

MAHLE



AC Service

Be connected with the
new A/C Service generation



BrainBee[®]
WORKSHOP SOLUTIONS



9380

R134a



UV DYE
LUBRICANT
DYE

Stay cool – with our wide range of A/C stations



R134a series
Multigas series
R1234yf series



BRAIN BEE is a leading trademark of A/C stations. Our focus is on designing and developing innovative solutions and offering robust A/C stations that perform their work independently and without problem, making everyday work easier in any vehicle workshop.

You give your all to ensure that your work is always as perfect as possible, so that workshops, as well as, couriers, truck drivers, farmers, or construction workers can do their work with confidence. That's why we've got your back.

Key features of our A/C stations

- Super Charge® system guaranteed 100% system charging, regardless of the ambient temperature or engine temperature
- Patented Eco Lock® quick couplers prevent gas from escaping
- Oil Care System (patented): continuous air dehydration process inside the oil bottles
- One-touch opening system that reduces service time by 50% (available for AIR-NEX 9350/9380 and AIR-NEX 9450/9480)
- Vehicle database with connection diagrams, automatic updates via WIFI or USB stick
- WiFi or Bluetooth connection

Stations and refrigerants cross-reference

All AIR-NEX stations are equipped with Super Charge® function (patented). They allow fully automatic refrigerant/vacuum recovery cycles and leak testing. Thanks to WiFi and Bluetooth(*) connection, it is possible to take advantage of additional functions such as: Automatic Update (Software And Database), Remote Control, Remote Service, Report WiFi Printer, User Interface and Apps (iOs and Android).

AIR-NEX R134a

12 l



AIR-NEX 9310
AIR-NEX 9320

20 l



AIR-NEX 9350
AIR-NEX 9380

AIR-NEX R1234yf

12 l



AIR-NEX 9410
AIR-NEX 9420

20 l



AIR-NEX 9450
AIR-NEX 9480

⁽¹⁾ Except for AIR-NEX 9310 and AIR-NEX 9410

Our innovative technologies at a glance

Super Charge®

In all ambient conditions, the station is 100% guaranteed (patented feature) to charge the system with the programmed quantity of refrigerant, irrespective of the temperature of the environment or engine, thus reducing charging times to a minimum.

Eco Lock®

The Eco Lock® quick couplers (patented feature) prevent the “Puff” effect during every service (thus saving 2 g of refrigerant for each operation). This feature also allows to check for leaks before the end of the charge operation, ensuring safety and greatly helping to protect the environment.

Oil Care System

Process whereby air within the oil bottles is continuously dehumidified (patented feature). One of the aims of the A/C Service is to remove humidity from the system. Since oil is highly hygroscopic, it absorbs humidity, which then ends up being put into the system. It also increases electrical conductivity, which is extremely harmful for electric compressors.

Air Purge System®

Automatic purging of non-condensing gas: special algorithm ensures that the purging of non-condensing gas is only recommended when actually necessary. This way, you can decide for

yourself whether you wish to carry out this procedure, and always stay in complete control of the station, while reducing accidental refrigerant leaks to a minimum.

HPV®

The HPV (High Precision Vacuum) feature allows reaching an extremely high level of vacuum, so that even the tiniest residues of humidity can be removed from air conditioning systems.

Long Life Pump®

The special Long Life Pump® feature regenerates vacuum pump oil, thus extending its life to up to 1,000 hours.

N-Leak Test

With the optional nitrogen kit, you can perform a leak test on all air conditioning systems. This function is included as standard on all BRAIN BEE stations, to be combined with the optional kit.

Agri & Work

The special Agri & Work feature includes an agricultural and construction machinery database and a special multi-stage program, specifically designed for this type of vehicles that are often equipped with special air conditioning systems, the volume of which is unknown.

Special features (available for some models)

- For **R134a** and **R1234yf** (Optional IDX Identifier)
- **Flushing** (with standard kit or VAS kit)
- **MULTIPASS** allows additional filtering, in a closed loop, of the recovered refrigerant fluid
- **APP** remote Display
- **R.O.U.** (with optional R.O.U. accessory), ensures safe recovery from vehicles containing gas of unknown origin
- **Hybrid Vehicles function**, allows flushing the pneumatic circuit and the charge hoses of the station to service vehicles equipped with an electric compressor
- **Oil Clean** (ensures oil is recovered and discharged even under the most extreme work conditions)

AIR-NEX 9310

AIR-NEX 9410

With the AIR-NEX 9310 (R134a) and AIR-NEX 9410 (R1234yf) your workshop can advance to the highest technological level in air conditioning servicing without major investment, while also guaranteeing maximum quality.

This station incorporates all the technical finesse of our large BRAIN BEE A/C stations. It is compact, mobile and sturdy. Using the AIR-NEX line is simple and intuitive, making them a perfect

second unit or an ideal mobile solution. The AIR-NEX 9310 with optional Agri & Work is the perfect assistant to every agricultural and construction machinery engineer.

