

YOU CAN ALWAYS ASK A GOOD FRIEND ANYTHING.



TAKE A LOOK IN OUR TECHNICAL KNOWLEDGE BASE TO FIND CRYSTAL-CLEAR ANSWERS. FREE OF CHARGE AND EASILY ACCESSIBLE:

www.hella.com/techworld





Contents

VEHICLE DIAGNOSTICS	4
mega macs diagnostic devices mega macs X	5
Optional equipment for the mega macs X	6
mega macs ONE mega macs PC	10 11
Low-pressure measurements LPD-Kit	12 12
Equipment for vehicle diagnostics	13
MOTORCYCLE DIAGNOSTICS	14
mega macs diagnostic devices	15
mega macs X Bike mega macs PC Bike	15 16
Motorcycle adapter plugs and sets	17
Accessories for motorcycle diagnostics	18
SERVICE SOLUTIONS	20
Digital Services	21
HGS DATA	21
Remote Services	22
macsRemote Services	22

ADAS CALIBRATION AND ADJUSTMENT	
Calibration of front camera and sensors CSC-Tool Digital (2023) CSC-Tool SE	25 25 26
Mobile calibration of front camera and sensors CSC-Tool Mobile	27
Calibration of rearview and all-round vision camera	28
Calibration of radar sensors	31
Calibration of laser sensors	32
Wheel alignment measurement	33
Reference panels for camera calibration	34
Optional accessories for the CSC-Tool	35
HEADLIGHT AIMING	38
Headlight aiming devices	39
Rail systems	41



Flexible solutions for any workshop

Vehicle diagnostics from Hella Gutmann

Welcome to the mega macs family Reliable communication with all relevant vehicle systems, interpretation of all data and trouble codes in a flash - that's what matters today.

Benefit from the best that state-of-the-art diagnostics technology can offer your business.

mega macs diagnostic devices

mega macs X



Item no. 8PD 015 265-841

You can find the scope of performances of the different license packages on page 9

FREEDOM OF CHOICE AT ALL LEVELS

Just like the vehicles themselves, communication with them is also changing. Therefore, Hella Gutmann has been entirely re-thinking the world of data and diagnostics and has developed the mega macs X: The all-in-one car translator. Just like the vehicle user, workshops should also be able to decide individually which functions and technical data they require for multibrand diagnosis and which hardware they would like you use. Always bearing in mind that what is common practice today might be obsolete tomorrow. That's no problem with mega macs X – it's just a question of configuration.

ALL BENEFITS AT A GLANCE

- Investment security and flexibility thanks to one hardware for all needs
- Display and operating unit (tablet, PC, etc.) is installed in the mega macs X independently from the hardware and diagnostic software
- Supports DoiP and CAN FD
- · Inductive charging tray
- Integrated LED lighting at the OBD plug
- Supports 12 V and 24 V
- Can be expanded with measuring technology/ high-voltage technology (see following page)

STANDARD DELIVERY CONTENTS

- mega macs X
- · Charging tray
- · Power adapter
- Power cord
- USB cable
- · Quick start guide

MEGA MACS X	
Processor	ARM dual processor 1.2 GHzRAM 2 GB DDR3EMMC 32 GB
Interfaces	USB-CDC-InEthernet
Supply voltage	12 V – 24 VDC
Temperature of work area	0 to 45 °C
Storage temperature	-10 to +50 °C
Weight	1420 g
Dimensions	210 × 193 × 80 mm (H × W × D)
Requirements on an external displaying device	 Screen diagonal 25.4cm (10") Screen resolution at least 1024 × 768 Pixel Wi-Fi corresponds to IEEE 802.11 n Google Chrome browser at least

CHARGING TRAY FOR MEGA MACS X	
Non-contact charging procedure	Inductive energy transfer according to Hella Gutmann standard (no QI charging procedure)
Supply voltage	15 VDC
Temperature of work area	0 to 45 °C
Storage temperature	-10 to +50 °C
Weight	590 g
Dimensions	164 × 164 × 37 mm (H × W × D)

version 81

SOFTWARE MEGA MACS X*	
SDI-Module X¹ (software module for license X¹) Item no. 8PY 015 267-591	
SDI-Module X ² (software module for license X ²) Item no. 8PY 015 267-601	
SDI-Module X³ (software module for license X³) Item no. 8PY 015 267-611	
SDI-Module X ⁴ (software module for license X ⁴) Item no. 8PY 015 267-621	
SDI-Module X ⁵ (software module for license X ⁵) Item no. 8PY 015 267-631	
SDI-Module X-Bike (software module for license X-Bike) Item no. 8PY 015 267-851	
SDI-Module X-Body+Glass (software module for license Item no. 8PY 015 745-271	X-Body+Glass)

Item no. 8PY 015 267-631	
SDI-Module X-Bike (software module for license X-Bike) Item no. 8PY 015 267-851	
SDI-Module X-Body+Glass (software module for license X-Body+Glas Item no. 8PY 015 745-271	s)
LICENSES FOR THE MEGA MACS X **	
License X¹ (for the mega macs X with SDI-Module X¹)*** Item no. 8PY 015 267-791	
License X² (for the mega macs X with SDI-Module X²) Item no. 8PY 015 267-801	
License X³ for the mega macs X with SDI-Module X³) Item no. 8PY 015 267-811	
License X ⁴ (for the mega macs X with SDI-Module X ⁴) Item no. 8PY 015 267-821	
License X ⁵ (for the mega macs X with SDI-Module X ⁵) Item no. 8PY 015 267-831	
License X-Bike (for the mega macs X with SDI-Module X-Bike) Item no. 8PY 015 267-861	
License X-Bike Add-on (Add-on license for vehicle customers) Item no. 8PY 015 267-841	

License X Body+Glass (for the mega macs X with SDI-Module X Body+Glass)

Item no. 8PY 015 745-281

- One-time costs
- ** Monthly costs *** For Free

Optional equipment for the mega macs X

Measurement module MT-HV





AN EXTRA FEATURE – THE BLUETOOTH® MODULE FOR ALL MEASUREMENTS – HIGH-VOLTAGE AND LOW-VOLTAGE

The MT-HV measurement module, which has been extra customized for the mega macs X, has been specially designed for the work on electric and hybrid vehicles. It consists of a firmly integrated high-voltage measuring technology and a module slot, in which you can insert the already existing low-voltage measurement modules MT-56 and MT-77. Thanks to that the MT-HV turns into a wireless measurement module for high-voltage and low-voltage measurements – this is a profitable solution especially if you already have an additional module of a mega macs 56/77. Optionally you can purchase the MT-HV and the MT-77 in one package.

SURVEY OF APPLICATIONS*

- Multimeter
- 2-channel oscilloscope
- Guided MeasurementsPressure measurements
- High-voltage measurements
- Guided high-voltage measurements
- High-voltage measurements up to 1000 $\rm V$
- Insulation resistance measurements with adjustable test voltage
- Potential equalization measurements of HV components
- Resistance measurements on HV service disconnect plug







	MT-HV BASIC*	MT-HV PLUS*	MT-HV PRO*
Item no.	8PZ 015 266-101	8PZ 015 265-721	8PZ 015 265-731
Delivery contents	Measurement module MT-HV	Measurement module MT-HV High-voltage test leads black/red	Measurement module MT-HV High-voltage test leads black/red Black/blue test lead & black/red test lead MT-77 Test kit with test probes and alligator clips

^{*} The service scope depends on the selected hardware, software and license of the MT-HV Software modules and licenses may vary from country to country

MT-USB measurement module



PROFESSIONAL MEASUREMENTS WITH THE EXTERNAL USB MODULE

When the mega macs X is connected via USB cable to the optional measurement module MT-USB, the menu item 'Measurements' appears automatically on the SDI user interface of the display unit. Provided that you have License X^3 or higher, your diagnostic device will turn out a practical two-channel multimeter for voltage measurements up to 60 volts as well as current and resistance measurements. The settings are performed on the display unit.

