



AIRTEK AC-Dual 20 Fully Automatic Machine User Manual

[Home](#) » [AIRTEK](#) » AIRTEK AC-Dual 20 Fully Automatic Machine User Manual 

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AC-Dual 20
Operation Manual
For new customer training

Contents

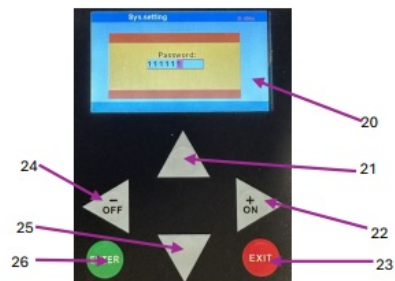
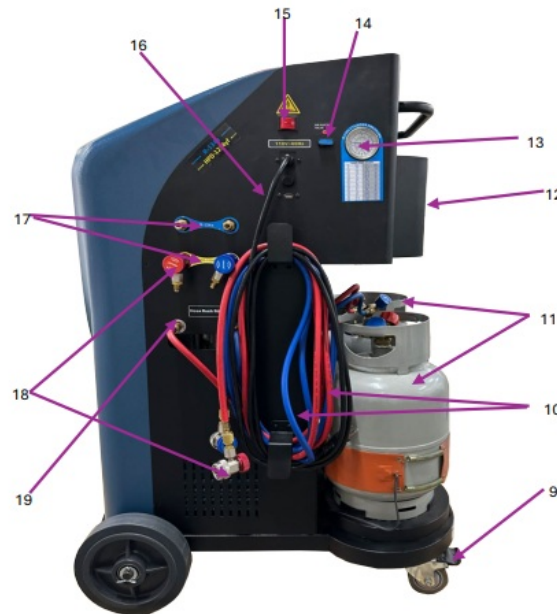
- [1 Machine Introduction](#)
- [2 Unlock Scales](#)
- [3 Turn on the machine and select refrigerant type](#)
- [4 Prepare to use the machine](#)
- [5 System Setting](#)
- [6 Tank fill](#)
- [7 Automatic Mode Operation](#)
- [8 Documents / Resources](#)
 - [8.1 References](#)
- [9 Related Posts](#)

Machine Introduction



1. Graphic Display and Keypad
2. Thermal Printer
3. Low-side (blue) and High-side (red) Manifold Gauges
4. HFO1234yf Tank Gauge
5. Non-condensable Air Purge Valve for 1234yf Tank
6. New Oil Bottle
7. Used Oil Bottle
8. Plate with Serial number and Machine model
9. Wheel Lock
10. Low-side (blue) and High-side (red) Service Hoses
11. R134a and HFO1234yf refrigerant Tanks
12. Storage
13. R134a Tank Gauge
14. Non-condensable Air Purge Valve for R134a Tank
15. Power Switch
16. Power Cord
17. R134a and HFO1234yf HP/LP Couplers Parking Connectors
18. 134a and HFO1234yf HP/LP Couplers
19. Service Hoses Connection Fittings
20. LCD Display
21. Up Arrow (Number Added)
22. Right Arrow (Quantity Added and Solenoid On)
23. Exit Button
24. Left Arrow (Quantity Reduced and Solenoid Off)
25. Down Arrow (Number Reduced)

26. Enter Button



Set Up the machine



Unlock Scales



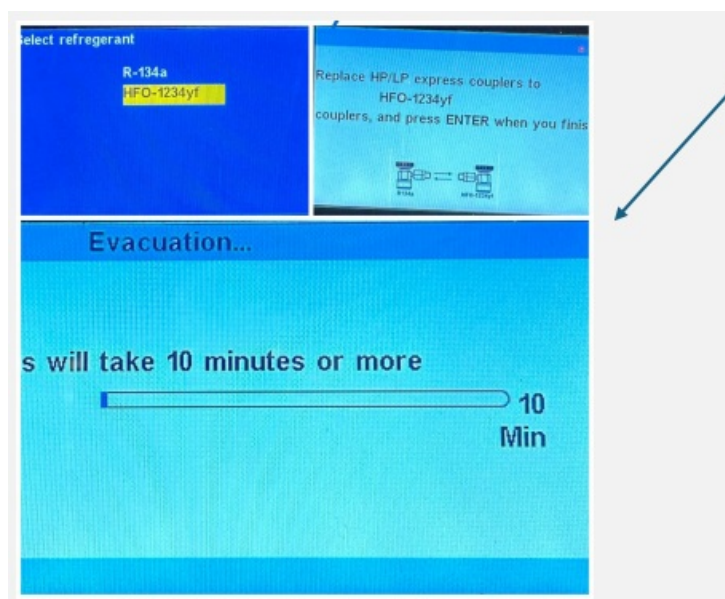
Remove the two lock bolts to release two scales and make them to accurately measure the weight of the refrigerant tanks.

