

Operation manual (EN)

Charging Kit for HC Refrigerants



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1. Foreword / safety notice

The Charging Kit you are about to use is designed and built only for vacuuming and filling of HC Refrigerants. DO NOT – in any way – try to use the kit for anything else. When using this Charging kit or one of its 'standalone' parts, please take notice of the safety precautions



Always read the manual before operating the charging kit or specific part(s) of the kit!



No smoking or open fire in or around the charging kit and other areas where refrigerants are processed. Fumes can be toxic and/or flammable!



Always wear safety goggles, protective gloves and ear protection!

Refrigerants can cause severe burn marks and damage to skin and other unprotected bodyparts. Longer periods of excessive noise cause hearing damage



Warning!

Danger! High voltage is present to run electrical devices in this system! (230V/110V AC / 16A)

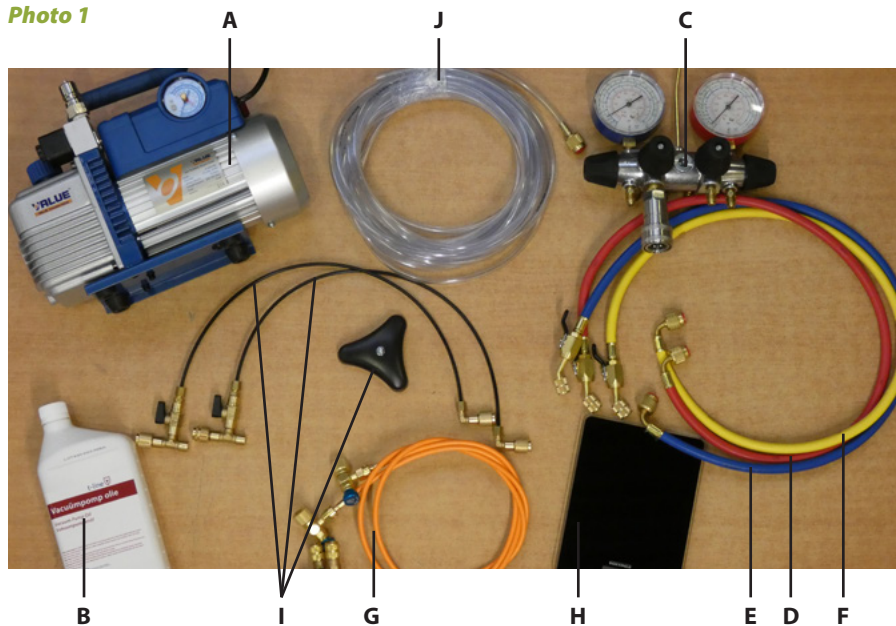
Always check power cords, landlines, outlets, etc. for a good connection, good insulation and safety earth before connecting and powering-up the electrical system! Replace and/or check parts if necessary! Have the electrical system checked on a regular basis by an accredited electrician. Avoid use of the electrical system in an environment with high relative humidity ($RH > 70\%$) and avoid contact with wet surfaces, metal (conductive) parts. Don't touch damaged insulation of live wires!

2. HC Refrigerants Charging Kit Components

This Charging Kit consists of (Photo 1):

- A** Vacuum pump
- B** 1 bottle of oil
- C** Manifold
- D** 1/4" SAE hose red with ball valve
- E** 1/4" SAE hose blue with ball valve
- F** 1/4" SAE hose yellow with ball valve
- G** Capillary hoses orange with 1/4" SAE
- H** Scale 0 - 5000 gr
- I** Support + Hose 7/16" x 1/4" and hose 1/4" x 1/4"
- J** *Transparent hose

Photo 1



*Use transparent hose when the gauges still indicate pressure in the cool unit after the vacuum pump is connected but before the vacuum pump is switched on. Make sure that the transparent hose always ends outdoors (photo's I en II)

