

XTOOL selected

Air Dryer



Quick Start Guide

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Meet Air Dryer - - - - - **01**

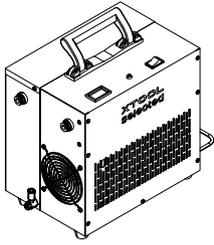
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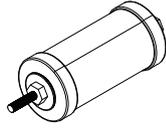
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List of items



Air Dryer



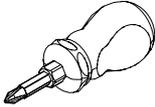
Filter element 1



Filter element 2



Wrench



Screwdriver



Tube (3 m)



Drain tube (2 m)



Quick Start Guide

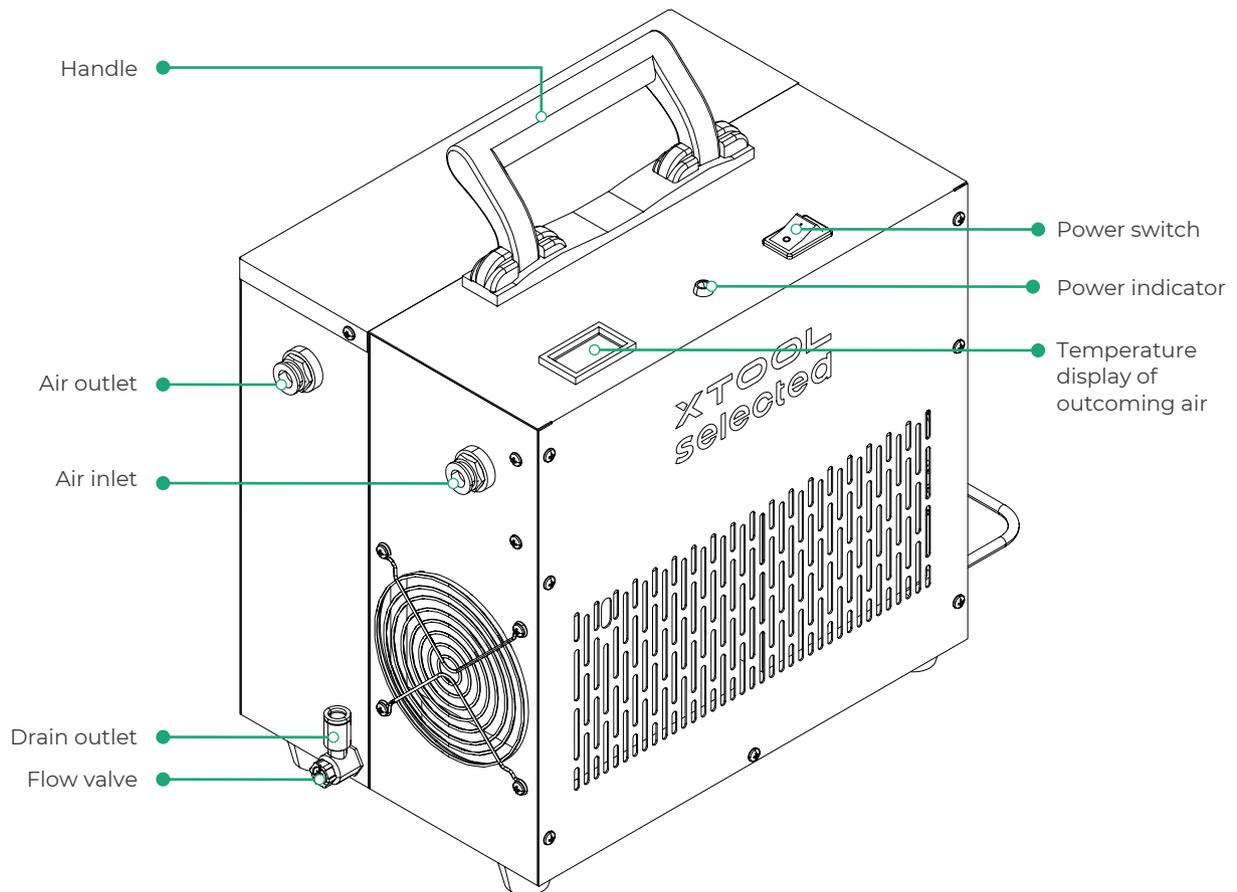


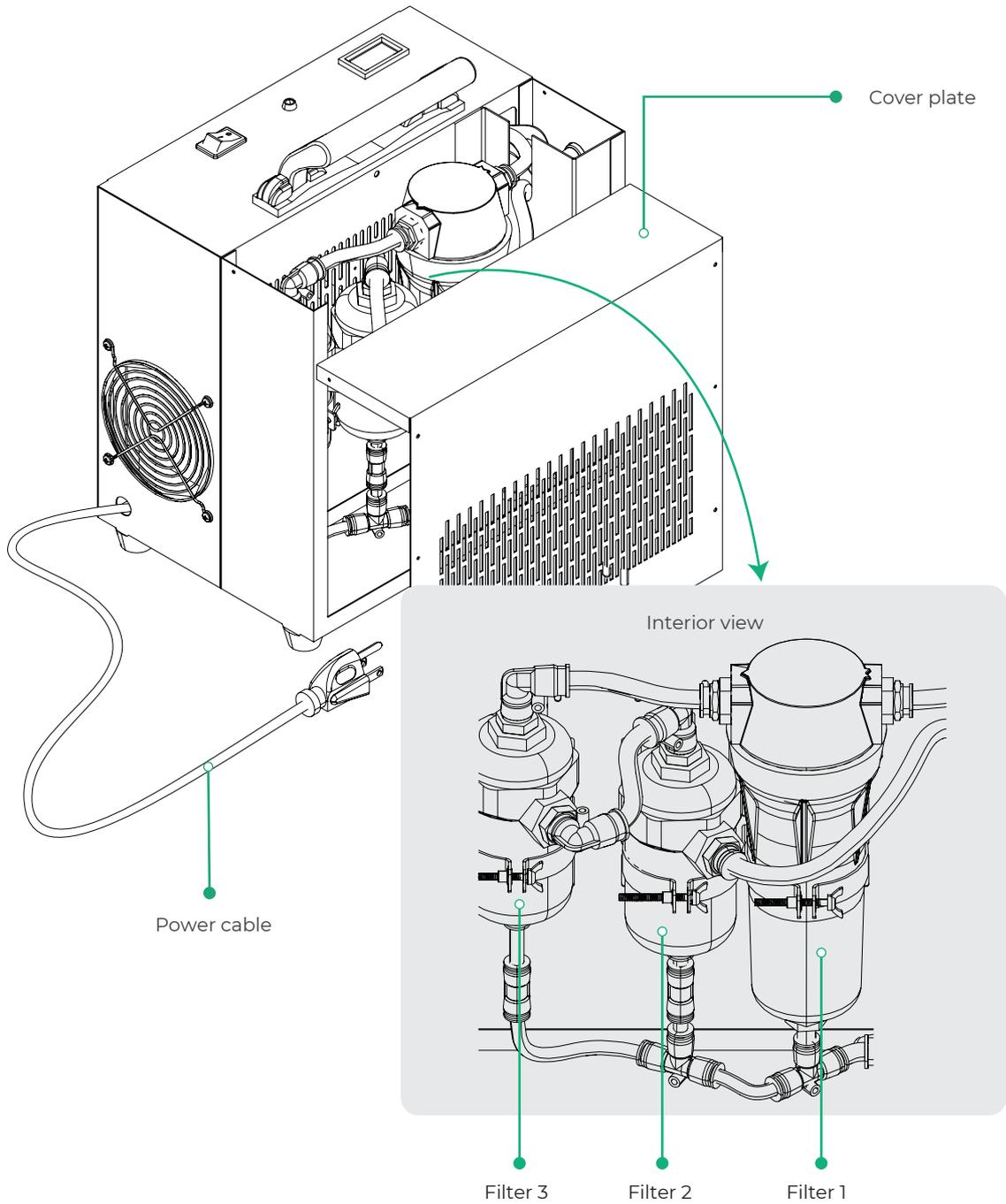
Safety Instructions



The power cable varies according to the region in which the product is delivered.

Meet Air Dryer





Product specifications

