## Thermonics

### **Process Chiller W-60-4700**

Thermonics specializes in the design and manufacture of low temperature standard and custom fluid chillers for challenging applications. The W-60-4700 FluidChill<sup>™</sup> system delivers high reliability and precision temperature control.

#### FEATURES:

- Touch-screen controller provides precise temperature control with data logging, graphing, performance monitoring, and fault alarms
- Magnetically coupled pump to match wetted materials
- Compatible with multiple heat transfer fluids
- Communications options for remote control and reading chiller parameters

CHILLER SPECIFICATIONS						
COOLING AND HEATING CAPACITY						
	°C	+25	0	-20	-40	-60
Cooling Capacity	kW	6.8	6.8	6.2	5.4	4.7
Condenser	Water-cooled					
Process Heater	1.7kW					
Process Fluid Set Point Range	-60 to +50°C					
Fluid Stability	±0.5°C (at rated load)					
PUMP AND PROCESS FLUID						
Pump	Gear or Turbine					
Process Fluid	Compatible with a variety of process fluids. Published specifications using Syltherm XLT.					
Wetted Materials	Standard materials include copper, nickel, brass, and plastic. Optional: Fully stainless steel					
Flow Rate	4 GPM (15.1 LPM) at 50 PSIG. Optional: Flow monitoring and control					
Available Pressure	50 PSIG (or less), Optional: Pressure monitoring and control					
Fluid Connections	0.75" NPT					
	СС	NTROLS AND	COMPLIANCE			
User Interface	5.7" color touch-screen with temperature graphing and charting					
Temperature Measurement	Range: -210 to +680°C, Resolution: 0.1°C full scale					
Remote Communications	Ethernet, Serial-USB, Web server. Optional: RS-232					
Alarms	Low Flow, Low F	Reservoir, Out-of	-temp Range. Op	tional: Drip Tray	,	
Diagnostics	Runtime hours (controller, chiller, compressor, pump), system performance log, valve activation counts, enclosure temperature					
Chiller Compliance	CE / RoHS / designed to meet UL1995/UL61010					
OPERATING REQUIREMENTS						
Ambient Temperature Range	10 to 40°C					
Power Requirement	3-phase, 208 to 230v, 60Hz					
Facility Water Requirements	Flow: 10.5 to 12.5 GPM (39.7 to 47.3 LPM), Temperature: 10 to 32°C (20°C nominal) Pressure: 10 to 50 PSIG (40 PSIG nominal), Connection: 0.75" NPT					
System Dimensions (approx.)	43.0"W X 60.0"D X 64.0"H (109.2 X 152.4 X 162.6cm)					

nTEST Thermal Solutions

an inTEST Company



Programmable touch-screen controls with diagnostics and remote communications



System Diagnostics	
ATD1:20.1 ATD2: 153.3 ATD3: 80.1 T Controller Runtime (hours) Compressor (hours) Pump (hours) Valve activation count (Life Time) Valve activation count (Life Time)	205 191 43 59061
Frequency (Hz) Controller Enclosure Temperature (°). Heat/Cool Percentage	60 24.8 0.0 %
Memory Dynamic Setpoint (*) Flow Rate GPM Pressure PSI	-20.0 0.0

Cooling capacity with 50Hz power reduced by approximately 17%. Consult factory for additional flow rate options. Specifications subject to change.



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### **Chiller Controller**

The chiller controller provides precision temperature control with touch-screen operation, easy-to-read information, remote operation, and data logging.

Developed by our in-house engineering team, this controller provides flexible setup and customization not readily achievable with PLCs.

#### **FEATURES**:

- Displays critical parameters such as fluid supply and return temperature and pressure (based on chiller options selected)
- $\boldsymbol{\cdot}$  Alarms for out-of-temperature range, low process flow, low reservoir level, and more
- Built-in diagnostics valve counts, ambient temp, equipment runtimes
- Displays temperature graphs
- Communicates via Ethernet, USB, HTML Web server, RS-232 (optional)
- Logs system data and performance
- CE and RoHs compliant



System Diagnostics TD1:20.1 RTD2:-153.3 RTD3: 00.1 TC1: Controller Runtime (hours)			
Controller Runtime (hours)	K	System Diagnostics	
Pump (hours)			
Valve activation count (Life Time) 59861 Valve activation count (Current) 17889 Frequency (Hz)		Compressor (hours)	191
Valve activation count (Current) 17889 Frequency (Hz)		Pump (hours)	43
Frequency (Hz)		Valve activation count (Life Time)	59061
Controller Enclosure Temperature (*). 24.8 Heat/Cool Percentage		Valve activation count (Current)	17809
Heat/Cool Percentage	F	Frequency (Hz)	60
Memory 1888	0	Controller Enclosure Temperature (°).	24.8
	ł	Heat/Cool Percentage	0.0 %
Dynamic Setpoint (*),		lemory	1888
		Dynamic Setpoint (*)	-20.0



CONTROLLER SPECIFICATIONS				
Temperature Measurement	Range: -210 to +680°C, Resolution: 0.1°C full scale			
User Interface	5.7" color touch-screen with temperature graphing and charting			
Control Safety	High and low temperature limits, Independent fail-safe modules (IFM, optional)			
Diagnostics	Runtime hours (controller, chiller, compressor, pump), system performance log, valve activation counts, enclosure temperature			
Operating Environment	Temperature: 10 to 50°C, Humidity: 0 to 50%			
Temperature Sensors	Remote RTD (500 Ohm), thermocouple (type K)			
Control Algorithms	Primary loop PID, Dual loop multiple RTD control mode			
Communication Interfaces	Ethernet 10/100, Telnet, HTML web server, USB 2.0. RS232 (optional)			
Alarms	Low Flow, Low Reservoir, Out-of-Temp Range. Optional: Drip Tray			
Controller Compliance	CE / RoHS / UL61010			



The inTEST Thermal family includes three temperature-related corporations: Temptronic,

Sigma Systems, and Thermonics.