Photo I

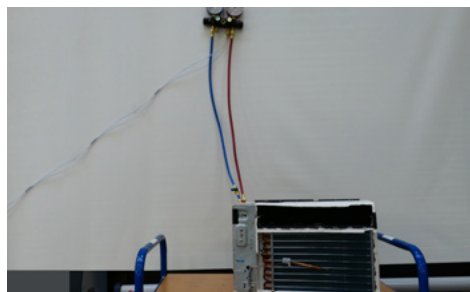


Photo II



3. Set Up Vacuum Pump

- 1 Remove Cap from Pump A (Photo 2)

Photo 2



- 2 Fill reservoir pump with Oil B until indicated stripes (Photo 3).
- 3 Put cap back on pump

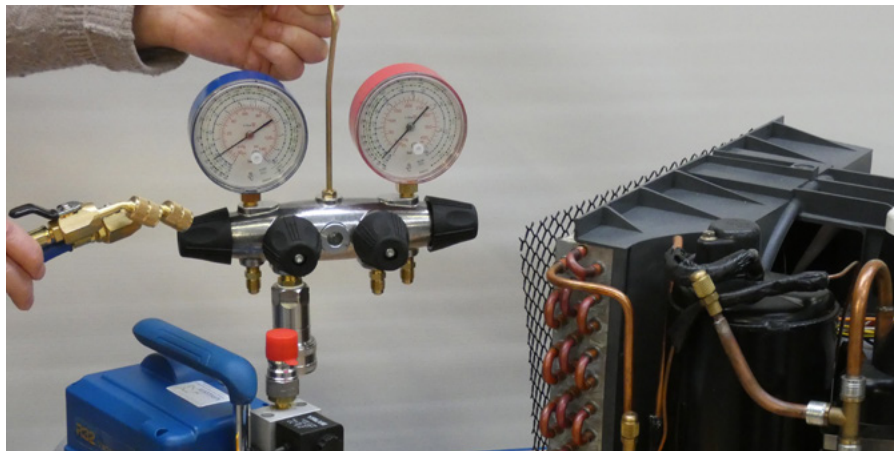
Photo 3



4. Start Vacuum pump

- 1 Get Manifold and ¼ SAE red Hose with ball valve (D) and ¼ SAE blue hose with ball valve (E) (Photo 4)

Photo 4



- 2 Attach ¼ SAE red hose with ball valve (D) on the red pressure gauge (Photo 5)
- 3 Attach ¼ SAE blue hose with ball valve (E) on the blue pressure gauge. Make sure all valves are CLOSED (Photo 5)

Photo 5



- 4 Attach the other side of ¼ SAE red hose with ball valve (D) on the discharge/liquid line of the cooling unit (Photo 6)
- 5 Attach the other side of ¼ SAE blue hose with ball valve (E) on the charge/suction line of the cooling unit (Photo 6)

Photo 6



- 6 Attach the manifold (C) on the vacuum pump (A) as shown in photo's 7, 8a and 9