Model	Volume flow rate (L/min)	Operating pressure (MPa)	Voltage (VAC)*	Rated power (kW)	Air inlet temperature (°C)	Weight (kg)	Dimensions (W × H × D) (mm)
NP3-5AC	400	1.0	US/Japan: 100-120 EU/UK/AU: 200-240	0.45	≤45	12.1	402 × 355 × 227

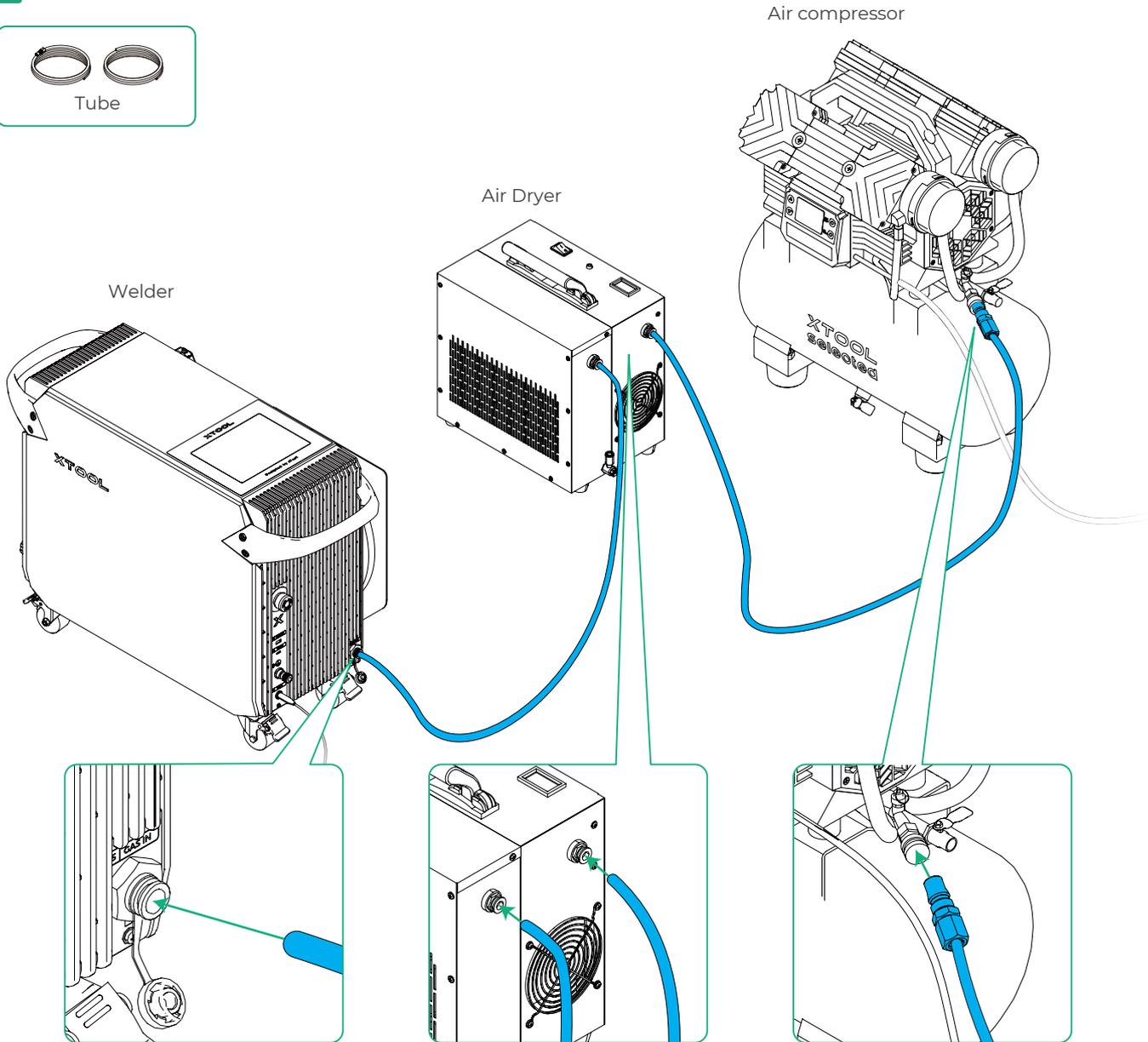
* For other countries and regions, see the requirements on the machine label.

Connections

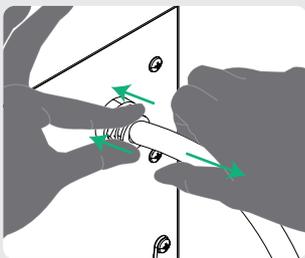


Since the air dryer is designed to be used with the air compressor and the welder, this manual includes instructions for operating the air compressor. Please find the air compressor components from its package.

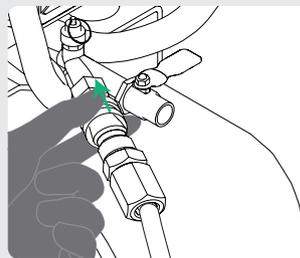
1 Connect the devices



Removing tubes



Air Dryer
■ Press the connector collet and pull out the tube.

