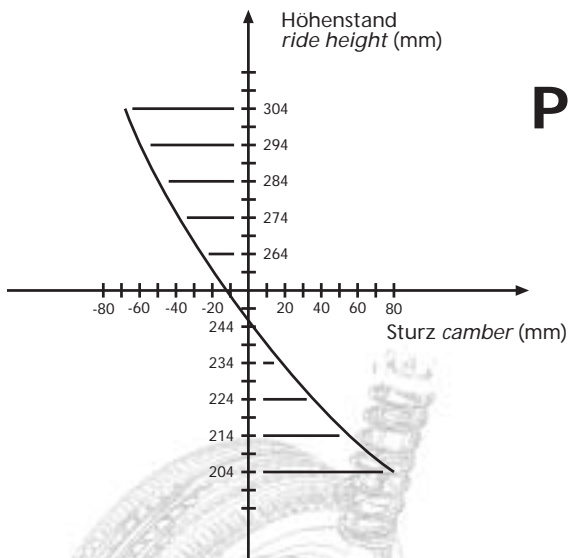


microline tech

The new microline tech.
Professional OEM standards
in your workshop.



10'

15'

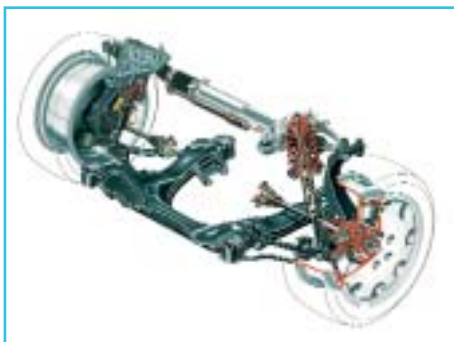
20'

25'

The Wheel Safety Expert.

BEISSBARTH[®]
BEISSBARTH
Automotive Group

TECH



The new microline tech. Professional wheel alignment supported by manufacturer's data.

For precise suspension you need precise servicing technology.

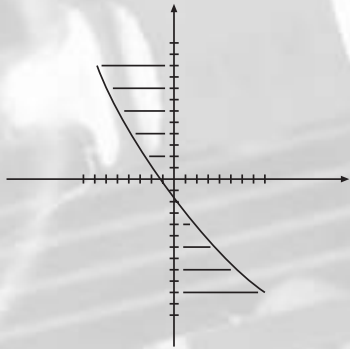
Front and rear suspension geometry and design ratings are decisive for safe road behaviour and ride quality. Car manufacturers develop better and more perfect suspension systems all the time. New materials and technologies are used – multi-link rear axles with insulated cross-members, rear wheel carriers made from torsion and flexurally resistant hollow sand-cast parts or multi-link rear axles with spherical kinematics. The front suspension struts consist of a single-tube gas-filled shock absorber and a coil spring matched to the vehicle's road dynamics, with wheel location by wishbones and an anti-roll bar – to mention just a few examples of the latest technologies.



243

5'

10'



To maintain their suspension design standards, vehicle manufacturers impose severe demands on servicing technology. They specify tight tolerances – for instance 2 minutes for individual toe, specific measuring routines, high precision and high repeat accuracy. Conventional axle measuring equipment just doesn't meet these requirements. The wide variety of standard alloy wheels is another wheel-alignment challenge – but Beissbarth has equipped the new microline tech to handle all such tasks with ease.

Switch to the wheel measuring technology preferred by the car manufacturers: it has been designed with only one goal in mind: to maintain road safety for the driver and make service work as easy as possible for you. With the microline tech.

Beissbarth's wheel alignment know-how is based on a tradition of equipment development going back more than 50 years.



Precise measuring technology is needed when servicing what the car manufacturer has developed by extremely precise methods.

New patented, digital CCD camera technology for cableless measurement with an accuracy of ± 1 minute of angle.

Each microline tech measuring sensor is equipped with two new digital CCD cameras and a its own processor. This has significant advantages for your work. Measuring and repeat accuracy is much higher than with conventional equipment, and cableless measurement significantly reduces preparation time.

New digital 20° CCD camera technology for easier caster angle measurement.