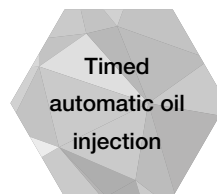
The special Agri & Work feature includes an agricultural and construction machinery database and a special multi-stage refrigerant injection mode, specifically designed for this type of vehicles that are often equipped with special air conditioning systems, the volume of which is unknown.

Key features

- Autom. purging of non-condensing gas (manual for AIR-NEX 9310)
- Export of reports as PDF files via USB pen drive
- Easy activation via App
- Timed automatic oil injection
- Oil Clean function
- Oil bottles: 2 (fresh oil, used oil)
- Agri & Work function (AIR-NEX 9310 only)
- Made by MAHLE

Technical data

- Dimensions: 544 x 617 x 957 mm
- Weight: 65 kg
- Refrigerant tank: 12 l
- Compressor: 8 cc
- Eco Lock: optional
- Hybrid Function: optional
- N-Leak test Function: with external optional kit
- Thermal printer: optional
- Gas identifier: optional



AIR-NEX 9320

AIR-NEX 9420

AIR-NEX 9320 and AIR-NEX 9420 look simple, but are extremely performing: you just cannot miss the new BRAIN BEE AIR-NEX range.

Fully automatic stations, with which the workshop can access the extraordinary MAHLE technology for A/C systems R-134a (9320) or R-1234yf (9420).

The simple and complete user interface on the 7" high resolution display guides the less experienced operator to maintain total control of the station, thanks to the various customization pos-

sibilities. All updates, software and databases, are self-installed thanks to the integrated WiFi connection. The Nexus-Print feature and the export of reports as PDF files to USB sticks are integrated.

Designed for systems operating with R134a gas, AIR-NEX 9320 can be easily converted into R1234yf ⁽¹⁾.

⁽¹⁾ R1234yf READY – convertible with special kit

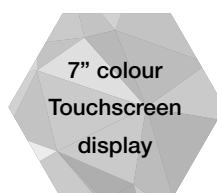
Key features

- 7" High Visibility Touch Screen Display
- WiFi
- Bluetooth Connection
- Flushing ⁽²⁾
- Hybrid Vehicles function ⁽²⁾
- N-Leak Test ⁽²⁾
- Autom. purging of non-condensing gas
- Agri & Work function (for AIR-NEX 9320 only)
- Made by MAHLE

Technical data

- Dimensions: 544 x 617 x 957 mm
- Weight: 65 kg
- Refrigerant tank: 12 l
- Compressor: 14 cc
- Thermal printer: optional
- Gas identifier: optional

⁽²⁾ Optional kit required



Gas R134a

Gas R1234yf

AIR-NEX 9350

AIR-NEX 9450

AIR-NEX 9350 and AIR-NEX 9450 are the perfect compromise for those who want complete stations, equipped with UV Test function, at a convenient price level.

The new oil bottle and the UV Dye bottle are both equipped with Oil Care System, the special cap that prevents oil contamination with moisture in the air. Simple to use, thanks to the intuitive graphics of its touch interface, and due to its capacitive display, that allows to operate even when wear-

ing protective gloves. All updates, software and databases are self-installed thanks to the integrated WiFi connection. The Nexus-Print feature and the export of reports as PDF files to USB sticks are integrated.

AIR-NEX 9350 can be easily converted for managing the R1234yf ⁽¹⁾ thanks to convenient conversion kits and special software.

⁽¹⁾ R1234yf READY – convertible with special kit

Key features

- 7" high visibility touchscreen display
- One-Touch liftdoor system
- WiFi
- Bluetooth
- UV Dye injection
- Flushing ⁽²⁾
- Hybrid Vehicles function ⁽²⁾
- N-Leak test ⁽²⁾
- Agri & Work function (for AIR-NEX 9350 only)
- Oil Care System
- Autom. purging of non-condensing gas
- Integration with APP (iOS and Android) ⁽²⁾
- Made by MAHLE

Technical data

- Dimensions: 700 x 750 x 1100 mm
- Weight 85 kg
- Reservoir capacity: 20 l
- Compressor: 14 cc
- Thermal printer: optional
- IDX500 Gas identifier: optional

⁽²⁾ Optional kit required



AIR-NEX 9380

AIR-NEX 9480

Top Level A/C stations in the series. You could not wish for more!

Highly performing, they offer all the unique selling points of the AIR-NEX range, plus the convenience of having an integrated circuit for POE oil and POE UV Dye, necessary for those who frequently service hybrid or electric cars, alternating with cars with traditional engines. The integration with the "Remote Display" App ensures practical and interactive usage and is also aimed at making the recharge service a customer retention tool. Recharge and Recovery are entirely automated processes: this en-

sure flawless results, while users can engage in other activities. All updates, software and databases are self-installed thanks to the integrated WiFi connection. The Nexus-Print feature and the export of reports as PDF files to USB sticks are integrated. AIR-NEX 9380 too, for R-134a, can be easily converted for managing the R-1234yf ⁽¹⁾.