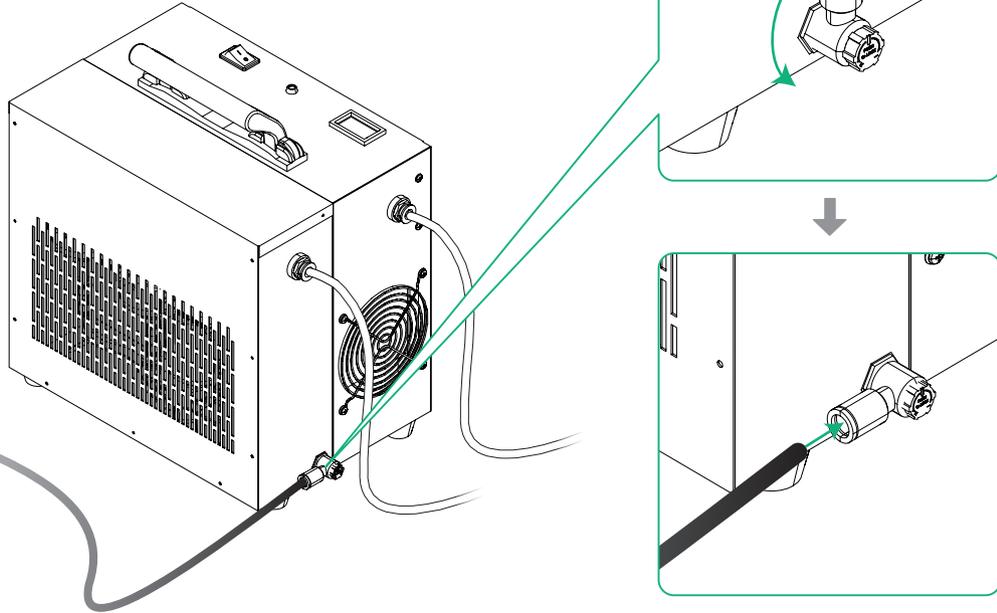


Air compressor
■ Press the connector collet and the tube will pop out automatically.

2 Connect drain tube



- Connect the drain tube to the drain outlet and guide the tube to a wastewater disposal area.



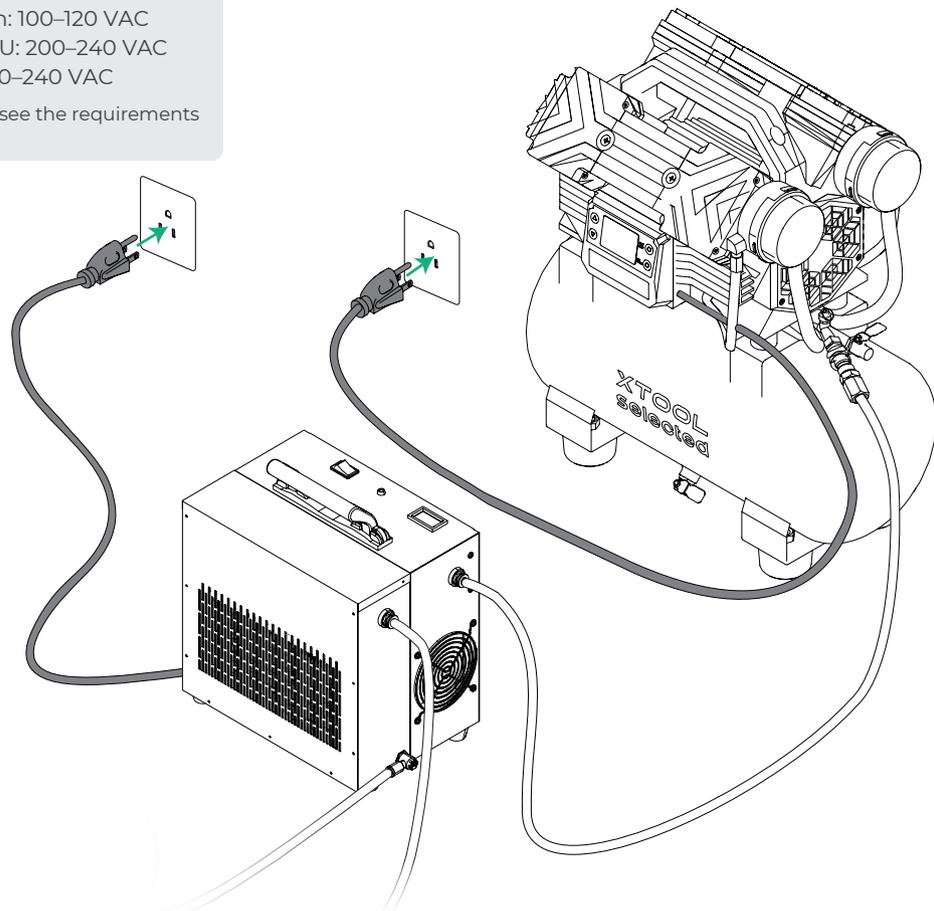
3 Connect to power supply



Power voltage requirements:

- Air dryer: US/Japan: 100–120 VAC
EU/UK/AU: 200–240 VAC
- Air compressor: 200–240 VAC

For other countries and regions, see the requirements on the machine label.

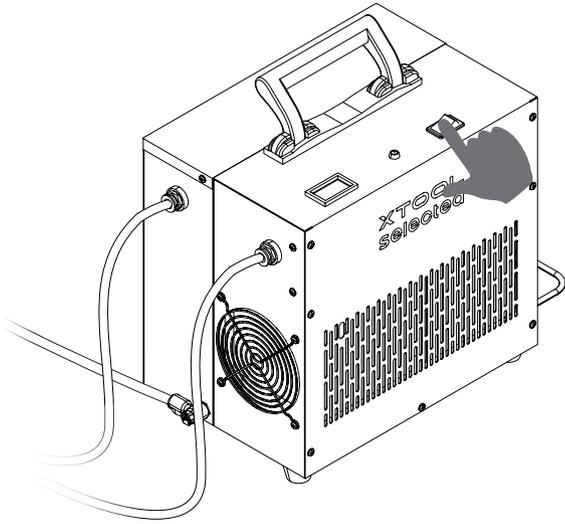


Use the devices

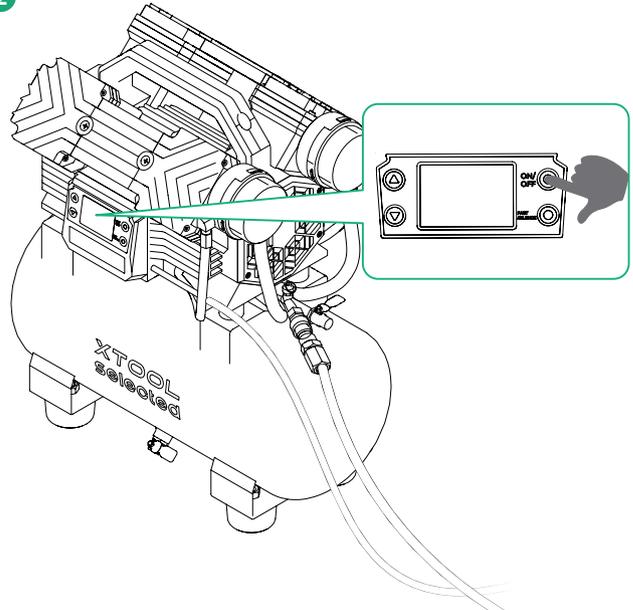
1 Power on

- Power on the air dryer first and then air compressor.