The new digital CCD camera technology has wider toe and camber measuring ranges. The benefits are:

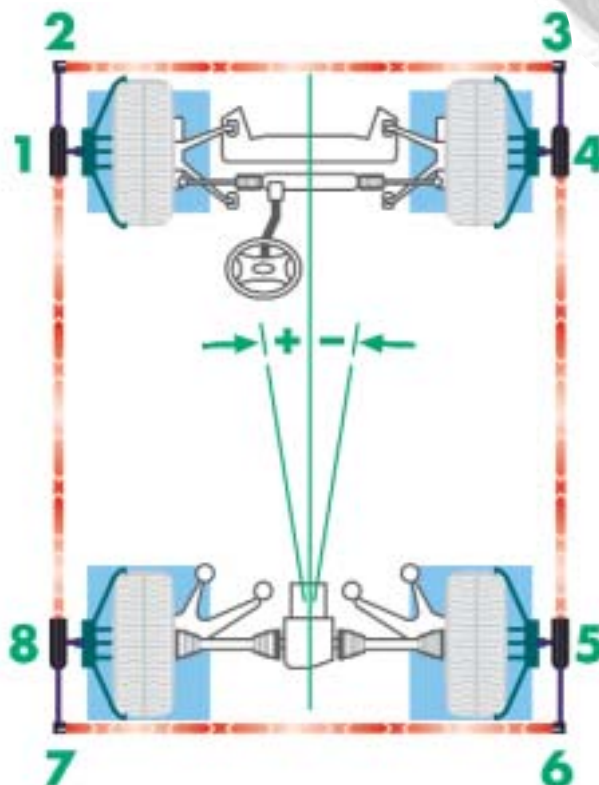
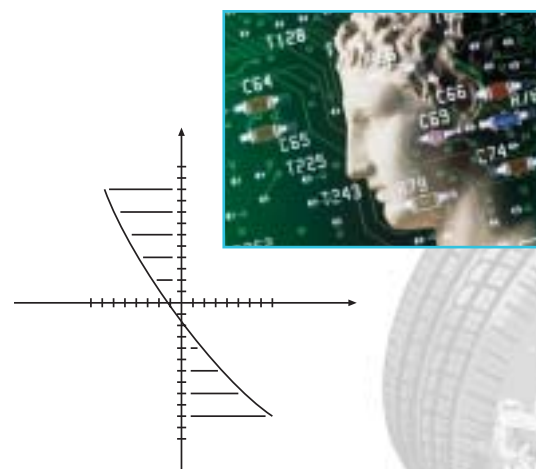
- use of low-cost mechanical turntables
- live toe display also available with the wheel turned, for convenient track-rod adjustment
- live toe and camber displays also available in raised position, for convenient track-rod adjustment

8-track toe sensing system for permanent precision check and additional measuring options.

The microline tech's infrared 8-track toe sensing system creates a closed 360° measuring zone around the vehicle for additional rear wheel measurements and permanent precision system control. Deviations from the tolerances and the need for maintenance are automatically displayed on the screen.



The new digital CCD cameras permit camber measurement at 20° with mechanical turntables and at a measuring distance of 6 metres.



Permanent system precision check prevents measuring errors.

The new microline tech has more precision features.

Standard: OEM measuring routines.

Some manufacturers require a specific measuring routine to match the vehicle being checked. This is no problem for you as a brand-name workshop equipped with microline tech. The system switches to the required measuring routine automatically after the vehicle has been selected by mouse-click.



Brand-specific measuring routines at no extra charge, for top-quality results.

Standard: Measuring station control system

The 8-track toe sensing system permits permanent precision monitoring of the measuring station, i.e. the vehicle hoist level, with the "Measuring station control system" software feature. Discrepancy values are displayed immediately on the screen.



Aspects of precision: The picture shows the DaimlerChrysler MKS system display.

Optional extra: Turntables with electronic wheel load weigher.

This option was mainly developed for wheel alignment on sports cars such as Porsche. The turntables allow exact distribution of the car's entire weight between the individual wheels or the front and rear axles. This extremely accurate preparation guarantees optimal suspension settings.



The "micro-weight system" display for exact distribution of vehicle weight between all wheels.

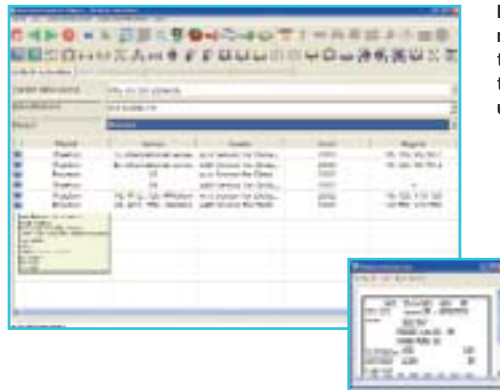
Professional handling and an efficient measuring process: three system measuring routines and original adjusting displays.

5'

10'

Professional handling with typical Windows functions.

