



User manual

# Flushing the Refrigerant cycle of a unit with refrigerant R134a



**Art.-Nr.: 0997 527 431**

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## 1 Explanation

### 1.1 Safety instructions

- Please read this user manual carefully before operating the unit for the first time. If you do not understand any section of this manual, please contact your nearest distributor or the manufacturer.
- This unit may be operated by an accredited technician only! Users must have basic knowledge of air-conditioning and refrigerant systems, including potential hazards associated with the handling of refrigerants and systems under high pressure.
- The refrigerant must be handled with care as serious injury may occur. Always wear appropriate protective clothing and safety glasses.



- Avoid the inhalation of refrigerant or oil vapours. Operate only in well-ventilated work areas.
- Use only pure R134a refrigerant with this unit.

### 1.2 How does the flushing work?

The refrigerant cycle is cleaned by flushing it with liquid refrigerant with a high flow rate and against the normal flow direction. The high flow rate is achieved by the removal of certain components, the high pressure in the refrigerant cylinder on one side and the high vacuum in the flushing cylinder on the other side of the system.

To preserve the high flow rate for as long as possible, a flushing cylinder with a volume of more than 3 l is used. Components such as the compressor, expansion valve, drier etc. are exchanged with adapters with large flow holes to avoid a throttle effect.



Observe the manufacturer's instructions!

The refrigerant cycle must be evacuated prior to the removal of components! Refrigerant must not be released into the environment!

The air conditioning service unit and the flushing kit are connected to the refrigerant cycle via the connectors of the compressor. For this purpose, the high-pressure connection of the air conditioning service unit must be connected to the low-pressure side of the refrigerant cycle. And the low-pressure connection of the air conditioning service unit must be connected via the flushing kit to the high-pressure side of the refrigerant cycle.

#### Default setting of the air conditioning service unit with the following data

- **Number of flushing cycles (minimum of 3 flushing cycles recommended)**
- **Length of vacuum time (30 minutes recommended)**



Observe the minimum filling quantity of the refrigerant bottle; consult the user manual of the air conditioning service unit for further information – [www.wow-portal.com](http://www.wow-portal.com)

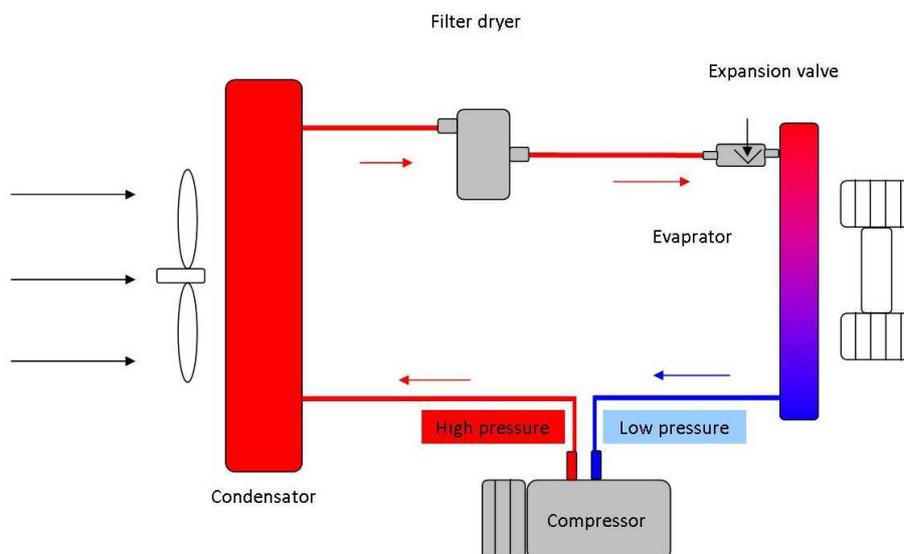
After the start of the flushing function, the refrigerant cycle will first of all be evacuated for at least 30 minutes. After the leak test, the system is flushed with liquid refrigerant at a high flow rate until the flushing cylinder is completely filled. Subsequently, all refrigerant is evacuated from the refrigerant cycle through a micron filter with a pore size of 30  $\mu$ . Implemented check valves control the required flow direction. Depending on the operator's preselection concerning the "number of flushing cycles", this procedure will be repeated accordingly.