Item no. 8PZ 015 266-001

PRODUCT CHARACTERISTICS

- Economical product for beginners
- Alternative option for when user does not yet have a measurement module

DELIVERY CONTENTS

- 1 × MT-USB
- 1 × Black/blue test lead
- 1 × Black/red test lead
- 1 × Test kit with test probes and alligator clips

MT-HV MEASURING TEC	HNOLOGY
Supply voltage	12 to 32 V
Power input	10 W type
Current draw	1 A
Ambient temperature	Recommended: 10 to 35 °C Working range: 0 to 45 °C
Suitable for humid environment?	No
Continuous operation	Yes
Weight	1700 g
Dimensions	300 × 360 × 80 mm (L × W × D)
IP degree of protection	IP20
Overload protection	Max. 1 kV
Measuring channels	1 (galvanically isolated)
Measured variables HV modules	High-voltage measurement up to 1 kV Potential equalization measurement Insulation resistance measurement Resistance measurement (service disconnect plug)
Interfaces	USB-C Bluetooth®

MEASURING TECHNOLO	
Supply voltage	5 V (through USB)
Power input	Max. 2.5 W
Current draw	Max. 500 mA, average 300 mA
Ambient temperature	Recommended: 10 to 35 °C Working range: 0 to 40 °C
Suitable for humid environment?	No
Continuous operation	Yes
Weight	Approx. 490 g
Dimensions	38 × 102 × 130 mm (H × W × D)
IP degree of protection	IP20
Bandwidth	Max. 100 kHz
Sampling rate	1 MSa/s
Amplitude resolution	12 bit
Measuring channels	2
Measured variables	Voltage max. 60 V Current (external amps clamp necessary Resistance
Interfaces	USB-C

HIGH-VOLTAGE TEST LEAD)
Red	 Length: 1500 mm Handpiece with function button With 4 mm test connection (safety connector) for manufacturer-specific test adapters Incl. removable test prod
Black	Length: 1500 mm Handpiece With 4 mm test connection (safety connector) for manufacturer-specific test adapters Incl. removable test prod

MT 77	
Supply voltage	5 VDC (through module interface)
Power input	Max. 10 W
Current draw	Max. 2 A
Ambient temperature	Recommended: 10 to 35 °C Working range: 0 to 45 °C
Suitable for humid environment?	No
Continuous operation	Yes
Weight	Approx. 270 g
Dimensions	43 × 110 × 136 mm (H × W × D)
IP degree of protection	IP20
Bandwidth	Max. 10 MHz
Sampling rate	64 MSa/s
Memory depth	64 kB
Amplitude resolution	14 bit
Measuring channels	2 (galvanically isolated)
Measured variables	Voltage max. 200 V Current (external clamp meter*) Resistance Pressure (external LPD-Kit*)

^{*} Additional accessories required

Hella Gutmann-Tablet



Item no. 8PZ 015 265-951

EASY IMMEDIATE START WITH THE HELLA GUTMANN-TABLET

Starting diagnostics is especially easy with the optional complete package, consisting of a mega macs X and the Hella Gutmann-Tablet. The modern Android tablet comes with a docking station, which includes various interfaces (HDMI, Ethernet etc.). It has been selected carefully while paying special attention to speed, reliability and sturdiness, and it is geared toward the diagnostic processes with the mega macs X. Even if you have never handled a tablet before, with this package you are on the safe side. The integrated Setup Wizard establishes the connection between the tablet and the mega macs X automatically and you can start working immediately.

HELLA GUTMANN-TABLE	T
Software	Android 9.0
Operating temperature	-10 to +50 °C
Processor	Rockchip RK3399
RAM/data storage capacity	• 4GB RAM • 64GB eMMC
Display	X10.1" WUXGA 1200 × 1920 IPS, 470 nits
Audio	• 1 × Digital microphone • 2 × Integrated speakers
Input	10-point multi-touch Glove With capacitive stylus Glove mode and wet-touch mode
Interfaces	Docking station USB 3.0 USB 2.0 Micro USB 2.0
Remote interfaces	• Wi-Fi IEEE 802.11 a/b/g/n/ac • Bluetooth® 4.1 • Bluetooth® 4.2
Battery charging voltage	3.7 V
Battery capacity	10800 Ah / 40 Wh
Battery run time	Up to 8.5 hours
Dimensions	283.4 × 192 × 21.9 mm
Weight	1280 g

DOCKING STATION HELLA GUTMANN-TABLET		
Supply voltage	AC Adapter 65 W (19 V / 3.42 A)	
Temperature of work area	0 to 45 °C	
Storage temperature	-10 to +60 °C	
Weight	2500 g	
Interfaces e.g.	 1 × HDMI 4 × USB 2.0 (type A) 1 × VGA port 1 × Display port 1 × LAN port 1 × Audio MIC in 1 × Audio line OUT 1 × DC-IN 	

Overview of software modules and license scopes for the mega macs \boldsymbol{X}

		SOFTWARE MODULES		
SDI module X ¹	SDI module X ²	SDI module X ³	SDI module X ⁴	SDI module X ⁵
		LICENCES*		
Licence X ¹	Licence X ²	Licence X³	Licence X ⁴	Licence X⁵
	•	FUNCTIONS	•	
Read/delete error code (without overall query) DoiP technology	Read/delete error code DoiP technology Service reset Basic settings Parameters Coding Actuator test Test functions Error code-based online proposed solutions Cyber security management Automated mileage query HV(High Voltage)-Battery Diagnostics Basic	Read/delete error code DoiP technology Service reset Basic settings Parameters Coding Actuator test Test functions Error code-based online proposed solutions Cyber security management Automated mileage query HV(High Voltage)-Battery Diagnostics Basic	Read/delete error code DoiP technology Service reset Basic settings Parameters Coding Actuator test Test functions Error code-based online proposed solutions Cyber security management Automated mileage query HV(High Voltage)-Battery Diagnostics Basic	Read/delete error code DoiP technology Service reset Basic settings Parameters Coding Actuator test Test functions Error code-based online proposed solutions Cyber security management Automated mileage query HV(High Voltage)-Battery Diagnostics Basic
	• 	MEASUREMENT TECHNOLOGY**	: 	
		Multimeter	Multimeter 2-channel oscilloscope Guided measurements Pressure measurements	Multimeter 2-channel oscilloscope Guided measurements Pressure measurements Guided high-voltage measurements
		Required measurement technology (minimum): MT-HV with MT-56 or MT-USB	Required measurement technology (minimum): MT-HV with MT-77	Required measurement technology (minimum): MT-HV with MT-77 and high-voltage measuring cables
		DATA		
	HGS data (2 extra accesses)	HGS data (2 extra accesses Recall campaigns Component test values Component location Timing belt data Circuit diagrams Passenger compartment air filter Fuses/relays Labour values Inspection data	HGS Data (2 extra accesses Recall campaigns Component test values Component location Timing belt data Circuit diagrams Passenger compartment air filter Fuses/relays Labour values Inspection data PIN data Service information Manufacturer campaigns Battery management Repair instructions Diesel information Interactive circuit diagrams Symptom-based solutions	HGS Data (2 extra accesses) Recall campaigns Component test values Component location Timing belt data Circuit diagrams Passenger compartment air filter Fuses/relays Labour values Inspection data PIN data Service information Manufacturer campaigns Battery management Repair instructions Diesel information Interactive circuit diagrams Symptom-based solutions ADAS & LIGHTING E-Mobility
		SERVICES	:	
			Call Flat (Technical Hotline)	Call Flat (Technical Hotline)
		NEW FUNCTIONS AND DATA TYPE	-	
	Automatic Diagnostics (AD) HV(High Voltage)-Battery Diagnostics PRO (soon available) OBFCM (OnBoard Fuel Consumption Monitoring)	Automatic Diagnostics (AD) HV (High Voltage)-Battery Diagnostics PRO (soon available) OBFCM (OnBoard Fuel Consumption Monitoring)	Automatic Diagnostics (AD) HV (High Voltage)-Battery Diagnostics PRO (soon available) OBFCM (OnBoard Fuel Consumption Monitoring)	Automatic Diagnostics (AD) HV (High Voltage)-Battery Diagnostics PRO (soon available) OBFCM (OnBoard Fuel Consumption Monitoring)

*corresponding software module required
**appropriate accessories required

mega macs ONE



Item no. 8PD 015 265-101

Basic Software mega macs ONE

Item no. 8PY 010 609-341

Basic Software mega macs ONE Glass Item no. 8PY 015 267-301

The software (app) is downloaded via the **Google** Play Store. The suitable tablet for the mega macs ONE is listed in the diagnostic accessories on page 13

THE ANDROID SOLUTION FOR DIAGNOSTICS ALLROUNDERS

The mega macs ONE is a newly developed Android-based diagnostic platform incorporating decades of experience with vehicle diagnostics from Hella Gutmann. The interface is intuitive, self-explanatory, clearly laid out, and user-friendly, allowing the user to quickly get results on the condition of the relevant vehicle.

