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Emission analysis

for future-ready exhaust gas testing

Modern vehicles with gasoline and diesel engines provide mobility for the people and goods of today – and tomorrow. For sustainable environmental protection efforts involving the steady reduction of emissions, technological innovations in touch with current trends are essential.

An important contribution is made by precise emission measurements and adjustments happening every day. This is highly relevant for workshops and inspection organizations.

Measurement, diagnosis or testing: Bosch provides you with a complete range of offerings from basic emissions testing to sophisticated emission system analysis. The various measurement modules allow you to execute fast and precise emission measurements on passenger cars, motorcycles, commercial vehicles and buses. This helps carry out emissions tests more efficiently.

BEA 030 and BEA 040

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The right solution for any need

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BEA 950 S1 UNI benefits at a glance

- ▶ Premium emissions test station for the professional workshop environment
- ▶ Robust trolley with room for all measuring components
- ► Great usability due to wireless radio connection between PC, BEA 070, BEA 030 and KTS 5XX
- ▶ Good visibility on 24" screen and high availability thanks to short setup and warmup times
- ► System can be upgraded by control unit diagnosis, ESI[tronic] 2.0 troubleshooting instructions and FSA vehicle system analysis options

- ► Remote control for comfortable operation during the inspection process
- ► High mobility during inspections thanks to optional battery operation with the **BEA 070**
- ► Flexibility with Windows PC which can be used for additional applications
- ► Supports the workshop networking concept Bosch Connected Repair





BEA 950 S1 UNI

the premium exhaust gas station for the highest demands

The user-friendly exhaust gas measurement system BEA 950 S1 UNI offers everything needed to quickly and cost-effectively test gasoline, gas, hybrid and diesel vehicles. It is the solution to current and future demands of workshops and inspection organizations.

All measurement modules, control unit testers (optional), Windows PC, 24" screen, keyboard (optional) and A4 color laser printer come as a compact package in a trolley.

To make the system even more future-ready, supplementary options from the Bosch equipment range including control unit diagnosis, trouble-shooting instructions and vehicle system analysis are available.

Thanks to its robust design, the BEA 950 S1 UNI is well-equipped for tough everyday workshop use.

In short, it is a premium solution designed for more efficient working processes, satisfying even the highest demands.



Remote control

- Easy navigation within the BEA PC Software during the measurement process, even from the distance
- ► For comfortable operation during the inspection process

Keyboard tray

Various language versions of keyboards are optionally available

Printer _

A4 color laser printer

Computer -

- ▶ Integrated Bluetooth
- ► Integrated network card
- ► Integrated HDMI output port
- ▶ USB ports on the back
- ► Hard drive (SSD)
- ▶ Possibility to upgrade with further workshop software such as ESI[tronic] 2.0, vehicle systems analysis, etc.



24" screen

Good visibility

BEA PC UNI Software

- ► Easy vehicle identification
- ► User-friendly step-bystep guidance through the testing process

Rotational speed and temperature measurement (BEA 030)

Engine speed measurement BEA 030 by means of +/- battery terminals or cigarette lighter socket

Opacimeter (BEA 070)

- ► Smoke opacity measurement module with Bluetooth for flexible usage
- ► Optionally available with battery and charging station

4/5 gas measurement (BEA 055)

- ► Module on-board
- ► To measure CO, CO₂, HC, O₂, option for NO

Trolley

Robust, ergonomic with room for all the measuring components

BEA 950 S2 UNI

allround exhaust gas station for universal use



From simple exhaust gas tests to demanding emission system analyses, the BEA 950 S2 UNI is tailored to everyday workshop operations and simplifies emission measurements.

The powerful allround solution BEA 950 S2 UNI shows its strengths particularly in everyday testing procedures. It is the right choice for workshops that want to connect an existing DCU device/Laptop by radio and boast easy and fast usability.

With BEA 950 S2 UNI, you get a comfortable allround solution for all typical workshop duties involving the testing and adjustment of emission values for gasoline, gas, hybrid and diesel vehicles.



