

# KTS 520, KTS 550, KTS 650: For fast and efficient vehicle diagnosis Better Bosch.



Automotive



**KTS 520 – the multipurpose solution**

**KTS 550 – the convenient multipurpose solution**

**KTS 650 – the multimedia-capable test system**

Bosch-Diagnostics				
ESI[tronic] Software	<b>Test Equipment</b>	Service Training	Technical Hotline	Knowledge Database

# BOSCH

# Everything for tomorrow's successful workshop – from a single source

The digital revolution in the automotive industry hasn't bypassed the workshop. Increasingly more complicated vehicle components and their networking to systems are turning vehicles into "mobile computers". This results in professional repairs and maintenance requiring qualified diagnosis. With regard to diagnosis, Bosch supports workshops with a comprehensive range of system knowledge, technical and commercial data, innovative testing technology coupled with technical advice and practical training courses.

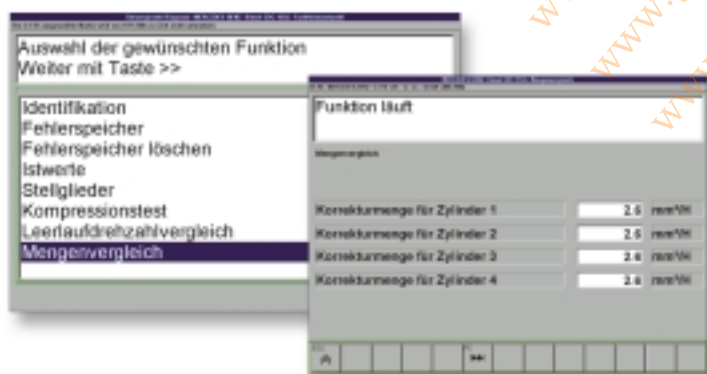


## State-of-the-art diesel technology – you too can benefit from the diesel boom

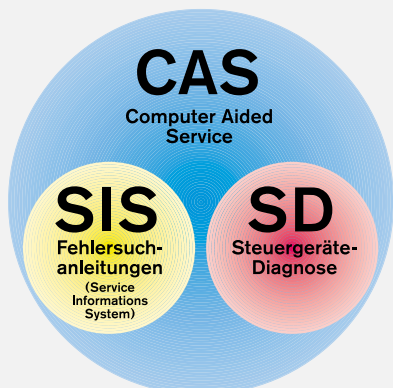
Diesel's triumphal march in new vehicle registrations is continuing unabated. High-pressure systems, such as, e.g. common rail or the unit injector system from Bosch render vehicle diagnosis absolutely essential. The new KTS series in conjunction with the ESI[tronic]-CD-C provide you with the ideal combination.

## KTS 520, KTS 550, KTS 650 – Diagnosis professionals: powered by ESI[tronic]

Bosch's new KTS diagnosis equipment together with the ESI[tronic] software presents the perfect combination of hardware and software for efficient error analysis on the vehicle. They enable fast and qualified repairs to be made and thus in turn they serve as guarantors for customer satisfaction.



**CAS "Computer Aided Service" from Bosch – the intelligent connection for fast and efficient troubleshooting**



CAS is an unique connection of control unit diagnosis data with the data in the Service Information Systems (SIS) within the ESI[tronic]-Software.

Advantages at a glance:

- saves time through unique identification of vehicle
- convenience – fault memory can be called up straight from troubleshooting instructions (SIS)
- efficient – direct and fast transfer of control unit diagnosis data for troubleshooting

# ESI[tronic] software – technical and commercial information for the efficient workshop



## ESI[tronic] CD-A: access to the full range of Bosch automotive equipment

Additional benefit through comparison of Bosch codes with order numbers for vehicle manufacturers

## ESI[tronic] CD-C: modular system for vehicle diagnosis and SIS troubleshooting instructions

Comprehensive information on error diagnosis and rectification on engine-management systems (gasoline and diesel) as well as car braking and convenience systems