It can even be further upgraded with advanced functions, thanks to the optional integration with BRAIN BEE self-diagnosis tools.

⁽¹⁾ R1234yf READY – convertible with special kit

Key features

- 7" high visibility touchscreen display
- One-Touch liftdoor system
- WiFi
- Bluetooth
- Dedicated circuit for POE oil and POE UV Dye (For Hybrid/Electric vehicles)
- Flushing ⁽²⁾
- Hybrid Vehicles function
- N-Leak Test ⁽²⁾
- Agri & Work function (for AIR-NEX 9380 only)
- Oil Care System
- Autom. purging of non-condensing gas
- Integration with APP (iOS and Android)
- Made by MAHLE

Technical data

- Dimensions: 700 x 750 x 1100 mm
- Weight 85 kg
- Reservoir capacity: 20 l
- Compressor: 14 cc
- Thermal printer: optional
- IDX500 Gas identifier: optional

⁽²⁾ Optional kit required



R.O.U. - Recovery Only Unit

R.O.U. is the BRAIN BEE equipment designed for the recovery only of the vehicle's contaminated refrigerant and must be used in combination with the BRAIN BEE A/C recharge station and its Gas Identifier.

The R.O.U. system (patented) becomes indispensable when, after having ascertained the non-purity of the gas contained in a

vehicle A/C system under maintenance, it is not recommended (or even prohibited, according to the specifications of car manufacturers) a direct recharge without first making the emptying of the A/C system. R.O.U allows the recovery of the contaminated gas, and completes the emptying in just 30 minutes, through phases guided by the A/C station software.

Technical features

- Vessel capacity: 2.4 l
- Maximum operating pressure (PS): 18 bar
- Length of external HP and LP hoses: 1.5 m
- LP Gauge: Analog, 80 mm, pulse free, 1.0 class
- Operating temperature: 10-50°C
- Dimensions: 700 x 700 x 1000 mm
- Loadless weight: 12 kg approx





VAS Flushing Kit

Accessory kit for flushing systems and components. Conforms to the requirements of German automakers. The 6-litre tank and the hose set with 3/8" SAE connections are a guarantee of maximum efficiency. The VAS flushing tool is additionally equipped with a glass filter, which enables visual monitoring to optimise servicing.

VAS Flushing Kit technical data

Tank capacity	6 l
Max. operating pressure (Ps)	20 bar
Pressure equipment class (Dir. 97/23/CE)	II
Glass filter	
Length of hose	2 x 1.5 m

Oil Care System

Why it is important

Oil is hygroscopic and if it absorbs humidity, electric conductivity increases, which is very dangerous for hybrid and electric vehicles. One of the objectives of the maintenance service is to dehumidify the system, therefore using "damp" oil would make no sense.

Oil Care System

The "Oil Care System" consists of a special cork filled with material that separate humidity from air during oil suction phase – this way it avoids the humidity contaminate the oil (air is completely dry).



Gas Identifier

Before servicing air conditioning systems, the optional external gas identifier can be used to identify the refrigerant, so that the A/C station can then charge the system based on the results. The gas identifier is used before the hoses of the A/C station are connected to the vehicle's air conditioning system. Only the correct sequence during use ensures that the gas in the vehicle is correctly identified. The hoses therefore cannot be connected if the refrigerant is not sufficiently pure. This prevents damage to the A/C station.

Gas Identifier technical data

Power	2 V @0.8 A max
Identification threshold	≥ 92%
Identification method	%
Capillary hose connection	3 m
Connection	USB
Test Time	30 sec.
Calibration	Automatic
Sample Calibration	Vapor Only
Temperature	10°C–50°C
Dimensions	147 x 115 x 57 mm
Weight	0.500 kg

Accessories for your A/C stations

BRAIN BEE's service does not come to an end once you have bought our equipment. BRAIN BEE provides a wide range of accessories and spare parts to maintain your A/C station's high level of performance.

Code	Description	Quantity per package
1010350397XX	134 to 1234 KIT 1	1
1010350399XX	AIR-NEX COVER	1
1010350395XX	AIR-NEX PRINTER KIT	1
1010350128XX	CLIMA PRINTER KIT (NO WIFI)	1
1010750098XX	DUST COVER 9x10 A/C UNIT	1
1010350472XX	ECOLOCK UPGRADE KIT (R-1234yf)	1
1010350113XX	ECOLOCK UPGRADE KIT (R-134A)	1
1010350289XX	EXPERT KIT	1
1010350053XX	FLUSHING KIT 134_1234 M SERIES	1
1010350107XX	HOSES EXTENSION KIT 4,5M (HP - LP)	1
1010350401XX	HYBRID FUNCTION	1
1010350129XX	HYBRID PRO KIT (NO WIFI)	1
1010350520XX	HYBRID PRO KIT (WIFI MY23)	1
1010350404XX	IDX500 GAS IDENTIFIER (No WiFi) 1	1
1010350393XX	IDX-500 Gas Identifier MY 2018 1	1
1010350276XX	KIT FLUSH BB UNIVERSAL R-134a/R-1234yf	1
1010350298XX	KIT SERVICE ACX 1	1
1010350262XX	NITROGEN LEAK TEST 134 TO 1234 KIT	1
1010350130XX	NITROGEN LEAK TEST KIT	1
1010350288XX	NITROGEN/HYDROGEN LEAK DETECTOR KIT	1
1010350326XX	R.O.U. - Recovery Only Unit R134a R1234yf / New 2019 1	1
1010350491XX	UNIVERSAL FLUSHING KIT BMW (R134A/R1234YF)	1
1010350033XX	UV KIT	1
1010350250XX	CARD CLIMA SOLUTION	1