Warning:

1. Failure to remove the scale lock bolts may cause wrong refrigerant processing amount.
2. When you need transport the machine, please screw those bolts on to lock the scales.

Turn on the machine and select refrigerant type

Each time the machine is turned on, it reminds to select refrigerant type. If the refrigerant type selected is different from the refrigerant handled at previous operation (our new machine is default 134a refrigerant), the machine requires you to replace HP/LP couplers to the selected refrigerant couplers, then process 10 minutes evacuation.



Notes:

1. Be sure you select same refrigerant type as what the vehicle contains, or serious contamination in machine tanks will be caused.

- Anytime you desire to shift from the refrigerant which machine currently handles to another, turn the machine off and turn it on again, and then select the refrigerant type.
- Do not connect any external refrigerant tanks or vehicles until the machine has completed switching the refrigerant system.
- Make the HP/LP hoses clean off refrigerant (based on HP/LP gauges pressure) before switching to different refrigerant. Otherwise, it will take longer to purge the remaining refrigerant in the hoses to used oil bottle.



Prepare to use the machine

The machine permits totally 600 operations (every recovery and vacuum counts for one operation) before regular maintenance is required. The remaining operations before next maintenance is displayed here.

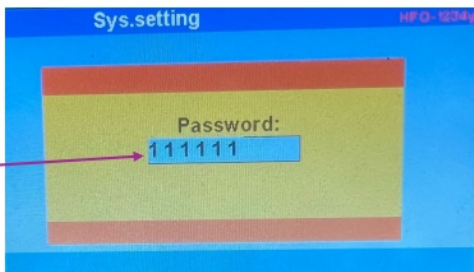

Make sure the machine is compatible with the refrigerant type system you have selected

Place an object of known weight on the refrigerant tank you are using to ensure that the scale can accurately measure the weight. If the weighing is inaccurate, calibration of the scale should be performed (refer to the maintenance manual for instructions)



System Setting

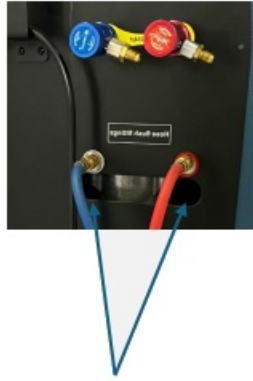
- Enter the system settings (password: 111111) to adjust unit and language settings.
- The default language is English, but you can change it to your preferred language.
- The default unit is pounds (lb), but you can change it to kilograms (kg) as needed.
- Our refrigerant tank scale is calibrated before shipment, and it is locked during transportation. Therefore, in most cases, you do not need to recalibrate the scale when you receive the machine. However, if you find that the scale is inaccurate, you will need to follow the maintenance manual to calibrate the scale.

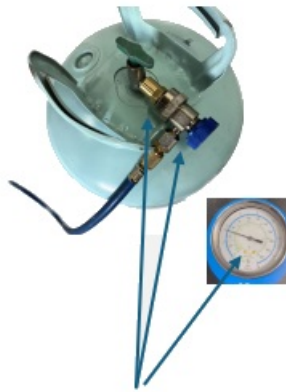
Tank fill

New machine is empty, so you need to fill the machine with refrigerant.

1. Connect the red and blue HP/LP service hoses tightly to the machine's side hose flush fitting ports.



2. Use the brass fitting adapters to securely connect the external tank to the LP coupler. Then, open the valves of the external tank and the LP coupler, ensuring that the blue LP gauge on the machine displays a certain pressure.



3. Upside down the external tank.

Note: Leave the HP coupler closed or disconnected with parking connector

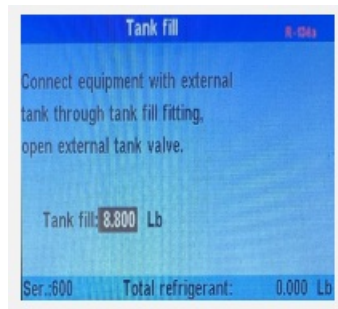


4. Enter the tank fill interface, set the quantity of refrigerant you want to add to the machine's refrigerant tank (the machine defaults to 8.8 lbs), then click "Enter." The machine will begin the recovery process.

Note:

Our machine's refrigerant tank has a minimum set quantity of 4 lbs and a maximum of 22 lbs. If it falls below 4 lbs, it cannot recharge, and if it exceeds 22 lbs, it cannot recover.

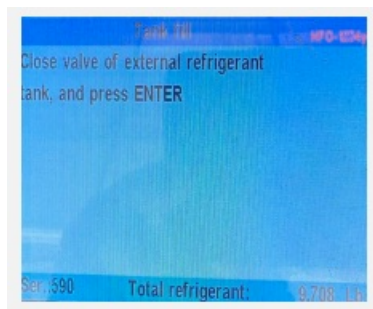
Therefore, we recommend not exceeding 15 lbs to ensure there is some space for recovery.



