

Smart ❄️ Freeze

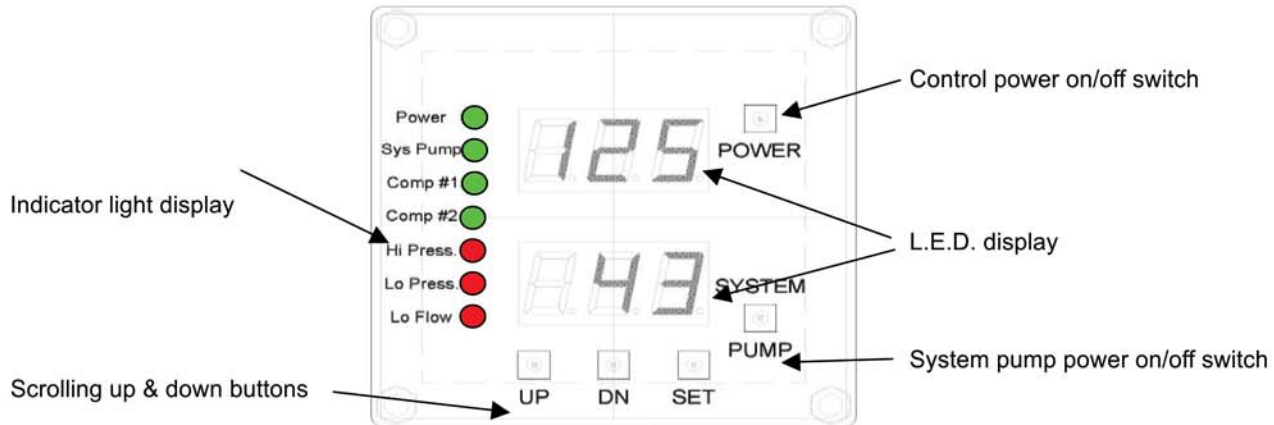
The greatest luxury is custom

WATER COOLED SCROLL CHILLERS



1 TO 20 NOMINAL TONS





Features:

- Control operates to a +/- 1°F accuracy.
- Powered from the chiller 24volt control circuit. No high voltage interference.
- 1 or 2 compressor control capability
- Operates and displays in °F or °C
- Controls chiller on inlet or outlet temperature
- Scroll through set up and review mode
- 30 second compressor time delay to prevent short cycling and nuisance faults
- 60 second hot gas solenoid delay to prevent false hot gas feeding during compressor start up.
- Lock out relay shuts down the chiller when control fault settings activate
- Automatic compressor lead lag on dual circuit chillers
- Weather resistant for outdoor use.
- Basic chiller functionality for ease of set up and operation.
- Factory default function code to reset the controller to the initial factory settings

- Two L.E.D. display windows.
 - a) Inlet & outlet temperature during chiller operation
 - b) Displays refrigerant high and low pressure in review mode
 - 1) no cap tubes to break causing a loss of refrigerant and down time
 - 2) No refrigerant recovery to change out the pressure transducer

- Indicator lights
 - a) Chiller control power on/off switch with green indicator.
 - b) System pump on/off switch with green indicator.
 - c) Compressor run indicator lights
 - d) High and low refrigerant pressure red fault indicator
 - e) Low fluid flow red indicator

- Display flashes all chiller faults.
 - a) Safety faults:

High fluid temperature outlet alarm	- (display only - does not shut down the chiller)
Low fluid temperature outlet alarm	- (shuts down the chiller and requires manual reset)
High refrigerant pressure	- (shuts down the chiller and requires manual reset)
Low refrigerant pressure	- (shuts down the chiller and requires manual reset)
Low water flow through evaporator	- (shuts down the chiller and automatically resets when flow is restored)

- Monitors and logs compressor run hours

Example: **STWC T 30 S 2 - T3 - Z**

<u>WC</u>	WC = Water Cooled Condenser		
<u>T</u>	T = Tank Model		
<u>30</u>	Nominal Capacity MBTUH	Ex. 12 = 12,000 BTUH	Etc.
<u>S</u>	S = Single Circuit Unit D = Dual Circuit Unit M = Three Circuit Unit		
<u>2</u>	1 = R134a	2 = R22	6 = R404A, R507
<u>T3</u>	Electrical Requirement	S2 = 208/230-1-60	S6 = 220-1-50
		T3 = 208/230-3-60	T7 = 200/208-3-50
		T4 = 460-3-60	T9 = 380-3-50
		T5 = 575-3-60	
<u>Z</u>	Compressor Type	Z = Scroll	S = Semi-Hermetic

Low ambient, or lower leaving water temperatures, can require the recirculation of glycol solutions or other fluid blends. These solutions can effect unit capacities. Please consult the factory on these or other special applications for proper sizing.