Photo 7



Photo 8

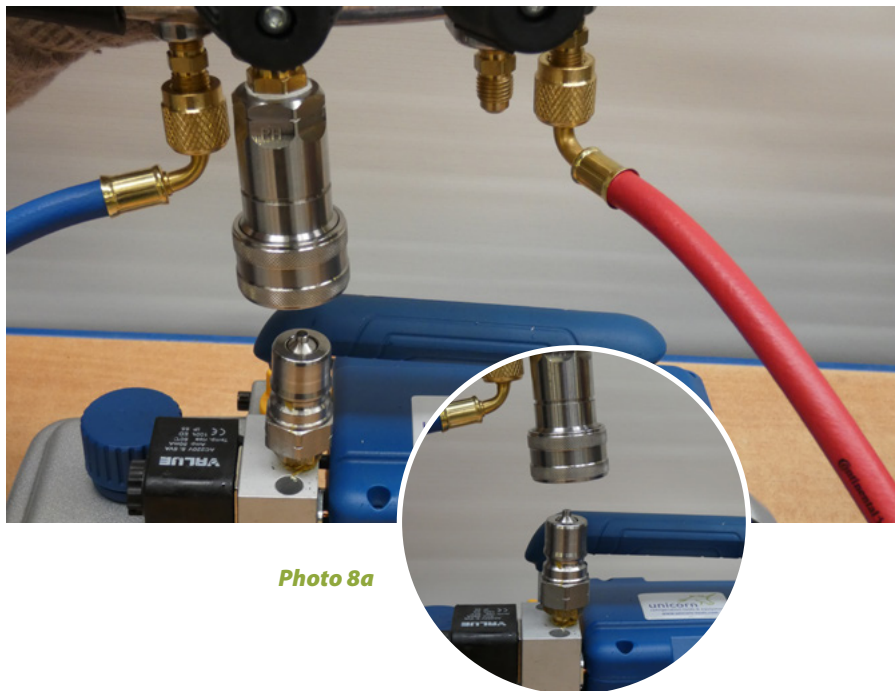


Photo 8a

Photo 9

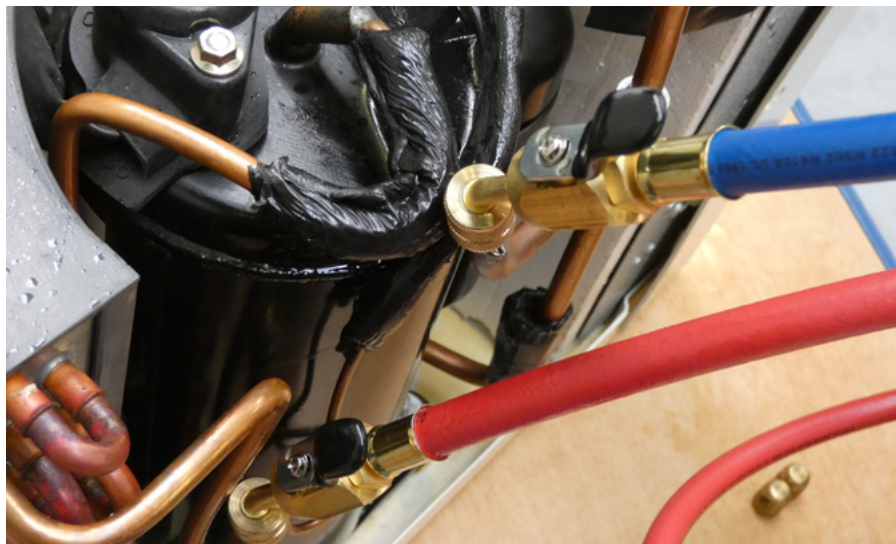


7 Turn the ball valves from position as shown in photo 10 and 11a

Photo 10



Photo 11



8 Open the valves on the manifold in the sequence as shown in photo's 12, 13, 14

Photo 12



Photo 13

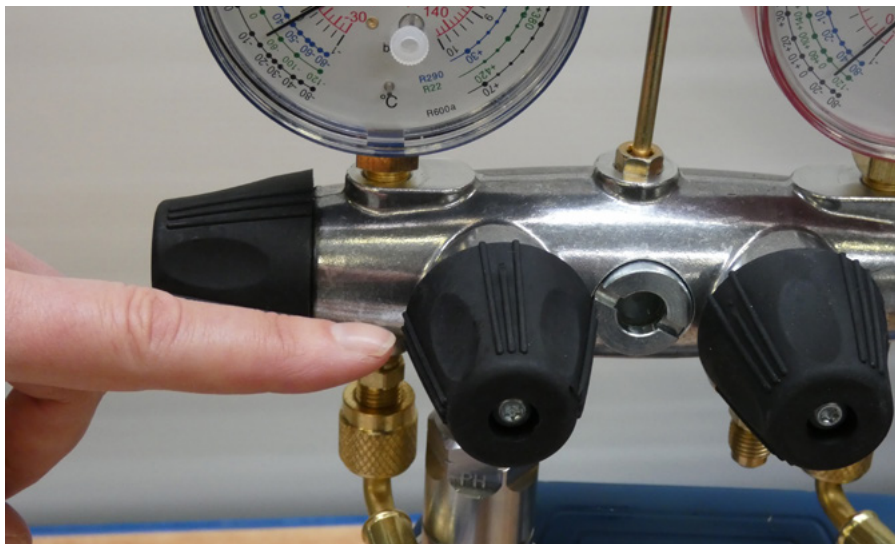


Photo 14



9 Push on/off switch button on the vacuum pump (photo 15)

Photo 15



10 When vacuum is complete push the on/off switch on vacuum pump again (photo 16)

Photo 16



11 Close all the valves on the manifold in the reverse order as shown in photo 17, 18, 19

Photo 17



