



Legacy Chiller Systems, Inc.  
www.Legacychillers.com  
877-988-5464

# AIR-COOLED CHILLERS



## **SCROLL - R407C** PACKAGED SYSTEMS

EPA COMPLIANT

# NOMENCLATURE

**Example:** P AC T 30 S 3 - T3 - Z

**P** P = Packaged ES = Evaporator Section CS = Condenser Section

**AC** AC = Air-Cooled Condenser

**T** T = Tank Model

**30** Nominal Capacity MBTUH Ex. 12 = 12,000 BTUH, etc.

**S** S = Single Circuit Unit D = Dual Circuit Unit M = Three Circuit Unit

**3** 1 = R134a 3= R407C 6 = R404A, R507

**T3** Electrical Requirement  
 S2 = 208/230-1-60 S6 = 220-1-50  
 T3 = 208/230-3-60 T7 = 200/208-3-50  
 S4 = 460-1-60 T9 = 380-3-50  
 T4 = 460-3-60  
 T5 = 575-3-60

**Z** Compressor Type Z = Scroll



Now Available on all PACT,EST and PWCT Scroll models. See Supplemental section of this catalog section for more information

**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.





Consult factory on sizing chillers with glycol or any fluid other than water.

## AIR-COOLED SELECTION PROCEDURES

To properly select an air-cooled packaged chiller, the following information must be known:

1. The required cooling capacity, BTUH.
2. Delta T of entering and leaving fluid temperatures.
3. Fluid factor (ex. water = 500).
4. GPM of process fluid to be circulated.
5. Design ambient air temperature.

If you know any three of the items 1 through 4 above, you can calculate the fourth by using the formulas below.

### For 100% water:

Cooling capacity (in BTUH) = GPM x Delta T x 500

$$\text{GPM} = \frac{\text{Capacity (in BTUH)}}{\text{Delta T} \times 500}$$

$$\text{Delta T} = \frac{\text{Capacity (in BTUH)}}{\text{GPM} \times 500}$$

### Sample selection:

Select an air-cooled, packaged chiller to cool 6.5 GPM of 100% water from 54°F to 44°F. Design ambient air temperature 95°F.

### Find:

Air-cooled chiller model.

### Solution:

1. Chilled fluid Delta T = 54°F - 44°F = 10°F
2. Capacity (in BTUH) = 6.5 GPM x 10°F Delta T x 500 = 32,500 BTUH
3. From the PAC chiller capacity tables, it can be determined that the PAC30S has the capacity to meet the requirements.