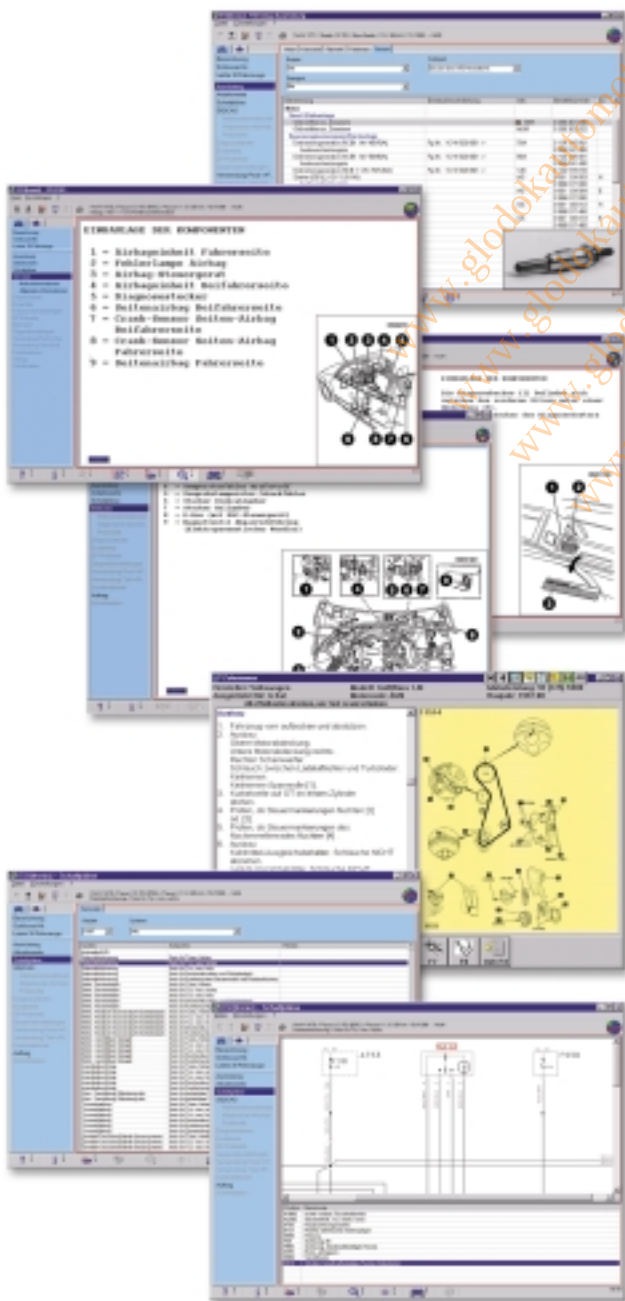
## ESI[tronic] CD-M: mechanical work and features to do with automobiles

Technical vehicle data for gasoline and diesel vehicles, e.g. wheel alignment data, maintenance schedules, data and information on toothed-belt replacement

## ESI[tronic] CD-P: diagrams for all important convenience electronic system areas

The most comprehensive range of general manufacturer selection of automotive convenience diagrams in a single graphical user interface.

The modular design of the ESI[tronic] enables you to combine the ESI[tronic]-CDs in a manner specifically geared towards your particular workshop – along with a comprehensive workshop system with commercial information. ESI[tronic] updates will be sent to you four times a year on a CD ROM.



# KTS 520 and KTS 550 – for multipurpose diagnosis using existing workshop hardware



## KTS 520 – the multipurpose solution geared to automotive workshops

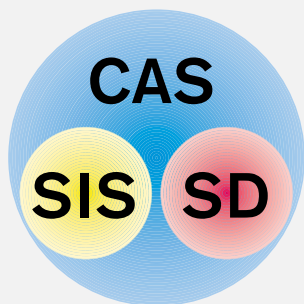
- Suitable for workshops that only occasionally require control unit diagnosis data
- Multipurpose diagnosis possible using a PC or a laptop
- Equipped with a multimeter for voltage, resistance and current measurements

