

**ROBINAIR®**

**AC 790 PRO**  
A/C service unit



## 1. Application

This Quick start guide is designed as a reference only and does not replace the detailed information contained in the operator's manual and should only be used in conjunction with the operating instructions.

The AC790PRO will service air-conditioner systems using with R134a refrigerant used in cars, bus, trucks and industrial vehicles. The AC station can operate with systems using PAG oil.

By connecting the AC790PRO unit to an A/C system the refrigerant can be recovered, the system vacuumed, leak tested and the refrigerant recycled ready for recharging the system.

The amount of lubricant taken from the A/C system during the recovery can be measured using the scale on the out bottle and, when prompted, new oil added to the system.

The unit is equipped with a two-stage pump for high vacuum and a manifold set to continuously monitor the operations in progress.

Pressure is measured in the A/C system on the manometers the unit is equipped with.

The station can only be used with **R134a**. The station must not be used for the maintenance of vehicles with air conditioning systems that use refrigerants other than **R134a**. Before performing maintenance of the air conditioning system, check the type of refrigerant used in the air conditioning system of the vehicle.

Unpacking and checking components

- Remove the machine packaging.
- Check to ensure that all of the accessory components are present:
  - ✓ Operating instructions.
  - ✓ 2 x oil bottles
  - ✓ cylinder adaptor
  - ✓ Bottle safety valve conformity certificate.

## 1.1 Scope of delivery

Description	Order number
AC790PRO	–
Safety goggles	–
Protective gloves	–
Original instructions	SP00D00100
Service hose, HP, 5 m	SP00100035
Service hose, LP, 5 m	SP00100036
Fresh oil bottle 2 l	SP00100112
Used oil bottle 2 l	SP00100113
Two adapters for connection to an external refrigerant cylinder 1/4" SAE W21.8-14 x 1/4" FL (EU standard)	SP00100019 SP00100080

## 1.2 Overview on software texts

Software	Orig. operating instructions
HOSES LENGTH	Service hose length
TANK	Internal refrigerant cylinder
A/C SYSTEM	Vehicle air-conditioning system
HP & LP	High Pressure & Low Pressure
HOSES	Service hoses
SELECT PORTS	Vehicle air-conditioning system service connection (service quick-release coupling)
PUMP	Vacuum pump

## Important note

Before start up, connecting and operating Robinair products it is absolutely essential that the operating instructions/owner's manual and, in particular, the safety instructions are studied carefully. By doing so you can eliminate any uncertainties in handling Robinair products and thus associated safety risks upfront; something which is in the interests of your own safety and will ultimately help avoid damage to the device. When a Robinair product is handed over to another person, not only the operating instructions but also the safety instructions and information on its designated use must be handed over to the person.



## 1.3 Description of unit

### 1.3.1 Front view

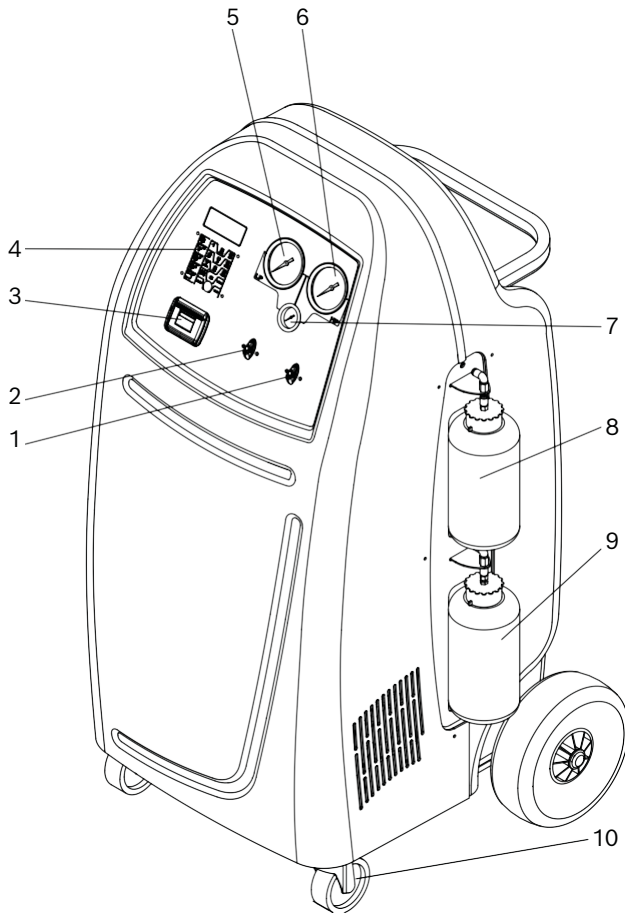


Fig. 1: Front view

- 1 Service quick-release coupling (LP)
- 2 Service quick-release coupling (HP)
- 3 Service hose (5 m)
- 4 Service hose mount
- 5 Rear wheels
- 6 Power cord (socket)
- 7 Master switch

