CADDY FOX

Universal kit for Vacuum and Charge

User's manual

WIGAM

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WARNING

SAFETY PRECAUTIONS

- This equipment is designed for trained personnel only, who must know the refrigeration fundamentals, cooling systems, refrigerants and possible damage that pressurized equipment may cause.
- Carefully read the instructions contained in this manual; strict observance of the procedures described is fundamental to the operator's safety, the perfect state of the unit and constant performances as declared.
- It is recommended to wear suitable protections like safety glasses and gloves; contact with refrigerant may cause blindness and other personal injuries
- Do not operate near open flames and hot surfaces; the high temperatures decompose the refrigerant releasing toxic and caustic substances which are hazardous for the operator and the environment
- Avoid skin contact; the low boiling temperature of the refrigerant (about -30°C) can cause freezing
- Avoid breathing refrigerant vapours
- Always make sure that the vacuum pump is connected to a suitably protected mains supply provided with an efficient earth connection
- Even if the temperature of the pump never reaches high values, make sure that the pump is placed, so that it cannot cause injuries or local burns to people, while it is working.
- Operate the pump only in locations with suitable ventilation and a high number of air changes
- Before disconnecting the unit, make sure that the cycle has been completed and that all valves are closed in order to avoid release of refrigerant to the atmosphere
- Never fill any tank with liquid refrigerant to more than 75% of its maximum capacity
- when the pump will not be used for a long period of time, turn it off and disconnect it from the mains supply
- During operations avoid release of refrigerant to the environment; this precaution is required by international environmental standards and is essential to avoid difficult leak detection in a refrigerant polluted environment.

INTRODUCTION

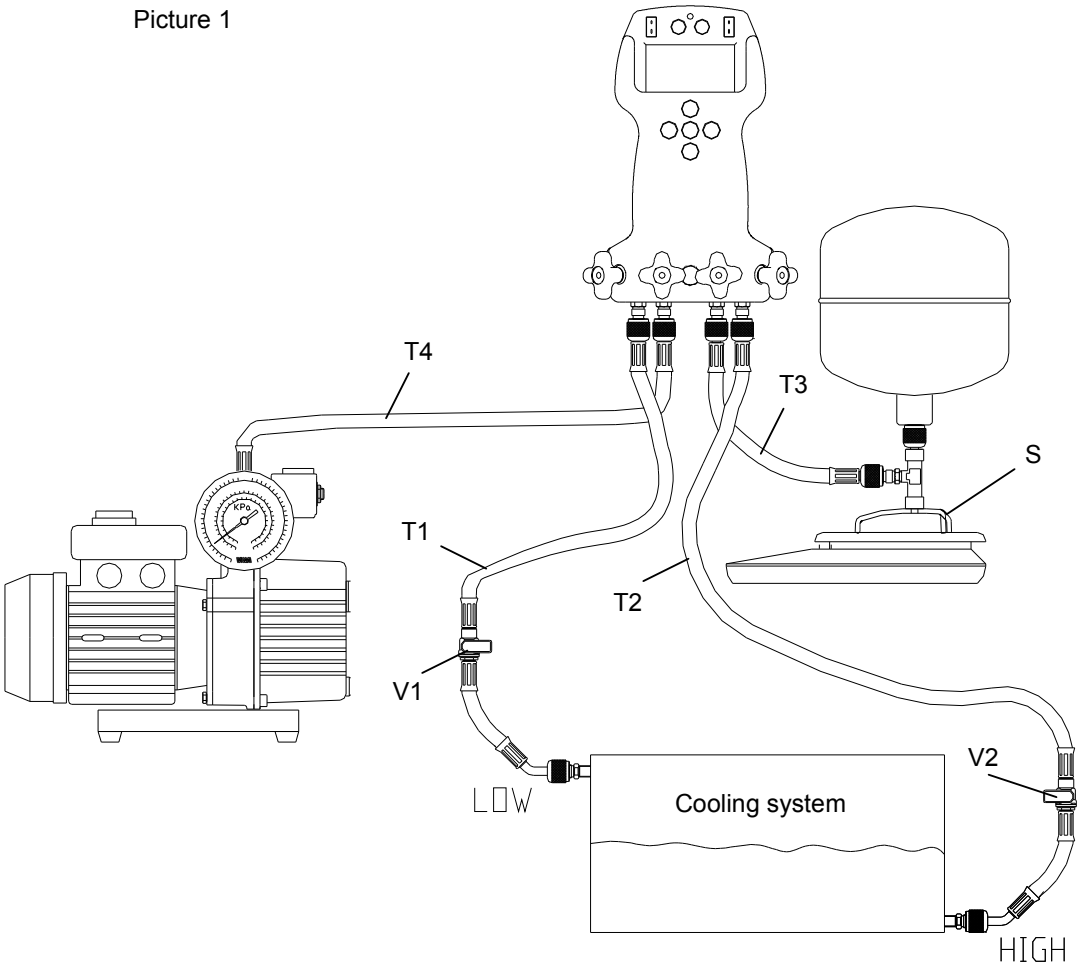
CADDY is a complete system for vacuum and charge that enables to evacuate the cooling system, to check the tightness, to charge the system and to check the operations pressures.

