

Lowering and lifting device
The optional lowering and lifting device eases the driving into and out of the rollers, especially vehicles that are fitted with front spoilers and in many cases they can substitute the requirement for roller drive over covers.
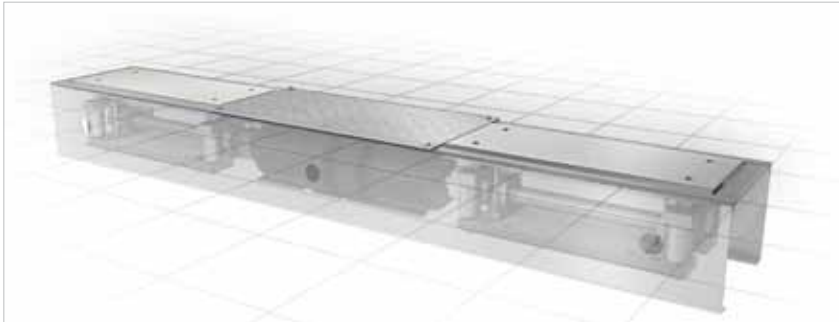
EUSAMA Tester. Alternatively we offer the BOGE and THETA-Tester*.

Side slip tester

Suspension tester

The vehicle suspension is an important safety aspect. It ensures a safe vehicle road holding, incorporating optimal steering and braking. The EUSAMA tester calculates the rebounding forces on the wheels through defined oscillation conditions whereas the Boge tester shows the axle absorption in relation to the static rebounding forces. The THETA tester* measures the physical absorption values.
As there are no recognised pre-defined values for suspension testing, all three methods exist in parallel and we can offer the most suitable to your requirements.

Side slip plate

The side slip tester quickly checks the axle geometry and completes the test.

Development & production

Modern productions processes mainly manufactured in – house ensures long lasting product quality. Enclosures and frameworks are all produced on modern laser plants and worm gears are developed and manufactured in our own factories.

*under development

Display and control units
Choose:

Analogue display

The braking values are quickly and easily read with the 350 mm scale on the analogue display. The standard format also has signal lamps for the slip values and for exceeding the maximum brake force difference. The slip limit values and brake force difference limits can be adjusted.

The 14 digit LCD display (optional) shows other values such as axle weight and braking efficiencies (with optional weighing device). Test results from the optional suspension tester and side slip can also be read from the digital LCD display.

Monitor display for the PC system

The modern software system offers many possibilities and is essentially simple and intuitive to use on two levels. First, configure the software once to your requirements: The brake force graphical display can be depicted either in analogue or columns. Start the test through, either

customer/vehicle input or driving onto the test lane. After configuration, the testing steps are confirmed and the rest is easy. You can configure 2 or more sequences and later on select the test procedure that is best suited to your requirements.

Various analysis and indication possibilities

Made in Germany

The perfect accessories for every application

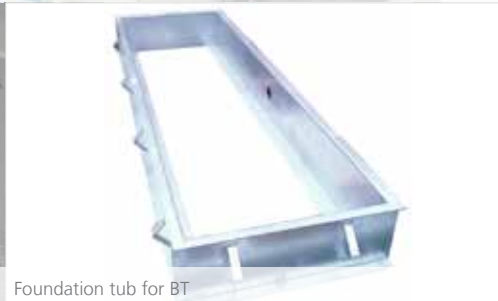Motorcycle testing device

Cabinet wall mounting brackets

Cable connected or RC version brake force meter

Cover plates

Foundation tub for BT

Automatic all wheel recognition

This option is available on both analogue and PC versions of the brake tester.

After the rollers have started, the test stand recognises if an all wheel vehicle is positioned in the rollers and then automatically changes the testing sequence to unregulated left – right running. A further important accessory is the pedal force meter which can be offered as a cable connected or remote control connected unit. This will enable the brake force difference to be calculated using the brake pedal force.

