

MAHLE



CONNEX 2 Line

The extraordinary diagnostics
for your daily work.



BrainBee[®]
WORKSHOP SOLUTIONS



CONNEX 2: The future-proof diagnostics line

BRAIN BEE's CONNEX line evolves and reinvents itself to ensure excellent performance and long-lasting solutions for every workshop need. Without ever having to give up the usual speed and ease of use.

CONNEX 2
CONNEX 2 SMART
CONNEX 2 PLUS

Key features:

- New graphical interface, even simpler, even more complete
- Commitment to exhaustive coverage of the car fleet
- Continuous software updates and database implementation, automatically installed through the instrument's Wi-Fi connection
- Unlimited initial diagnostic database license, upgrade licenses recommended
- Wide range of special functions with which to customize your instrumentation
- Automatic vehicle identification - now also with the Click&Go function
- DoIP (Diagnostic overInternet Protocol)
- MCS Pass, Your pass to Cyber Security
- E-Scan function
- Troubleshooting guides (MTS license)
- Modular technical database (MRI - MRP licenses)

Maximum speed:

Access the CONNEX 2 app and you're ready to go. It doesn't get any faster than that!

Tailored to you:

The flexible licensing structure allows you to configure your tool based on your needs.

Video tutorials:

A wealth of video tutorials can guide you step by step whenever you wish.

CONNEX 2 DS:

The new App developed to follow you today and into the future, with an even simpler interface.

Always connected:

The tool is always up-to-date and can access many In Cloud functions. So you are sure to use your CONNEX 2 to its full potential every day.

Constant development:

A new planning and development strategy to enable the dynamic car fleet to be addressed with the right weapons.

Made in BRAIN BEE by MAHLE:

As the latest generation of diagnostic tools, the new CONNEX 2 line brings with it all the reliability of its brand.

The CONNEX 2 Line

CONNEX 2



Android 12.0 tablet - 10.1" display
MIL-STD-810H; IP66 certification
8 MP Front camera
16 MP Rear camera
Memory: RAM 4GB; FLASH 64GB

VCI with CAN-FD, DoIP - Remote Ready
IP54 certification
EOBD connection via Bluetooth
Wi-Fi Ready

CONNEX 2 Plus



Windows® 10 tablet - 10.1" display
MIL-STD-810H; MIL-STD-461G; IP65
FULL HD Front camera
8 MP Rear camera
Memory: RAM 8GB; FLASH 256 GB

VCI with CAN-FD, DoIP - Remote Ready
IP54 certification
EOBD connection via Bluetooth
Wi-Fi Ready

CONNEX 2 Smart



VCI with CAN-FD, DoIP - Remote Ready
IP54 certification
EOBD connection via Bluetooth
Wi-Fi Ready



A unique tool, as unique is your workshop

A rich licensing system (diagnostic database and additional functions - see *Configurations*) allows you to configure your tool according to your workshop needs, safe in the knowledge that you are always in control of its performance.

Multi-platform

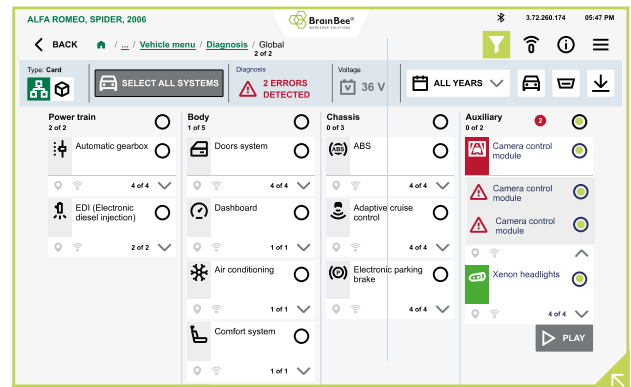
Versatility is the main feature that MAHLE products are inspired by. For this reason, self-diagnosis is also adaptable to all operating systems you are used to working on in the workshop, through activation of the appropriate licenses.

CONNEX 2	Android 12
CONNEX 2 Plus	Windows IoT
CONNEX 2 Smart	Android/ Windows ⁽¹⁾

Quick to the target

Ready for fast action! CONNEX 2 immediately recognizes the model of the vehicle being worked on. You can choose how you access the diagnosis, in accordance with your habits and preferences:

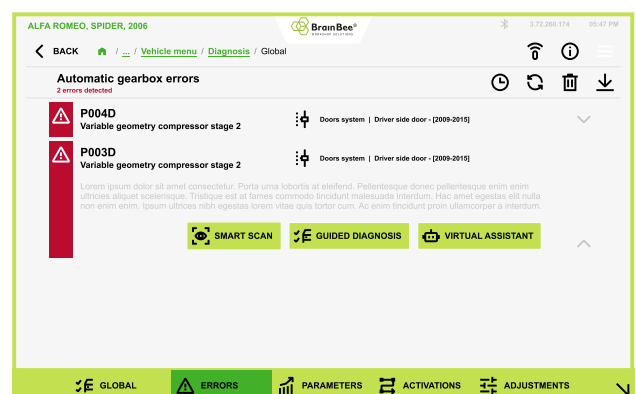
- **Automatic Search:** Connect the VCI to the vehicle, select Automatic Search, and CONNEX 2 will immediately recognize the car model by reading and decoding the VIN
- **Search bar:** Just enter a keyword, you will enter a diagnostic session immediately
- By entering the **VIN** ⁽²⁾
- By entering the license plate, with **SKIP 12** license ⁽³⁾
- **Click&Go:** Frame the license plate (with SKIP 12) or the VIN on the windshield, click, and your CONNEX 2 will immediately recognize the model of the car being serviced
- **Manual model search**, facilitated by actual photos of the vehicle and by new numerous selection filters



Smart Scan: Intelligent fault scan:

Completely redesigned fault scan to make fault detection and repair even more intuitive and easy.

With Smart Scan (MTS license), at the end of the fault-detection scan, the tool provides additional information about the fault and possible repair actions, with recall data and technical bulletins issued by the manufacturer and repair aids provided by experts in the field.



¹⁾ Minimum requirements: Android 10, Windows 10

²⁾ Optional. Also available: search with KBA (German Motor Transport Authority) in Germany.

³⁾ Available in England, France, Ireland, Italy, the Netherlands, Portugal, and Spain. For other countries, please contact your MAHLE dealer.

CONNEX 2



Robust design, superior intelligence: future-proof.

The new CONNEX 2 has an extra boost! A comprehensive and strong tool to meet any challenge in your workshop.

New generation, to meet new challenges

CONNEX 2 comes with new hardware, indestructible for those who face the hustle and bustle of work and want functional and especially robust tools.

The CONNEX 2 tablet has achieved the highest certifications in terms of durability and strength, as has its new VCI, which is particularly resistant to shock and dust.

Thanks to the useful carrying handle, your CONNEX 2 will always follow you in every task.

Versatile and tailored

Each workshop is a world apart. Why then propose the same tool to everyone?

The instrument's new graphical interface and large memory will allow you to better appreciate the rich range of functions and possibilities you can configure on your tool.

