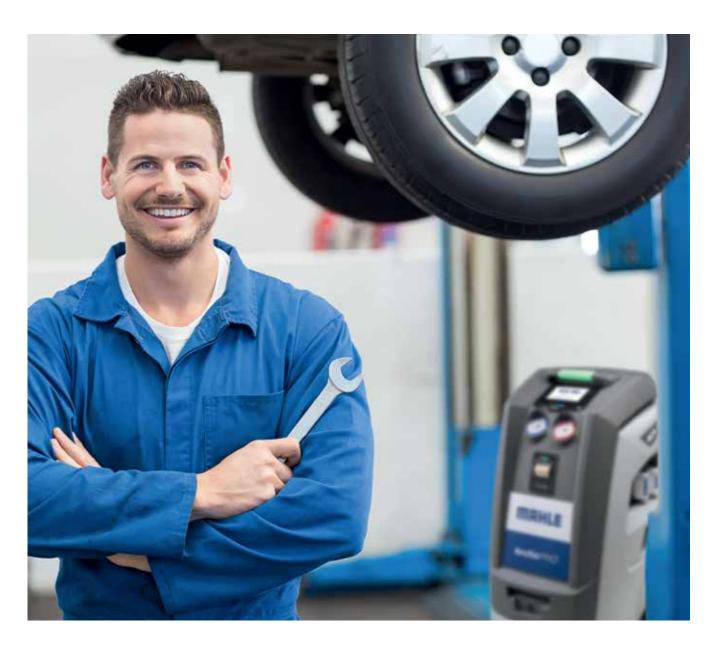


EFFICIENT SOLUTIONS FOR MAINTENANCE AND SERVICE

Workshop equipment and diagnostics from MAHLE



MAHLE SERVICE SOLUTIONS

To increase comfort, safety, and efficiency, vehicle technologies are becoming ever more complex—and the job of workshops more demanding. With MAHLE Service Solutions, workshop owners and service pros have a strong partner to rely on, as they have done for more than 30 years. In addition to spare parts in original equipment quality, MAHLE also supplies innovative and efficient complete solutions for maintenance and service with a focus on engines and thermal management.

NEW GENERATION OF SERVICE UNITS

To celebrate our anniversary, we're presenting the new generation of ArcticPRO® A/C service units. These units are cutting edge when it comes to connectivity and ease of maintenance—with Bluetooth and Wi-Fi, a large touch screen, a status monitoring app, and remote service.

→ GET YOUR HANDS ON OUR STRONG BRANDS

Our colleagues at MAHLE Aftermarket look forward to taking your inquiries:

sales-workshop-equipment@mahle.com







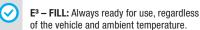


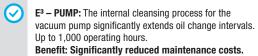


E³ technology from MAHLE ensures A/C services are ecological, economical, and efficient. Workshops that choose A/C service units from MAHLE also benefit from our Europe-wide service network, technical support, thorough instruction, and comprehensive training.

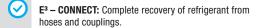
ALWAYS BY YOUR SIDE

The formula for A/C service units from MAHLE: E³ = Ecological × Economical × Efficient





Delicit. Organicantly reduced maintenance costs





The EGEA label stands for the quality and functionality of professional workshop equipment products. A device that has been developed and designed in accordance with the EGEA specification fulfills all legal requirements and safety standards. The label certifies that MAHLE develops high-quality and effective service units for workshops. Many of our A/C service units for R1234yf carry this label.

WORKSHOP EQUIPMENT: A/C SERVICE UNITS

POWERFUL MODELS FOR YOUR A/C SERVICE

The fully automated ArcticPRO® model series from MAHLE offers innovative processes to support both experienced automotive technicians and novices with A/C service jobs.