Photo 18

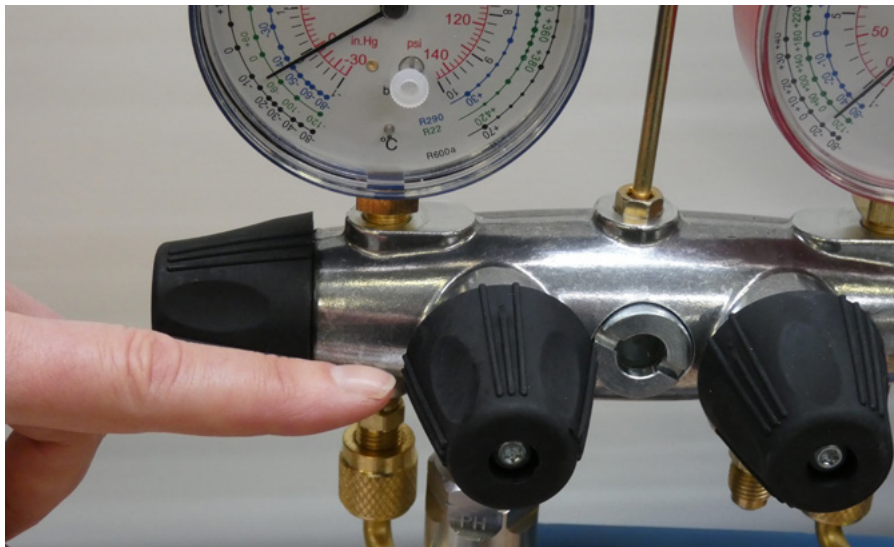


Photo 19



12 Close the ball valves on the red and blue hoses as shown in photo 20 and 21

Photo 20

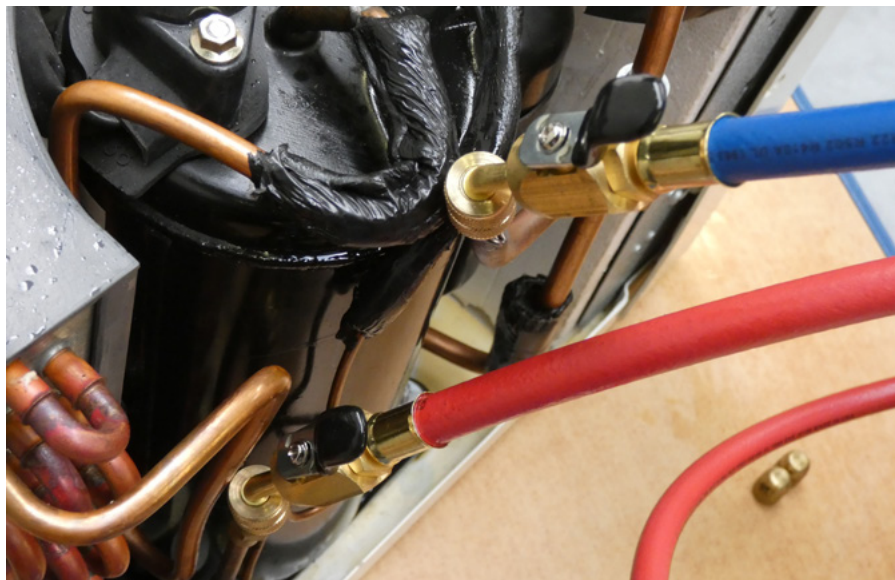


Photo 21



- 13** ALWAYS REMOVE MANIFOLD IMMEDIATELY AFTER VACUUMING. DO NOT KEEP THIS CONNECTED TO THE VACUUM PUMP

Photo 22



Photo 22a



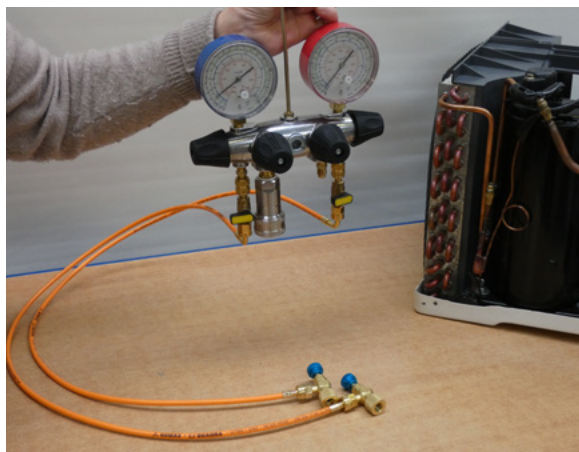
- 14** Disconnect 1/4 SAE Hose red with ball valve (D) from Manifold (C) and from the cool unit
- 15** Disconnect 1/4 SAE Hose blue with ball valve (E) from Manifold (C) and from the cool unit

5. Setting up charging cool unit with refrigerant