And nothing will take away your freedom to change your mind over time. You will always be free to modify or add new features as they are subsequently released.

- Rugged Design structure, tested to MIL-STD 810H military standards and IP66 certified (dust and liquids) - 3-year warranty and accidental damage coverage for the tablet
- Android 12 (Android Enterprise Recommended)
- Dual-band (2.4/5 GHz) 802.11 ac Wi-Fi connectivity
- Bluetooth V5.0
- Cameras: Front 8 MP, rear 16 MP
- Click & Go, for vehicle self-recognition
- 10.1" capacitive multi touch LCD display - 800 nits brightness for optimal visibility in all conditions, also usable with gloves and stylus
- 4 configurable function buttons
- Adjustable rigid handle, elastic band (optional) back handle with lectern function
- Docking station (optional)
- New VCI with CAN-FD, DoIP - REMOTE Ready



BrainBee®
SMART SOLUTIONS

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Wi-Fi, Help, Menu icons

Welcome to CONNEX 2 DS

Explore hundreds of vehicles, functions and more to start your diagnosis.

Search license plate, VIN, engine code... SEARCH

Latest searches: VOLKSWAGEN Golf V (1H) GTI (2.0 TFSI), AUDI A4 2009 3.0 TDI DPF CCLA 176kW

Search vehicle mode

AUTOMATIC SEARCH
Connect the VCI and select the brand

MANUAL SELECTION
Connect the VCI and select brand, model, vehicle

Functions

EOBD
Subtitle

REMOTEPRO
Subtitle

PASS THRU
Subtitle

MAHLE

Gerac

MAHLE



Getac



Welcome to CONNEX 2 DS

Explore hundreds of vehicles, functions and more to start your diagnosis.

Search license plate, VIN, engine code...

Latest sources: [V2L](#) [AGW](#) [WSP](#) [Gef](#) [V176](#) [ELI](#) [G3](#) [T20L](#) [A30L](#) [L4](#) [20P](#) [L](#) [L17](#) [L10P](#) [G3L](#) [T20W](#)

Search vehicle mode

AUTOMATIC SEARCH
Connect the VCI and select the brand

MANUAL SELECTION
Connect the VCI and select brand, model, vehicle

Functions

EBDD
Sublife

REMOTEPRO
Sublife

PASS THRU
Sublife

MAHLE

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P1

P2

CONNEX 2 Plus



*When the going gets tough,
the tough get going!*

*CONNEX 2 Plus is the right
tool for busy workshops,
those that pass the diagnostic
tool from hand to hand to
speed up their work and
optimize time.*

*CONNEX 2 Plus is tested to
align with military standards
and fears no accidental fall
(certified up to 180cm).*

Enhanced Connectivity

With enhanced wireless connectivity, everything is even easier and faster: Wi-Fi 6, BT 5.1 and 4G LTE module for total autonomy in accessing the WEB.

Front and rear camera

The integrated camera provides simplified access to vehicle recognition functions (Click & Go Function, which identifies the model by taking a photo of license plate or VIN) and paves the way for new functions and ways of exchanging information via images.

Docking Station

CONNEX 2 Plus' charging and support accessory, makes it a complete PC that can potentially be used for other workshop activities as well.

It includes: 4 USB ports, 1 HDMI port, 1 VGA port, 1 RS232 serial port, 1 Ethernet port.

- Rugged Design Structure, tested to MIL-STD 810H and MIL-STD 461G military standards and certified IP65 (dust and liquids) - 3-year warranty and accidental damage coverage for the tablet
- Windows 11 IoT Enterprise
- Intel® WiFi 6 AX200 Enhanced WiFi Connectivity
- Bluetooth V5.1
- Cameras: Front FHD, rear 8MP
- Click & Go, for vehicle self-recognition
- 10.1" capacitive multi touch LCD display - 1000 nits and can also be used with work gloves
- Adjustable rigid handle, elastic band (standard) rear handle with lectern function
- Docking station (standard)
- New VCI with CAN-FD, DoIP - REMOTE Ready

CONNEX 2 Smart



So compact, yet so powerful!

The new CONNEX 2 Smart embeds the best technology to serve the automotive industry, and the VCI is so robust it will challenge anyone.

Do you want to put it to the test?

The most flexible solution

CONNEX 2 Smart offers the easiest access to the powerful CONNEX 2 DS diagnosis, through the simple use of the unique VCI in conjunction with a Tablet or commercial PC^(*).

The new GUI fits well with existing devices on the shop floor.

VCI hardware is also designed for durability and shock resistance (IP54).

(*) Minimum system requirements: Android 10; Windows 10

All CONNEX 2 features at your fingertips

No limitation to the licensing configurations possible with CONNEX 2 Smart:

- Duration: 12 or 36 months
- Diagnostic specialties: EASY PASS; ADAS PASS; FULL PASS
- Additional packages: MCS; MRI; MTS; MRP; MHL

(More details and explanations in the *Configurations* section).

- New VCI with CAN-FD DoIP
- To be paired with Android or Windows devices
- 3 simultaneous CAN-BUS communication channels
- USB-C interface with protective door
- Wi-Fi 2.4 GHz | BLE 5.0
- Led control connection and data exchange
- Warranty: 24 months and possible extension 12 additional months



VCI REMOTE READY (coming soon)

You can directly access MAHLE Remote Diagnosis from your CONNEX 2 Smart.





BrainBee

Welcome to CONNEX 2 DS

Explore hundreds of vehicles, functions and more to start your diagnosis.

Search license plate, VIN, engine code...

Latest searches: [VOLKSWAGEN Golf IV \(16V GTI \(2.0 TFSI\) AWD\) 44 2009 3.0 TDI DPF CC1A 18kW](#)

FUNCTIONS

EObd
Subtitle

REMOTEPRO
Subtitle

PASS THRU
Subtitle

SEARCH VEHICLE MODE

AUTOMATIC SEARCH
Connect the VCI and

MANUAL SELECTION
a VCI and select
job, vehicle

MAHLE

CONNEX 2 DS APP

CONNEX 2 proprietary software for self-diagnosis. Easy to use and versatile, you'll be ready to start your work in no time!

Few gestures and video tutorials to go straight to the result

You do not need to have years of experience under your belt before you can use CONNEX 2. A few moments and the system will be immediately familiar, as it exploits gestures and symbols common in the daily experience of the workshop professional.

A rich collection of video tutorials will follow you step by step through even the most difficult situations.