ADVANTAGES AT A GLANCE

- No connection to HGS drivers necessary
- Diagnostic results via mail as PDF
- Rapid and precise vehicle identification
- Additionally integrated country-specific vehicle search
- Indication of OBD interface inside the vehicle
- Compatible with Android 6.0 and higher
- Communication (Internet, Bluetooth®) via tablet
- Easy download via Google Play Store
- Easy update handling
 Works on tablets with screen size of already 7
- Flexible views (landscape and portrait format)
- Graphic representation of parameters with explanations (16 parameters)

DELIVERY CONTENTS

- mega macs ONE VCI
- Packaging
- Lanyard
- Quick start guide

TECHNICAL DATA	
Frequency band	2.4 GHz
Data transfer rate	Max. 3 Mbit/s
Operating range inside	3 to 10 m
Operating range outside	Max. 50 m
Dimensions	110 × 50 × 26 mm (L × W × H)
Interfaces	Micro-USB Bluetooth®

SYSTEM REQUIREMENTS	
Minimum	Android 6.0
Hardware	 1.5 GB RAM WXGA (1280 × 800) 1 GB storage capacity Bluetooth® Class 1 Bluetooth® 2.1 DER
Tablet screen diagonal	• 7" (minimum) • 8" or larger (recommended)

mega macs PC



TRANSFORM YOUR WORKSHOP PC INTO A FULLY-FLEDGED DIAGNOSTIC UNIT

The new and completely revised mega macs PC diagnostic software offers repair shops the widest possible scope of services without costing them an arm and a leg. And what's more – there is no need to invest in an additional device. Just vamp up your workshop computer*!

The scope of services of the mega macs PC includes functions such as reading and deleting trouble codes, graphic representation of parameters, actuator tests, basic settings, codings, service resets and automatic storage of vehicle data. In connection with the Repair Plus Light license, you can expand the scope of services offered by mega macs PC and access an abundance of technical data and background information. You can access this information directly on your laptop, tablet or workshop PC: Component help, inspection data, timing belt data, technical data, wiring diagrams, fuses, component test values, flat rate units, emission data, recall campaigns and much more.

Hardware package

Item no. 8PD 010 601-931

Basic software

Item no. 8PY 010 600-911

PRODUCT CHARACTERISTICS

- Reading and deleting trouble codes in all ECUs
- Graphic representation of parameters with explanations (8 parameters)
- · Actuator test
- Service reset of all systems
- Codings and basic settings of all systems
- Wireless communication

- Quick and clear vehicle identification through VIN
- Full scope of technical data and diagnostics in one solution*
- Integrated wiring diagrams, fuses/relays, flat rate units, timing belt data, etc.**
- Regular updates**
- And much more

SYSTEM REQUIREMENTS	
Minimum	Microsoft Windows 7
Hardware	512 MB RAM2 GB hard disk spaceUSB 2.0 interface

PC VCI	
Dimensions	$110 \times 50 \times 26 \mathrm{mm} (\mathrm{L} \times \mathrm{W} \times \mathrm{H})$
Interfaces	Micro-USB Bluetooth®
Operating range inside	3 to 10 m
Operating range outside	Up to max. 50 m
Data transfer rate	Max. 3 Mbit/s
Frequency band	2.4 GHz
Temperature of work area	0 to 45 °C Recommended: 10 to 35 °C

SOFTWARE
Graphical user interface
Intuitive menu navigation
Extensive data on more than 40 vehicle brands
Print function

^{*} Only on Windows-based systems/devices (except RT)

^{**} Available with Repair Plus Light license

Low-pressure measurements

LPD-Kit



THE ALL-IN-ONE SOLUTION FOR LOW-PRESSURE MEASUREMENTS

The fault is often in the detail. With the LPD-Kit (low pressure diagnostic kit) from Hella Gutmann, you will be able to carry out all relevant pressure tests in a single quick and easy step. You will find even the smallest discrepancies in a jiffy. The low pressure test set is a low-cost device for all important pressure measurements. And naturally in best Hella Gutmann quality.

ONE SET - NUMEROUS POSSIBILITIES

- Cylinder pressure measurement
- · Compression test
- TDC search
- Intake manifold pressure and boost pressure measurement
- Fuel pressure measurement
- Distributor-type injection pump measurement
- Return flow pressure measurement
- System pressure measurement
- Oil pressure measurement
- And much more

LPD-Kit

Item no. 301498-002

LPD-KIT

 Low Pressure Diagnostic Kit – low-pressure test set incl. pressure sensors for up to 60 bar (only in connection with measurement module MT-77)

LPD-Kit adapter set 1

Item no. 301463

LPD-KIT ADAPTER SET 1

• Adapters for Ford, Citroën, Peugeot, Jaguar (ZKD 26+40+49)

LPD-Kit adapter set 2

Item no. 301467

LPD-KIT ADAPTER SET 2

• Adapters for Vauxhall, Alfa Romeo, Fiat, Isuzu, Lancia, Mazda (ZKD 41 + 42 + 43)

LPD-Kit adapter set 3

Item no. 301499

LPD-KIT ADAPTER SET 3

- KPA 09, spark plug adapter (flexible), M $12 \times 1,25$ with VG5 internal thread
- KPA 03, spark plug adapter M 10×1 (used only with KPA 09)
- DPAK 96, fuel pressure test adapter, Schrader thread 7/16"-20 UNF
- DPAK 97, fuel pressure test adapter, Schrader thread VG8
- DPAK 4, fuel pressure test adapter, tandem pump (pump-nozzle)

The LPD-Kit version for all relevant pressure tests on motorcycles and gasoline engines of vehicles is listed on page 18

Equipment for vehicle diagnostics

MEASUREMENT MODULES & DOCKING STATIONS



Measurement module MT 77

- 2-channel oscilloscope
- Oszi 1 blue cable
- Oszi 2 red cable
- Red test lead
- Black test lead
- Test kit with test probes and alligator clips

Item no. 8PZ 010 614-291



Measurement module MT 56

(and the mega macs 56 Bike) incl. cables



Item no. S40210



Clamp meter blue,

40 – 700 A

Item no. 342439



Clamp meter green,

40 A

Item no. 8PZ 010 614-141



Docking station for the mega macs 77 or mega macs 77 VARIO Item no. 8PZ 010 606-391



Docking station for the mega macs 56

Item no. 8PZ 010 606-231



Repair kit

for the VCI

Item no. S42999

PASSENGER CAR ADAPTER PLUGS



VAG (Audi/VW/SEAT/Skoda)

VOL012+1

Item no. 8PZ 010 603-001



BMW01a 20

Item no. 8PZ 010 603-011



Iveco IVE01 38

Item no. 8PZ 010 603-771



Mercedes-Benz

MER02 38

Item no. 8PZ 010 603-081



Mercedes-Benz/VW (Sprinter/LT)

MER04 14

Item no. 8PZ 010 614-121



Nissan

NIS01 14

Item no. 8PZ 010 603-101



Opel/Vauxhall OPE01a 10

Item no. 8PZ 010 603-111



OBD cable extension*

1500 mm

Item no. 8PZ 010 606-721

CARRY CASE



Carry case for the mega macs X

Item no. 8PZ 015 266-031



Carry case for the MT-HV

Item no. 8PZ 015 266-151



Carry case for the mega macs 77,

mega macs 77 VARIO

or mega macs 56

Item no. 8PZ 010 606-561

DISPLAY UNIT



Samsung Galaxy TAB Active 3

Android Tablet, can be used with the mega macs ONE, macsDIA, macsRemote Services and mega macs X Item no. 8PZ 010 616-421

IT ACCESSORIES

USB/Wireless adapter

Version 3

Item no. 8PZ 010 614-091



mega macs diagnostic devices

mega macs X Bike



The mega macs X offers utmost flexibility and options with regard to hardware and software. The choice is yours. Whether you wish to combine your existing tablet or PC with the mega macs X or whether you prefer to opt for the robust Hella Gutmann-Tablet, the mega macs X works well with all of them. Should your requirements change, you just need to change your mega macs X setup.

Thanks to the software modules X Bike, you can retrieve exactly the scope of services you need and that ideally suits your workshop situation.

For motorbike diagnosis, two options will be available: The X-Bike license is aimed at workshops specializing in motorbikes only. Workshops which want to extend their service portfolio can purchase the Bike-X Add-on license in addition to their existing license.