Order number

BEA 950 S2 UNI: 0 684 123 359

BEA 950 S2 UNI benefits at a glance

- ► Robust trolley with space for all modules and accessories
- ► Ease of use in connection with existing DCU 100/DCU 220/laptop
- ► Spacious shelf on the trolley, e.g. for laptop
- ► Prepared for easy connection with DCU 100/DCU 220/laptop

- ► High availability thanks to short setup and warmup times
- ► User-friendly due to wireless radio connection between DCU 100/DCU 220/ laptop as well as BEA 070, BEA 030 and KTS 5XX
- ► Expandable: System can be rounded off by control unit diagnosis, ESI[tronic] 2.0 troubleshooting instructions and FSA vehicle system analysis options

¹ Not included in the scope of delivery.

BEA 030 and **BEA 040** reliable rotational speed and temperature measurement

BEA 030

The BEA 030¹ is a practical module for quick and easy engine speed measurement via B+/Band TN/TD and for reading oil temperature. It is used to measure both diesel and gasoline vehicles. It is designed to upgrade existing computer-based emissions testers from Bosch, and can be connected via USB or bluetooth.





BEA 030: 0 684 440 000

BEA 040

The BEA 040 is a measurement module for quick engine speed measurement by way of structure-borne and airborne sound from the engine. The BEA 040 is used as an addition to BEA 030. It must be connected to the BEA 030 for power supply and data transmission to a PC.





Order number BEA 040: 1 687 023 673

Benefits at a glance **BEA 030**

- ► Flexibility in measurement process: Measure engine speed via B+/B- or TN/TD
- ▶ Precise measurement thanks to adjustable length of oil temperature sensor
- ▶ Mobility during operation thanks to bluetooth connection to the PC
- ► Easy connection and measurement in the driver's cabin via TN/TD without opening the engine bay

BEA 040

- ▶ Efficient rotational speed measurement on diesel and gasoline motors via structureborne and air-borne sound
- ▶ Time-saving when used with both passenger car and commercial vehicle engines thanks to easy adaptation
- ► Easy and quick usage by simply connecting the magnetic sensor to the engine
- ▶ Efficient: no need to lower the cab on commercial vehicles

¹ functionalities included in BEA 950 S1, BEA 950 S2, BEA 550



BEA 550 UNI benefits at a glance

- ► Ideal for mobile emissions testing, e. g. for inspection organizations
- ► Compact, space saving, light weight
- ► Great usability due to radio connection between a DCU device/Laptop as well as BEA 070, BEA 030 and KTS 5xx
- ► Flexible working thanks to battery operation of BEA 070 (optional)

- ► Ease of use in connection with a DCU device/Laptop
- Flexibility thanks to compact and portable measurement modules





BEA 550 UNI

mobile emissions diagnosis for varying operating places



The portable exhaust gas measurement system BEA 550 UNI is designed for mobile emissions testing and offers all the tools needed to meet the specific demands of inspection organizations. It can be used with an existing DCU 220/Laptop, and comes in combination with the rotational speed measurement module BEA 030.

In both mobile and workshop use, its wireless radio and battery technology help the system get ready for use quickly to conduct precise inspections to gasoline, gas, hybrid and diesel vehicles. For workshops who already have an existing rotational speed measurement module the BEA 060 for mere 4/5 gas measurement is the right solution.

This is what makes the BEA 550 UNI with its compact shape and low weight – at full performance – a reliable companion for flexible inspection work.



Order number

BEA 550 Combi UNI: 0 684 105 506 BEA 550 Gasoline UNI: 0 684 105 279 BEA 550 Diesel UNI: 0 684 105 179 BEA 060 Standalone UNI: 0 684 105 288

BEA PC Softwareefficient and connected with asanetwork

For fast data exchange - BEA PC software

We have made it our goal to make legally required emissions tests and inspections even faster and more cost-effective. The result: BEA PC software by Bosch.

Fully automatic test sequences, simple operation with an intuitive user interface and networking options enable you to perform even faster and more cost-effective emissions testing in the future.