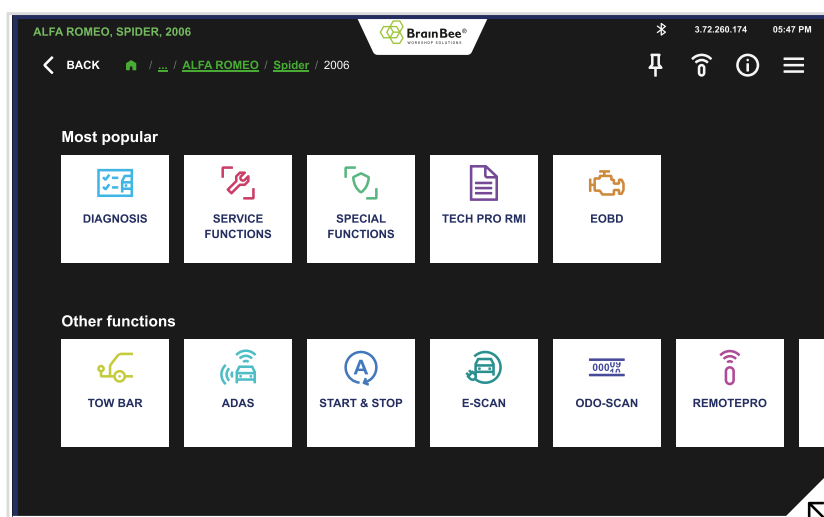
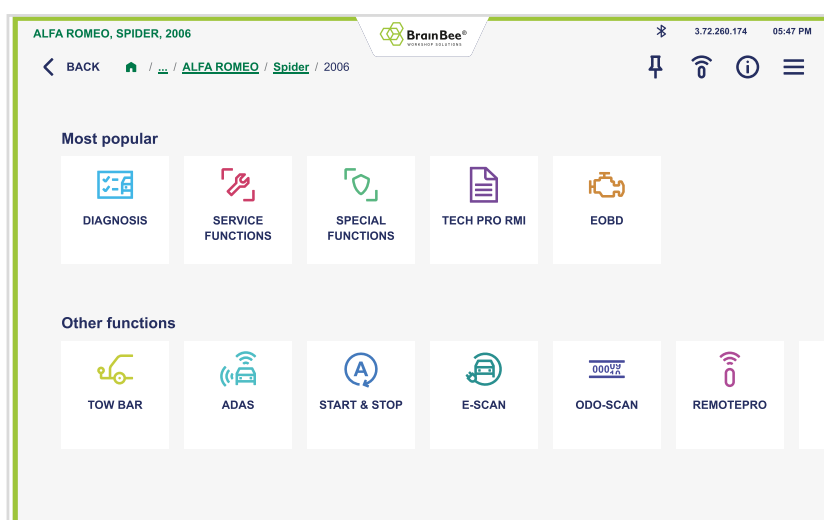
User friendly interface design

The graphical interface gives you immediate and quick access to all the information you need for your professional work.

The diagnostic tool communicates with the vehicle's system and allows you to quickly identify what work is required for its maintenance.

Developed with everyday use in mind

We are never satisfied. The interface, as well as the diagnostic database, is also undergoing continuous improvement in order to optimize its use in even the most dynamic workshops.



Two display modes: Light and Dark Mode

A flexible licensing system

The strength of a true business ally is its ability to adapt to your needs. That is why we continue to offer a line of licenses that can be combined with each other to configure your self-diagnostics as you like. It's easy: just 3 simple steps.

STEP #1: EASY, ADAS or FULL. Choose according to your type of activity

Each workshop has the right to modulate the use of its equipment according to the work opportunities or type of service it has decided to offer. With CONNEX 2 you can choose from several diagnostic license modules, corresponding to as many different professional (or usage) types:

- **EASY PASS** - Recommended for those who carry out quick repairs (e.g: Fast Fitters Centers, Gas Stations). Provides access to the most common diagnostic functions for periodic/ordinary vehicle maintenance.
- **ADAS PASS** - Geared toward the world of Body Shops and Crystal Repairers, with all services related to the world of ADAS systems.
- **FULL PASS** - Ideal license for the professional multi-brand workshop: deep and accurate diagnosis.



Contents	EASY PASS	ADAS PASS	FULL PASS
EOBD Diagnosis Standard	■	■	■
Vehicle Scan (Read/Delete)	■	■	■
Fault history	■	■	■
SMART-Scan ^(*)	■	■	■
E-Scan ^(*)	■	■	■
ODO-Scan ^(*)	■	■	■
ECU data	■	■	■
Parameters	■	■	■
Component activations			■
Configurations			■
Tow hook			■
Special Functions (Body Specialist +PUK)			■
ADAS dynamic calibrations		■	■
Static Calibrations (With Digital ADAS 1.0)		■	■
Static Calibrations (With Digital ADAS 2.0)		■	■
Video tutorials	■	■	■
Integrated Remote Diagnosis ^(*) (Coming Soon)		■	■
Service functions	■	■	■

■ Included

■ Optional

^(*) active license (not expired)

STEP #2: Choose the duration you want.

The second step in configuring the tool is to choose the duration of your license: 12 or 36 months No problem for renewal, you can always decide to change your size!

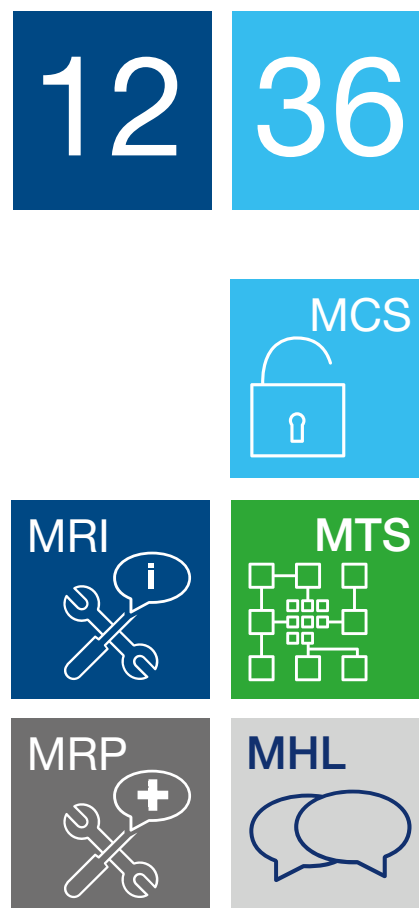
STEP #3: Add the functions that specialize your business.

Now all that's left is to customize your tool, adding those features that will give you an extra boost in the workshop:

- **MCS - MAHLE CYBER SECURITY:** Single (Flat) license that includes all current and future releases (including FCA, Renault/Dacia^(*), Mercedes-Benz, BMW **NEW**, Maserati **NEW**, VAG **NEW**, KIA^(**), Hyundai^(**), and Nissan^(**))
- **MRI - MAHLE REPAIR INFORMATION:** Basic access to repair support information bank
- **MTS - MAHLE TROUBLE SHOOTING:** Guided diagnosis to get to the solution quickly - also includes the Smart Scan function
- **MRP - MAHLE REPAIR PLUS:** In addition to technical information, you also have access to technical drawings, wiring diagrams, templates and workshop organizer
- **MHL - MAHLE HOT LINE:** Chat and telephone support service (active in some countries)

^(*) Renault/Dacia flat license up to 5 interventions per day

^(**) Coming soon



More options to add functionality to your CONNEX 2

SKIP 12

12-month flat license for the license plate search function (currently available in Italy, France, Spain, Portugal, UK, Ireland and the Netherlands)

DIGITAL ADAS 2.0

Enables static calibration of ADAS systems with Digital ADAS 2.0

MAHLE Repair Functions Your Best Assistants

Everything you need, just one click away. So you don't know how to perform a particular service on a vehicle? It's simple: with CONNEX 2 and the MRI - MTS - MRP functions.