The kit is available in the following versions:

CADDY 46D/5-FOX300	with 46 lit/min pump and 5 kg scale
CADDY 46D/100-FOX300	with 46 lit/min pump and 100 kg scale

ASSEMBLING THE WIGAM VACUUM AND CHARGING SYSTEM , SERIES CADDY-FOX

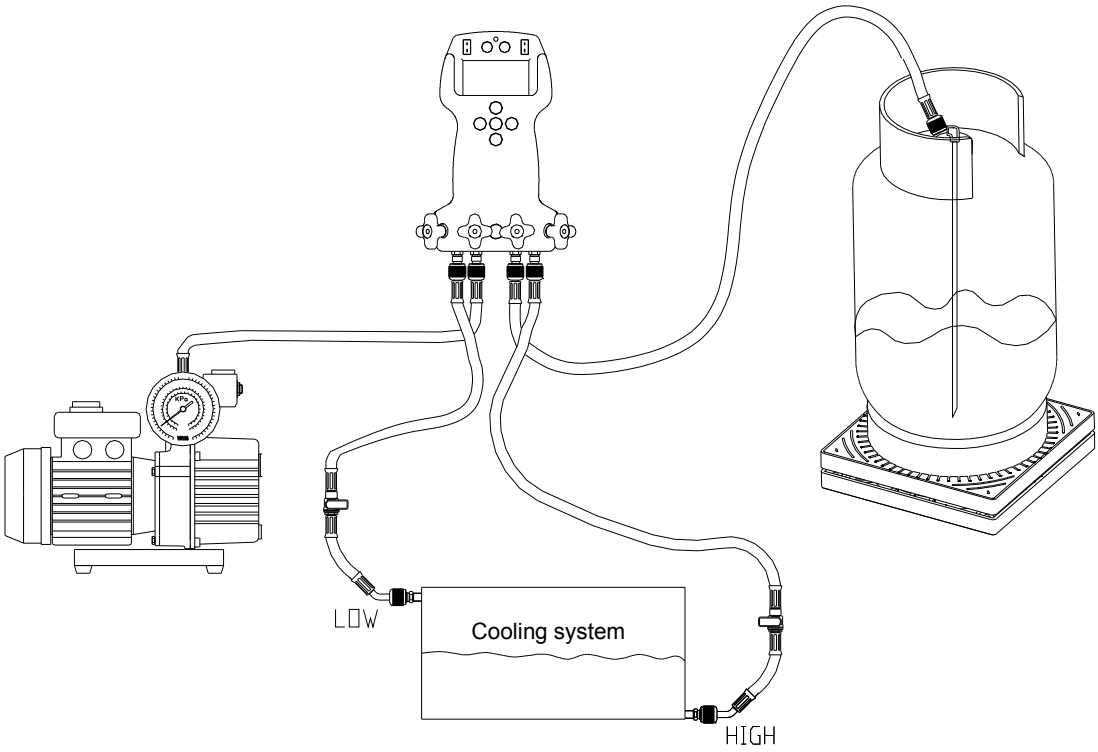
Picture 1



- Connect the manifold to the vacuum pump by means of the T4 flexible hose with 1/4”sae connections and tighten the connections.
- Connect the T1 blue flexible hose and the T2 red flexible hose to the manifold.
- Connect the T3 flexible hose to the manifold and to the refrigerant bottle, situated on the scale.

ASSEMBLING WITH BOTTLES AND SCALES OF OTHER CAPACITIES

Picture 2



PREPARING THE VACUUM PUMP

The pump is supplied without lubricant.
Before using the pump for the first time, fill it with the correct quantity of oil. A small bottle of oil is supplied with the pump. (See the user's manual of the pump)

EVACUATING THE MANIFOLD AND THE HOSES

- Close all the valves on the manifold and the V1 and V2 valves of the T1 and T2 hoses.
- Start the vacuum pump and let it run for about 3 minutes with the gas ballast valve open.
- Open the LOW, HIGH, REF and VAC valves on the manifold.
- After 3 minutes, close the gas ballast valve and evacuate the system for about 30 minutes.
- Turn the vacuum pump off.
- Close the VAC valve on the manifold.