You will soon feel at home with the microline tech's user interface. Clear symbols and typical Windows functions including tab key, mouse, scrolling or selection by entering the first letter of a word make the selection of a vehicle very easy. Users can see an overview of the selected car's target data by clicking the mouse twice.



Rapid access to the required vehicle target data thanks to typical Windows user functions.

Online support: clear instructions in any phase of wheel alignment.

If you are not sure what's important for a particular make of car, don't worry. Simply click the online support button and the information you need will appear on the monitor: text, images, charts, videos. The microline tech supports you during every stage of your work.



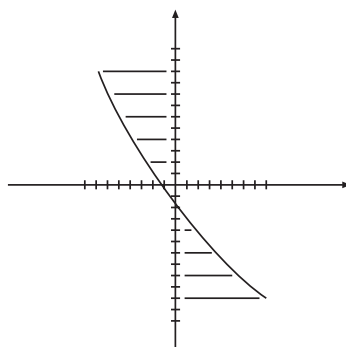
Texts, images, charts and videos: rapid information via online support at any time.

Three system measuring routines increase the efficiency of the measuring process.

In addition to professional operation you can choose the most effective measuring routine for the vehicle before starting the measuring process. "Standard" is a program-guided routine with initial and final measurements. "Rapid" means measurement without caster steering angle. And "Free Measurement" is for checking individual values as required.



Standard, rapid or free measurement: Select the most effective measuring mode by mouse-click.



15'

20'

25'

30'

Mixed workshops will appreciate the standard passenger-car/truck program.



Clear information about the live-measurement displays: tolerance-range chart and faded-up target data.

Live measured-value display with permanent comparison of target/actual data.

As soon as the microline tech has been attached to the vehicle, all measured values can be called up on the monitor – in a matter of seconds. The large figures on the live measured-value display are easy to read and highlighted additionally by a colour panel that turns red if the actual value is out of tolerance.

Faded-up target data for the relevant measurement provide you with a precise target value during the alignment process, and a key symbol next to the live measured value tells you that you can call up adjustment help in the form of images, texts or videos for this value.



Available in every microline tech at no extra charge: a truck wheel alignment programme.



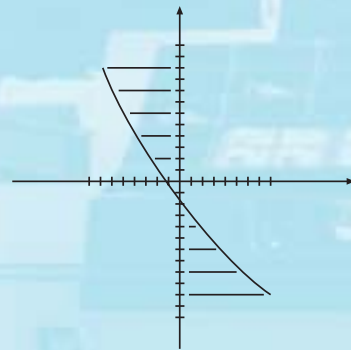
Free choice: two measuring report versions plus a tyre report.

The wheel alignment records have been redesigned: the version in tabulated form stays with the mechanic, the graphic chart is for the customer. It documents in an easily understood way the work your company has performed. And the additional tyre report will boost your tyre sales.



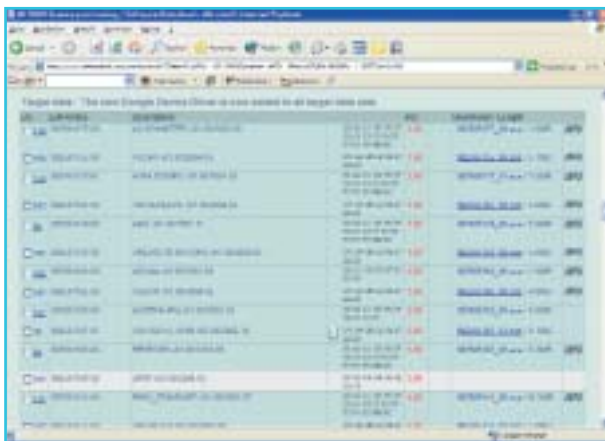
The standard A4 printer is protected against dust in an integrated drawer.

Everything you need: a big target database, rapid updates, network capability.



Manufacturer	Model	Year	Price	Type
Lada	2101	2000	1500	1P
Lada	2102	2000	1500	1P
Lada	2103	2000	1500	1P
Lada	2104	2000	1500	1P
Lada	2105	2000	1500	1P
Lada	2106	2000	1500	1P
Lada	2107	2000	1500	1P
Lada	2108	2000	1500	1P
Lada	2109	2000	1500	1P
Lada	2110	2000	1500	1P
Lada	2111	2000	1500	1P
Lada	2112	2000	1500	1P
Lada	2113	2000	1500	1P
Lada	2114	2000	1500	1P
Lada	2115	2000	1500	1P
Lada	2116	2000	1500	1P
Lada	2117	2000	1500	1P
Lada	2118	2000	1500	1P
Lada	2119	2000	1500	1P
Lada	2120	2000	1500	1P
Lada	2121	2000	1500	1P
Lada	2122	2000	1500	1P
Lada	2123	2000	1500	1P
Lada	2124	2000	1500	1P
Lada	2125	2000	1500	1P
Lada	2126	2000	1500	1P
Lada	2127	2000	1500	1P
Lada	2128	2000	1500	1P
Lada	2129	2000	1500	1P
Lada	2130	2000	1500	1P

Access by mouse-click: vehicle target data from A as in AC-Schnitzer to Y as in Yugo. Over 12,000 data sets!