5. When there is approximately 2 lbs left to reach the set quantity of refrigerant, the machine will stop the recovery process. It will prompt you to close the valve of the external tank. Then, it will continue to recover the remaining refrigerant from the hoses until the recovery process is automatically completed.

Note:

Forgetting to close the valve of the R134a external tank as prompted by the machine can result in an excessive amount of refrigerant being added to the machine's refrigerant tank, which may affect the machine's normal operation.



Fill PAG oil to new oil bottle

For the AC-Dual 20, only install a new oil bottle, and it can only inject PAG oil that most regular cars can use (the most common type is PAG 46, although some cars may require higher-density PAG).



For hybrid or electric vehicles, which require POE oil, this machine cannot be used for oil injection. You must prepare a manual injector to inject POE oil.



Operating the machine



Manual Operations

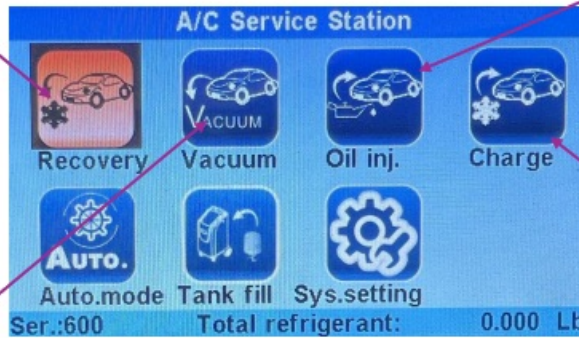
Recovery:

Press the Enter key twice to start recovering the refrigerant from the vehicle.

Vacuum and leak test:

Enter the vacuum menu and set the vacuum time according to your needs. If components such as the car's air conditioning compressor have been replaced, a longer vacuum time may be required.

You can also set a specific duration for the vacuum leak test to check the leakage status of the car's air conditioning system.



Oil Injection:

Based on the specific vehicle model, the amount of oil injection is determined. Our AC-Dual 20 machine prohibits oil injection for hybrid or electric vehicles.

Charge:

Enter the charge menu and select "Normal charging" or "High voltage charging".

Then, manually set the refrigerant charge amount based on the refrigerant capacity shown on the vehicle label, or select "Charge by database" to set the refrigerant charge amount based on the vehicle model and year.

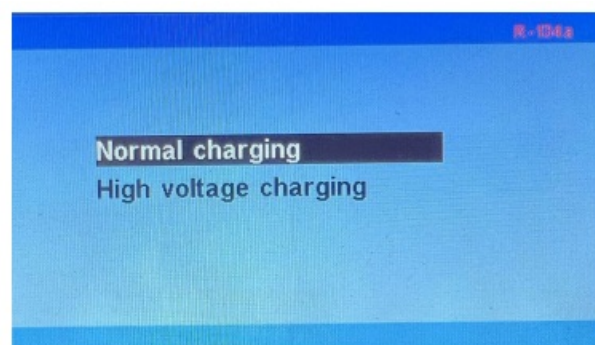
Next, choose HP, LP, or HP-LP charging (you can only turn on the vehicle's air conditioning during LP charging).

Automatic Mode Operation

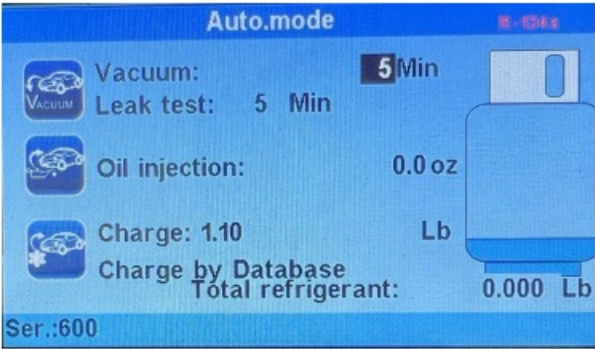
- We recommend selecting auto mode for charging the vehicle with refrigerant, as it provides better results and cost savings.



- Enter auto mode and select "Normal charging" or "High voltage charging". If it's high voltage charging for hybrid or electric vehicles, hose flush must be performed to clear any remaining oil residue in all hoses to avoid oil contamination. If it's Normal charging, hose flush is an optional step.




- Pre-set the duration for vacuum and leak test, the amount for oil injection and refrigerant charging, as well as the method of refrigerant charging (HP, LP, or HP-LP). The machine will automatically perform recovery, vacuum, leak test, oil injection, and refrigerant charging in sequence according to these settings.



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Documents / Resources

	AIRTEK AC-Dual 20 Fully Automatic Machine [pdf] User Manual 2020, DU, AC-Dual 20 Fully Automatic Machine, AC-Dual 20, Fully Automatic Machine, Automat ic Machine, Machine
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References

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