

AIR CONDITIONING WORKSHOP EQUIPMENT 2014 / 2015

ECO
ecologically friendly

**LOW
EMISSION**

FAST, ECONOMICAL,
ECO-FRIENDLY



A/C service units



Refrigerants and
oils



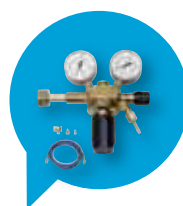
A/C flushing



Recovery/leak
detection



Air conditioner
cleaning



Tools and
accessories



Accessories for
R 1234yf

A/C SERVICE UNITS
FOR R 134A AND R 1234YF

THE NUMBER ONE IN A/C SERVICE

LEADERSHIP IN ALL ASPECTS OF TECHNOLOGY

Business as usual? Even after 40 years in the A/C business our R&D department is not stuck in a routine. Working closely with the automotive industry we recognise A/C service trends earlier than others, and we use our inside knowledge to create product innovations that make an impact in the market. The new ASC 2500 Low Emission, featuring a refrigerant loss rate of close to zero, has proven a highly profitable service tool. A/C service on hybrid vehicles, too, is ensured in the long run – thanks to our tried and tested automatic ASC service units, which are compatible with all hybrids produced in Germany. An upgrade kit for service work on vehicles made in Japan and Korean is also available.

Automotive manufacturers	Approved by automotive manufacturers			
	A/C service units	Leak detection equipment	Air conditioner cleaning	UV additives (e.g. for UV leak detection)
Mercedes-Benz	●	●	–	●
BMW Group	●	●	–	●
Nissan Germany	●	●	●	●
Renault Germany	●	●	●	●
Volkswagen Group	●	●	–	●
Fiat Germany	●	●	●	●
Ford Europe	●	●	●	●
Volvo Germany	●	●	●	●
Jaguar Europe	●	●	●	●
Landrover Europe	●	●	●	●
Aston Martin Europe	●	●	●	●
Mazda	●	●	●	●
Hyundai	●	–	–	–
Opel / GM Europe	●	●	–	–
MAN	●	●	–	●
DAF	●	●	–	●
Scania	●	●	●	●

WE ARE GLAD TO HELP!



YOUR SERVICE CONTACT DETAILS:

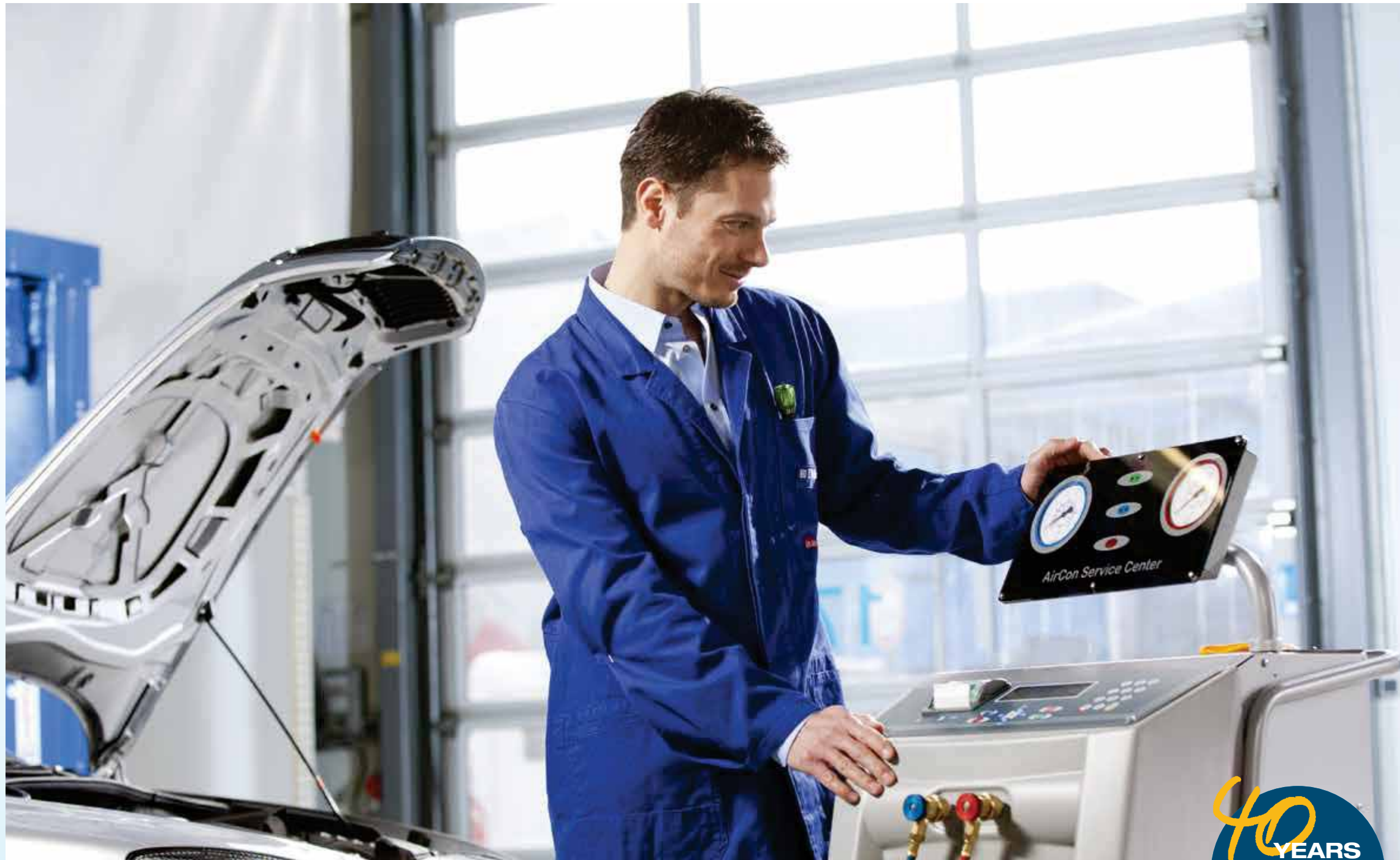
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WHAT WAEKO AIRCONSERVICE OFFERS

- | Products approved by major vehicle manufacturers
- | Original replacement parts
- | Universal components
- | Components for special A/C applications
- | A/C workshop equipment
- | Consumables
- | Technical advice and support
- | Tailor-made training concepts
- | Proof of competence according to the German Chemicals Climate Protection Ordinance
- | A/C service units and consumables for the new R1234yf refrigerant
- | F-Gas certification



PROFESSIONAL STANDARD:

THE ASC SERVICE UNIT GENERATION

ASC by WAECO is, and has been for years, the abbreviation for excellent quality and cutting-edge technology in A/C service equipment. The series is constantly improved and complemented to meet future requirements. All ASC service units are state of the art and fully automatic.



40 years WAECO

Join the party!

In spring 2014 we are going to celebrate the 40th anniversary of our WAECO brand. Join us for the party and look forward to many attractive offers. Just check our website www.dometic-waeco.com to keep informed of the birthday celebrations.



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ASC 2000	ASC 3000
ASC 2500 Low Emission	ASC 5000 / ASC 5000RPA

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UV leak detection	

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Infrared laser thermometer
Pressure meter

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Kits 66 – 70

Hoses/adapters	Original replacement O-rings
Set of chip filters	O-rings for retrofit
Orifice tubes	air conditioners

Accessories for R 1234yf 72 – 73

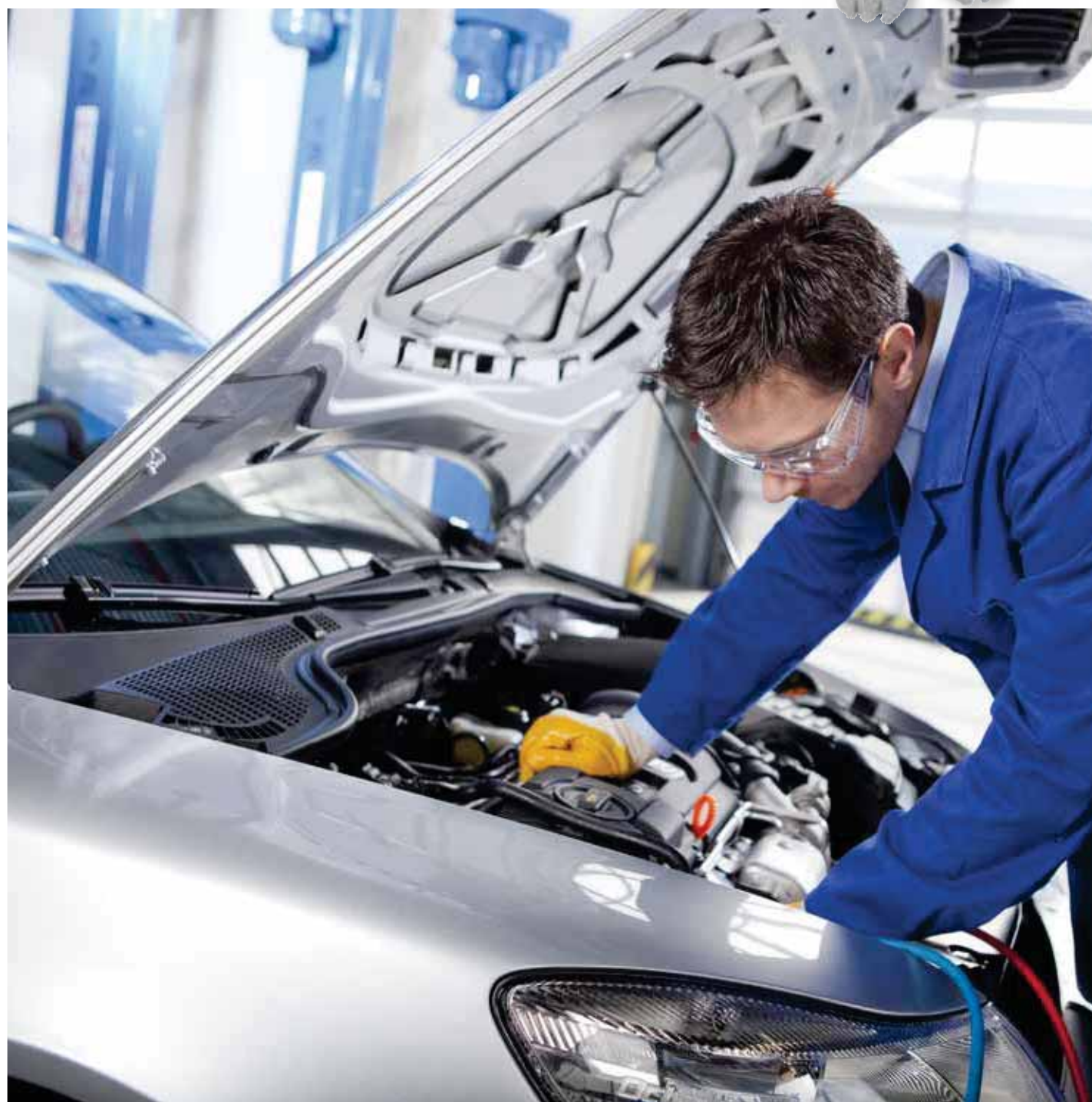
Electronic leak detector	Service filter
External refrigerant analysis tools	Oil injector
Service coupler	Special oil ND 12

Service 74 – 78

Overview of consumables
ASC package solutions
Catalogue requests

HOW TO BE A SUCCESSFUL A/C PROFESSIONAL

Polar bear Eddie has got a new face to mark the WAECO anniversary celebrations. But, of course, he has retained his lovely nature. He stands for a unique and complete air conditioning concept that gives your business an edge on efficiency and success. Benefit from a comprehensive scope of services and stay an Eddie nose length ahead of your competitors!



ASC A/C SERVICE UNITS

NOW WITH SWIVEL AND TILT DISPLAY



ASC A/C service units have, over the years, gained a firm place in motor garages and air conditioning workshops. This is because they have the right quality and all it takes to make service work on automotive air conditioners a profitable and safe business.

With this philosophy in mind we have created the 2014 facelift series, which is now even more user-friendly. All R134a service units in our ASC series were fitted with a new, swivel and tilt manometer display panel that makes sure important measurements are easy to read from every angle in the workshop.



Custom versions to meet specific customer requirements – no problem for Europe's largest manufacturer!

Environment and efficiency

ASC 2500 Low Emission

All the benefits of the ASC series combined with eco-friendly Low Emission technology for close to 100% refrigerant recovery. Outstanding efficiency, ideal for professional A/C service.



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Pages 14 – 15

Universal entry-level model

ASC 1000

Professional, fully automatic unit with quick-start function. Inexpensive entry-level model with all functions included. Ideal for “all-round workshops”.



Pages 16 – 17

Classic model for pros

ASC 2000

High-performance high-end unit with extra-large charging cylinder capacity. For professional A/C service with little operator effort and extremely fast throughput.



Pages 18 – 19

Designed for extra safety

ASC 2000RPA

High-performance unit with additional gas analysis function. Recognises R 134a as well as R 12, R 22, HC and air. Nitrogen connection for leak check.



Pages 20 – 21

High-volume version

ASC 3000

Extra-high performance, ideal for A/C service on buses, rail cars, etc. The 2-stage vacuum pump evacuates 132 litres per minute.



Pages 22 – 23

Newcomers to the range

ASC 5000 / ASC 5000RPA

For safe maintenance of air conditioners with R 1234yf refrigerant. The ASC 5000RPA comes with an integrated gas analysis tool. Can be retrofitted for use with R 134a.



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Pages 26 – 29

PATENTED FEEDING SYSTEM FOR FRESH OIL AND UV ADDITIVE

Plastic containers let moisture in, which may lead to acid or ice formation in the A/C system. Therefore, ASC A/C service units use aluminium laminated bags contained in protective metal cylinders for moisture-free storage

of fresh oil and UV additive. No blockage of valves, no solvent penetration and the full approval of many automotive manufacturers.



Laminate bags



Included as standard with models ASC 1000, ASC 2000, ASC 2500 and ASC 2000RPA

ASC SERIES MEETS SAE J 2788 AND 2099

The standard developed by the Society of Automotive Engineers (SAE) is valid for the USA, while it can also be found in the factory specifications of several German automotive manufacturers.

What are the most significant requirements and what do they mean for daily workshop operation?

Requirements for SAE J 2788 approval:

- The unit must be able to recover 95% of the refrigerant contained in the automotive air conditioner within 30 minutes, at ambient temperatures between 20 and 24°C. In other words, no more than 5% of the refrigerant may be left in the air conditioner.
- Refrigerant must be charged with an accuracy of +/- 15 g.
- Refrigerant recovery must be made and displayed with an accuracy of +/- 30 g.

To comply with these requirements we modified the hardware and software of the ASC-series units. Among other things, we integrated a new weighing platform. The special **weighing technology requires no transport lock.**



Contents, specifications and availability are subject to change due to the technical improvement. We are not liable for errors and printing mistakes.

LOW LIFECYCLE COSTS

ASC – THE MOST PROFITABLE SOLUTION IN THE LONG RUN

You certainly know the tale about those “super-low-cost” printers where the cartridge will in the end cost you more than the unit did. When considering the investment in an A/C service unit you will naturally have an eye on the costs – upcoming maintenance costs included. This is where fully automatic ASC A/C service units offer many plus factors: **low costs**

for spares and consumables, considerably longer service and maintenance intervals, plus a full 24 months of warranty coverage! Projected to the entire lifecycle of an A/C service unit (8 years and beyond), ASC-series units are a very profitable choice.

Maintenance-friendly vacuum pump



Oil change only after every 60 operating hours

High-capacity filter drier



Needs to be replaced less often (after 150 kg of recovered refrigerant)

Valve block



Fully electronic control of all processes, reduces service times.

High-capacity weighing cell



All refrigerant carrying components are placed on the main scales, which prevents measuring errors and thus saves time.

Heating tape



Helps charge the required amount of refrigerant into the vehicle even when ambient temperature are high and the engine is hot. No need to manually interfere into the process.



ASC BENEFITS AT A GLANCE

1 TRULY AUTOMATIC UNITS – OFTEN COPIED, NEVER MATCHED!

Units with manual control valves involve the risk of erroneously charging the air conditioner from the low pressure side. Automatic units are safer, they have no control valves.

2 PATENTED FEEDING SYSTEM FOR FRESH OIL AND UV ADDITIVE

Fresh oil and UV additive are stored in aluminium laminated bags contained in protective metal cylinders. This keeps moisture out.

3 INTEGRATED CHARGING AMOUNT DATABASE

The database contains vehicle-specific data such as the oil type and the amount of oil and refrigerant. It provides the option to create a personalised charging amount database for up to 100 vehicles. Updates can be made with the flash memory card or via the service unit's USB interface (ASC 5000).

4 INTEGRATED REFRIGERANT CHARGING / RECOVERY AMOUNT MANAGEMENT

The total amount of refrigerant charged or recovered per month can be displayed on the service unit or printed out with the thermal printer. Alternatively, it can be exported to a USB stick or laptop via the USB interface (ASC 5000 only).

5 ALSO SUITABLE FOR MODERN-DAY HYBRID VEHICLES



Thanks to the optional hybrid flushing kit the unit can be used for service work on hybrid vehicles of all makes. Dangerous oil cross contamination is impossible.

