microline 5000

The world's first voice-controlled passenger-car wheel alignment system.

Top-class suspension technology calls for a top-class wheel alignment system.

Driving safety and comfort are powerful slogans for automobile manufacturers and motorists alike. For this reason, the suspension technology of almost all new models is improved and more finely tuned than before. That means more and more kinematic settings for the suspension and even closer tolerances for the target values.

The average tolerance today for the overall toe angle is ± 10 minutes. That is equivalent to the overall measuring precision of older wheel alignment equipment! The microline's measuring precision is ± 1 minute of angle. This is a yardstick that will be valid for many years to come. It is not by chance that Audi/VW, BMW, Mercedes-Benz, Ford, Mazda, Opel, Peugeot, Porsche, Renault, Toyota, Rover and many other manufacturers throughout the world recommend microline measuring technology to their dealerships.

Enter the world of state-of-the-art wheel-alignment technology. Meet the world's first voice-controlled system: the microline 5000.

BEISSBARTH®
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Automotive Group

Passenger-car wheel alignment has never been so easy!

Beissbarth has been setting new standards in wheel-alignment technology continuously for many years. In 1979, for example, with the world's first system based on a geometric dynamic axis. Or in 1985, with the first colour monitor system. In 1991, Beissbarth was the first manufacturer to launch CCD measuring sensor technology, 8-track toe sensing system and infrared data transfer on the world market: the microline 4000. In 1999 this development was outperformed by the microline 5000, the world's first wheel-alignment system with optional voice control. You simply tell the microline 5000 the value you wish to work on and the system displays the requested data on the screen. Your advantage: both hands are free for adjustment work!

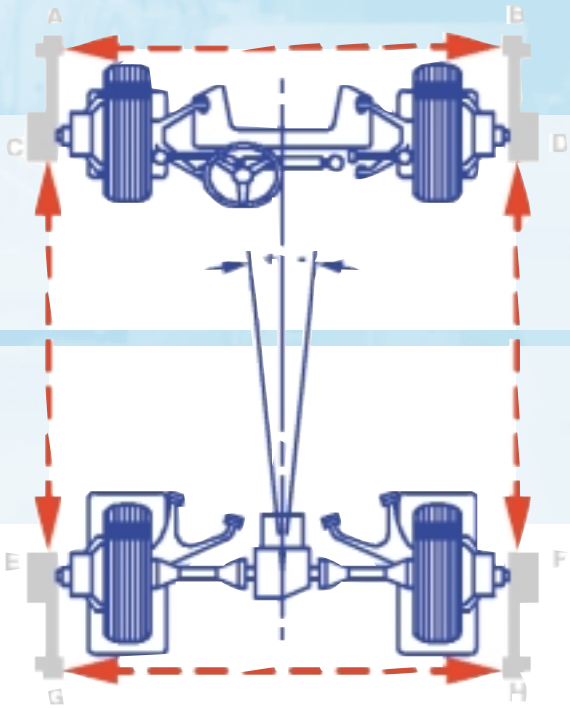
Together with radio transmission of measured data and a battery mode for cableless operation of the microline system, wheel alignment has never been as easy.

The microline 5000 – a world first – was awarded the Federal German Innovation Prize in 2001.

You say the word.
Both hands free for adjustment work.

You tell the system via the headset to display the measured value. Then you have both hands free for suspension adjustment.

Cableless measuring with five times higher precision.



Precision: ± 1 minute of angle. With CCD infrared measuring sensors.
The precision of the measurement system is vital for perfect wheel alignment. In order to guarantee precision as high as ± 1 minute of angle, each sensor is equipped with two CCD cameras. The angle is therefore determined by two infrared beams. For your needs, this technology means: all suspension data can be displayed permanently and with high precision on the microline's colour monitor. Naturally with a comparison of target and actual data.

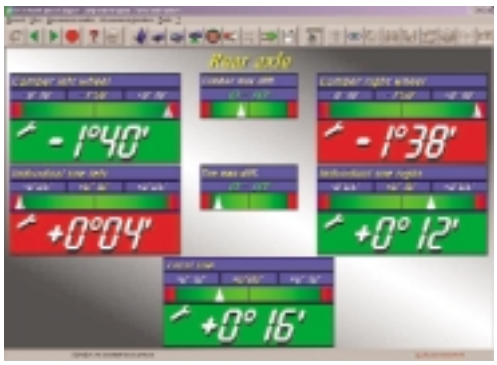
CCD infrared measuring sensors have many additional practical advantages:

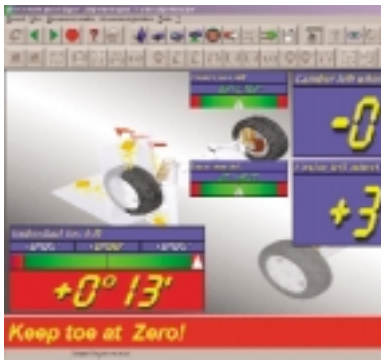
- Measurement precision unaffected by temperature
- Very high resolution: theoretically the toe angle could be measured in seconds of angle
- Single toe zone with more than ± 11 degrees for consistent display of toe angle when replacing track-rod ends
- The system is accurate to ± 1 minute of angle for toe and camber after rim runout compensation.

360° measuring zone for permanent precision control and scope for additional measurements.
No wires. No cables. The microline 5000 eight-track toe sensing system creates a closed 360° measuring zone around the vehicle. There are distinct advantages here: display of the measured values without a tangle of cables; scope for additional measurements at the rear axle (important for body damage); a programme for vehicles equipped with a spoiler and permanent monitoring of the system's precision during measurement and suspension adjustment. Deviations are automatically displayed on the colour monitor.