1

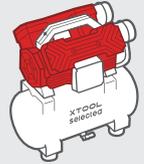


2

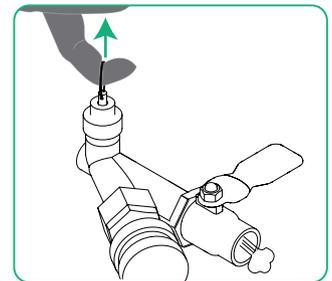
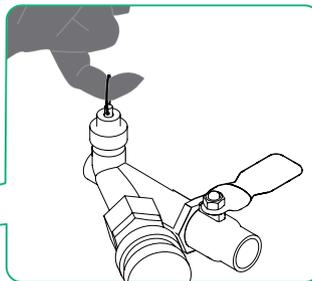
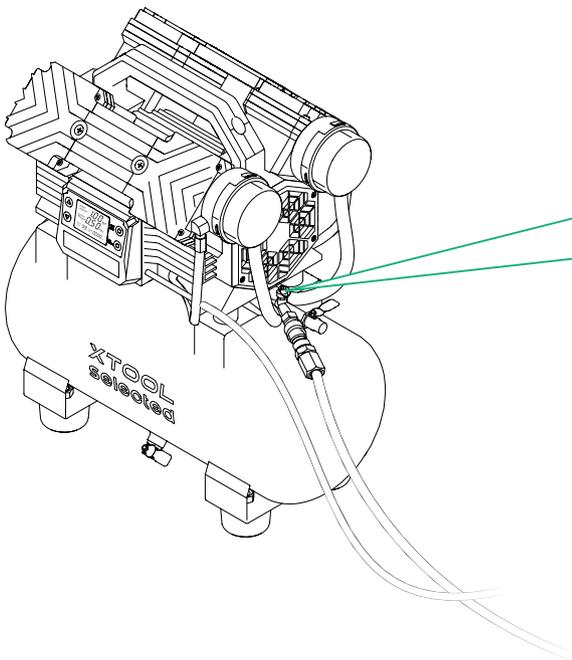


CAUTION

The air compressor's upper part heats up during operation. Do not touch it during operation or shortly after it shuts down.

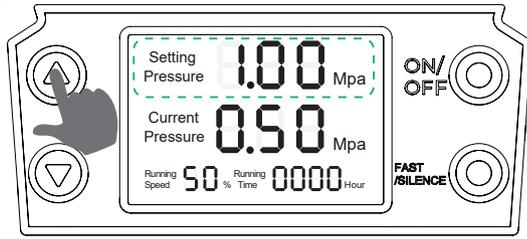


2 Check the safety valve of the air compressor



- Pull the safety valve ring to check for gas release. If there is gas coming out, the air compressor is working properly.

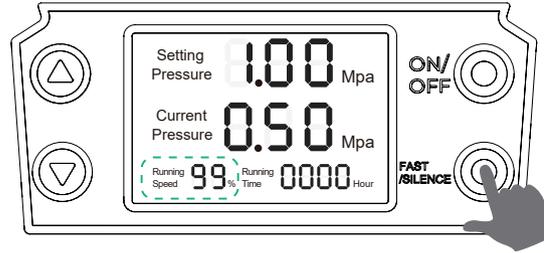
3 Set pressure



Pressure range: 0.3–1.0 MPa
Recommended pressure: 1.0 MPa
Up button: + 0.05 MPa per press
Down button: –0.05 MPa per press

The air compressor automatically stops working when the air pressure reaches the set value, and starts working again when the pressure drops 0.2 MPa below the set value.

4 Switch the speed mode



Press the FAST/SILENCE button to switch the operating speed. A speed of 99% indicates high-speed mode, while 50% indicates low-speed mode.

Recommended mode: FAST

- Once the air compressor's current pressure is steady, you can proceed to operate the welding machine.



To stop the air dryer and compressor, first turn off the air compressor and then turn off the air dryer.

Maintenance

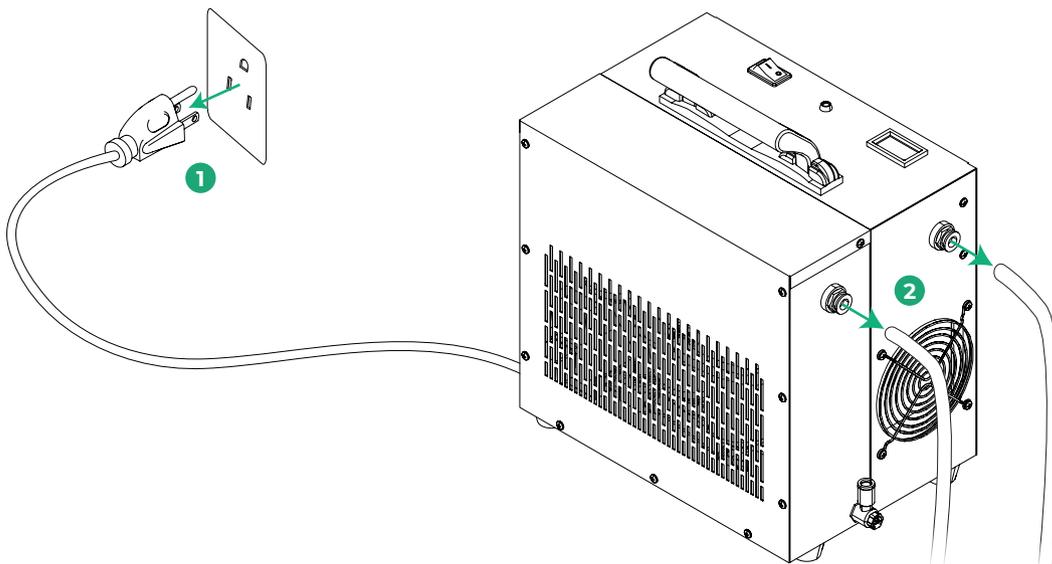


Before performing any maintenance, disconnect the power supply.

Replace filter elements

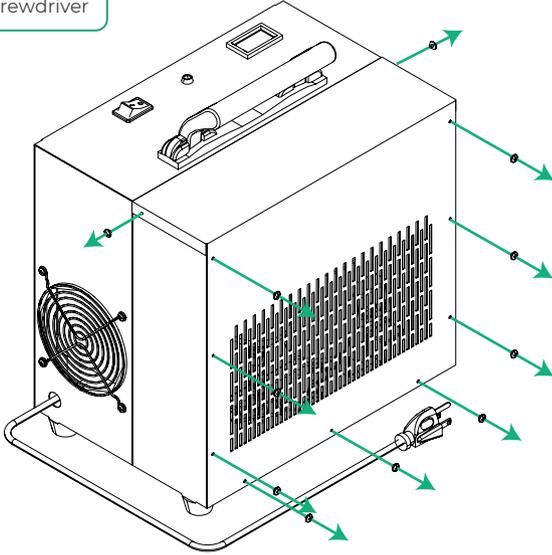
After long period of use, the performance of the air dryer filters may degrade due to accumulated contaminants. You need to replace the filter elements in time.