EVACUATING THE COOLING SYSTEM

- Connect the T1 flexible hose to the LP connection of the cooling system.
- Connect the T2 flexible hose to the HP connection of the cooling system.

P.S. In case the cooling system has got only one connection (LOW), refer only to the instructions concerning the T1 hose.

- Open the LOW and HIGH valves on the manifold and make sure that the REF valve is closed.
- Open the V1 and V2 valves on the T1 and T2 hoses.
- Open the VAC valve on the manifold
- Start the vacuum pump and let it run for about 3 minutes with the gas ballast valve open.
- After 3 minutes, close the gas ballast valve and evacuate the system for about 30 minutes.
- Turn the vacuum pump off.
- Watch the vacuum gauge in order to check the system tightness by superimposing the red pointer and the black pointer; let the system for a few minutes (max. 5) in the same conditions in which it was at the end of the vacuum operations.
- The possible worsening of the vacuum level means that the cooling system is not perfectly tight; it is necessary to pinpoint the leak and repair it.
- Close the VAC valve on the manifold.

WARNING

Do not forget to close the VAC valve before the following charging operation otherwise the vacuum gauge will break.

CHARING REFRIGERANT INTO THE COOLING SYSTEM

- Close all the valves on the manifold.
- Close the V1 and V2 valves on the T1 and T2 hoses.
  P.S. In case the cooling system has got only one connection (LOW), refer only to the instructions concerning the T1 hose
- Take a bottle containing the suitable refrigerant to work with the cooling system and place it upside down on the V3 valve of the T3 hose (situated on the electric scale),

WARNING

The refrigerant charge must be performed ONLY in liquid phase

- Connect the T3 hose and let it become saturated by refrigerant.
- Open the LOW valve on the manifold and the V1 valve of the T1 hose, if you want to charge only from the low pressure side.
- Open the HIGH valve on the manifold and the V2 valve of the T2 hose, if you want to charge only from the high pressure side.
- Open the LOW and HIGH valves on the manifold and the V1 and V2 valves of the T1 and T2 hoses, if you want to charge refrigerant from the both sides.
- Open the REF valve on the manifold and check on the scale display the refrigerant quantity that has been charged.
- Close the REF valve on the manifold as soon the quantity of refrigerant requested for a correct use of the cooling system has been charged.

CHECKING THE COOLING SYSTEM OPERATING PRESSURES

- Make sure that all the valves on the manifold are closed
- Connect the T1 flexible hose to the cooling system low pressure side and open the V1 valve
- Connect the T2 flexible hose to the cooling system high pressure side and open the V2 valve (if the system has got a high pressure connection)
- Start the cooling system compressor
- Read the pressure and the corresponding evaporation temperature on the blue pressure gauge
- Read the pressure and the corresponding condensation temperature on the red pressure gauge
- Compare these values with those suggested by the cooling system manufacturer

DISCONNECTING THE VACUUM AND CHARGING SYSTEM FROM THE COOLING SYSTEM

After having checked that there are no leaks in the cooling system and that it is functioning well, you can disconnect the vacuum and charging system from the cooling system.
In case the vacuum and charging operations were performed only from the low pressure side, close the LOW valve on the manifold and the V1 valve on the T1 hose and disconnect the hose from the system.
In case the vacuum and charging operations were performed from both sides (low and high pressure), follow the following instructions:

- with the cooling system on, close the V2 valve on the T2 hose
- open the LOW and HIGH on the manifold in order to have the liquid refrigerant inside the T1 and T2 hoses sucked into the low pressure side of the cooling system
- close the LOW and HIGH valves on the manifold and the V1 valve on the T1 hose
- disconnect the hoses from the cooling system

ACCESSORIES

Code	Model	Description
11001088	WR1K-TPED/410	Bottle with 800 g R410A – refillable
11001079001	WR2.5K-PED/410	Bottle with 2 kg R410A – refillable
11001089	WR1K-TPED/407	Bottle with 800 g R407C – refillable
11001080001	WR2.5K-PED/407	Bottle with 2 kg R407C – refillable
11001090	WR1K-TPED/134	Bottle with 900 g R134a – refillable
09013018	W8025	Scale - 5 kg
09013019	PRATIKA 100-05	Electronic scale - 100 Kg
04080001003	FOX-300	Digital manifold with hoses

Notes

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