9480

USED

AG



A healthy air conditioning

The replacement of the filter-dryer every 2 years and also of the cabin filter once a year or every 15.000 km completes the A/C Service. It can be done with the regular A/C checks and allows the workshop to offer the customer a complete service and a healthy air conditioning.

A/C check (once a year/every 15,000 km)

- Replace the cabin filter
- Visually inspect all components
- Perform function and performance test
- If necessary, disinfect the evaporator

A/C service (every two years)

- Perform all services included in the A/C check (see above)
- Replace the filter-drier
- Change the refrigerant
- Check leaktightness
- If necessary, disinfect the evaporator

Change the cabin filter

It filters dust, pollen, and dirt particles out of the air before they can reach you in the cabin. The air conditioning check therefore always includes the regular replacement of the cabin filter, improving the quality of the air and increasing safety.

Good to know!

In comparison with conventional cabin filters, MAHLE's CareMetix® cabin filters ensure that no intensive odors, mold, bacteria, or allergens enter the vehicle interior.

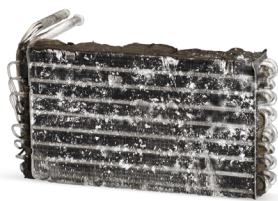
Replace the filter-drier

The filter-drier removes dirt particles from the refrigerant and absorbs moisture. As the capacity of the filter-drier is limited, it must be regularly replaced so that the A/C system can function reliably.

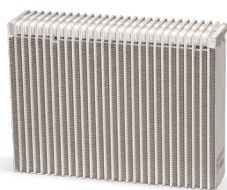
Disinfect the evaporator

Condensation builds up in the inaccessible, dark, and dank environment between the fins of the evaporator — a breeding ground for bacteria and fungi. That's why the evaporator is disinfected during the A/C check.

Evaporator



Without A/C maintenance

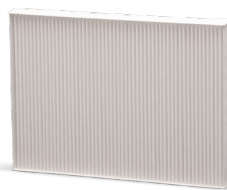


With A/C maintenance

Cabin-filter

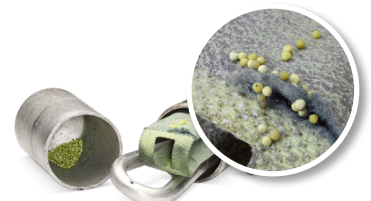


Without A/C maintenance



With A/C maintenance

Filter-drier



Without A/C maintenance



With A/C maintenance



All MAHLE filters for your air conditioning system.



Technical data

	AIR-NEX 9310 R134a	AIR-NEX 9410 R1234yf	AIR-NEX 9320 R134a
Refrigerant	R134a	R1234yf	Multigas
Convertible to refrigerant R1234yf	-	-	■
Refrigerant analyzer	▲	▲	▲
Vacuum pump	50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar
Refrigerant tank	12 L	12 L	12 L
Compressor displacement	8 cc	8 cc	14 cc
Dryer filter capacity	27 kg	27 kg	100 kg
Recovery rate	>95%	> 95%	> 95%
HP and LP gauges	Analog 80mm, 1.6 Class	Analog 80mm, 1.0 Class	Analog 80mm, 1.0 Class
Pressure sensors	LP	LP	LP
Oil bottle capacity (ml)	250	250	250
Oil bottles	2 - New oil, Used oil	2 - New oil, Used oil	2 - New oil, Used oil
Bottles with Oil Care System (hermetically sealed containers)	-	-	▲
Oil scales	-	-	1
Automatic recovery and injection of refrigerant	■	■	■
Automatic recovery of compressor oil	■	■	■
Automatic injection of UV dye	-	-	-
Manual operating mode	■	■	■
Automatic hose compensation	■	■	■
Air purge system (Purging of non-condensing gas)	Automatic check with manual release	Automatic	Automatic
Length of charge hoses	3 m	3 m	3 m
Optional: Extension of service hose to	7,5 m	7,5 m	7,5 m
Display	B&W 35x200 4 lines/30 characters	B&W 35x200 4 lines/30 characters	7"Colour TFT capacitive screen
Keypad	4 direction keys, Enter, Esc	4 direction keys, Enter, Esc	Touch screen
Menu languages	25	25	25
Super Charge®	■	■	■
Long Life Pump®	■	■	■
Eco Lock®	▲	▲	▲
A/C system pressure test (dynamic performance testing of the A/C system with final report)	■ (optional report printout)	■ (optional report printout)	■
Tank pressure reading	■	■	■
Compatibility with hybrid vehicles	▲	▲	▲
Vehicles database	■	■	■
Electric vehicles database	■	■	■
Agricultural and construction machinery database	▲	-	▲
Nitrogen leak test function (optional external kit)	■	■	■
Nitrogen leak test function (integrated Manifold)	-	-	-
Forming gas leak test function (optional external kit)	■	■	■
Forming gas leak test function (integrated Manifold)	-	-	-
Standard flushing kit	▲	▲	▲
VAS flushing kit	▲	▲	▲
R.O.U.	-	-	▲
Thermal printer	▲	▲	▲
Nexus-Print (Printout via WiFi with connection to Windows PC)	-	-	■
Remote assistance (anytime, anywhere)	■	■	■
USB interface	■	■	■
Report pdf export to USB stick	■	■	■
WiFi	-	-	■
Bluetooth	-	-	■
ASA Network service	-	-	▲
"A/C Remote Viewer" APP with SMS service	-	-	-
Operating temperature	10°C to 50°C	10°C to 50°C	10 °C to 50 °C
Power supply	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W
Warranty	24 months	24 months	24 months
Certifications	CE, PED	CE, PED	CE, PED