Innovative, exemplary precision control: The 360° infrared measuring zone must surely make the microline 5000 the best system now available on the world market.

Precise and clear: standard 2-dimensional measured-value displays.





Measurement in battery mode.
Radio transfer of measured data.
Optional: Voice control.

Practical: the measuring sensors have easy-to-replace interchangeable batteries for cableless measurement.

The system displays the requested measured value at your command.
The voice control facility on the microline 5000 is completely new on the world market. You tell the system via headset what it should do and what values you want displayed. You can see immediately what advantages you have especially when adjusting the suspension settings: both hands free for adjustment work. That's what we call efficiency improvement at Beissbarth. Of course you can also operate the system via the standard MF keyboard and mouse.

Specially practical: measuring by pure battery power.
The microline 5000's interchangeable batteries keep the system immediately operational around the clock. You simply exchange the sensor batteries for the second set (optional) in the charger: taking measurements in the battery mode without a cable in sight is so simple and saves so much time!

The measured data reach the PC unit by radio transfer. Even without line-of-sight contact.
This is currently the quickest cableless form of data transfer. Data are always displayed on the colour monitor, even if there is no visual link with the receiver. What's more, the sensors' radio system is so perfectly tuned that you can accept measurements at up to four work stations simultaneously.

The microline 5000 measuring sensor with radio antenna for transmission of measured data to the system's computer.

System software:

ASA network compatibility and multimedia capability.

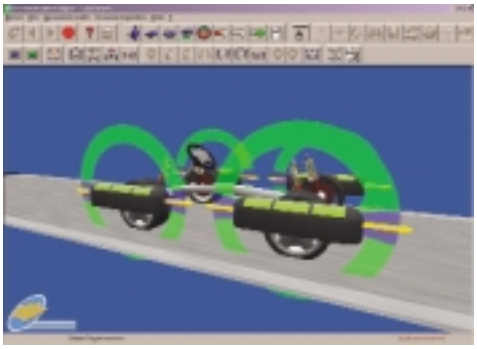
Networking individual work stations such as brake testing, wheel alignment, exhaust-emission testing or engine diagnosis cuts costs considerably because you don't have to enter customer data more than once.

Standard: the complete software on one CD with clearance codes.
A CD-ROM with the software you have asked for accompanies your microline. If you need further software – no problem! Via a clearance code which you receive from us, for example by e-mail, you can open this software on your CD-ROM and integrate it into your microline system. It's as easy as that with Beissbarth.

Runs on the microline system: the ASA workshop network manager.
There is no new measuring system from us that is not suitable for full networking. Naturally! The microline is compatible via AWN with current commercial software and with other workshop equipment.

Animated, three-dimensional measurement displays.
Measurement displays can also be animated in three dimensions. Your employees and customers can follow the individual angle settings more easily and understand why precise wheel alignment is so important for roadholding and safety.

Practical: multimedia capability and online diagnosis.
The microline software runs on Windows 2000 and offers you a whole series of advantages: for example, simultaneous work in several programs, a network connection to other systems or software updates via Internet. We have even gone a stage further. In future, we can log into your new microline system via Internet or ISDN at your request and carry out a diagnosis. Almost all system faults or operator errors can be determined in next to no time – anywhere in the world.



Special accessories and technical details.

Special accessories:

- Multi-quick clamp (932 401 111) for mounting the measuring sensors, all-purpose design
- Precision aluminium turntables (932 401 092) for front wheels.
- Turntables with weighing cells (932 501 009)
- Short (932 401 015) or long (932 401 011) sliding supports for rear wheels
- Voice control with headset (932 501 008)
- VW/Audi ground clearance gauge (932 402 035) for adjustment of the toe-in curve
- Vehicle level measuring facility (977 141 030) for Mercedes-Benz models.

Contact us now for advice.

Operating range:

- Passenger cars or light trucks
- Wheel diameters from 10 to 20 inches
- Maximum load on turntables and sliding supports: 1000 kg

Technical data:

- Display via 17” colour screen (1024 x 768 pixels in true colour quality)
- Unlimited target data input in degrees/minutes – degrees/decimals – mm/inches
- Power connection: 100 – 240V/50 – 60Hz (other values on request)
- Paint finish: RAL 5005 black, RAL 7021 anthracite

Radio system:

- Frequency range 2.4 GHz
- Multi-channel system

Measured values:	Measuring accuracy:
Total toe	± 2'
Individual toe	± 1'
Camber	± 1'
Wheel offset	± 2'
Driving axis angle	± 2'
Caster	± 4'
Kingpin inclination	± 4'
Toe-out on turns	± 4'
Total steering lock, front axle	± 4'
Total steering lock, rear axle	± 4'
Caster correction range	± 4'
Rear axle offset	± 2'
Rear wheel offset	± 2'
Track difference	± 3'
Lateral offset per rear wheel	± 2'
Wheelbase difference	± 3'

Equipment details and technical data subject to amendment.

Measured-value displays can be switched to three dimensional animation as a standard feature.

Microline 5000.
The passenger-car wheel alignment system with voice control.

Beissbarth service: reliable, nation-wide, worldwide.
In Germany, initial product familiarisation, assembly and servicing are carried out by our own national service centres and certified partner workshops. This is to guarantee our customers rapid on-site availability for servicing and maintenance.

The software update for PC-aided equipment is available on disk or CD ROM or on the Internet as well, so that your service equipment can be updated more rapidly.
In other countries, our customers can rely on Beissbarth's global presence, maintained by its own subsidiaries and more than 70 sales partners.

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