

DIRECTOR SERIES TEMPERATURE CONTROL SYSTEM

Director Series Temperature Control Systems deliver accurate and reliable temperature control to your process vessel across a very wide temperature range from -85° to +200°C.

The Director Series Temperature Control System is suitable for a variety of applications requiring a wide range of heating and cooling with a single heat transfer fluid and incorporates a seal-less magnetic drive pump for leak free operation along with other features including:

- Temperature range from -85 to +200°C
- Sizes from 20 liter to 500 gallon reactors
- Jacket delivery pressure control
- Single loop or cascade control
- General duty or explosion proof classification
- On-board low-temperature refrigeration circuit
- Seal-less magnetic drive pump
- SCR modulating heater control
- Welded and flanged construction
- Factory tested prior to shipment

The Director Series Temperature Control Systems contain a refrigerant circuit with:

- Variable frequency drive which allows for jacket delivery pressure to be precisely maintained
- Graphic user interface PLC system
- Electric immersion heater with an SCR for true modulating output
- Industrial heavy duty centrifugal type pump
- Low watt density heater
- Cooling via a low temperature scroll compressor
- Electronic modulating hot gas bypass valve
- Electronic modulating thermal expansion valve
- Compressor suction regulator
- Through the door disconnect
- Pressure relief valve

Budzar Industries also designs and manufactures specialized equipment for non-standard applications. Our engineers have extensive experience in process chilling and heating applications for such industries as: chemical, defense, energy, extraction, food, medical, pharmaceutical, plastics, rubber, tire and, semiconductor. We take the time to understand your current and future needs and design solutions targeting high quality and fast payback.

- Brushed finish stainless steel cabinet
- Stainless steel pipe and tubing
- Industrial heavy duty centrifugal type pump
- Seal-less magnetic drive, close-coupled pump
- Stainless steel heater elements
- Stainless steel heater shell
- Low watt density heater design protects the thermal fluid from damage
- SCR modulating heat output for accurate temperature control
- Cooling provided via a low temperature scroll compressor
- Electronic modulating hot gas bypass valve
- Electronic modulating thermal expansion valve
- Compressor suction regulator
- NEMA 1 electrical enclosure
- Through the door disconnect
- PLC Controls
- Variable frequency drive on the thermal fluid pump for user settable delivery pressure
- Pressure relief valve
- Temperature control within +/-1°C
- Expansion tank
- Factory tested prior to shipment



PROGRAMMABLE LOGIC CONTROLLER PROVIDES:

PROGRAMMABILITY

-Software may be customized, transferred from a personal computer and updated via programming key

DISPLAYED INSTRUMENTATION INFORMATION

-Pump discharge pressure and flow
-Compressor suction pressure, temperature and superheat
-Liquid refrigerant temperature and sub-cooling
-Evaporator inlet and outlet temperature
-Compressor pump status

CONTROLLER FUNCTIONS

-Selectable controlled parameter (supply or return temperature)
-Head pressure control via fan motor cycling (air-cooled units)

HIGH TECHNOLOGY

-All alarm situation, values of the monitored parameters and the status of the controlled devices are saved for service/maintenance review
-Troubleshooting information is displayed when circumstances require assistance
-The controller identifies marginal operating conditions and adjusts chiller operation



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OPTIONS AVAILABLE

- Additional memory card for data storage
- Cascade control
- Variable frequency drive speed control
- Class 2, Div II, Type Z purge system
- Finger-safe electrical system
- Stainless steel cabinet
- Chiller only option