1 Disconnect power

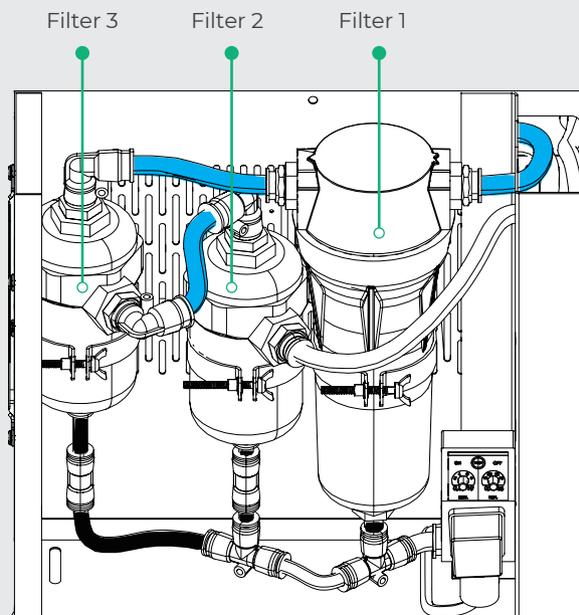
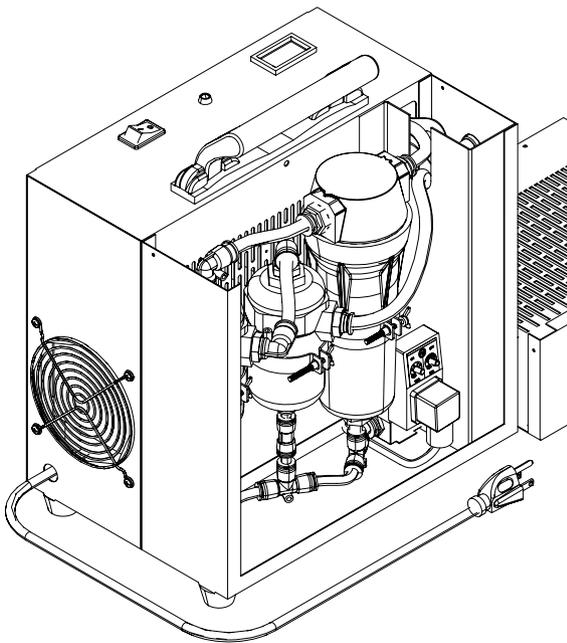
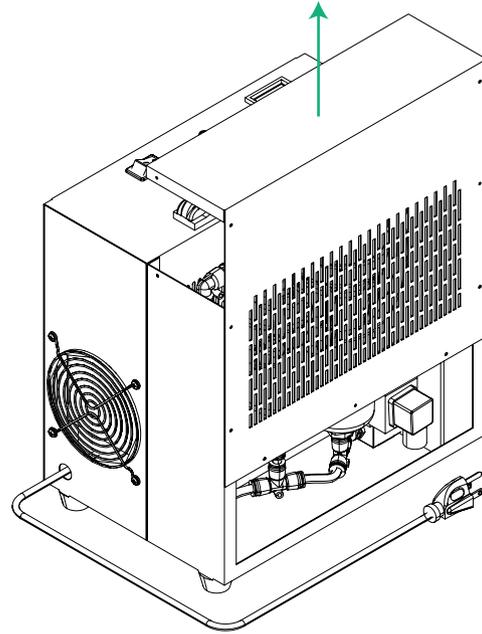


2 Remove the cover plate

(1) Remove the screws



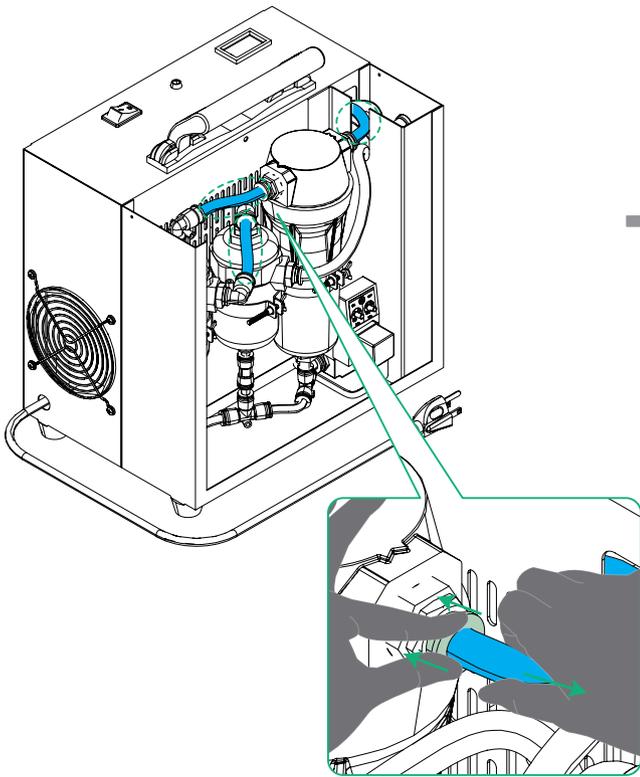
(2) Lift up the cover plate



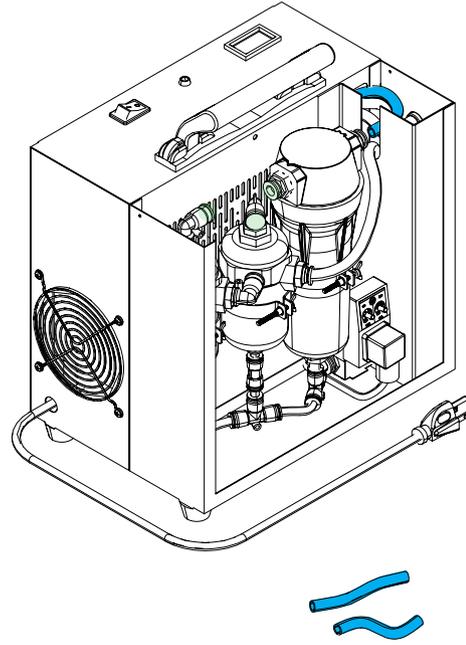
Only the blue tubes are removable. Do not operate the clear and black tubes.

3 Remove tubes

Remove the highlighted tubes from the filter ports.