MAHLE Repair functions

Through CONNEX 2 you can instantly access one of the most comprehensive information systems, integrating the best diagnostic information databases (including HaynesPro).

- **MRI - MAHLE REPAIR INFORMATION** - Provides access to the most important information, parameters and data sheets.

Maintenance form

Repair manuals

Wiring diagrams

Adjustment data

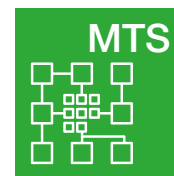
Fluids and lubricants

Identification data

Relays and fuses

Recall data

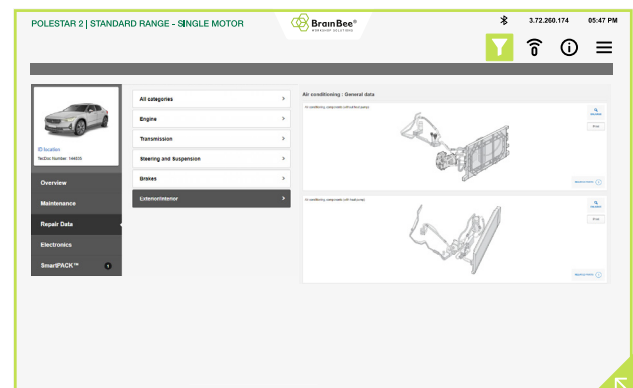
Technical service bulletins



- **MTS - MAHLE TROUBLE SHOOTING** - An ideal extension for those who need an instrument with even higher performance. Integrates all the contents of the MRI version (license required) including specific **trouble shooting** logic (guided diagnosis). Indeed, starting from the error code reported by the diagnostic tool, through a series of consecutive tests, we arrive at determining the cause of the malfunction.

MTS Also includes the new Smart Scan function.

- **MRP - MAHLE REPAIR PLUS** is the configuration of those who do not want to leave anything to chance. Adds **additional diagrams and drawings** to MTS (license required), as well as **timetables, known cases and their resolution**.



Contents	MRI	MTS	MRP
Identification data	■	■	■
Maintenance form	■	■	■
Adjustment data	■	■	■
Fluids and lubricants	■	■	■
Recall data	■	■	■
Technical service bulletins	■	■	■
Repair manuals	■	■	■
Relays and fuses	■	■	■
Wiring diagrams	■	■	■
Guided diagnosis		■	■
Repair aid (cases with verified corrections and suggestions)		■	■
Technical drawings			■
Comfort wiring diagrams			■
Timetables			■

New Smart Scan Function

It further speeds up your work.

After performing the global system scan, in the presence of errors (also stored errors) you can directly access:

- Technical Assistance Bulletins
- Recall data
- Repair aids

Smart Scan is already included in the MTS package



MAHLE Cyber Security

In a market where vehicles are increasingly equipped with computer interconnections that optimize their operation and improve the driving experience, the protection of exchanged data is increasingly important for all manufacturers.

A topic not to be underestimated

Starting with FCA Group, Mercedes-Benz and Renault/Dacia, all vehicle manufacturers are taking steps to improve the digital security of these interchanges by implementing protection systems that differ from each other but are commonly referred to as "Cyber Security."

However, protecting data in this case means disabling all access not preliminarily authorized. This also involves access to systems that are interrogated and managed on a daily basis in every multi-brand workshop.

The result of this protective action has a strong impact on the work of the auto repairer, who is faced with the need to identify and manage agreements with each manufacturer.

For this reason, MAHLE introduces MCS - MAHLE Cyber Security: a service that facilitates workshop permissions management by the manufacturers of the protected brand, allowing authorized access directly through CONNEX 2, without loss of time and effectiveness.

MCS – MAHLE Cyber Security

Through package activation, one license can enable all Cyber Security functions developed^(*) now and in the future^(**).

^(*) FCA-Group, Renault/Dacia, Mercedes-Benz, BMW **NEW**, Maserati **NEW**, VAG-Group **NEW**.

^(**) Kia, Hyundai, Nissan.



MCS Pass

Facilitated access to Cyber Security permissions is now possible: MAHLE Cyber Security Pass is the one-time pass for all Secure Gateway licenses activated on your diagnostic tool.

A single digital identity.

All Cyber Security features you want

Managing the Cyber Security strategy enabled by manufacturers is becoming standard practice within the repair world. However, for each of the trademarks adopting such protection, there is still no uniform and facilitated access procedure. At least so far... MCS Pass - MAHLE Cyber Security Pass - is the universal, integrated and standardized solution that enables the workshop professional to access authenticated diagnostics directly with one click from their CONNEX 2.

The benefits

- A single password to remember
- A single access procedure, simple and immediate
- Unbeatable speed of access to authenticated diagnosis

1. Have a valid ID handy and be prepared for a selfie.
2. Access the MCS Pass section from CONNEX 2 DS Settings, select "Create New User," enter your information and confirm.
3. Check your inbox where you will receive a message to proceed with identity verification, which must be done:
 - Directly on CONNEX 2 / CONNEX 2 Plus
 - On App (Android/iOS smartphones)
 - On Web portal (from PC with camera)
4. Follow the step-by-step procedures required by the app or Web portal and confirm your information. Within a maximum of a couple of hours your MCS-Pass^(*) account will be active (you can verify activation from the CONNEX 2 DS settings).

^(*) Credentials are personal.



AI Power Search

When time is precious and precision makes the difference, a new feature is born to make every search more immediate and every intervention more effective. Thanks to MAHLE's expertise and the integration of artificial intelligence, diagnostics enter a new era of simplicity and intelligent performance.

AI Power Search marks a significant leap forward in MAHLE's ongoing journey to make diagnostics smarter, more personalized, and user-centric. Its purpose is to simplify daily tasks, reduce technical complexity, and provide tools that truly align with the needs of professionals. With AI Power Search, technology evolves from being just a tool to becoming an intelligent partner—anticipating needs and streamlining every step of the repair process.

A new search experience

Using the search bar on the app's welcome screen, users can now access an advanced search function that can understand what they are looking for, even if it is not a literal search term.

It is no longer necessary to know the exact name of a system or function: a generic description, a similar term or even a misspelled word will do. Artificial intelligence recognizes keywords, synonyms and approximate descriptions, naturally handling typos and inaccuracies.

Efficiency and professionalism in the workshop

Thanks to quick access to the desired functions and systems, AI Power Search allows you to:

- Reduce problem identification time
- Eliminate errors due to different or non-standard terminology
- Speed up workflow, improving productivity
- Increase the accuracy of interventions
- Offer a more professional and modern service to customers

All these features are essential in contexts where speed and clarity are fundamental, such as in multi-brand workshops, rapid service centres and body shops.