- 1 Connect Capillary hoses orange with ¼ SAE (G) to Manifold (C) (Photo 23)

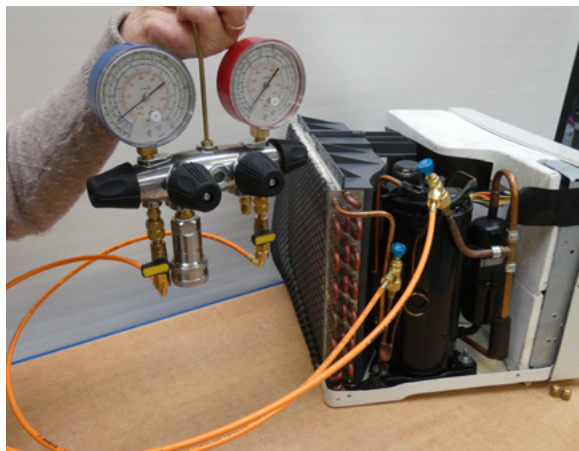
NB make sure to connect the hose connected to the red pressure gauge with the high pressure on the cool unit and to connect the hose connected to the blue pressure gauge with the low pressure on the cool unit

Photo 23



- 2 Connect Capillary hoses orange with ¼ SAE (G) to cool unit (Photo 24)

Photo 24



- 3 Open* the control valves on capillary hoses orange with ¼ SAE (G) as shown in photo 25 and 26 (*open is clockwise)

Photo 25



Photo 26



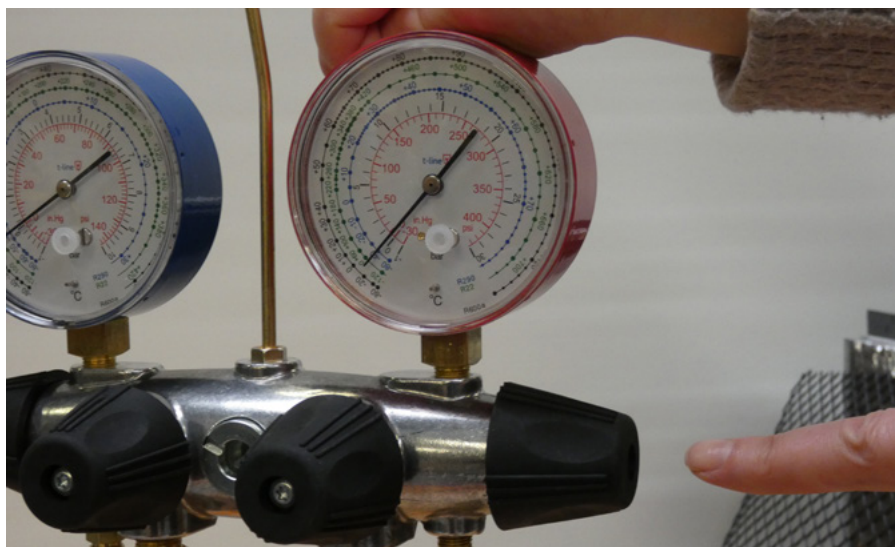
4 Open the valve on the manifold (C) as shown in photo 27