# 12S - 60S SCROLL CHILLERS

## Capacity Table

MODEL	COMPRESSOR	LWT °F	80			90			95			100			105		
			TONS	KW	EER												
12S	ZR16KCE	42.0	1.3	1.2	9.1	1.2	1.3	8.0	1.2	1.4	7.5	1.2	1.5	7.0	1.1	1.6	6.6
		44.0	1.3	1.2	9.3	1.2	1.3	8.3	1.2	1.4	7.7	1.2	1.5	7.2	1.2	1.6	6.8
		45.0	1.3	1.2	9.5	1.3	1.3	8.4	1.2	1.4	7.8	1.2	1.5	7.3	1.2	1.6	6.9
		50.0	1.5	1.2	10.3	1.4	1.3	9.2	1.4	1.4	8.5	1.3	1.5	8.0	1.3	1.6	7.5
18S	ZB15KCE	42.0	1.8	1.6	9.9	1.7	1.8	8.6	1.6	1.9	7.9	1.6	2.0	7.3	1.5	2.2	6.8
		44.0	1.8	1.6	10.3	1.7	1.8	8.9	1.7	1.9	8.2	1.6	2.1	7.6	1.6	2.2	7.1
		45.0	1.9	1.6	10.5	1.8	1.8	9.1	1.7	1.9	8.4	1.7	2.1	7.8	1.6	2.2	7.3
		50.0	2.0	1.6	11.4	2.0	1.8	10.0	1.9	2.0	9.2	1.8	2.1	8.6	1.8	2.2	8.0
24S	ZB19KCE	42.0	2.1	1.7	11.0	1.9	2.0	9.4	1.9	2.1	8.7	1.8	2.2	8.0	1.8	2.4	7.3
		44.0	2.2	1.8	11.5	2.0	2.0	9.9	2.0	2.1	9.2	1.9	2.2	8.4	1.9	2.4	7.7
		45.0	2.2	1.8	11.7	2.1	2.0	10.1	2.0	2.1	9.3	1.9	2.2	8.6	2.0	2.4	7.9
		50.0	2.4	1.8	12.8	2.3	2.0	11.0	2.2	2.1	10.2	2.2	2.3	9.4	2.1	2.4	8.7
30S	ZB26KCE	42.0	2.8	2.5	11.0	2.6	2.8	9.3	2.5	3.0	8.6	2.4	3.2	7.9	2.4	3.4	7.3
		44.0	2.9	2.5	11.4	2.7	2.9	9.7	2.7	3.0	9.0	2.5	3.2	8.2	2.5	3.4	7.6
		45.0	2.9	2.5	11.6	2.8	2.9	9.9	2.7	3.0	9.2	2.6	3.2	8.3	2.5	3.4	7.7
		50.0	3.2	2.6	12.6	3.1	2.9	10.8	3.0	3.1	10.0	2.9	3.3	9.2	2.8	3.4	8.5
36S	ZB30KCE	42.0	3.4	3.2	11.1	3.3	3.6	9.6	3.1	3.8	8.9	3.1	4.0	8.3	3.0	4.2	7.7
		44.0	3.6	3.3	11.5	3.4	3.6	10.0	3.2	3.8	9.3	3.2	4.0	8.5	3.1	4.2	8.0
		45.0	3.7	3.3	11.7	3.5	3.6	10.1	3.3	3.8	9.4	3.3	4.0	8.7	3.2	4.2	8.1
		50.0	4.0	3.3	12.5	3.8	3.7	10.9	3.6	3.9	10.2	3.6	4.1	9.4	3.5	4.3	8.8
48S	ZB38KCE	42.0	4.5	3.8	12.7	4.3	4.2	11.0	4.2	4.4	10.2	4.1	4.7	9.5	4.0	4.9	8.8
		44.0	4.7	3.8	13.0	4.4	4.2	11.3	4.2	4.5	10.5	4.2	4.7	9.7	4.1	4.9	9.1
		45.0	4.8	3.8	13.2	4.5	4.2	11.4	4.4	4.5	10.6	4.3	4.7	9.8	4.2	4.9	9.2
		50.0	5.3	3.9	14.2	5.0	4.4	12.4	4.9	4.6	11.5	4.8	4.8	10.7	4.6	5.1	10.0
50S	ZB42KCE	42.0	4.7	4.6	10.9	4.5	5.1	9.6	4.4	5.4	9.0	4.3	5.6	8.4	4.2	5.9	7.9
		44.0	4.8	4.7	11.3	4.7	5.1	9.9	4.6	5.4	9.3	4.5	5.6	8.7	4.3	5.9	8.1
		45.0	4.9	4.7	11.5	4.8	5.1	10.1	4.7	5.4	9.5	4.6	5.7	8.9	4.5	5.9	8.3
		50.0	5.4	4.7	12.4	5.2	5.2	11.0	5.1	5.5	10.3	5.0	5.7	9.7	4.9	6.0	9.1
60S	ZB45KCE	42.0	5.1	4.5	12.3	4.9	5.0	10.6	4.7	5.3	9.8	4.6	5.6	9.1	4.5	5.9	8.4
		44.0	5.3	4.5	12.7	5.0	5.1	10.9	4.9	5.3	10.1	4.8	5.6	9.3	4.7	6.0	8.7
		45.0	5.4	4.5	12.8	5.2	5.1	11.0	5.0	5.4	10.3	4.9	5.7	9.4	4.7	6.0	8.8
		50.0	5.9	4.6	13.7	5.6	5.2	11.8	5.5	5.5	11.1	5.3	5.8	10.2	5.2	6.1	9.5

- Capacities on this chart are based on refrigerant R407C. Low ambient or lower leaving water temperatures can require the use of a glycol solution or other fluid blends. These solutions affect unit capacities. Please consult the factory on these or other special fluids.
- KW input is for compressor(s) only.
- EER = Energy Efficiency Ratio (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s) and control power.