**In combination with this flushing kit, all air conditioning service units listed in chapter 4 meet the following requirements**

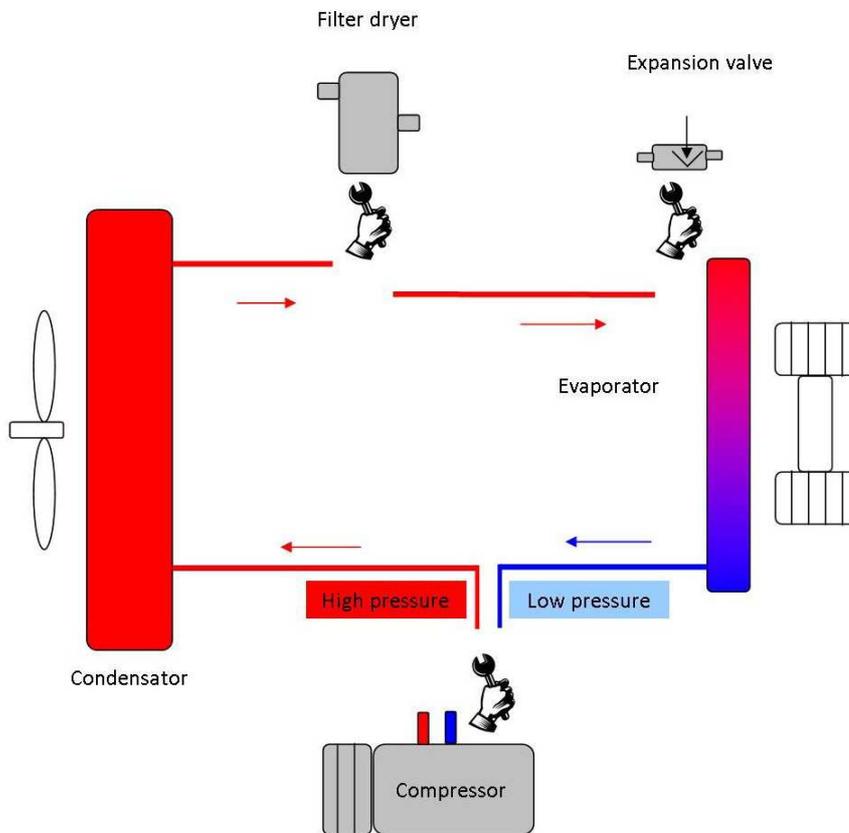
- Flushing of the cycle with R134a liquid refrigerant against the normal flow direction.
- Number of flushing cycles and evacuation time freely selectable.
- Protocol of the number of flushing cycles and refrigerant oil discharge (printed report).