6 ECONOMICAL DIAGNOSIS TOOL

Low-emission ASC service units have a refrigerant recovery rate of about 99.8%. This saves on expensive refrigerant, and it also helps detect leaks.

7 CUSTOMISED FLUSHING PROCESS AND FLUSH BOTTLE

The efficient and safe flushing process was developed in consultation with the automotive industry.

8 TÜV-APPROVED REFRIGERANT PURITY

TÜV Rheinland confirmed that the effectiveness of the refrigerant cleaning function of ASC A/C service units complies with SAE J 2099 / J 2210.

9 PROTECTED ACCESS WITH INDIVIDUAL USER CODES

Up to 10 user names can be programmed in combination with individual PIN codes.

10 OPERATIONAL SOFTWARE IN MORE THAN 20 LANGUAGES

DE, EN, FR, IT, SR, HR, SL, TR, NL, DA, NO, SV, PT, GL, CA, ES, EU, FI, ET, CS, RO, PL

11 COMPETITIVE LIFECYCLE COSTS

The operational costs are significantly lower than with comparable units. Service intervals and warranty periods are considerably longer.

12 DESIGNED FOR WORLDWIDE USE

The ASC range includes service units ready for connection to 230 volts or 110 volts. Models with country-specific mains plugs are also available.

13 USER-FRIENDLY DISPLAY UNITS

The swivel and tilt manometer unit is easy to read from every angle.

„ENGINEERED IN GERMANY“ ASC 2500 LOW EMISSION FEATURES

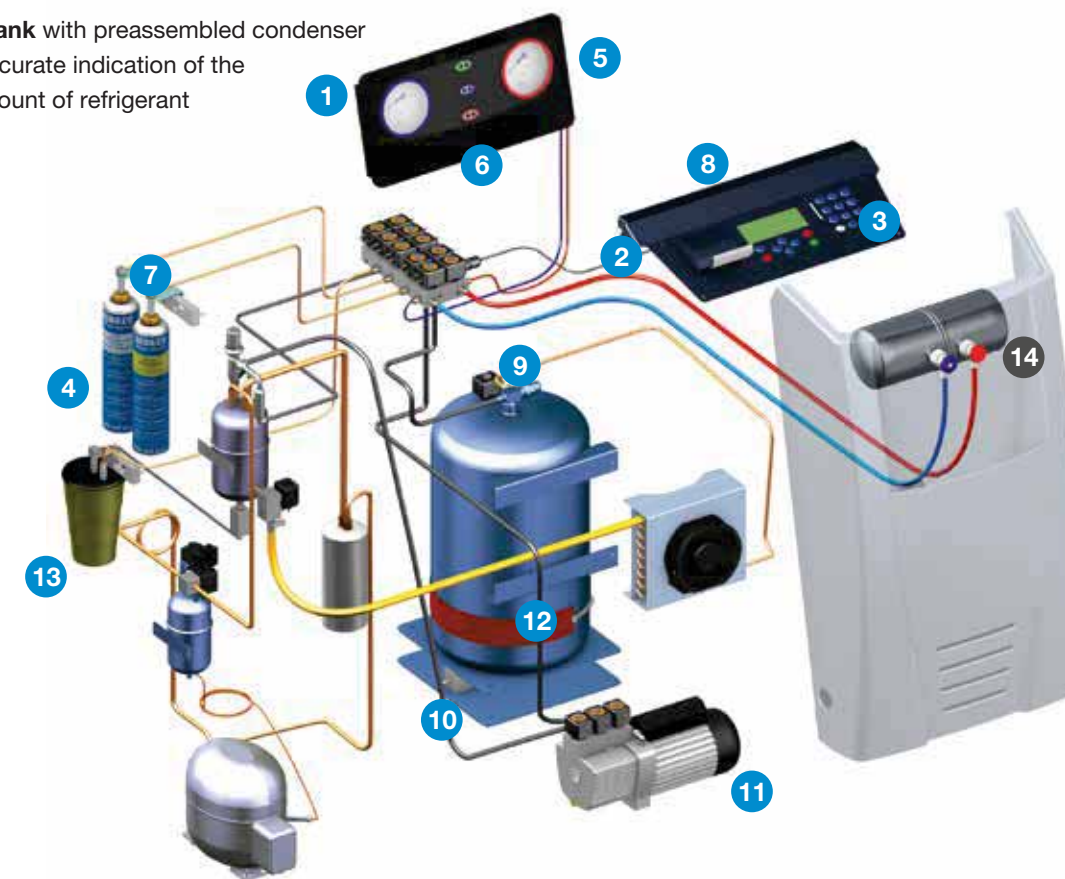


ASC service stations are perfectly geared to the needs of daily workshop routine. Easy to use and maintain, they work fully automatic – no need to keep a constant eye on them. Add to this the convincing cost/benefit ratio and you'll agree that all the

conditions for profitable A/C service are met. Approvals from automotive manufacturers are a recommendation in itself. The ASC 2500 offers the following distinctive features:

- NEW: swivel and tilt manometer panel – easy to read from every angle**
- Data printer** to be activated as required, with multiple print-out and paper feed options
- Large, high-quality **membrane keypad** for reliable data entry
- Patented, professional feeding system** for fresh oil and UV additive
- Illuminated manometer** with 100 mm diameter
- High-contrast **LED display** for process supervision from a long distance
- 3 separate weighing cells** for oil management (used oil / fresh oil / UV additive) are a distinctive feature of the fully automatic unit
- Large display** for easy readability and reliable data entry
- Refrigerant tank** with preassembled condenser and fan for accurate indication of the recovered amount of refrigerant

- Special, 8-bearing weighing platform** with high-capacity weighing cell (100 kg load capacity)
- Service-friendly low-emission vacuum pump** with **60-hour** oil change interval
- Increased pressure due to heating band on the refrigerant tank;** for complete charging of the A/C system even at high ambient temperature
- Patented, low-emission used oil container** prevents refrigerant loss during used oil purging; the refrigerant recovered with the used oil is supplied to the refrigerant tank and included in the weighing.
- Optional accessory: flushing kit for the internal circuit of the ASC.** Especially recommendable where the ASC is also used on Asian-make hybrid vehicles.





ASC 2500 Low Emission – ENVIRONMENTALLY SOUND AND PROFITABLE

New technology for use with an “old” refrigerant. **How does the ASC 2500 manage to recover almost 100% of the R134a refrigerant from the A/C system?** Refrigerant loss mainly occurs in the phase when the refrigerator oil is forced out from the **used oil container**. The ASC 2500 uses a **pressure-tight container**. The system was modified so as to allow it to extract and recover the refrigerant escaping during used oil discharging and

return it to the refrigerant tank. Moreover, it returns the residual refrigerant to the tank in the vacuum phase. The result is a refrigerant loss rate of close to zero percent! This saves refrigerant and money. And above all, it protects the environment



ASC 2500 Low Emission

- Sturdy metal housing
- Charging cylinder storage capacity: 16 kg, vacuum pump capacity: 5 cars/h
- Patented feeding system for fresh oil and UV additive including test bottles
- Print-out of important service data, several print-outs possible
- Fully automatic refrigerant recycling, oil and additive management
- Automatic vacuum check
- Automatic charging of leak detection additive
- Integrated refrigerant charging and recovery amount management
- Integrated charging amount database
- Complies with SAE J 2099 and SAE J 2788
- Close to 100% refrigerant recovery
- Virtually 0% service emission thanks to patented used oil container
- Personalised charging amount database
- Operator guidance via large display and illuminated manometer
- NEW: swivel and tilt manometer panel (patented)
- Swivel-mount display and information unit (patented)
- Heated charging cylinder for high-speed charging, heat-up also possible during the charging process
- Special, 8-bearing weighing platform
- Special air conditioner flush function
- Large recessed tray for tools
- Also suitable for German-make hybrid vehicles
- Service on Asian-make hybrid vehicles is possible if the optional flushing kit for the ASC's internal circuit was installed (see page 54)
- Patented used oil container

Ref. No.

8885200095 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)
8885400035 (Adapter for non-returnable bottles, 1/4" HP)



ALSO GREAT AS DIAGNOSIS TOOL

The ASC 2500 Low Emission integrates all refrigerant bearing components on the weighing platform. That means the complete amount of refrigerant contained in the unit can be recorded and the amount of the recovered refrigerant can be exactly determined. This in turn will tell the operator about potential leaks in the A/C system. The accurate diagnosis function of the ASC 2500 is also very useful with

regard to decreasing refrigerant charging amounts on modern-day vehicles. In the compact car segment we already see models with charging amounts of less than 300 g (e.g. Daihatsu Cuore). Older A/C service units won't be able to charge these systems with the required accuracy. Excessive or insufficient charging, though, would entail major problems.



Well engineered:
Patented used oil container



Practical:
Easy-to-maintain special filter



NEW

Swivel and tilt manometer panel:
Easy to read from every angle in the workshop



Optional

hybrid

Safe and secure:
Accessory kit for service on hybrid vehicles



With special software for A/C flushing to vehicle manufacturer's specifications

ASC1000 – FULLY AUTOMATIC A/C SERVICE UNIT

Fully automatic AirCon Service Centre for all A/C specialists. This unit has all it takes to perform standard service work on automotive air conditioners. With **quick-start function:** simply enter the amount of refrigerant to be charged, make a total of three input instructions, and the unit will automatically do all the required functions:

- › **Refrigerant recovery and recycling**
- › **Residual pressure measurement**
- › **Used oil drainage**

- › **Evacuation**
- › **Leak check**
- › **Charging of fresh oil and UV additive**
- › **Refrigerant charging with charging amount compensation of the service hoses**

All process steps are fully automatic and self-monitored by the system. Errors are indicated by acoustic and visual signals from the swivel-mount display unit.

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ASC1000 – FULLY AUTOMATIC AIRCON SERVICE CENTRE

- **Sturdy metal housing**
- **Charging cylinder storage capacity: 10 kg, vacuum pump capacity: 4 cars/h**
- **Optional adapter 4440600026 enables patented feeding system for fresh oil and UV additive**
- **Print-out of important service data, several print-outs possible**
- **Fully automatic refrigerant recycling, oil and additive management**
- **Automatic vacuum check**
- **Automatic charging of leak detection additive**
- **Integrated refrigerant charging and recovery amount management**
- **Integrated charging amount database**
- **Complies with SAE J 2099 and SAE J 2788**
- **Personalised charging amount database**
- **Operator guidance via large display and manometer**
- **NEW: swivel and tilt manometer panel (patented)**
- **Swivel-mount display and information unit (patented)**
- **Heated charging cylinder for high-speed charging, heat-up also possible during the charging process**
- **Special, 8-bearing weighing platform**
- **Special air conditioner flush function**
- **Large recessed tray for tools**
- **500 ml used oil container for longer change intervals**
- **Also suitable for German-make hybrid vehicles**
- **Service on Asian-make hybrid vehicles is possible if the optional flushing kit for the ASC's internal circuit was installed (see page 54)**

Ref. No.

9103301826 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)
8885400035 (Adapter for non-returnable bottles, 1/4" HP)



ASC 1000 FEATURES:

Individual user code:

To prevent unauthorised use of WAECO A/C service units, up to 10 user names can be programmed in combination with individual PIN codes.

Personalised charging amount database:

ASC-series units give you the option to create a personalised charging amount database for 100 different vehicles.

A/C service worldwide: the ASC 1000 is also available in a 110 V – 50/60 Hz version.



Optional:
Patented feeding system for fresh oil and UV additive



Data printer: Print-out of important service data, as many copies as required



Swivel and tilt manometer panel:
Easy to read from every angle in the workshop



ASC 2000 – WITH PATENTED FEEDING SYSTEM FOR FRESH OIL AND UV ADDITIVE

Ease of use at its best. Designed for professional A/C service on trucks and cars, the ASC 2000 minimises operator effort and throughput time. Prior to system start the operator can read the oil level from the display. **Afterwards, the following processes are performed fully automatic:**

- › Refrigerant recovery and recycling
- › Residual pressure measurement
- › Used oil drainage
- › Evacuation
- › Leak check

- › Fresh oil and UV additive charging
- › Refrigerant charging with charging amount compensation of the service hoses

Additional ASC 2000 benefits:

- › Large charging cylinder storage capacity (21 kg)
- › Dust cover included as standard
- › Accurate oil management with 3 separate micro scales



ASC 2000 – FULLY AUTOMATIC A/C SERVICE UNIT

- Charging cylinder storage capacity: 21 kg, vacuum pump capacity: 5 cars/h
- Patented feeding system for fresh oil and UV additive incl. test bottles
- Print-out of important service data, several print-outs possible
- Dust cover included
- Fully automatic refrigerant recycling, oil and additive management
- Automatic vacuum check
- Automatic charging of leak detection additive
- Integrated refrigerant charging and recovery amount management
- Integrated charging amount database
- Complies with SAE J 2099 and SAE J 2788
- Personalised charging amount database
- Operator guidance via large display and manometer
- NEW: swivel and tilt manometer panel (patented)
- Heated charging cylinder for high-speed charging, heat-up also possible during the charging process
- Special, 8-bearing weighing platform
- Special air conditioner flush function
- 500 ml used oil container for longer change intervals
- Also suitable for German-make hybrid vehicles

- Service on Asian-make hybrid vehicles is possible if the optional flushing kit for the ASC's internal circuit was installed (see page 54)



Ref. No.

9103301815 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)
8885400035 (Adapter for non-returnable bottles, 1/4" HP)

ASC 2000 FEATURES:

Individual user code:

To prevent unauthorised use of WAEKO A/C service units, up to 10 user names can be programmed in combination with individual PIN codes.

Personalised charging amount database:

ASC-series units give you the option to create a personalised charging amount database for 100 different vehicles.

Built-in data printer:

Measurements can be printed out as often as desired once the service process has been completed. The amount of recovered refrigerant can be blanked out if required.

A/C service worldwide: the ASC 2000 is also available in a 110 V – 50/60 Hz version.



Standard on ASC 2000 units:
Patented feeding system for fresh oil and UV additive



Swivel and tilt manometer panel:
Easy to read from every angle in the workshop



Safe and secure:
Accessory kit for service on hybrid vehicles



ASC 2000RPA – WITH FULLY AUTOMATIC REFRIGERANT ANALYSIS

The unnoticed presence of contaminated refrigerant in a vehicle A/C system or refrigerant bottle runs the risk of contaminating all the vehicles serviced afterwards. Workshop owner may face substantial damage claims as a result. A refrigerant analysis tool prevents the trouble.

RPA stands for **R**efrigerant **P**urity **A**nalysier – a system which checks whether the vehicle A/C system and A/C service unit really contain pure R 134a and nothing else. The most frequent reasons for refrigerants contamination are **refrigerants imported from the Far East or the presence of air in the vehicle A/C system.**

A vehicle A/C system can only operate successfully when filled with pure R 134a. Air entering the system means a serious problem.

Possible consequences:

- › Increased operating pressure and functional problems of the A/C system
- › Corrosion caused by the humidity admitted with the air
- › Substantial reduction of the refrigeration performance
- › Substantial strain on the compressor suction and

pressure valves caused by increased pressure in the system

- › Besides R 134a, the ASC 2000RPA also recognises R 12, R 22, HC and air.

Nitrogen leak check

In order to meet our commitment to protect our environment it is necessary to release as little refrigerant as possible into the atmosphere. **In addition to the existing, fully automatic vacuum leak test function integrated in the service unit it is possible to admit nitrogen to the system.**

This method eliminates the drawback of leak tests solely by vacuum (components such as A/C tubes might contract and thus close a leak). Exposure to pressurised nitrogen during A/C service tells you immediately whether the system is tight. The test is carried out fully automatic by the ASC 2000RPA.



ASC 2000RPA – FULLY AUTOMATIC A/C SERVICE UNIT

- **Sturdy metal housing**
- **Fully automatic gas analysis (R 134a, R 12, R 22, HC, air)**
- **Charging cylinder storage capacity: 21 kg, vacuum pump capacity: 5 cars/h**
- **Patented feeding system for fresh oil and UV additive incl. test bottles**
- **Print-out of important service data, several print-outs possible**
- **Fully automatic refrigerant recycling, oil and additive management**
- **Automatic vacuum check**
- **Fully automatic nitrogen leak check**
- **Automatic charging of leak detection additive**
- **Integrated refrigerant charging and recovery amount management**
- **Integrated charging amount database**
- **Complies with SAE J 2099 and SAE J 2788**
- **Personalised charging amount database**
- **Operator guidance via large display and manometer**
- **NEW: swivel and tilt manometer panel (patented)**
- **Swivel-mount display and information unit (patented)**
- **Heated charging cylinder for high-speed charging, heat-up also possible during the charging process**
- **Robust weighing technology for the refrigerant tank allows service work also in mobile applications**
- **Special air conditioner flush function**
- **Large recessed tray for tools**
- **500 ml used oil container for longer change intervals**
- **Dust cover included in the delivery kit**

Ref. No.