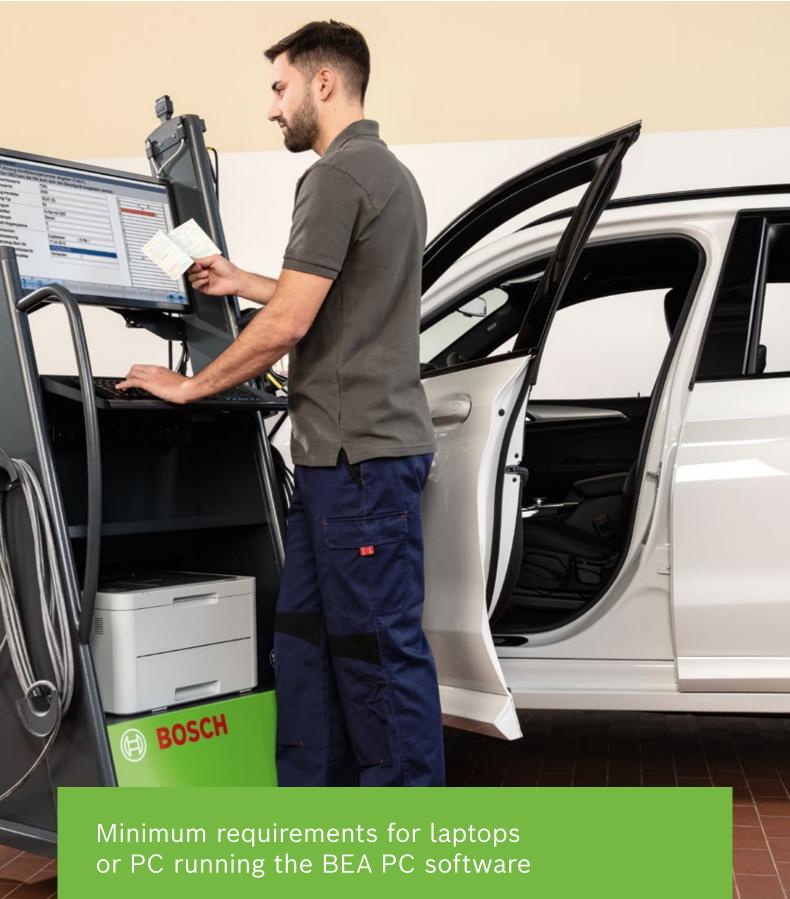
Bosch test equipment, networked by asanetwork

Asanetwork connects the entire test equipment to the rest of the workshop. All information collected from the job order, the workshop itself and centralized database storage is available anytime at all working stations.

When a new order is created in the system, the exhaust gas tester receives the job information automatically.







- ▶ Min. 2 GHz CPU or 1.6 GHz dual core
- ► Min. 2 GB of RAM
- ▶ Windows 7 operating systems or newer
- ▶ Min. 160 GB of hard drive space
- 2 free USB ports
- ► Adaptation options: BEA PC software can also be used with a DCU device

BEA PC Software

efficient and connected with Bosch Connected Repair

Intelligent integration - Bosch Connected Repair

The software solution Bosch Connected Repair digitally connects service equipment, vehicle data, technicians and customer-facing staff to share service and repair information.

Bosch Connected Repair connects test equipment and reception for quicker workshop processes. Service tasks are defined directly at the reception desk with the customer and immediately transmitted to the equipment at the repair floor, where the technicians will perform their tasks quickly and efficiently.

Vehicle identification is done only once and the technicians can concentrate on their tasks. All results and even pictures are electronically documented and will be returned and saved in the locally installed server. The usage of Bosch Connected Repair is in compliance with the General Data Protection Regulation (GDPR, a regulation in EU law).

All connected staff can seamlessly and simultaneously see a live workshop schedule and the status of each job in an instant.

Using Bosch Connected Repair will mean you spend less time with each car, enabling more services and inspections through your workshop, every single day.