## 2 Connecting the flushing kit

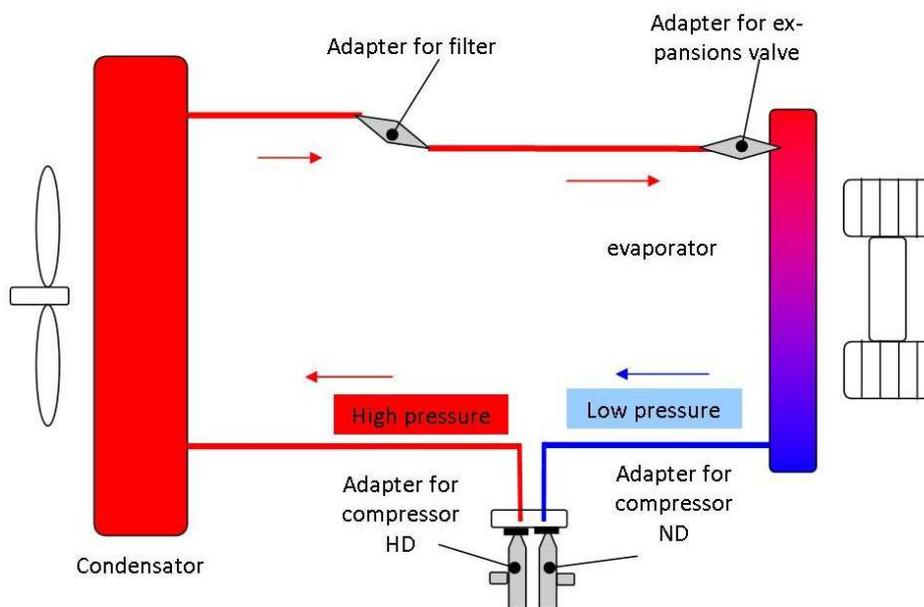
### 2.1 Refrigerant cycle



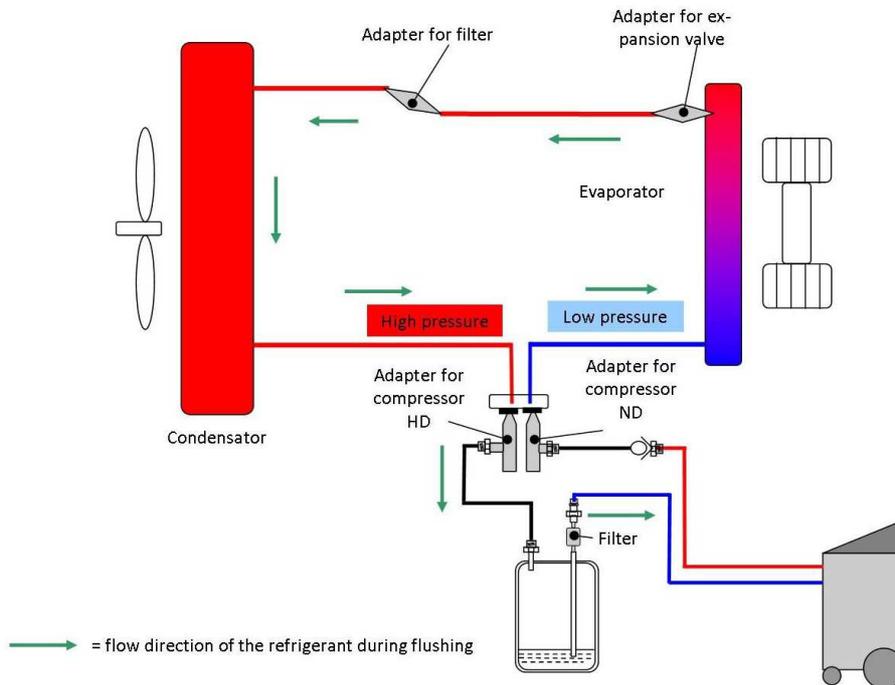
## 2.2 Step 1: Removing the air conditioning components



## 2.3 Step 2: Exchanging the components with adapters



## 2.4 Step 3: Connecting the flushing kit and the air conditioning service unit



### 3 Maintenance of the flushing kit

In general, the flushing kit does not need any maintenance. However, we recommend the exchange and renewal of the implemented micron filter (30  $\mu$  pore size) before the flushing of a vehicle; please observe the manufacturer's instructions. A leak test is performed by the air conditioning service unit prior to the flushing.

### 4 Suitable air conditioning service units

The following list includes all air conditioning service units in the WOW! and Würth product range which can carry out an automated flushing.

Item number	Name
076497	COOLIUS 20kg DATA
0900764970	COOLIUS 20kg DATA
0900764981	COOLIUS 1000
0900764971	COOLIUS 2000
W050200013	WAC 2000 R134a
W050200011	COOLIUS 4000HP

## 5 Flushing adapter kit Würth S-item

### Spüladapterkit – Art. 0997 156 540 (S-Artikel)



#### Art.-Nr. 0997 156 540 (S-Artikel)

- Spülen von Klimaanlage mit R134a Zur Überbrückung von Expansionsventilen und Trockner.
- Ermöglicht den Direktanschluss von Klimaserviceschläuchen an den Saug- und Druckschlauch des Kompressors.
- Hochwertige Messing-Aluminium Werkstoffe für den rauen Werkstattalltag.
- Lieferung im stabilen Kunststoffkoffer.
- Lieferumfang: Universelles Spüladapterkit für viele Audi- und VW-Modelle, sowie für weitere Fabrikate.



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## 6 Editorial

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