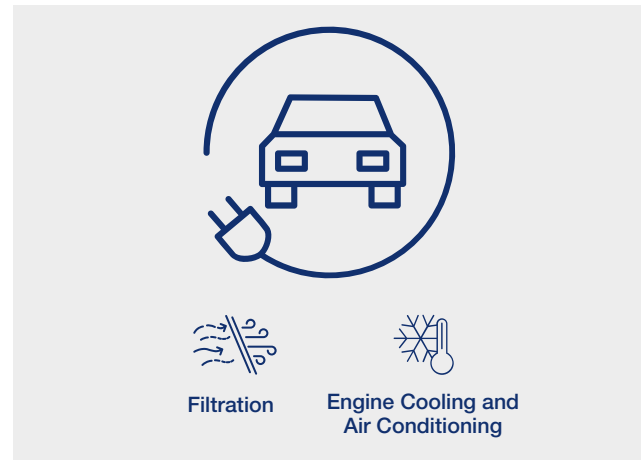
AIR-NEX 9420 R1234yf	AIR-NEX 9350 R134a	AIR-NEX 9450 R1234yf	AIR-NEX 9380 R134a	AIR-NEX 9480 R1234yf
R1234yf	Multigas	R1234yf	Multigas	R1234yf
-	■	-	■	-
▲	▲	▲	▲	▲
50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar	50 l/min - HPV 0.02 mbar
12 L	20 L	20 L	20 L	20 L
14 cc	14 cc	14 cc	14 cc	14 cc
100 kg	150 kg	150 kg	150 kg	150 kg
> 95%	> 95%	> 95%	> 95%	> 95%
Analog 80mm, 1.0 Class	Analog 80mm, 1.0 Class	Analog 80mm, 1.0 Class	Analog 80mm, 1.0 Class	Analog 80mm, 1.0 Class
LP	LP	LP	Tank, LP, HP	Tank, LP, HP
250	250	250	250	250
2 - New oil, Used oil	3 - New (PAG) oil, Used oil, UV dye	3 - New (PAG) oil, Used oil, UV dye	5 - New (PAG and POE) oil, Used oil, UV dye (STD and HYB)	5 - New (PAG and POE) oil, Used oil, UV dye (STD and HYB)
▲	■	■	■	■
1	1	1	5	5
■	■	■	■	■
■	■	■	■	■
-	■	■	■	■
■	■	■	■	■
■	■	■	■	■
Automatic	Automatic	Automatic	Fully automatic	Fully automatic
3 m	4.5 m	4.5 m	4.5 m	4.5 m
7,5 m	9 m	9 m	9 m	9 m
7"Colour TFT capacitive screen	7"Colour TFT capacitive screen	7"Colour TFT capacitive screen	7"Colour TFT capacitive screen	7"Colour TFT capacitive screen
Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
25	25	25	25	25
■	■	■	■	■
■	■	■	■	■
▲	■	■	■	■
■	■	■	■	■
■	■	■	■	■
▲	▲	▲	■	■
■	■	■	■	■
■	■	■	■	■
-	▲	-	▲	-
■	■	■	■	■
-	-	-	-	-
■	■	■	■	■
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▲	▲	▲	▲	▲
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
▲	▲	▲	▲	▲
-	▲	▲	■	■
10 °C to 50 °C	10 °C to 50 °C	10 °C to 50 °C	10 °C to 50 °C	10 °C to 50 °C
230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W
24 months	24 months	24 months	24 months	24 months
CE, PED	CE, PED	CE, PED	CE, PED	CE, PED

Full power: MAHLE products for electric vehicles

MAHLE quality for electric vehicles.