Process Cooling: Industrial & Commercial Applications

- ✓ Compressor oil cooling
- ✓ Commercial HVAC
- ✓ Plastics processing cooling (Injection molding & extrusion)
- ✓ Anodizing/Plating process cooling
- ✓ Data room cooling
- ✓ Laser & welding machine cooling
- ✓ X-ray developer machine cooling
- ✓ Engine dynamometer testing cooling

Medical Process Cooling

- ✓ MRI cooling
- ✓ C.A.T. scan cooling
- ✓ P.E.T. scan cooling
- ✓ Operating Room A/C duty
- ✓ Lab testing
- ✓ Clean room air conditioning

Food Process Cooling

- ✓ Low temperature (34°F water) batch process cooling (Dough mixers)
- ✓ Brewery process cooling
- ✓ Ice machine pre-cooling
- ✓ Drinking water fountain cooling
- ✓ Brine marinade cooling
- ✓ Vacuum meat tumbler / massager cooling
- ✓ Ice cream / slushy machine cooling

- ✓ ETL listed
- ✓ Microprocessor Controller.
- ✓ Copeland Scroll compressor(s)
- ✓ STAINLESS STEEL brazed plate evaporator with insulation, and secured in a steel bracket
- ✓ STAINLESS STEEL storage tank with ½" insulation (Optional on STWC)
- ✓ Fused STAINLESS STEEL re-circulation pump for tank operation with ball valve and cleanable strainer
- ✓ Compressor and hot gas valve time delays
- ✓ 24V control transformer
- ✓ Suction accumulator
- ✓ Water flow switch, Pump differential sensor
- ✓ Hot gas by-pass capacity control
- ✓ Return fluid sensing thermostat
- ✓ Liquid line drier, sight glass, solenoid, TEV
- ✓ MICRO - High-pressure refrigerant control
- ✓ MICRO- Low-pressure refrigerant control with time
- ✓ MICRO - inlet and outlet realtime readouts.
- ✓ Compressor motor contactor
- ✓ Hard start kit (single phase units only)
- ✓ Painted galvanized steel sheet metal cabinet (360D and larger systems are GALVANIZED)
- ✓ ½ in insulation on all water and refrigerant lines
- ✓ Micro - Processor On - Off switch for control circuit operation
- ✓ Micro - Processor automatic compressor lead lag on dual circuit units
- ✓ Voltage Phase Monitor
- ✓ Compressor Fusing
- ✓ Tank pressure relief valve, vent and drain connections
- ✓ Full refrigerant charge from factory (407C) Standard
- ✓ Computerized factory run testing under load conditions
- ✓ Standard LTL crating - Pallet, Foam vertical corners with plastic wrap. Optional Enhanced Packaging is available for most models.

OPTIONS:

- ✓ Dedicated 304SS Process pump with suction isolation valve
- ✓ Low Flow bypass valve
- ✓ Economizer system for cooler climates
- ✓ Process flow meter
- ✓ Tank Sight glass

Smart Freeze

Packaged water cooled chiller with tank

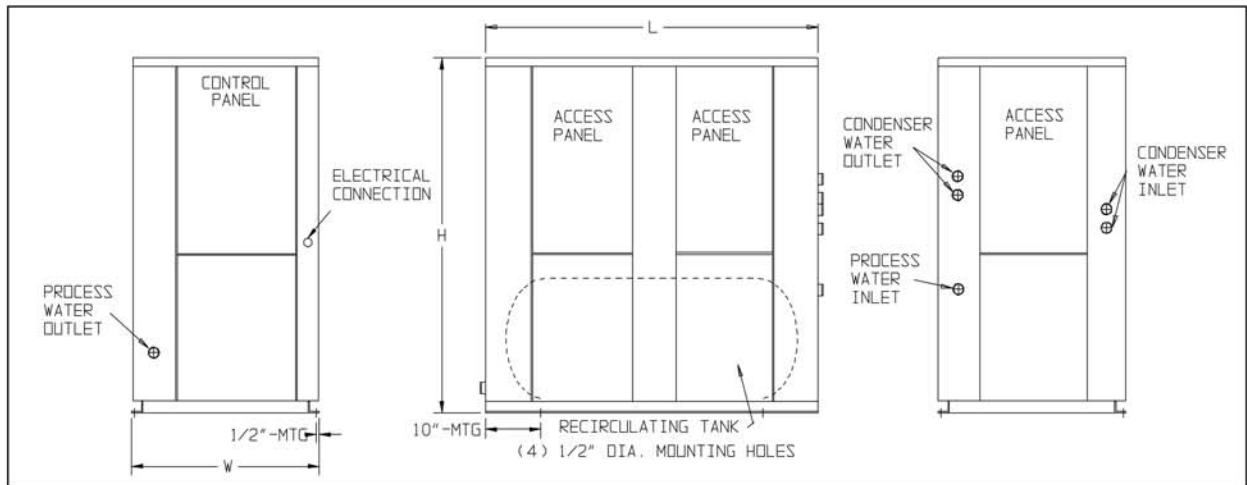
STWCT DIMENSIONAL & ELECTRICAL SPECIFICATIONS