Your benefits at a glance

- ► Vehicle and costumer information at a glance
- ► Connection with Asanetwork and Bosch Connected Repair
- ► Automatic and fast test sequences
- ► User-friendly and intuitive operation

► Networking of diagnostic devices for more efficient workshop processes







The right solution for any need

Scope of delivery	BEA 950 S1 UNI	BEA 950 S2 UNI	BEA 060 UNI
Order number	0 684 123 360	0 684 128 359	0 684 105 288
BEA 030	✓	✓	
BEA 055	✓	✓	
BEA 060			✓
BEA 070	✓	✓	
Premium trolley	✓		
Medium trolley		✓	
PC, monitor, keyboard, mouse	✓		
A4 color laser printer	✓	✓	
KTS 560 (optional)			
KTS 515 (optional)			
BEA 040 (optional)			
Remote control	✓		
BEA PC UNI Software	✓	✓	✓

Scope of delivery	BEA 550 Combi	BEA 550 Gasoline UNI	BEA 550 Diesel UNI
Order number	0 684 105 506	0 684 105 279	0 684 105 179
BEA 030	✓	✓	✓
BEA 055			
BEA 060	✓	✓	
BEA 070	✓		✓
KTS 560 (optional)			
KTS 515 (optional)			
BEA 040 (optional)			
Remote control (optional)			
BEA PC UNI Software	✓	✓	✓

Technical data overview

BEA 950 S1 UNI

Technical data	BEA 950 S1
Dimensions (H x W x D)	1780 x 800 x 800 mm
Weight	115 kg
Operating temperature	5°C to 45°C

BEA 950 S2 UNI

Technical data	BEA 950 S2
Dimensions (H x W x D)	1400 x 800 x 800 mm
Weight	100 kg
Operating temperature	5 °C to 45 °C

BEA 070

Technical data	BEA 070
Dimensions (W x H x D)	414 x 330 x 280 mm
Weight	approx. 10 kg
Power supply unit operating voltage	100 to 240 V, 50 to 60 Hz
Operating temperature	5 °C to 45 °C
Exhaust gas sampling probe maximum temperature	250 °C
Measurement input maximum temperature	200 °C

Sensor	Measuring range	Resolution
Opacity	0-100%	0.1%
Absorption coefficient	0-10 m ⁻¹	0.01 min ⁻¹

BEA 030

Technical data	BEA 030
Dimensions $(W \times D \times H)$	17 x 12 x 3.5 cm
Weight	approx. 0.35 kg
Power supply unit opera- ting voltage	100 to 240 V, 50 to 60 Hz
Operating temperature	5 °C to 45 °C

Designation	Measuring range	Resolution
Battery voltage	9 to 32 V	0.1 V
Oil temperature	−20 °C to 150 °C	0.16 °C
B+/B-	450 to 9,500 rpm	20 rpm
TN/TD	100 to 12,000 rpm	10 rpm

BEA 060

Technical data	BEA 060
Dimensions (WxHxD)	414 x 330 x 280 mm
Weight	approx. 10 kg
Power supply unit operating voltage	100 to 240 V, 50 to 60 Hz
Operating temperature	5 °C to 45 °C

BEA 055/060/065

Designation	Measuring range	Resolution
CO	0-10 vol%	0.001 vol%
CO ₂	0-18 vol%	0.010 vol%
HC	0-9,999 ppm	1.0 ppm
O_2	0-22 vol%	0.010 vol%
NO	0-5,000 ppm	1.0 ppm
Lambda	0.5-9,999	0.001
COvrai	0-10 vol%	0.010 vol%

Accuracy classes and approvals

- ► OIML class 0
- ► MID (Measuring Instruments Directive)

BEA 040

Technical data	BEA 040
Dimensions (W x D x H)	22.5 x 18.5 x 5 cm
Weight	approx. 0.8 kg
Power supply unit operating voltage	230 VAC / 50 Hz via 12 VDC or power supply via OBD interface
Operating temperature	5 °C to 45 °C