- 8885200087** (See pages 30/31 for specifications)
- 8889900001** (Instruction package for A/C service units)
- 8885400035** (Adapter for non-returnable bottles, 1/4" HP)



(Picture similar to product)

ASC 2000RPA FEATURES:

Fully automatic testing of refrigerant purity

The ASC2000RPA A/C service unit ensures that the A/C system only contains pure R 134a, neither contaminated with banned refrigerants nor mixed with air.

Prior to the actual recycling process the service unit automatically removes and analyses a small refrigerant sample (9.5 g). The results are shown on the unit display. The operator receives a significant, qualified assessment of the refrigerant in the A/C system connected to the service station and can exactly determine what repairs or maintenance may be required.

If the refrigerant is fine, the ASC2000RPA continues its fully automatic programme in the same manner as the WAECO ASC2000 system.



Reliable:
Information displayed after refrigerant analysis



User-friendly:
Intake filter of the analysis unit is easy to access



Illuminated:
Large display with quick-select menu



Optional:
Gas cylinder trolley



ASC 3000 – HIGH-VOLUME AIRCON SERVICE CENTRE FOR BUSES, TRAINS, HELICOPTERS AND CUSTOM APPLICATIONS

Time is valuable, especially when it comes to air conditioning service on large vehicles such as **buses and trains** where downtimes are extremely costly for the operators. Speed and reliability are vital. Key service tasks such as refrigerant recovery, evacuation and refrigerant recharging need to be performed within a tight timeframe. The ASC 3000 perfectly meets these requirements. Its **2-stage vacuum pump** evacuates **132 litres per minute**. An additional fluid pump ensures fast refrigerant recharging.

Using the optional flush kit (p. 41) the A/C service unit can be cleaned inside after use to remove residual oil and UV additive and avoid cross contamination.

The following processes are performed fully **automatic**:

- › **Refrigerant recovery and recycling**
- › **Residual pressure measurement**
- › **Used oil drainage**
- › **Evacuation**

- › **Leak check**
- › **Fresh oil and UV additive charging**
- › **Refrigerant charging with charging amount compensation of the service hoses**

The ASC 3000 offers:

- › **Patented fresh oil and UV additive feeding system** (allows moisture-free and clean storage of refrigerant oils even over longer periods of time, which cuts A/C service costs)
- › **Integrated printer** for service data documentation

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ASC 3000 – FULLY AUTOMATIC A/C SERVICE UNIT

- **Charging cylinder storage capacity:** 30 kg
- **Integrated fluid pump** for high-volume refrigerant charging
- **2-stage vacuum pump** designed in cooperation with utility vehicle manufacturers, vacuum pump capacity: 132 l/min
- **Print-out of important service data**, several print-outs possible
- **Optional: patented feeding system** for fresh oil and UV additive
- **Fully automatic** refrigerant recycling, oil and additive management
- **Automatic vacuum check** and charging of leak detection additive
- Complies with SAE J 2099 and SAE J 2788
- **Integrated refrigerant charging and recovery amount management**
- Integrated charging amount database
- **Personalised charging amount database**
- Operator guidance via large display and manometer, large recessed tray for tools
- **NEW: swivel and tilt manometer panel (patented)**
- Swivel-mount display and information unit (patented)
- Heated charging cylinder for high-speed charging, heat-up also possible during the charging process
- Special, 8-bearing weighing platform
- Special air conditioner flush function
- 500 ml used oil container for longer change intervals
- Service hoses 8 m
- Also suitable for German-make hybrid vehicles
- **Suitable for Asian-make hybrid vehicles when optional flushing kit 8885200263 is installed (see page 54).**

Ref. No.

9103301819 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)
8885400035 (Adapter for non-returnable bottles, 1/4" HP)



ASC 3000 FEATURES:

Individual user code:

To prevent unauthorised use of WAECO A/C service units, up to 10 user names can be programmed in combination with individual PIN codes.

Personalised charging amount database:

ASC-series units give you the option to create a personalised charging amount database for 100 different vehicles.

Simply perfect:

Easy-to-read manometer, patented feeding system for fresh oil and UV additive. The unit is suitable for mobile use and complies with automotive manufacturers' requirements.



Optional:
Patented feeding system for fresh oil and UV additive



Swivel and tilt manometer panel:
Easy to read from every angle in the workshop



Integrated fluid pump:
For charging high-volume A/C systems



Included:
Can of professional SE 55 oil

12 THINGS – YOU OUGHT TO KNOW ABOUT R 1234YF SERVICE UNITS

Time and again we see A/C service units being offered in the marketplace that do not meet the technical requirements for use with R 1234yf. Here are some things for you to consider, just to be “on the safe side”:

1 Fully automatic self-test

R 1234yf service units are subject to special safety regulations. The refrigerant must not escape into the atmosphere. Therefore, the ASC 5000RPA from WAECO automatically performs a leak check in regular intervals. This ensures that potential minor leaks in the system will not remain undetected.

2 Service couplers with clearance ventilation

The service connections on R 1234yf air conditioners are different from those on R 134a systems. This eliminates the risk of confusion when connecting the service equipment. Service couplers on R 1234yf systems must have what is called a “ventilated clearance” to ensure that no refrigerant escapes from the air conditioner even when you have a defective Schrader valve.

3 Clearly recognisable service equipment

A/C workshops are most likely to have two different A/C service units in the future, because R 134a and R 1234yf are not compatible with each other. To avoid confusion right from the start, the differences between the units should be clearly visible.

4 Separate manometers for R 1234yf

R 1234yf and R 134a have different chemical properties and must not be mixed. Accordingly, pressurised containers, hoses, gaskets and manometers all have to be adapted to the specific refrigerant. Universal service units used for both refrigerants must have separate circuits and separate components wherever they get in touch with the substances.

5 Integrated refrigerant analysis / safe and smooth process flow

R 1234yf is very sensitive to cross contamination with other refrigerants. Therefore, it is mandatory to use analysis equipment to check the refrigerant purity. You can save time if the analysis tool is already integrated in the service unit. Also, it is safer because the analysis is always done automatically.

6 Low Emission

The low-emission technology prevents workshop staff are exposed to illegally high concentrations of R 1234yf.



7 External switch-on delay

R 1234yf is inflammable under certain conditions. Therefore, the system start will only activate the external fan at first. After the fan has been running for 35 seconds, the voltage is passed on to the system. This guarantees there's no inflammable mixture contained in the system when the electrical components are enabled.

8 External ventilation

Prior to system start-up, the service unit is ventilated upon pressing the ON button. For the purpose the ASC 5000RPA features large ventilation holes in the base. It only makes sense to use an external fan that draws fresh air in. A fan fitted inside the unit might lead to an inflammable mixture.

9 Easy-to-maintain special filter

Electronic change-filter indicator: After a certain amount of refrigerant recovered the system automatically tells you it's time to replace the filter. The filter is accessible from the outside for easy maintenance.

10 Get everything from one source

It's not enough to have an A/C service unit and maintain a stock of refrigerant. A good supplier will also provide all the consumables required for A/C service, such as oils and leak detection additives. Please bear in mind that PAG oils and ester oils for R 134a are not suitable for use in R 1234yf A/C systems!

11 Avoid costly refrigerant loss

It can be expected that the price for R 1234yf will be considerably higher than that for R 134a – another reason why refrigerant loss should be avoided. Conventional A/C service units may lose up to 100 kilograms of refrigerant per use through the vacuum pump and during oil recovery. This is all different with the ASC 5000RPA from WAECO. Based on the low-emission principle, it has a refrigerant loss rate of close to zero %.

12 Connection for external refrigerant recovery (not illustrated)





ASC 5000RPA

FOR THE NEW REFRIGERANT R 1234YF

They may be only a few, but they are there – the first new vehicle models with A/C systems prepared for the use of R1234yf refrigerant. Brand-bound motor garages, in particular, are obliged to get prepared for servicing these systems. Against this backdrop WAECO’s AirCon professionals have designed, in close cooperation with the automotive industry, the ASC 5000RPA service unit.

As R 1234yf is very sensitive to contamination with other refrigerants, **the ASC 5000RPA was fitted with an integrated analysis tool that checks the refrigerant purity.**

Designed inside out for use with R1234yf refrigerant, the ASC 5000RPA meets fire regulations and, of course, offers all the benefits known from the “classic” models in the ASC series.

A/C service units approved/ recommended for R 1234yf

Vehicle manufacturer	Approval for R 1234yf
BMW Group	●
Fisker (in various countries)	●
Ford Europe	●
Hyundai (in various countries)	●
Kia (in various countries)	●
Mazda (in various countries)	●
Nissan (in various countries)	●
Opel Group	●
Subaru (in various countries)	●
Suzuki (in various countries)	●
Toyota Motor Europe	●
Volkswagen Group	●

A/C service cost savings with low-emission concept

A/C service R 1234yf without low-emission concept

Average amount of refrigerant charged into the A/C system	600 g	
Average market price for R1234yf refrigerant	179.00 € / kg	
Refrigerant lost during used oil purging	25 g	4.48 €
Refrigerant recovered from the A/C system	95 %	5.37 €
Refrigerant lost per service		9.85 €
For 3 x A/C service per week, the annual loss on refrigerant is		1.536,60 €

A/C service R 1234yf with low-emission concept

Average amount of refrigerant charged into the A/C system	600 g	
Average market price for R1234yf refrigerant	179.00 € / kg	
Refrigerant lost during used oil purging	0 g	0.00 €
Refrigerant recovered from the A/C system	99,9 %	0.11 €
Refrigerant lost per service		0,11 €
For 3 x A/C service per week, the annual loss on refrigerant is		17,11 €

Annual savings per year with low-emission concept	1.519,44 €
Annual savings in 8 years with low-emission concept	12.155,52 €

ASC 5000RPA Low Emission

- **Stabiles Metallgehäuse**
 - **Füllzylinderspeicher 16 kg, Vakuumpumpenleistung 5 Kfz/h**
 - **Optional:** Patentiertes Zufuhrsystem für Frischöl und UV-Additiv
 - **Integrierte vollautomatische Kältemittelanalyse**
 - Recycling des Kältemittels sowie Öl- und Additiv-Management **vollautomatisch**
 - Vakuumcheck automatisch
 - Automatische Dichtheitsprüfung vor Arbeitsbeginn
 - Lecksuchmitteleinfüllung automatisch
 - **Integriertes Kältemitteleinfüll- und Absaugmengen-Management**
- Integrierte Füllmengendatenbank
 - Erfüllt SAE J 2099 / 2788 und 2843
 - **Nahezu 100 % Entleerungsrate**
 - **Persönliche Füllmengendatenbank**
 - Bedienerführung über großes Display und **beleuchtete Manometer**
 - Beheizter Füllzylinder für einen schnellen Füllvorgang, Aufheizung auch während des Füllvorganges
 - Spezielle, 8-fach gelagerte Wiegetechnik
 - Spezielle Klimaanlageaspülfunktion
 - Große Werkzeugablagefläche
 - **Auch für Hybridfahrzeuge deutscher Fabrikate geeignet**

■ Patentierter Altölbehälter



Ref. No.

8885200102 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)

ASC 5000RPA FEATURES:

Extra safety:

The service unit comes with integrated refrigerant analysis function.
Explosion protection: hazard analysis performed by an **independent test institute**.

Automatic, regular leak check:

Service couplers with clearance ventilation prevent refrigerant leakage.

Switch-on delay and external ventilation:

R 1234yf is inflammable under certain conditions. Therefore, the system start will only activate the external fan. After the fan has been running for 35 seconds, the voltage is passed on to the system.

Low-emission concept: close to 100% refrigerant recovery.



Well engineered:
Patented used oil container



Big size
manometers



Practical:
Easy-to-maintain special filter



Safe and secure:
electronic, dual fan control



ASC 5000

LOW-COST ENTRY-LEVEL SERVICE UNIT FOR R 1234YF

Are you in the market for an A/C service unit for the new R1234yf refrigerant? And do you want one from a renowned manufacturer – without spending more money than necessary, though? Then this simple basic version of the ASC 5000 could be just the right thing for you. The unit integrates a wealth of WAECO know-how and experience. Professional A/C service work is performed fully automatic, with little operator

effort. All standard ASC-series features are provided, including refrigerant charging and recovery management, personalised charging amount database and automatic vacuum check. The ASC 5000 can be upgraded with an external refrigerant analysis tool. Thus equipped you will always know which refrigerant you are dealing with.

FEATURES DES ASC 5000:

- Air flow:**
Controlled air flow and a high-performance fan with special electronics guarantee adequate ventilation.
- Personalised charging amount database:**
ASC-series units give you the option to create a personalised charging amount database for 100 different vehicles.
- NEW Soft graphic display:**
The soft graphic display can also display special characters such as Cyrillic or Chinese script.
- NEW Improved manometer unit:**
The manometers for high and low pressure are now integrated in a **swivel and tilt panel** that flexibly adjusts to the situation at hand.
- NEW USB interface:**
The new ASC 5000 comes with a USB interface that can be used to update the software and the integrated charging amount database. Important service data (e.g. refrigerant amounts) can simply be exported to a USB stick or laptop for documentation.



Optional for all ASC 5000:
Patented feeding system for fresh oil and UV additive



NEW: USB interface
for software and database updates as well as for service data documentation;
soft graphic display will also display special characters



Safe and secure:
electronic, dual fan control

ASC 5000

- **Sturdy metal housing**
 - **Charging cylinder storage capacity: 16 kg, vacuum pump capacity: 5 cars/h**
 - **Patented feeding system for fresh oil and UV additive including test bottles**
 - **Print-out of important service data, several print-outs possible**
 - **Fully automatic** refrigerant recycling, oil and additive management
 - Automatic vacuum check
 - Automatic charging of leak detection additive
 - **Integrated refrigerant charging and recovery amount management**
 - Integrated charging amount database
 - Complies with SAE J 2099 and SAE J 2788
- **Personalised charging amount database**
 - Operator guidance via large display and **illuminated manometer**
 - **NEW: swivel and tilt manometer panel (patented)**
 - Swivel-mount display and information unit (patented)
 - Heated charging cylinder for high-speed charging, heat-up also possible during the charging process
 - Special, 8-bearing weighing platform
 - Special air conditioner flush function
 - Large recessed tray for tools
 - **Also suitable for German-make hybrid vehicles**
 - **Patented used oil container**
- **NEW: USB interface**
 - **NEW: soft graphic display**

Ref. No.
8885200104 (See pages 30/31 for specifications)
8889900001 (Instruction package for A/C service units)



External refrigerant analysis tools R 1234yf



- External R 1234yf gas analysis tool with USB connection**
Complies with the specifications of the task force of German vehicle manufacturers
- For ASC 5000
 - Reliable analysis with service coupler with clearance ventilation
 - Easy handling
 - **Not including printer**
 - Simple indication of the refrigerant purity

Ref. No.
8885100106 (external refrigerant analysis tool)



- External R 1234yf gas analysis SAE with USB connection**
- For ASC 5000
 - Analysis tool complies with SAE J 2912
 - With USB connection
 - **Including printer**
 - **Indicates the specific gases on the display, e.g. R 1234yf, R 134a, R 22, HC and air**

Ref. No.
8885100107 (external refrigerant analysis tool)

	ASC 1000	ASC 2000	ASC 2000RPA
Power supply	220/240 V – 50/60 Hz *	220/240 V – 50/60 Hz *	220/240 V – 50/60 Hz
Suitable for refrigerant	R 134a	R 134a	R 134a
Ref. No.	9103301826	9103301815	8885200087
Recovery / recycling			
Manufactured to UL standards of the USA	●	●	●
Purity of recovered refrigerant according to SAE J 2099	●	●	●
Refrigerant recovery rate in kg/h	30	30	30
Vacuum pump capacity	4 Cars/h	5 Cars/h	4 Cars/h
Capacity of the hermetic compressor in kW	0.32	0.32	0.32
Dry filter capacity in kg	150	150	150
Refrigerant recycling rate	min 95 %	min 95 %	min 95 %
Can be used as diagnosis tool	–	–	–
Charging			
Charging cylinder/useful capacity in kg	10 kg	21 kg	21 kg
Charging amount indicated by	Display	Display	Display
Processes			
Refrigerant analysis	–	–	automatic
Recovery/recycling	automatic	automatic	automatic
Purging of non-condensable gases	automatic	automatic	fully automatic
Purging of used oil	automatic	automatic	automatic
Evacuation	automatic	automatic	automatic
Vacuum check	automatic	automatic	automatic
Nitrogen leak check	–	–	automatic
Injection of leak detection additive	automatic	automatic	automatic
Injection of oil into the A/C system	automatic	automatic	automatic
Refrigerant charging	automatic	automatic	automatic
Control panel			
High/low pressure indicated by	Manometer	Manometer	Manometer
Vacuum indicated on	Display	Display	Display
Total process control via display	●	●	●
Option to set the evacuation time	●	●	●
Protocol print-out with printer	●	●	●
USB connection for software- und database updates	–	–	–
Scope of delivery			
Printer	●	●	●
Service hoses (SAE standard), 3 m	●	●	●
Service hoses (SAE standard), 8 m	–	–	–
Valve adapter for WAECO refrigerant bottles	●	●	●
Operating instructions	●	●	●
Adapter for 500 ml fresh oil and UV tracer dye bottle	●	●	●
Used oil container (500 ml)	●	●	●
Hermetically closed used oil container	–	–	–
Charging device for A/C compressor oil	●	●	●
Injection device for UV additive	●	●	●
Heated refrigerant tank / fluid pump (F)	●	●	●
Dust cover	–	●	●
Goggles / safety gloves	●	●	●
Test bottles UV additive for approx. 10 applications	–	●	●
Bottle of fresh PAG oil ISO 46, 500 ml		8887200013	–
Bottle of fresh PAG oil ISO 100, 500 ml		8887200014	–
Accessories/consumables			
Conversion to R 1234yf possible	–	–	–
Adapter for 500 ml bottle of fresh oil and UV tracer dye	4440600026	4440600026	4440600026
Used oil container, 500 ml	4440600033	4440600033	4440600033
Spare filter for service work	4440400008	4440400008	4440400008
Dust cover	4445900081	4445900081	4445900081
Universal flush container R 134a	8885200088	8885200088	8885200088
Spare roll of thermal paper for printer (sales pack 4 pcs.)	4445900088	4445900088	4445900088
Service hose for high-pressure side (SAE standard), 5 m	8885100026	8885100026	8885100026
Service hose for low-pressure side (SAE standard), 5 m	8885100025	8885100025	8885100025
Service adapter high pressure	8885400027	8885400027	8885400027
Service adapter low pressure	8885400026	8885400026	8885400026
Dimensions			
W x H x D in mm	560 x 1300 x 650	560 x 1300 x 650	560 x 1300 x 650
Weight in kg	95	100	100

* auch als 110 Volt-Version erhältlich

Contents, specifications and availability are subject to change due to the technical improvement.
We are not liable for errors and printing mistakes.