Single Circuit

Model	BTUH @ 105°F cond. 45°F Lwt	Length Inches	Width Inches	Height Inches	Tank Gal.	Process Fluid Conn.	Condenser Water Conn.	Compressor		RLA ea.	LRA ea.	Evap Pump FLA	MCA	M.O.P.	Weight Pounds													
								Qty.	HP																			
12S2-S2-Z	14,700	36	34	53	30	3/4" FPT	3/4" FPT	1	1	1.3	10	42	5.1	20	25	500												
18S2-S2-Z	21,500									1.3	13.6	61.0	5.1	25	35													
18S2-T3-Z										2.0	8.6	55.0	5.1	20	20													
18S2-T4-Z										4.3	27.0	1.3	15	15														
24S2-S2-Z	24,200									2.5	15.7	73.0	5.1	25	40													
24S2-T3-Z										8.2	63.0	5.1	20	20														
24S2-T4-Z						4.3	31.0			1.3	15	15																
30S2-S2-Z	36,000					56	63			60	1" FPT	1" FPT	1	1	3.5	20.7	127.0	5.1	35	50	545							
30S2-T3-Z															13.9	88.0	5.1	25	35									
30S2-T4-Z															7.1	44.0	1.3	15	15									
36S2-S2-Z	41,200														85	64	90	1.25" FPT	1.25" FPT	1	1	4	25.0	132.0	5.1	40	60	675
36S2-T3-Z																						15.0	115.0	5.1	25	35		
36S2-T4-Z		7.4	47.5	1.3	15			15																				
48S2-S2-Z	50,000	85	64	90	1.25" FPT	1.25" FPT	1	1	5	30.1	175.0	5.1										45	70	840				
48S2-T3-Z									20.7	115.0	5.1	35										50						
48S2-T4-Z									8.9	63.0	1.3	15										20						
50S2-S2-Z	55,500								85	64	90	1.25" FPT			1.25" FPT	1	1	5	27.9			129.0	5.1	40	60	850		
60S2-T3-Z	20.7																	156.0	5.1			35	50					
60S2-T4-Z	11.5																	70.0	1.3			20	25					
70S2-T3-Z	78,500	85	64	90	1.25" FPT	1.25" FPT							1	1				8	32.1			195.0	6.7	50	70	880		
70S2-T4-Z	16.4																	95.0	1.7			25	35					
80S2-T3-Z	33.6																	225.0	7.9			50	80					
80S2-T4-Z	17.3								114.0	2.0	25	40																
90S2-T3-Z	91,000								85	64	90	1.25" FPT			1.25" FPT			1	1	9	42.0	239.0	10.0	70	100	925		
90S2-T4-Z	19.2																			125.0	2.8	30	45					
120S2-T3-Z	47.0	245.0	10.0	70	110																							
120S2-T4-Z	22.1	125.0	2.8	35	50																							

