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Refrigerant Charging Instructions

Suitable refrigerant Type:R407C ， R134a,R410, R404C

(Application:All Electric Bus air conditioner)

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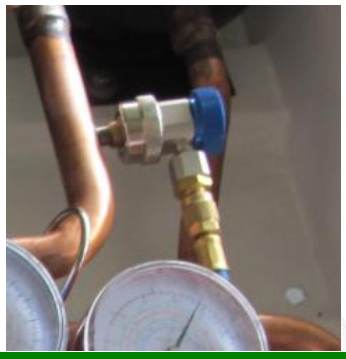
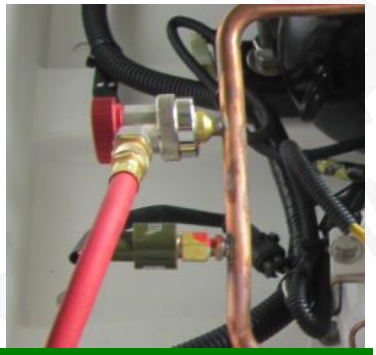
1.Prepare the material and the tools, and pls insure the material and tools in good condition.

Material	Refrigerant	platform balance	Manifold pressure gauge	Vacuum pump
Qty	As requirement	1 set	1 set	1 set

2.Vacuum

2.1: Connect the manifold pressure gauge to the vacuum pump (the yellow pipe), connect the blue hose (low pressure)to the Low pressure pipeline maintenance valve port or the compressor Low pressure maintenance on the valve (the sign is S or the SUC).connect the red hose (high pressure)to the Low pressure pipeline maintenance valve port or the compressor Low pressure maintenance on the valve (the sign is D or the DIS)





Connect yellow hose to vacuum pump Connect blue hose to low pressure value Connect the red hose to high pressure value

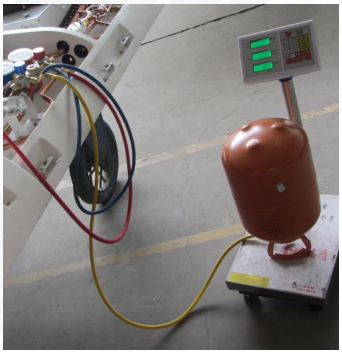
2.2 Insure all the hose fixed well, then open the high& low manual pressure value of the manifold pressure gauge, start the vacuum pump.

2.3 Vacuum until the low pressure table Negative pressure value is 98 kpa, time is at least 60 minutes.

Insure the Negative pressure value is 98Kpa

2.4 Close the high& low pressure manual value , the low voltage side can not exceed 3.4 KPa; within 5~8 minutes .

2.4.1 If the figure recovery is normal,close the high&low pressure manual value,close the vacuum pump, then charging the refrigerant to the system .According to the Step 3.



Charging the liquid refrigerant, the Refrigerant steel cylinder **handstand**

2.4.2 If the figure recovery is not normal, you can charging little refrigerant from the low pressure.when the pressure reached the 49kpa,use the soap water or the electronic leak detector detect it , then eliminate it .

2.4.3 Then repeat vacuum, Vacuum time shall not be less than 60 min, because the flow and evaporate of the water need time, ended the vacuum, close the high&low pressure manual value,close the vacuum pump, then charging the refrigerant to the system .According to the Step.

3.Charging the refrigerant(before charging , pls confirm the model of the refrigerant and volume base on the model of the air conditioner and compressor model)

3.1 Charging the liquid refrigerant

3.1.1 Remove the yellow hose from the Vacuum pump,then connect it to the refrigerant cylinder interface which on the platform balance, pls confirm connect well .

3.1.2 Unscrew the cylinder valve, unscrew the pressure gauge yellow hose ,until the refrigerant gas divulge out for about 5 seconds, then tighten the nut.

3.1.3 Unscrew the pressure gauge pressure manual value,Charging the liquid refrigerant to the system until enough(specified volume,pls ask the supplier),then closed the high pressure manual value,then closed refrigerant cylinders; For refrigerant R134a,R410A, R404A, if can't refill to specified amount (write down the difference), Charging gaseous refrigerant base on 3.2; For refrigerant R407C, it can not charging the gaseous refrigerant,pls do it on step 3.3.

Charging the gaseous refrigerant ,the Refrigerant steel cylinder **front stand**

3.2 Pls take reference when Charging the Gaseous refrigerant :R134a,R410A, R404A.

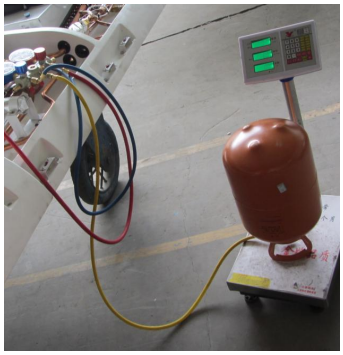
Charging the gaseous refrigerant ,the Refrigerant steel cylinder **front stand**

3.2.1 pls insure the cylinder front stand on the platform scale, and pay more attention to check that the nozzle connection is tight.

