

Making Your Job More Enjoyable

Smart Refrigerant Valve
VSV1



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Warning

This product contains a built-in lithium-ion battery.

- Do not disassemble, puncture, crush, or expose the battery to fire, high temperatures, or water.
- Use only the provided or compatible charger specified in the manual.
- Improper handling of the battery may cause fire, explosion, or serious injury.
- Dispose of the product following local regulations. Do not dispose of it with household waste.

I. Safety Information

Please read this manual carefully before operating, overhauling, or maintaining the product in order to fully understand the safety issues and precautions necessary for its proper use and operation to ensure long-term, stable operation.

Please carefully verify that the product you received matches your order, that all accessories and the instruction manual are complete, and that there is no damage from transportation. If you find any of the above situations, please contact customer service or local distributor promptly.

By carefully reading the manual and adopting the correct operation, you can ensure both the safe operation and the service life of this equipment.

Dispose of This Product Correctly



This mark indicates that this product should not be disposed of with other household waste. It is important to prevent uncontrolled waste disposal that may be harmful to the environment or human health, please use a return and collection system or contact the retailer from whom you purchased the product. They can recycle this product in an environmentally safe manner.



Warning

Indicates a risk of injury or death if used incorrectly.

Caution

Indicates improper use may cause damage to the equipment, preventing it from operating properly or reducing its performance.

Warning

1. This equipment must be operated by qualified personnel who are familiar with air conditioning and refrigeration systems!
2. All components (system, refrigerant meter valve group, refrigerant cylinder, etc.) should be properly and securely grounded before starting this equipment!
3. Please open the equipment to check whether the sealing is proper before using it to prevent refrigerant leaks that could pose a risk to personnel!
4. Please wear protective gloves and goggles during operation to prevent the refrigerant from coming into contact with your skin or eyes and causing harm to your health!
5. Connect the tubes of this equipment according to the instructions to prevent the wrong connection that could lead to refrigerant leaks and harm to personnel!
6. The product shall not be used in a potentially explosive environment!

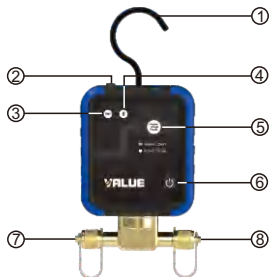
Caution

1. Please open the equipment before use to check whether the power is sufficient or not!
2. Please check the equipment before use to ensure that the metal valve opens and closes normally!
3. Please check the equipment before use to ensure that the sealing of the metal valve is functioning properly!
4. Please screw the copper cap on the inlet and exhaust joints after using the equipment!
5. After completing the charging process, the refrigerant flow in the refrigerant cylinder should be stopped!
6. The smart solenoid valve shall not be used near a magnetic field!

II. Technical Specification

Location	Indoor / Outdoor
Altitude	≤5000 m
Charging temperature	0~43°C / 32~110°F
Discharge temperature	-10 ~50 °C / 14~122 °F
Environmental Conditions	Operating temperature: -10 ~ 50 °C / 14 ~122 °F Storage temperature: -10 ~ 50 °C / 14 ~122 °F Humidity in the operating area: 10...90 % RH
Applicable Refrigerant	Class III: R12, R134a, R401C, R406A, R500
	Class IV: R22, R401A, R401B, R402B, R407C, R407D, R408A, R409A, R502, R509
	Class V: R143A, R402A, R404A, R407A, R407B, R410A, R507
Power Supply	Power: Battery pack rated at 7.4v DC (rechargeable) Charging parameters: DC5V/2A Battery pack life: > 60 h with 2000 cycles of solenoid valve operation
Interface	2.4Ghz support BLE5.0 Bluetooth transmitting module
Maximum Operating Pressure	551 psi
Bluetooth Range	100 ft (30m) line of sight
Protection Class	IP54
Dimensions	125x95x47.5 mm
Net weight	0.6 kg

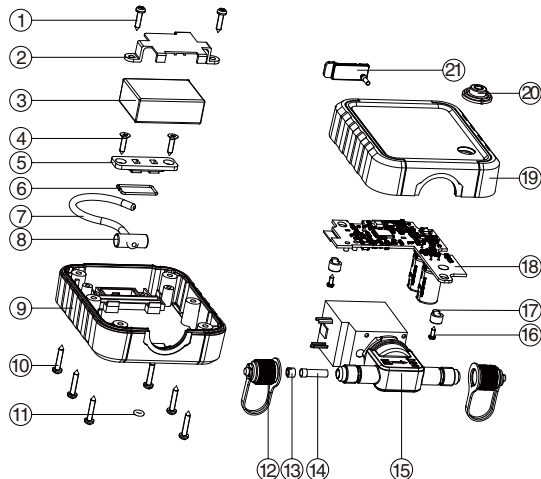
III. Product Overview



1. Folding Hook
2. Charging Port
3. Power Indicator

	Power Indicator
	Red indicates charging
	Green indicates charging fully charged
	Flashing green 25% < power ≤ 100%
	Flashing yellow 5% < power ≤ 25%
	Flashing red power ≤ 5%

4. Bluetooth indicator: Shows the Bluetooth status of the device.
 - Flashing yellow: Bluetooth is not connected (standby mode).
 - Flashing blue: Bluetooth connected.
 - Flashing red: Bluetooth module error.
5. Valve indicator: Indicates the device's valve status.
 - Always green: Open valve.
 - Off: Closed valve.
 - Flashing red: Abnormal.
6. Operation buttons: Control the device's power and manage the opening and closing of the metal valve.
 - Turn on the device: Press and hold the button for 2 seconds.
 - Turn off the device: Press and hold the button for 2 seconds.
 - Open the valve: Press the button twice within 0.3 seconds while the device is on. The valve will open for 1 second before closing.
 - Close the valve: Press the button while the valve is open to close it instantly.
7. Refrigerant input port: 1/4" SAE.
8. Refrigerant output port: 1/4" SAE.