### 1.3.2 Rear view

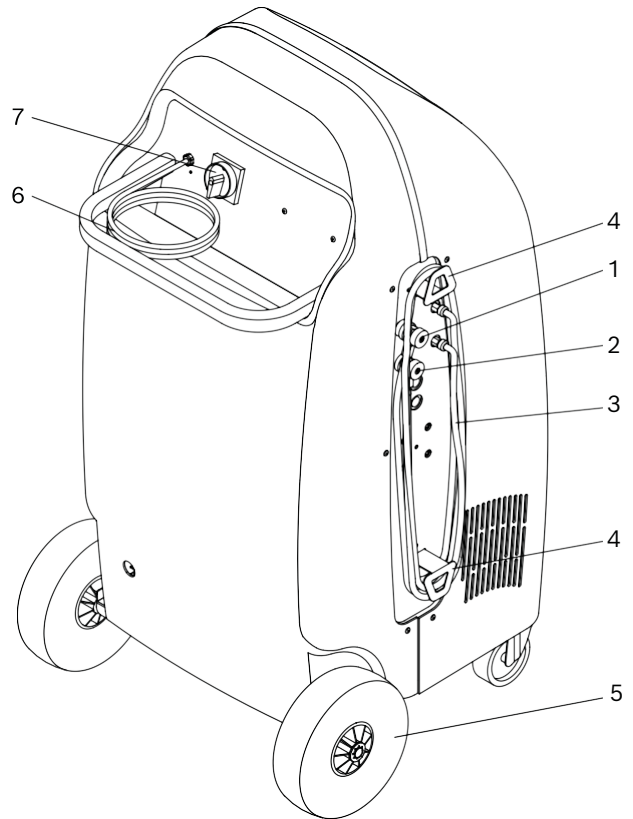


Fig. 2: Rear view

- 1 Valve high pressure (HP)
- 2 Valve low pressure (LP)
- 3 Printer
- 4 Display and control panel
- 5 Gage low-pressure pressure (LP)
- 6 Gage high-pressure valve (HP)
- 7 Pressure gage of internal refrigerant cylinder
- 8 Fresh oil bottle
- 9 Used oil bottle
- 10 Front wheels with locking brake

The high (6) and low pressure (5) gages show the current pressure during the air conditioning service on the vehicle. The small gauge (7) is used to check the pressure in the internal refrigerant cylinder.

The two panel valve settings are labeled as follows:

- # C (closed) = valve is closed
- # O (open) = valve is open

### 1.3.3 Display and control panel

The display and control panel of the operating unit control the menus and the service phases.

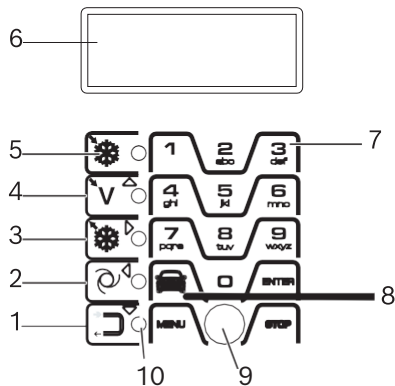


Fig. 3: Display and control panel

- 1 Flushing
- 2 Automatic service
- 3 Filling
- 4 Vacuum
- 5 Removal by suction
- 6 LCD display
- 7 Key panel
- 8 Vehicle database
- 9 PS2 interface <sup>1)</sup>
- 10 Function light

<sup>1)</sup> For updating firmware/software or database

### 1.3.4 Selection and function keys

Keys	Name	Operation
	Evacuation	Refrigerant is extracted from the vehicle.
	* Cursor up * Vacuum	* Upward cursor movement. * A vacuum is generated.
	* Cursor right * Charge	* Cursor movement to the right. * Vehicle air conditioning system is filled with refrigerant.
	* Cursor left * Automatic	* Cursor movement to the left. * Automatic service run: Air conditioning service is carried out according to the programmed settings.
	* Cursor down * Flushing	* Downward cursor movement. * Flush components of the vehicle air conditioning.
	Menu	Call up various function for service and data management.
	Database	Call up databases: * USER SPECS * VEHICLE DATAS
	Enter (E)	Confirm and take over.
	Stop	Terminate and return.