Item no. 8PD 015 265-841

SDI module X-Bike software module for Bike license

Item no. 8PY 015 267-851

License X-Bike for mega macs X with SDI module Bike

Item no. 8PY 015 267-861

License X-Bike Add-on for mega macs X Add-on license for vehicle owners

Item no. 8PY 015 267-841

The suitable measuring technology and optional equipment is listed on page 6

A big variety of **motorcycle adapter plugs and sets** for the mega macs X Bike are listed on **page 18**

ADVANTAGES AT A GLANCE

- Display and operating unit (tablet, PC, etc.) is installed in the mega macs X independently from the hardware and diagnostic software
- Supports DoiP and CAN FD
- Integrated LED lighting at the OBD plugr
- · Inductive charging tray

RANGE OF FUNCTIONS

- Reading/deleting fault codes
- DoiP technology
- Service reset
- Basic settings
- Parameter
- Codings
- Actuator testTest functions
- And much more

DELIVERY CONTENTS

- mega macs X
- Charging trayPower adapter
- Power cord
- USB cable
- · Quick start guide

MEASURING TECHNOLOGY

• Multimeter*

GENERAL DATA	
Processor	ARM dual processor 1.2 GHzRAM 2 GB DDR3EMMC 32 GB
Interfaces	• SB-C • DC-In • Ethernet
Supply voltage	12 V – 24 VDC
Temperature of work area	0 to 45 °C
Storage temperature	-10 to +50 °C
Weight	1420 g
Dimensions	210 × 193 × 80 mm (H × W × D)
Requirements for the display unit	 Screen diagonal 25.4 cm (10") Screen resolution at least 1024 x 768 Pixel Wi-Fi according to IEEE 802.11 n Google Chrome browser at least version 81

CHARGING CRADLE FOR MEGA MACS X	
Contactless charging	Inductive energy transfer according to Hella Gutmann standard (no QI charging procedure)
Supply voltage	15 VDC
Temperature of work area	0 to 45 °C
Storage temperature	-10 to +50 °C
Weight	590 g
Dimensions	164 × 164 × 37 mm (H × W × D)

^{*} Additional hardware required

mega macs PC Bike



Hardware

Item no. 8PD 010 601-941

Basic software

Item no. 8PD 010 600-961

TURN YOUR WORKSHOP PC INTO A FULLY-FLEDGED DIAGNOSTIC DEVICE FOR MOTORCYCLES

Whether you need to troubleshoot electronic components or perform basic settings; with mega macs PC Bike you have all the important diagnostic and repair functions for a wide range of bike brands and models. And our engineers are constantly adding to the list of manufacturers and models. You can download the relevant data updates conveniently over the Internet. There is no need for an additional device – modern motorbike diagnostics couldn't be easier. Simply upgrade your laptop*, tablet or workshop PC*.

PRODUCT CHARACTERISTICS

- Reading and deleting trouble codes in all ECUs
- Trouble code explanation with detailed information
- Graphic representation of parameters with explanations (up to 8 parameters simultaneously)
- Indicates location of diagnostic connector and name of required adapter
- Actuator test
- Codings

- Basic setting
- Service reset
- Printing of all test results
- Wireless communication
- Regular updates**
- And much more

SYSTEMVORAUSSETZUNGEN		
Minimum	Microsoft Windows 7	
	• 512 MB RAM	
Hardware	 2 GB hard disk space 	
	 USB 2.0 interface 	

PC VCI	
Dimensions	110 × 50 × 26 mm (L × W × H)
Interfaces	Micro-USB Bluetooth®
Operating range inside	3 to 10 m
Operating range outside	Up to max. 50 m
Data transfer rate	Max. 3 Mbit/s
Frequency band	2.4 GHz
Temperature of work area	0 to 45 °C Recommended: 10 to 35 °C

SOFTWARE
Graphical user interface
Intuitive menu navigation
Print function

^{*} Only on Windows-based systems/devices (except RT)

^{**} Optiona

Motorcycle adapter plugs and sets



Aprilia: BAP01 · 3+6** Item no. 8PZ 010 613-171



CAN-AM: BRP01 · 6 Item no. 8ZP 010 604-171



Aprilia: BAP02 · 4 Item no. 8PZ 010 616-301



Derbi, Gilera, Moto Guzzi, MV Agusta, Piaggio, Vespa, Malaguti, KVN Motors, Laverda Moto Morini, Sherco, Voxan: FIA01 · 3** Item no. 8PZ 010 613-271



Benelli: BBE01 · 6



Ducati: BDU02 · 3+4** Item no. 8PZ 010 613-261



BMW: BBM04 · 10 Item no. 8PZ 010 613-201



Euronorm: BEN05 · 5 Aprilia, Moto Guzzi, Vespa, Piaggio, Ducati, Honda, Kawasaki, Yamaha, Suzuki, KTM, MV Augusta, Harley-Davidson, Fantic Item no. 8PZ 010 616-321



BMW: BBM02 · 3** Item no. 8PZ 010 613-241



Harley-Davidson/Buell: BJ < 2011 BHD01 · 4



Harley-Davidson: BJ > 2011 BHD02 · 6 Item no. 8PZ 010 613-211



Honda: BH001 · 4** Item no. 8PZ 010 613-231



Honda: BH003 · 3+3 · 2+1** Item no. 8PZ 010 613-251



Husqvarna: BHU01 · 6* Item no. 8ZP 010 604-191



Hyosung: BHY01 · 6 Item no. 342517



Hyosung: BHY02 · 4



Kawasaki: BKA01 · 4+8



Kawasaki: BKA02 · 4+6



Kawasaki: BKA03 · 4+6



KTM/Husaberg: BKT01 · 6*



Kymco: BKY01 · 3 Item no. 8PZ 010 613-111



Linhai: BLI01 · 6 Item no. 8ZP 010 604-151



Multi Italiano: BMI01 AJP, Benelli, Generic, Quadro, Stels, Keeway, Hisun Quad, Brixton, FB Mondial, KSR Motors, Wottan, MH Item no. 8PZ 010 613-421



MV Augusta: BMV01 · 4** Item no. 8PZ 010 613-291



Peugeot: BPE01 · 3 Item no. 8PZ 010 613-121



Piaggio: BVE01 Item no. 8PZ 010 616-311



Suzuki: BSU01 · 6** Item no. 8PZ 010 613-281



Suzuki: BSU02 · 4** Item no. 8PZ 010 613-221



SWM: BSWM01 · 2



SYM: BSY01 · 3 Item no. 8PZ 010 613-191



VCC adapter for additional 12 V voltage supply

This new adapter provides an additional 12 V voltage supply for vehicles with no ignition lock, such as motorsport models. It also makes it possible to use all old momacs 50 adapters with a current VCI where necessary. Item no. 8PZ 010 613-321





Yamaha: BYA02 · 3+4*



Yamaha: BYA03 Item no. 8PZ 010 613-311

Adapter set Bike Basic: Adapter set Diske Basic:
Kawasaki (BKA03), KTM/
Husaberg**, BMW/G+G Technik
(BBM04), Harley Davidson (BHD02),
Honda (BHD01)*, Ducati (BDU02)*,
Derbi, Gilera, MV Agusta, Piaggio,
Vespa (FIA01)*, Yamaha BYA03, Euronorm 5 (BEN05) Item no. 8PZ 010 613-331



^{**} The external voltage supply requires the red alligator clip (Item no. 300207) and the black alligator clip (Item no. 300580)

Accessories for motorcycle diagnostics

LPD-Kit Car + Bike



Item no. 8PZ 015 265-501

THE ALL-IN-ONE SOLUTION FOR RELEVANT LOW-PRESSURE MEASUREMENTS

Often it is the detail that causes the problem. With the Car+Bike LPD-Kit (low pressure diagnostic kit) from Hella Gutmann, you will be able to carry out all relevant pressure tests on your motorcycle in a single quick and easy work step. This allows you to find even the slightest deviations in a flash.

All measurements can be logged with the date and the kilometre/mileage reading and can be printed out. Plus, the smaller version of the standard LPD-Kit can also be used on petrol engines in passenger cars.

PRODUCT CHARACTERISTICS

- Compression test
- Pressure-drop test
- Fuel pressure test up to 16 bar Intake manifold pressure test

REQUIREMENTS

• Measurement module



Digital Services

HGS DATA



Repair Plus Light stand alone

The online portal for anyone without a Hella Gutmann diagnostic device – technical data, background knowledge & suggested solutions for all relevant vehicle data (two online accesses)

Item no. 8PY 010 600-151

HGS Data is included in a RepairPlus licence or in the scope of deliveryof mega macs X (starting from SDI X²)**.

DATA FLAT RATE FOR OVER 35,000 VEHICLE MODELS

HGS Data is your indispensable, interactive knowledge database for everyday use. It is one of the biggest in the world and pays off from Day One. It provides you with fast, clear access to vehicle data, technical information and, of course, many useful tips and tricks, compiled for you by our experts from hundreds of thousands of support enquiries and solutions offered by other workshops. This is how everyone in the great Hella Gutmann family helps one other.

