Common rotary screw air compressor problems

Compressor will not start
You press the start button but nothing happens. Either an electrical problem, or the compressor has tripped on a safety device.

Check supply power. Check for errors on display. Check emergency stop is out. Check and reset the overload relay. If it’s a new installation, check the phase sequence.

Compressor will not start
You press the start button but nothing happens. Either an electrical problem, or the compressor has tripped on a safety device.

Check supply power. Check for errors on display. Check emergency stop is out. Check and reset the overload relay. If it’s a new installation, check the phase sequence.

Compressor shuts down on high-temperature
If your compressor trips on over temperature, it could be any of the following:

- Ambient temperature too high or not enough ventilation.
- Too low oil level
- Wrong type of oil
- Dirty oil cooler
- Thermostatic valve not working
- Dirt / obstruction in oil lines

Compressor runs but will not load
A screw compressor can run loaded (‘pumping air’) or unloaded (‘idle’). The inlet/loading valve opens and closes according to air demand. The inlet valve is controlled by a solenoid valve that supplies control air to the inlet/loading valve.

- Check electrical power to solenoid valve
- Check solenoid valve coil and solenoid valve operation.
- Check working of inlet/loading valve

Low capacity / not enough pressure
First, check that there isn’t a very high air demand, or air leak somewhere.

If the capacity of the air compressor is really too low, check the following:

- Does the inlet valve fully open
- Check differential pressure over oil separator. Replace separator when necessary.
- Check if inlet filter is clean
- Check and replace compressed air filters (if installed).

Safety valve blows / too high pressure
Compressor does not unload. Check if pressure switch is correctly set and working. Check inlet valve and loading solenoid for good operation.

If the safety valve is located before the oil separator, check differential pressure of oil separator.

Oil in compressed air
Oil in compressed air can have various causes:

- Oil separator old / saturated
- Scavenge line plugged
- Too high running temperature
- Too high oil level
- Wrong type of oil used
- Minimum pressure valve not working

Water in compressed air

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Water is a natural by product of air compression. There will always be water in compressed air, unless we remove it.

Check the condensate trap for good operation. There should be water coming out every few minutes. If you open up the manual drain, there should only a little water be coming out.

If you have a compressed air dryer, check the dewpoint.

**Compressor overload relay trips**
Check the current draw with a current clamp meter.

If the motor draws excessive current:

- Try to turn the compressor by hand. It should be possible to turn it around. It should turn around smoothly, without any ‘hickups’ (be sure to completely shut down the air compressor!).
- Check the isolation of the motor windings. Should be in the mage-ohms (you need an isolation tester / high voltage ohm meter for this).
- Check the voltage when the compressor is running. If the voltage drop significantly when the compressor starts/runs, you have a bad connection somewhere. Check all relays, fuses and electrical connections.
- Check if all phases are present

If the motor draws it’s normal current, but still trips on overload, replace the overload relay with a new one (they are known to sometimes become too sensitive when they get old)

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Didn’t find what you were looking for? let me help you repair your rotary screw air compressor.

Click here to ask your troubleshooting questions now. I usually respons within 1 or 2 days. On that page you can also view lot’s of other questions (and my answers)

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