MAHLE

ArcticPRO®

Tech | Advanced
Expert | Ultimate

Multi language instruction manual



Contents

1. General instructions

1.1 General notes 09
1.2 General instructions 09
1.3 Environmental precautions 10

2. Identification

2.1 Manufacturer identification 11
2.2 Model identification 11
2.3 Reference directives 11

3. About this manual

3.1 Use of the manual 12
3.2 Recipients 12
3.3 Supply and storage 12
3.4 Symbols used in this manual 13
3.5 Glossary 13

4. Important safety instructions

4.1 Definitions 15
4.2 Operator classification 15
4.3 Personnel safety information 16
4.4 Precautions for equipment operation 20
4.5 Guidelines for the handling of refrigerant 21
4.6 Safety devices 22
4.7 Safety labels 23

5. Description of the equipment

5.1 Application 24
5.2 Standard equipment 24
5.3 Main components ArcticPRO® Tech 25

5.4 Main components ArcticPRO® Advanced 26
5.5 Main components ArcticPRO® Expert 27
5.6 Main components ArcticPRO® Ultimate 28
5.7 User interface 29
5.8 Main menu 32
5.9 E³ CONNECT couplings (Expert/Ultimate) 32

6. Technical features 33

7. Receiving the equipment and unpacking it
7.1 Unpacking 38

8. Commissioning
8.1 Charging hoses kit 40
8.2 Electrical connections 40
8.3 Initial verification 42
8.4 New oil bottle filling 43

9. Software updating 44

10. Settings 45

11. A/C system charge
11.1 Preliminary operations 47
11.2 Non-condensable gas discharge ArcticPRO® Tech 48
11.3 Non-condensable gas discharge ArcticPRO® Advanced 49
11.4 Non-condensable gas discharge ArcticPRO® Expert/Ultimate 50

12. Cycles

12.1 Vehicle selection 51
12.2 Cycles 51
12.3 Cycle data setting 52
12.4 Electric compressor function (vehicle side) 53

13. Additional Functions

13.1 Refrigerant Analysis 54
13.2 A/C Performance Test ArcticPRO® Tech/Advanced 54
13.3 A/C Performance Test ArcticPRO® Expert/Ultimate 55
13.4 Flushing (with optional accessories) 56
13.5 Forming gas leak test 57
13.6 Nitrogen test (external kit Tech/Advanced) 58

14. Maintenance

14.1 Hoses emptying 59
14.2 Air purge 59
14.3 Vessel filling 59
14.4 Zero pressure 60
14.5 Self leak test 61
14.6 E^3 PUMP 61
14.7 Pump oil change 62
14.8 Dryer filter change 63
14.9 Replacement of Active Oil Protection Cartridge 65
14.10 Calibration check 65
14.11 Maintenance of printer (optional Tech/Advanced /Expert) 66
14.12 Periodic checks 67

15. Disposal
15.1 Equipment disposal 68
15.2 Recycled materials disposal 68
15.3 Packaging disposal 68

16. Spare parts 69

1. General instructions

1.1 General notes

All rights reserved.

This manual may not be reproduced, in part or entirely, either in printed or digital form.

Printing is permitted for the exclusive use of the user and operators of the equipment to which this manual refers.

MAHLE Aftermarket Italy S.r.l. and the resources employed in the production of this manual do not assume any responsibility deriving from the improper use of both the manual and the equipment, guaranteeing that the information contained in this manual has been carefully checked.

The product can be subject to changes and improvements. Therefore, MAHLE Aftermarket Italy S.r.l. reserves the right to modify the information contained in this manual without notice.

1.2 General instructions

Check the pressurized equipment before commissioning and carry out periodic inspections according to the local rules and regulations.

The operator is responsible for operating the equipment in conformity with local legislation.

ArcticPRO® equipment is designed for recovering and recycling R134a / R1234yf / R444a / R456a refrigerant fluid from automotive A/C system.

The use of the equipment is intended for repair/maintenance workshops on motor vehicles or similar vehicles.

This equipment is intended solely for use by **professionally trained operators** familiar with the basics of refrigeration, refrigeration systems, refrigerants and the hazards associated with pressurised equipment.

Careful reading of the present manual by the owners, the users and the operators is required for a correct and safe use of the tool.

If the equipment is used in a manner not specified in this manual, the protecion provided by the equipment may be impaired.

The user shall not be entitled to open the product since maintenance operations are reserved to the authorised service centre.

1.3 Environmental precautions

Any service operation with the equipment must be carried out being careful not to disperse fluorinated gases (R134a / R1234yf) into the environment, in order to prevent the greenhouse effect and the subsequent global warming of the planet. The release of refrigerant gas R134a / R1234yf into the atmosphere is forbidden by laws that were enacted within the framework of the Kyoto protocol.

For information only, we will mention in particular, for the European Union, REGULATION (EU) No 2024/573 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024 on fluorinated greenhouse gases.

The waste coming from the service activities must be placed in collection centres foreseen by the enforced laws, they must not be dispersed in the environment and they must not be disposed of with urban waste.

2. Identification

2.1 Manufacturer identification

The AC equipment is manufactured by:

MAHLE Aftermarket Italy S.r.l.
Via Diesel 10/A - 43122 Parma (Italy)
Tel. +39 0521 954411
email info.aftermarket@mahle.com
internet www.mahle-aftermarket.com

2.2 Model identification

The equipment covered by this manual is:

- Models:
  AC 8910, AC 8920, AC 8950, AC 8980

2.3 Reference directives

European Union: CE The equipment complies with the following applicable directives:

- 2014/35/EU - LVD
- 2014/30/EU - EMC
- 2014/53/EU - RED
- 2014/68/EU - PED

Declarations of Conformity are available with the equipment documentation.

3. About this manual

3.1 Use of the manual



This manual is an integral part of the equipment and should be kept by the purchaser in the immediate vicinity of the equipment.

This manual describes the operation of the equipment ArcticPRO®.

- This manual should accompany the equipment when it is transferred to a new user
- The content of this manual has been compiled following the guidelines of the UNI 10893:2000 standard
- It is forbidden for anyone to disclose, modify or use this manual for their own purposes.
- In this manual visible symbols are used to draw attention to specific points, in order to make consultation easier and faster
- It includes all information relating to technical aspect, operation, shutdown of the equipment, maintenance, spare parts and safety

In case of any doubts about the correct interpretation of the instructions, please contact the Technical Assistance Service to obtain the necessary clarifications.

3.2 Recipients

This manual is intended for professionally trained operators in charge of using the equipment ArcticPRO®.

3.3 Supply and storage

This digital manual forms an integral part of the equipment.

Keep it accessible and unaltered until the equipment is decommissioned.

For safety instructions, refer to the printed Safety Manual supplied with the equipment. It must be kept with the equipment until decommissioning.

3.4 Symbols used in this manual

Symbols are used throughout this manual to emphasize key information. The following symbols are used:

	Symbol used to identify a potentially hazardous situation for operators. Such operations can cause serious injury
	Symbol used to identify operations and information that need special attention. These operations must be carried out correctly in order to avoid damaging property or surrounding environment
	Symbol used to identify operations that require careful reading of the indications given in the use and maintenance manual

3.5 Glossary

To make the reading of this manual easier, we have prepared the list of the most important technical terms used in the manual.

Refrigerant: Refrigerant fluid used in advanced motor vehicle A/C systems. The following refrigerant fluids may be used:

- **R1234yf** CH2CFCF3 2,3,3,3 -Tetrafluoropropene
- **R134a** C2H2F4 - 1,1,1,2-Tetrafluoroethane
- **R444a**
- **R456a**

A/C system: Air conditioning system

Equipment: Service station for recovering,

recycling, draining and charging the A/C system

External tank: Refrigerant tank, used to fill the inner cylinder

Inner container: Refrigerant storage cylinder

Phase: Execution of the single function

Cycle: Sequential execution of individual steps

Recovery: Drawing the refrigerant out of the vehicle

Recycling: Cleaning of refrigerant, includes: separating out oils, removal of non-condensable gas and single/multiple pass through filters to reduce humidity, acidity and particulate content of the fluid.

Disposal: Disposal of refrigerant for storage followed by destruction/scrapping by an authorised waste management centre

Function-Vacuum: Draining out of a motor vehicle A/C system and separation out of condensed matter and humidity, using only the vacuum pump

Oil injection: Adding oil into an A/C system to ensure the correct volume as specified by the vehicle's manufacturer

Refill: Filling of refrigerant into the A/C system in the amount specified by the manufacturer

System flushing: Step involving the cleaning of the A/C system or related units from any contaminants

Non-condensable gases: Gases stored in the vapor phase such as air and nitrogen

4. IMPORTANT SAFETY INSTRUCTIONS

KEEP THESE INSTRUCTIONS.