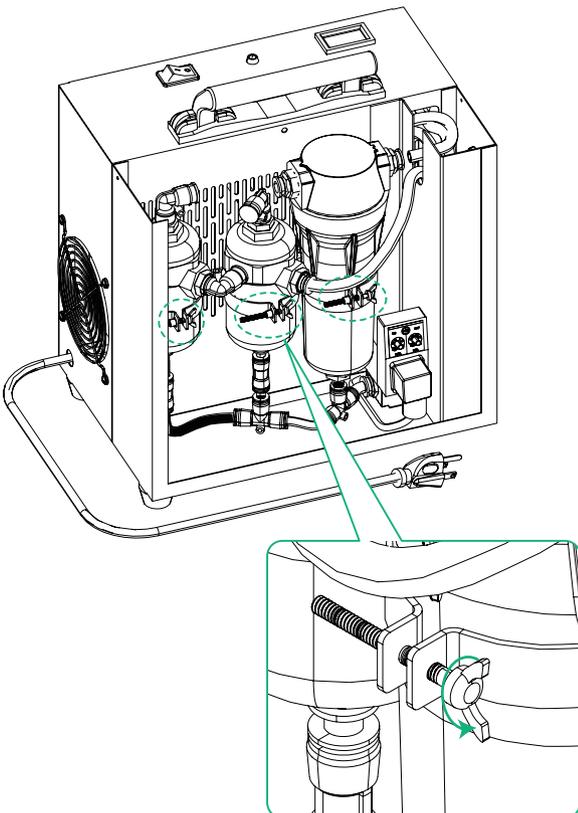


You should see this after removing the tubes

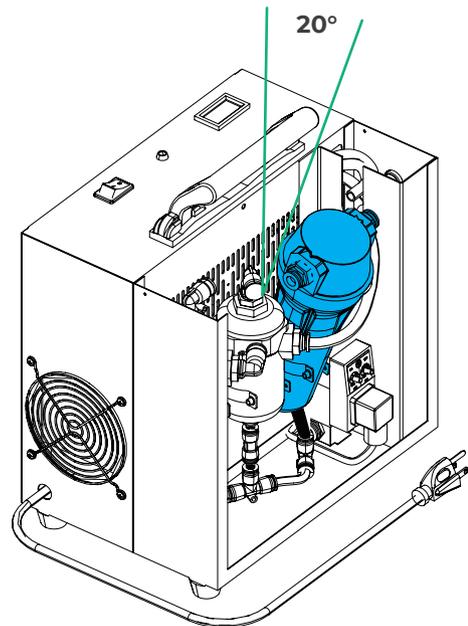


4 Remove the filter elements

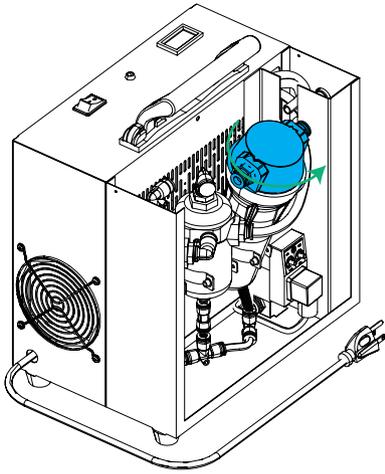
(1) Loosen the three wing screws



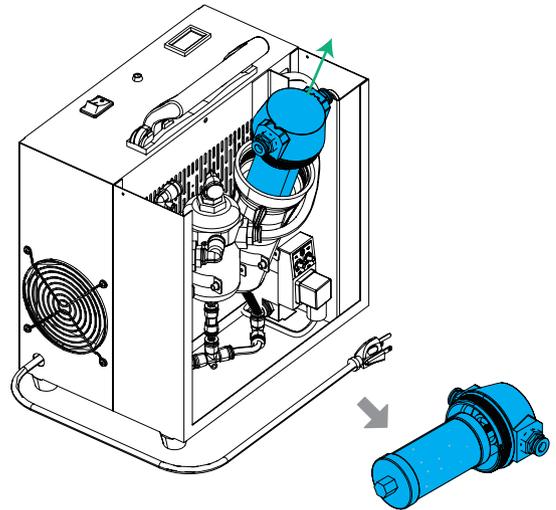
(2) Pull the upper part of filter 1 out for about 20° to 60°



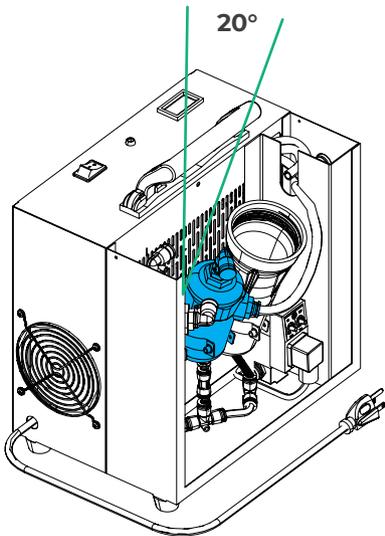
(3) Rotate to open the cover of filter 1



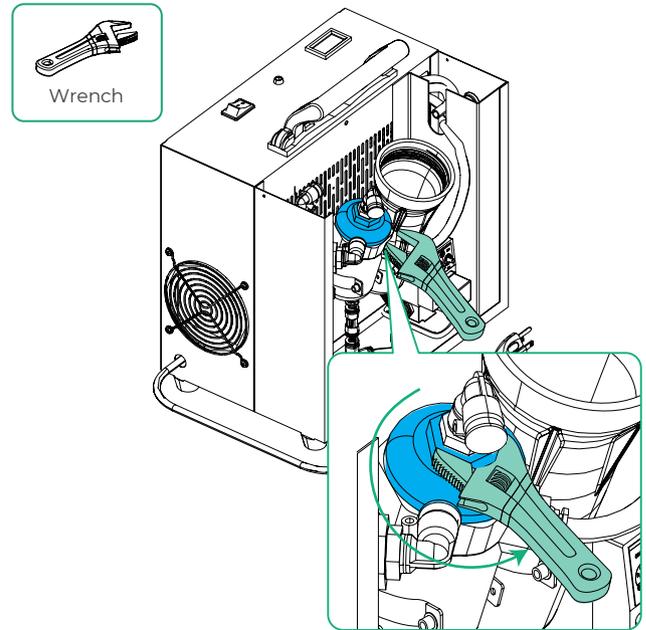
(4) Take out the filter element



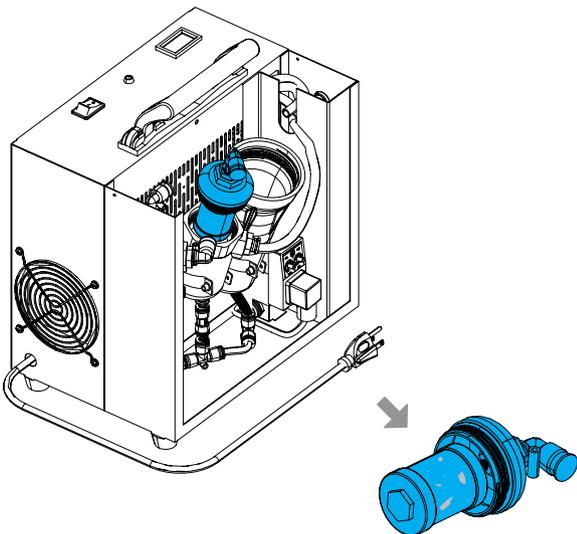
(5) Pull the upper part of filter 2 out for about 20° to 60 °