### KTS 520 Technical Data

Diagnosis protocol	ISO 9141-2, K/L lines Flasher code SAE-J1850 DLC (GM,...) SAE-J1850 SPC (Ford) CAN ISO11898 ISO 15765-4 (OBD)
Multimeter	Accuracy 1% of measured value Voltage, minimum resolution: 0.1 mV, maximum measuring range: 200 V Current, minimum resolution: 0,1 mA, maximum measuring range: 600 A resistance, minimum resolution: 100 mOhm, maximum measuring range: 1 M Ohm
Connections for	OBD line or via universal adapter plus vehicle specific cables Multimeter socket yellow (+), blue (-) and black (ground), USB, serial, Power supply and status indicator

## KTS 520 and KTS 550 – common technical features

- Simple adaptation to laptop or PC through USB or serial standard interface
- Powered by ESI[tronic]: ideal in combination with the workshop software for fast and targeted vehicle diagnosis in the workshop
- Full range of ESI [tronic] test specification immediately available



- Both models are equipped for all current diagnosis protocols:
  - ISO systems of European vehicles
  - SAE systems for American and Japanese vehicles
  - CAN protocols for testing state-of-the-art CAN bus systems in new vehicles
- direct multiplexer connection via OBD line to the diagnosis socket
- software automatically controls multiplexer – thus dispensing with need for troublesome changing around of communication connections

## KTS 550 – the multipurpose solution for automotive workshops

- Workshop PC or laptop together with ESI[tronic] provides a test station for convenient vehicle diagnosis
- 2-channel multimeter for rapid tracing of faults through simultaneous measurements on two components
- 2-channel oscilloscope for complicated tests on state-of-the-art vehicle-system components – ideally suited for sensor testing in vehicle, e.g. simultaneous display of both lambda sensors in a single display image
- One device for both diagnosis and measuring technology

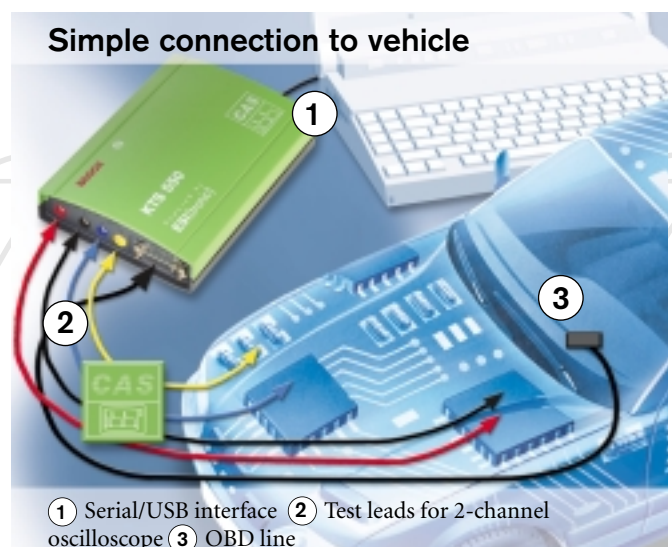
### KTS 550 Technical Data

Diagnosis protocol	ISO 9141-2,K/L lines Flasher code SAE-J1850 DLC (GM,...), SAE-J1850 SPC (Ford) CAN ISO11898 ISO 15765-4 (OBD)
2-channel multimeter	Accuracy 1% of measured value Voltage, minimum resolution: 0.1 mV, maximum measuring range: 200 V Current, minimum resolution: 0,1 mA, maximum measuring range: 600 A resistance, minimum resolution: 100 mOhm, maximum measuring range: 1 M Ohm
2-channel oscilloscope	1-channel operation: 1x 100 K scans/sec 2-channel operation: 2x 50 K scans/sec Channel 1 zero potential
Connections for	OBD line or via universal adapter plus vehicle specific cables Multimeter channel 1: socket yellow (+), blue (-), channel 2: red (+) and black (ground), USB, serial, power supply and status indicator



### Ideal augmentation to PC-aided testers

- Extension of diagnosis options, e.g. for the Emission System Analysis (ESA) or for rival devices with standard interface
- In such an instance the following PC requirements must be fulfilled:  
operating system Win95 to Win2000, minimum of 128 MB main memory, one free USB and one serial interface, minimum of 5 GB hard drive capacity for the ESI[tronic]- basic installation