ASC 2500	ASC 3000	ASC 5000RPA	ASC 5000
220/240 V – 50/60 Hz	220/240 V – 50/60 Hz	220/240 V – 50/60 Hz	220/240 V – 50/60 Hz
R 134a	R 134a	R 1234yf	R 1234yf
8885200095	9103301819	8885200102	8885200104
●	●	●	●
●	●	●	●
30	30	30	30
5 Cars/h	132 l/min.	5 Cars/h	5 Cars/h
0.32	0.32	0.32	0.32
150	150	150	150
close to 100 %	min 95 %	close to 100 %	min 95 %
●	–	●	–
16 kg	30 kg	16 kg	16 kg
Display	Display	Display	Display
–	–	integrated/automatic	external/optional
automatic	automatic	automatic	automatic
fully automatic	automatic	fully automatic	automatic
automatic	automatic	automatic	automatic
automatic	automatic	automatic	automatic
automatic	automatic	automatic	automatic
–	–	–	–
automatic	automatic	automatic	automatic
automatic	automatic	automatic	automatic
automatic	automatic	automatic	automatic
Manometer	Manometer	Manometer	Manometer
Display	Display	Display	Display
●	●	●	●
●	●	–	–
●	●	●	●
–	–	–	●
●	●	●	●
●	–	●	●
–	●	–	–
●	●	●	●
●	●	●	●
●	●	●	●
●	● / F	●	●
●	●	●	●
●	●	●	●
●	–	–	–
8887200013	–	–	–
8887200014	–	–	–
●	–		
4440600026	4440600026	4440600026	4440600026
–	4440600033	–	–
4440400009	4440400008	4445900221	4445900221
4445900081	4445900081	4445900081	4445900081
8885200088	8885200088	–	–
4445900088	4445900088	4445900088	4445900088
8885100026	8885100026	8885100109	8885100109
8885100025	8885100025	8885100108	8885100108
8885400027	8885400027	with clearance ventilation: 8885400171	with clearance ventilation: 8885400171 Standard: 8885400164
8885400026	8885400026	with clearance ventilation: 8885400170	with clearance ventilation: 8885400170 Standard: 8885400163
560 x 1300 x 650	560 x 1300 x 650	560 x 1300 x 650	560 x 1300 x 650
100	110	110	100

Charging and vacuum hoses

R 134a



Service hoses in various colours for all A/C technology applications

- Suitable for all standard refrigerants
- Highly flexible material allows use even in hard-to-access areas of automotive A/C systems
- Connection thread as per SAE standard

Ref. No.

8885100065 (hose colour: red, length: 3000 mm)
8885100064 (hose colour: blue, length: 3000 mm)

Universal flush container

R 134a



For easy fitting on A/C service units

- Integrated into the flushing circuit to speed up the process to the required level

Accessory:

Replacement filter, Ref. No. 8880700246

Ref. No.

8885200088 (universal flush container)
8880700246 (Replacement filter)

Flash-Memory-Card



Updated edition

The 2014 update comprises further new vehicle models

- Charging amount data also for truck air conditioners
- Flash memory card – just slot in and play!
- 6.000 vehicle data

ASC 3000 card on request.
Please specify serial number and software version used.

Bottle set for ASC series



Bottle set for ASC series

- 250 ml capacity

Ref. No.

4440600110 (sales pack: 2 pieces)

Spare rolls for printer



Special printer paper for ASC-series thermal printers

Ref. No.

4445900088 (sales pack: 4 pieces)

Service quick couplers

R 134a



For fast connection of A/C service units to automotive air conditioners

- › Suitable for use on all WAECO A/C service units
- › High-quality special couplers for long-term use

Ref. No.

8885400026 (low-pressure coupler for R 134a with M14 x 1.5" inside thread)
8885400027 (high-pressure coupler for R 134a with M14 x 1.5" inside thread)
8885400024 (low-pressure coupler for R 134a with 3/8" SAE outside thread)
8885400025 (high-pressure coupler for R 134a with 3/8" SAE outside thread)
8885400089 (low-pressure coupler for R 134a with 1/4" SAE outside thread)
8885400090 (high-pressure coupler for R 134a with 1/4" SAE outside thread)

Used oil container

R 1234yf



Patented used oil container for ASC 2500 and ASC 5000RPA

- › Specially designed for the low-emission concept

Ref. No.

4440600131 (used oil container)
4440600133 (lid)
4443300097 (O-ring)
4442500710 (metal strip used oil bottle)

1 Service filter 2 Vacuum pump oil



1 High-performance filter for ASC series

- Special connector for easy installation

2 Vacuum pump oil

- Contains 1 litre; HT 32

Ref. No.

4440400009 (Trockner ASC 2500, models built in 2013 or later)
4445900221 (Drier for ASC 5000)
4440400008 (Drier for ASC models built before 2013)
8887200018 (Vacuum pump oil, 1 litre, HT 32)

Starter kit hybrid oil

R 134a



Starter-Kit hybrid oil

Content 120 ml

- > Safe and approved charging of the special POE (polyolester) oil with well proven spindle technology
- > No accidental confusion of oil types
- > Safe and clean oil storage
- > No mixing with other compressor oils

Ref. No.

127181 (Starter kit hybrid oil, 120 ml)
TP-9775-0104 (spare cartridge)

Type-tested refillable steel bottle for extraction in gas or liquid form

R 134a



Reusable system with refill safety device

Capacity: 12 kg of R 134a refrigerant

- > Sturdy design, good stability, stand-up collar and practical extraction valve, bottle without riser tube
- > Suitable for all charging units in mobile or stationary use

Ref. No.

8887100007 (fill of WAECO refillable bottle)
8887100008 (purchase of bottle*)
8885400129 (bottle adapter)

* Purchase price is refunded if bottle is returned within 2 years

Type-tested refillable steel bottle for extraction in gas or liquid form

R 1234yf



Reusable system with refill safety device

Capacity: 5 kg of R 1234yf refrigerant

- Sturdy design, good stability, stand-up collar and practical extraction valve, bottle without riser tube
- Suitable for all charging units in mobile or stationary use

Ref. No.

8887100016 (5 kg fill)
8887100017 (returnable bottle)
4440600148 (bottle adapter, for large bottle valves -> HD)
8885400238 (bottle adapter, 1/2" ACME left-> HD)

1 Universal PAO compressor oil 2 Universal compressor oil with UV additive R 134a



1 Synthetic multi-grade A/C compressor oil for universal use on all car and truck air conditioners

2 Universal compressor oil with UV additive

Ref. No.

8887200009 (Universal oil, viscosity 68, 1 litre)
8887200036 (Universal oil with UV additive, 1 litre)

PAG compressor oil

R 134a



The right oil for all currently available A/C compressors

- PAG oil (R 134a), 0.25 litres

Ref. No.

8887200001 (low viscosity, ISO 46)
8887200002 (high viscosity, ISO 100)
8887200008 (ultrahigh viscosity, ISO 150)

PAG compressor oil

R 134a



Unique oil charging system for professional use

- Moisture-free and clean storage
- Prevents penetration of contaminants into the A/C service unit
- Long shelf life without quality loss
- High-capacity containers, need to be replaced less often

Ref. No.

8887200013 (low viscosity, ISO 46, 500 ml)
8887200014 (high viscosity, ISO 100, 500 ml)
8887200019 (ultra-high viscosity, ISO 150, 500 ml)
8887200017 (universal oil, 500 ml)
8887200028 (ester oil SE 55, 500 ml, not for hybrids)

Accessory: Adapter (4440600026)

Compressor oil Denso ND 8 and Denso ND 11 (hybrid)

R 134a



ND 8:
Special compressor oil for factory-fitted Denso compressors

ND 11:
Special compressor oil for high-voltage hybrid applications

Accessory: adapter, Ref. No. 4440600026

Ref. No.

8887200021 (compressor oil Denso ND 8, 500 ml)
8887200035 (compressor oil Denso ND 11, 100 ml)

Ester oil Triton SE 55

R 134a



Special oil for bus air conditioners

- Polyol ester lubricant, for use on bus air conditioners
- Original Fuchs oil

Ref. No.

8887200029 (ester oil Triton, 1 litre, not for hybrids)

1 Vacuum pump oil / 2 Ester Compressor oil

R 134a



Ref. No.

8887200018 (Vacuum pump oil, HT 32, 1 litre)
8887200006 (for R 134a and R 404, contains 1 litre)

CLEAN WORKING – IT PAYS TO FLUSH!

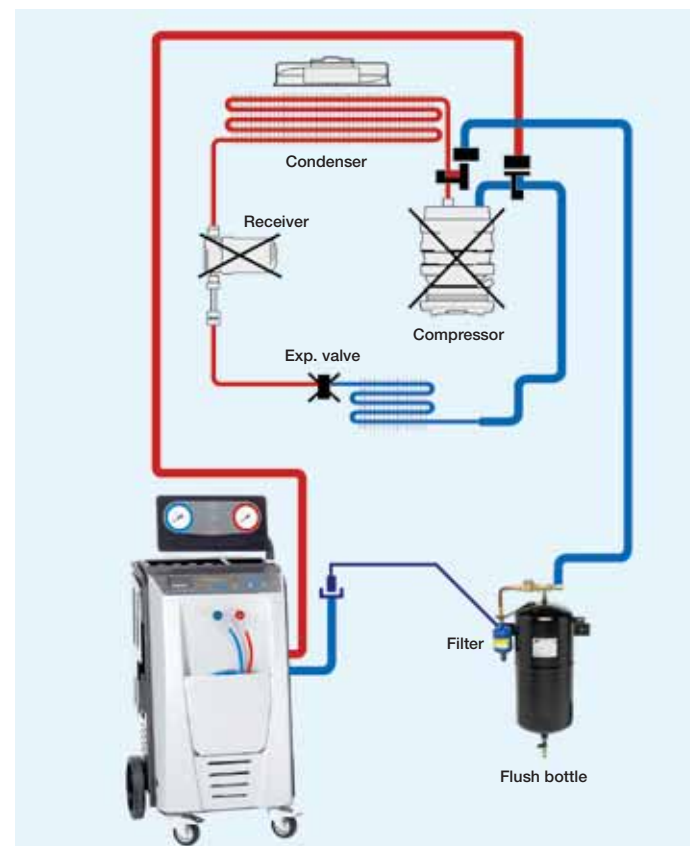
Professional service on automotive A/C systems naturally also includes flushing the system to clear away aggressive substances and contaminants from the refrigerant circuit. Flushing protects all parts of the air conditioner from damage, especially the compressor being its core component.

You will never get a hundred per cent clean refrigerant circuit, though. This is because of the parallel flow evaporator technology commonly used these days. **We strictly recommend you** to add a **chip filter** to the suction line when you flush the system. This will **protect the compressor** and is

especially advisable when you've replaced the compressor, as it will keep the remaining particles away from the newly fitted unit.

Important note: The chip filter (Ref. No. 8880700246) should be replaced after every flushing process (for each vehicle)!

This flushing process was developed directly with major automotive manufacturers. Experts say it is a sensible and necessary measure to take.



The benefits of air conditioner flushing

- › Prevents costly and annoying repeat repairs
- › Reduces subsequent costs for the workshop
- › Prevents problems with guarantee claims
- › Enhances the workshop's A/C service package
- › Recommendation for the workshop

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SAVE ON REPAIR COSTS – FLUSH A/C COMPONENTS INSTEAD OF REPLACING THEM

A defective A/C compressor can have serious consequences. It often occurs that **abrasion particles from the compressor** enter the A/C system. The abrasion particles then circulate within the refrigerant circuit and build up over time. This can lead to time consuming and costly repairs, because all components in contact with refrigerant usually need to be replaced.

The universal flush container as well as the flush adapter kit provide a cost-effective solution in such cases. Using this equipment, which is approved by major vehicle manufacturers, you can flush the entire A/C circuit without having to remove a single component. Just fit a new refrigerant compressor and the A/C system is ready for use again.

The universal flush container can also be used with other manufacturers' A/C service units. In this case the flush process needs to be controlled manually, though. **The following service units already come with a software for automatic flush control: AirCon Service Centre series ASC 1000, ASC 2000, ASC 2000RPA, ASC 2500, ASC 3000, ASC 5000 and ASC 5000RPA.**

To use the flush function of these A/C service units, just retrofit the universal flush container (Ref. No. 8885200088).



With special software for A/C flushing to vehicle manufacturer's specifications

Universal flush container

R 134a



To be fitted on A/C service units

Integrated into the flushing circuit to speed up the process to the required level

Scope of delivery:

Pressurised container with 2-way extraction valve, universal mounting bracket for pressurised container, purifier Filter, sight glass, hose to connect the container to the air conditioner and the A/C service unit connected

Ref. No.

8885200088 (universal flush container)

8880700246 (spare filter)

A/C flush adapter kit, 17 items



For bypassing expansion valves and dryers

- For direct connection of A/C service hoses to the compressor's suction and pressure hoses
- Made of high-quality brass-aluminium materials to withstand the rigours of workshop use
- Supplied in sturdy workshop case

Scope of delivery:

Universal flush adapter kit for many Audi and VW models as well as for other makes

Ref. No.

8885300089 (A/C flush adapter kit)

8885400104 (Adapter 3/8" on high-pressure side)

A/C flush adapter kit II, 18 items



A/C flush adapter set for removal of harmful substances from the refrigerant circuit

- Set includes a variety of adapters, e.g. for expansion valves and compressors
- Air conditioner is flushed with refrigerants, no need to dispose of cleaning agents
- Ideal for removing oil from the system
- Flexible use with various adapter options
- Refrigerant is recycled by the A/C service unit and can then be reused
- Causes no damage to gaskets and components

Ref. No.

SK43 (universal A/C flush adapter set)

8885300090 (repair set of 6 gaskets)

A/C flush adapter kit III, 5 items



For targeted flushing of condensers and evaporators

- For bypassing expansion valves and dryers
- Special clamps with brass connectors
- Connectors for 3/8" service hoses

Spares:

Repair set of gaskets, Ref. No. 8881500878

Ref. No.

SK46 (A/C flush connector)

8881500878 (repair set of 4 gaskets)

A/C flush adapter kit IV, 65 items



A/C flush adapter set for removal of harmful substances from the refrigerant circuit

- Set includes a variety of adapters, e.g. for expansion valves and compressors
- Air conditioner is flushed with refrigerants, no need to dispose cleaning agents
- Ideal for removing oil from the system
- Flexible use with various hose connection options
- Refrigerant is recycled by the A/C service unit and can then be reused
- Causes no damage to gaskets and components

Ref. No.

8885300080 (A/C flush adapter set)

Flush adapter set V, 143 items



For use with O-ring and taper connections

- Universal flush adapter set
- The variable connectors can be adapted, which allows the use on flange connections
- Multiple connections possible
- Supplied in sturdy plastic case
- Suitable for workshop use

Scope of delivery:

Sturdy service case, brief application instructions with illustrations, 12 gaskets, fixing material, various adapters

Ref. No.

8885300104 (flush adapter set)

Set of chip filters, 60 items



Filter catches contaminants coming from the system to protect the compressor

- Keeps a newly installed compressor free from chips
- Easy to fit; no need to cut pipes or insert fittings
- Choice of sizes to suit different A/C systems

Scope of delivery:

60 filters in 20 different sizes, SK 47 including set of tools

Ref. No.

SK47 (set of chip filters with tools)

SK48 (set of chip filters without tools)

13317 (filter for Audi A3, VW Golf V and VW Touran)

67541 (chip filter 22 mm)

67542 (chip filter 22 mm, 15 mm)

67543 (chip filter 23 mm)

Recycle Guard

R 134a

Separates and removes sealants from A/C systems

During refrigerant recovery the Recycle Guard is connected between the A/C service unit and the air conditioning system.