ADVANTAGES AT A GLANCE

Efficient and innovative—our line of ArcticPRO® A/C service units

- Efficient and successful servicing, regardless of the vehicle and ambient temperature
- USB interface, Wi-Fi, Bluetooth for remote diagnostics, software updates, and ASA connectivity
- Suitable for: passenger cars as well as commercial, off-road, agricultural, and hybrid vehicles
- LED light indicates status anywhere in the workshop
- Remote control via a smartphone/tablet app (iOS & Android)
 - Ergonomic design: handle to open front of the unit



ArcticPRO® A/C service units for refrigerant R134a



ARCTICPRO® ACX 110

Weighs just 65 kg and is extremely compact: our basic/lightweight model

- · Also for mobile applications
- · Stable metal housing
- · CE/PED Certifications
- · 24 menu languages
- · **OPTIONAL:** Printer for customer reports and database for service data



ARCTICPRO® ACX 120 IS NOW ACX 320

Attractive price/performance ratio: our entry-level unit

- · High-performance vacuum pump
- · 12 L refrigerant tank
- · Alphanumeric keypad for data entry **NEW for the ACX 320:** Large 7" touch screen
- **OPTIONAL:** Printer for customer reports and database for service data
- · Convertible to refrigerants R1234yf and R513a (ACX 320)



ARCTICPRO® ACX 150 IS NOW ACX 350

Meets the highest requirements in A/C servicing: our professional unit

- · High-performance vacuum pump
- · Convertible to refrigerants R1234vf and R513a
- · Color touch screen **NEW for the ACX 350:** Large 7" touch screen
- · Printer for customer reports
- · Database for service data
- · A/C performance test
- · Nitrogen/forming gas leak test









ARCTICPRO® ACX 180 IS NOW ACX 380

Maximum safety and high-end precision: our premium unit

- · Suitable for hybrid vehicles
- · High-performance vacuum pump
- · Convertible to refrigerants R1234yf and R513a (ACX 380)
- · Alphanumeric keypad for data entry **NEW for the ACX 380:** Large 7" touch screen
- · Printer for customer reports
- · Database for service data
- · A/C performance test
- · Nitrogen/forming gas leak test
- · Oil care system: hermetically sealed oil bottles

ArcticPRO® A/C service units for refrigerant R1234yf



ARCTICPRO® ACX 210

Compact and intuitive: our basic/lightweight model

- · Stable metal housing
- · Weighs just 65 kg
- · Stable metal housing
- · 24 menu languages
- · Convertible to refrigerant R513a
- **OPTIONAL:** Printer for customer reports and database for service data



ARCTICPRO® ACX 250 IS NOW ACX 450

Convenient, fast, intuitive: our professional unit

- $\cdot \ \text{High-performance vacuum pump}$
- · CE/PED Certifications
- · Fully automated drainage of noncondensable gases
- · Printer for customer reports
- · Database for service data
- · A/C performance test
- \cdot Convertible to refrigerant R513a
- · Nitrogen/forming gas leak test



ARCTICPRO® ACX 220 IS NOW ACX 420

Accurate and fully automated work processes: our entry-level unit

- · 12 L refrigerant tank
- · Alphanumeric keypad for data entry **NEW for the ACX 420:** Large 7" touch screen
- · For passenger cars as well as commercial, off-road, agricultural, and hybrid vehicles
- · Printer for customer reports and database for service data
- · Convertible to refrigerant R513a
- · OPTIONAL: Hybrid function, standard in the ACX 420



ARCTICPRO® ACX 280 IS NOW ACX 480

First-class service at the touch of a button: our premium unit

- · High-performance vacuum pump
- · Alphanumeric keypad **NEW for the ACX 480:** Large 7" touch screen
- $\cdot \ \text{Printer for customer reports}$
- · Database for service data
- · A/C performance test
- · Convertible to refrigerant R513a
- · Nitrogen/forming gas leak test
- · Oil care system: hermetically sealed oil bottles





ARCTICPRO® ACX 255

Best-in-class with intelligent add-on function: our premium unit

- · Incl. refrigerant analysis and TÜV certification
- · VDA approved
- $\cdot \ \text{Color touch screen}$
- $\cdot \ \text{High-performance vacuum pump}$
- · Database for service data
- · Printer for customer reports



→ LOOKING FOR SPARE PARTS?