3.2.2 Start the air conditioner, also make sure it is in the max refrigeration Gear;

3.2.3 then open the low pressure manual value,suction the refrigerant into the system until to the specified amount, then close the low pressure value, then observed the visual mirror , make sure there is no bubble ,no excess refrigerant (Observe the liquid flow of the refrigerant, if it is stable ,no bubble,that is ok , if bubbles are clearly visible , pls continue charging the refrigerant until no bubble)

3.3 Charging the liquid refrigerant (R407C), pls check below picture



Charging the liquid refrigerant ,the Refrigerant steel cylinder **handstand**

3.3.1 pls insure the cylinder handstand on the platform scale, and pay more attention to check that the nozzle connection is tight.

3.3.2 Start the air conditioner, also make sure it is in the max refrigeration Gear;

3.3.3 Then open the low pressure manual value a little, charging the refrigerant slowly , make sure the Inhalation flow within 50g/min,until the specific volume, then closed the low pressure value, finished the charging .

Caution !

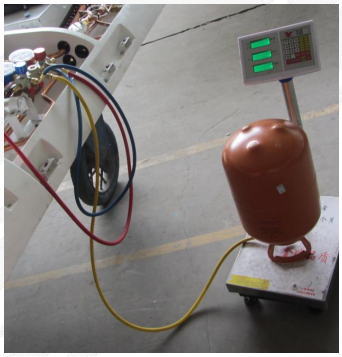
1.When charging the liquid refrigerant ,can not open the low pressure manual value(in case of avoid the liquid impact)

2.when charging the R407C, can not base on the visual mirror , it should be on the specific charging volume

3. Can not start the air conditioning, it is very dangerous that refrigerant flow backward into the cylinder .

4.The Schematic diagram of Quality control points

1. Vacuum negative pressure value should be 98 kpa;
2. When close the high&low pressure manual value, For low voltage side,the figure can not decline more than 3.4Kpa after 3~5 min.



Charging the Liquid refrigerant

1.pls insure it connect well without any leakage.

2.Pls remove out all the air before charging .

3.Charging the liquid refrigerant.

4.Can not open the low pressure manual value

5.can not start the air conditioner

Charging the Gaseous refrigerant

1.pls insure it connect well without any leakage.

2.Pls remove out all the air before charging .

5.The Environment and safety

5.1 When charging the refrigerant, you should wear the protection gloves to avoid Frostbite the hand.

5.2 Before the next step, pls insure the pipe and the value is connect well.

5.3 Keep the working position and ground clean. "

6.The key control points

6.1 pls insure all the joints is connect well without any leakage . Then open the vacuum pump or the value of the Refrigerant steel cylinder.

6.2, Pls wear the protection gloves

6.3 Vacuum

6.3.1 pls stop when the negative pressure value at 98 kpa;

6.3.2 When close the high&low pressure manual value, For low voltage side,the figure can not decline more than 3.4Kpa after 3~5 min.