The unit reliably separates sealants before they can enter and cause damage to the service unit.

The integrated filter insert can be used several times.



Sealant contamination in the A/C service unit without the use of the Recycle Guard



Watch the Recycle Guard instructions video at www.airconservice.eu/recycleguard

Ref. No.

8885200060 (Recycle Guard)

8880600008 (Universal mounting bracket)

8885200061 (Spare filter)

Oil Checker

R 134a



- 1 **Dark red/black**
Overheated oil: check the condition of the compressor, oil flush required
- 2 **Orange/yellow**
Oil starts to overheat: check the condition of the compressor, oil flush required
- 3 **Pale yellow/white**
Oil OK



Watch the Oil Checker instructions video at www.airconservice.eu/oilchecker

Scope of delivery

Oil checker, one-way manifold, blue service hoses, red service hoses, red service coupler

Ref. No.

8885100086 (Oil Checker)



Hybrid flush kit

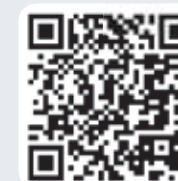
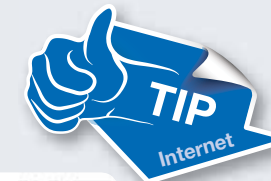


Special flush container for ASC-series service units

- Approved according to SAE J 2843/2788/2843H
- Suitable for use with ASC 2000 and ASC 2500
- Simple, fully automatic cleaning and flushing of the service unit for application on hybrid vehicles
- For service on all hybrid vehicles

Scope of delivery

Flush container, special software, operating instructions



Watch the Hybrid flush kit instructions video at www.airconservice.de/hybridkit

Ref. No.

8885200260 (hybrid flush kit for ASC 1000)

8885200261 (hybrid flush kit for ASC 2000)

8885200262 (hybrid flush kit for ASC 2500)

8885200263 (USB and flush kit for ASC 3000)

WAECO AIRCON SERVICE – EVACUATION OF AUTOMOTIVE AIR CONDITIONERS

Evacuation of automotive A/C systems has to be done with vacuum pumps designed for the purpose. Too fast an evacuation by means of over-dimensioned vacuum pumps will lead to icing of residual moisture in the air conditioning system and consequently to system malfunctions.

Today's automotive A/C systems only have a maximum volume of 3 litres of air.

Therefore, only 3 litres of air per minute will flow through the service coupler during the evacuation process. The vacuum pumps shown below have been exactly designed to match the specific capacity requirements of automotive A/C systems.

4-way manifold

R 134a



Universal 4-way manifold for mobile use

- Universal unit designed for mobile use
- High quality connection for 3/8" SAE
- Can be used for: R 134a, R 404a, R 407c, R 22
- Manometer class 1
- Not damped
- Can be adjusted by the operator
- Includes safety sight glass and suspension
- Supplied without hoses

Ref. No.

8885100115 (4-way manifold)

Vacuum pump, 42 l/min

R 134a



Vacuum pump for use on passenger car and utility vehicle air conditioners

Specifications

Rated flow	42 l/min	Power input	125 W
End vacuum	0.5 mbar	Supply voltage	230 V/50 Hz
Speed	2.850 ¹ / _{min}	Dimensions	95 x 184 x 279 mm
Oil capacity	227 ml	Weight	4.5 kg

Ref. No.

8885200005 (Vacuum pump)

Vacuum pump, 132 l/min

R 134a



Hochleistungsvakuumpumpe für den Einsatz an Fahrzeugklimaanlagen oberhalb eines Kältemittelfüllvolumens von 2 kg. Insbesondere für die Anwendung an Busklimaanlagen vorgesehen.

Specifications

Rated flow	132 l/min	Power input	330 W
End vacuum	0.02 mbar	Supply voltage	230 V/50 Hz
Speed	2.800 ¹ / _{min}	Dimensions	350 x 143 x 265 mm
Oil capacity	400 ml	Weight	11.2 kg

Ref. No.

8885200256 (Vacuum pump)

Refrigerant recovery unit



(Picture similar to product)

Automatic recovery of refrigerants

(R 12, R 22, R 134a, R 404a, R 413a (Isceon 49), R 410a)

- Recovery of refrigerant from A/C systems, transfer from one refrigerant bottle to another, disposal in a special R-bottle
- Automatic self-emptying – several recovery processes can be performed in quick sticks

Specifications

Recovery rate	gases: 16 kg/h; liquids: 22 kg/h
Supply voltage	230 volts/50 Hz
Power input	350 watts
Audits	CE, TÜV/GS
Weight	12.6 kg

Scope of delivery

Recovery unit, red and blue service hoses with ball valves

Ref. No.

8885200059 (refrigerant recovery unit)

4.0 kg charging cylinder for R 134a, R 404a and R 407c



For stationary use in A/C workshops

- Sturdy construction
- Refrigerant can be extracted in liquid or gas form

Scope of delivery

Charging cylinder, safety valve, manometer

Ref. No.

8885200101 (Charging cylinder)

Refrigerant scales



Heavy-duty weighing platform with separate display unit in sturdy plastic case

- Large LCD display with setting option for kg – lb – oz
- Solenoid valve control for accurate charging
- 100 kg weighing platform
- Recovery and charging possible via solenoid valve control system
- Charging process can be repeated
- 220-volt solenoid valve control
- Mains-independent 9-volt LCD control system

Specifications

Voltage supply	9-volt block battery / 220 volts
Maximum weight	110 kg
Dimensions (platform)	220 x 220 mm

Ref. No.

8885100099 (refrigerant scales)

LEAK DETECTION: SIX METHODS TO TRACE LEAKS

UV LEAK DETECTION

- A special, fluorescent additive is injected into the refrigerant circuit – either via the A/C service unit or manually. Some new drier models are already fitted in the factory with such additives.
- When the A/C components are illuminated with a UV lamp and viewed through yellow UV protection goggles, the leak appears brightly lit up. Visibility is ensured even where oil-covered engines are concerned and even at some distance.
- Unlike the forming gas method, UV leak detection is also suitable for tracing ultra-fine leaks. Where vibration leaks are concerned it is the only method available.
- UV leak detection is already approved for use on R 1234yf systems. Matching leak detection additives are ready to be shipped.

NITROGEN

- This method involves the production of positive pressure through nitrogen or negative pressure through vacuum by the A/C service unit.
- Leak detection through differential pressure is mainly suitable for the initial testing of strongly leaking or even empty systems. It only indicates that the system is leaking – not where the leak is.
- Testing is only possible with A/C service units that automatically stop when it is impossible to generate vacuum (e.g. all WAECO ASC service units). If the process continues without fault warning, you can be certain that the system has no leak and may be charged with refrigerant. The requirements of the Chemicals Climate Protection Ordinance are met.
- The WAECO ASC 2000RPA allows application of both methods (positive pressure through nitrogen or negative pressure through vacuum).



TRACER OR FORMING GAS

- Forming gas consists of 95% nitrogen and 5% hydrogen. The operating principle is similar to that of electronic leak detection. The difference is that the operator has to fill the system with test gas when the refrigerant has been removed.
- The drawback of this method is the length of time required (after 15 minutes the hydrogen has almost completely diffused and must be replaced).
- Another disadvantage is the fact that testing takes place when the system is not operating. “Vibration leaks” which occur while the engine is running can therefore not be detected. (The system needs refrigerant to operate, but it cannot be recharged yet because of the leak!) Moreover, leak detection with forming gas requires clean and constant ambient conditions (for example no draughts in the workshop).

ELECTRONIC LEAK DETECTION

- Finding very small leaks is no problem for electronic leak detection systems. In some sections of the A/C system it is difficult though to apply the probe correctly, or at least very time-consuming.

VACUUM CHECK

- Fully automatic with advanced A/C service units

SIMPLE BUBBLE TEST

- Looking for a leak with lather, the so-called “bubble test”, belongs to the oldest methods of leak detection. It has become almost insignificant, however, as it is impossible to find very small leaks using this method.

LEAKAGE CONTROL – AN ABSOLUTE MUST

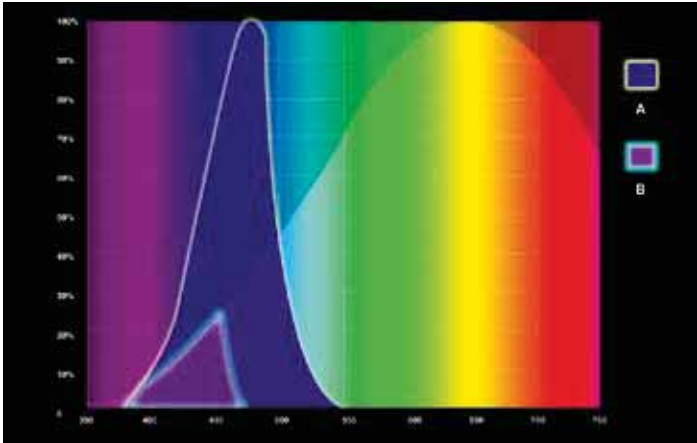
The utopia of a maintenance-free A/C system has been abandoned long ago. These days, A/C experts accept the fact that refrigerant losses occur with virtually every system. These losses do not always result from torn ducting or damages through accidents. Even totally intact systems lose some refrigerant – through the ducting and piping system, screw connections, sealing rings, etc. Such losses particularly affect modern systems containing

far less refrigerant than former system generations. The law forbids recharging defect A/C systems – after all, R134a is regarded as an environmental hazard and climate killer. Regular leakage checks are in the interest of the vehicle owner, too, to prevent compressor damage. What’s the best way to detect a leak though?



When buying a UV additive, make sure you get a quality one! Poor quality additives may cause wear on the seals in the air conditioner as well as in the A/C service unit. Moreover, some UV additives contain solvents which may impair the refrigerant oil’s lubricating ability and in the worst case, damage the compressor. Additives containing naphthalene are also dangerous because they let the seals swell. Currently, there is only one UV additive available that

was specially formulated for use with refrigerant oils and is therefore absolutely solvent-free: TRACERLINE®. When applied properly, this additive is absolutely safe for use in vehicle air conditioners or A/C service equipment. Many automotive manufactures stipulate that leak detection additives of a certain quality must be used.



Decreasing refrigerant charging amounts in automotive air conditioners call for more sensitive UV leak detection equipment. TRACER® has introduced a new TRACERLINE® LED technology with its TP-8690 lamp series. The advantage about the new technology is the improved fluorescent reflection of the UV additive in the colour spectrum visible to the human eye. This colour spectrum covers the entire blue range (A) of the diagram shown above. Conventional leak detection lamps usually come with halogen lights, which are unable to show the complete reflection range visible to the human eye (see diagram range B). The new LED leak detection technology cuts the time of inspection and increases the sensitivity of detection.

Contents, specifications and availability are subject to change due to the technical improvement. We are not liable for errors and printing mistakes.

UV leak detection kit

R 134a



(Picture similar to product)

For leak detection on automotive air conditioners with R 134a in combination with PAG oil

- Sturdy case in PAG oil resistant plastic
- Hand pump and cartridges can be stored mounted ready for use

Scope of delivery: hand pump incl. 2 cartridges of leak dye, low-side service hose and valve adapter, UV leak detection lamp with cigarette lighter plug, vehicle battery adapter, UV glasses, GLO-AWAY (225 ml), TRACER® under-hood labels (50 pcs.)

Ref. No.
8885300072 ((UV leak detection kit)

Blue light UV leak detection kit

R 134a



Specially designed for all A/C service units with integrated tracer dye injection device

- Powerful UV lamp (50 watts, 12 volts)
- UV intensity: 5000 µW/cm²

Scope of delivery
50-watt UV leak detection lamp with battery clamps, 236 ml refill bottle for all recycling units with integrated UV additive management. Contents sufficient for approx. 24 car applications. UV glasses, TRACER® under-hood labels (24 pcs.)

Ref. No.
TP-1151 (Blue light UV leak detection kit)

LED leak detection kit

R 134a



Specially designed for all A/C service units with integrated tracer dye injection device

- Powerful UV LED lamp (50 watts, 12 volts)
- UV intensity: 5000 µW/cm²

Scope of delivery
50-watt UV LED leak detection lamp with battery clamps, 236 ml refill bottle for all recycling units with integrated UV additive management. Contents sufficient for approx. 24 car applications. UV glasses, TRACER® under-hood labels (24 pcs.)

Ref. No.
TP-8651 (LED leak detection kit)

LED blue light UV leak detection lamp

LED blue light UV leak detection lamp

- 12 volts operating voltage, for direct connection to cigarette lighter plug
- Adapter for direct connection to vehicle battery
- High light output for high-performance leak detection
- No preheating required – ready for use straight away!
- 5.5 m connection cable

Scope of delivery

UV lamp, UV glasses, connection adapter

SK18/2: Supplied in a sturdy plastic case

Ref. No.

TP-8690X (LED blue-light UV leak detection lamp)
SK18/2 (set of leak detection lamps)



SK18/2

LED blue light UV leak detection lamp

Blue light UV leak detection lamp

- Cordless design
- Powered by rechargeable NiMh battery
- Extremely high light output
- Special LED technology, 10 times brighter than standard LED lights
- Extra large inspection range (up to 6 m)
- Up to 6 hours of operation between charges
- Compatible with all leak detection dyes

Scope of delivery

Battery powered UV lamp, UV glasses, charger

Ref. No.

TP-8690/F (LED blue light UV leak detection lamp)



LED blue light UV leak detection flashlight

Ideal for initial inspection on automotive reception

- Compact, cordless design
- Super lightweight
- High light output
- Powered by 3 AA batteries
- Easy to use
- 100,000-hour LED bulb

Scope of delivery

UV lamp, UV glasses

Ref. No.

TP-8640CS (UV lamp and UV glasses)



PROTECT YOUR A/C SERVICE UNIT –
AND YOUR CUSTOMERS' A/C SYSTEMS!

UV leak detection additives are well proven worldwide, because they are fast and easy to use providing high leak detection accuracy at competitive costs. Caution is advised, though, because poor quality products can cause wear on the seals in the air conditioner as well as in the A/C service unit.

Moreover, leak detection additives can contain solvents that impair the refrigerant oil's lubricating ability. **Therefore, when buying a leak detection additive, make sure you get a quality one!**

For use with refrigerant oils (PAG, mineral oil, ester), there's currently only one UV additive available that contains no solvents whatsoever. Its name: TRACER®. When properly applied, this additive is absolutely safe for use in all types of automotive air conditioners and A/C service units.

Special TRACER® leak detection additives have already been approved for use with new refrigerants, such as CO₂ and R 1234yf.

TRACER® products contain **10 times more dye** than other UV additives, which makes them more much more effective when it comes to tracing smaller leaks.



TRACER® additives (right) contain 10 times more dye than other UV additives(left)



TRACER® bottles

R 134a



For refrigeration and air conditioning systems (R 134a/PAG oil)

- Refill bottle for all recycling units with integrated UV additive management
- Individual quantities can be used as and when required
- **Once the system is empty** the additive (TP-3820-0301) is simply fed into the component to be replaced – e.g. the dryer
- Individual quantities can be used as and when required

Ref. No.

TP-3820-0016 (refill bottle 475 ml, for approx. 50 car applications)
TP-3820-0008 (refill bottle 236 ml, for approx. 25 car applications)
TP-3820-0301 (sales pack: 3 bottles, for 4 car applications)

TRACER® UV additive (in patented container)

R 134a



For ASC series and other manufacturers' service units

- TRACER® UV additive for approx. 71 applications when used in combination with ASC A/C service units
- Approved by major automotive manufacturers

Accessory

4440600026 (adapter)

Ref. No.

TP-3820-500 (TRACER® UV additive, contains 500 ml)

TRACER® sticks

R 134a



Approved by automotive manufacturers

For refrigerating and air conditioning systems

- When recharging with refrigerant after a normal repair, the contents of the TRACER® stick is simply added to the refrigerant
- Each stick contains exactly the right quantity for the refrigerant volume of an automotive A/C system

Ref. No.

TP-3860-0601

(for use with R 134a in combination with PAG oil, sales pack: 6 pcs.)

TP-3870-0601

(for use with R 134a in combination with ester oil, sales pack: 6 pcs.)

TRACER® cartridge for approx. 14 car applications

R 134a



Approved by automotive manufacturers

For refrigerating and air conditioning systems

- For adding to the system **when already charged** using the TP-9848 hand pump
- In preparation for a repair when the customer cannot leave the car in the workshop straight away
- For use with R 134a refrigerant in combination with PAG oil

Type of vehicle	Refrigerant charging amount	Applications
Passenger cars	up to 0.9 kg	14
Vans/small trucks	0.9 to 2.2 kg	7

Ref. No.

TP-9860-0301 (sales pack: 3 pcs.)

TRACER® cartridge for approx. 34 car applications

R 134a



For refrigerating and air conditioning systems

- For adding to the system **when already charged** using the TP-9741 hand pump
- In preparation for a repair when the customer cannot leave the car in the workshop straight away
- For use with R 134a refrigerant in combination with PAG oil

Type of vehicle	Refrigerant charging amount	Applications
Passenger cars	up to 0.9 kg	34
Vans/small trucks	0.9 to 2.2 kg	17

Ref. No.