Are you looking for that extra something for your A/C service unit, or do you need a spare part?

We offer a large selection of accessories and look forward to your inquiry:

sales-workshop-equipment@mahle.com

WORKSHOP EQUIPMENT: A/C SERVICE UNITS & ACCESSORIES

THAT EXTRA SOMETHING FOR YOUR A/C SERVICE UNIT

Hoses, adapters, or small parts—we've always got the right accessory for your unit.



ADVANTAGES AT A GLANCE

Our custom-fit accessories for your A/C servicing

- Suitable for all ArcticPRO® units
- Suitable for refrigerants R134a & R1234yf
- Suitable for passenger cars as well as commercial, off-road, agricultural, and hybrid vehicles



NITROGEN/ HYDROGEN LEAK DETECTOR KIT

Leak detector kit

- · Kit for identifying LEAKAGES in air conditioning systems
- · Kit comprises: forming gas bottle, leak detector for forming gas and pressure regulator

A/C service unit accessories for A/C servicing



ROU – RECOVERY ONLY UNIT

Removes unknown and contaminated refrigerants from vehicle air conditioning systems simply and safely

- · **Ecological:** Professional and safe disposal protects people and the environment.
- Economical: The ROU is immediately ready to use together with an A/C service unit. No other materials and supplies are required.
- Efficient: Our patented internal cycle guarantees a fast service with a 95% recovery rate within 30 minutes
- \cdot For refrigerants R134a and R1234yf.

It's all organized:

One call is all it takes—transport, analysis, and disposal—automatically and with no paperwork.



ARCTICPRO® LD-2 DUAL MODE LEAK DETECTOR

The LD-2 ArcticPRO® is a dual mode leak detector featuring both electronic sensor and patented UV detection modes.

- · The long-life solid electrolyte sensor technology detects refrigerants R134a and R1234yf.
- · Highly sensitive to all HCFC, HFC, and HC refrigerants and blands
- · The digital display also works independently of the audible alarm and sensitivity level, allowing precise location of the leak source.
- · Uses standard batteries.



ACX UNIVERSAL FLUSHING UNIT FOR REFRIGERANTS R134a AND R1234yf

Flushing tank with support for flexible usage entirely independent of the A/C service unit location and model

- · Direct access to refrigerant filter for fast replacement.
- · Ergonomically positioned: Control sight glass to check flushing process and refrigerant purity.
- · Flexible application: HP hose connector adapter set for various A/C service units.
- · Flushing adapter set (3/8" and ¼") allows connection to all standard flushing adapters for air conditioning systems or to a system's individual components.
- · Coupling adapter set for refrigerants R134a and R1234yf to connect the LP coupling to the flushing unit.
- · Optional: Protective storage cover.



ACX RFID REFRIGERANT ANALYSIS UNIT

External analysis unit for the MAHLE ACX A/C service unit for refrigerant R1234yf

- \cdot Meets German Association of the Automotive Industry (VDA) specifications.
- · Offers maximum protection to A/C service units .
- · Safe analysis via LP coupling.
- \cdot Plug and play allows immediate integration with the unit.
- · Simple, automatic operation and instant measurement result.
- · Fully automated control via integrated software process.

WORKSHOP EQUIPMENT: AUTOMATIC TRANSMISSION SERVICE UNITS

AUTOMATIC TRANSMISSION SERVICING— SIMPLE AND FULLY AUTOMATED

User-friendly design combined with state-of-the-art technology—with the MAHLE FluidPRO®. Our automatic transmission flushing units stand out thanks to their ease of use and automated flushing process.