SINGLE REFRIGERANT LOOP UNITS DESIGN PARAMETERS													Motor HP to Heat ▶ 90%			
Thermal Fluid: ClearCo 10			Refrigerant R449A										Cond. Water Temp. = 10°C			
Model	Comp HP	Htr kW	200°C	20°C	0°C	-20°C	-35°C	-35°C	-40°C	-60°C	-80°C	-85°C	Pump GPM	KW	Cndr Wtr GPM	FLA
DSFW-0202-C-FCB-S1(425W)	2.0	2	8.85	8.85	5.83	1.93	0.41	NA	NA	NA	NA	NA	14	1.1	8.1	12.6
DSFW-2.504-C-FCB-S1(430W)	2.5	4	11.40	11.40	7.59	2.73	0.80	NA	NA	NA	NA	NA	14	1.1	10.3	13.6
DSFW-3.506-C-FCB-S1(510W)	3.5	6	16.00	16.00	10.40	3.97	1.48	NA	NA	NA	NA	NA	14	1.1	14.0	17.4
DSFW-0506-C-FCB-S1(520W)	5	6	21.50	21.50	15.00	6.15	2.58	NA	NA	NA	NA	NA	14	1.1	18.6	20.3
DSFW-0606-C-FCB-S1(610W)	6.0	6	26.60	26.60	18.50	7.41	3.17	NA	NA	NA	NA	NA	14	1.1	22.3	20.0
DSFW-0612-C-FCB-S1(615W)	6	12	26.60	26.60	18.50	7.41	3.17	NA	NA	NA	NA	NA	14	1.1	22.3	27.5
DSFW-7.512-C-FCB-S1(620W)	7.5	12	32.40	32.40	22.40	9.43	4.22	NA	NA	NA	NA	NA	14	1.1	27.0	30.2
DSFW-1012-C-FCB-S1(625W)	10	12	41.30	41.30	28.60	11.50	5.63	NA	NA	NA	NA	NA	14	1.1	35.6	38.7
DSFW-1324-C-FCB-S1(630W)	13.0	(2) 12	52.00	52.00	32.40	15.70	7.33	NA	NA	NA	NA	NA	14	1.1	45.0	54.8
DSFW-1524-C-FCB-S1(635W)	15	(2) 12	61.80	61.80	38.20	18.20	9.11	NA	NA	NA	NA	NA	14	1.1	53.1	52.4
DSFW-2030-C-FCB-S2(640W)	(2) 10	(2) 15	80.80	80.80	49.70	21.40	7.30	NA	NA	NA	NA	NA	40	6.6	69.3	88.8
DSFW-2636-C-FCB-S2(645W)	2 (13)	(2) 18	92.10	92.10	59.10	27.70	10.70	NA	NA	NA	NA	NA	40	6.6	85.6	98.6
DSFW-3048-C-FCB-S2(650W)	(2) 15	(2) 24	89.40	89.40	64.00	32.70	14.30	NA	NA	NA	NA	NA	40	6.6	91.3	108.7
DSFW-6096-C-FCB-S4(680W)	(4) 15	(4) 24	209.00	209.00	139.00	69.60	34.50	NA	NA	NA	NA	NA	40	6.6	193.7	205.3

Thermal Fluid: ClearCo 5			High T COMPRESSOR ONLY Refrig. [High]: R449A					CASCADE MODE Refrig. [Low]: R508B					Cond. Water Temp. = 10°C			
Model	Comp HP	Htr kW	Net Capacity, kW										Pump		Cndr Wtr	
			200°C	20°C	0°C	-20°C	-30°C	-35°C	-40°C	-60°C	-80°C	-85°C	GPM	KW	GPM	FLA
DSFW-5.502-C-FCB-S2(815W)	2.5/3.5	2	16.50	16.50	10.90	4.51	3.68	2.64	2.64	2.64	1.10	0.76	7	0.5	14.0	15.0
DSFW-7.503-C-FCB-S2(825W)	2.5/5	3	22.10	22.10	15.50	6.69	5.50	6.56	6.56	3.24	1.24	0.86	7	0.5	18.6	18.5
DSFW-9.503-C-FCB-S2(830W)	3.5/6	3	27.20	27.20	19.00	7.95	6.54	7.99	7.99	4.22	1.80	1.29	7	0.5	22.3	21.1
DSFW-1106-C-FCB-S2(910W)	3.5/7.5	6	32.90	32.90	23.00	10.00	8.20	8.50	8.50	4.44	1.90	1.34	7	0.5	27.0	27.7
DSFW-1512-C-FCB-S2(920W)	5/10	12	41.30	41.30	28.60	11.50	9.60	11.60	11.60	5.97	2.31	1.59	14	1.1	35.6	46.7
DSFW-22.512-C-FCB-S2(925W)	7.5/12	12	52.00	52.00	32.40	15.70	7.30	17.60	17.60	9.27	4.15	2.85	14	1.1	45.0	46.8
DSFW-3024-C-FCB-S3(930W)	10/(2)10	(2)12	80.80	80.80	49.70	21.40	16.70	20.00	20.00	8.26	0.76		40	6.6	69.3	84.6
DSFW-4536-C-FCB-S3(950W)	15/(2)15	(2)18	89.40	89.40	69.90	32.70	26.60	31.80	31.80	14.80	3.87	1.67	40	6.6	91.3	111.7

UNITS AVAILABLE FROM BUDZAR INDUSTRIES



Low Temperature Process Chillers to -85°C



Clean Steam Sampling Cart



Standard and Custom Temperature Control Modules



Cold Storage Room



CIP Systems



Reactor Temperature Control Systems from -85°C to +200°C