TP-9760-0304 (sales pack: 3 pcs.)

TRACER® Dyes

R 134a



For engine, gearbox and power steering oil, fuel, cooling water

- Possible applications: cooling water loss, oil leaks or smell of petrol
- Simply add to the liquid circuit concerned. The necessary quantity can be taken from the resealable bottles as and when required

Ref. No.

TP-3400-0601 (sales pack: 6 pcs., for oils and fuels)

TP-3900-0601 (sales pack: 6 pcs., for cooling water)

TRACER® GLO-AWAY



Dye cleaner/remover

- For leak clean-up after repairs
- Removes traces of additive in the engine compartment/at the service ports
- Suitable for use with all TRACER® leak detection additives

Ref. No.

TP-9000-0008 (225 ml spray bottle)

TP-9000-0016 (450 ml spray bottle)

Hand pump for adding leak detection additives

R 134a



Accessory: Spare spindle, Ref. No. 123195

For adding TRACER® leak detection additives to the suction side of charged R 134a air conditioners

- Accurate dosing via spindle adjustment
- Integrated non-return valve protects against over-pressure
- For cartridge Ref. No. TP-9860-0301

Scope of delivery

Low-pressure service hose with quick coupler for R 134a A/C systems, 2 cartridges of additive, vent adapter, hand spindle, label with instructions

Ref. No.

TP-9848 (hand pump)

123195 (Spare spindle)

Hand pump for injection of leak detection additives

R 134a



For adding TRACER® leak detection additives to the suction side of charged R 134a A/C systems

- Accurate dosing via spindle adjustment
- Integrated non-return valve protects against over-pressure
- For cartridge Ref. No. TP-9760-0304

Scope of delivery

Low-pressure service hose with quick coupler for R 134a A/C systems, 1 cartridge of additive, vent adapter, hand spindle, label with instructions

Ref. No.

TP-9741 (hand pump)

Safety gloves / Standard full-view goggles / UV glasses



Safety gloves for working with refrigerants and UV additives
Standard full-view goggles for working with refrigerants
UV glasses for leak detection

Ref. No.

8885400065 (safety gloves)

8885400066 (standard full-view goggles)

TP-9940 (UV glasses for leak detection)

Nitrogen pressure gauge and leak detector R 134a

R 134a



For inspections on A/C evaporators and complete A/C systems in installed condition

- Manometer block with vent valve and safety valves, 36 bar opening pressure
- Nitrogen pressure reducer, adjustable from 0 to 35 bar
- Test manometer 0 to 40 bar, calibration: 1 bar, class 1.0

Scope of delivery: pressure reducer, service quick coupler, 1.8 m service hose for low side, 1/4" SAE x 1/2" ACME adapter, cylinder trolley with manometer block

Ref. No.

- 8885400092 (pressure gauge and leak detector)
- 8885400124 (extension kit for high side)
- 8885400165 (extension kit for R 1234yf)

Portable nitrogen tester

R 134a



Compact, portable unit – designed for nitrogen measurements in mobile use

- Firmly installed in a sturdy steel frame
- Ideal for external service work on construction and mining machinery, and other special vehicles

Scope of delivery

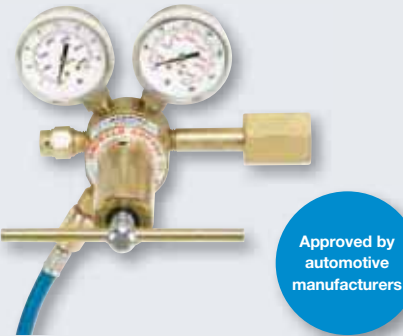
Large manometer class 1.0, aluminium block incl. safety valve, 1.8 m service hose with low side coupler, WITHOUT pressure reducer

Ref. No.

- 8885400297 (portable nitrogen tester)

Nitrogen pressure reducer

R 134a



For controlled and safe admission of nitrogen to A/C systems (pressure test)

- Adjustment range from 0 to 35 bar, so also suitable for flushing
- High quality design

Scope of delivery

Pressure reducer, service quick coupler, 1.8 m service hose for low-pressure side, 1/4" SAE x 1/2" ACME adapter

Ref. No.

- 8885400058 (nitrogen pressure reducer)

Nitrogen pressure reducer

R 134a



For controlled and safe admission of nitrogen to A/C systems (pressure test)

- Adjustment range from 0 to 20 bar, ideal for air conditioner inspections (§ 5 of the German Chemicals Climate Protection Ordinance)

Hose set for safe connection to vehicle A/C system

Scope of delivery: service quick coupler, 1.8 m service hose for low-pressure side, 1/4" SAE x 1/2" ACME adapter

Ref. No.

- 8885400135 (Nitrogen pressure reducer)
- 8885400136 (Hose set for nitrogen pressure reducer)

Electronic R 134a leak detector // R 134a reference leak



Senses refrigerant concentrations in the ambient air

- Responds to R 134a refrigerant only, therefore no interference by other gases (plastic emissions) or air movement
- Measuring head on flexible neck to reach hard-to-access places
- Sensitivity: up to 5 g/year

Specifications

Operating voltage	3 volts
Sensor service time approx.	100 hours
Length of neck	420 mm
Dimensions / weight	270 x 65 x 65 mm / 580 g (incl. battery)
Battery	2 x D

Ref. No.

- TP-9360 (R 134a leak detector)
- 123802 (sensor)
- 123803 (filter, sales pack: 20 pcs.)



R 134a reference leak – for checking the functioning and sensitivity of electronic leakdetectors

- Constant R 134a leak source
- Suitable for all electronic refrigerant leak detectors

Specifications

Release rate	5 g/year
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Ref. No.

- 8885100095 (reference leak)

Multi-gas leak detector



Microprocessor controlled sensor electronics with multi-channel signal recognition

- Consistent sensitivity throughout the sensor's lifetime
- Can also be set for heavily contaminated environments (e.g. engine compartment)
- Complies with all international standards relevant for vehicle applications: SAE J2913 for R 1234yf, SAE J2791 for R 134a, EN14624:2005. Identifies all FC- and CFC-based refrigerants and blends as well as SF6.

Ref. No.

- 8885100124 (Multi-gas leak detector)

Cylinder trolley



For safe transport and storage of 10-litre cylinders

- Handy and sturdy cylinder trolley
- With hose suspension
- Integrated storage box for accessories

Ref. No.

- 8885400057 (Cylinder trolley)

Leak detection spray



Leak detection by formation of foam on leaky spots in the refrigerant circuit

- Suitable for fast detection of larger leaks (e.g. on threaded joints or press fits)

Ref. No.

- 8887300018 (500 ml) 106 10,90

SERVICE ON HYBRID VEHICLES –

100 % CLEAN AND SAFE



No problem with German makes!

The market offers many A/C service units with a hybrid option, but by far not all of them are doing a really clean job. And this although everyone in the industry agrees that the complete system needs to be flushed thoroughly when changing over from one refrigerant to another.

But what does “thorough flushing” actually mean? SAE J2843 H stipulates a maximum permissible oil cross contamination of 0.1% on the total oil volume. For 150 ml of PAG oil this translates to a mere 0.15 ml. (For comparison: one drop of oil is about 1 ml in volume.) That said, it won't be enough to just hook on the service hoses and flood the system with refrigerant, as is common practice with some service units available in the market. Refrigerant lines, magnetic valves and service hoses

will always contain residual oil, which can lead to cross contamination and dangerous high-voltage exposure.

It is pretty much the same as if you would try to clean a greasy glass just by filling it up with water. Things are quite different, though, if you force a large amount of water through the glass – about the same way a high-pressure cleaner would. Dometic WAECO's hybrid concept is based on a similar principle: An additional flush container is installed and put under vacuum. The refrigerant required for cleaning the unit's internal components is forced through the system several times, under high pressure and in changing directions. The result: service hoses, magnetic valves and the likes are almost 100% clean.

Hybrid flush kit

R 134a



Special flush container for ASC-series service units

- see page 41

Ref. No.

8885200260 (hybrid flush kit for ASC 1000)
8885200261 (hybrid flush kit for ASC2000)
8885200262 (hybrid flush kit for ASC2500)
8885200263 (USB- and flush kit for ASC3000)

High-voltage gloves

R 134a



High-voltage-resistant safety gloves

- Comply with EN 60903 and CE 0333
- For professional and safe work on hybrid vehicles
- Supplied in light-proof safety packaging

Ref. No.

8885400173 (High-voltage gloves)

Contents, specifications and availability are subject to change due to the technical improvement. We are not liable for errors and printing mistakes.

TRACER® hybrid application

R 134a



UV additive injection kit for hybrid vehicles

- Insulation resistance of the compressor oil won't drop
- Light-proof storage of the POE special oils in aluminium laminated bags

Ref. No.

TP-3812 (UV additive injection kit for hybrid vehicles)

Compressor oil

R 134a



Denso ND 11 compressor oil

- Special compressor oil for high-voltage hybrid applications

Ref. No.

8887200035 (Denso ND 11 compressor oil, 100 ml)

Oil injector

R 134a



Injector for manual injection of oils and/or UV additives

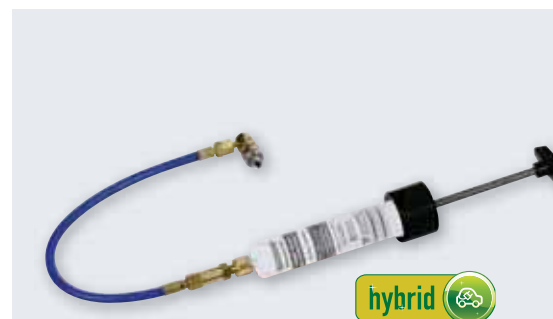
- Injector for manual injection of oils and/or UV additives
- Easy-to-use, sturdy design, ideal for workshop use
- With ml and oz scales for oil and an extra scale for additive
- Supplied with hose and couplers (R 134a and R 1234yf) for use with different refrigerants and oils
- Sight glass with crash protection device for enhanced safety
- Ideal for hybrid applications, where cross-contamination of oils is not allowed (SAE J2843H)

Ref. No.

8885300132 (Oil injector)

Starter kit hybrid oil

R 134a



Starter-Kit hybrid oil

Content 120 ml

- Safe and approved charging of the special POE (polyolester) oil with well proven spindle technology
- No accidental confusion of oil types
- Safe and clean oil storage
- No mixing with other compressor oils

Ref. No.

127181 (Starter kit hybrid oil, 120 ml)
TP-9775-0104 (spare cartridge)

AIR CONDITIONER CLEANING

FRESH AND HEALTHY AIR IN THE CAR



It only takes minimal effort to effectively remove harmful micro-organisms from automotive A/C systems. **WAECO's ultrasonic atomiser Refresh-o-mat HD** takes care of that service. The high performance, professional unit has been **designed inside out for workshop use**: robust stainless steel housing, power supply with IEC input filter, microprocessor controlled

programme code. The unit has the capacity to atomise up to 400 ml of cleaner fluid, which makes it suitable for disinfecting larger A/C systems on buses or trucks. Using the optional adapter kit, the atomiser can even be connected to the vehicle's air ducts to give them a thorough clean-up.

Contents, specifications and availability are subject to change due to the technical improvement. We are not liable for errors and printing mistakes.

Refresh-o-mat HD ultrasonic atomiser



For professional use in workshops: Ultrasonic technology eliminates bacteria and smells

- Robust stainless steel housing
- Integrated power transformer
- Atomises up to 400 ml of cleaner fluid (also suitable for large vehicles such as buses)

Specifications

Power supply: 230 volts AC/50 Hz
Atomiser capacity: approx. 383 l/h
Dimensions (WxHxD): 150 x 280 x 400 mm (incl. outlet tube)

Optional extra:

Adapter kit for treatment of air ducts



Ref. No.

8885300096 (Refresh-o-mat HD)

8885300097 (Hose set)

AirCon Refresh air conditioner cleaner



Saver tip:
100 ml single
portion



AirCon Refresh air conditioner cleaner

- Ideal for air conditioner cleaning and maintenance
- Eliminates mould, bacteria and other harmful micro-organisms from evaporators, air-vent channels and condensation drains
- Effectively prevents odour
- Can also be used with other manufacturers' equipment
- Also available in practical single-portion bottle. This ensures that only the required quantity is applied. Saves material and hence costs!

* Certification to the EN 1040 standard means that the product has a bactericide effect on a strictly defined type of test bacteria when applied undiluted at a certain product concentration over a certain period of time.



Effectiveness approved according to EN 1040*

Ref. No.

8887400008 (1 litre capacity, sufficient for approx. 10 applications)

8887400016 (100 ml capacity, sales pack: 20 pcs.)

Air conditioner spray can in 12-unit display



Effectiveness approved according to EN 1040

For do-it-yourself use

Attract new customer groups with this easy-to-use spray cleaner. For everybody who don't have or don't take the time for a proper A/C clean-up. Handy do-it-yourself product in sales promoting counter display (12 cans per display). Placed in a prominent place, it can be a useful in-shop marketing tool.

- Spray cans of air conditioner cleaner
- For air conditioner cleaning and disinfection
- Simple handling
- Detailed instructions included with each product
- Effectiveness approved according to EN 1040

Scope of delivery

12 spray cans with integrated spray head, product with instructions, sales display

Ref. No.

8887400007 (12-unit display)

8885300078 (spray head with hose)

PROFESSIONAL INTERIOR CLEAN-UP

ELIMINATES BACTERIA AND SMELLS



When fixing used cars for resale or giving customer cars a professional clean-up you often have to deal with persistent odours. This is where the **ozone generator** comes in. It eliminates smells effectively and without any chemicals and harmful residues. The handy unit turns oxygen into ozone, which is then blown into the vehicle's air duct via a flexible tube. Ozone consists of highly reactive, triple-bonded oxygen molecules. It has the ability to oxidise all kinds of organic substances. In the process it neutralises bacteria, mould, viruses and other microorganisms – which are the source of the smell. What remains is pure oxygen. The ozone method is a

highly effective alternative to conventional disinfectants. It also works against fungal spores, bacteria and virus strains that have become resistant to certain active substances. Yet another proven method to neutralise smells in passenger compartments is the **WAECO Refresh-o-Mat**. The ultrasonic atomiser is available in two different versions: as a **compact unit in a practical workshop case** or as a **heavy-duty model** enclosed in a robust stainless steel housing.

Ozone generator



Effectively eliminates unpleasant odours through oxidation with ozone

- Suitable for odour decontamination in vehicles and other interiors
- Effectively eliminates intensive odours (e.g. nicotine, mould and animal smell, lactic acid, vomit, diesel or fuel oil)
- Compact unit in a sturdy stainless steel housing
- Supplied with a flexible tube for blowing the ozone into the air duct
- Connection to the vehicle battery with 12-volt cigarette lighter plug and adapter plug

Specifications
Power supply: 12 volts DC
Output: approx. 500 mg/h

Scope of delivery:
Ozone generator, 12-volt cigarette lighter plug, adapter plug, blow-off tube

Ref. No.
8885300105 (ozone generator)

Refresh-o-mat HD ultrasonic atomiser



For professional use in workshops:
Ultrasonic technology eliminates bacteria and smells

- Robust stainless steel housing
- Integrated power transformer
- Atomises up to 400 ml of cleaner fluid (also suitable for large vehicles such as buses)

Specifications
Power supply: 230 volts AC/50 Hz
Atomiser capacity: approx. 383 l/h
Dimensions (WxHxD): 150 x 280 x 400 mm (incl. outlet tube)

Optional extra:
Adapter kit for treatment of air ducts



Ref. No.
8885300096 (Refresh-o-mat HD)
8885300097 (Hose set)

Refresh-o-mat ultrasonic atomiser



Cleans the air conditioner and neutralises odour in the passenger compartment

Specifications
Power supply 230 volts AC/50 Hz
Input voltage 24 volts AC
Dimensions (WxHxD) 138 x 310 x 285 mm

Scope of delivery
Refresh-o-mat, high-quality case, mains adapter, hose

Ref. No.
8885300082 (Refresh-o-mat)

Car Refresh smell stopper



Smell eliminator for use with the Refresh-o-mat

- Ideal for eliminating intensive odours in vehicle interiors, e.g. cigarette smoke, plastic emissions and animal scent
- Works chemically to give a lasting result rather than just covering up
- Can also be used with other manufacturers' equipment
- Also available in practical single-portion bottle. This ensures that only the required quantity is applied. Saves material and hence costs!

Ref. No.
8887400009 (1 litre capacity, sufficient for approx. 10 applications)
8887400015 (100 ml capacity, sales pack: 20 pcs.)

LCD digital thermometer



For the exact measurement of air temperatures

- Extra-large, easy-to-read digital display
- Long probe (213 mm), excellent measuring accuracy

Specifications

Measurement range	–50°C to +150°C
Calibration	±0.1°C
Accuracy	± 1°C in a range from –30°C to +150°C
Ambient temperature	–10°C to +50°C (plastic cabinet)

Ref. No.