The performance and reliability of electric vehicles is largely determined by the quality and compatibility of the individual components. So choose MAHLE quality for your electric vehicle servicing and repair needs. Each of our products incorporates all the OE expertise that we have acquired over more than 100 years as a development partner to global vehicle manufacturers.

Our continuously updated catalog contains our complete range for electric vehicles and vehicles of all drive types.



Five MAHLE benefits that will help you get ahead

- **Proven quality** from one of the leading suppliers of international vehicle and engine manufacturers.
- **OE competence** gained from over 100 years of company history and as a long-standing development partner to many global manufacturers.
- **The ideal high-performance products** for a long service life for both components and vehicles.
- **Wide range** of components for vehicles with combustion engines, electric motors, and other alternative drive systems.
- **Complete solutions** combining high-quality parts, practical workshop equipment, and services for workshop professionals.

MAHLE AC Essentials Line

MAHLE's service does not come to an end once you have bought our equipment. Our AC Essentials Line, which was specially developed to keep things running smoothly at the workshop, includes all the products and accessories you will need for A/C and cooling systems. AC Essentials Line products have been developed for intensive professional use in our stations, but also bring out the best in other devices that are available on the market.

Products and accessories from the AC Essentials Line:

- PAG/POE oils for refrigerant R134a and R1234yf
- Sanitizing line
- UV test line
- Leak test devices
- Filters
- Pump oil
- Special functions Kits



We guarantee that with our products your Station will perform its best everyday.







Many types of oil are available — which one is recommended?

Whether you're changing the air conditioning compressor oil or topping it up during an air conditioning service: The oil in the air conditioning system performs vital functions — just like the blood in the human body.

That's why using a high-grade air conditioning compressor oil is crucial for ensuring that the system can be used safely and for a long time. Just like in an engine, the use of low-grade or incorrect oils results in increased wear, premature failure of the air conditioning compressor, and loss of the warranty or legally binding guarantee. The wrong choice can lead to damage. Vehicle - or manufacturer - specific instructions must be followed carefully.

PAG oil - features, advantages and effect

Product features

- PAG oils are fully synthetic, hygroscopic oils based on polyalkylene glycol.
- Used during construction by many vehicle and compressor manufacturers in air conditioning systems with R134a refrigerant, available at various viscosities.
- Special new PAG 46 YF and 100 YF oils suitable for both R1234yf and R134a refrigerants.

Advantages and effect

- PAG oils are highly miscible with R134a (PAG 46 YF and 100 YF oils can also be mixed with R1234yf) and are suitable for lubricating the air conditioning systems of most passenger cars and commercial vehicles.
- It is important to choose the right viscosity class when using PAG oils (PAG 46, PAG 100, PAG 150). The vehicle manufacturer specifications and approved products should be taken into account.

POE oil - for hybrid and electric vehicles

Product features

- POE oils are synthetic ester oils based on polyols and fatty acids.
- Electrically insulating.
- Suitable for electric air conditioning compressors in hybrid and electric vehicles.
- Hygroscopic, i.e. must be protected from moisture.

Advantages and effect

Electrically driven air conditioning compressors in hybrid and electric vehicles are driven by an internal electric motor that operates in the high-voltage range. The compressor oil comes into contact with the coil of this electric motor. POE oils do not damage the materials used in the compressor and have an excellent electrical short-circuit resistance.

Comparison of PAG and POE oils

Type of oil	Application	Remark
PAG oils (for refrigerant R134a)	<p>There are various PAG oils with different flow characteristics (viscosities) for use with refrigerant R134a.</p> <p>PAG oils are hygroscopic. This means that cans do not have a long shelf life once opened.</p>	Standard PAG oils are not suitable for refrigerant R1234yf or for electrically driven air conditioning compressors.
PAG oil YF (for refrigerants R1234yf and R134a)	<p>There are also a number of PAG oils with different flow characteristics (viscosities) for use with refrigerant R1234yf.</p> <p>What makes these PAG oils from MAHLE/BRAIN BEE special is that they are not only suitable for use with the refrigerant R1234yf but can also be used with the refrigerant R134a.</p> <p>PAG oils are hygroscopic. This means that cans do not have a long shelf life once opened.</p>	PAG YF oil is suitable for both R1234yf and R134a refrigerants.
POE 80 Hybrid oil (for R134a refrigerant and, in some cases, also for R1234yf refrigerant)	Can be used on all hybrid and electric vehicles with electrically driven compressors that have been filled ex works with POE oil. There are also electrically driven compressors for hybrid and electric vehicles that have been filled ex works with a special PAG oil; POE oil cannot be used for these.	Make sure that the POE oils are suitable for the respective refrigerant.