AI POWER Search detects the error and suggests the most relevant diagnosis

SCORE	VEHICULE	ANNEES	CATEGORIE	VARIANTE
3.61	FIAT 500 (312)	2007 -	Diagnostic	Tableau de bord MARELLI EP 2 - (42014)
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.3 D Multijet (312AXB1A) 169A1 000 EDI (injection électronique diesel) MARELLI 6F3 EURO-4 -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.3 D Multijet (312AXA1A) 312B5 000 EDI (injection électronique diesel) MARELLI 6F3 EURO-4 -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.3 D Multijet (312CXB1A) 169A1 000 EDI (injection électronique diesel) MARELLI 6F3 EURO-4 -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.3 D Multijet (312AXE1A) 169B1 000 EDI (injection électronique diesel) MARELLI 6F3 EURO-4 -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.3 D Multijet (312CXE1A, 312AXE1A) 169B1 000 EDI (injection électronique diesel) MARELLI 6F3 EURO-4 -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.2 (312AXA1A) 169A4 000 EFI (injection électronique essence) MARELLI SF8BMR -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.2 (312CAX1A, 312AXA1A) 169A4 000 EFI (injection électronique essence) MARELLI SF8BMR -
3.61	FIAT 500 (312)	2007 -	Diagnostic	1.2 LPG (312AXA1A) 169A4 000 EFI (injection électronique essence) MARELLI SF8BMR -

Relevant results, instantly

At the core of AI Power Search is MAHLE's proprietary algorithm, which assigns relevance scores to results and ranks them accordingly. This ensures that the most useful and pertinent information appears at the top of the list -dramatically reducing navigation time and boosting operational efficiency.

RemotePRO - device

From now on you will no longer have 'impossible missions' in your workshop: with MAHLE's remote diagnostics you can rely on a whole team of technicians ready to assist you and work for you.

It is the remote diagnostic support solution that complements and enhances your MAHLE self-diagnosis. Thanks to the connection with CONNEX® self-diagnosis, a team of specialised professionals and a considerable variety of original diagnostic tools is at your disposal on a daily basis, enabling you to tackle any diagnostic challenge.

- Service can be activated on all CONNEX platforms (stand alone, iOS, Windows, Android)
- More than 20 specialised technicians, experts in self-diagnosis and repair
- More than 100 original OE diagnostic tools
- More than 60 brands covered
- Service with the best service coverage during working hours, including Saturdays
- Pay per Use solution (MAHLE Coins): no charge if the service is not used
- DoIP protocol supported; 4 simultaneous CAN-BUS channel

Simple operation; immediate response

You can now access remote diagnostics at any time, by simply activating the appropriate service on your CONNEX.

By connecting the RemotePRO interface, you allow vehicle-specific data to be shared with remote service operators. In this way, thanks to the acquisition of all useful elements and thanks to a convenient chat from CONNEX it will be possible to complete the service in the blink of an eye.

Final Report

At the end of each operation, you will receive an email containing a detailed report of the operation, which you can also share with your customer.

At any time, it will be possible to query the status and outcome of each request.

Available services

Preliminary Scan + error deletion	Scan to be performed upon acceptance of a repair job, including error deletion
End Scan + error deletion	Scan to be carried out at the end of a repair job, including error deletion
Calibration	System calibration, including ADAS modules
Programming + calibration	Component activation and subsequent calibration
Programming / coding	Programming and/or coding of modules or sensors, following the operation
Service Reset	Procedures required during routine/periodic maintenance work
Special configurations and investigations	Support and diagnostic investigations for specific issues
Key Encoding	Transponder Key Programming Procedure

RemotePRO Air

With RemotePRO Air, MAHLE Diagnostics evolves into an advanced, Vehicle Connected Technology-based service that creates value before, during, and after the intervention. By leveraging the native connectivity of modern vehicles, it delivers an innovative, flexible, and highly professional solution that enhances every phase of the diagnostic process.

Contactless diagnostics, even before the vehicle arrives

RemotePRO Air allows workshops to remotely check the status of a vehicle, even before it physically enters the workshop. Currently available for BMW, Mini and Mercedes-Benz vehicles (with connected vehicle technology), this feature opens up new operational possibilities:

- More accurate planning of repairs and spare parts supply
- Reduction of unnecessary dismantling and extra costs
- Optimization of schedules and resources

Total flexibility: pay-per-use model

The RemotePRO Air service is available on a pay-per-use basis, with payment via MAHLE Coin, to ensure maximum flexibility and adaptability to the needs of each workshop.



RemotePRO Air is also perfect for **fleet management**, through remote monitoring of the status of the vehicle fleet and planning of repairs at the optimal times, preventing unexpected downtime.

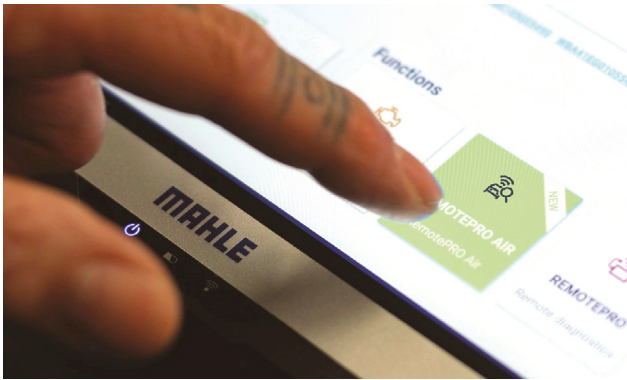
The car owner encounters a problem with their vehicle and calls their repairer to make an appointment

The repairer consults RemotePRO Air in real time, performs an initial diagnosis of the problem, immediately orders the necessary spare parts and makes an appointment for a quick repair, without wasting time for their customer and their workshop team.

A few days later, the repairer performs a new remote diagnosis to ensure that the problem has been completely resolved.

Not "just" remote diagnostics

Vehicle Connected Technology diagnostics open new opportunities for independent workshops. Optimized workflows and an expanded service offering make every job faster, more accurate, and more professional, delivering higher-quality support and strengthening customer loyalty.



Preventive diagnostics for warranty and maintenance contracts

RemotePRO Air allows you to organize repair activities in advance, offering a real competitive advantage:

- New revenue opportunities
- Customer loyalty through proactive service
- Early detection of faults or anomalies

Post-intervention follow-up: quality and loyalty

RemotePRO Air does not stop at the initial diagnosis. After the intervention, it allows you to monitor the status of the vehicle over time, offering:

- Loyalty strategies based on continuous monitoring
- Greater quality assurance
- Fewer complaints and returns to the workshop
- Timely interventions without calling the customer back
- The ability to offer premium services such as reporting, alerts and preventive maintenance

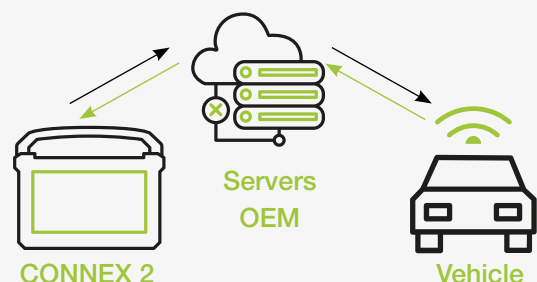
Bringing vehicles and workshops closer than ever.