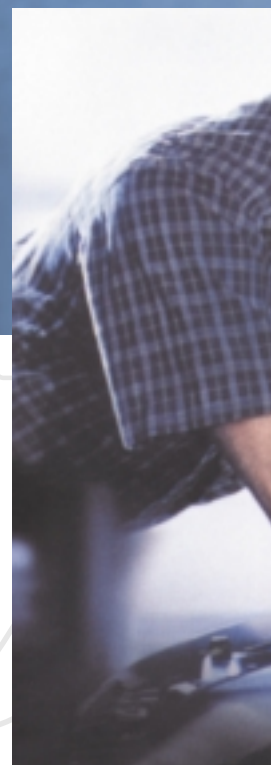


# KTS 650 – new multimedia-capable, mobile diagnosis tester for automotive workshops



## KTS 650 Technical Data

PC board	operating system Windows Me, 128 MB main memory, 20 GB hard drive
Display	12.1" TFT color display with touch screen, industry standard providing excellent brilliance and large reading angle; resolution SVGA 800x600
Equipment	multimedia, built-in speaker and headset connection, installed LAN network card (10/100 Mbit), PCMCIA standard connection enables LAN radio connection
Status indicator	via 4 LEDs: ON /OFF, mains operation, battery charge status, hard-drive access
Operation	Touch screen, 2 touch-sensitive keyboard; ON/OFF button, special menu key (backlighting control, virtual keyboard, ..)
Lithium ionic battery	Service life depending upon charge status and application 1 to 2 hrs.
Housing	stable plastic housing, integrated impact protection
Operating temperature	0 to 40°C
Weight	approx. 4 kg
Diagnosis protocol	as for KTS 550
2-channel multimeter	as for KTS 550
2-channel oscilloscope	as for KTS 550
Connections for	<p>OBD line or via universal adapter plus vehicle specific cables,                      Multimeter channel 1: socket yellow (+), blue (-), channel 2: red (+) and black (ground), 2 x USB, LAN-port.                      Jacks for AC adapter and contacts for stationary charger, PS/2 for pointing device or keyboard, VGA for external monitor, PCMCIA slots type 2 (2 pcs) or type 3 (1 pc), Micro-In, Line-out, headset</p>



## **KTS 650 – greater mobility in the workshop and on the vehicle**

- Together with ESI[tronic] the KTS 650 the professional diagnosis system for automobiles in the workshop and during test drives
- All KTS 550 features are integrated
- Screen with ideal resolution for bright display, even where light conditions are poor

## **High practical functionality for efficient diagnosis**

- The KTS 650 masters all current diagnosis protocols:
  - ISO systems of European vehicles
  - SAE systems for American and Japanese vehicles
  - CAN protocols for testing state-of-the-art CAN bus systems in new vehicles
- multiplexer controlled automatically by software, thus dispensing with need for troublesome changing around of communication connections
- system automatically detects the control unit, reads out actual values, fault memory and control-unit specific data

## **Full range of equipment for complicated measurements**

- The KTS 650 comes with a convenient 2-channel oscilloscope
- Advantage: the mechanic can, e.g. view and assess both lambda sensors in a single image
- The tester comes with a 2-channel multimeter for performing voltage, resistance and current measurements

- Robust screen with large TFT color display for excellent readability, outstanding brightness and large angle of view, and a touch screen
- Ideally selected screen with SVGA resolution for workshop requirements: error codes, actual and target values, test and repair steps can all be easily read even in poor lighting
- Switch on and off as well as calling up a virtual keyboard by means of touch-sensitive keyboard

## **Network and multimedia capable**

- The KTS 650 can be integrated into computer networks; it is designed for the ASA workshop network (AWN) and for LAN networks and can be connected to WLAN cards
- Ideally prepared for future developments the KTS 650 also comes with a speaker and a headset connection
- Current connection options also available

