MESSER
Gases for Life

CRYOCONTROL™ FTC System.

Process cooling equipment.

CRYOCONTROL PX5

CRYOCONTROL PX20

CRYOCONTROL PX50 and PX100

The CRYOCONTROL™ Fluid Temperature Control (FTC) system from Messer provides a fast and accurate cooling of process fluids. The CRYOCONTROL PX modules are developed for cooling temperatures down to -148 °F (-100 °C). For cooling down to -180 °F (-120 °C) the CRYOCONTROL XLT50 module is available.

Advantages

The CRYOCONTROL FTC system quickly and efficiently reduces process temperatures to between -20 and -180 °F. Additional benefits include:

- Fast and flexible - insensitive to process flow or load variations which leads to a rapid and controlled accuracy of +/- 1 °F
- Compact design – ability to fit into the process without modifications or production disturbances →
- Easy installation and operation - can be installed either indoors or outdoors, and is fully automated
- Friendly to the environment - nitrogen is an inert gas that can be released to the atmosphere or reused in your process without harming the environment. The process is free of chlorofluorocarbons and generates no wastewater or secondary pollution
- Creates a high degree of process control and stability in order to increase product quality, yield, and selectivity

Applications

CRYOCONTROL FTC systems are used widely across Europe and throughout the Americas, efficiently solving cooling demands for a wide variety of customers. Common heat transfer fluids cooled by the system for customers within the pharmaceutical and chemical process industries are:

- Acetone
- Methanol
- SYLTHERM® XLT
- DOWTHERM®
- Limonone
- Brine
- Other heat transfer fluids

CRYOCONTROL Technical data

PM = Process Medium side	PX5	PX20	PX50	PX100	XLT50
N_2 = Nitrogen side	Process data				
Cooling duty[1] [1000 BTU/hr]	17	68	170	340	170
Flow rate[1] [ft^3/h]	70	180	350	710	350
Pressure drop: [2] PM [psi]	14.5	14.5	14.5	14.5	14.5
Pressure drop: N_2 [psi]	43.5	43.5	43.5	43.5	43.5
Volume: [3] PM [ft^3]	0.07	0.21	0.53	1.38	2.47
Min / Max pressure [4]					
PM [psi (g)]	0 / 275	0 / 275	0 / 275	0 / 275	0 / 275
N_2 [psi (g)]	0 / 275	0 / 275	0 / 275	0 / 275	0 / 275
Min / Max temperature [5]					
PM [°F]	-148 / 120	-148 / 120	-148 / 120	-148 / 120	-180 / 120
N_2 [°F]	-320 / 120	-320 / 120	-320 / 120	-320 / 120	-320 / 120
	Dimensions				
Width [in]	35	28	59	59	59
Depth [in]	31	39	53	53	53
Height [in]	26	45	59	59	69
Weight [lb]	130	490	1250	1750	1980
	Control system, Allen-Bradley CompactLogix				
Operator panel	Panel View 7	Panel View 7	Panel View 7	Panel View 7	Panel View 7
	Connections				
PM: inlet flange	0.75"	1"	1"	2"	2"
outlet flange	0.75"	1"	1"	2"	2"
N_2: inlet flange	0.75"	1"	1"	1"	1"
outlet flange	0.75"	1"	1"	1.5"	1"
	Utilities				
Electrical	120/230 V, 10 A, 50/60 Hz				
Compressed air [psi (g)]	72 - 102	72 - 102	72 - 102	72 - 102	72 - 102
Dew point [°F]	< -4	< -4	< -4	< -4	< -4

- These values are nominal values. For most applications, the system can handle loads that range anywhere from 5% to a full 100% of these nominal values. In some cases, the upper load limit can even exceed 100%.
- Approximate pressure drop at nominal flow (dependant on temperature and process medium used).
- Volume of process medium system inside the unit.
- Minimum / Maximum allowable pressure for which the equipment is designed.
- Minimum / Maximum allowable temperature for which the equipment is designed. Valid for standard units. Option for maximum temperature of +212 °F available.

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