Various functions are assigned to the <MENU> key in the AC790PRO software. The functions of the keys are defined in the menu lines of the AC790PRO software.

## 2. Initial commissioning

### Removing transportation packaging

On removing the outer packaging of the refrigerant cylinder, make sure the cylinder hoses do not come into contact with the housing or the filter dryer.

1. Remove the cardboard box.
2. Remove the AC790PRO from the packaging pallet.
3. Check delivery contents.
4. Check oil level of vacuum pump (sight glass).

Do not disconnect any electrical connections, and only have internal components opened and repaired by trained customer service personnel.

Contact customer service in the event of any transportation damage (e.g. oil leakage).

### Connecting the service hoses

Connect the service hoses included in the delivery to the service quick-release coupling HP and LP.

The connected hose length is provided in the settings of the software to precisely calculate the refrigerant quantity. For this reason, any change to the hose length must be entered into the software settings in the **"HOSES LENGTH"** menu (see Sect. 11.3 of the manual).

### Connecting oil bottles

Do not exert excessive force when removing or inserting the fresh oil and used oil bottles, as this could damage the couplers.

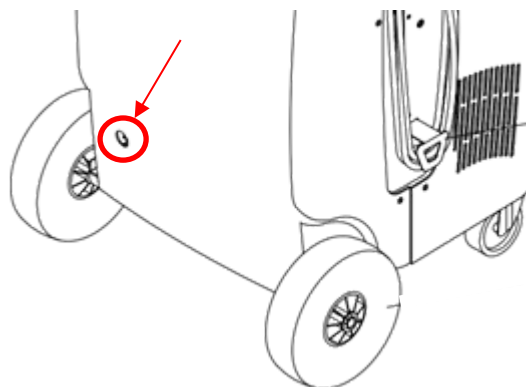
Pay attention to the symbols on the service label showing the type of bottle.

1. Fill the fresh oil bottle with compressor oil
2. Connect the fresh oil bottle to the top quick release coupling.
3. Connect the used oil bottle to the bottom quick release coupling.

AC790PRO has no weighing scales for fresh oil and used oil. The required quantities must be read from the bottle scale.

### Vacuum pump oil

From the lower rear cover check the vacuum pump oil via the inspection apparatus and the sight glass of the vacuum pump. If top up is required only use Robinair high performance vacuum pump oil.



### Internal cylinder (ISV)

The internal cylinder has been installed during pre-delivery and evacuated to ensure all air is removed to allow for a quick initial tank fill and to minimize the possibility of damaging air being trapped in the internal system of the machine.

### Switching on the AC790PRO

! The AC790PRO is designed for 230 volts, 50 Hz. Observe the information on the AC790PRO compliance rating plate.

1. Stand the AC790PRO on a flat, vibration-proof surface.
2. Actuate the brake to stop the AC790PRO rolling.
3. Connect the power supply cord to the power supply.
4. Switch on the master switch.
  - ☐ Conducting display test.

"Date and time (start screen) are displayed.





## Required settings

The following settings must be checked or changed as required during initial commissioning.

All other settings as well as the factory settings can be found in Section "Settings".

### Setting the language

1. Call up start screen.
2. Press <3> and <Flush> simultaneously and release.  
The message ENTER CODE 0000 is displayed.
3. Enter code 2222 and confirm with E.
4. Select "LANGUAGE" with ↑↓ and confirm with E.  
Available languages are displayed.  
Select language with ↑↓ and confirm with E.  
Language is set.  
i Return with <Stop>.



### Setting the date and time

1. Call up start screen.
2. Press <3> and <Flush> simultaneously and release.  
The message ENTER CODE 0000 is displayed.
3. Enter code 2222 and confirm with E.
4. Select "DATE/TIME" with ↑↓ and confirm with E.  
Date and time are displayed.  
The cursor is automatically placed on the day's date.  
Enter date and time using <0 – 9> and confirm with E.  
i Return with <Stop>.



### Set workshop data

The workshop data is limited to a maximum of 8 lines with 20 characters in each line.