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## Capacity Table

## 70S - 380S SCROLL CHILLERS

MODEL	COMPRESSOR	LWT °F	80			90			95			100			105		
			TONS	KW	EER	TONS	KW	EER									
70S	ZB58KCE	42.0	7.1	6.0	12.2	6.7	6.6	10.5	6.5	7.0	9.7	6.3	7.4	9.0	6.2	7.8	8.3
		44.0	7.4	6.0	12.5	7.0	6.7	10.9	6.8	7.0	10.1	6.6	7.4	9.3	6.4	7.9	8.7
		45.0	7.6	6.1	12.8	7.2	6.7	11.2	7.0	7.1	10.3	6.8	7.5	9.6	6.6	7.9	8.9
		50.0	8.2	6.2	13.8	7.8	6.8	12.1	7.6	7.2	11.2	7.4	7.6	10.4	7.2	8.0	9.6
80S	ZB66KCE	42.0	7.8	6.8	11.9	7.4	7.5	10.5	7.2	7.9	9.8	7.0	8.3	9.0	6.8	8.7	8.4
		44.0	8.1	6.8	12.3	7.7	7.6	10.8	7.5	7.9	10.1	7.3	8.4	9.3	7.2	8.8	8.7
		45.0	8.2	6.9	12.5	7.8	7.6	11.1	7.7	8.0	10.2	7.4	8.4	9.5	7.2	8.8	8.9
		50.0	9.0	7.0	13.5	8.7	7.7	11.9	8.5	8.1	11.1	8.2	8.6	10.3	8.0	9.0	9.6
90S	ZB76KCE	42.0	9.1	8.2	11.8	8.7	9.1	10.3	8.5	9.6	9.6	8.2	10.0	8.9	8.0	10.6	8.3
		44.0	9.5	8.3	12.2	9.0	9.2	10.6	8.8	9.6	9.9	8.6	10.1	9.2	8.3	10.7	8.5
		45.0	9.7	8.3	12.4	9.2	9.2	10.8	9.0	9.7	10.1	8.7	10.2	9.4	8.5	10.7	8.7
		50.0	10.6	8.5	13.3	10.1	9.4	11.6	9.8	9.9	10.8	9.6	10.4	10.1	9.3	10.9	9.4
120S	ZB95KCE	42.0	11.4	10.2	12.2	10.8	11.3	10.5	10.5	11.9	9.8	10.2	12.6	9.0	9.9	13.3	8.3
		44.0	11.8	10.3	12.6	11.2	11.4	10.8	10.9	12.0	10.1	10.5	12.7	9.2	10.2	13.4	8.5
		45.0	12.1	10.3	12.8	11.4	11.5	10.9	11.2	12.1	10.2	10.7	12.8	9.4	10.5	13.4	8.7
		50.0	13.3	10.6	13.7	12.6	11.8	11.8	12.3	12.3	11.1	11.9	13.1	10.1	11.6	13.7	9.4
180S	ZB114KCE	42.0	42.0	12.3	11.3	12.3	13.5	9.9	11.7	14.2	9.2	11.7	14.9	8.6	11.3	15.7	7.9
		44.0	13.5	12.4	11.7	12.8	13.7	10.2	12.2	14.3	9.5	12.2	15.0	8.8	11.8	15.8	8.2
		45.0	13.8	12.5	11.9	13.1	13.7	10.3	12.4	14.4	9.7	12.4	15.1	9.0	12.0	15.9	8.3
		50.0	15.2	12.9	12.7	14.4	14.1	11.1	13.7	14.7	10.5	13.7	15.5	9.8	13.3	16.2	9.1
250S	ZR250KCE	42.0	17.7	16.0	11.7	16.9	17.5	10.2	16.4	18.5	9.5	15.9	19.5	8.8	15.4	20.6	8.1
		44.0	18.4	16.2	12.1	17.6	17.8	10.6	17.1	18.6	9.8	16.5	19.7	9.0	16.1	20.8	8.4
		45.0	18.8	16.2	12.3	17.8	17.8	10.7	17.5	18.7	10.0	16.8	19.8	9.2	16.4	20.8	8.6
		50.0	20.6	16.5	13.2	19.6	18.3	11.5	19.0	19.2	10.7	18.4	20.3	9.9	18.0	21.3	9.2
300S	ZR300KCE	42.0	21.4	19.3	12.0	20.4	21.3	10.5	19.9	22.2	9.8	19.4	23.3	9.1	18.8	24.5	8.5
		44.0	22.3	19.6	12.3	21.3	21.5	10.8	20.7	22.5	10.1	20.2	23.6	9.4	19.6	24.8	8.7
		45.0	22.8	19.7	12.5	21.7	21.6	10.9	21.1	22.5	10.2	20.5	23.7	9.5	20.0	24.9	8.9
		50.0	25.0	20.3	13.4	23.8	22.2	11.7	23.2	23.3	11.0	22.5	24.4	10.2	22.0	25.5	9.5
380S	ZR380KCE	42.0	25.2	25.1	10.8	23.9	27.6	9.4	23.1	29.1	8.7	22.6	30.4	8.1	21.9	31.6	7.6
		44.0	26.2	25.7	11.1	25.0	27.9	9.7	24.2	29.3	9.0	23.5	30.6	8.4	22.9	31.8	7.9
		45.0	26.6	25.9	11.3	25.3	28.0	9.9	24.6	29.4	9.1	23.9	30.7	8.6	23.3	31.9	8.0
		50.0	29.0	26.3	12.0	27.8	28.7	10.5	26.9	29.9	9.8	26.3	31.3	9.2	25.6	32.5	8.7