RemotePRO Air is designed to simplify access to connected-vehicle diagnostic data through a secure, linear, and fully digital workflow. The architecture involves three key components: CONNEX 2, the vehicle manufacturer's servers, and the vehicle owner's mobile app.

How it works:

1. Vehicle identification via VIN in CONNEX 2
2. Request submission to OEM backend servers
3. Owner approval (*) through the OEM smartphone app
4. Collection and processing of ECU telematic data
5. Instant delivery of the diagnostic report to the workshop (and CONNEX 2)

(*) first time only



ODO-Scan

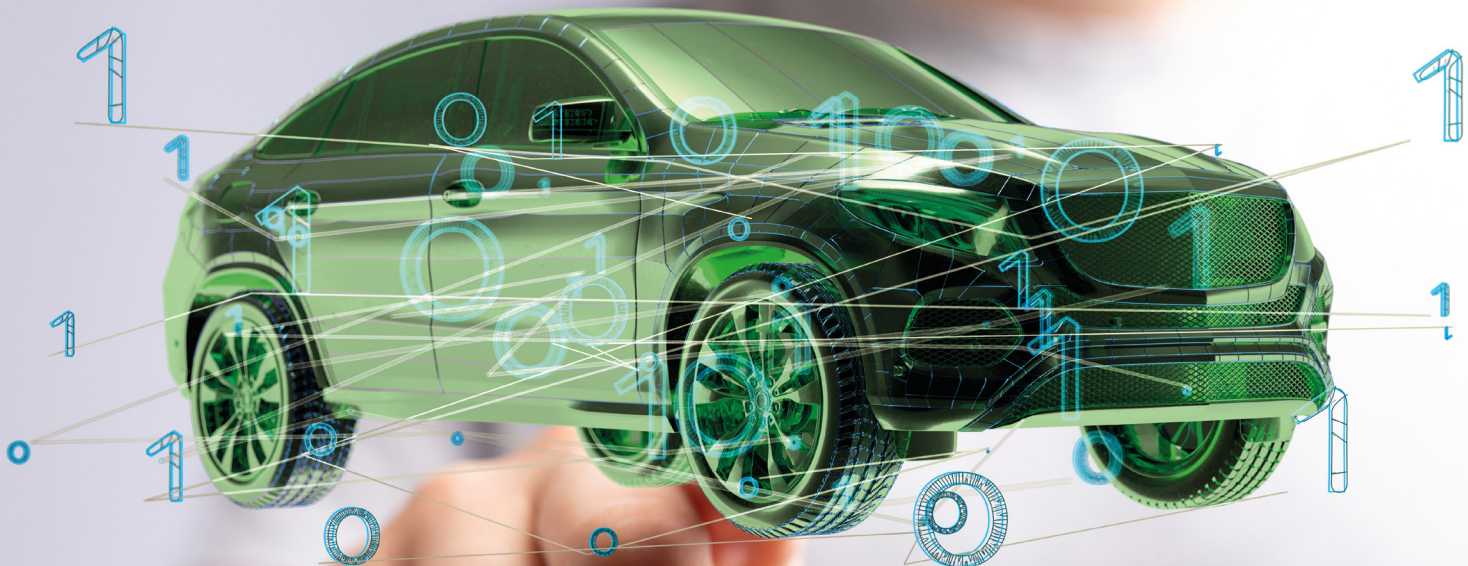
The ODO-Scan function is dedicated to those professionals who need to know just about everything of the car in their hands. Through ODO-Scan analysis, any diagnostic intervention will achieve even more value.

Not only Odometer

MAHLE wanted to include a real specialist's function in its diagnostic software: measurement and analysis of the vehicle's mileage. This is the principle that **ODO-Scan** exploits, relating all the mileage values saved in the vehicle's ECUs. From viewing this data, the operator may find anomalies in the vehicle's mileage management.

Its use is recommended when...

- Assessing car wear and tear (e.g. in the second-hand market)
- The original odometer has been replaced
- Doubts arise about the actual status of a vehicle



Other functions

In one tool, a world of possibilities and services with the aim of simplifying work.

Automatic search

It is the function that takes advantage of the software's self-learning capabilities. The vehicle identification algorithm is supported by a continuous learning mechanism on the associations between VIN and related car model.

Special Functions

- **Service Function** - Brings together repair functions for routine and extraordinary vehicle maintenance by making them accessible with a single click.
- **Body Specialist** - Brings together procedures that enable easy replacement and reset of the Body Computer system, restoring its original configurations.
- **Start & Stop** - For proper management and maintenance of the Start & Stop function, through instructions and diagnostic functions at the click of a button.
- **PUK - Pin Unlock Key** - Pincode retrieval function for key reprogramming procedures.
- **Tow Bar** - Function for the correct configuration and management of the tow bar, through a wizard that allows you to perform the set of diagnostic operations necessary for the installation/uninstallation of the device.

CONNEX Thru

Access portal to the Pass-Thru world, available through SMART THRU (optional), an accessory approved by the major automakers providing the service, for use with a PC terminal (Windows).



CONNEX 2 Technical Data



DIAGNOSTICS	CONNEX 2 1010601781XX	CONNEX 2 PLUS 1010601782XX	CONNEX 2 SMART 1010601783XX
Communication protocols		CAN (ISO 15765-4) CAN-FD (ISO 11898-1:2015) Single Wire CAN (SAE J2411) DoIP (ISO 13400) KWP 2000 (ISO 14230) ISO 9141-2 SAE J1850 PWM	SAE J1850 VPW (GM Class II) UDS (ISO 14229) SAE J1939 GMLAN (SAE J2284, CAN based) GMLAN (HS CAN) DIAG H [Honda] VW TP 1.0/2.0
Operating system	Android™ 12.0 (Android Enterprise Recommended)	Windows 11 IoT Enterprise	To be paired with Android Windows tablets
Sae J2534 Pass-Thru		SMART-Thru (optional)	
Wireless Connection	TERMINAL: Wi-Fi Bluetooth 5.0 VCI: Wi-Fi 2.4GHz (802.11 b/g/n) Bluetooth 5.0	TERMINAL: Wi-Fi 6 Bluetooth 5.1 4G LTE VCI: Wi-Fi 2.4GHz (802.11 b/g/n) Bluetooth 5.0	Wi-Fi 2.4GHz (802.11 b/g/n) Bluetooth BLE 5.0
Display	TFT LCD 10.1" WUXGA 800 nits Capacitive MultiTouch RESOLUTION 1200 x 800 (std) Resolution 1920 x 1200 (max)	TFT LCD 10.1" WUXGA 1000 nits Capacitive MultiTouch Resolution 1200 x 800 (std) Resolution 1920 x 1200 (max)	-
Camera	Front camera 8K Rear camera 16K	Front camera FULL HD Rear camera 8K	-
Battery	Lithium-ion battery (3.84 V, typical 4990 mAh; min. 4870 mAh) x 2 LifeSupport™ battery replacement technology	Lithium-ion battery (11.1 V, typical 4200 mAh; min. 4080 mAh) x 1	-
Operating temperature	TERMINAL: -29°C ÷ 63°C VCI: 0-50°C	TERMINAL: -29°C ÷ 63°C VCI: 0-50°C	0 ÷ 50 °C
Power	TERMINAL: 65W VCI: 3W	TERMINAL: 65W VCI: 3W	3 W
Military Certifications and IP Grade	TERMINAL: MIL-STD-810H IP66 VCI: IP54	TERMINAL: MIL-STD-810H MIL-STD-461G IP65 VCI: IP54	IP54
Dimensions (W x H x D)	TERMINAL: 275 x 192 x 17.9 mm VCI: 137 x 52 x 31 mm	TERMINAL: 277 x 195 x 24 mm VCI: 137 x 52 x 31 mm (VCI)	137 x 52 x 31 mm
Weight	TERMINAL: 1040g VCI: 110g	TERMINAL: 1220g VCI: 110g	110 g

Activation and Updates.

