



# Trouble Shooting Guide

PWA, 3-phase

(D10571)



## Trouble Shooting Guide

Problem	Possible Cause	Possible Remedy
Unit does not start	<p>No power to unit, breaker tripped</p> <p>Low voltage</p> <p>Loose wire</p> <p>Defective contactor or coil</p> <p>Loss of refrigerant</p> <p>Compressor damaged</p>	<p>Verify correct power is applied, close breaker after correcting fault</p> <p>Check electrical service to unit</p> <p>Disconnect power, then check wiring</p> <p>Repair or replace contactor or coil</p> <p>Locate and repair leak, then recharge with type and amount of refrigerant specified on serial tag</p> <p>Replace compressor - Call Lydall</p>
Unit does not cool	<p>Compressor internal thermostat tripped</p> <p>Compressor damaged</p> <p>Evaporator damaged</p> <p>Microprocessor failure</p> <p>Facility Water control valve set too low</p> <p>Microprocessor programmed incorrectly</p> <p>Insufficient flow of Facility Water</p> <p>Facility Water too warm</p> <p>Cooling load exceeds capacity of unit</p> <p>Refrigeration solenoid coil failure</p> <p>Loss of refrigerant</p>	<p>Allow time for compressor to cool and automatically reset</p> <p>Replace compressor - Call Lydall</p> <p>Call Lydall</p> <p>Replace microprocessor</p> <p>Reset Facility Water control valve - Call Lydall</p> <p>Reprogram microprocessor - Call Lydall</p> <p>Increase flow of Facility Water</p> <p>Provide cooler Facility Water</p> <p>Reduce cooling load</p> <p>Replace solenoid coil</p> <p>Locate and repair leak, then recharge with type and amount of refrigerant specified on serial tag</p>

Problem	Possible Cause	Possible Remedy
Unit does not cool (continued)	Solenoid valve stuck shut  Defective refrigeration low pressure cut-out  Malfunctioning thermal expansion valve  Pump damaged, loss of flow  Hot gas bypass valve setting too high  Hot gas bypass valve stuck open	Repair or replace solenoid valve  Repair or replace low pressure cut-out  Replace thermal expansion valve  Replace pump  Call Lydall  Repair or replace valve
Pump leaks	Faulty pump casing  Shaft seal damaged  Pump housing O-Ring damaged  Improper fluid	Replace pump assembly  Replace shaft seal  Remove pump and rebuild  Call Lydall
Noisy compressor	Flooding of refrigerant into crankcase   Worn compressor  Refrigeration high pressure cut-out set too high  Refrigeration low pressure cut-out set too low	Warm crankcase if unit has been off for a long period or has been left in a cool ambient for more than a few hours  Replace compressor - Call Lydall  Adjust setting  Adjust setting
Excessive noise on Start-Up	Low voltage  Wrong voltage taps used on transformer  Contactor or coil failure	Check electrical service to unit  Connect to proper taps  Replace contactor or coil

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Pump motor overheats	Pump overload protection set too high Improper voltage supplied	Reset pump thermal overload relay, or replace if faulty Correct voltage
Level light remains on	Low coolant level Reservoir level switch float stuck Time delay relay malfunction (when used) Level switch failure	Check for leaks, then fill reservoir Clean reservoir and level switch Replace time delay relay Replace level switch
Fault light remains on	Low coolant flow No coolant flow Flow switch sticking	See Problem; Low coolant flow See Problem; No coolant flow Disassemble flow switch, clean and reinstall, or replace
Low coolant flow	Pump suction strainer clogged Flow control valve not fully open Pressure relief valve set too low (unless not adjustable) Low coolant level in reservoir Restriction in coolant lines external to chiller Frozen evaporator Flow switch clogged	Remove strainer, clean and reinstall or replace Open flow control valve Adjust pressure relief valve to specification Fill reservoir to proper level Eliminate restrictions in coolant lines external to chiller Call Lydall Disassemble flow switch, clean and reinstall, or replace
Too much recirculating pressure to process	Flow control valve set too high Pressure relief valve set too high (unless not adjustable)	Throttle flow control valve Adjust pressure relief valve

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Level light does not work	Time delay relay has not timed out (when used)  Lamp burned out  Level switch failure	Wait for time delay relay to time out  Replace lamp  Replace level switch
Compressor turns on and off automatically	Discharge pressure too high  Condenser fan(s) not on  Refrigeration high pressure cut-out set to automatic	Check Facility Water for blockage  Check motor(s) and wiring  Check settings
Compressor does not run	Compressor internal thermostat tripped  Defective Solid State Motor Overload  Motor burned out	Allow time for compressor to cool and automatically reset  Replace module  Replace - Call Lydall
No coolant flow	Pump not primed  Pump suction strainer clogged  No coolant in reservoir  Pump overload tripped  Pump motor shaft bound to seal  Pump housing improperly torqued  Damaged pump  Frozen evaporator  Clogged line or closed valve in external piping  Leak(s) in external piping	Prime pump  Remove and clean strainer, then reinstall  Repair any leaks, then fill reservoir  Wait 5 minutes for overload to reset  Replace pump or renew seal  Remove pump, torque to specifications, test, and reinstall  Replace pump  Call Lydall  Check external piping for dirt or closed valve  Repair leaks as needed

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Chiller cools well below the desired Set-Point	Microprocessor programmed incorrectly	Reprogram microprocessor - Call Lydall
	Malfunctioning solenoid valve	Repair or replace solenoid valve
	Solid State Relay failure	Replace Solid State Relay
	Microprocessor failure	Replace microprocessor
Chiller shuts down during operation	Refrigeration high pressure cut-out set too low	Adjust and reset refrigeration high pressure cut-out
	Refrigeration low pressure cut-out set too high	Adjust and reset refrigeration low pressure cut-out
	Water modulating valve set too high	Adjust water modulating valve
	Excess refrigerant charge	Remove excess refrigerant, then charge with type and amount of refrigerated listed on serial tag
	Pump overload setting too low	Adjust and reset pump thermal overload relay to specifications, or replace if faulty
	Pump overload tripped	Determine cause, if pump is damaged, repair or replace
Temperature display reads incorrectly	Loose wire	Disconnect power to unit, then check wiring
	Broken RTD	Replace RTD
	Microprocessor failure	Replace microprocessor
Microprocessor does not work	5 second delay has not timed out	Wait at least 5 seconds after turning on
	Microprocessor programmed incorrectly	Reprogram microprocessor - Call Lydall
	Microprocessor failure	Replace microprocessor