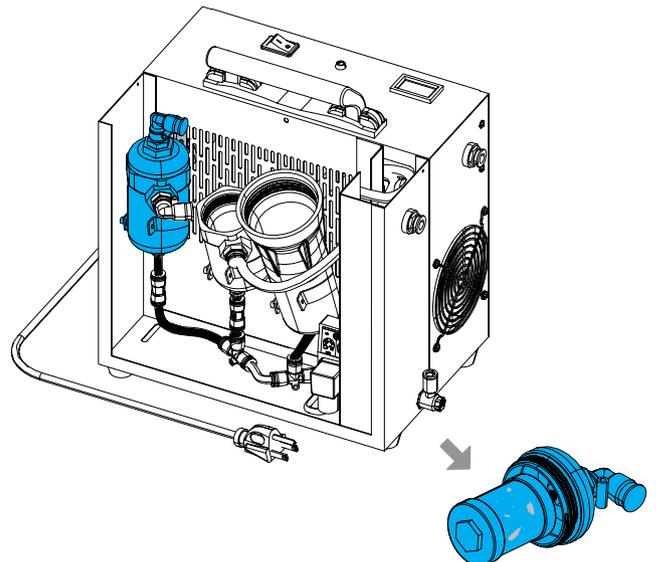
(6) Loosen the cover by using the wrench



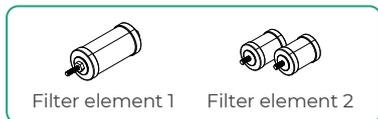
(7) Take out the filter element



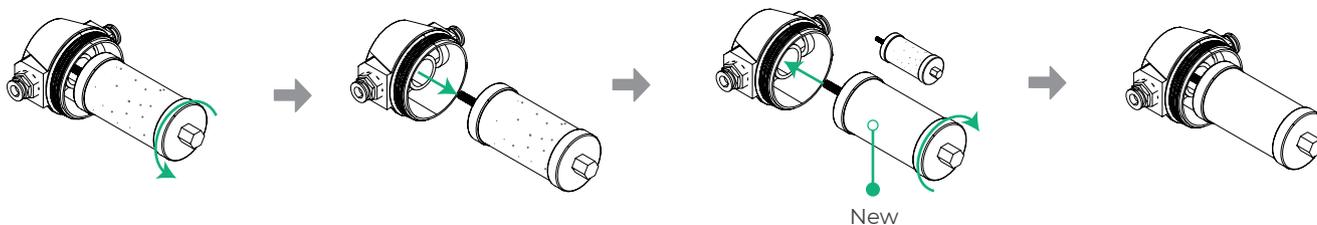
(8) Repeat steps 5-7 to take out the third filter element



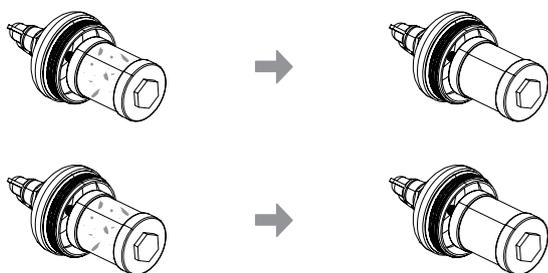
5 Replace filter elements



(1) Replace filter element 1

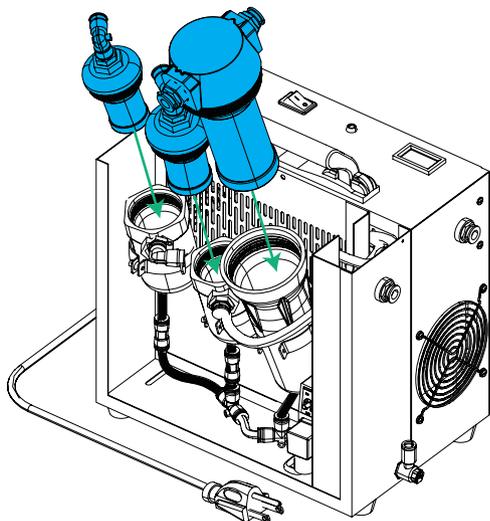


(2) Repeat the steps to replace the other two filter elements

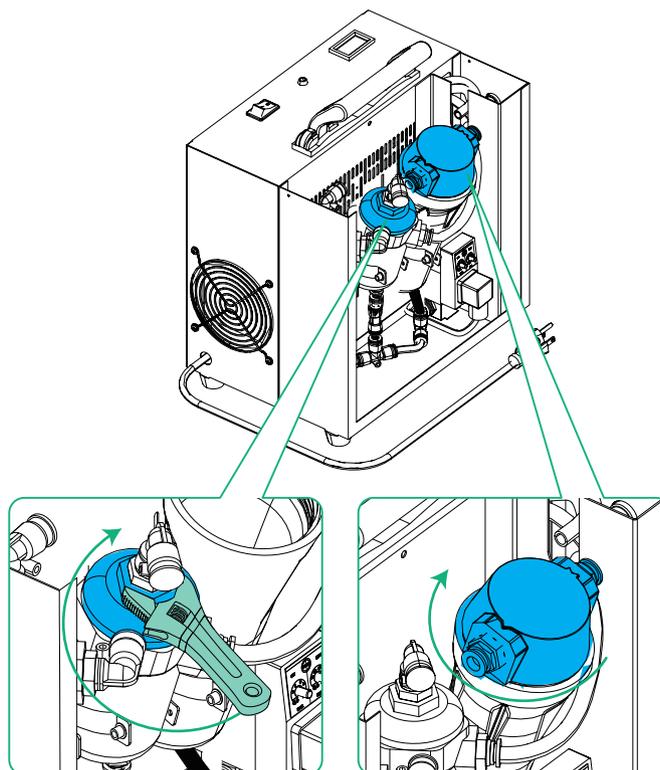


6 Re-install filter elements

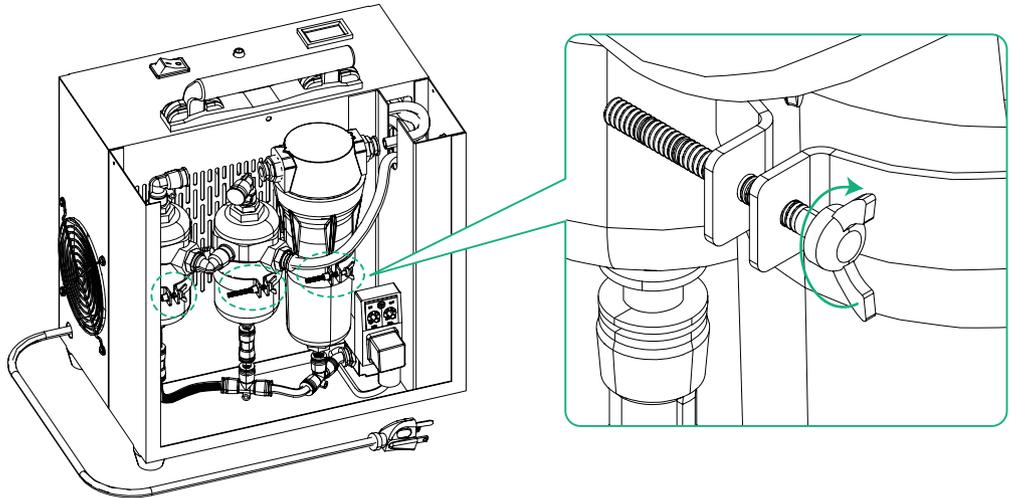
(1) Put filter elements into their corresponding cases