Please read carefully all instructions in this user manual before operating this equipment.

4.1 Definitions

Dangerous areas	Any area in or near the equipment where there is a risk to the safety and health of an exposed person
Exposed person	Any person standing completely or partially within a dangerous area
Operator	The person(s) assigned to operate the equipment for its intended purpose
User	Entity or person legally responsible for the equipment

4.2 Operator classification

The operator can be classified according to two main categories, which, in some cases, refer to one single person:

The operator appointed with the equipment operation has the duty to:

- Starting and checking the automatic operation of the unit
- Performing simple adjustment tasks
- Eliminating causes of equipment stoppage that do not involve organ failure but simple operating anomalies

Equipment maintenance operator: A technician trained by the authorized MAHLE service center, able to operate the equipment in open circuit protection conditions and to intervene on mechanical and electrical parts to carry out adjustments, maintenance and repairs

4.3 Personnel safety information

The A/C service station is particularly simple and reliable due to its adjustments and functions. When used correctly it presents no hazard for the operator, provided he observes the following general safety instructions and that the service station is regularly serviced (incorrect maintenance/use compromise the equipment's safety).

Before operating the service station for the first time, read these instructions carefully. If any part of the instructions is unclear, contact your dealer or MAHLE.

This service station is to be used by an operator only! The operator must be familiar with A/C and refrigeration systems and the hazards associated with refrigerants and high pressure equipment.



Work environment: ArcticPRO® can operate with either R134a / R1234yf / R444a / R456a refrigerant (the two refrigerants cannot be contained in it at the same time).

Refrigerant R1234yf is defined as flammable refrigerant.

Nonetheless, although refrigerant R134a is not defined as flammable, mixtures of air or oxygen with R134a may become flammable under very particular conditions.

The equipment must be operated outdoor or in a well-ventilated location (at least 1 air change per hour). The workshop has to be equipped with ventilation systems able to ensure air change in every environment area or carry out periodical ventilation by opening the areas. Use the equipment away from heat sources or hot surfaces.

The equipment must not be used in explosion risk environments (potentially explosive atmospheres). Before using it, put the equipment on a levelled and secure surface, blocking it with suitable wheel stops.

Do not expose the tool to direct sunrays, heat sources, rain and jets of water. Do not smoke near the equipment and during operations (keep at a distance of at least 1 m).

The work area must be monitored by the operator while the equipment is operating.



R134a / R1234yf / R444a / R456a refrigerant fumes/gases are heavier than air and can gather on the floor or inside cavities/holes and cause choke by reducing the oxygen available for breathing. At high temperatures, the refrigerant breaks down releasing toxic and aggressive substances, harmful for the operator and the environment. Avoid inhaling the system coolants and oils. Exposure can irritate eyes and the respiratory tract.



Do not use gases that may contain ammonia.



Electrical Connection: Connect the power cord only to a socket rated for the voltage indicated on the nameplate located on the side of the equipment. Always connect the power plug to a grounded power outlet.

The maximum permissible impedance at the point of connection to the mains must comply with CEI EN 61000-3-11. Inrush currents can cause short voltage drops that can affect other equipment under unfavorable conditions. If the impedance at the point of connection to the mains does not match, interference may occur, therefore, consult your electric power company before connecting the equipment.

Never use the service station with a defective power cord or a different one from that supplied with the machine. If damaged, immediately have it replaced with an original spare part or equivalent by a MAHLE centre. Before opening the service station, extract completely the supply cable from the plug, or you can get an electric shock.

Do not tamper with or bypass the safety equipment and settings.

Do not leave the machine powered up when not in use; shut off the power supply before leaving the equipment unused for a long time. Do not forget that the tool (pressure tool) must always be protected.



Refrigerants and lubricants - personal protective equipment and precautions: Caution should be exercised in handling refrigerants and pressure vessels, as there may otherwise be health hazards. The operator must wear safety glasses, gloves and protective clothing suitable to the work. Contact with the refrigerant can cause blindness (eyes) and other physical damages (freezing) to the operator.

Avoid contact with the skin; the refrigerant's low boiling point (approx. –26 °C for R134a and approx. -30 °C for R1234yf) can cause freezing burns. Further information about safety can be obtained from the safety sheets of lubricant and refrigerant producers.

Do not inhale refrigerant or oil vapour. Keep away from the vent valves and ventilation coupling, especially when non-condensable gas is being vented.

Never direct the quick couplings (taps) towards your face or other persons or animals.



Other prohibitions and limitations to use: Use only pure R134a / R1234yf / R444a / R456a refrigerant; refrain from use on vehicles containing other types of refrigerants or mixtures between or with other refrigerants. Mixture with other types of refrigerant produces serious damage to the conditioning and cooling systems. **Mixed refrigerants have to be disposed of according to the current regulations.** Never use the equipment with systems containing compressed air; mixtures of R134a / R1234yf / R444a / R456a with air or oxygen may be potentially flammable.

Do not modify calibration of safety devices. Do not remove seals of safety valves and of control systems. Do not use external tanks or other storage containers that are not type-approved or without safety valves.

Make sure the equipment's aeration and ventilation ports are not obstructed or covered while the equipment is operating.

The AC service stations have been designed for use within a certain range of temperature and humidity rate, as indicated on the machine nameplate. Before connecting the hoses to a vehicle and before activating refrigerant recovery, make sure the following conditions are met:

- ambient temperature and engine compartment/ AC system temperature are lower than the maximum operating temperature indicated on the machine nameplate,
- the pressure of the turned off AC system is less than 12 bar,
- the vehicle's engine and AC system are off.



Piping connection: Hoses may contain pressurized refrigerant. Before changing the service couplers, check the respective pressures in the hoses (pressure gauge).

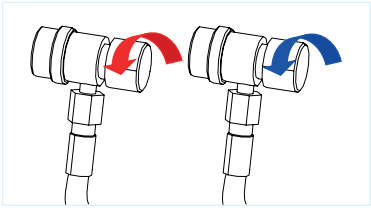
Before connecting to a car A/C system, to an external tank/cylinder, check that the quick couplers are closed (unscrewed HP and LP valves).

Scrupulously follow the instructions on the equipment's display.



Quick couplers closing /opening:

- Opening (connect to vehicle): clockwise
- Closing (disconnect from vehicle): counterclockwise



Maintenance/general cleaning: The equipment should be serviced at the intervals specified by the equipment. The service station maintenance has to be performed according to the procedures described in this manual and to the current safety regulations. Use only MAHLE original parts. When the equipment requires the drier filter and the vacuum pump oil to be changed, you have to be careful in the replacement. A/C service station maintenance can be carried out exclusively by a trained operator or by a service man of a MAHLE certified seller.

Do not use chemical agents for the service station cleaning as they could attack the material or the surface.



Long-term storage: The equipment should be stored in a safe place, disconnected from the power supply, away from excessive temperatures, moisture and the danger of collision with objects that could damage it.

Contact the Technical Service to run a safety shutdown of the equipment, and if scrapping the unit, to drain and recycle the R134a / R1234yf / R444a / R456a refrigerant as required by local legislation.

Repeat the installation operation for re-commisioning, (there is no need to register the unit anew on the website) and run the commissioning trials and regular operational checks as required by local legislation.

4.4 Precautions for equipment operation

When using the equipment, the following operations are not allowed as they might cause, under certain circumstances, danger for persons and cause permanent damage to the equipment itself.

	It is not allowed to remove or make unreadable labels, signs and/or warning notices placed on the equipment and in its immediate vicinity
	The safety devices on the equipment must not be bypassed
	The electrical system to which the equipment is connected must be prepared in accordance with the standards in force in the country of use



Only authorized service personnel may open the equipment. There are parts inside the equipment that can cause electric shock: it is recommended to remove power before opening the equipment for any repair/maintenance

4.5 Guidelines for the handling of refrigerant

Precautions for refrigerant storage

The refrigerant removed from the A/C system must be handled with care to prevent or minimise the risk of mixing with other refrigerants.

This machine is suitable for treating R134a / R1234yf / R444a / R456a refrigerants, individually (not simultaneously).

The external cylinders used to store the refrigerants must be clearly marked to prevent mixing different refrigerants. Cylinders shall be free from oil or other contaminants and clearly marked so as to identify the refrigerant contained.



When handling, using and storing R134a / R1234yf / R444a / R456a refrigerant and dealing with emergency situations, make sure to refer to the product's safety sheet.

You must request the gas safety data sheet from your gas supplier and follow its requirements. Refrigerant R1234yf is defined as flammable refrigerant.

Conditions of refrigerant and system

The condition of the refrigerant is critical to the operation of the vehicle's A/C system. Running repairs properly following failure or damage safeguards the quality of the refrigerant itself (particulates, acids and water).