The brake force difference can be shown on the LCD display or printed out on the test report protocol.
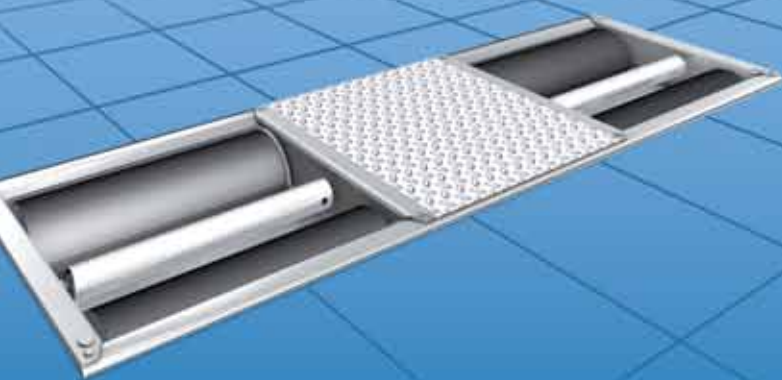

Noise detection device

Printers for Analogue or PC configurations

Lowering and lifting device

BT 110

The analog display indicates the most important re-
sults at a glance: the braking force is clearly shown on
350mm diameter scale. Moreover, an excessive braking
force imbalance is symbolised through a standrad
signal lamp.

• Brake tester for passenger car and transporter
• 4 t axle load, 6 kN brake force
• One-piece galvanized roller set, including middle cover
  plates
• Electronic measuring system with strain gauges
• Switching on and re-start, start blocking protection
• Cabinet for wall mounting
• Splash-proof motor (IP54)
• Drive-by self-locking worm gear box
• Solid and lasting rollers with welded surface
• Differential indicator light and automatic lamp

Analogue display or PC system for brake testing?

BT 110 & BT Data

Experience the best of both worlds in one system:
BT 110 together with the Software BT Data offer amazing
possibilities.

BT Data

BT Data can run on any PC in your workshop – which just
needs connecting via the BT 110 serial interface . BT Data is
an Option, of course BT 110 runs as standalone brake tester
as well.

The workshop has an additional benefit:

Measured data can be stored along with customer data,
diagramm and display can be provided by an inexpensive
and common PC printer.

And the best: The software can be installed on an exsited
PC in any workshop.

Experience the best of both worlds in
one system: BT 110 together with the
Software BT Data offer amazing possi-
bilities.

Made
in
Germany

Technical data

Brake tester	BT 110	BT 400 NTS 800-B / NTS 800	BT 410 NTS 810-B / NTS 810	BT 420 NTS 820-B / NTS 820
Measuring range	6 kN	5 kN	6 kN	8 kN
Testing speed	5 km/h	3,3 km/h	5 km/h	5 km/h
Roller diameter	202 mm	202 mm	202 mm	202 mm
Motor power	3,5 kW	2,5 kW	3,5 kW	4 kW
Permissable axle weight	4 t	3 t	4 t	4 t
Conforms to RiLi from 2011 in Germany	ja	–	ja	ja
Distance between front and rear rollers	420 mm	420 mm	420 mm	420 mm
Level rollers	standard	standard	standard	standard
Rear rollers raised by 40 mm	–	option	option	option
Single frame roller set	standard	standard	standard	standard
Split frame roller set for inst. in a pit	–	option	option	option
Testing width 800 - 2200 mm	standard	standard	standard	standard
Testing width 800 - 2800 mm	–	option	option	option
Weighing device	option	option	option	option
Lifting/lowering device	–	option	option	option

Suspension tester EUSAMA	
Permissable axle weight	2 t / Axle
Vibrational amplitude	+/- 3 mm
Frequency	25 – 0 Hz
Motor power	2 x 2,5 kW
Measurment method	lifting force
Noise detection function	option

Suspension tester BOGE	
Permissable axle weight	2 t / Axle
Frequency	16 – 0 Hz
Motor power	2 x 1,5 kW
Measurment method	vibrational force
Noise detection function	option

Side Slip	
Permissible axle weight	2,5 t
Measuring range	−15 m/km to +15 m/km

Network connections
All PC based test lanes (NTS6xx und NTS8xx) can be connected using ASA Network, GiegNet und MCTCNet protocols