Photo 27



5 Open the valve on the manifold (C) as shown in photo 28

Photo 28



- 6 Connect Support + hose 7/16"x 1/4" or hose 1/4"x 1/4" (K) with the manifold as shown in photo 29. NB there are two different sizes as shown in Photo 29 a. Hose 1/4 SAE is standard cans and on the left side of Photo 29a and Hose 7/16" is on the right side of photo 29 a is for small cans

Photo 29

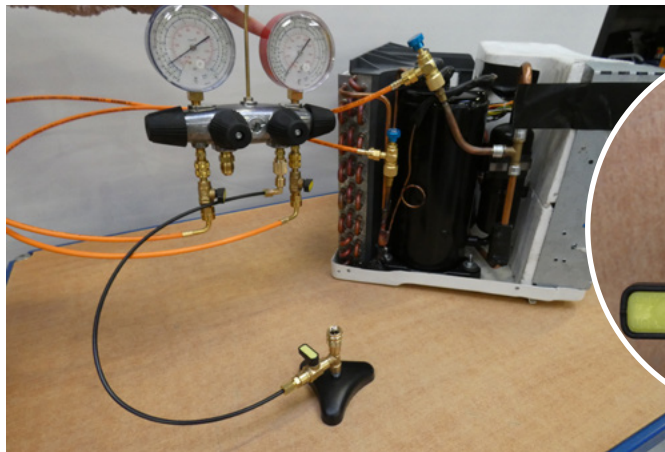
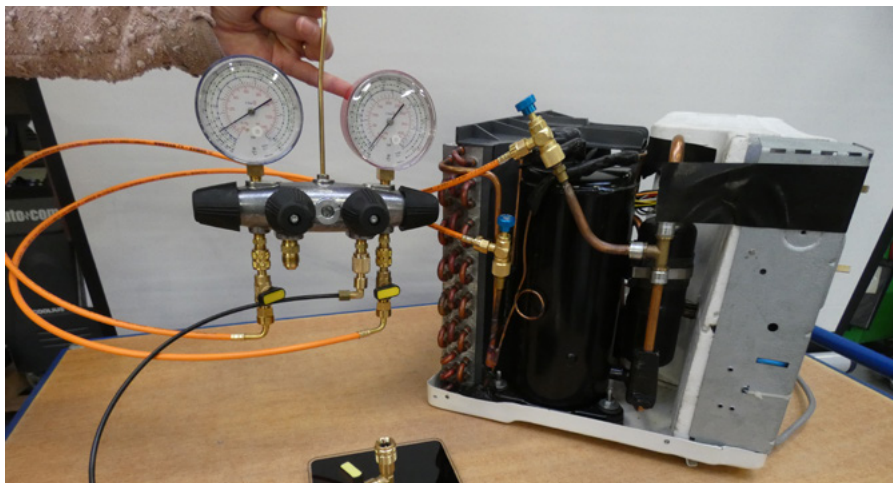