Recycling capacity

The service equipment's filtering systems must be replaced regularly (see maintenance messages) to ensure effective recycling.

4.6 Safety devices

ArcticPRO® is equipped with the following safety devices:

Main switch	Allows the equipment to be turned off by disconnecting the power line. In any case, the plug of the power supply cable must be unplugged from the mains before maintenance work is carried out
Safety pressure switch	Intervenes by stopping the compressor in case of excessive pressure
Safety valve	Opens when the pressure within the system reaches a level above the prescribed limits



No tampering with the safety devices mentioned in the table is allowed. Failure to observe any of the above safety instructions voids the equipment's warranty.

4.7 Safety labels

This paragraph describes the safety symbols which may be posted on the service equipment.

	Alternating current
	Protective grounding
	Read the instruction manual
	Attention! Risk of electric shock
	Attention! Do not attempt to remove the cover (this operation is reserved for equipment maintenance personnel)
	Use protective gloves
	Use safety glasses
	Use protective footwear against the risk of crushing

5. Description of the equipment

5.1 Application

The A/C service stations Tech/Advanced/Expert/Ultimate are suitable for vehicle with A/C systems using R134a / R1234yf / R444a / R456a.

The following functions can be implemented:

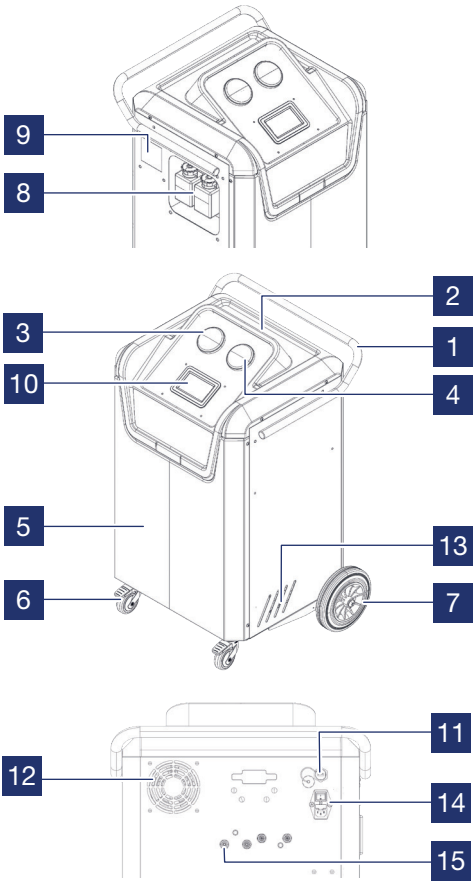
- Refrigerant recovery and refilling
- Vacuum generation
- Flushing

5.2 Standard equipment

- New PAG oil bottle
- Used oil bottle
- New UV dye bottle
- New UV dye POE bottle
- New POE oil bottle

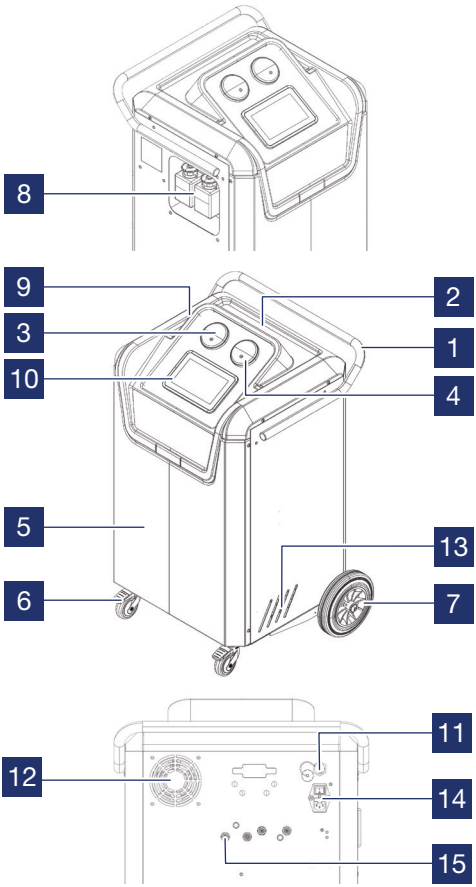
5.3 Main components ArcticPRO® Tech

Main components	
1	Rear Handle
2	Tool Tray
3	Low-pressure gauge
4	High-pressure gauge
5	Front Cover
6	Locking Caster
7	Rear Wheel
8	New & Used Oil Bottles
9	Printer (optional)
10	4.3" Touch screen display
11	USB port
12	Fan
13	Vents
14	Power cord connector and Power switch
15	HP&LP quick couplers and hoses



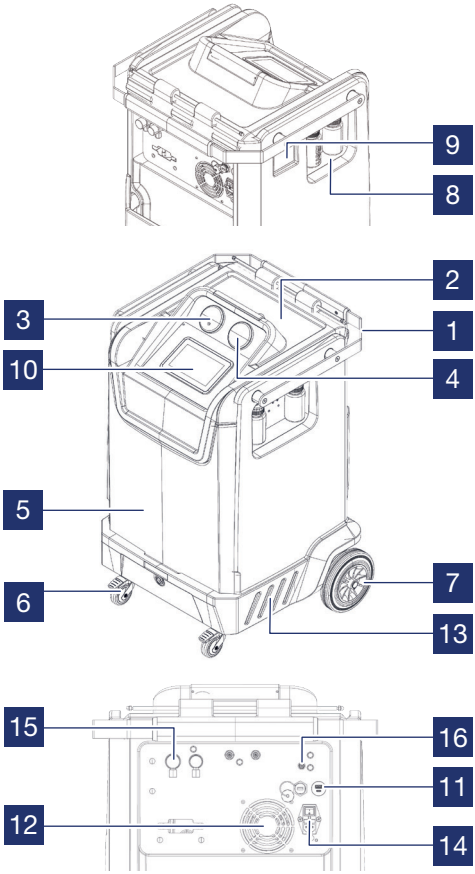
5.4 Main components ArcticPRO® Advanced

Main components	
1	Rear Handle
2	Tool Tray
3	Low-pressure gauge
4	High-pressure gauge
5	Front Cover
6	Locking Caster
7	Rear Wheel
8	New & Used Oil Bottles
9	Printer (optional)
10	7" Touch screen display
11	USB port
12	Fan
13	Vents
14	Power cord connector and Power switch
15	HP&LP quick couplers and hoses



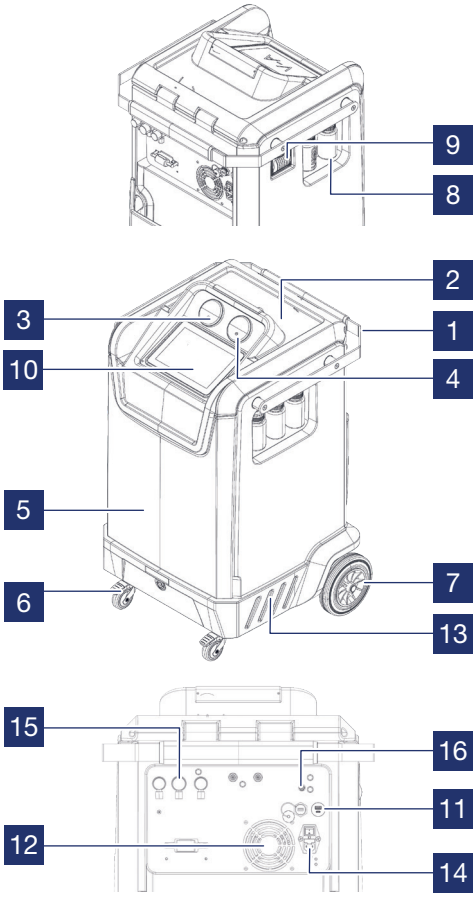
5.5 Main components ArcticPRO® Expert

Main components	
1	Rear Handle
2	Tool Tray
3	Low-pressure gauge
4	High-pressure gauge
5	Front Cover
6	Locking Caster
7	Rear Wheel
8	New & Used Oil Bottles
9	Printer (optional)
10	7" Touch screen display
11	USB port
12	Fan
13	Vents
14	Power cord connector and Power switch
15	HP&LP quick couplers and hoses
16	Nitrogen Inlet



5.6 Main components ArcticPRO® Ultimate

Main components	
1	Rear Handle
2	Tool Tray
3	Low-pressure gauge
4	High-pressure gauge
5	Front Cover
6	Locking Caster
7	Rear Wheel
8	New Oil, Used Oil and Tracer Bottles
9	Printer
10	10" Touch screen display
11	USB port
12	Fan
13	Vents
14	Power cord connector and Power switch
15	HP&LP quick couplers and hoses
16	Nitrogen Inlet



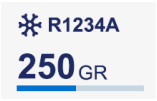
Use the equipment only with the charging tubes (HP - LP) properly connected.