FluidPRO® for automatic transmission servicing

FLUIDPRO® ATX 180

Automated service procedures to meet the highest requirements

- · Highest level of purity: No contamination of the oil, ensured by two pumps, separate oil circuits, and an automated cleaning process
- · Ecological: Zero Cross—a fast program facilitates safe, convenient oil type changes with the highest purity
- Economical: Database—the intelligent database quickly provides detailed information on the relevant vehicle specifications and service information, such as oil type, fill level, adapter, and filter
- Efficient: Complete—the simple and intuitive interface guides you quickly and comprehensively though the automated service process
- · Almost 100% fluid replacement with each use
- · Clear indication of oil quality and transmission oil pressure during the service
- · Precise control of flushing quantity with the double weighing principle
- · Change oil types easily with the removable oil tanks
- · A service time of just 5 to 15 minutes
- · Hose connections are checked automatically and adjusted to the direction of flow before every service—no need to change this manually any more
- · Checks the temperature of the transmission oil automatically: The flushing process starts automatically as soon as the oil has reached the correct temperature
- \cdot Dipstick mode: Alternative oil change method via the oil guide pipe
- · Integrated process for removing the oil pan and changing the transmission oil filter





→ COMING SOON FROM MAHLE

FluidPRO® ATX 150—the entry-level model for transmission servicing. With many benefits for service pros.



WORKSHOP EQUIPMENT: EMISSIONS TESTING STATION

NEW TO THE RANGE: EVEN MORE SOLUTIONS FOR EFFICIENT SERVICING

"Our new EmissionPRO® 180 is the outstanding result of our cooperative development and production efforts with BRAIN BEE."

Olaf Henning - Corporate Executive Vice President and General Manager MAHLE Aftermarket



ADVANTAGES AT A GLANCE

EmissionPRO® 180—MAHLE's complete emissions testing package

- Windows-based emissions testing station
- Can be used as a mobile or stationary unit
 - Can be configured to suit individual customer demands

EMISSIONPRO®

Reliable exhaust gas measurement for diesel and gasoline engines

- · Meets emissions testing guideline 5.01
- · Software separation of calibration and user interface
- · Modular design
- · Open PC solution
- · Integrated operating instructions
- \cdot Possible to integrate diagnostics and guided troubleshooting
- $\cdot \ \text{Intuitive software} \\$
- Universal rpm measurement module with data transfer via USB or Bluetooth
- · A powerful vehicle communication interface for reading the error memory
- · A convenient rolling cart with printer, keyboard, mouse, 24-inch monitor, and computer

TechPRO® diagnostic tool





The software for multibrand diagnostics will be available from Q1 2019.

TECHPRO® 180

The world's fastest diagnostic tool

- · With TechPRO®, you're all set to start vehicle diagnostics within just seven seconds
- · Easy to operate
- · Integrated technical information (wiring diagram, fault list, status screen)
- Functions: reads data—reads errors and displays solutions; single-part diagnostics and component coding
- · Touch screen and Wi-Fi
- · Based on TecDoc
- · Compatible with almost 90% of all vehicles in EU9 countries

TechPRO® ADAS (Advanced Driver Assistance Systems)

This tool allows workshops to adjust and calibrate driver assistance systems quickly and easily—using a digital calibration panel. This saves time and money.



Remote diagnostics und service support



ACX AND ATX MANAGER

Remote diagnostics and service support: anytime and anywhere

- · Immediate assistance when you need it—on site without a technician
- · A/C service unit connects simply to your PC via USB or, for new generation units, directly via Wi-Fi

Your workshop service partner can control the service unit and individual components or correct defects remotely, without an on-site visit

- \cdot Chat window for multilingual communication
- \cdot For MAHLE A/C service units $\text{ArcticPRO}^{\otimes}$ and MAHLE FluidPRO $\!^{\otimes}$

MAHLE A/C service and transmission flushing units are easy to operate and extremely reliable. Should there still be any problems, our remote diagnostics service offers fast assistance.