6.4 Charging the refrigerant

6.4.1 Pls insure it connect well without any leakage.

6.4.2 Remove out all the air before charging .

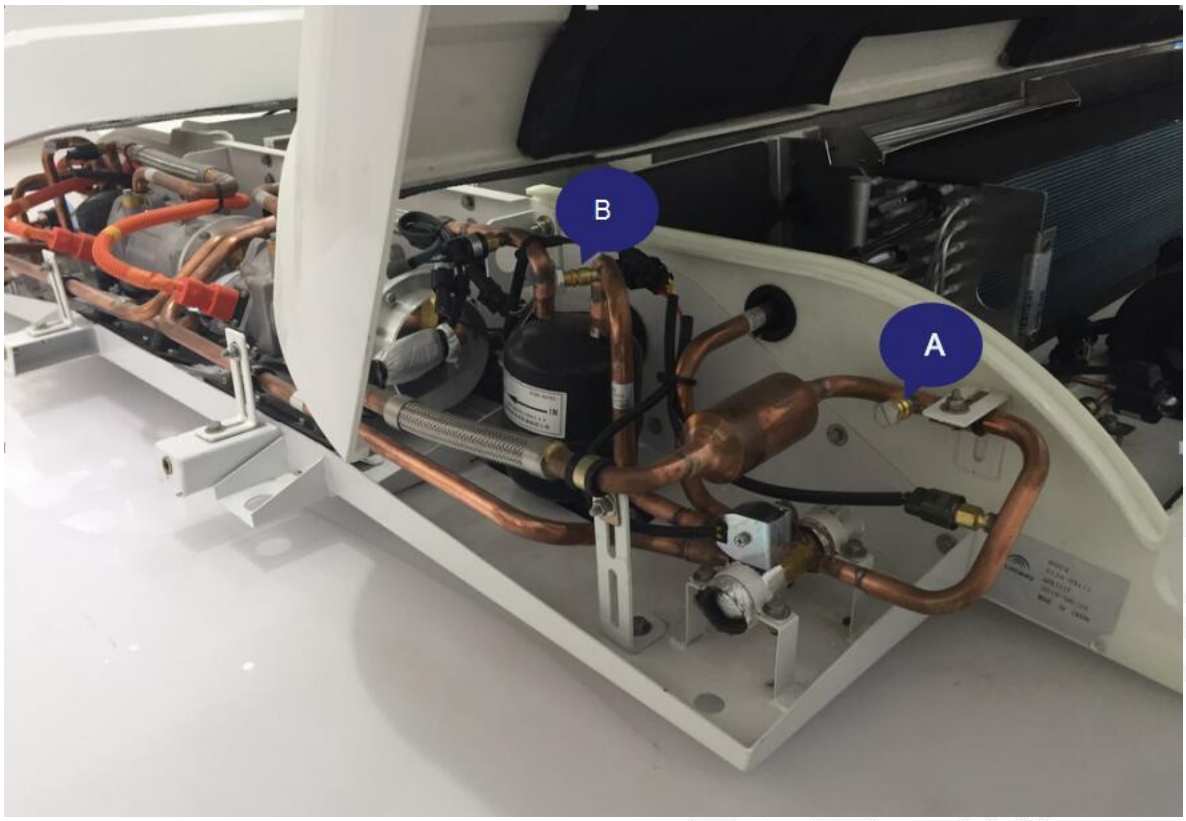
6.5 Charging the liquid refrigerant

6.5.1 Can not open the low pressure manual value(in case of avoid the liquid impact)

6.5.2 Can not start the air conditioning, it is very dangerous that refrigerant flow backward into the cylinder .

6.6 In order to protect the compressor, when start the compressor, the time should at least 2 minutes, and can not more than 10 time within one hour .

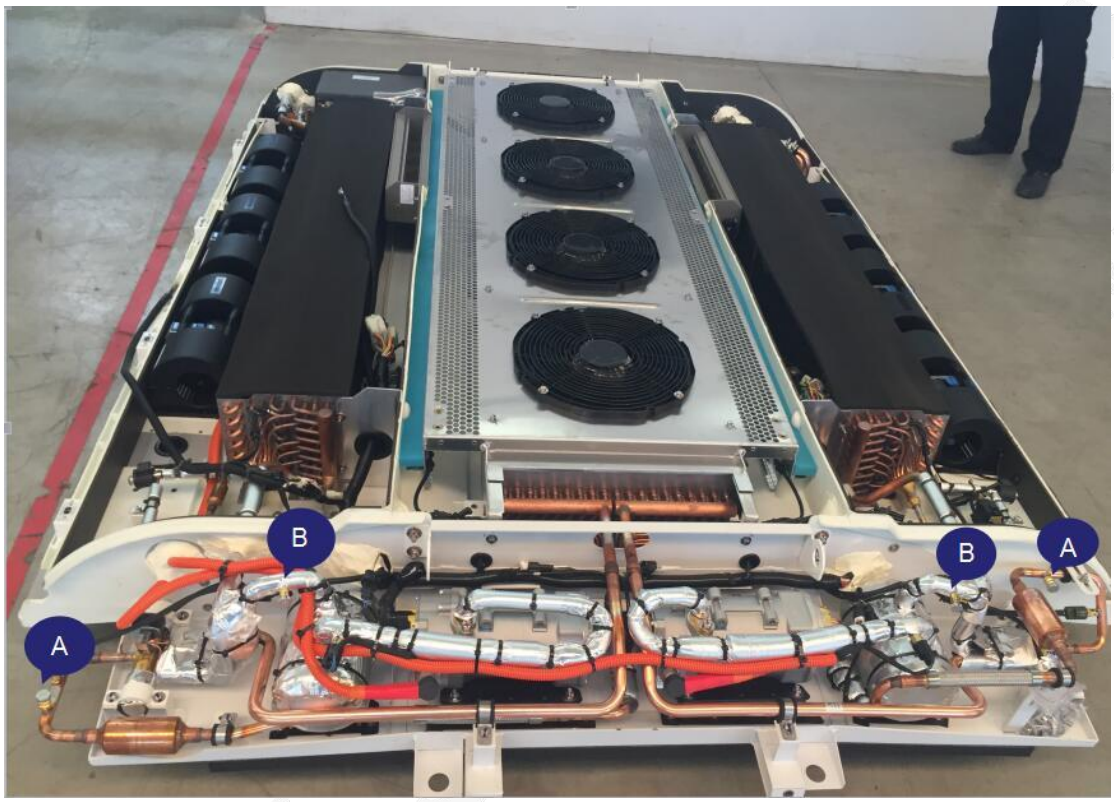
7.Refrigerant charging instructions ----------Side view



A is the HIGH pressure side, pls add the Refrigerant from A side .

B is the LOW pressure side, pls add the Refrigerant oil from B side .

8.Refrigerant charging instructions.----------Front view



A is the HIGH pressure side, pls add the Refrigerant from A side .

B is the LOW pressure side, pls add the Refrigerant oil from B side .

9.Refrigerant charging volume

Model	Refrigerant charging weight	Refrigerant model
SEE-24	3.2kg	R407c
SEE-28	2.2kg*2	R407c
SEE-32	2.5kg*2	R407c
SEE-38	3kg*2	R407c

(***2*** means should add the refrigerant in two side of the air conditioner)

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