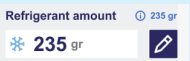
The pressure gauges **(3** and **4)** of the display and operating unit are used to monitor the pressure during the individual vehicle A/C service phases. The status of the different stages during maintenance is displayed on the touch screen **(10)**.

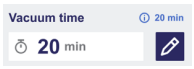
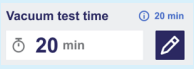
The menu selection and the necessary entries are made on the touch screen **(10)**.

5.7 User interface

All settings, controls and service functions are available on the touch screen display. It also displays the service equipment's status, the progress of A/C system service and any alarms and warning/error messages.
The touch screen is the key element of interaction with the climate station and is finger-activated. When a button is pressed, a beep sounds.
The following icons are available on the display:

	Device connected via Wi-Fi
	The residual refrigerant weight (in gr and with visual bar)
	Enables/disables the bar by horizontal swipe from left to right

	Remote connection “RE.SOLVE” active
	Icon to send email via Wi-Fi
	Icon to print report via the unit printer if available
	Icon to print via Wi-Fi on a network printer
	Document in print queue
	Icon to start cycles
	Recovered refrigerant amount
	Amount of refrigerant to be injected
	Recovered oil amount
	Amount of oil to be injected

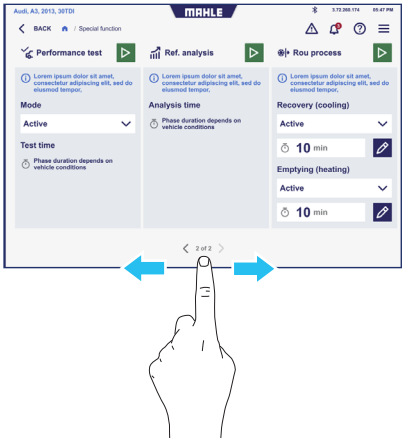
	Vacuum time
	Vacuum test time
	Function or cycle disabled
	Function or cycle enabled
	Icon to update list
	Low light intensity
	High light intensity

To select a function in the menu, press on the function name, the selection is made when you lift your finger.

In the case of functions that require more space than available on the screen, such as additional functions or the maintenance list, you need to swipe horizontally across the display, or in the case of settings, you can view the various items by moving the scroll bar across the display with your finger.

Lift the finger when you are on the desired position.

Horizontal swipe on the touch screen



If you need to enter free text or identify a set of data, a keypad automatically appears (for example, for entering workshop data or at the end of the service cycle).

Status Light

The station with the status light on the top communicates based on the following modes:

- Blue: procedure in progress.
- Steady green: procedure completed successfully.
- Yellow: operator presence required.
- Red: alarm/critical error, operator required.

5.8 Main menu

The main menu of the graphical user interface allow to select the following functions:

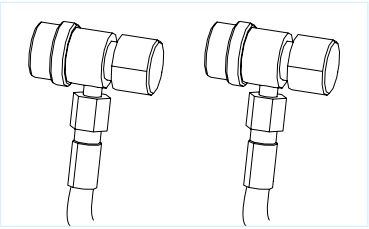
- Vehicle selection
- Cycles
- Additional Functions
- Maintenance
- Setup
- Secured Service (not available for user; reserved only for customer service personnel)
- Each function will be described in detail in the following chapters.

Each function will be described in detail in the following chapters.

5.9 E³ CONNECT couplings (Expert/Ultimate)

E³ CONNECT is the intelligent coupler that with the suitable automated procedure in the software makes it possible to:

- Reduce the non condensable gas formation inside the cylinder
- Avoid refrigerant dispersion in the air during disconnection (puff effect)
- Check possible SCHRADER valve leaks before disconnection



6. Technical features

R134a / R1234yf / R444a / R456a	Tech	Advanced	Expert	Ultimate
R134a / R1234yf / R444a / R456a cylinder capacity	12 l		20 l	
Maximum operating pressure (PS)	20 bar			
PED category (Dir.2014/68/EU) PER Category (Pressure Equipment (Safety) Regulations 2016 (S.I. 2016/1105)	III			
Weight of contained refrigerant	Load cell			

Safety valves	Tech	Advanced	Expert	Ultimate
Type	AIRTEK - VS14NPT20HNBRPED4 20bar R 1/4 NPT			
Calibration pressure	20 bar			
PED category (Dir.2014/68/EU) PER Category (Pressure Equipment (Safety) Regulations 2016 (S.I. 2016/1105)	IV			

Safety pressure switch	Tech	Advanced	Expert	Ultimate
Type	13/18bar 1/4SAE			
Trip pressure	18 bar			
PED category (Dir.2014/68/EU)	IV			

Containers for oil and detection dye	Tech	Advanced	Expert	Ultimate
Recovered PAG oil container	250 ml			
New PAG oil container	250 ml			
UV Dye container	-		250 ml	
New POE oil container	-		250 ml	
POE UV Dye container	-			250 ml
PVE oil container	250 ml (■)			
Oil type recognition	Mech.polarization ■			
Recovered oil measurement	Oil bottle visual check	Automatic weighing, 1 g res., 5 g acc		
Load cells	-	1	4	5
New oil automatic charge	Timed	Automatic weighing, 1 g res., 5 g acc	Automatic weighing, 1 g res., 5 g acc	
UV dye automatic charge	-		Automatic weighing, 1 g res., 5 g acc	
Oil care cap with Silica Gel	(■)		■	
Oil bottle shape	Square		Round	

■ standard (■) optional

Pneumatic circuit	Tech	Advanced	Expert	Ultimate
Intake group	Standard grade accuracy		High grade accuracy	
Vacuum pump flow rate	HPV - 0.02 mbar			
Vacuum pump oil life	60h – extensible to max 1000 h with LONG LIFE PUMP procedure			
Drier filter (replacement frequency (Kg)	75Kg @ 24°C		150Kg @ 24°C	
Non condensable gas discharge	Automatic check / Manual discharge	Automatic check / Discharge triggered by solenoid	Fully Automatic, with solenoid valve	
HP and LP taps	Automatic			
Pressure sensors	1x (LP) - 0..36bar (abs)		3x (LP, HP, TANK) - 0..36bar (abs)	
HP and LP pressure gauges	Analog 80 mm, pulse-free, 1.0 class - double scale			
Vacuum pump shock absorber	NO		YES	

Pneumatic fittings	Tech	Advanced	Expert	Ultimate
Couplers (HP / LP)	Standard SAEJ639		E3 connect	
Net length of external HP and LP hoses	3.5 m		4.5 m	

Optional features	Tech	Advanced	Expert	Ultimate
E³ connect couplers (HP / LP)	(■)		■	
Thermal printer	(■)		■	
Refrigerant identifier	(■)			
Nitrogen test	(■) External		■ External (Nitrogen inlet)	
Forming gas leak test	(■) External		■ External (Nitrogen inlet)	
Flushing	(■) Standard flushing or VAS KIT			
Hoses extension kit + 4.5m	(■) (Total Length 8 m)		(■) (Total Length 9m)	
PVE Oil kit	(■)			

■ standard (■) optional

Operating conditions	Tech	Advanced	Expert	Ultimate
Operating environmental conditions	+10/+50 °C			
Storage temperature and humidity	+5/+50 °C, 10–90% RH (non-condensing)			
Ambient pressure	75 kPa ÷ 106 kPa			
Machine electrical data	230 V 50/60 Hz 800 W		230 V 50 Hz 800 W	
Maximum operating altitude	2000 m			
Maximum supply voltage fluctuations	±10%			
Pollution degree	2			

7. Receiving the equipment and unpacking it

7.1 Unpacking





Danger of overturning

Incorrect handling could cause equipment to overturn.

The manufacturer declines all responsibility for any damage to persons and/or property deriving from incorrect removal of the equipment from the pallet, carried out by unsuitable personnel, with inadequate means and/or protections and without following the regulations in force in terms of manual handling of loads and the operating procedures described in this manual.

Removing the packaging	
1	Remove the metal staples and open the carton box
2	Remove the cap and carton box
3	With the equipment on the pallet, cut the clamps that tie the equipment to it
4	Remove the equipment from the pallet **Note:** 2 people are required to perform this task
5	Raise the two front wheels by levering the handle and the rear wheels (in this way the operators do not have to lift the full weight of the equipment)
6	Slowly lower the equipment from the pallet using the rear wheels

It is advisable to keep the pallet, carton and scratch-resistant film for possible returns.

The equipment is moved on wheels; the two smallest wheels have a mechanical brake and can be locked.

A/C service station is supplied with the internal refrigerant tank empty. This prevents problems in shipping the unit.

