


Causes and Remedies of Abnormal Condition

This chapter describes product abnormalities, their causes, and remedies. Check these before calling for repairs.



- Before performing inspection, never fail to press  key to stop operation and turn OFF the primary power supply of your distribution facility. Then, shutdown disconnect switch or power breaker. Please perform inspection works after cooled down for 5 hours. Machine and medium temperature is very high immediately after stopped, it is very dangerous. When you got burned, cool that position immediately with pure cooled water and get medical attention.
- Inspection should be performed by your qualified personnel. Parts should not be replaced by people other than our service division staff or your qualified personnel.

Display of Temperature controller control panel does not light up		
Check point	Remedy	Precautions
Check that disconnect switch or power breaker is ON or not.	Turn “ON” the disconnect switch or the power breaker. ↓ <ul style="list-style-type: none"> ○ If it becomes OFF immediately, it implies electric short circuit. ○ If it becomes ON at once, check that operation is normal or not and also check SSR (VM-1,2). 	<u>Open/Close durability 10,000 times</u> <u>(Reference)</u> (Power Breaker) If open/close function does not operate properly, please replace power breaker. In case of electric short circuit, contact our service division.
Open front panel to check that glass tube fuse (F1) is blown or not.	Replace glass tube fuse.	Model of cartridge glass tube fuse is 250 V – 2 A (φ6.4 × L30 mm). When fuse is blown again, it is due to short circuit of circuit. Contact our service division.
Check that temperature controller is operating normally or not.	If not good, replace it.	Contact our service division for inspection and replacement.

Water not supplied.		
Check point	Remedy	Precautions
Check your water supply (primary side cooling water). Water supply valve Drain valve Water supply strainer Cooling tower pump, etc.	<ul style="list-style-type: none"> • Surely open valve etc. • Check that water supply pressure of primary side cooling water and pressure at drain side are same as specified or not. • Check that there are some dusts accumulating at strainer or not. 	Medium Low Level display is continuing at monitor display. Contact our service division if you have any questions.

Pump does not run.		
Check point	Remedy	Precautions
Check that connecting terminals of power cord are tightened securely or not. (Whether single-phase operation is occurring or not.)	Tighten terminals securely.	Turn off primary power supply of your distribution facility before performing.
Open front panel to check that magnetic switch (KM-1) is operating normally or not.	Replace magnetic switch (KM-1).	<u>Open/Close durability 10,000 times or the periods of use : within a year</u> Contact our service division for replacement procedures.
Check that medium is dirty or not. Check that foreign matters are coming into pump or not.	Replace medium. Clean pump.	Contact our service division if you have any questions.

Pump pressure does not increase.		
Check point	Remedy	Precautions
Check that pressure gauge is operating normally or not.	Replace pressure gauge with a new one.	Contact our service division for replacement procedures.
Check that medium feed pump is operating normally or not.	Replace pump or impeller.	Contact our service division for replacement procedures.
Check that pump rotating direction is correct or not.	Wiring pump wires correctly.	The correct pump rotation direction is clockwise as seen from the fan side.
Check that pressure adjustment valve is fully open or not.	Check pressure adjustment valve.	

Pump pressure does not decrease.		
Check point	Remedy	Precautions
Check that medium feed and medium return valves are fully open or not.	Fully open medium supply and medium return valves.	
Check that if there is pressure loss in pipe or not.	Use bigger diameter pipe or change the piping route. Adjust with bypass valve.	
Check that pressure gauge is operating normally or not.	Replace pressure gauge with a new one.	Contact our service division for replacement procedures.

[1] Temperature does not increase. [2] Temperature does not decrease. [3] Significant change in temperature.		
Check point	Remedy	Precautions
Open front panel and check that heater contactor (SSR) (VM-1, 2) is operating normally or not.	Replace heater contactor (SSR) (VM-1, 2).	Contact our service division for replacement procedures and models.
Check that heater is broken or not.	Replace heater.	Contact our service division for replacement. ※ Apply for [1].
Check that temperature sensor is broken or not. (Confirm by ALARM monitor display)	Replace sensor.	Contact our service division for replacement.
Check that there is pressure loss in pipe or not.	Use bigger diameter pipe or change the piping route.	
Check that water-supply cooling solenoid valve is operating normally or not.	Repair or replace solenoid valve.	Contact our service division for repair and replacement.
Check that open relief valve is operating normally or not.	Repair or replace relief valve.	Contact our service division for repair and replacement. ※ Apply for [1].

Power breaker trip.		
Check point	Remedy	Precautions
Check that electric circuit is short-circuited or not.	Remove short circuit.	Repair should be performed by authorized personnel in your company or our service division staff.
Breaker trips by activation of safety device (overheat thermostat).	Replacement and repair of temperature controller and heater contactor (SSR) (VM-1, 2). Check heater and floatless switch for boiling dry. In case of H type, check leakage of open relief valve or water-supply cooling solenoid valve, and replace it.	Repair should be performed by authorized personnel in your company or our service division staff.

Strikingly different of display temperatures between actual temperature (SV Value) and measured value (PV Value)		
Check point	Remedy	Precautions
Check that sensor is installed properly or not.	Certainly insert sensor in designed position.	
Check sensor type.	Set parameters according to the sensor type.	Contact our service division for replacement and models.
Check that temperature controller is operating normally or not.	If not good, replace it.	Contact our service division for inspection and replacement.