Renewal E-card	Includes:	MCS	MRI	MTS	MHL
1010601821EX	UPDATE 12 FULL PASS ML1				
1010601822EX	UPDATE 12 FULL PASS ML2		■		
1010601823EX	UPDATE 12 FULL PASS ML3	■	■		
1010601824EX	UPDATE 12 FULL PASS ML4	■	■	■	
1010601825EX	UPDATE 12 ADAS PASS ML1	■			
1010601826EX	UPDATE 12 ADAS PASS ML2	■	■		
1010601827EX	UPDATE 12 EASY PASS ML1				
1010601828EX	UPDATE 12 EASY PASS ML2	■			
1010601829EX	UPDATE 36 FULL PASS ML1				
1010601830EX	UPDATE 36 FULL PASS ML2		■		
1010601831EX	UPDATE 36 FULL PASS ML3	■	■		
1010601832EX	UPDATE 36 FULL PASS ML4	■	■	■	
1010601833EX	UPDATE 36 ADAS PASS ML1	■			
1010601834EX	UPDATE 36 ADAS PASS ML2	■	■		
1010601835EX	UPDATE 36 EASY PASS ML1				
1010601836EX	UPDATE 36 EASY PASS ML2	■			

Configuration change	Description
1010601848EX	UPGRADE EASY PASS TO FULL PASS From Easy Pass to Full Pass / remaining months
1010601849EX	UPGRADE EASY PASS TO ADAS PASS From Easy Pass to ADAS Pass / remaining months
1010601850EX	UPGRADE ADAS PASS TO FULL PASS ADAS Pass to Full Pass / remaining months

MCS = MAHLE Cyber Security
MRI = MAHLE Repair Information

MTS = MAHLE Trouble Shooting[†]
MHL = MAHLE HOTLINE

MRP = MAHLE Repair Plus

[†]Includes Smart Scan

TechPRO® Power Check: for the electrical system

TechPRO® Power Check represents a new generation of portable testers, designed to provide fast and accurate diagnostics of vehicle batteries and electrical systems. Thanks to the integration of MDX-AI by MIDTRONICS, it analyses millions of real data points to provide reliable results in seconds.

Battery and Electrical System Tester with advanced MDX-AI Technology

Designed for the modern workshop, TechPRO® Power Check combines reliability, speed and accuracy. Its intelligent technology makes it an indispensable tool for battery diagnosis, optimising time and increasing service quality. Thanks to MIDTRONICS' MDX-AI technology, the TechPRO® Power Check portable battery tester offers diagnostic capabilities previously unheard of in portable battery testers, making battery testing extremely fast while delivering professional accuracy.

When to use Power Check

- **Preventive maintenance** - periodic battery status checks, preventing unexpected failures.
- **Vehicle check-in** - quick assessment upon arrival at the workshop.
- **Pre-delivery inspection** - battery efficiency check before delivery of new or reconditioned vehicles.
- **Battery warranties** - Generate detailed reports to support warranty claims.
- **Quick Service Diagnostics** - Ideal for quickly identifying recurring electrical problems.



- Müller or Sport clamps
- With or without printer

Benefits

- **Fast and Accurate Diagnosis:** provides results in 10-20 seconds without the need to manually enter battery data, even in the presence of electrical disturbances or when the CCA value is not readable.
- **Intelligent AI Technology:** uses advanced machine learning algorithms to analyse and interpret battery parameters, continuously improving accuracy over time.
- **Intuitive Colour Display:** Equipped with a 3.5" colour screen and a simple, clear interface to make it easy for all users.
- **Wi-Fi connectivity:** Enables over-the-air software updates and direct report sending via email, improving workshop productivity.
- **Robust and reliable design:** Internal rechargeable battery and field-replaceable cables: perfect for intensive professional use.



Test Results - Battery

Good Recharge

In Vehicle Test

12,65 V

617 EN / 700 Rated

Print | Email | System Test

MAHLE

MAHLE

Quick to identify new business opportunities

Quick and accurate battery tests eliminate any uncertainty and wasted time, assessing the need for replacement or maintenance as soon as the vehicle is accepted.

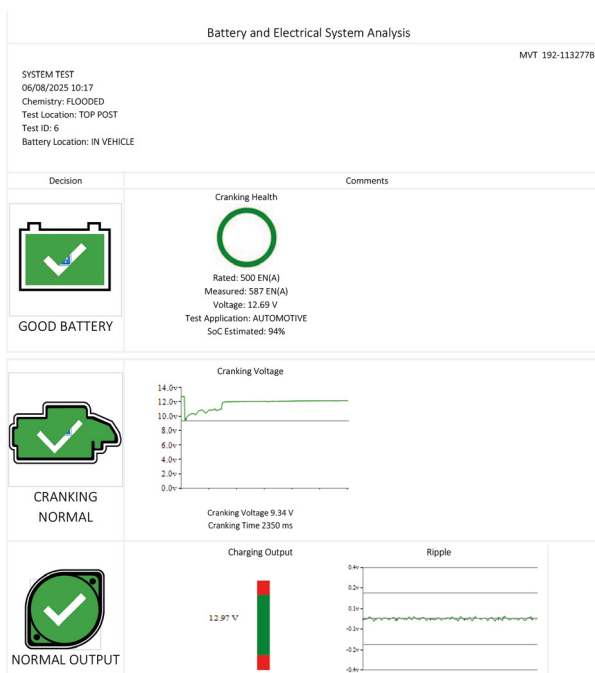
Advanced features

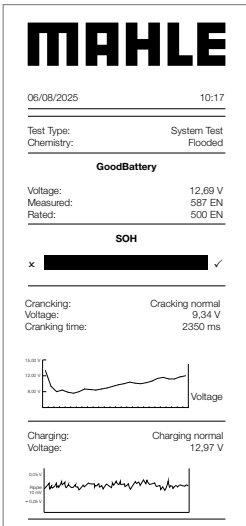
TechPRO® Power Check improves the functionality of standard battery testers, offering distinctive features:

Quick Decision - allows you to perform a quick battery test, **even on a completely flat battery**. The procedure allows you to immediately identify whether the problem is due to battery depletion and therefore requires replacement without further investigation. It also allows the test to be carried out even without further information or input from the operator (e.g. battery type), which may no longer be legible due to wear and tear.