Product overview

A/C compressor oil



PAG oil/POE oil
Hybrid vehicles
for refrigerant R134a



PAG oil
for refrigerant R1234yf

UV test



Fluorescent dye/
Fluorescent dye
Hybrid vehicles
for refrigerant R134a



Fluorescent dye
for refrigerant
R1234yf



Fluorescent dye
remover trigger



Filters



Dryer filter

Pump oil



Vacuum Pump Oil

Oil Care System



Oil Care Cartridge

Leak test



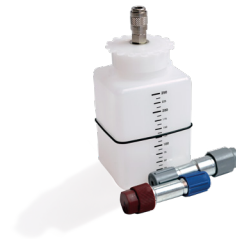
Nitrogen/Hydrogen
leak detector Kit

Flushing



Flushing Kit

Hybrid systems



Hybrid Kit

Service



Expert Kit

Purifying products



A/C system sanitary spray

A/C compressor oil

Our compressor oils for A/C systems guarantee reliable and profitable work on A/C stations. These oils are compatible with all the components of our A/C stations, extending their service life and protecting against compressor wear.

Chemical composition specially for new generation systems

Refrigerant R134a



PAG oil ISO 46

Item no. 1010350038XX

250 ml bottle

Minimum order quantity:
6 bottles



PAG oil ISO 100

Item no. 1010350039XX

250 ml bottle

Minimum order quantity:
6 bottles



PAG oil ISO 150

Item no. 1010350040XX

250 ml bottle

Minimum order quantity:
6 bottles



POE oil 80 Hybrid

Item no. 1010350279XX

250 ml bottle

Minimum order quantity:
6 bottles

Refrigerant R1234yf



PAG oil 46 HFO 1234yf

Item no. 1010350283XX

250 ml bottle

Minimum order quantity:
6 bottles



PAG oil 100 HFO 1234yf

Item no. 1010350284XX

250 ml bottle

Minimum order quantity:
6 bottles



The 250 ml bottle offers practical advantages.

The smaller size has an advantage over the 1-litre bottle, because you are recommended to use up the oil within approximately one month of opening.* With 1 litre of oil at 20 ml per charge, you can charge around 50 A/C systems.

* Depending on environmental conditions.

UV test

Our fluorescent dye is a special tracer oil that becomes fluorescent under UV light. It is ideal for visual searches for possible leaks in the A/C circuit. Its chemical composition means it is compatible with the components of our A/C stations and suitable for every circuit.

Refrigerant R134a



Fluorescent dye

Item no. 1010350041XX

250 ml bottle

Minimum order quantity:

1 bottle



Fluorescent dye hybrid

Item no. 1010350281XX

250 ml bottle

Minimum order quantity:

1 bottle



Fluorescent dye with dispenser – 7.5 ml + hose

Item no. 1010350285XX

7.5 ml syringe

Minimum order quantity:

6 syringes



- Fluorescent dye is the key to avoiding damage due to leaks in the system.
- Choose a bottle size that best fits in with your usual recharging methods.

Refrigerant R1234yf



Fluorescent dye HFO1234YF

Item no. 1010350282XX

250 ml bottle

Minimum order quantity:

1 bottle



Fluorescent dye with dispenser – 7.5 ml + hose

Item no. 1010350286XX

7.5 ml syringe

Minimum order quantity:

6 syringes

Fluorescent dye bottle:

The handy dispenser and chemical composition have been tested to ensure there is no corrosion or damage to system components, and guarantee maximum efficiency during leak tests.

Fluorescent dye syringe:

Using the single-use syringe ensures no refrigerant is removed from the system. When the compressor is switched on, the additive is squirted into the low-pressure port, without the need for any further steps.

Vacuum pump oil



Vacuum pump oil

Item no. 1010350037XX

500 ml bottle

Minimum order quantity:

2 bottles

The quality of our vacuum pump oil cannot fail to impress. It ensures equipment has a long life and protects it from internal damage.



This pump oil mixture is certified for use with HPV pumps and guarantees the best performance.

Filters



Dry filter MY 2018

Item no. 1010350402XX



Dry filter MPP/HPP Line

Item no. 1010350420XX



Dry filter LPP Line

Item no. 1010350421XX



Make sure that you always have a moisture filter to hand so that you can replace them regularly.

All MAHLE recharge stations are equipped with software that indicates when routine replacement of moisture filters is due.

Valves Kit



Valves Kit

Item no. 1010350280XX

The Kit contains 6 different types of needle valves that can be useful during the pre-re-charge phase to avoid leaks at a later stage.

We look forward to your request: info.aftermarket@mahle.com



If you have all the resources you need for a service, you will save both time and money!

UV test



Fluorescent dye remover trigger

Item no. 1010350287XX

250 ml bottle

Minimum order quantity:

1 bottle

The Fluorescent dye remover gets rid of residues of fluorescent dye (tracer oil). Its chemical composition has been tested to ensure no corrosion or damage is caused to system components.