ADVANTAGES AT A GLANCE

- Up-to-the-minute technical data
- Many practice-oriented tips and tricks
- Service schedules of all important brands

PRODUCT CHARACTERISTICS

- · Symptoms-based troubleshooting
- Parts dialogue with information on the selected part
- E-mail cloud for maintaining the requests
- All recall campaigns at a glance
- TecDoc checklist
- Overview of the last 10 processed vehicles*
- Technical data on more than 35 000 models
- Service schedules of all important brands
 Coloured wiring disasses in pin phase.
- Coloured wiring diagrams in pin-sharp resolution
- Fuse/relay box images
- Component test values with additional information
- Exhaust emission data
- And much more



Relay box images



Wiring diagrams



Engine compartment images



Component test values

^{*} The tool will save vehicles for which the licence plate number is entered

^{**} Country specific

Remote Services

macsRemote Services



WHEN YOU DON'T KNOW WHERE TO TURN

There are frequently situations, in which workshops do not have a suitable solution – either because of missing data or missing access authorizations or because the vehicle is not yet included in the regular diagnostic software and hence is not available yet.

With macsRemote services it is possible carry out procedures such as calibration and coding on customer vehicles via remote connection – this applies to nearly all makes and models. Hence the workshop saves valuable time and remains independent.

The only investment spending is the macsRemote hardware (VCI). The use of the services does not require legal obligation and works on a pay-per-use principle. It's as simple as that.

Item no. 8PZ 015 705-091

The suitable **tablet** for macsRemote services is listed among the diagnostic accessories on **page 13**

All **services** are invoiced by Hella Gutmann directly with the workshop

PRODUCT CHARACTERISTICS

- · Calibration of front camera systems*
- Calibration of radar and LiDAR systems*
- Calibration of rear cameras and 360° monitoring systems*
- Coding, reset and activation of replaced components, e.g. steering, transmission, headlights
- Coding of new equipment or functions, e.g. trailer hitch (OE and aftermarket) and cruise control
- Service reset (incl. secured vehicles, e.g. Security Gateway)
- Storage of service report in the multimedia system of BMW
- DEF warning reset
- Key remote control coding
- Reading and deletion of trouble codes on the latest vehicles
- And much more

DELIVERY CONTENTS

- macsRemote Services VCI
- Carry case

OPERATING PRINCIPLE

- macsRemote-VCI is connected to the vehicle's OBD interface
- Registration is done via browser on end device
- Vehicle and requested service is selected and ordered after having checked the costs
- During the service procedure the customer is permanently communicating with the Hella Gutmann technician
- Documentation and invoicing is done afterwards



^{*} Requirement: A CSC-Tool shall be at hand



Calibration of front camera and sensors

CSC-Tool Digital (2023)



Item no. 8PD 015 270-311

Setup and initial start-up CSC-Tool Digital Item no. 03-1180-222

All accessories from the CSC-Tool product range such as Radar Kit I EVO or Rear Cam Kit can of course be included in the CSC-Tool Digital, too

The CSC-Tool Digital can also be used for wheel alignment measurements. Precondition for that is the use of a wheel alignment module (see page 33)

CAMERA CALIBRATION AT ITS BEST

The CSC-Tool Digital (2023) is the space-saving alternative to the CSC-Tool SE: The large-format calibration targets for front cameras are provided digitally by Hella Gutmann and projected onto the screen of the CSC-Tool. This has another advantage: The panels are available much sooner enabling new vehicle models to be calibrated without delay.

The digital calibration targets are obtained via the CSC-Tool Digital App, which can be easily downloaded from the Apple app store. The digital calibration panels are transmitted to the projector via an Apple TV box, which is included in the kit contents and which is fixed to the upper edge of the screen. The required reference panels are controlled and selected via remote control.

The reference panels are purchased using the in-app checkout process. The user can choose between different purchase options.

ADVANTAGES AT A GLANCE

- Prompt calibration of new vehicle models as the digital panels are available much sooner
- Less storage space required
- Depiction with a projector produces significantly less reflection compared to screen technology
- Saving time thanks to the easy way of reference panel selection with the remote control (Honda, for example requires three different ways of positioning of the same reference panel for one calibration procedure)
- Depiction of all panels in original size of vehicle manufacturer
- The combination of the selected input and output devices (Apple TV & projector) provide direct access to further applications and large-format means of depiction such as training videos, technical videos, corporate communication or diagnostic data, e.g. HGS Data
- Option to adjust to different camera and radar systems
- Upgradeable at any time
- Documentation of adjustment/calibration on hard copy and in Car History
- · Excellent measuring accuracy
- Compatible with the diagnostic devices of the mega macs family
- App-supported alignment of the CSC-Tool to the vehicle
- Electronic distance measurement
- Electric height adjustment of reference panel
- Compatible with the comprehensive extensions of all-round calibration processes

BASIC DELIVERY CONTENTS

- Reference panel VAG (unlimited utilization)
- $1 \times Base frame incl. 2 \times lifting cylinders$
- 1 × Projection surface
- 2 × Adjustable foot
- 1 × Measuring rod and 1x cross member
- 1 × Control element, controls & wiring
- 2 × Wheel clamp 'Distance'
- 1 × Projector
- $1 \times CSC$ -Tool Digital Projector Mount EVO
- $1 \times Apple TV incl.$ power cord and remote control
- 1 × Apple TV mount
- 1 × HDMI cable
- 2 × Laser distance meter incl. mount
- 1 × Product packaging

PRECONDITION

- Wheel clamp SE (front camera calibration) or wheel clamp module (wheel alignment measurement)
- Apple ID

More information



CSC-Tool SE



Item no. 8PD 015 269-101

The CSC-Tool SE can also be used for wheel alignment measurements. Precondition for that is the use of a wheel alignment module (see page 33)

THE ASSISTANT FOR ADVANCED DRIVER ASSISTANCE SYSTEMS

Numerous improvements of the CSC-Tool SE (Second Edition) provide a faster and simpler set up to the vehicle, saving time. In addition, there is an option to add an analogue 4-wheel alignment system.

ADVANTAGES AT A GLANCE

- One person only required for spring-supported height adjustment of the cross member
- Option to adjust to different camera and radar systems
- Base support with recesses for extremely low positioning of the angular adjustment plate
- Upgradeable at any time
- Documentation of adjustment/calibration as hard-copy printout and in the Car History
- · Excellent measuring accuracy
- Compatible with the diagnostic devices of the mega macs family

BASIC DELIVERY CONTENTS

- Base support incl. cross member
- VAG reference panel
- Measuring rod (2000 mm)
- · Mounting kit

PRECONDITION

- Reference panels
- Wheel clamp SE (front camera calibration) or wheel clamp module (wheel alignment measurement)

Wheel clamp module SE



Item no. 8PZ 015 269-131

The wheel clamp modules SE are a **precondition** for performing calibrations

The new wheel clamp modules SE are a precondition for the centring and parallel positioning of the CSC-Tool SE/CSC-Tool Digital in front of the vehicle.

ADVANTAGES AT A GLANCE

- Fast positioning of the CSC-Tool SE/CSC-Tool Digital in front of the vehicle
- Centre and align the tool parallel to the rear axle just in a few steps thanks to the green line laser
- Significantly higher ease of use

BASIC DELIVERY CONTENTS

• 2 × Wheel clamp SE

Mobile calibration of front camera and sensors

CSC-Tool Mobile



Item no. 8PD 010 624-001

CALIBRATION 'TO GO'

The mobile calibration solution CSC-Tool Mobile opens new opportunities for mobile roadside assistance, glass repair services, service providers for transport fleets and associated workshops. Hence, the mobile version also corresponds to the most stringent manufacturer specifications – provided that the setup area is level.

ADVANTAGES AT A GLANCE

- Sturdy, compact and well transportable (e.g.: in minivan or transporter)
- Safe transport in wooden multipurpose packaging
 Can be assembled and disassembled by
- Can be assembled and disassembled by one person
- Multibrand solution

OPTIONAL ACCESSORIES

 Lock detent pawl for fixing the cross member to the base frame (see accessories page 36)

BASIC DELIVERY CONTENTS*

- · Mobile base support
- · Insertable top frame
- Cross member with extendable mirrors
- Measuring rod (1800 mm)
- Mounting set
- Wheel alignment module (2 pieces)
- Socket wrench

REQUIREMENTS

Reference panels

^{*} Reference panels are not part of the basic delivery contents

Calibration of rearview and all-round vision camera

REAR CAM KIT I - BASIC

Together with the mega macs software, the Rear Cam Kits I+II enable the exact calibration of all-round vision camera systems and rearview cameras. According to the manufacturer's specifications, these cameras shall also be aligned exactly to the vehicle's thrust line (rear axle).

