Bulletin 520

PLATE CHILLER PACKAGE

Featuring: New Matrix LLC Level Control and Level Probe

Matrix///



Technology for the Future, Available Today!



MPC Semi-Welded Plate Chiller Package

The MPC Semi-Welded Plate Chiller Package incorporates semi-welded plate heat exchanger technology with split-flow surge drum design and state of the art level controls into a complete package which reduces installation time and cost compared to field fabricated units. The unit comes complete with oil management system and proportional liquid feed assembly requiring only two refrigerant connections in the field.

Typical Applications

 Chilled water and glycol solutions for use in process cooling and air conditioning

Advantages

- High heat transfer rate for close approach temperatures and improved operating efficiency
- Low refrigerant charge



Matrix LLC Control

Reads 4-20mA signal from level probe and provides visual readout in digital and color bar graph form on panel.

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- Adjustable high and low level alarms and cut outs.
- Door-mounted (7) button keypad. No need to open enclosure to change settings.
- Communications via industry standard protocol MODBUS-RTU over RS-485.
 - Factory mounted and wired requiring only a single power connection in the field.

Semi-Welded Plate Heat Exchanger

- Maximum efficiency with low refrigerant charge
- Heat exchanger may be supplied by customer

ASME 250 psig Horizontal Surge Drum with Dual Relief Assembly

- Split-flow design to • reduce overall size
- Stainless steel nameplate bracket and standoff to prevent corrosion

Proportional Liquid Feed Assembly

- Modulating valve minimizes vessel pressure surges and liquid line hammer
- Backup solenoid valve or UPS (uninterrupted power supply) provides positive shutoff in the event of a power failure

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Options Conventional on/off solenoid

- and hand expansion valve liquid feed assemblies (single or dual)
- 1.5kw oil pot heater
- Seismic design
- · Post weld heat treatment
- · Radiography of pipe welds
- Suction pressure regulator

Liquid Level Column

- Level indicating column with RVS electronic level probe
- High level shutdown float switch for compressor protection



SELECTION PROCEDURE

STEP 1: After determining plate heat exchanger selection please select PC package model from Table 1 with capacity equal to or greater than the required capacity at the given chiller suction temperature.

STEP 2: From Table 2 or 3, select the liquid feed assembly. (Proportional motorized valve or Solenoid/Hand expansion)

WHEN ORDERING PLEASE SPECIFY:

Capacity in TR and operating temperature. Package Model Number.

Liquid Feed Control model number.

If Plate Heat Exchanger is customer supplied - please specify model number and provide specifications and dimensional drawings.

Table 1

MPC PLATE CHILLER PACKAGE CAPACITIES

	TONS OF REFRIGERATION R-717							
MODEL	HIGH STAGE SUCTION TEMPERATURE (°F)							
NO.	+40°F	+33°F	+30°F	+20°F	+10°F	0°F	-10°F	
MPC-20	132	120	122	111	101	91	70	
MPC-24	186	180	172	157	143	128	110	
MPC-30	307	290	284	260	235	211	180	
MPC-36	458	430	422	386	345	325	270	
MPC-42	630	600	580	530	475	420	370	
MPC-48	830	790	770	700	630	560	490	
MPC-54	1110	1050	1030	930	840	745	650	
MPC-60	1380	1300	1275	1160	1040	920	810	

Ratings based on 96°F condensing temperature.

Table 2 SINGLE FEED ASSEMBLY - MOTORIZED VALVE

MODEL NO.	VALVE SIZE	LINE SIZE	CAPACITY (TR)
PLF075	3/4"	1"	165
PLF100	1"	1-1/4"	290
PLF125	1-1/4"	1-1/2"	415
PLF150	1-1/2"	2"	910
PLF200	2"	2-1/2"	1210
PLF300	3"	4"	2640

Sealed motor Liquid Feed Assembly (assembled) including motorized proportional feed valve, solenoid valve (120 Volt) with strainer and flanges, two globe isolation valves, and one angle bypass valve.

Table 3 SINGLE FEED ASSEMBLY - HAND EXPANSION

MODEL NO.	SIZE	CAPACITY (TR)
6LF075	3/4"	60
6LF100	1"	105
6LF125	1-1/4"	225
6LF150	1-1/2"	350
6LF200	2"	800
6LF250	2-1/2"	1200
6LF300	3"	1870

Liquid Feed Assembly (assembled) including solenoid valve, (120 Volt) with strainer and flanges, one globe hand expansion valve, two globe shut-off valves, and one angle bypass valve.



MPC PLATE CHILLER PACKAGE





	VESSEL	VESSEL	PACKAGE DIMENSIONS			SUCTION	LIQUID	PACKAGE
MODEL	DIAMETER	LENGTH	HEIGHT (A)	WIDTH (B)	LENGTH (C)	OUTLET	INLET	WEIGHT*
MPC-20	20"	96"	107"	66"	121"	4"	1-1/4"	2000
MPC-24	24"	96"	109"	70"	121"	5"	1-1/4"	2100
MPC-30	30"	96"	113"	72"	121"	6"	1-1/2"	2300
MPC-36	36"	96"	146"	84"	123"	6"	2"	2800
MPC-42	42"	96"	152"	87"	133"	8"	2"	3300
MPC-48	48"	120"	158"	90"	158"	8"	2"	4000
MPC-54	54"	144"	164"	95"	154"	8"	2-1/2"	6000
MPC-60	60"	144"	170"	105"	178"	10"	3"	6500

* Package weight less plate heat exchanger.

Dimensions are approximate and will vary with heat exchanger selection.

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