8. Commissioning

8.1 Charging hoses kit

Installation of charging hoses kit	
1	Apply gas type sticker
2	Install hoses
3	Install parking couplers
4	Install the quick couplers on the hoses
5	Connect the power cable
6	Run leak test
7	Connect the cylinder fittings
8	Refill the tank

8.2 Electrical connections

Place the unit on a level and stable surface to ensure proper operation.

It is then necessary to connect it to the mains in accordance with the indications on the nameplate of the unit located near the main switch, especially regarding the applicable voltage and power.

The A/C service stations are designed for 230VAC, 50 Hz or 50/60 Hz. Follow the information on the rating plate.

Positioning and electrical connection

Handling: In handling, it is necessary to have the minimum equipment for proper handling as required by accident prevention regulations.

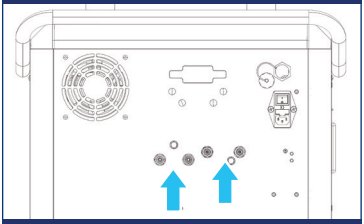
Placement: The equipment should be placed in a stable location. The location must be well ventilated, with a good rate of change of air. The unit must be located at least 10 cm from any potential obstacles to its internal ventilation. Keep the unit away from rain and excessive humidity as they can irreparably damage it. In addition, the equipment must never be directly exposed to the sunrays or to excessive dust.

Installation: Installation must be carried out by specialized personnel, and the current national electrical regulations must be strictly observed. It is forbidden to use the equipment in an explosive atmosphere.

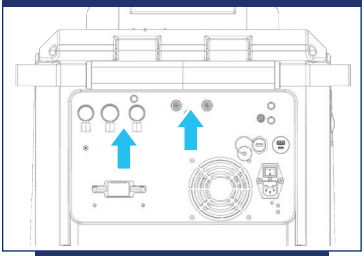
Connections: Since this is an electronic device connected to the mains, it is mandatory to use the correct grounding on the power plug. Failure to ground the unit can damage it and constitutes a risk of fatal injury to the operator. Position the equipment so that the mains power socket is easily accessible to the operator.

Caution: Leave the quick coupler taps closed when the station is not in use and when operations are completed.

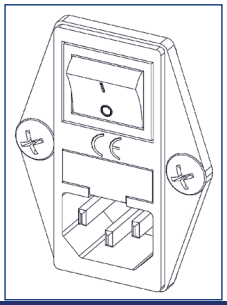
TECH/ADVANCED connectors



EXPERT/ULTIMATE connectors



Pipes and couplings



Main connection and switch

8.3 Initial verification

Before any operation, make sure you have the right installation kit for gas type.

A leak test shall be performed to ensure all components assembled by the distributor have been correctly installed.

Execute the following actions in sequence by following the display guided procedure and the illustrations on the screen of the equipment:

- Gas weight verification
- Oil weight verification
- First vessel filling

It is possible to interrupt the initial verification, which will be re-proposed the next time the station is powered on.

The equipment cannot operate until all the steps of the initial verification have been completed.



Carefully abide by the following instructions to avoid danger to persons, the discharge of refrigerant in the atmosphere

Let us consider as first filling the one carried out during the initial check with internal tank of the equipment free of refrigerant and containing air.

Set the quantity of refrigerant to fill (at least 3 kg) and follow the guided procedure shown on the display. Check that the equipment hoses are not connected and positioned in the hose winder. Start the procedure that initially implies the creation of vacuum in the internal tank. This phase will take 15 minutes and will act on the whole equipment.

Only when the message appears asking to connect the charge tank, connect the LP quick coupler (colour blue) of the unit to an external refrigerant tank using the supplied adaptor. When the message occurs open the coupler by turning the knob clockwise. Open the valve on the external tank.

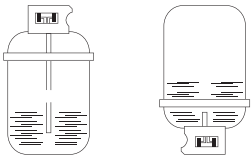
Just right before reaching the planned quantity of refrigerant, the unit will stop and ask the user to close the external refrigerant tank. Then, the device will continue the recovery from the hoses and ends when these are empty. Hence, it is

necessary to open the LP quick-coupler and disconnect it from the external tank. Thanks to the E³ CONNECT function (optional), the refrigerant - usually kept between the cylinder fitting and the hose quick-coupler until the end of the process - will not be released in the environment.

There may be two types of source tanks: with plunger and without plunger.

Tanks **with plunger** shall remain upright to be able to transfer liquid refrigerant; for this type of tanks connect to the L (liquid) coupler.

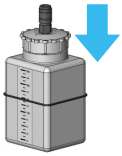
Tanks **without plunger** have only one valve, so they must be turned upside down to transfer the liquid refrigerant.



The **LP** gauge indicates the pressure inside the external tank. After some minutes the unit will automatically end the function. At the end the weight of the charged refrigerant will be displayed.

8.4
New oil bottle filling

To fill the new oil bottle **(9)** it has to be extracted from its housing by means of the quick coupler on the top of the bottle; slightly press downward the coupler ring nut to extract it.



Fill the bottle by paying special attention to the “Active Oil Protection” valve.
This valve is made of a silicon polymer membrane; it compensates pressure variations within the bottle and stops humid air infeed inside thus preserving the new oil inside.



After filling, close the bottle and place it back in its seat.

9. Software updating

You can check for software updates and download them over the Internet via Wi-Fi connection in the Settings menu:

- Main menu
    - Settings
        - Updates Check

Note: You must have a router or Wi-Fi access point with Internet access.

10. Settings

Within the Settings menu it will be possible to set various parameters and enablements:

Wi-Fi: By selecting this item, the user can check and select the available Wi-Fi networks and connect the station via Wi-Fi

Print: By selecting this item, the user can select printing options, such as:

- Start Print Queue
- Clear Print Queue
- How to print (instructions)
- Print test

Two printing modes are available; via the station printer, if present, or, for all models, via Wi-Fi using NexusPrint printing software to be installed on a PC running Windows 7 or higher

Update: By selecting this item, the user can check for software updates and subsequently download them. Updates Check starts with this icon 

Brightness: By selecting this item, the user can change the brightness of the touch screen display and the Status Led

Maintenance counters: By selecting this item, the user can check the status of the station and consumable counters.

Account: By selecting this item, the user will be able to enter the workshop data, which will be printed on the end-of-cycle reports

Language: By selecting this item, it is possible to set any language present in the database. In case you choose a language with incomprehensible characters, turn off the device and turn it on again by keeping a finger pressed on the screen, this will allow you to go directly to the language setting menu

Re.solve: By selecting this item, the user can connect the station to the server via Wi-Fi to authorize a remote support session by the dealer. The system will provide an ID number and PIN code to be provided to the dealer.

System information: By selecting this item, the user can check the station data

Date and time: By selecting this item, the user can edit and save the date and time

Licenses: By selecting this item, the user can check the licenses enabled on the station.

Settings: By selecting this item, the user can enable specific functions (such as Refrigerant Analysis)



MAHLE reserves the right to add new parameters to make the equipment increasingly versatile and adaptable to market's needs.

11. A/C system charge

11.1 Preliminary operations

The recovery and charge operations have be carried out after the car /AC system has run for some time; however, an excessively hot A/C system has to be avoided since the next charge phase could be adversely affected by high pressures.

The vehicle does not have to be specially prepared. Connecting pipes must be connected by identifying their location.

Vehicle details necessary for the performance of the charge/recovery/ vacuum cycle are the amount of refrigerant and the type and quantity of oil.

These data are often found on the engine compartment plate or on the technical manuals.

As to oil quantity, technical manuals of cars, systems as well as available details in general indicate the total quantity of oil in the system.

Generally, the amount of oil that is drawn out during the refrigerant recovery phase is very small, and only this needs to be refilled. In the car A/C system you have to add only the oil amount necessary to restore the amount set by the car manufacturer.

Special features

Your new A/C service station is equipped with new E³ CONNECT (optional) quick couplers. These new couplers offer the following functions:

1. Avoid dispersion of the refrigerant, allowing the recovery by the unit (thus protecting the environment and saving refrigerant)
2. Automatic leak test of the car A/C system valve at the end of the service

After connecting the quick couplers to the (high pressure) HP and (low pressure) LP connectors of the vehicle, screw the valves only when required by the messages on the unit display.

11.2 Non-condensable gas discharge ArcticPRO® Tech

The station is equipped with the AIR PURGE SYSTEM function, which allows detecting and purging non-condensable gas (mainly air) accumulated within the tank.