We look forward to your request: info.aftermarket@mahle.com



Since it does not contain any propellant and is non-flammable, there are no restrictions regarding its storage and transport.

Oil Care System



Oil Care Cartridge

Cod. 1010350329XX

3 pcs-box

We look forward to your request: info.aftermarket@mahle.com

The "Oil Care System" consists of a special cork material that separates humidity from air during oil suction phase – this way it avoids that the humidity contaminates the oil.

Why it is so important?

Oil is hygroscopic and if it absorbs humidity, electric conductivity increases, which is very dangerous for hybrid and electric vehicles. One of the objectives of the maintenance service is to dehumidify the system, therefore using "damp" oil would make no sense.



Leak test



Choose the right tool and detect leakage problems immediately.



UV Kit

Complete solution for traditional leak detection using fluorescent dye and a UV lamp. The Kit is enhanced by a special product for subsequently cleaning the system, to ensure the very best results.

This special Kit contains everything you need for tests using fluorescent dye and the UV lamp. Once the dye has been squirted into the system, the UV lamp enables all leaks to be detected. The Kit comes with protective goggles and a special universal degreasing cleanser.
Item no. 1010350033XX



Nitrogen/Hydrogen Leak Detector Kit

For use with smaller leaks that are difficult to find with fluorescent dye. For a clean system without residues.

This Kit version for detecting nitrogen/hydrogen leaks is to be combined with the Nitrogen Leak Detector Kit for leak tests.

The Kit comprises: Nitrogen/Hydrogen Cylinder, hydrogen leak detector and pressure regulator.

Item no. 1010350288XX



Nitrogen Leak Detector Kit

For use during the first overall analysis or for larger leaks. It can be used to test for leaks in A/C systems that are under pressure.

Item no. 1010350130XX



Nitrogen Leak Test 134 to 1234 Kit

Conversion couplers for the leak tests on A/C 1234 stations

Item no. 1010350262XX

- A software function integrates all AC Essentials Line Kits in the MAHLE stations.
- The nitrogen leak test and nitrogen/hydrogen leak detector Kits can deliver significant savings, as unlike free-standing Kits they use the station's own pressure gauges. They also offer a report printout feature.

Nitrogen/Hydrogen Cylinder

1-l spare cylinder for the nitrogen/hydrogen leak detector Kit.

Item no. 1010350296XX



Flushing



Flushing Kit

Item no. 1010350053XX



Flushing Kit R1234 M

Item no. 1010350198XX



VAS Flushing Kit 134a/1234yf

Item no. 1010350150XX

The MAHLE flushing process offers various advantages:

- Special software enables use of the flushing feature from the stations
- Option of printing a report when the process is complete
- Help with removing repair residues



Regular flushing reduces the risk of damage to the system and the station due to impurities.

Our Flushing Kits:

Our flushing Kits include the special filters and valves required for flushing, whereby refrigerant is repeatedly flushed into the circuits of the vehicle recharge stations. They have higher filtration, improved efficiency, more precise cleaning and higher safety levels for protection against possible damage due to impurities in the recharge station.

Hybrid systems



Hybrid Kit

Item no. 1010350129XX

The Hybrid Kit is an accessory that enables the use of the Reset feature. This is vital for replacing the residues of PAG oil in the station. It is therefore essential to switch correctly and safely from servicing a traditional engine to servicing a hybrid vehicle.

Expert Kit



Expert Kit

Item no. 1010350289XX

This is your complete package of everything you need for your A/C station.

Content:

- 2 bottles PAG Oil ISO 46
- 2 bottles PAG Oil ISO 100
- 1 bottle PAG Oil ISO 150
- 1 bottle Fluorescent Dye
- 2 bottles Cabin Sanitary Agent
- 1 bottle POE Oil 80 Hybrid
- 1 bottle PAG Oil 46 Hfo1234yf
- 6 x Fluorescent Dye Hybrid in Syringe – 7.5 ml + Hose
- 6 x Fluorescent Dye HFO 1234yf in Syringe – 7.5 ml + Hose
- 1 Valve Kit
- 1 bottle Fluorescent Dye Remover Trigger



By using original products for A/C stations, you are demonstrating responsible workmanship to the customer.

Purifying products



A/C System Sanitary Spray

Item no. 1010350046XX

400 ml bottle

Minimum order quantity:

4 bottles

Sanitary spray for car A/C systems.



Cabin Sanitary Agent

Item no. 1010350047XX

200 ml bottle

Minimum order quantity:

6 bottles

Special sanitary spray for the interior of vehicles. The Cabin Sanitary Agent can be added to a full service package for A/C systems, without any waste.



Condenser Cleaner

Item no. 1010350048XX

400 ml bottle

Minimum order quantity:

4 bottles

Special, degreasing cleanser for the condenser. The condenser cleaner cleans the condenser to keep it in tip-top condition.



Finishing the recharging process by purifying the circuits for the passenger interior is a sign of high-quality work.

Member



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