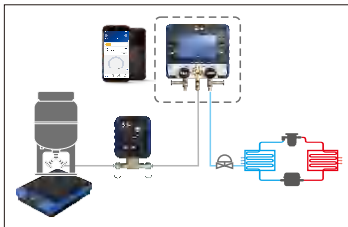


Spare Parts List

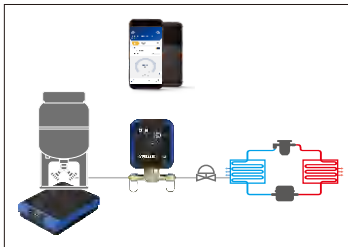
No.	Item
1	Cross Recessed Pan Head Tapping Screws
2	Electromagnetic Cover
3	Lithium Battery Pack
4	Cross Recessed Countersunk Head Tapping Screws
5	Hook Pressure Plate
6	O-Ring
7	Hook
8	O-Ring
	Lower Housing
10	Cross Recessed Pan Head Tapping Screws
11	O-Ring
12	Copper Cap Assembly
13	Strainer Press Studs
14	Strainer
15	Self-retaining Valve
16	Cross Recessed Countersunk Head Tapping Screws
17	Compression Caps
18	PCB Assembly
19	Upper Housing
20	Pushbutton
21	Plug

V. System Connection Diagram

Solution 1



Solution 2



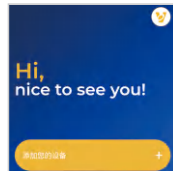
VI. Page Introduction



1. Connecting the Device

1.1 Turn on your phone's Bluetooth and power on your device. On the main interface, tap the "+" icon next to "Add Your Device" to start searching for devices.

1.2 Locate the target device to be connected, tap the "+" in the upper right corner, and wait for the connection to be established.

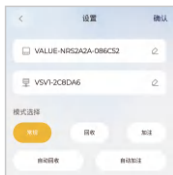
1.3 Once successfully connected, tap the device icon to access the device interface.



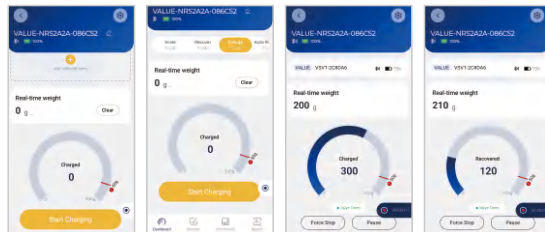
1.4 After the first successful connection, subsequent connections only require turning on the device. When the corresponding product box under “My Devices” changes from gray to bright, tap “


2. Device Main Interface

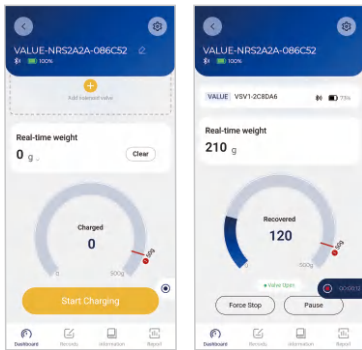
2.1 When the intelligent wireless solenoid valve is used with an electronic scale, the automatic recovery mode and automatic filling mode are unlocked.



2.2 Auto Recovery Mode is used for automatic refrigerant recovery. In the Auto Recovery Mode settings page, select weight unit and fill in recovery target value and alarm value; before operation, valves need to be added. Click Start to perform refrigerant recovery, and the app will automatically open the valves; the Auto Recovery function page will display the refrigerant recovery amount in real time. When the remaining refrigerant recovery amount is 100g, the app controls the valves for pulse switching; when the remaining amount reaches the alarm value, a pop-up window will appear with an alert sound; when recovery is completed, the valves will automatically close, and a pop-up window will prompt the end of recovery.



2.3 Auto Charging Mode is used for automatic refrigerant charging. In the Auto Charging Mode settings page, select weight unit and fill in charging target value and alarm value; before operation, valves need to be added. Click Start to perform refrigerant charging, and the app will automatically open the valves; the Auto Charging function page will display the refrigerant charging amount in real time. When the remaining refrigerant charging amount is 100g, the app controls the valves for pulse switching; when the remaining amount reaches the alarm value, a pop-up window will appear with an alert sound; when charging is completed, the valves will automatically close, and a pop-up window will prompt the end of charging.



2.4 Auto Recovery/Auto Charging functions have abnormal weight prompt function: during automatic charging or recovery process, if the recovery amount or charging amount remains abnormally unchanged, the app will pop up a window to prompt abnormal weight, automatically close the valves, and end the process.