- Capacities on this chart are based on refrigerant R407C. Low ambient or lower leaving water temperatures can require the use of a glycol solution or other fluid blends. These solutions affect unit capacities. Please consult the factory on these or other special fluids.
- KW input is for compressor(s) only.
- EER = Energy Efficiency Ratio (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s) and control power.



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# 72D - 180D SCROLL CHILLERS

## Capacity Table

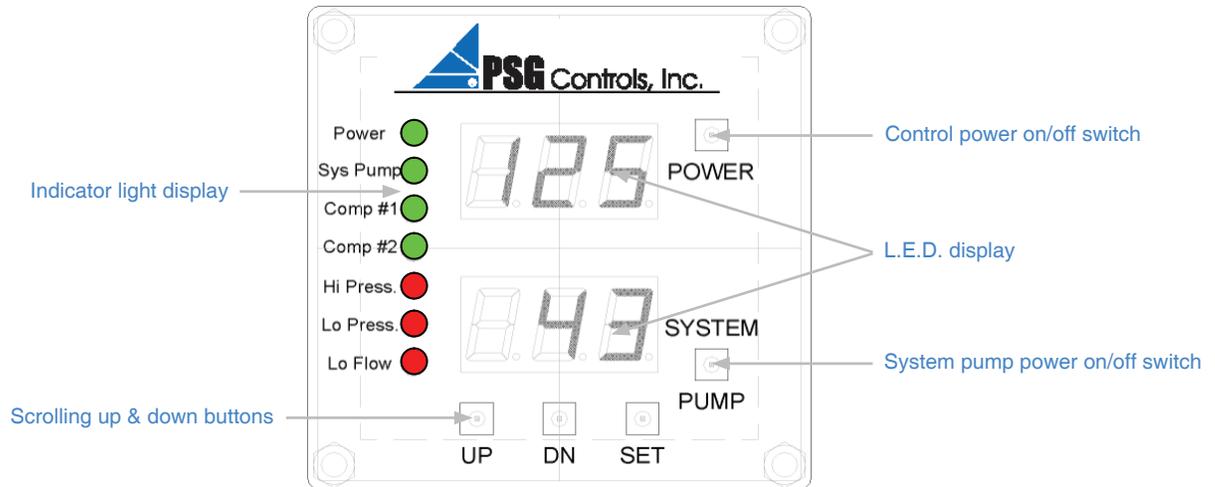
MODEL	COMPRESSOR	LWT °F	80			90			95			100			105		
			TONS	KW	EER												
72D	ZB30KCE	42.0	6.8	6.5	10.9	6.4	7.2	9.4	6.3	7.5	8.8	6.1	7.9	8.2	5.9	8.3	7.5
		44.0	7.1	6.5	11.2	6.7	7.2	9.7	6.5	7.6	9.1	6.3	8.0	8.4	6.1	8.4	7.8
		45.0	7.2	6.6	11.4	6.8	7.3	9.9	6.7	7.6	9.2	6.4	8.0	8.6	6.2	8.4	7.9
		50.0	7.9	6.7	12.3	7.5	7.4	10.6	7.3	7.8	10.0	7.1	8.2	9.3	6.9	8.6	8.6
96D	ZB38KCE	42.0	9.0	7.4	12.8	9.4	8.2	11.1	8.3	8.7	10.3	8.1	9.1	9.6	7.9	9.6	8.9
		44.0	9.4	7.5	13.2	9.7	8.3	11.4	8.7	8.7	10.7	8.4	9.2	9.9	8.2	9.7	9.2
		45.0	9.5	7.5	13.4	9.9	8.3	11.6	8.8	8.7	10.9	8.6	9.2	10.1	8.4	9.7	9.4
		50.0	10.4	7.7	14.4	9.9	8.5	12.5	9.7	8.9	11.7	9.4	9.4	10.8	9.2	9.9	10.1
100D	ZB42KCE	42.0	9.3	9.1	11.1	9.0	10.0	9.7	8.8	10.5	9.1	8.6	11.1	8.5	8.4	11.6	7.9
		44.0	9.7	9.2	11.4	9.3	10.1	10.1	9.1	10.6	9.4	8.9	11.1	8.8	8.7	11.7	8.3
		45.0	9.9	9.2	11.6	9.5	10.1	10.2	9.3	10.6	9.6	9.1	11.1	9.0	8.9	11.7	8.4
		50.0	10.7	9.3	12.5	10.3	10.2	11.1	10.1	10.7	10.3	9.9	11.3	9.7	9.8	11.8	9.1
120D	ZB45KCE	42.0	10.1	8.9	12.2	9.6	9.9	10.6	9.3	10.5	9.7	9.1	11.1	9.0	8.8	11.7	8.3
		44.0	10.5	9.0	12.5	10.0	10.0	10.9	9.8	10.6	10.0	9.5	11.2	9.3	9.2	11.8	8.6
		45.0	10.6	9.0	12.7	10.2	10.0	11.1	9.9	10.6	10.2	9.7	11.2	9.5	9.5	11.8	8.8
		50.0	11.7	9.3	13.6	11.2	10.2	11.9	10.9	10.9	11.0	10.6	11.5	10.2	10.3	12.1	9.5
140D	ZB58KCE	42.0	13.8	12.0	12.7	13.1	13.4	10.9	12.7	14.1	10.1	12.3	14.9	9.3	12.0	15.8	8.5
		44.0	14.4	12.1	13.1	13.6	13.5	11.3	13.2	14.2	10.4	12.8	15.0	9.6	12.4	15.9	8.8