Photo 29a



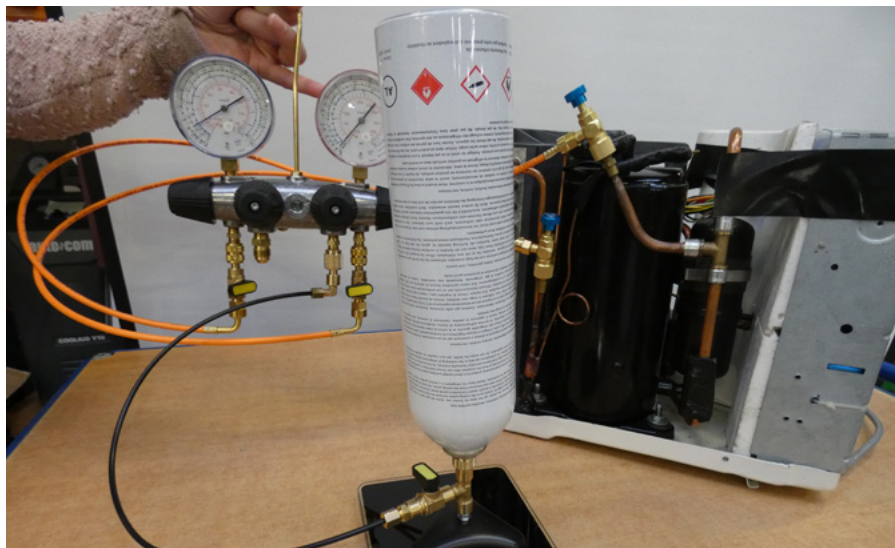
- 7 Put scale 0-5000 gr (l) underneath Support and hose as shown in photo 30

Photo 30



8 Put Refrigerant (J) on support and hose as shown in photo 31

Photo 31



9 Make sure that the yellow ball valve on support and hose is as shown in photo 32

Photo 32



10 Push air from the hoses as shown in photo 33

Photo 33



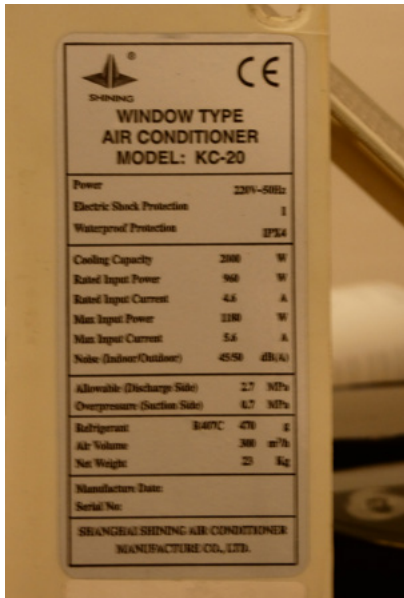
11 Select KG or LBS on the scale. Make sure that the weight indicator shows 0 KG/0 LB (Photo 34)

Photo 34



12 Check on the cool unit (photo 35) how much refrigerant is required.

Photo 35



13 Open* the control valves on capillary hose red with ¼ SAE (G) and capillary hose blue with ¼ SAE (H) as shown in photo 36 and 37 (*open is clockwise)

Photo 36

Photo 37



- 14** Open yellow ball valve buttons on support and hose is as shown in photo 38, until the scale indicator reaches the quantity of refrigerant that was shown on sticker on the cool unit (Photo 35). Then close the yellow valve (photo 38 en 39)

Photo 38



Photo 39



15 Close* the control valves (*Close is counterclockwise) (Photo 40 and 41)

Photo 40



Photo 41



16 Disconnect capillary hoses orange

17 Put cool unit back together and it is ready to use again.

6. Maintenance

- Check level of vacuum pump oil regularly
- Check quality of vacuum pump oil daily, replace if necessary
- Check gaskets in hoses daily, replace if necessary
- Check all couplers daily, clean with dry cloth
- Check all hoses daily on damage or cracks. Replace if necessary for your own safety
- Check scale daily, clean if necessary
- Replace scale battery when needed for accurate reading
- Keep manifold clean with dry cloth
- Check pressure gauges on zero point when manifold is pressure-less. Adjust gauges if necessary with adjust screw
- Check vacuum pump power cord daily

Keep in mind that damaged parts need to be replaced for your own safety!!



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