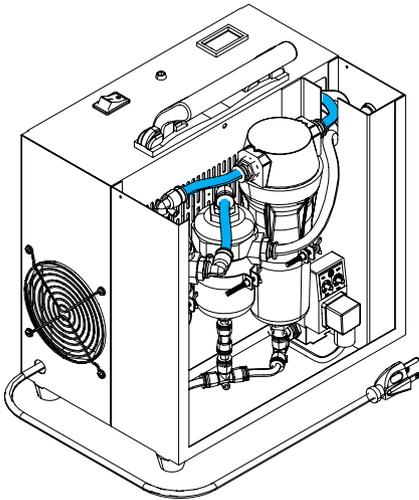
(2) Rotate to tighten the cover of filter 1 and use the wrench to tighten those of filters 2 and 3



(3) Re-install and tighten the wing screws



7 Re-connect tubes



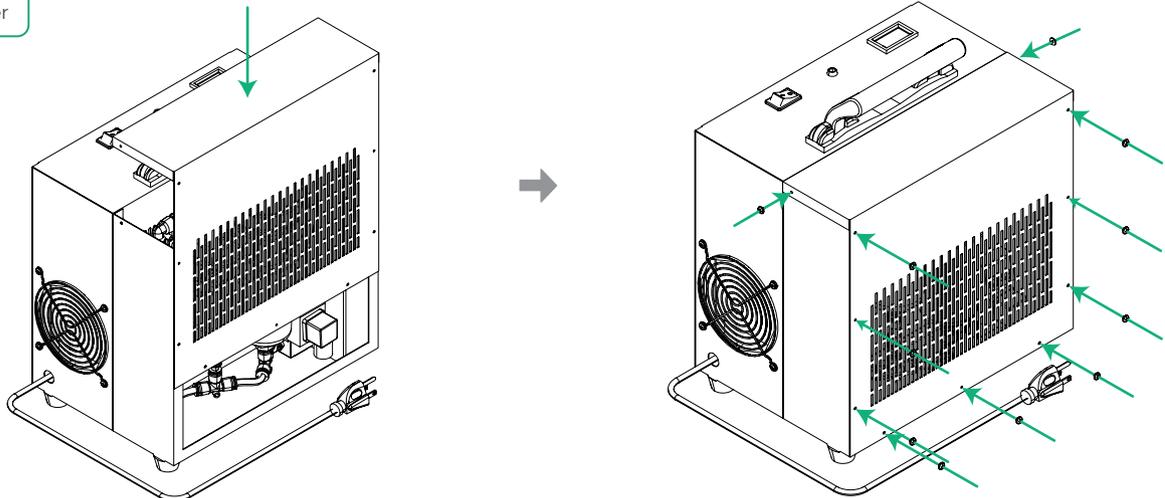
Check the connections

Connect the tubes to the air inlet and outlet. Then connect the power cable and check whether the air way is working properly.

8 Re-install the cover plate



Screwdriver



FAQ

1. What should I do if the air volume and pressure are insufficient?

Inspect all tube and pipe connections. If you find any leaks, apply tape to the threaded ends to ensure a secure connection. If xTool MetalFab CNC Cutter is connected and the xTool software displays an air pressure lower than 0.4 MPa, first verify the air compressor is set to 1 MPa in Fast mode as recommended.

If the settings are correct but pressure remains low, inspect all tube connections for leaks and check the compressor for damage.

2. Is it possible to shorten the tube connecting to the welder?

It is not recommended. A shorter tube may not effectively condense water, which could disrupt airflow to the welder.

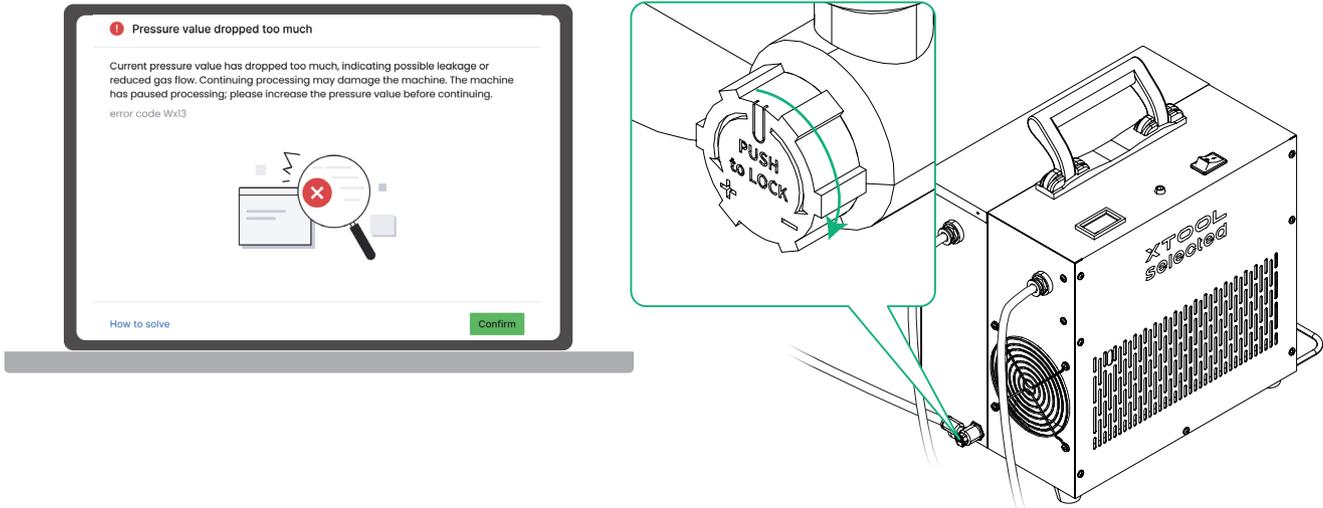
3. What should I do if water enters the tube connecting the welder?

If the processing result is poor and water droplets are found on the lens protector, follow these steps to resolve the issue:

- 1) Stop using the welder's cutting function immediately.
- 2) Check the air dryer to ensure it is functioning properly.
- 3) Allow the air dryer to run and continue drying the air.
- 4) After some time, place a dry piece of cardboard near the welder head nozzle. If the cardboard remains dry, the air dryer is now supplying dry air.
- 5) Replace the lens protector and resume processing.

4. A low-pressure alarm is reported when the air dryer is connected to xTool MetalFab CNC Cutter. What should I do ?

To address this issue, reduce the flow speed by slightly turning the flow valve knob clockwise from its factory setting. Be careful not to rotate it too far.



5. What is the temperature range of the air outlet of the air dryer?

With ambient temperature of 0°C to 40°C and relative humidity of 50% to 90%, the outlet air temperature maintains within 0°C to 40°C.

6. What should I do if a small amount of oil stains builds up on the lens protector after long-term continuous cutting (e.g., 8 hours)?

The lens protector has a limited lifespan. An oil-stained lens protector may negatively affect dress adhesion. You can wipe the lens protector by using a cotton swab or lint-free cloth dampened with alcohol.

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