Dual Circuit

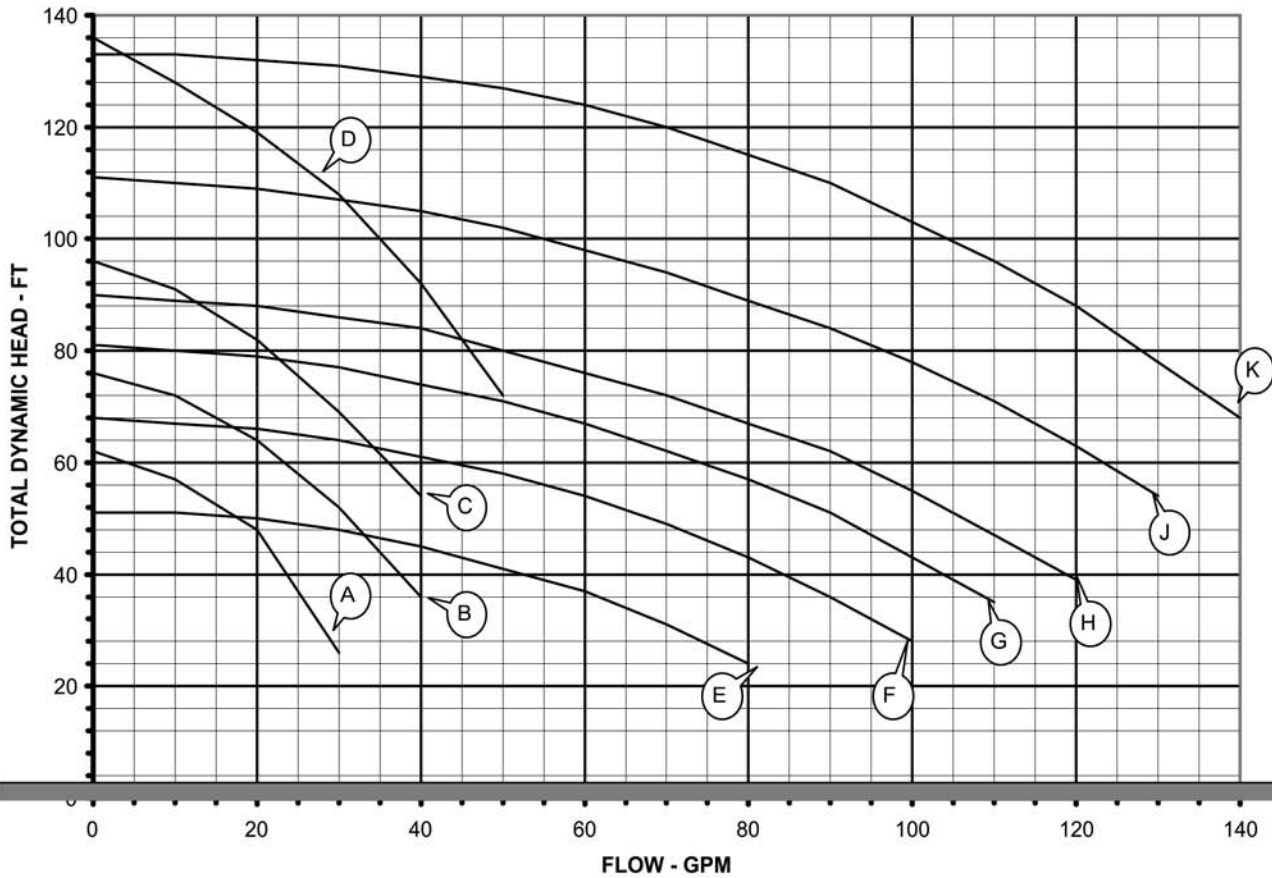
Legacy Model	BTUH @ 95°F amb. 45°F Lwt	Length Inches	Width Inches	Height Inches	Tank Gal.	Process Fluid Conn.	Condenser Water Conn.	Compressor		RLA ea.	LRA ea.	Evap Pump FLA	MCA	M.O.P.	Weight Pounds																			
								Qty.	HP																									
72D2-S2-Z	82,000	85	34	64	60	1.25" FPT	1" FPT	2	2	4	25.0	132	6.7	70	80	990																		
72D2-T3-Z										15.0	115	6.7	45	50																				
72D2-T4-Z										7.4	47.5	1.7	20	25																				
96D2-S2-Z	100,000									85	34	64	90	1.25" FPT	1" FPT	2	2	5	30.1	175	10.0	80	100	1190										
96D2-T3-Z																		20.7	115	10.0	60	70												
96D2-T4-Z																		8.9	63	2.8	25	30												
100D2-S2-Z	112,000				85	34	64											90	1.25" FPT	1" FPT	2	2	5	27.9	129	10.0	80	100	1400					
120D2-T3-Z	124,800																						6	20.7	156	10.0	60	70						
120D2-T4-Z	11.5																						70	2.8	30	40								
140D2-T3-Z	158,000												85	34	64								135	1.5" FPT	1.25" FPT	2	2	8	32.1	195	10.5	90	110	1950
140D2-T4-Z	16.4																											95	3.2	40	50			
160D2-T3-Z	33.6																											225	7.9	90	110			
160D2-T4-Z	17.3	114	2.0	45				50																										
180D2-T3-Z	210,000	85	34	64				135	1.5" FPT									1.25" FPT	2	2								10	42.0	239	5.6	110	125	2195
180D2-T4-Z	19.2																											125	2.8	50	60			
240D2-T3-Z	47.0									245.0	13.3	125				150																		
240D2-T4-Z	22.1									125.0	4.5	60				70																		



Smart*Freeze

Standard Available Stainless Steel Process System Pumps

1MS & 2MS PUMPS



- A) 1/3HP 1MS
- B) 1/2HP 1MS
- C) 3/4HP 1MS
- D) 1-1/2HP 1MS
- E) 3/4HP 2MS
- F) 1HP 2MS
- G) 1-1/2HP 2MS
- H) 2HP 2MS
- J) 3HP 2MS
- K) 5HP 2MS

** SmartFreeze chillers are not limited to the pumps shown on this curve. Contact the factory @ (281) 540-2805 with the flow and head pressure requirements to have the proper pump selected for your application.

Certain applications may require the use of glycol (antifreeze) depending on cooling requirements and / or low ambient temperatures. These fluids affect chiller capacities and may require heat exchanger adjustments. Please consult the factory for assistance.



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