Delete the space before the cursor with <MENU>.

1. Call up start screen.
2. Press <3> and <Flush> simultaneously and release.  
The message ENTER CODE 0000 is displayed.
3. Enter code 2222 and confirm with E.
4. Select "GARAGE" with ↑↓ and confirm with E.
5. Enter workshop data with <A – Z>, <0 – 9> and confirm with E.  
Use ↑↓ to go to another line.  
Workshop data is set.  
i Return with <Stop>.



## | AC790PRO | Initial commissioning

## Filling internal refrigerant cylinder

**WARNING – Risk of frostbite from escaping refrigerant**

Refrigerant causes severe frostbite on the skin.

- ¶ Check the service hoses for damage.
- ¶ Firmly connect the service quick-release couplings to the service hoses.
- ¶ Wear safety goggles.
- ¶ Wear protective gloves.

Before the AC790PRO can be used, the internal refrigerant cylinder must be filled with liquid refrigerant.

The optimum quantity for initial fill is approx. **10 - 12 kg**.

Do not interrupt the automatic filling process prior to automatic termination by the AC790PRO.

AC790PRO automatically clears the service hoses and internal lines after filling of the internal refrigerant cylinder. This additional quantity causes the actual filling capacity to deviate + 500 g – 700 g from the initial fill refrigerant quantity.



<MENU> key

Be sure to follow the AC790PRO menu prompting.

1. Screw the adapter onto the external refrigerant cylinder.
2. Connect the LP service hose to the adapter on the external refrigerant cylinder.
3. Turn the LP valve to setting "O".
4. Open the valve on the external refrigerant cylinder.
5. Press <MENU>.
6. Select **"TANK FILLING"** with ↑↓ and confirm with **E**.

The maximum quantity that can be filled is displayed. (TANK)

Enter the required amount of refrigerant to be transfer to the internal tank (MAX RECOVERABLE AMOUNT) with <0 – 9> and confirm with **E**.

## Important information

Connection types of external refrigerant cylinder

- # **External refrigerant cylinder with one valve:** Always turn this external refrigerant cylinder upside down when filling the internal refrigerant cylinder. Screw the adapter onto the connection of the external refrigerant cylinder.
- # **External refrigerant cylinder with two valves:** Screw the adapter onto the LIQUID connection of the external refrigerant cylinder.



## Select ports

1/HP & LP PORTS 2/HP PORT 3/LP PORT

7. Select <1> and confirm with **E**.

☐ Filling process starts.

The current pressure inside the external refrigerant cylinder is indicated on the tank pressure gauge.

AC790PRO ends the filling process when the entered refrigerant quantity is reached.

8. Close the valves of the external refrigerant cylinder and of the LP service hose.
9. Confirm with **E**
- ☐ Automatic recovery of the refrigerant in the hoses and internal components starts.
  - ☐ Recovery phase is completed (after approx. 2 - 4 minutes).
10. Disconnect the LP service hose and adapter from the external refrigerant cylinder.
- Internal refrigerant cylinder is filled to the preset level.
- To Check the amount of refrigerant, call up start screen to check refrigerant quantity in internal refrigerant cylinder and press **E**.

**i** Return with <Stop>.

11. It is recommended to perform a short tank re-cycle (approx 5 min) after the initial fill to help stabilize the machine prior to first use.

## Tank recycling

Follow the AC790PRO menu prompting.

1. Call up start screen.
2. Press <MENU>.
3. Select <TANK RECYCLING> with **↑↓** and confirm with **E**.

The maximum recycle processing time is limited to 60 minutes and stops automatically after the internal circuit has been cleared.

Return with <Stop>.

## Factory default settings

Menu	Factory setting
LANGUAGE	English
DATE/TIME	CET
UNIT OF MEASURE	kg/m
HOSES LENGTH	5 m
CONTRAST	medium contrast
GARAGE ADDRESS	empty, no data entered
FLUSHING	deactivated
OIL SCALE	deactivated
UV DYE	deactivated
SERIAL NUMBER	Serial number has already been entered (compare with name plate)
EXPERT MODE	deactivated

**!** Observe all warning notices on products and ensure they remain legible.



➤ Wear safety goggles.



➤ Wear protective gloves.



➤ Protect against dampness and moisture.

Please refer to the operation manual for more detailed set up information and instruction on how to operate the machine and service AC systems