Designation	Measuring range
Diesel engine speed	400 to 9,500 rpm
Diesel engine speed	400 to 8,000 rpm

Special accessories

Special accessories for 4/5 gas and temperature measurement



Connection cable (2 m) for BEA 060 to cigarette lighter socket



NO extension set



Silicon hose extension set for 2-stroke engines



Active carbon filter



1 687 001 972



1 1 687 432 014



Gasoline passenger car exhaust gas sampling probe (part load up to 500 °C)



Probe sealing for leak test



Temperature measurement probes also for commercial vehicle



Four gas measuring extension set for FSA 740

1 680 790 052

½ 1 680 706 040

📙 see table

1 687 001 975

Probe	Cable length	Probe length	Comments
1 687 230 068	120 cm	90 cm	Passenger cars
1 687 230 036	300 cm	90 cm	Passenger cars
1 687 230 042	600 cm	90 cm	Passenger cars
1 687 230 045	600 cm	150 cm	Commercial vehicles
1 687 230 051	10 m	150 cm	Commercial vehicles, buses
1 687 230 050	600 cm	210 cm	Commercial vehicles, buses

Special accessories for professional emissions analysis and OBD



KTS 515 -OBD module



KTS 560 – control unit diagnosis with 1-channel multimeter



control unit diagnosis with 2-channel multimeter/2-channel oscilloscope



OBD adapter box with OBD interface



Test cable case

6 0 684 400 515

№ 0 684 400 560

№ 0 684 400 590

½ 1 684 462 514

½ 1 687 011 208

Special accessories for professional emissions analysis and OBD



Rotational speed measurement module BEA 040







Mounting for BEA 040

1 681 332 332



BEA 040 connection cable to BEA 030 and BEA 060

1 684 463 810



TN/TD rotational speed line for BEA 030 and BEA 750 L = 4 m

1 684 460 292



Remote control

1 687 201 985

Special accessories for smoke opacity measurement



Commercial-vehicle exhaust gas sampling probe for BEA 070



Exhaust gas sampling hose (BEA 070) for commercial-vehicle exhaust gas sampling probe (1 m)





Exhaust gas sampling hose (BEA 070) for commercial-vehicle exhaust gas sampling probe (3.5 m)

1 680 712 201



Clamping fixture with telescopic rod for BEA 070 (for commercial vehicles with an elevated exhaust)

1 688 040 258



Passenger car full-load exhaust gas sampling probe for BEA 070 (measurement at the performance/engine test bench)

1 680 790 041



Battery extension set for BEA 070



Charging station for BEA 070 battery



Wall mounting for BEA 060 or BEA 070



1 680 790 046

Trolley for BEA 550

1 1 685 510 232

Heated exhaust

(BEA 070) for commercial-vehicle probe (5 m)

gas sampling hose

1687 001 626

1 687 023 878

1 687 001 649

1 688 003 255

Diesel extension set for FSA 740

1687 001 648



Diesel extension set for BEA 550 Otto

1687 001 989

Special accessories for BEA 950



Cover for BEA 950

1 685 439 535

№ 1 687 023 810 DE 1 687 023 835 FI/SE 1 687 023 839 FI/SE 1 687 023 833 GB

Keyboard for BEA 950



Keyboard tray for BEA 950

1 687 010 632

What drives you, drives us

Bosch technologies are used in most vehicles worldwide. People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated over 130 years of pioneering spirit and expertise in research and manufacturing to achieving this.

We provide the aftermarket and workshops worldwide with modern diagnostic and workshop equipment and a wide range of spare parts for passenger cars and commercial vehicles:

- ► Solutions for efficient and effective vehicle repairs
- ► Innovative workshop equipment and software
- One of the world's most comprehensive ranges of new and exchange parts
- ► Large network of wholesale customers, for quick and reliable parts supply
- ► Competent technical support
- ► Comprehensive educational and training offers
- ► Targeted sales and marketing support

Find out more at: boschaftermarket.com

Robert Bosch GmbH

Automotive Aftermarket

Auf der Breit 4 76227 Karlsruhe Germany