8885100072 (LCD digital thermometer)

Digital pocket temperature meter



For reception testing of automotive A/C systems

- Extremely compact design allows measuring of air outlet temperature directly at the centre air vents
- Easy-to-read display

Specifications

Measurement range	–50°C to +150°C
Accuracy	1°C

Ref. No.

8885100059 (temperature meter)

Infrared laser thermometer



Contact-free temperature measurements for automotive uses

- Ideal for measuring the air outlet temperature at the air vents
- Quick temperature checks on condenser surface or heat exchanger
- Integrated laser pointer for precise positioning of the measuring beam – exact measurements even over longish distances

Specifications

Measurement range	–20°C to +270°C
Accuracy	2%

Ref. No.

8885100062 (laser thermometer)

Digital pressure meter



Digital pressure meter with battery and solar operation

- Measuring range: 0.2 – 7 bar
- Accuracy : +/- 1.5%
- ¼" LCD display
- Display in PSI, bar, kg/cm³ or kPa

Ref. No.

8885100120 (Digital pressure meter)

Pressure meter (low pressure side)



Pressure meter for measuring the pressure in the A/C system

- Ideal for quick check at service reception
- High-quality, impact protected housing
- Easy-grip coating for optimum handling in the workshop

Ref. No.

8885100096 (Pressure meter)

INDISPENSABLE TOOLS:

THE SPECIALISTS FOR PERFECT WORKMANSHIP

Service quick couplers (see page 62)

Space is often in short supply in today's engine compartments. Therefore, automotive manufacturers are also using concealed areas to accommodate air conditioner components. On some models (e.g. 5-Series BMW, Ford, Volvo, Mercedes-Benz SLK) the high-pressure-side service port is mounted near the bonnet lock bracket, inaccessible with a standard A/C service coupler. WAECO AirCon Service has developed a matching service tool for easy access to the port.

Spring lock repair set (see page 62)

Factory-fitted automotive air conditioners, especially those made by **Ford, Volkswagen and Opel**, come with **spring lock couplers** for quick fitting of refrigerant lines. To release these couplers you will need special tools, which WAECO supply.

Workshop kits (page 68 ff.)

Repair work on automotive air conditioning systems often involves the replacement of **small parts, such as valve cores and O-rings**. To have everything ready at hand, you need a well organised storage system with parts for specific vehicles. WAECO workshop kits include all essential parts, clearly arranged and handily organised in metal cases. The spectrum ranges from plugs to prevent moisture and contaminants from entering an open A/C system to O-ring sets for factory-fitted and retrofit A/C systems.

Dual diagnostic thermometer



For diagnosis on two-zone air conditioners

- Ideal for measuring the air outlet temperature at the air vents
- Digital thermometer with 2 sensors and suction cup holder for the windscreen
- Sensors: 3 m long
- Measures and displays the minimum, maximum and average temperatures

Specifications

Display	dual, with 5-digit LCD display
Temperature unit	°C, °F, °K
Battery	9 V
Operating temperature	5°C to 40°C at 80% air humidity
Measuring range	–200°C to +1050°C

Ref. No.

8885100127 (dual diagnostic thermometer)

Surface sensor

Specifications

Measuring range	–50°C to +400°C
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Temperature probe

Specifications

Measuring range	–50°C to +700°C
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Ref. No.

8885100128 (surface sensor)

8885100129 (temperature probe)

Service quick coupler, high pressure, for hard-to-access service ports R 134a

Specially designed for fast connection to air conditioners on BMW E60 (BMW 5-Series)/Ford/Volvo vehicles

- Allows coupling to service ports in hard-to-reach places
- Service adapters for connection to all types of service units are included in the set



Ref. No.
641240 (service quick coupler)

Service quick coupler HP R 134a Service quick coupler LP R 134a



For hard-to-access service ports

- Suitable for BMW E60 and others; Volvo S80, S60 and younger models; Mercedes M-Class; all Chrysler (USA) models and all Asian vehicles

Ref. No.		
8885400227 (Service quick coupler)	106	59,00



For hard-to-access service ports

- Suitable for Jaguar XJ (new) and all Asian vehicles

Ref. No.
8885400228 (Service quick coupler)

Service quick coupler HP R 134a Service quick coupler HD auf ND R 134a



For connection of A/C service units to the high-pressure service port in the SLK (R171)

Ref. No.
8885400117 (Service quick coupler)



Custom-made service quick coupler for various Renault vehicles, e.g. Laguna

- Adapter HD auf ND

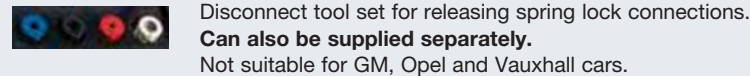
Ref. No.
8885400098 (Service quick coupler)

Spring lock repair and disconnect set, 8 items R 134a



For service work on spring lock connections

- Spring lock connections can be released or repaired to ensure durable leak protection
- Suitable for Audi, VW, Citroën, Chrysler, Ford, Hyundai, Peugeot, PSA, Renault, Opel, GM, Vauxhall, Seat and Skoda cars



Ref. No.
SK44 (spring lock disconnect case set)
8885300044 (disconnect set)

Threading tool set for metric threads, 9 items



Thread repair tools for metric threads

- Suitable for cutting female and male thread of the following sizes: M14x1.5 female and male thread, M16x1.5 female and male thread, M18x1.5 female and male thread, M20x1.5 female and male thread, M22x1.5 female and male thread, M24x1.5 female and male thread, M27x1.5 female and male thread, M28x1.5 female and male thread

Scope of delivery:
8 thread cutters (double-sided), 1 extension

Ref. No.
SK41 (threading tool set)

Threading tool set for inch threads, 9 items



Thread repair tools for inch threads

- Suitable for cutting female and male thread of the following sizes: 5/8" UNF, 3/4" UNF, 7/8" UNF, 1" UNF, 1-1/16" UNF

Scope of delivery:
5 thread cutters (double-sided), 1 extension

Ref. No.
SK42 (threading tool set)

Adjustable spanner



Spanner (adjustable from 0 – 30 mm)

- Spanner and ratchet all in one, simply move a lever to change between functions
- Convenient and durable
- Excellent torque
- Ergonomic, soft-grip handle

Ref. No.
8885300133 (Adjustable spanner)

Solenoid valve opener



Tool for opening solenoid valves

- For use on buses
- Opens locked refrigerant circuits
- Can be used for 18 mm / 10 mm solenoid valve coils
- Small and handy, fits into every pocket and thus saves time

Ref. No.
8885300131 (Solenoid valve opener)

Octagon sockets for fitting service valves / O-ring pick tool



Thin-walled sockets for exchanging 8-sided service ports (R 134a)

Special tool for picking O-lock gaskets on refrigerated vehicles or standard O-rings

Ref. No.

8885300032 (for low-pressure side)
8885300033 for high-pressure side
8885300092 (for removal of expansion valves on VW and Audi cars)
8885300094 (O-ring pick tool)

Valve fitting tools



Fitting tool for Schrader valves used in R 134a A/C systems, e.g. on Ford or Japanese vehicles

- For high- and low-pressure side; connection diameters: 6.3 and 4.5 mm

Torque wrench

- For high- and low-pressure side; connection diameter 4.5 mm

Ref. No.

8885300037 (for Ford or Japanese vehicles)
8885300035 (for Ford, French or Japanese vehicles)
8885300095 (torque wrench)

Slide hammer puller for dryer cores



For removal of plugs on dryer cores

- High quality special tool for easy removal of plugs on dryer cores
- Required for new condenser designs where the dryer is located inside the unit, e.g. on Audi, Seat, Skoda, Opel and Ford cars
- Universal tool for plugs with 5 mm inside thread

Ref. No.

8885300091 (slide hammer puller)

Crimping tool for refrigerant fittings



Extremely sturdy, heavy-duty tool kit for fast and reliable connection of hoses and fittings

- Operated by integrated hydraulic hand pump
- Equally suitable for use with aluminium and thin-walled steel fittings
- Socket sets for four hose sizes (6 – 8 – 10 – 12) included in the kit

Scope of delivery

Crimping tool and 7 socket sets

Ref. No.

8885300045 (supplied in sturdy service case)
8885300002 (hose cutter)

Manuli case set



Manuli case set

- Tool set for working with Manuli fittings
- The hose cutter is necessary in order not to damage the inner plastic core during cutting
- Using the special fitting tool, fittings can be sealed quickly and reliably – and released, if required

Scope of delivery Fitting tool, hose cutter, mandrel

Ref. No.

8885300060 (case set)
8885300066 (spare blade)

Set of special ring spanners



Set of ring spanners for the opening/closing of air conditioner pipes and threaded connections

- Universal set of ring spanners, sizes:
 10 mm / 11 mm / 13 mm /
 17 mm / 19 mm / 22 mm
- Supplied in high quality tool bag



Ref. No.

8885300093 (set of ring spanners)

Easy repair set for aluminium refrigerant pipes



Damaged pipe section is sawn out
 Repair: insert the connection sleeve – tighten – done!

For easy repair of damaged pipes

- Low-cost alternative to fitting a new refrigerant pipe
- No special tools required

Ref. No.

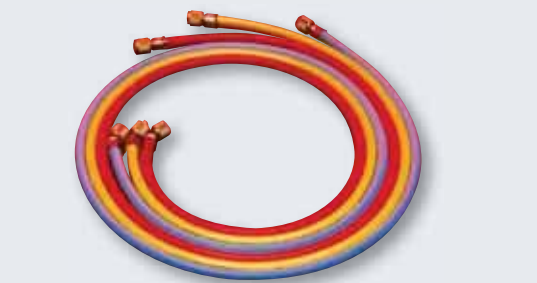
8885400119 (repair kit for 1/2" pipes)
8885400120 (repair kit for 3/8" pipes)
8885400121 (repair kit for 5/16" pipes)
8885400123 (repair kit for 5/8" pipes)
8885400122 (set of seals for 1/2", 3/8", 5/16" pipes)
8885400146 (T-piece for 5/16" pipes, low side)
8885400147 (T-piece for 3/8" pipes, low side)
8885400148 (T-piece for 1/2" pipes, low side)
8885400149 (T-piece for 5/8" pipes, low side)
8885400150 (T-piece for 10 mm pipes, low side)
8885400151 (T-piece for 12 mm pipes, low side)
8885400152 (T-piece for 15 mm pipes, low side)
8885400153 (T-piece for 16 mm pipes, low side)
8885400154 (T-piece for 5/16" pipes, high side)
8885400155 (T-piece for 3/8" pipes, high side)
8885400156 (T-piece for 1/2" pipes, high side)
8885400157 (T-piece for 5/8" pipes, high side)
8885400158 (T-piece for 10 mm pipes, high side)
8885400159 (T-piece for 12 mm pipes, high side)
8885400160 (T-piece for 15 mm pipes, high side)
8885400161 (T-piece for 16 mm pipes, high side)



Chek out our complete range at
www.airconservice.de/easy-reparatur

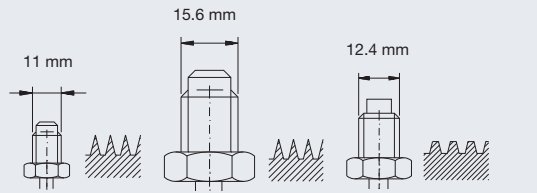
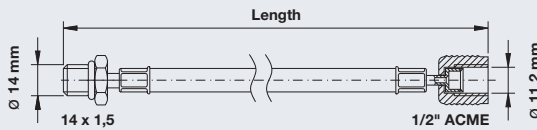
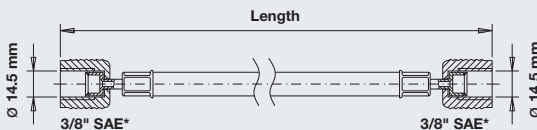
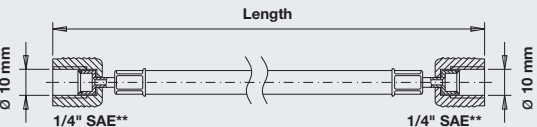
Charging hoses and vacuum hoses

R 134a



Service hoses in various colours for all applications in A/C fitting and service

- › Suitable for all commonly available refrigerants
- › Highly flexible material allows use even in hard-to-access areas of automotive A/C systems
- › Connection thread as per SAE standard



* 3/8" SAE = 5/8" UNF, ** 1/4" SAE = 7/16" UNF

Ref. No.

- 8885100005 (red hose, 1800 mm)
- 8885100006 (blue hose, 1800 mm)
- 8885100007 (yellow hose, 1800 mm)
- 8885400022 (spare seal)

Ref. No.

- 8885100008 (red hose, 1800 mm)
- 8885100024 (red hose, 5000 mm)
- 8885100009 (blue hose, 1800 mm)
- 8885100023 (blue hose, 5000 mm)
- 8885100010 (yellow hose, 1800 mm)
- 8881500037 (spare seal, sales pack: 10 pcs.)
- 8885400023 (Teflon seal)

Ref. No.

- 8885100011 (red hose, 1800 mm)
- 8885100065 (red hose, 3000 mm)
- 8885100026 (red hose, 5000 mm)
- 8885100028 (red hose, 8000 mm)
- 8885100012 (blue hose, 1800 mm)
- 8885100064 (blue hose, 3000 mm)
- 8885100025 (blue hose, 5000 mm)
- 8885100027 (blue hose, 8000 mm)
- 8881500034 (spare seal)

For connection to A/C service units RHS-910, RHS-950 and RHS-1050, the adapter 8885400038 is required.

Ref. No.

	8885400129	Connection adapter for reusable refrigerant bottle with seal
	8881500091	Seal for connection adapter 8885400129
	8885400024	Service quick coupler, low pressure, for R 134a with 3/8" SAE outside thread
	8885400025	Service quick coupler, high pressure, for R 134a with 3/8" SAE outside thread
	8885400089	Service quick coupler, low pressure, for R 134a with 1/4" SAE outside thread
	8885400090	Service quick coupler, high pressure, for R 134a with 1/4" SAE outside thread
	8885400026	Service quick coupler, low pressure, for R 134a with M14 x 1.5 inside thread
	8885400027	Service quick coupler, high pressure, for R 134a with M14 x 1.5 inside thread
	8881500090	Service port low pressure, R 134a, with outside thread, for Mercedes-Benz, Porsche, BMW, MAN, Opel
	8881500088	Service port low pressure, R 134a, with inside thread, for VW, Audi, Ford, Chrysler

Ref. No.

	8881500087	Service port, high pressure, R 134a, with outside thread, for Mercedes-Benz, Porsche, BMW, MAN, Opel
	8881500089	Service port, high pressure, R 134a, with inside thread, for VW, Audi, Ford, Chrysler
	8881500006	Sealing cap for service port, R 134a, high pressure
	8881500007	Sealing cap for service port, R 134a, low pressure
	8881500038	Sealing cap for service port, R 134a, high pressure, for Japanese A/C systems
	8881500039	Sealing cap for service port, R 134a, low pressure, for Japanese A/C systems
	8885400033	Connection adapter with 1/4" SAE inside thread and connection for R 134a service quick coupler, low-pressure side
	8885400082	Connection adapter with 1/4" SAE inside thread for high-pressure side
	8885400037	Connection adapter with 3/8" SAE inside thread and connection for R 134a service quick coupler, low-pressure side
	8881500013	90° retrofit adapter for the high-pressure side with 1/4" inside thread
	8881500014	90° retrofit adapter for the high-pressure side with 3/16" inside thread
	8881500015	90° retrofit adapter for the low-pressure side with 1/4" inside thread
	8885400036	Retrofit adapter, straight, comprising one high-pressure and one low-pressure adapter, each with 1/4" inside thread
	8881500017	Retrofit hose adapter, approx. 35 cm long, with 3/16" SAE inside thread and 1/4" SAE outside thread
	8881500018	90° retrofit hose adapter, approx. 35 cm long, with 1/4" SAE inside and outside thread
	8885400038	Adapter 1/4" SAE inside thread x 1/2" ACME outside thread
	8885400050	Adapter 1/4" SAE inside thread x 3/8" SAE outside thread
	8885400051	Adapter 3/8" SAE inside thread x 1/4" SAE outside thread
	8885400052	Adapter for Audi 100/A6 original A/C systems for connection of a service quick coupler on the suction side
	8885400034	Adapter 1/4" x low-pressure side
	8885400035	Adapter 1/4" x high-pressure side
	4440600148	Adapter for R 1234yf refrigerant bottles, for large bottle valves -> HD
	8885400238	Adapter for R 1234yf refrigerant bottles, 1/2" ACME left -> HD

Set of chip filters, 60 items



Filter catches contaminants coming from the system to protect the compressor

- Keeps the compressor free from chips, recommended e.g. when a new one was fitted
- Easy to fit; no need to cut pipes or insert fittings
- Choice of sizes to suit different A/C systems

Scope of delivery:
60 filters in 20 different sizes, SK47 including tools

Ref. No.	
SK47	(set of chip filters with tools)
SK48	(set of chip filters without tools)
13317	(filter for Audi A3, VW Golf V and VW Touran)
67541	(chip filter 22 mm, set of 3 items)
67542	(chip filter 22.15 mm, set of 3 items)
67543	(chip filter 23 mm, set of 3 items)