## **Workshop-compatible equipment for everyday usage**

- Effective impact and dripping water protection
- Excellent mobility on account of practical handle and power supply capability using vehicle battery or a rechargeable battery during a test drive



## Delivery Specification

Designation	KTS		
	520 1)	550 1)	650 1)
Power supply	✓	✓	✓
OBD diagnosis line	✓	✓	✓
OBD adapter box	✓	✓	✓
Universal adapter line	✓	✓	✓
Test lead, yellow	✓	✓	✓
Test lead, blue	✓	✓	✓
Test lead, black	✓	✓	✓
Test lead, red	...	✓	✓
USB line	✓	✓	...
Serial line	✓	✓	...
Test probes	1x	2x	2x
Terminal, black	✓	✓	✓
Touch pen	...	...	✓
Case	...	...	✓
ESI[tronic] CD-A and CD-C, without release	enclosed	enclosed	pre-installed

## Note:

- 1) Device fully operation with ESI[tronic] release only
- \*) only in combination with multipurpose adapter cable
- \*\*\*) only in combination with in PSA adapter cable (+/- clip) or adapter cable voltage supply and the Rover adapter cable
- \*\*\*) USB connecting cable must also be ordered



## Special Equipment

Designation	Order number KTS	KTS		
		520	550	650
*) Adapter cable Opel	1 684 463 464	✓	✓	✓
*) Adapter cable BMW	1 684 463 465	✓	✓	✓
*) Adapter cable VW/Audi	1 684 463 467	✓	✓	✓
*) Adapter cable Nissan	1 684 463 466	✓	✓	✓
*) Adapter cable Mercedes Benz (order 3 off)	1 684 447 032	✓	✓	✓
*) Adapter cable PSA	1 684 460 181	✓	✓	✓
*) Adapter cable PSA (+/- Clip)	1 684 460 182	✓	✓	✓
*) Adapter cable Hyundai/Mitsubishi	1 684 461 144	✓	✓	✓
*) Adapter cable Fiat Group	1 684 463 394	✓	✓	✓
*) Adapter cable power supply connection to cigarette lighter	1 684 460 202	✓	✓	✓
*) Adapter cable PSA (10-fährig) for engine management systems	1 684 463 399	✓	✓	✓
*) Adapter cable PSA 3-pin e.g. ABS. (precondition is 1 684 463 399)	1 684 463 400	✓	✓	✓
*) Adapter cable Opel Multec	1 684 463 410	✓	✓	✓
*) Adapter cable Rover	1 684 463 439	✓	✓	✓
*) Adapter cable Ford	1 684 463 440	✓	✓	✓
***) Power supply KTS at Rover	1 684 460 231	✓	✓	✓
*) Adapter cable Renault	in preparation	✓	✓	✓
Extension cable	1 684 465 489	✓	✓	✓
PC connecting cable, serial 3.0 m	1 684 465 371	✓	✓	...
Ground cable, screened for oscilloscope	1 684 465 490	...	✓	✓
Monitor/VGA connecting cable	1 684 465 385	...	...	✓
Measuring shunt 0 to 600 mA	1 684 503 103	✓	✓	✓
AC/DC current clamps 100/600A with banana plugs	1 687 224 864	✓	✓	✓
Test cable set	1 687 011 208 !!!	✓	✓	✓
KTS cable set consisting of: extension cable, multipurpose connector set and adapter cables for BMW, Fiat, Ford, MB, Opel, Opel Multec and VW.	in preparation	✓	✓	✓
***) Printer	0 684 412 217	...	...	✓
USB connecting cable 1.0m	1 684 465 491	...	...	✓
DVD drive	1 687 022 872	...	...	✓
Bosch PC	1 687 022 844	✓	✓	...
Tracer pin set (3 off)	in preparation	...	...	✓
Radio LAN PCMCIA	commercial card	...	...	✓
Loading shell	in preparation	...	...	✓
Trolley	in preparation	✓	✓	✓
KTS 650 convenience, consisting of KTS 650 and DVD drive	in preparation	...	...	✓

Bosch Test Equipment is available from:

Robert Bosch GmbH  
Automotive Aftermarket

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