The kits are to be considered as supplements to the CSC-Tool types and include a multipiece reference panel system in frame structure (Rear Cam Kit I – Basic & Addition) and three roll-out optical reference panels (Rear Cam Kit II – Side).

Rear Cam Kit I - Basic Profile



The Rear Cam Kit I – Basic Profile is also required for the alignment in the course of radar sensor calibration (Radar Kit III + radar reflector CSC 4-06, **pages 31 + 32**).

Item no. 8PZ 010 611-601

ADVANTAGES AT A GLANCE

- Currently, it is possible to calibrate the rearview cameras in various models of VW, Audi, Seat, Skoda, Mercedes-Benz & Nissan. For details please refer to the current list of covered vehicles (www.hella-gutmann.com)
- Manufacturer list and model range can be extended
- An even surface is sufficient for calibrating camera systems
- Multibrand solution (can be extended at any time)

DELIVERY CONTENTS

- 2 × Base support (2 pieces)
- 2 × Slide
- 2 × Tape measure with holder
- 4 × Mounting bolts
- 2 × Stabilizing plate

Rear Cam Kit I - Basic Mercedes-Benz + VAG reference panel set



VAG reference panel CSC 2-01



Mercedes-Benz reference panel CSC 2-02

Item no. 8PZ 010 611-691

DELIVERY CONTENTS

- VAG reference panel CSC 2-01
- Mercedes-Benz reference panel CSC 2-02

REQUIREMENT

- Rear Cam Kit I Basic Profile
- Wheel clamp module

Rear Cam Kit I – Basic Nissan reference panel set



Nissan reference panel CSC 2-03



Nissan reference panel CSC 2-04



Nissan reference panel CSC 2-05

Item no. 8PZ 010 611-971

DELIVERY CONTENTS

- Nissan reference panel CSC 2-03
- Nissan reference panel CSC 2-04
- Nissan reference panel CSC 2-05

REQUIREMENT

- Rear Cam Kit I Basic Profile
- Wheel clamp module

Rear Cam Kit I - Addition Profile



Item no. 8PZ 010 611-611

DELIVERY CONTENTS

- + $2 \times$ Reference panel fastening profile
- 2 × Mounting set for reference panel

REQUIREMENT

- Rear Cam Kit I Basic Profile
- Rear Cam Kit I reference mat VAG

Rear Cam Kit I - Addition VAG Kalibriertafel Set (CSC 3-01)



DELIVERY CONTENTS

• 2 × VAG reference panel 3-01

REQUIREMENT

- Rear Cam Kit I Basic Profile
- Rear Cam Kit I reference mat VAG
- Rear Cam Kit I Additional Profile

REAR CAM KIT II - SIDE

All-round vision camera systems are calibrated with the help of the roll-out calibration mats.

The space-saving mats are robust and can be walked on. The product range is being extended continuously.

Rear Cam Kit II - Side VAG reference mat set (CSC 3-02)



Item no. 8PZ 010 611-621

DELIVERY CONTENTS

- 2 × VAG reference mat CSC 3-02
- 4× End rail

Rear Cam Kit I+II can only be used in connection with a product of the CSC-Tool family or a wheel clamp module set and a diagnostic device of Hella Gutmann Solutions

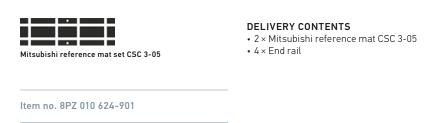
Rear Cam Kit II - Side Mazda reference mat set (CSC 3-03)

Mazda reference mat set CSC 3-03	DELIVERY CONTENTS • 2 × Mazda reference mat CSC 3-03 • 4 × End rail	
Item no. 8PZ 010 624-931		

Rear Cam Kit II - Side Opel/Vauxhall reference mat (CSC 3-04)

Opel/Vauxhall reference mat CSC 3-04	DELIVERY CONTENTS • 1 × Opel/Vauxhall reference mat CSC 3-04 • 2 × End rail
Item no. 8PZ 010 624-881	

Rear Cam Kit II - Side Mitsubishi reference mat set (CSC 3-05)



Rear Cam Kit I+II can only be used in connection with a product of the CSC-Tool family or a wheel clamp module set and a diagnostic device of Hella Gutmann Solutions

i

Calibration of radar sensors

Radar Kit I EVO (CSC 4-01 EVO)



Item no. 8PZ 010 611-981

Angular adjustment plate EVO Item no. 8PZ 010 624-941

System mount

Item no. 8PZ 010 624-951

Today, many service and repair tasks also entail the calibration of the radar system. These include collision repair work, wheel or camber adjustment, the addition of ride height altering components to the suspension system or a standard service task such as a lock carrier having been set to maintenance position (e.g. during timing belt replacement). All these tasks require system calibration. With the Radar Kit I EVO, you can calibrate radar sensors at almost any height. This gives the CSC-Tool and all its versions the necessary flexibility. An essential part of this new tool is the ingenious system mount which allows continuously variable vertical movement, e.g. of the angular adjustment plate and of the new reference panel for laser sensor calibration on the latest Audi models.

ADVANTAGES AT A GLANCE

- Vertical, continuously variable movement of angular adjustment plate
- Compatible with all versions of the CSC-Tool
- The system mount is the basis for future ADAS hardware extensions.
- Adjustment of angular plate via a simple rotary cam

BASIC DELIVERY CONTENTS FOR RADAR KIT EVO

- System mount
- Angular adjustment plate EVO

Radar Kit II (CSC 4-03)



Item no. 8PZ 010 611-251

Radar Kit II for calibrating the radar sensors from Mercedes-Benz (radar sensors without mirrors).

BASIC DELIVERY CONTENTS

- Case
- Mirror adjustment device with vacuum bell
- Centering ring for vehicles as from 2004
- Centering ring for E-Class
- Manual vacuum pump
- Adjustment tool
- Vaseline

REQUIREMENTS

- Radar Kit I or Radar Kit I EVO
- Magnetic laser (see accessories page 37)

Radar Kit III (CSC 4-04 + CSC 4-05)



Item no. 8PZ 015 269-051

The Radar Kit III consists of a rotating base with a glass-fiber reinforced plastic rod, a laser module and 2 radar reflectors. The kit is designed for calibrating front and rear radar sensors. For this purpose, different radar reflectors are used depending on the manufacturer.

BASIC DELIVERY CONTENTS

- 1 × CSC 4-04 radar reflector
- 1 × CSC 4-05 radar reflector
- 1 × Base incl. glass-fiber reinforced plastic rod
- 1 × Laser module

REQUIREMENTS

- Rear Cam Kit I Basic Profile
- Wheel alignment module
- Positioning aid for radar reflector if needed

Radar reflector (CSC 4-06)



Item no. 8PZ 015 269-001

With the CSC 4-06 radar reflector the radar sensors of systems such as lane change assist and blind spot monitoring are calibrated regardless of the manufacturer. The CSC 4-06 radar reflector is adapted to the Rear Cam Kit I – Basic & Addition which is already included in the product portfolio.

BASIC DELIVERY CONTENTS

- 1 × CSC 4-06 Radar Reflector
- 1 × Power adapter
- $1 \times Operating instructions$

REQUIREMENT

- Rear Cam Kit I Basic Profile
- Rear Cam Kit I Addition Profile
- Rear Cam Kit I reference mat VAG

Radar reflector (CSC 4-07)



Item no. 8PZ 015 269-061

Adjustment of rear radar sensors on Mitsubishi vehicles. The radar reflector CSC 4-07 serves as extension of the Radar Kit III.

BASIC DELIVERY CONTENTS

- 1 × CSC 4-07 radar reflector
- 1 × Operating instructions

REQUIREMENT

- Radar Kit III
- Positioning aid for radar reflector
- Rear Cam Kit I Basic profile

Positioning aid for radar reflector



Item no. 8PZ 015 269-041

Together with the already known Rear Cam Kit I – Basic Profile the radar reflector positioning aid allows the the exact positioning of the CSC 4-04/4-05 radar reflector (part of the Radar Kit III) in the course of rear radar sensor calibration depending on the manufacturer.

