

83–514 Refilling or replenishing air-conditioning system

Filling capacity	kg
Refrigerant R 12	1.2

Refrigerant bottle R 12, capacity approx. 7.5 kg
One-way bottle Frigen-Baby R 12, capacity approx. 430 g

Conventional tools

Assembly tester with 3 filling hoses and vacuum pump or evacuating and filling unit (service unit) for air-conditioning system

Line connection-reduction piece 7/16"–1/4" for refrigerant bottle or tapping valve for Frigen-baby-bottle

e.g. made by Christoff Fischer, Augsburgstraße 289
D-7000 Stuttgart 60

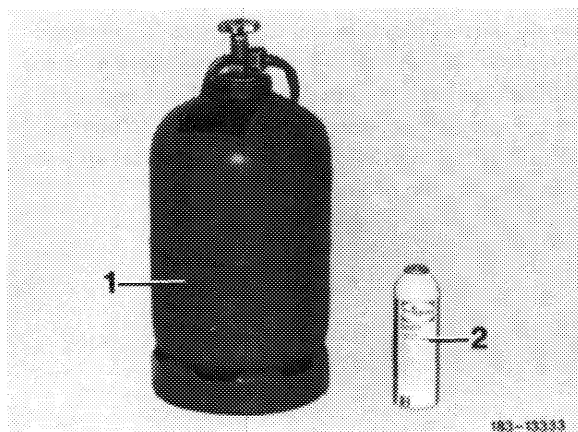
Filling aid type CH 200 and angle piece 90° with rapid screw connection 7/16"

Wrench 1/2" x 9/16"

Note

The jobs for refilling and filling up of air-conditioning system are in principle alike. When refilling, evacuate system first (83–512).

Note: Filling requires a supply bottle (1) with refrigerant, which is commercially available just like e.g. a supply bottle with oxygen or acetylene gas. In addition there are small cans (2) [Frigen-babies], containing approx. 1/2 Liter R 12. If hard to obtain, contact one of the specialist companies manufacturing or operating refrigerating units.



Since the refrigerant in the supply bottle is under pressure and liquid and will flow in the shape of gas when filling the air-conditioning system **without** filling cylinder or when refilling, it is recommended (at least when the supply bottle is already partially empty) to place the supply bottle in a water bath of **max. 40° C**. If the system is completely empty, the refrigerant can also be filled in liquid shape via pressure side upon evacuation. Filling up can be done only in the shape of gas with the system switched on. **When filling the system from a refrigerant bottle of 10 or 20 kg capacity, a scale with 100 g graduation for the bottle or a filling cylinder will be required.**

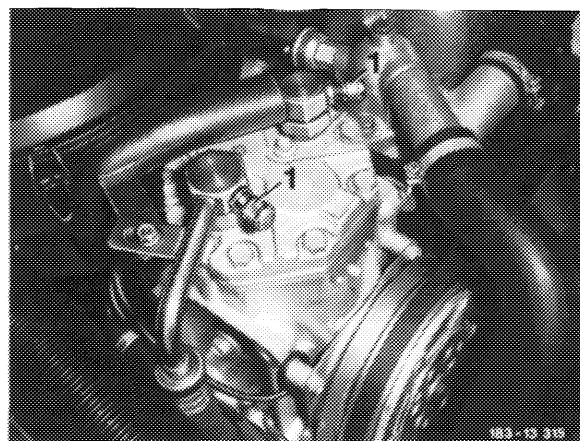
Attention!

If filling up in the shape of gas, the supply bottle should always be set up with the lock in upward direction.

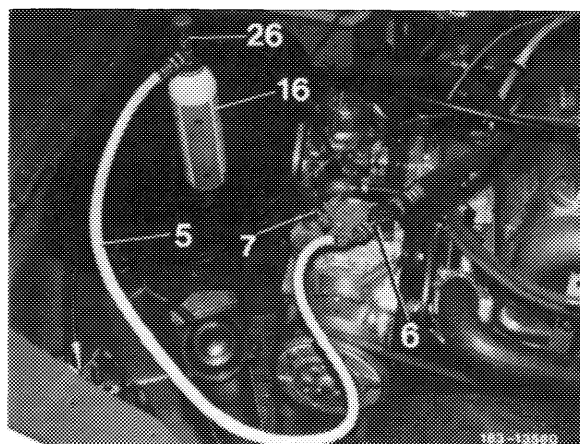
A. Filling system from supply bottle

Filling-in refrigerant in the shape of gas

1 Remove closing caps (1) from service valves.



2 Screw line connection reduction piece (26) on supply bottle (16). Connect filling hose (5) to reduction piece (26) and blow through for a short moment with refrigerant to remove remains of dirt and moisture, if any, then connect filling hose (5) to connection (6) (suction side) of service valve (offset end with pressure pin of hose line).



- 3 Run engine at approx. 1000/min and set temperature selector knob to highest cooling capacity and blower switch to full blower speed. In rooms with temperatures above 22 °C blow out condenser with an additional blower. Blowing out of condenser will always speed up filling.
- 4 Slowly open valve on supply bottle. When filling up air-conditioning system, continue until refrigerant flows free of bubbles past sight glass of receiver dehydrator.
- 5 When refilling, fill in approx. 100–200 g refrigerant. Then stop engine.
- 6 Check complete air-conditioning system with leak tester and seal leaks, if required. Fill system with full quantity of refrigerant only when there are no more leaks.
- 7 Completely fill air-conditioning system (item 1 to 3).
- 8 Close valve on supply bottle and stop engine. Disconnect filling hose (5).
- 9 *Screw closing caps (1) to service valves.*
- 10 Check air-conditioning system for function (83–510).