

Title (en)

DEVICE FOR FILLING VEHICLE AIR CONDITIONING SYSTEMS WITH COOLANT R744

Title (de)

VORRICHTUNG ZUR BEFÜLLUNG VON FAHRZEUGKLIMASYSTEMEN MIT KÄLTEMITTEL R744

Title (fr)

DISPOSITIF POUR REMPLIR DES SYSTÈMES DE CLIMATISATION DE VÉHICULE PAR LE RÉFRIGÉRANT R744

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Application

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Abstract (en)

[origin: WO2016011990A1] The invention relates to a device for filling vehicle air conditioning systems with coolant R744. Said device comprises at least one storage tank (1) for liquid coolant R744, which is actively connected by means of at least one pump station (2), a supply line (6) and a return line (7), to a filling system (3) from which the coolant R744 is fed by means of an adapter (4) into the vehicle air conditioning system. The aim of the invention is to provide a technical solution in which the coolant R744 can be maintained in the liquid phase within said type of supply design. Said aim is achieved in that a temperature sensor (T) and a valve circuit (10) are arranged in the transitional region between the supply line (6) and the filling system (3), which control the flow if the coolant in accordance with each actual operating situation such that when the removal of the coolant is interrupted, the coolant forceably heated by the removal pause is returned and/or guided to the storage tank (1) and the cold coolant is guided from the storage tank (1) to the filling station (3). The valve circuit (10) and subsequently a return and/or cooling of the coolant by the filling system (3) is initiated, and an adapter support is designed such that the adapter (4) in the support position thereof can be tensioned by means of a sealing positive fit on a specific connection (Service Port) such that a return and/or cooling of coolant takes place by means of a return line (8; 9) associated with the adapter support. Said adapter support is controlled and subsequently the returning and/or cooling of the coolant is initiated by the filling system (3) and the device triggers the return and/or cooling of the coolant by means of the a valve circuit and/or of adapter support only at certain time points in which the use-specific operating behaviour of the filling system is not taken into account.

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