REMOTE SERVICE

A function of the ACX and ATX Manager software

- \cdot Download the software directly onto your PC
- · Connect the service unit to your PC via the USB port or, for new generation units, directly via Wi-Fi
- · Remote Service will now start in the ACX Manager software
- Your MAHLE partner or authorized service partner can connect remotely to your MAHLE service unit using the serial number
- Your service partner will see all the values and details on his or her screen and will be able to check what's running on your service unit and whether any of the components are showing errors
- · You can communicate in writing via a chat window
- \cdot The hydraulic schematic and components will be displayed
- Your service partner can control the service unit and individual components or correct defects remotely



A/C SERVICE UNITS	ACX 110
Refrigerant	R134a
Convertible to refrigerant R1234yf	-
Convertible to refrigerant R513a	-
Vacuum pump	HPV 0.02 mbar
Refrigerant tank	12 L
Compressor	8 cc
Filter drier capacity	75 kg
Recovery rate	>95%
Pressure sensors	LP
Oil bottles	2 (fresh oil, used oil)
Oil care bottle (hermetically sealed oil bottles)	-
Oil scales	-
Operating temperature	10°C to 50°C
Power supply	230 V, 50 Hz, 800 W
Length of service hoses	3 m
Optional: Extension of service hose to	6 m
Display	B&W 35x200 4 lines/30 characters
Keypad	4 direction keys, Enter, Esc.
Menu languages	24
Warranty	24 months
Certifications	CE, PED
Noncondensable gases through air purge system	Automatic check/manual releas
Automatic recovery and injection of refrigerant	•
Automatic recovery of compressor oil	•
Automatic injection of UV dye	
Manual operating mode	•
Automatic hose compensation	•
E ³ – fill (always ready for use, regardless of the vehicle and ambient temperature)	
E ^s – pump (vacuum pump oil change after 1,000 h.)	
E ³ - connect (complete recovery of refrigerant from hoses and service couplings)	A
A/C performance test (for dynamic performance testing of the A/C system in only 10 minutes with a customer report)	W/o printout
Remote Service (service support anytime, anywhere)	•
Tank pressure reading	•
Refrigerant analyzer	-
Compatibility with hybrid vehicles	A
Electronic car database	A
Agricultural and construction machinery database	A
Nitrogen leak test, optional kit required	•
Nitrogen leak test—integrated connection, optional connector required	-
Forming gas leak test, optional kit required	•
Forming gas leak test—integrated connection, optional connector required	-
Status indicator lights	-
Printer	A
NETWORK printout via Windows PC service	-
USB interface	•
Wi-Fi	-
Bluetooth	-
ASA connectivity via Windows PC service	-
VCI A/C diagnostics (SW & HW)	-













