

NEW!



Efficient and **easy** measurement
of cars and commercial vehicles:
Professional wheel alignment



BOSCH

Invented for life

Bosch Diagnostics

ESI[tronic]
Software

Test
Equipment

Service
Training

Technical
Hotline

Precise and compact: conventional wheel alignment for passenger cars and commercial vehicles



Short setup time and simple measurement with radio data transmission and remote control

Wheel alignment from Bosch at a glance

Precision and large measuring range angle

- ▶ Measurement accuracy with very tight tolerance thanks to well-engineered CCD sensor technology
- ▶ 20° CCD camera technology for simplified caster measurement

Software and specs database

- ▶ Simple and flexible user software
- ▶ Over 20,000 different vehicles from more than 50 manufacturers, which can be regularly updated
- ▶ Many explanatory images and drawings, which allow immediate, reliable correction of incorrect positions

Mobility and compactness

- ▶ Control system computer, TFT monitor, color printing, all sensor heads and the most important accessories in a robust and practical trolley



Free sight for the measurement

The new wheel alignment systems from Bosch: Precision for safe handling performance and driving comfort

The development of new chassis progresses continuously. Every year new vehicles are introduced to the market with increased safety and driving comfort and which make higher demands on the wheel alignment. The measurement of such vehicles depends, on the one hand, on appropriate equipment and, on the other hand, on the information available at all times to support the user. The new generation of wheel alignment systems from Bosch always meets both requirements with a suitable solution.

Different versions for the workshop

The new wheel alignment generation from Bosch is available in different versions: Selection can be made between units from the basic model FWA 4310 with six CCD sensors and data transmission per cable to the top model FWA 4437 with eight CCD sensors, radio transmission and runout compensation encoder.

The camera technology

The use of modern 20° digital CCD (Charge Coupled Device) cameras speeds up caster measurement and work with mechanical turntables is possible with almost all vehicles. Only when a maximum steering angle is required by the car manufacturer is the use of an electronic turntable necessary. All new Bosch aligners still cover this requirement and offer a corresponding connection option for electronic turntables. Furthermore, the capacity of the camera permits measurement of vehicles with a wheel base of up to 6.50 meters; this also includes transporters.



Clear and simple to operate

Comprehensive software with a lot of specs data and setting instructions



Sensor heads with protective rubber

A large amount of data and simple operation

The vehicle database includes around 20,000 vehicles and the user can extend it at any time with individual vehicle target data. Optional updates ensure that new models are integrated quickly. Extensive setting assistances are available to the user if incorrect chassis geometry positions are to be corrected immediately and reliably. The appealing, well laid-out user interface with Windows-typical functions makes operation very easy. The user can also select between a guided routine with input and output measurement, a fast measurement without caster deflection or an optional measurement for targeted testing of individual measured values.

Measured values and accuracy

Eight sensor systems make a 360-degree measurement all round the vehicle possible. They also offer a rear axle measurement option while the system performs a self-check. Depending on the equipment version, measured values, such as toe (partial and total toe), relative steering angle, driving angle between axles, camber, caster, kingpin angle, set-back, wheel base differential, lateral offset, wheel track differential and offset are provided to the user for proper setting of the chassis. Measurement accuracy of up to two angular minutes is achieved.

Base version and S1 version: the right FWA system for every workshop

The base versions of the FWA 4xxx have been designed as complete systems for independent workshops to enable testing of most vehicles with the equipment supplied as standard. This why the scope of delivery of the base version



Fitting parts for a precise measurement

contains mechanical turntables and the universal quick-action clamps. These parts are not included in the S1 version for workshops that wish to design their systems themselves. If required, they have to be ordered separately.

Scope of delivery of base version

Trolley, computer unit, TFT monitor and color inkjet printer, measured-value sensor, connecting cable, universal quick clamps, a set of mechanical turntables, steering wheel lock, brake tension adjuster, and standard software package with target data

Scope of delivery of S1 version

Trolley, computer unit, TFT monitor and color inkjet printer, measured-value sensor, connecting cable, steering wheel lock, brake tension adjuster, and standard software package with target data

Chassis analysis

Complete service

Device types for base version

Designation	Order number	Description
FWA 4437	1 690 320 009	8 CCD sensors, radio transmission with 2.4 GHz (*) and runout compensation encoder
FWA 4435	1 690 320 006	8 CCD sensors , radio transmission with 433 MHz and runout compensation encoder
FWA 4432	1 690 320 008	8 CCD sensors and radio transmission with 2.4 GHz (*)
FWA 4430	1 690 320 005	8 CCD sensors and radio transmission with 433 MHz
FWA 4415	1 690 320 003	8 CCD sensors, data transmission by cable and runout compensation encoder
FWA 4410	1 690 320 002	8 CCD sensors and data transmission by cable
FWA 4332	1 690 320 007	6 CCD sensors and radio transmission with 2.4 GHz (*)
FWA 4330	1 690 320 004	6 CCD sensors and radio transmission with 433 MHz
FWA 4310	1 690 320 001	6 CCD sensors and data transmission by cable