Software updating at any time by logging into the Beissbarth Software Centre at www.beissbarth.com.



Standard: a combined DVD/CD-ROM burner drive for rapid data backup and data imports.

Standard target database with over 12,000 different vehicle models from over 50 manufacturers.

We're confident that the new target database from Beissbarth is the world's best. In quality, since it consists of original data. As well as all well-known automobile brands, the database includes models less frequently encountered, for instance under Korean workshop data the complete ranges from Asia, Kia, Hyundai and Daewoo. You have access to a truly comprehensive selection of vehicles.

Update program software by mouse-click. Around the clock.

You can only do an effective job if your wheel-alignment workshop has the latest program software and the latest vehicle target data. Go to www.beissbarth.com and you are connected directly to the Beissbarth Software Centre. You have the choice of downloading the relevant software against payment of a fee or printing out free of charge the latest colour-coded vehicle target data updated on a day-to-day basis, operating manuals or technical planning leaflets.

Combined DVD/CD ROM burner drive for rapid data imports and data backup.

The microline tech is designed in every way for professional work. For instance, it has a standard combined DVD/CD burner drive for data backup on CD, program or target data updates and data imports. You have direct access to repair manuals, part lists or training material at your work station.

Standard ASA network compatibility or multimedia capability with Windows XP-Professional operating software.

The Power Pentium PC and the Windows-XP Professional operating software in the microline tech make two things possible: parallel work in several programs and networking with the Internet or the ASA network.

Hardware details for precise results and time-saving operation.



The batteries of the measuring sensors with radio data transmission are automatically recharged via the locating pins.



The long version of the sliding table (order No. 932 401 011) for rear suspension rebound has an additional rotary movement range of $\pm 2.5^\circ$ to $\pm 10^\circ$.



The "Multiquick" clamp (order No. 932 401 111) for rapid attachment of the measuring sensors to the wheel. Clamping range covers rim diameters up to 23" (optional up to 26").



The free-moving precision aluminium turntable (order No. 932 401 092) avoids trapped stresses at the front wheels during measurements with the steering turned.



The Porsche quick clamp unit (set in case, order No. 932 301 176) for precise attachment of the measuring sensors via the wheel centre hole.



Electronic turntables with integrated weigher cells (order No. 932 501 009) for work on high-speed vehicles.



Measuring sensor for trucks with radio data transmission and quick clamp for European front and rear wheels (order No. 932 401 180).



Mechanical truck turntable (order No. 932 401 180) avoids trapped stresses at the front wheels during measurements with the steering turned.

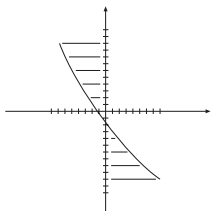


Mobile component trolley (order No. 932 502 028) to carry four truck measuring sensors.

More profit with the right choice: microline tech product versions.

microline tech 8

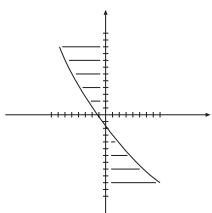
- with data transmission by cable or with radio data transmission
- available in various designs for automobile manufacturers and key customers
- standard passenger-car/truck measuring program
- optional retrofitting for truck measurements



The microline tech series: unmatched measuring accuracy of ± 1 minute of angle.

microline 5000 tech

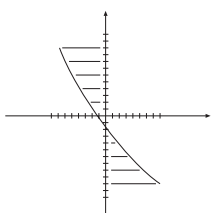
- with radio data transmission
- available in various designs for automobile manufacturers
- standard passenger-car/truck measuring program
- optional retrofitting with voice control
- optional retrofitting for truck measurements



The microline 5000 tech with standard two- and three-dimensional measured-value displays.

microline 5000 tech Truck

- with radio data transmission
- standard truck/passenger-car measuring program
- optional retrofitting for passenger-car measurement



Standard: program-guided measurement of various truck axle combinations.

To sum up the microline tech: no workshop can be satisfied with less.

Below we have summarised all the advantages of the microline tech series.