Set of valve cores, 70 items



Set of valve cores – avoids time-consuming search and procurement

Scope of delivery		
10	Valve cores R 134a	Ref. No. 8881500001
10	Valve cores R 134a for Japanese make A/C systems	Ref. No. 8881500002
10	Valve cores R 134a for Opel	Ref. No. 8881500004
5	Sealing caps for service port R 134a high pressure	Ref. No. 8881500006
5	Sealing caps for service port R 134a low pressure	Ref. No. 8881500007
5	Sealing caps for service port R 134a high pressure for Japanese make A/C systems	Ref. No. 8881500038
5	Sealing caps for service port R 134a low pressure for Japanese make A/C systems	Ref. No. 8881500039
5	Service ports high pressure R 134a with outside thread for Mercedes-Benz/Porsche/BMW/MAN/Opel	Ref. No. 8881500087
5	Service ports low pressure R 134a with inside thread for VW/Audi/Ford/Chrysler	Ref. No. 8881500088
5	Service ports high pressure R 134a with inside thread for VW/Audi/Ford/Chrysler	Ref. No. 8881500089
5	Service ports low pressure R 134a with outside thread for Mercedes-Benz/Porsche/BMW/MAN/Opel	Ref. No. 8881500090

Ref. No.
SK 25 (Set of valve cores)

Set of plugs for refrigerant lines, 179 items



Prevent moisture and contaminants from entering the A/C system during servicing work

Scope of delivery		
20	MF 9/16"	Ref. No. 8881500022
15	MF 5/8"	Ref. No. 8881500023
10	MF 3/4"	Ref. No. 8881500024
10	MF 7/8"	Ref. No. 8881500025
20	FF 9/16"	Ref. No. 8881500027
10	FF 5/8"	Ref. No. 8881500028
10	FF 3/4"	Ref. No. 8881500029
10	FF 7/8"	Ref. No. 8881500030
20	7.6 – 9.4 mm	Ref. No. 8881500180
20	8.4 – 10.2 mm	Ref. No. 8881500181
20	11.3 – 13.1 mm	Ref. No. 8881500182
14	20.7 – 23.5 mm	Ref. No. 8881500183

Ref. No.
SK 33 (set of plugs)

Orifice Tubes, 41 items



Set of orifice tubes for automotive A/C systems with accumulator

- The SK set of orifice tubes allows the user optimum, cost-saving working because it avoids time-consuming search and procurement

Scope of delivery		
5	Orifice tube (red)	Ref. No. 8881100003
5	Orifice tube (white)	Ref. No. 8881100004
5	Orifice tube (brown)	Ref. No. 8881100005
5	Orifice tube (blue)	Ref. No. 8881100007
5	Orifice tube (orange)	Ref. No. 8881100008
5	Orifice tube (grey)	Ref. No. 8881100038
5	Orifice tube (violet)	Ref. No. 8881100039
5	Orifice tube (yellow)	Ref. No. 8881100040
1	Orifice tube tool	Ref. No. 8885400040

Ref. No.
SK 26 (set of orifice tubes)

Original replacement O-rings for car air conditioners with R 134a, 654 items



For all common types of cars

- To save you from time-consuming procurement processes, we have put together a professional set of O-rings to replace virtually all O-ring connections on original A/C systems of the following makes:

Alfa-Romeo, Audi, BMW, Citroën, Fiat, Ford, Honda, Hyundai, Jaguar, Mazda, Mercedes-Benz, Mitsubishi, Nissan, Opel, Peugeot, Porsche, Renault, Rover, Saab, Subaru, Suzuki, Toyota, Volkswagen, Volvo

Ref. No.
SK 31 (set of O-rings for cars)

Original replacement O-rings for truck air conditioners with R 134a, 330 items



Workshop kit for all servicing and repair works on A/C systems in trucks and vans, 17 different O-rings (330 items).

Ref. No.
SK 32 (set of O-rings for trucks)



PAG oil dosing dispenser

For lubricating O-rings and threads during professional fitting of A/C components

Scope of delivery Sales pack: 2 cans (2 x 200 ml), dispenser tip

Accessory Spare dispenser tip

Ref. No.
8887200010 (PAG oil dosing dispenser)
8885300081 (spare dispenser tip)

O-rings for R 134a refrigerant on retrofit A/C systems, 200 items

This workshop kit contains all the O-rings needed for servicing work on retrofitted A/C systems

Scope of delivery

10	Valves R 134a	Ref. No. 8881500001
5	R 134a charging valves for Japanese make units	Ref. No. 8881500002
30	O-rings 6 R 134a	Ref. No. 8881500008
30	O-rings 8 R 134a	Ref. No. 8881500009
30	O-rings 10 R 134a	Ref. No. 8881500010
30	O-rings 12 R 134a	Ref. No. 8881500011
10	O-rings 6-6/16"	Ref. No. 8881500012
2	O-rings for compressor	Ref. No. 8881500020
2	O-rings for compressor	Ref. No. 8881500021
3	Seals for charging hose 1/4"	Ref. No. 8885400030
10	O-ring pressure switches, outside thread	Ref. No. 8881500055
10	O-ring pressure switches, inside thread	Ref. No. 8881500033
3	Seals R 134a for service hose	Ref. No. 8881500034
10	Seals OR	Ref. No. 8881500036
10	Seals for charging hose	Ref. No. 8885400037
5	O-rings for R 134a charging hose	Ref. No. 8881500037
5	O-Ringe für Füllschlauch R 134a	Ref. No. 8881500041

Ref. No.

SK 06 (set of O-rings)

Original replacement special O-rings for various French make car A/C systems, 44 items

The ideal supplement to the SK 31 basic set

- Includes various special O-rings for French make cars
- 12 different designs / dimensionsen

Ref. No.

SK 39 (set of special O-rings)

**PAG oil dosing dispenser**

For lubricating O-rings and threads during professional fitting of A/C components

Scope of delivery Sales pack: 2 cans (2 x 200 ml), dispenser tip

Accessory Spare dispenser tip

Ref. No.

8887200010 (PAG oil dosing dispenser)

8885300081 (spare dispenser tip)

Original replacement special O-rings for various German make car A/C systems, 84 items

The ideal supplement to the SK 31 basic set

- Includes various special O-rings for German make cars
- 7 different designs / dimensionsen

Ref. No.

SK 40 (set of special O-rings)

**PAG oil dosing dispenser**

For lubricating O-rings and threads during professional fitting of A/C components

Scope of delivery Sales pack: 2 cans (2 x 200 ml), dispenser tip

Accessory Spare dispenser tip

Ref. No.

8887200010 (PAG oil dosing dispenser)

8885300081 (spare dispenser tip)

ONLINE CATALOGUE ON THE INTERNET – WWW.WAECOPARTS.COM

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The number of air conditioned cars on European roads is steadily increasing, and so is the demand for spares. With a virtually complete range of A/C spare parts Dometic WAECO offers profitable business opportunities for quality-conscious workshops. Attractive margins are guaranteed, because **WAECO AirCon parts** are just **as good as the original, but considerably less expensive**.

Under www.waecoparts.com you can also find cross references to the A/C parts of original equipment manufacturers and other suppliers.

Using these cross reference lists you can easily replace any commonly used A/C part with a WAECO AirCon part.

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WWW.WAECOPARTS.COM

Multi-gas leak detector



Microprocessor controlled sensor electronics with multi-channel signal recognition

- Consistent sensitivity throughout the sensor's lifetime
- Can also be set for heavily contaminated environments (e.g. engine compartment)
- Complies with all international standards relevant for vehicle applications: SAE J2913 for R 1234yf, SAE J2791 for R 134a, EN14624:2005. Identifies all FC- and CFC-based refrigerants and blends as well as SF6.

Ref. No.
8885100124 (Multi-gas leak detector)

Electronic leak detector TP-9364/F

R 1234yf



Electronic leak detector for professional use in workshops

- Supplied in practical hard-top case
- Leak detection with **infrared sensor**, leak detection rate: 3 g per year
- Certified according to SAE J 2791
- Suitable for all HFC, HCFC and CFC refrigerants and for SNAP blends such as: R 134a, R 22, R 410a, R 404a, R 12, R 407c, R 409A, R 410B, R 406A, R 414A, R 502, R 500 and all SNAP refrigerants such as R 1234yf

Ref. No.
TP-9364/F (electronic leak detector)

External refrigerant analysis tools

R 1234yf



External R 1234yf gas analysis tool
(complies with the specifications of the task force of German OEMs)

- Reliable analysis with service coupler with clearance ventilation
- Easy handling and simple indication of the refrigerant purity

External R 1234yf gas analysis tool SAE (complies with SAE J 2912)

- Including printer
- Indicates the specific gases on the display, e.g. R 1234yf, R 134a, R 22, HC and air

Ref. No.
8885100106 (external refrigerant analysis tool)
8885100107 (external refrigerant analysis tool)

Service coupler

R 1234yf



Service coupler with clearance ventilation

- Quality coupler
- Complies with SAE J 639
- **With 1 g clearance ventilation**
- e.g. for ASC 5000RPA

Ref. No.
8885400170 (service coupler R 1234yf, low side)
8885400171 (service coupler R 1234yf, high side)

Service coupler

R 1234yf



Service coupler

- Quality coupler
- Complies with SAE J 639
- Suitable for leak checks

Ref. No.
8885400163 (service coupler R 1234yf, low side)
8885400164 (service coupler R 1234yf, high side)

Extension kit for nitrogen pressure gauge and leak detector for R 1234yf



Extension kit for nitrogen pressure gauge and leak detector (8885400092) for use on R 1234yf air conditioners

Scope of delivery:

- 1 x high side service coupler 8885400164,
- 1 x low side service coupler 8885400163,
- 2 x adapter 8885400162, 2 x adapter 8885400081, 1 x HP adapter 8885400178,
- 1 x LP adapter 8885400177, 1 x blue hose 8885100110,
- 1 x red hose 8885100111, 2 x O-ring 8881500041,
- 1 x O-ring (sales pack of 10 pcs.) 8881500055

Ref. No.
8885400165 (nitrogen extension kit)

Service filter

R 1234yf



High-performance filter for ASC 5000 series

- Special connector for easy installation

Ref. No.
4440400009 (drier ASC 5000)

Cold light UV leak detection lamp



Blue light UV leak detection lamp R 1234yf

- Cordless design
- Rechargeable NiMH battery
- Extremely high light output
- Up to 6 hours of operation between charges
- Safe and secure cold light technology for use with R 1234yf

Ref. No.
TP-8690/F (LED blue light UV leak detection lamp)

4-way manifold

R 1234yf



4-way manifold for R 1234yf

- Complete with hoses and quality couplers
- Ideal for mobile R 1234yf charging
- Suitable for R 1234yf recovery

Ref. No.
8885100098 (4-way manifold)

Oil injector

R 1234yf



Injector for manual injection of oils and/or UV additives

- Easy-to-use, sturdy design, ideal for workshop use
- With ml and oz scales for oil and an extra scale for additive

Ref. No.
8885300132 (Oil injector)

Special oil ND 12

R 1234yf



Special oil for use in R 1234yf A/C systems

- Moisture-free storage of the PAG oil

Ref. No.
8887200031 (special oil ND12 for R 1234yf)

Special oil SPA2

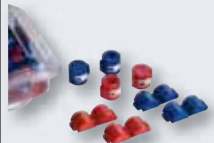
R 1234yf



Special oil SPA2


- Moisture-free storage of the oil
- Contains 500 ml

Ref. No.
8887200039 (special oil SPA2)



Click Lock service quality seal

Ref. No.
8887300008




Service stickers

Ref. No.
8887300007




Refillable steel bottle

Ref. No.
8887100007 (refill)



PAG compressor oil
(0.25 litres each)


Ref. No.
8887200001 (ISO 46)
8887200002 (ISO 100)
8887200008 (ISO 150)



PAG compressor oil, 500 ml each

Ref. No.
8887200013 (ISO 46)
8887200014 (ISO 100)
8887200019 (ISO 150)
8887200017 (Universal oil)
8887200028 (Ester oil)

(im patentierten Behälter)



Denso ND 8 compressor oil
Denso ND 11 compressor oil

Ref. No.
8887200021 (ND 8, 500 ml)
8887200035 (ND 11, 100 ml)

(im patentierten Behälter)



Special oil ND 12, 100 ml
Special oil SPA2, 500 ml

Ref. No.
8887200031 (ND 12)0
8887200039 (SPA2)




Ester compressor oil
for R134a and R404

Ref. No.
8887200006 (content: 1 litre)




Ester compressor oil SE 55

Ref. No.
8887200028 (Content 500 ml)




PAO compressor oil, universal

Ref. No.
8887200009 (content: 1 litre)




PAG oil dosing dispenser
Scope of delivery:
2 x 200 ml, dispenser tip

Ref. No.
8887200010




Vacuum pump oil
HT32

Ref. No.
8887200018 (content: 1 litre)




Leak detection spray
Leak detection by formation of foam on leaky spots in the refrigerant circuit

Ref. No.
8887300018 (content: 500 ml)




TRACER® Sticks

Ref. No.
TP-3860-0601
(for R 134a in combination with PAG oil)




TRACER® cartridge

Ref. No.
TP-9860-0301
(for R 134a in combination with PAG oil)




TRACER® cartridge

Ref. No.
TP-9760-0304
(for R 134a in combination with PAG oil)




TRACER® bottle

Ref. No.
TP-3820-0008 (236 ml)
(for R 134a in combination with PAG oil)



TRACER® bottle


Ref. No.
TP-3820-0016 (475 ml)
(for R 134a in combination with PAG oil)



TRACER® UV-Additiv
UV tracer dye


Ref. No.
TP-3820-500 (500 ml)

(im patentierten Behälter)




TRACER® bottle

Ref. No.
TP-3820-0301 (sales pack: 3 pcs.)
(for R 134a in combination with PAG oil)




TRACER® Dyes

Ref. No.
TP-3400-0601
(for oils and fuels)




TRACER® Dyes

Ref. No.
TP-3900-0601
(for cooling water)




TRACER® GLO-AWAY

Ref. No.
TP-9000-0008 (content: 225 ml)
TP-9000-0016 (content: 450 ml)




AIRSEPT®

Ref. No.
8887400002 (content: 100 ml)




AirCon Refresh air conditioner cleaner
For use with Refresh-o-mat, 1 litre

Ref. No.
8887400008




AirCon Refresh air conditioner cleaner
For use with Refresh-o-mat, 100 ml

Ref. No.
8887400016 (sales pack: 20 pcs.)




Car Refresh smell eliminator
For use with Refresh-o-mat, 1 litre

Ref. No.
8887400009




Car Refresh smell eliminator
For use with Refresh-o-mat, 100 ml

Ref. No.
8887400015 (sales pack: 20 pcs.)



Insulating material

Ref. No.
8887300001 (tar tape)
8887300002 (neoprene tape)



Heat protection pipe
For fitting on refrigerant lines
Aluminium coated on one side
Highly extendable and flexible
Suitable for temperatures up to 600°C

Heat protection hose with Velcro fastener
For fast retrofitting on refrigerant lines
Suitable for temperatures up to 600°C

Ref. No.
8887300003 (pipe length: 425 mm; ø inside: 26.5 mm)
8887300004 (pipe length: 240 mm; ø inside: 36.5 mm)
8887300005 (hose length: 1000 mm; ø inside: 30 mm max.)

ASC 1000

R 134a

Basic entry-level package for A/C service use

Ref. No.	
9103301826	Aircon Service Center ASC1000
TP-1151	236 ml refillable TRACER® bottle and 50-watt leak detection lamp
8887100007	R 134a refrigerant, refillable bottle, 12 kg capacity
SK31	Original replacement O-rings for R 134a refrigerant and PAG oil
8885100072	LCD digital thermometer
TP-9000-0008	GLO-AWAY® spray bottle
8885300037	Universal valve fitting tool
TP-3820-500	TRACER® UV additive (in patented container)



ASC 2000

R 134a

For workshops wishing to improve the efficiency of their A/C service business

Ref. No.	
9103301815	Aircon Service Center ASC2000
8887100007	R 134a refrigerant, refillable bottle, 12 kg capacity
8885100072	LCD digital thermometer
TP-8690X	LED blue light UV leak detection lamp
TP-9000-0008	GLO-AWAY® spray bottle
8885300037	Universal valve fitting tool
TP-3820-500	TRACER® UV additive (in patented container)



ASC 3000

R 134a

Package solution for A/C service on buses, rail cars, etc.

Ref. No.	
9103301819	Aircon Service Center ASC3000
8887100007	R 134a refrigerant, refillable bottle, 12 kg capacity
SK31	Original replacement O-rings for R134a refrigerant and PAG oil
8885100072	LCD digital thermometer
8887200006	Ester oil, 1 litre
8885300037	Universal valve fitting tool
TP-9360	R 134a leak detector



ASC 5000RPA

R 1234yf

For future-minded A/C specialists

Ref. No.	
8885200102	Aircon Service Center ASC 5000RPA
8885100072	LCD digital thermometer
TP-8690X	LED blue light UV leak detection lamp
TP-9000-0008	GLO-AWAY® spray bottle
8887200031	Special oil ND 12 for R 1234yf (in patented container)
8885400206	Adapter for R1234yf refrigerant bottle



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FROM THE NUMBER 1 IN A/C SERVICE



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