ACX 120	NEW: ACX 320	ACX 150	NEW: ACX 350	NEW: ACX 380
R134a	Convertible	R134a	Convertible	Convertible
_		•	•	•
_	•	•	•	•
HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar
12 L	12 L (PED)	20 L	20 L (PED)	20 L (PED)
8 cc	14 cc	14 cc	14 cc	14 cc
150 kg	100 kg	150 kg	150 kg	175 kg
>95%	>95%	>95%	>95%	>95%
Tank, LP	LP	Tank, LP, HP	Tank, LP, HP	Tank, LP, HP
2 (fresh oil, used oil)	2 (fresh oil, used oil)	4 fresh oil, (PAG & POE), used oil, UV additive	4 fresh oil, (PAG & POE), used oil, UV additive	4 fresh oil, (PAG & POE), used oil, UV additive
		<u> </u>		•
_	1	1	2 (fresh oil, used oil)	4
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
3 m	4.5 m	4.5 m	4.5 m	4.5 m
6 m	7.5 m	7.5 m	7.5 m	7.5 m
B&W 35x200 4 lines/30 characters	7" TFT color touch screen	4.3" TFT color touch screen	7" TFT color touch screen	7" TFT color touch screen
Alphanumeric keypad, 4 direction keys, Enter, Esc.	Touch screen	Touch screen	Touch screen	Touch screen
24	24	24	24	24
24 months	24 months	24 months	24 months	24 months
CE, PED	CE, PED	CE, PED	CE, PED	CE, PED
Automatic	Automatic	Fully automatic	Fully automatic	Fully automatic
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W/o printout	•	•	•	•
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A/C SERVICE UNITS	ACX 210	ACX 220
Refrigerant	R1234yf	R1234yf
Convertible to refrigerant R1234yf	-	-
Convertible to refrigerant R513a	•	•
Vacuum pump	HPV 0.02 mbar	HPV 0.02 mbar
Refrigerant tank	12 L	12 L
Compressor	8 cc	8 cc
Filter drier capacity	75 kg	150 kg
Recovery rate	>95%	>95%
Pressure sensors	LP	Tank, LP
Oil bottles	2 (fresh oil, used oil)	2 (fresh oil, used oil)
	Z (ITEST OII, USED OII)	
Oil care bottle (hermetically sealed oil bottles)		
Oil scales		-
Operating temperature	10°C to 50°C	10°C to 50°C
Power supply	230 V, 50 Hz, 800 W	230 V, 50 Hz, 800 W
Length of service hoses	3 m	3 m
Optional: Extension of service hose to	6 m	6 m
Display	B&W 35x200 4 lines/30 characters	B&W 35x200 4 lines/30 characters
Keypad	4 direction keys, Enter, Esc.	4 direction keys, Enter, Esc
Menu languages	24	24
Warranty	24 months	24 months
Certifications	CE, PED	CE, PED
Noncondensable gases through air purge system	Automatic check/manual release	Automatic
Automatic recovery and injection of refrigerant	•	•
Automatic recovery of compressor oil	•	•
Automatic injection of UV dye	-	-
Manual operating mode	•	•
Automatic hose compensation	•	•
E ³ – fill (always ready for use, regardless of the vehicle and ambient temperature)	•	•
E ³ – pump (vacuum pump oil change after 1,000 h.)	•	•
E ³ – connect (complete recovery of refrigerant from hoses and service couplings)	•	•
A/C performance test (for dynamic performance testing of the A/C system in only 10 minutes with a customer report)	W/o printout	W/o printout
Remote Service (service support anytime, anywhere)		
Tank pressure reading		
Refrigerant analyzer		
Compatibility with hybrid vehicles		
Electronic car database		<u> </u>
Agricultural and construction machinery database		
Nitrogen leak test, optional kit required		•
Nitrogen leak test—integrated connection, optional connector required		-
Forming gas leak test, optional kit required		
Forming gas leak test—integrated connection, optional connector required	-	-
Status indicator lights	-	-
Printer		A
NETWORK printout via Windows PC service	-	-
USB interface	•	
Wi-Fi	_	-
Bluetooth	_	_
ASA connectivity via Windows PC service	_	-
VCI A/C diagnostics (SW & HW)		_
Remote control via smartphone		











NEW: ACX 420	ACX 250	NEW: ACX 450	ACX 255	NEW: ACX 480
R1234yf	R1234yf	R1234yf	R1234yf	R1234yf
-	-	-	-	-
•	•	•	-	
HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar	HPV 0.02 mbar
12 L (PED)	20 L	20 L (PED)	20 L	20 L (PED)
14 cc	14 cc	14 cc	14 cc	14 cc
100 kg	150 kg	150 kg	150 kg	175 kg
>95%	>95%	>95%	>95%	>95%
LP	Tank, LP, HP	Tank, LP, HP	Tank, LP, HP	Tank, LP, HP
2 (fresh oil, used oil)	4 fresh oil, (PAG & POE), used oil, UV additive	4 fresh oil, (PAG & POE), used oil, UV additive	4 fresh oil, (PAG & POE), used oil, UV additive	4 fresh oil, (PAG & POE), used oil, UV additive
A	<u> </u>	•		•
1	1	2 (fresh oil, used oil)	1	4
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
4.5 m	4.5 m	4.5 m	3 m	4.5 m
7.5 m	7.5 m	7.5 m		7.5 m
7" TFT color touch screen	4.3" TFT color touch screen	7" TFT color touch screen	4.3" TFT color touch screen	7" TFT color touch screen
Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
24	24	24	24	24
24 months	24 months	24 months	24 months	24 months
CE, PED	CE, PED	CE, PED	CE, PED, TÜV, VDA approved	CE, PED
Automatic	Fully automatic	Fully automatic	Fully automatic	Fully automatic
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