- New digital CCD cameras with extended toe-measuring zone and integrated camber pendulum for caster measurement at unmatched 20" measuring and repeat accuracy
- Passenger-car/truck measuring program as standard
- Three different measuring routines for increased working efficiency (program-guided, free and rapid measurement)
- Power Pentium PC, with network capability and multimedia compatibility thanks to Windows XP Professional operating software
- Combined DVD/CD ROM burner drive for data import and data backup
- 8-track toe sensing system creates a 360° measuring zone with permanent precision check (important for cars with accident damage)
- Data transmission between measuring sensors and equipment cabinet by radio or cable
- 19" colour monitor with large live measured-value displays and faded-up target data to simplify suspension adjustment
- Live toe display even with the steering turned, for easy track rod adjustment
- Live toe and camber display even when the car is raised, for easy track rod adjustment
- Integrated A4 printer to print out measuring results (graphics or table) and tyre report for the customer
- Access by mouse-click to over 12,000 vehicle target data with adjusting diagrams, animations, videos and workshop data from over 50 manufacturers
- Program software available in more than 18 languages
- Software update and print-out of technical documents around the clock by logging into the Beissbarth Software Centre at www.beissbarth.com

Technical data

- Dimensions of equipment cabinet incl. 19" colour monitor (width x depth x height): approx. 98 x 80 x 160 cm
- Weight: approx. 80 kg
- Colour: RAL 7011 (grey) / RAL 5015 (blue)
- Power supply: 100 – 115 V AC / 220 – 240 V AC
- Frequency: 50/60 Hz
- Output rating: 0.5 kW
- Fuse rating: 3.15 A (slow-acting); other values on request
- Vehicle memory locations: unlimited
- Screen texts shown in the programmed national language
- Clamping system: quick clamping units for passenger cars with wheel sizes from 10 – 20". Multi-Quick clamping units for passenger cars with wheel sizes from 13 – 23" (both optional up to 26")
- Turntables: load capacity 1000 kg for passenger cars, turning angle $\pm 360^\circ$, length x width x height 450 x 450 x 50 mm, sliding range ± 50 mm, weight 18 kg
- Sliding tables: load capacity 1000 kg for passenger cars, turning angle $\pm 10^\circ$, length x width x height 450 x 450 x 50 mm, sliding area +65 ... -50 mm, weight 17 kg
- Radio system: frequency range 433 MHz (2.4 GHz) multi-channel system

Measured values

Measured values	Measuring accuracy	Tolerance
Total toe (front/rear axle)	$\pm 3'$	$\pm 2^\circ$
Individual toe (front/rear axle)	$\pm 2'$	$\pm 2^\circ$
Camber	$\pm 2'$	$\pm 3^\circ$
Wheel offset (front axle)	$\pm 2'$	$\pm 2^\circ$
Driving axis angle	$\pm 2'$	$\pm 2^\circ$
Caster	$\pm 4'$	$\pm 18^\circ$
Kingpin inclination	$\pm 4'$	$\pm 18^\circ$
Toe-out on turns	$\pm 4'$	$\pm 20^\circ$
Caster correction range	$\pm 4'$	$\pm 7^\circ$

Additional measured values:

Wheel offset (rear axle)	$\pm 2'$	bei $\pm 2^\circ$
Wheelbase difference	$\pm 3'$	bei $\pm 2^\circ$
Lateral offset left/right	$\pm 2'$	bei $\pm 2^\circ$
Track width difference	$\pm 3'$	bei $\pm 2^\circ$
Rear axle offset	$\pm 3'$	bei $\pm 2^\circ$

Equipment details and technical data subject to amendment; errors and omissions excepted.

The new microline tech.

How the automobile manufacturers
measure their cars.



Your specialist dealer:

Beissbarth Service:

reliable, nationwide, worldwide.

In Germany initial product familiarisation, assembly and servicing are carried out by our own national service centres and certified partner workshops. This guarantees our customers rapid on-site availability for servicing and maintenance. In other countries, our customers can rely on Beissbarth's global presence, maintained by the manufacturer's own subsidiaries and more than 70 sales partners.

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Beissbarth China
FFB France
Beissbarth Italy
Beissbarth South Africa
Beissbarth UK
Beissbarth Ukraine

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Beijing 100101
58440 Myennes
41043 Formigine (MO)
Boksburg
Nottingham NG 11 7 EP
01054 Kiew

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Tel. 00359-2-9732375
Tel. 0086-10-649264-83/-84/-31
Tel. 0033-3-86395050
Tel. 0039-059-570990
Tel. 0027-11-3978800
Tel. 0044-115-9815151
Tel. 0038-044-2512128

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