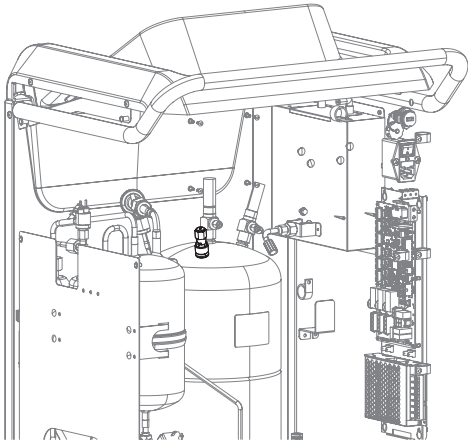
Periodically, basically every week, the station, the first time it is switched on that day, will suggest running the AIR PURGE SYSTEM procedure

Running this procedure is very important to ensure the ideal working parameters for the station operation. The presence of non-condensable gas in the tank will increase the pressure inside the tank and, therefore, will slow down and reduce the efficiency of charge cycle on the vehicle.

The procedure will take a few minutes, and its duration may vary according to the amount of non-condensable gas within the tank.

Leave the quick coupler taps closed when the station is not in use and when operations are completed.

For the Air Purge System procedure to be executed manually, the station must have been off for at least one hour.



11.3 Non-condensable gas discharge ArcticPRO® Advanced

The station is equipped with the AIR PURGE SYSTEM function, which allows automatically detecting and purging non-condensable gas (mainly air) accumulated within the tank.

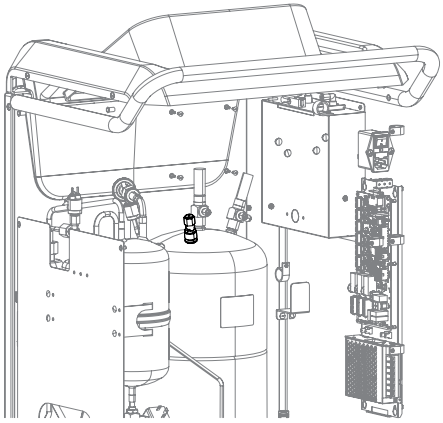
Periodically, basically every week, the station, the first time it is switched on that day, will suggest running the AIR PURGE SYSTEM procedure

Running this procedure is very important to ensure the ideal working parameters for the station operation. The presence of non-condensable gas in the tank will increase the pressure inside the tank and, therefore, will slow down and reduce the efficiency of charge cycle on the vehicle.

The procedure will take a few minutes, and its duration may vary according to the amount of non-condensable gas within the tank.

Leave the quick coupler taps closed when the station is not in use and when operations are completed.

For the Air Purge System procedure to be executed manually, the station must have been off for at least one hour.



11.4 Non-condensable gas discharge ArcticPRO® Expert/Ultimate

The station is equipped with the AIR PURGE SYSTEM function, which allows automatically detecting and purging non-condensable gas (mainly air) accumulated within the tank.

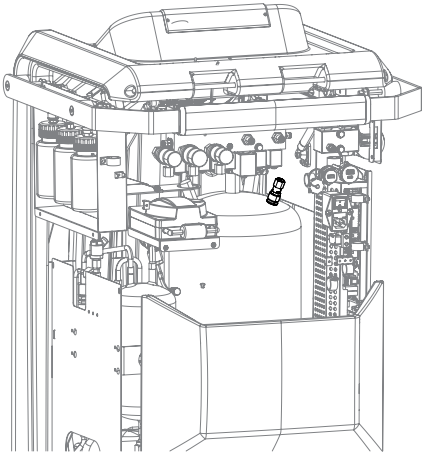
If the station detects non-condensable gas in the tank, it will automatically run the non-condensable gas discharge procedure.

Running this procedure is very important to ensure the ideal working parameters for the station operation. The presence of non-condensable gas in the tank will increase the pressure inside the tank and, therefore, will slow down and reduce the efficiency of charge cycle on the vehicle.

The procedure will take a few minutes, and its duration may vary according to the amount of non-condensable gas within the tank.

Leave the quick coupler taps closed when the station is not in use and when operations are completed.

For the Air Purge System procedure to be executed manually, the station must have been off for at least one hour.



12. Cycles

The access to Automatic cycle can be achieved by selecting the following menu Vehicle selection or Cycles.

12.1 Vehicle selection

MAHLE offers customers purchasing A/C service station the possibility of enhancing potentials of the station through the database. This database contains all data related to the A/C system of most vehicles. Hence, it will be possible to speed up the charge operations of the system with the aid of the data provided by the database.

- Maker
- Model
- Version / engine capacity
- Year
- System

Inside the Cycles window, it is possible to enable or disable specific cycles, such as:

- Recovery
- Vacuum
- Injection

and to modify the parameters if needed.

It is possible to select the A/C system type and enable the A/C performance test (if the background colour is in grey color the function is disabled).

12.2 Cycles

Inside the Cycles window, it is possible to enable or disable specific cycles, such as:

- Recovery
- Vacuum
- Injection

and to modify the parameters if needed.

It is possible to select the A/C system type and enable the A/C performance test (if the background colour is in grey color the function is disabled).

12.3 Cycle data setting

After selecting the type of A/C system the main page is shown with the following preset values

- Recovery (default automatic, or semi-automatic)
- Semi-automatic recovery
  - + If the function is enabled and the final recovery amount is less than 70% of the injection required amount, the software at the end of recovery will ask if the user wants to continue or stop the cycle
- Oil Clean
  - + Ensures oil is recovered and discharged even under the most extreme work conditions
- Vacuum phase (recommended but editable values – they do not depend by the selected car)
- Vacuum time duration
- Vacuum test time duration
- Oil Charge mode and quantity of oil that will be injected into the system
  - + OIL: <value> g. It injects the set amount of oil
  - + REC. + <value> g. It injects the quantity of recovered oil plus the quantity of oil that has been set
  - + NO OIL. No oil is injected during the injection cycle
- Oil type: It sets the oil type being used. PAG (ISO46/100/150) or POE, depending on the selected vehicle
- Amount of refrigerant that will be filled into the system and the amount of refrigerant available in the inner tank of the station
- Injection type: It makes it possible to select from which hose the service is carried out, according to the type of system
  - + Injection from HP hose (red)
  - + Injection from LP hose (blue)
  - + Injection from HP hose (red) and LP hose (blue)
  - + Injection from HP hose (red) and LP hose (blue)
  - + Injection from HP hose (red) on the system low pressure side. Specific for some Renault models

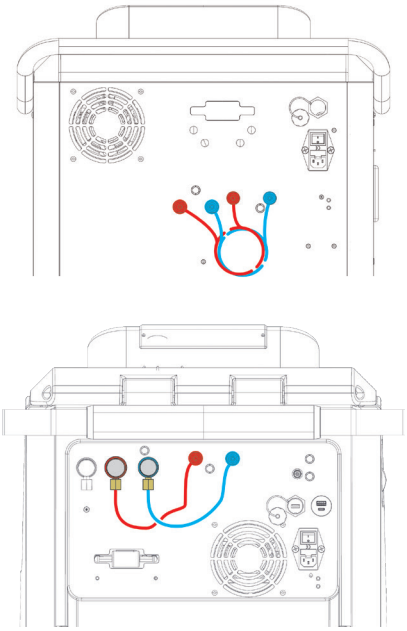
At the end of the setup, press the “START” button to start the automatic cycle.

12.4
Electric compressor function (vehicle side)

Before connecting the A/C service station hoses to the A/C system of the vehicle, select the oil type.

If the selected oil type is POE for Electric compressor, a special function named “Electric Compressor Function” will be executed to clean the hoses from any previous oil residue.

When required by the software, connect LP and HP quick coupler to their support connectors as in the picture below and change PAG oil bottle with the POE oil bottle.



Then, press START to proceed and follow the instructions shown on the screen.

13. Additional Functions

13.1 Refrigerant Analysis

By selecting this entry (only if the refrigerant analyser optional is available and enabled inside setting menu), the user can start the analysis of refrigerant present inside the vehicle AC system.

13.2 A/C Performance Test ArcticPRO® Tech/Advanced

To check the vehicle A/C system status – for instance in case there is no flow of cold air from flaps – pressure values can be checked.
Connect the couplers or the single coupler to the vehicle system. Under the sequence guided by the software perform the following preliminary operations on the vehicle:

Preliminary operations on the vehicle side	
1	Turn on the A/C system
2	Set temperature at minimum level
3	Set fan speed at maximum level; close all the flaps except the central one and set air distribution to central position
4	Keep engine at accelerated idle at constant speed for at least 2 minutes
5	Check the pressure values within about 3 - 5 minutes

In the MANUAL CYCLE menu, select the A/C PERFORMANCE TEST function.

Execute the A/C PERFORMANCE TEST following the instruction.

And at the end make sure that both values on LP and HP gauges fall within the values shown on the display.



The values of the pressures vary considerably as the ambient temperature changes. Keep this in mind when checking pressure values.

It is possible to interrupt the phase in progress at any time.