* Only for countries, where 433 MHz transmission frequency is not allowed

Device types S1 version**

Designation	Order number	Description
FWA 4437 S1	1 690 320 027	8 CCD sensors, radio transmission with 2.4 GHz * and runout compensation sensor
FWA 4435 S1	1 690 320 024	8 CCD sensors, radio transmission with 433 GHz and runout compensation sensor
FWA 4432 S1	1 690 320 026	8 CCD sensors and radio transmission with 2.4 GHz *
FWA 4430 S1	1 690 320 023	8 CCD sensors and radio transmission with 433 MHz
FWA 4415 S1	1 690 320 021	8 CCD sensors, data transmission by cable and runout compensation sensor
FWA 4410 S1	1 690 320 020	8 CCD sensors and data transmission by cable
FWA 4332 S1	1 690 320 025	6 CCD sensors and radio transmission with 2.4 GHz *
FWA 4330 S1	1 690 320 022	6 CCD sensors and radio transmission with 433 MHz
FWA 4310 S1	1 690 320 019	6 CCD sensors and data transmission by cable

* Only for countries, where 433 MHz transmission frequency is not allowed


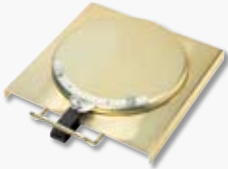
** The scope of delivery of the S1 version includes neither universal quick-action clamps nor mechanical turntables

Technical data	FWA 4437/4435/4432/4430/4415/4410/4332/4330/4310 and S1 versions
Voltage	110 – 240 V
Frequency	50/60 Hz
Power	500 W
Dimensions of equipment trolley including color monitor (W x D x H)	870 x 780 x 1600 mm
Weight	103 kg
Mechanical turntable (not S1 versions)	
Dimensions (W x D x H)	370 x 350 x 50 mm
Load bearing capacity	900 kg
Weight	11,5 kg

Chassis analysis

Comprehensive special accessories

Special accessories for S1 version (already included in supply for base version)

Illustration	Description of special accessories	Order number
	Universal quick-action clamps up to 21" 1 unit	1 690 311 001
	Mechanical turntable 1 unit	1 690 311 002


Special accessories for base version and S1 version

Illustration	Description of special accessories	Order number
	Multi-Quick clamps up to 23" 1 unit	1 690 401 001
	Quick-action clamps up to 20" 1 unit	1 690 301 001
	Extension arm for quick-action (up to 23") and multi-quick-action clamps (up to 26") Set of 12 units	1 690 401 032
	Plastic-coated clamping claws for aluminum rims 4 units for a universal clamp	1 690 311 003
	Plastic-coated aluminum sleeves for multi-quick clamps Set of 12 units	1 690 401 010
	Mechanical turntable ALU standard 1 unit	1 690 501 001

Chassis analysis

Comprehensive special accessories

Special accessories for base version and S1 version

Illustration	Description of special accessories	Order number
	Electronic turntable ALU precision 1 unit	1 690 401 013
	Electronic turntable with connecting line 1 unit	1 690 321 018
	Rubber cover for turntable 1 unit	1 690 402 001
	Short sliding plate 1 unit	1 690 401 003
	Long sliding plate 1 unit	1 690 401 004
	Drive-on ramps for turntables and sliding plates 2 units	1 690 401 008
	Calibration device 1 unit	1 690 401 056
	Remote control set with transmitter and receiver 1 unit	1 690 321 003

Chassis analysis

Comprehensive special accessories

Special accessories for base version and S1 version

Illustration	Description of special accessories	Order number
	Spoiler adapter - 50 mm 1 unit	1 690 401 005
	Spoiler adapter - 100 mm 1 unit	1 690 121 001
	Romess inclination measuring device (for manual data input) 1 unit	1 693 770 002
	Mercedes-Benz toe presser bar 1 unit	1 693 600 001
	Distance bolts for Mercedes-Benz and BMW for the multi-quick clamp Set with 5 units for one clamp	1 690 401 019
	Adapter for Porsche rims for multi-quick clamps 1 unit	1 690 402 005
	Ballast bags 20 kg 10 kg 5 kg	1 693 740 003 1 693 740 002 1 693 740 001
	VAG tool and bridge for four-link front-axle suspension adjustment 1 unit	1 690 401 039

Bosch: **Skilled partner** for workshop business

Developments from Bosch stand for innovative progress in automobile manufacturing

Geared to the growing proportion of electronics in the vehicle, Bosch offers workshops the suitable test technology for all sizes of company and service concepts. Sturdy, innovative, state-of-the-art automobile technology: Computer-assisted diagnosis systems help in finding any fault more quickly and more reliably. The modular layout – using future-oriented technologies – enables broad networking and efficient use of comprehensive information from the ESI[tronic] software. Mobility and user-friendly user guidance support the workshop in reliable and time-saving diagnostics.



ECU Diagnostics KTS



Engine System Testing FSA



Emission Analysis BEA



Diesel System Testing EPS



Battery Service BAT



Air Conditioning Service ACS



Wheel Alignment FWA



Tyre Service Equipment TSE



Brake Testing BSA



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Here you get the original Bosch-Quality:



Your automotive solutions partner

Note: Specifications may differ slightly on Australian models.

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