

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



Refer to www.Budzar.com for ISO Certificate with specific details.



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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		Cndr Wtr	
													GPM	KW	FLA	GPM
DSFW-0202-C-FCB-S1(425W)	2.0	2	9.84	9.84	6.82	2.92	1.40	NA	NA	NA	NA	NA	14	1.1	12.6	8.1
DSFW-2.504-C-FCB-S1(430W)	2.5	4	12.40	12.40	8.58	3.72	1.79	NA	NA	NA	NA	NA	14	1.1	13.6	10.3
DSFW-3.506-C-FCB-S1(510W)	3.5	6	17.00	17.00	11.40	4.96	2.47	NA	NA	NA	NA	NA	14	1.1	17.4	14.0
DSFW-0506-C-FCB-S1(520W)	5	6	22.50	22.50	16.00	7.14	3.57	NA	NA	NA	NA	NA	14	1.1	20.3	18.6
DSFW-0606-C-FCB-S1(610W)	6.0	6	27.60	27.60	19.50	8.40	4.16	NA	NA	NA	NA	NA	14	1.1	20.0	22.3
DSFW-0612-C-FCB-S1(615W)	6	12	27.60	27.60	19.50	8.40	4.16	NA	NA	NA	NA	NA	14	1.1	27.5	22.3
DSFW-7.512-C-FCB-S1(620W)	7.5	12	33.40	33.40	23.40	10.40	5.21	NA	NA	NA	NA	NA	14	1.1	30.2	27.0
DSFW-1012-C-FCB-S1(625W)	10	12	42.30	42.30	29.60	12.50	6.62	NA	NA	NA	NA	NA	14	1.1	38.7	36.6
DSFW-1324-C-FCB-S1(630W)	13.0	(2) 12	53.00	53.00	33.40	16.70	8.32	NA	NA	NA	NA	NA	14	1.1	54.8	45.0
DSFW-1524-C-FCB-S1(635W)	15	(2) 12	62.80	62.80	39.10	19.20	10.10	NA	NA	NA	NA	NA	14	1.1	52.4	53.1
DSFW-2030-C-FCB-S2(640W)	(2) 10	(2) 15	86.80	86.80	55.60	27.30	13.20	NA	NA	NA	NA	NA	40	6.6	88.8	69.3
DSFW-2636-C-FCB-S2(645W)	(2) 13	(2) 18	98.00	98.00	65.00	33.70	16.60	NA	NA	NA	NA	NA	40	6.6	98.6	85.6
DSFW-3048-C-FCB-S2(650W)	(2) 15	(2) 24	95.30	95.30	69.90	38.70	20.20	NA	NA	NA	NA	NA	40	6.6	108.7	91.3
DSFW-6096-C-FCB-S4(680W)	(4) 15	(4) 24	214.00	214.00	145.00	75.50	40.40	NA	NA	NA	NA	NA	40	6.6	205.3	193.7

High T COMPRESSOR ONLY						CASCADE MODE						Cond. Water Temp = 10°C						
Thermal Fluid: ClearCO 5			Refrig. [High]: R449A						Refrig. [LOW]: R508B						Pump		Cndr Wtr	
Model	Comp HP	Htr kW	Net Capacity, kW										GPM	KW	FLA	GPM		
			200°C	20°C	0°C	-20°C	-30°C	-35°C	-40°C	-60°C	-80°C	-85°C						
DSFW-5.502-C-FCB-S2(815W)	2.5/3.5	2	17.00	17.00	11.40	4.96	4.13	3.09	3.09	3.09	1.55	1.21	7	0.5	15.0	14.0		
DSFW-7.503-C-FCB-S2(825W)	2.5/5	3	22.5	22.5	5	7.14	5.95	7.01	7.01	3.69	1.69	1.31	7	0.5	18.5	18.6		
DSFW-9.503-C-FCB-S2(830W)	3.5/6	3	27.60	27.60	19.50	8.40	6.99	8.44	8.44	4.67	2.25	1.74	7	0.5	21.1	22.3		
DSFW-1106-C-FCB-S2(910W)	3.5/7.5	6	33.4	33.4	23.4	10.4	8.69	8.96	8.95	4.89	2.35	1.79	7	0.5	27.7	27.0		
DSFW-1512-C-FCB-S2(920W)	5/10	12	42.30	42.30	29.60	12.50	10.60	12.50	12.50	6.96	3.30	2.58	14	1.1	46.7	35.6		
DSFW-22.512-C-FCB-S2(925W)	7.5/12	12	53	53	33.4	16.7	8.3	18.60	18.60	10.30	5.14	3.84	14	1.1	46.8	45.0		
DSFW-3024-C-FCB-S3(930W)	10/(2)10	(2)12	86.80	86.80	55.60	27.30	22.60	26.00	26.00	14.20	6.70	5.23	40	6.6	84.6	69.3		
DSFW-4536-C-FCB-S3(950W)	15/(2)15	(2)18	95.3	95.3	69.9	38.7	32.5	37.80	37.80	20.70	9.81	7.61	40	6.6	111.7	91.3		

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