Email report - at the end of the test, a complete report can be sent by email so that the results can be stored and shared with the customer if necessary.

Quick Charge and Retest - with TechPRO® Power Check, it is no longer necessary to fully charge the battery before performing diagnostic tests on the battery and electrical system, which would otherwise prolong the operation time. Simply enter system test mode, start the car for 10 seconds, and the complete cranking and battery health test is available in a few seconds.





Report printing(*) - at the end of the test, the report can be printed on thermal paper.

(*) only on P models equipped with integrated printer

Technical Specifications

Battery Types:	6V e 12V (Flooded, AGM Spiral, Gel, AGM Flat, EFB)
Supported Charging Systems	12V e 24V
Test Standards	CCA, CA, MCA, DIN, SAE, IEC, EN, EN2, JIS)
Wi-Fi Communication	2.4 Ghz 802.11 b, g, n
Dimensions	241 mm x 105 mm x 51 mm
Weight	1,814 Kg



TechPRO® Power Protect: essential in every workshop

The growing demand for energy, combined with heavy daily use (short trips), requires a healthy battery. Good maintenance means paying particular attention to all operations with the engine on/off. TechPRO® Power Protect is designed to replace the battery in order to preserve it.

12V battery: not just for vehicle starting.

The battery is an essential part of the modern vehicle and is the backbone of the proper functioning of all electronic components in a vehicle. The proliferation of control units and other sensors that respond to the current challenges of integrated electronics makes the demand for energy increasingly important for:

- Limiting vehicle consumption.
- Limiting CO2 emissions.
- Improving safety performance (airbags, driver assistance systems, etc.).
- Improving user comfort (heated seats, on-board computers, etc.).



TechPRO® Power Protect is an indispensable solution for supplying the necessary power when the engine is off, especially during diagnostics or when the vehicle is on display in showrooms.

Thanks to its ability to deliver 120 A at 25°C(*) continuously and with a certified performance cycle, it is the most efficient solution even for vehicle brands with the most demanding power requirements.

(*) 116 A if the ambient temperature is 40°C

Why TechPRO® Power Protect in workshops

The maintenance of a modern vehicle in the workshop is based on actions that have a significant impact on the battery:

- Locating any faults through a diagnostic phase involving numerous control units, which can sometimes take a long time (several minutes/hours).
- Calibrating ADAS systems using CONNEX Digital ADAS.
- Reprogramming control units.

Diagnostic work with TechPRO® Power Protect allows you to:

- Follow the manufacturers' recommendations.
- Maintain all the vehicle's electrical systems at a stable voltage, regardless of the vehicle's power consumption being tested.
- Avoid errors due to voltage drops during ADAS system calibration.
- Perform error-free updates to the vehicle's control units.



MAHLE

Welcome to MAHLE TechPRO

Explore hundreds of vehicles, functions and more

Search license plate, VIN, engine code...



MANUAL SELECTION
Select the VCI and
model, vehicle

MAHLE
TechPRO
Power Protect

Maintain the right charge on the go

Thanks to inverter technology, TechPRO® Power Protect is a high-power smart unit capable of maintaining all batteries (lead, lithium, service, etc.) at a perfectly stabilised voltage in any situation that could compromise their performance.

Operation modes

1. Diagnostic Mode

- Compensates for power demands up to 120 A.
- Adjustable voltage from 12 to 14.8 V in 0.1 V steps according to manufacturer recommendations.
- Automatic warning in case of excessive consumption.

2. Battery Charge Mode

- Automatic lead charge curves in 9 distinct stages.
- Lithium charging curve in 9 stages incorporating TechPRO® Power Protect's 'UVP' (Under Voltage Protection) and "EBS" (Equalising Battery System) technologies.
- Automatic 'SOS Recovery' desulphation.
- Charges 50% faster than a traditional battery charger.
- Real-time display of charging progress.

3. Test Mode

- Measures battery voltage (voltmeter).
- Assesses the condition of a vehicle's starting system (starter + battery) when the engine is started.
- Determines the condition of the vehicle's alternator.

4. Showroom Mode

- Compensates for energy requirements up to 120 A.
- Detachable cables for easy access to the engine compartment.
- Can be used without a battery in the vehicle ('No battery' function).
- Automatic restart in the event of a power failure.
- 'Showroom lock' function to lock the charger and prevent tampering.

Battery change function ^(*)

- Maintains power requirements without risk of losing vehicle memory when changing batteries

Power Supply Function ^(*)

- Transforms TechPRO® Power Protect into a continuous stabilised power supply (DC).
- Adjustable voltage in 0.1 V steps: 2>16 V
- Adjustable current in 1 A steps: 2>Imax

Start Assist ^(*)

- Precharges the battery of thermal vehicles and delivers the maximum current of the battery charger during the engine start phase.

^(*) activation available on request

Traceability

Charging data is saved in the internal flash memory and sent to a PC via WiFi connection.

Flexible Voltage

The proprietary '**Flexible Voltage**' technology makes the device compatible with all power ranges (85 V <-> 265 V), compensating for drops or instability in the mains supply and thus protecting the vehicle's electronics and the charger. In the event of a brief power failure, the **Auto-Restart** function restores the settings from the moment of the interruption. and the user.

Active PFC correction system

Active power factor correction (PFC) system, which optimises and improves the performance of the device. 2000 W of power with 95% efficiency -> 1900 W transferred to the battery.



Its reduced height (only 13 cm) and adjustable cable length (5 metres, with a diameter of 25 mm to prevent any voltage drop) make it a multi-purpose tool, ideal for any situation where a battery support unit is required.

Maximum power protection

The electronics are programmed to monitor the current and voltage supplied by the cables at all times.

Polarity reversal, sparks and short circuits are promptly detected and trigger the device's protection system, preventing damage.

- Abnormal low voltage protection
- Internal thermal protection of the battery charger
- Reverse polarity protection
- Battery overvoltage protection
- Battery disconnection protection
- Charging time protection

In addition, a **fan cooling system** maintains the correct temperature, ensuring **IP40 protection**.

Which batteries?

- **Lead batteries (GEL, AMG, EFB)**, both open and sealed. They feature an automatic desulphation phase with 8 charging steps.
- **Lithium batteries (LifePo4)**. They feature 9 charging steps, with a wake-up phase if the battery has gone into protection mode. They also feature a cell voltage balancing phase.

If you are unable to correctly identify the battery type, you can use the **Easy Charge** function.

Finally, for **Midi-Hybrid batteries**, a specific 12V service battery charging function is available, which resolves the 48V battery protection lock.

Technical features

Nominal supply voltage	220-240 VAC ~ 50/60Hz 100-127 VAC ~ 50/60Hz
Nominal power	100-127 Vac - 1500 W 220-240 Vac - 2000 W
Nominal output voltage	12 VDC
Nominal output current	100-127 Vac - 100 A 220-240 Vac - 120 A
Dimensions	333 x 130 x 270 mm
Weight	10,4 Kg

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