13.3 A/C Performance Test ArcticPRO® Expert/Ultimate

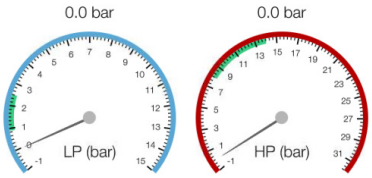
To check the vehicle A/C system status – for instance in case there is no flow of cold air from flaps – pressure values can be checked.
Connect the couplers or the single coupler to the vehicle system. Under the sequence guided by the software perform the following preliminary operations on the vehicle:

Preliminary operations on the vehicle side	
1	Turn on the A/C system
2	Set temperature at minimum level
3	Set fan speed at maximum level; close all the flaps except the central one and set air distribution to central position
4	Keep engine at accelerated idle at constant speed for at least 2 minutes
5	Check the pressure values within about 3 - 5 minutes

In the ADDITIONAL FUNCTIONS menu, select the AC PERFORMANCE TEST function.

Execute the AC PERFORMANCE TEST following the instruction.

And at the end make sure that both values on LP and HP gauges fall within the range of values shown in green on the display.



The values of the pressures vary considerably as the ambient temperature changes. Keep this in mind when checking pressure values.

It is possible to interrupt the phase in progress at any time.

13.4 Flushing (with optional accessories)

After performing many charge cycles, when a damaged compressor is identified, dirty compressor oil is visible or after replacing components or parts of the A/C circuit on a vehicle it is advisable to carry out a system flushing.

The system washing (Flushing) consists in purifying the vehicle cooling system through several R134a / R1234yf refrigerant flushes, by recovering it each time, so that the impurities can be filtered little by little through the additional filter.

Thanks to its specific design, A/C station automatically manages the flushing process so that the process becomes fully automatic.

Once the (optional) flushing kit has been installed, as described in the instructions included in the kit, and after selecting the specific function for the kit being used, start the phase.

After selecting the flushing function, default values (editable) are displayed:

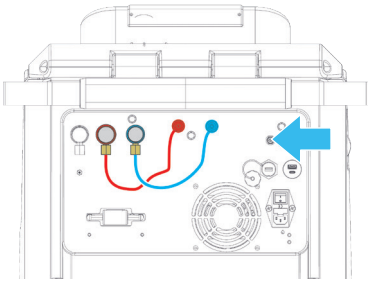
- Vacuum time
- Number of cycles
- Refrigerant amount used for each cycle

In case of problems or errors during this phase, a message will be displayed, identifying the type of error. It is possible to interrupt the phase in progress at any time.

13.5 Forming gas leak test

The function is integrated with a specific manifold integrated on A/C service station.

It is necessary to connect the external gas bottle of “Nitrogen” with pressure reducer (not inside scope of delivery of these models) to the Nitrogen inlet port/fitting on Expert/Ultimate (see drawing below).



After selecting the nitrogen test function, default values (editable) are displayed:

- Vacuum time
- Vacuum test time
- Leakage limit (mbar)
- Leakage test time

Note: Check that the reducer is set at a pressure ranging between 10 and 15 bar, start the test and follow the software instructions to carry out the test.

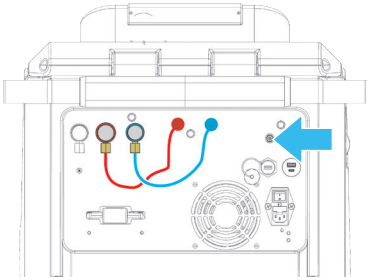
Pressure between 10 and 15 bar max. Overpressure can compromise the safety of people, vehicles and A/C service station.

In case of problems or errors during this phase, a message will be displayed, identifying the type of error.

It is possible to interrupt the phase in progress at any time.

13.6 Nitrogen test (external kit Tech/Advanced)

The function is integrated with a specific manifold integrated on A/C service station, it is necessary to connect the external gas bottle of “Nitrogen” with pressure reducer (not inside scope of delivery of these models) to the Nitrogen inlet port/fitting on Expert/Ultimate (see drawing below).



After selecting the nitrogen test function, default values (editable) are displayed:

- Vacuum time
- Vacuum test time
- Leakage limit (mbar)
- Leakage test time

Note: Check that the reducer is set at a pressure ranging between 10 and 15 bar, start the test and follow the software instructions to carry out the test.

Pressure between 10 and 15 bar max. Overpressure can compromise the safety of people, vehicles and A/C service station.

In case of problems or errors during this phase, a message will be displayed, identifying the type of error.

It is possible to interrupt the phase in progress at any time.

14. Maintenance

14.1 Hoses emptying

To empty the charge hoses completely perform the hoses emptying phase.

Select the hoses emptying function from the menu. Wait the end of the procedure.

14.2 Air purge

In the main menu select MAINTENANCE and press “AIR PURGE”.

By selecting this function, it is possible to manually discharge the non condensable gases by means of the solenoid valve.

Automatically every 7 days, the station will show the possibility to automatically check (automatic function named AIR PURGE SYSTEM) for condensable gases.

14.3 Vessel filling

In the main menu, select MAINTENANCE and press "FILL CYLINDER."

Set the quantity of refrigerant to fill and follow the guided procedure shown on the display.

The set value is limited to avoid to fill too much the internal cylinder.

Only when the message appears asking to connect the charge tank, connect the LP quick coupler (colour blue) of the unit to an external refrigerant tank using the supplied adaptor.

When the message occurs open the coupler by turning the knob clockwise. Open the valve on the external tank.

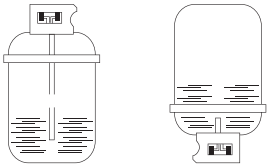
Just right before reaching the planned quantity of refrigerant, the unit will stop and ask the user to close the external refrigerant tank. Then, the device will continue the recovery from the hoses and ends when these are empty. Hence, it is necessary to open the LP quick-coupler and disconnect it from the external tank.

Thanks to the E³ CONNECT function (optional), the refrigerant - usually kept between the cylinder fitting and the hose quick-coupler until the end of the process - will not be released in the environment.

There may be two types of source tanks: with plunger and without plunger.

Tanks **with plunger** shall remain upright to be able to transfer liquid refrigerant; for this type of tanks connect to the L (liquid) coupler.

Tanks **without plunger** have only one valve, so they must be turned upside down to transfer the liquid refrigerant.



The **LP** gauge indicates the pressure inside the external tank.

After some minutes the unit will automatically end the function.

At the end the weight of the charged refrigerant will be displayed.

14.4 Zero pressure

In the main menu select MAINTENANCE and press “ZERO PRESSURE”.

This function allows to determine and store the atmospheric pressure value.

We recommend running this procedure every time the A/C service station will be moved from a location to another with a different altitude.

14.5 Self leak test

In the main menu select MAINTENANCE and press “SELF LEAK TEST”.

A leak test is carried out on the internal components of A/C service station.

This phase includes:
- Hoses emptying
- Vacuum test

This test allows to check the tightness of the internal circuits of the equipment from the solenoid valve, allowing the fluid outflow from the internal cylinder, to the manifold, (metallic component housing the check solenoid valves) to the compressor infeed, including the dryer filter leak test.

In case of failed leak test, it is necessary to check the charge hoses conditions and the quick couplers leak, and make the possible repair and then repeat the test.

14.6 E^3 PUMP

The A/C service station is equipped with a special function named E^3 PUMP that enables to optimize the vacuum pump oil use by avoiding the replacement every 60 hours of operation.

E^3 PUMP is a special function allowing to extend even to 1000 hours the life of the pump oil used in the station. E^3 PUMP function performance is suggested at the end of 60-hour operation intervals of the vacuum pump and can be manually activated in the MAINTENANCE menu pressing E^3 PUMP.

The E^3 PUMP procedure has to be started only after checking and, if necessary, topping up the pump oil level and lasts 1 hour: during this time the tool cannot be used.

During the procedure the oil is automatically purified from the gaseous polluting residues absorbed during the emptying operations of vehicles air conditioning systems.

At the end of the E³ PUMP procedure:

- in case of negative result or
- after 1000 hours of vacuum pump operation since the last oil change, the E³ PUMP procedure cannot be activated anymore

It is necessary to replace the vacuum pump oil.

14.7 Pump oil change

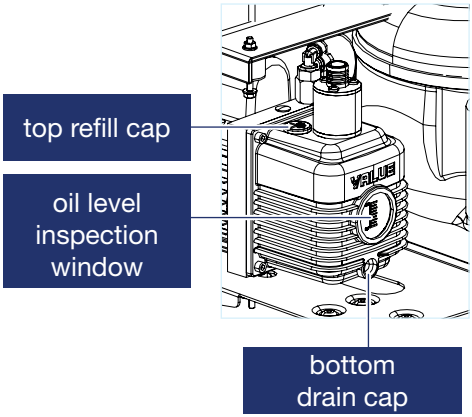
Required tools:

- 1 flat screwdriver
- 1 Hex key (10 mm)

Replacing the oil pump	
1	Disconnect the unit from the mains
2	Remove the six screws that fix the front door of the unit and remove it
3	Place a bowl underneath the machine, right under the pump oil drain hole. Open the upper plug and then the lower plug to drain the used oil contained within the vacuum pump
4	Once the pump has been emptied, screw the lower plug again
5	Fill the pump with new oil through the upper opening, using a funnel if needed. Bring new oil level halfway through the oil inspection window
6	Once the pump has been emptied, screw the lower plug again

7	Once oil has been replaced, switch on the unit and from the MAINTENANCE menu select PUMP OIL CHANGE: press OK to reset the counter.