BASIC DELIVERY CONTENTS

• $1 \times Positioning aid$

REQUIREMENTS

- Rear Cam Kit I Basic Profile
- Radar Kit III

Calibration of laser sensors

Reference panel for laser sensor (CSC 5-01)



Item no. 8PZ 010 624-961

ADVANTAGES AT A GLANCE

- Continuously variable, vertical movement possible
- Compatible with all previous versions of the CSC-Tool
- Calibration of the laser scanner in the latest Audi models

BASIC DELIVERY CONTENTS

• Reference panels for laser sensor CSC 5-01

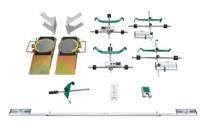
REQUIREMENT

System mount

Wheel alignment measurement

Wheel Alignment Kit





Item no. 8PD 015 269-301

ON TRACK

With the Wheel Alignment Kit in connection with the CSC-Tool SE and the CSC-Tool Digital, Hella Gutmann provides various wheel alignment measurement options. The Wheel Alignment Kit provides the fast alignment of von toe, camber, toe-out on turns, caster, kpi, straight-ahead position of steering wheel and thrust angle. A leveled workshop floor or vehicle hoist is not necessary.

ADVANTAGES AT A GLANCE

- Universal application for passenger cars/ transporters/off-road vehicles
- Measurement possible without the need to lift the vehicle
- All vehicle types can be aligned quickly with one system
- You can use the Wheel Alignment Kit flexibly for 4-wheel alignments without the need of a fixed workspace
- Any kind of axle alignments within 10 minutes incl. setup time
- Inclinometer for measurement of camber, caster and King Pin Inclination/Thrust Angle
- Easy attachment to all wheels
- Rim size up to 22": Adapters for 24" rims are optionally available with standard wheel alignment modules
- 360° rotating line laser module
- Rim runout compensation possible
- Excellent cost/performance ratio guarantees rapid amortisation

LIEFERUMFANG WHEEL ALIGNMENT KIT

- 2 × Wheel clamp modules WA incl. green line laser and scales
- 1 × Sliding scale for rear-axle alignment medium wheelbase 2500 to 3200 mm
- 2 × Rotating plates incl. ramps
- $4 \times Rotating plate locks made of plastic$
- 1 × Electronic inclinometer
- 2 × Hooked scales, rear axle
- 2 × Wall bracket
- 1 × Steering wheel arrestor
- 1 × Splittable track scale
- Multilingual operating instructions
- Axle alignment assistance software*

OPTIONAL ACCESSORIES

2× Rear-axle rotating plate

Item no. 8PZ 015 269-311

4× WA Kit aluminum settling bridges incl. 2× rear-axle rotating plates

Item no. 8PZ 015 269-321

6× 24" adapter

for extending the measuring shafts of the wheel alignment module when measuring 24" wheel rims Item no. 8PZ 015 269-331

1× Sliding scale

to slide onto the arbor scale for passenger cars with wheelbase between 1800 and 2500 mm ltem no. 8PZ 015 269-381

1× Sliding scale

to slide onto the arbor scale for passenger cars with wheelbase between 3200 and 3800 mm ltem no. 8PZ 015 269-391

2× Tape measure holder with tape measure

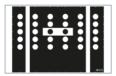
to measure the distance between the CSC-Tool SE and the vehicle and to calibrate the toe scale $ltem\ no.\ 301509$

^{*} The monthly charges for updates are not included in the delivery contents

Reference panels for camera calibration

To calibrate the camera system of a vehicle according to manufacturer's specifications, the CSC-Tool and the CSC-Tool SE require brand-specific reference panels.

The same number of reference panels is available for the CSC-Tool Mobile. These differ in size to the panels for the CSC-Tool and or CSC-Tool SE and some can be folded to max. 100 × 50 cm.



VAG Group Basic delivery contents 8PZ 010 624-011 (M-01)



Mercedes-Benz 8PD 010 601-901 (1-02) 8PZ 010 624-021 (M-02)



Renault 8PZ 010 607-951 (1-03) 8PZ 010 624-031 (M-03)



8PZ 010 607-961 (1-04) 8PZ 010 624-041 (M-04)



KIA | Hyundai | Opel/Vauxhall | Peugeot | Citroën | DS Automobiles | Fiat | Jeep 8PZ 010 607-971 (1-05) 8PZ 010 624-051 (M-05)



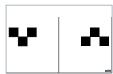
Honda 8PZ 010 607-981 (1-06) 8PZ 010 624-061 (M-06)



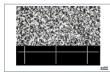
Mazda 8PZ 010 607-991 (1-07) 8PZ 010 624-071 (M-07)



Toyota | Lexus 8PZ 010 611-181 (1-08) 8PZ 010 624-081 (M-08)



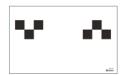
Honda 8PZ 010 611-451 (1-09) 8PZ 010 624-091 (M-09)



8PZ 010 611-461 (1-10) 8PZ 010 624-101 (M-10)



Toyota 8PZ 010 611-471 (1-11) 8PZ 010 624-111 (M-11)



Mazda 8PZ 010 611-631 (1-12) 8PZ 010 624-121 (M-12)



Toyota | Lexus 8PZ 010 611-641 (1-13) 8PZ 010 624-131 (M-13)



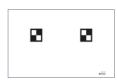
Toyota | Lexus 8PZ 010 611-651 (1-14) 8PZ 010 624-141 (M-14)



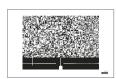
Honda 8PZ 010 611-831 (1-15) 8PZ 010 624-151 (M-15)



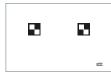
Fiat | Alfa Romeo 8PZ 010 611-841 (1-16) 8PZ 010 624-161 (M-16)



Mitsubishi 8PZ 010 611-881 (1-17) 8PZ 010 624-171 (M-17)



Suzuki 8PZ 010 611-911 (1-18) 8PZ 010 624-181 (M-18)



Suzuki 8PZ 010 611-921 (1-19) 8PZ 010 624-191 (M-19)



Hvundai 8PZ 010 611-931 (1-20) 8PZ 010 624-201 (M-20)

(M) = CSC-Tool Mobile

Optional accessories for the CSC-Tool

Front Camera Calibration Aid KIA/Hyundai



Item no. 8PZ 015 269-921

A special tool is required for various KIA/Hyundai vehicle models to calibrate the front camera, whereby the tool is mounted directly on the engine hood.

PRODUCT CHARACTERISTICS

- Front camera leveling compliant with the specifications of the manufacturer is a basic requirement for calibration
- · Easy handling

BASIC DELIVERY CONTENTS

• Front Camera Calibration Aid KIA/Hyundai

Front Radar Levelling Aid Volvo



Item no. 8PD 010 624-991

A special adjustment tool for basic setting/leveling is required before the dynamic calibration of the radar sensor on certain Volvo models.

PRODUCT CHARACTERISTICS

- Sensor adjustment with the help of manufacturer compliant positioning tools is the basic precondition for calibrations
- Easy handling

BASIC DELIVERY CONTENTS

• Front Radar Levelling Aid Volvo

Front Camera Levelling Aid Volvo



Item no. 8PD 010 611-991

A special adjustment tool is required for the front camera calibration on certain Volvo models. Prior to the dynamic camera calibration, the camera needs to be basically adjusted with a positioning tool compliant with the specifications of the manufacturer such as the Front Camera Leveling Aid from Hella Gutmann.

PRODUCT CHARACTERISTICS

- Front camera leveling compliant with the specifications of the manufacturer is a basic requirement for calibration
- Easy handling

BASIC DELIVERY CONTENTS

• Front Camera Levelling Aid Volvo

System adapter for VAG night-vision calibration tool VAS 6430/6



The system adapter serves for mounting the original VAG night-vision calibration tool VAS 6430/6* to the Hella Gutmann system mount in combination with all the current CSC-Tool versions of Hella Gutmann.