14.8 Dryer filter change

The dryer filter must be replaced after having dehydrated 75 kg on Tech / Advanced and 150 kg of refrigerant fluid on Expert / Ultimate, since the filter capacity to keep the humidity present in the refrigerant will run out.

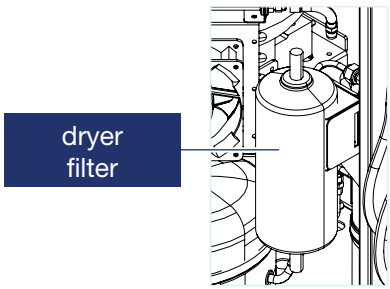
To replace the dryer filter, from the MAINTENANCE menu select DRYER FILTER REPLACEMENT: press “START” to set the counter to zero and to start the filter replacement procedure. Insert the code of the new filter. Now you can replace the filter.

Required tools:

- 1 flat screwdriver
- 1 cross screwdriver
- 1 regular or torque Hex key (14 mm)
- 1 Hex key (16 mm)

Dryer filter change

1	Disconnect the HP and LP hoses from other systems/circuits or vehicles and close the quick couplers
2	Wait until the hoses are empty
3	Wear personal protective equipment (PPE) and follow established/enforced safety requirements  **DANGER OF CONTACT WITH R134a / R1234yf / R444a / R456a REFRIGERANT and motor vehicle A/C system oil**
4	Before disassembling the front door of the equipment, turn off the switch and disconnect the machine from the power supply  **DANGEROUS VOLTAGE HAZARD**
5	Remove the six screws that fix the front door of the unit
6	Unscrew the 2 connection nuts of the filter by means of the hex keys
7	Remove the straps that wind up the filter
8	Install the new filter paying attention to the position of gaskets and to the direction of the arrow indicating the fluid flowing direction
9	Screw the two connection nuts of the filter
10	Reinstall the front door and secure it with the 6 screws
11	Carry out the automatic leak test requested by the software when switched on again after the filter replacement

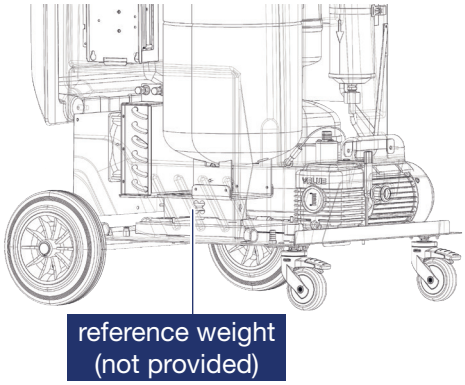


14.9 Replacement of Active Oil Protection Cartridge

After one year or after injecting 2 kg of New Oil or UV dye, the station will show a reminder suggesting the replacement of the cartridge. To replace the Active Oil Protection Cartridge, from the MAINTENANCE menu select CARTRIDGE REPLACEMENT: press “START” to set the counter to zero and to start the cartridge replacement procedure of each bottle. Enter the code of the new cartridge. Now you can replace the cartridge.

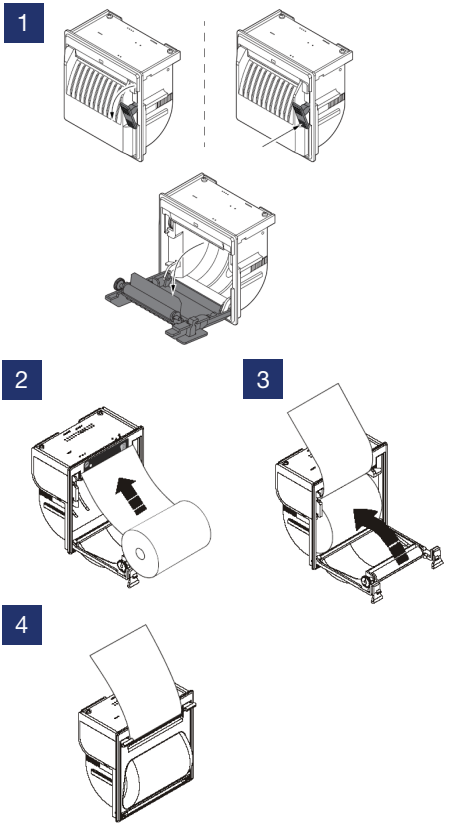
14.10 Calibration check

In the main menu select MAINTENANCE and press “CALIBRATION CHECK”. This function allows to check the status of gas weight scale measure with a reference weight (from 100 g to 1000 g maximum) not included in the scope of delivery. When requested by the software, put the weight above the scale plate as in the picture below.



14.11 Maintenance of printer (optional Tech/Advanced / Expert)

Paper roll change	
1	Open the printer cover as shown in the figure
2	Position the roll of paper inside the housing in the rotation direction indicated in the picture
3	Pull the paper until it comes out of the compartment as shown in the picture and close the door
4	The printer is ready to print



14.12
Periodic checks

A/C service stations (pressure equipment set) must be checked over regularly as provided by local legislation.

According the local legislation contact the technical customer service or the competent body for at least the following checks.

- Make sure no corrosion or leakage are present in the tank and in the other cylinder and metallic part of the equipment; under normal conditions of use, the tank life is at least 20 years (in the absence of wear and other types of damages).
- If the automatic safety valve trips, contact technical service to have the unit checked over, resolve any problems and replace the valve if necessary.
- Check presence of the device with references indicated above, wholeness of connection cables and connector, and the correct connection to the equipment printed circuit board. In case the pressure switch must intervene, please contact the technical customer service that will check the equipment and remove any defect.
- Periodically check that the external charging hoses, red (HP) and blue (LP), are in good order and undamaged. In case damages to the hoses are detected, stop using the station and contact the technical customer service for the related replacement.
- Verify that the lubricants (pump oil) and filters (dryer) have been replaced according to the scheduled periodicities for a proper functioning of the equipment.

15. Disposal

15.1 Equipment disposal

At the end of its service life, this equipment must be disposed of as follows:

- Have the service department recover and recycle all refrigerant in the equipment
- Return the equipment to an authorized disposal facility in accordance with the laws of the country in which it is used

15.2 Recycled materials disposal

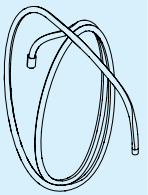
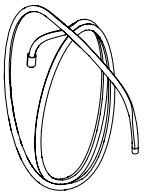
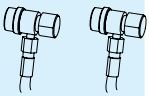
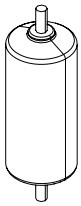
Consign the refrigerant recovered from the unit to the refrigerant supplier for proper disposal or recycling. Lubricants extracted from vehicles' A/C systems must be consigned to an used oil collection center.

15.3 Packaging disposal

Electronic and electrical A/C service equipment must never be disposed of with domestic waste, but recycled appropriately. The packaging must be disposed of in accordance with the regulations in force. This contributes to protecting the environment.

16. Spare parts

Spare parts available to the user:

	4.5 m red charging hose
	4.5 m blue charging hose
	Blue LP quick coupler and red HP quick coupler
	Dryer filter
-	Active Oil Protection kit (2 pcs New Oil, 1 UV dye)
-	Vacuum pump oil

Consumables available to the user:

- Vehicle A/C system oil
- UV dye
- Thermal paper rolls

Further spare parts are available through the Service Centers authorized by MAHLE or by its dealers.

If non-original/approved safety related parts or accessories are used, the safety of the equipment may be compromised.

Maintenance sheet | Refrigerant receiver load cell verification

Date	Identification Data Maintenance technician	Stamp and Signature Maintenance technician

Maintenance sheet | Other verification/maintenance/repair work

Date	Check outcome	Maintenance technician identification	Stamp and Signature Maintenance technician

Maintenance sheet | Other verification/maintenance/repair work

Job	Date	Check outcome	Maintenance technician identification	Stamp and Signature Maintenance technician

Note

Note

MAHLE Aftermarket Italy S.r.l.
Via Rudolf Diesel 10/a
43122 Parma
Italia
Tel. +39 0521 9544-11
info.aftermarket@mahle.com

www.mahle-aftermarket.com