BASIC DELIVERY CONTENTS

• System adapter

REQUIREMENT

- System mount
- VAG night-vision calibration tool VAS 6430/6

Item no. 8PZ 010 624-891

 $^{^{\}star}$ $\,$ Shall be acquired by the customer if such vehicle service is requested

Wheel clamp module 'Control'



Item no. 8PZ 010 611-411

PRODUCT CHARACTERISTICS

• With the wheel clamp module 'Control', it is possible to measure the toe of the rear axle and the thrust line of the vehicle. The result of this test is depicted optically in the form of a laser point

Protective cover for CSC-Tool



Protective cover CSC-Tool/CSC-Tool SE

Item no. 8PZ 010 611-381

CSC-Tool Digital board cover

Item no. 8PZ 015 270-131

PRODUCT CHARACTERISTICS

- Premium all-round protection
- · Quick and easy mounting
- · Repels water, dust and oil

Triplex storage box



Item no. 8PZ 010 624-701

PRODUCT CHARACTERISTICS

- Safe housing for up to 10 reference panels for the CSC-Tool Mobile
- Light, compact and robust
- Can be stacked

Lock detent pawl



Item no. 8PZ 010 624-971

PRODUCT CHARACTERISTICS

- The lock detent pawl fixes the cross member of the CSC-Tool Mobile to the base frame
- With this component, the system mount on the cross member of the CSC-Tool Mobile can be used in any position (e.g. laterally)
- The system holder can be fixed in maximum position left or right without risk of the cross member being lifted out of the retaining bolts

Magnetic laser (CSC 4-02)



Item no. 8PZ 010 611-321

The magnetic laser is used to adjust certain radar sensors. To do this, the laser beam is directed either onto the mirror at the radar sensor or onto the mounted mirror of the Radar Kit II (CSC 4-03) and then correctly adjusted by using the reflected laser point.

PRODUCT CHARACTERISTICS

- With the magnetic laser, the radar sensor can be set to zero position before the calibration which makes the calibration procedure faster and easier. The magnetic laser is a valuable tool for replacing radar sensors
- Exact positioning of EVO plate towards the centre of the radar sensor

DELIVERY CONTENTS

- Magnetic laser
- Case

REQUIREMENTS

• Angular adjustment plate/angular adjustment plate EVO

Tape measure holder with tape measure



Item no. 301509

PRODUCT CHARACTERISTICS

- Quick and easy adjustment of distance between CSC-Tool/SE and vehicle
- Exact positioning through moving the cross member
- Tape measure with magnet for easy mounting on wheel alignment module

BASIC DELIVERY CONTENTS

- 2 × Measure holder
- 2 × Tape measure

Support for mega macs 42 SE



Item no. 301539

PRODUCT CHARACTERISTICS

- Improved overview of the status display during the calibration drive
- Exact positioning of the mega macs 42 SE during driving
- Quick and easy mounting inside cabin (e.g. on windscreen)

BASIC DELIVERY CONTENTS

- $1 \times Mounting bracket incl. suction cup$

CSC-Tool measuring rod 2200 mm



CSC-Tool measuring rod 2200 mm Item no. 8PZ 015 269-911

CSC-Tool SE measuring rod 2200 mm Item no. 8PZ 015 269-531 On some vehicle models the specified height value exceeds the scale range of the standard measuring rod. Therefore we offer another measuring rod which is 200 mm longer.

AFFECTED VEHICLES

VW Crafter/T6

BASIC DELIVERY CONTENTS

Measuring rod 2200 mm



Headlight aiming devices

SEG IV SE



Item no. 8PA 007 732-321

LOOKING TOWARDS THE FUTURE

With the SEG IV SE from Hella Gutmann, you are able to test and aim any kind of lighting system including the most advanced headlight systems. The large test screen with vertical lines also enables checking and aiming headlights, especially ones with intelligent high beam assistant systems. A longer column increases the working range to max. 1650 mm and thus also allows the adjustment of even high-mounted headlights. The SEG IV SE also includes a hybrid sight. It consists of a powerful line laser and an analog sight. With these practical features, the tool can be aligned orthogonally to the vehicle with maximum precision – even in bright conditions. The combined visor ensures total functionality. Thanks to the reflection angle of 120°, you can also aim at external reference points. This is especially advantageous on vehicles with high-mounted headlights (SUVs, vans, etc.).

SEG IV DLLX



Item no. 8PA 007 732-311

FIT FOR ALL SYSTEMS

Thanks to the scaling on the test screen of the SEG IV, you are able to test and precisely aim all current headlight systems like halogen headlights, xenon headlights, LED headlights and systems with high beam assist (vertical light/dark boundary).

Like all SEGs from Hella Gutmann Solution, the unit is equipped with large plastic wheels that have a special tread and can therefore be used as a stand-alone unit or on rails. The roller base is made of polymer concrete and is designed for extreme loads. Due to the high weight, a low centre of gravity and thus a high tilt stability of the unit is achieved.

SEG V



Item no. 8PA 007 732-401

A REAL EYE-CATCHER

The latest model combines extensive diagnostic expertise and lighting know-how. All functions of the SEG V can be operated easily and intuitively thanks to the 8.4" touch screen. Precise vehicle identification takes place e.g. through the Car History. With the vehicle detection, the vehicle-specific algorithms for the correct detection of the light distribution are automatically selected! Incorrect settings, especially in modern vehicles with high beam assistance systems (glare-free high beam), are thus avoided. Thanks to the manual and/or automatic level compensation, inclinations and unevenness in the floor are compensated in both directions of the setup area of the SEG. The SEG V complies with German Guideline for the testing of headlamp leveling devices.



SCOPE OF FUNCTIONS	SEG V	SEG IV-DLLX	SEG IV-SE
Digital luxometer	•*	•	•
Broadband sight **		•	
Hybrid sight***	•		•
Deflection mirror		•	•
Fresnel lens	•	•	•
Laser positioning aid		•	•
Level gauge/eccentric shaft for angle adjustment		•	•
Rotating column for aligning the optical housing ****	•	•	•
Optional refitting to steel casters on adjustable rails	•	•	•
Automatic level compensation	•		
8.4" touch screen	•		
Vehicle recognition via Car History	•		
Interfaces: USB/WiFi	•		
asanetwork	•		
Can be updated	•		
Polymer concrete base with rollers	•	•	•
Extended column, adjustment range up to 1650 mm			•

^{*} Lux values are indicated in the measurements menu

^{**} Laser sight

^{**} Laser sight consisting of powerful laser and analog sight

^{****} Stainless steel column

Rail systems

Adjustable SEG rail system



Item no. 9XS 861 736-021

Caster set

Item no. 9XS 862 004-021

Extension set 1500 mm

Item no. 9XS 861 736-041

The adjustable rail system is a clever alternative to an expensive refitting of your workshop. The rail system is quickly set up and readjusted if needed. The tool convinces with its long service life and its attractive price. The basic set consists of 4 rails with a length of 1500 mm each and high-quality galvanized steel casters for the headlight aiming devices SEG IV and SEG V. The excellent stability of the set guarantees best results when measuring and adjusting headlights. This remarkable device, meets the different requirements of OE manufacturers.

ADVANTAGES AT A GLANCE

- · Adjustable rail system
- Quick setup
- Height adjustment is possible horizontally and vertically
- Unevenness of as much as 20 mm can be compensated
- For precise measurements and adjustments
- Readjustments possible at any time
- Designed specifically for the corresponding rail
- High-quality, heavy steel caster set for a higher tilt stability
- Solid construction
- Long service life
- Attractive price
- Optionally extendable
- And much more

DELIVERY CONTENTS OF SEG RAIL SYSTEM, INDIVIDUAL LEVELING

- $4 \times 1500 \, \text{mm}$ rails (2 hexagonal rails, 2 pieces of flat steel)
- 30 × Hexagon-socket countersunk head screws with flange M6
- 30 × Fischer dowels M8 S
- 80 × Setscrews (40 pieces short 10 mm, 40 pieces long 25 mm)
- 20 × Shims
- 2 × Rubber stops
- Assembly instructions

DELIVERY CONTENTS OF CASTER SET

- 2 × Track casters
- 1 × Ccaster

Rail system 'Basic'





Item no. 9XS 861 736-001

The rail system 'Basic' is ideal for the use in workshops whose floor properties already fulfil the legal requirements and the requirements of the OE manufacturers and where leveling is not necessary. Thanks to the low installation height, you can use the rails not only in front but also above and below the vehicle. Especially practicable is the use of the SEG IV and SEG V tools with the rail system including the standard casters. Hence you can move the tool any time from the rail system to another workspace. The easy assembly and the excellent price performance ratio are two plus points for this system. The set consists of 2 rails each of which is 1500 mm long. A standard workspace requires 2 sets.

ADVANTAGES AT A GLANCE

- Quick setup
- Several fields of application
- Excellent price-performance ratio
- Exact results of calibration/adjustment of headlight systems
- Can be extended any time by the requested length

DELIVERY CONTENTS

- 2×1500 mm rails (1 × profile and 1 × track profile)
- 16 × Hex bolts DIN 571 6 × 40 mm
- 16 × Dowels S8

HELLA GUTMANN SOLUTIONS GMBH Unit 6, Appletree Industrial Estate Chipping Warden Oxon OX17 1LL

Tel: 01295 662402 hgs.support@hella.com www.hella-gutmann.co.uk