		45.0	14.6	12.2	13.3	13.9	13.5	11.4	13.5	14.3	10.6	13.1	15.1	9.7	12.8	15.9	9.0
		50.0	16.0	12.4	14.3	15.3	13.8	12.3	14.8	14.5	11.4	14.4	15.4	10.5	14.0	16.2	9.8
160D	ZB66KCE	42.0	15.4	13.7	12.6	14.7	15.2	10.9	14.3	16.0	10.1	13.8	16.7	9.3	13.5	17.8	8.7
		44.0	16.1	13.9	13.0	15.3	15.4	11.2	14.9	16.1	10.6	14.5	17.0	9.6	14.1	17.9	8.9
		45.0	16.5	13.9	13.2	15.6	15.4	11.4	15.3	16.2	10.8	14.8	17.1	9.8	13.6	18.0	9.1
		50.0	18.0	14.3	14.1	17.1	15.9	12.2	16.8	16.6	11.4	16.3	17.5	10.5	15.9	18.4	9.8
180D	ZB76KCE	42.0	17.8	16.7	12.0	16.9	18.5	10.4	16.4	19.4	9.7	16.1	20.4	9.0	15.6	21.5	8.3
		44.0	18.5	16.9	12.3	17.6	18.6	10.7	17.2	19.6	10.0	16.8	20.6	9.3	16.3	21.7	8.6
		45.0	18.8	17.0	12.5	17.9	18.7	10.9	17.5	19.7	10.1	17.0	20.7	9.4	16.5	21.8	8.7
		50.0	20.6	17.4	13.4	19.6	19.2	11.6	19.2	20.2	10.9	18.8	21.2	10.1	18.2	22.3	9.3

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## MICROPROCESSOR FEATURES



### Standard Features

- Control operates to a +/- 1°F accuracy
- Powered from the chiller 24 volt control circuit. No high voltage interference.
- 1 or 2 compressor control capability
- Operates and displays in °F and °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 and 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 safety faults
  - a) High fluid temperature outlet alarm  
*Display only - does not shut the chiller down*
  - b) Low fluid temperature outlet alarm  
*Shuts down the chiller and requires manual reset*
  - c) High refrigerant pressure  
*Shuts down the chiller and requires manual reset*
  - d) Low refrigerant pressure  
*Shuts down the chiller and requires manual reset*
  - e) Low water flow through evaporator  
*Shuts down the chiller and automatically resets when flow is restored*
- Monitors and logs compressor run hours

**Standard Features** *(all models)*

- **ETL listed**
- **Microprocessor controller** *(see page 9 for details)*
- **STAINLESS STEEL**, brazed plate evaporator with 1/2" insulation and secured in a steel bracket
- **Shell and tube 180S to 600D models**
- **Scroll** compressor with crankcase heater
- **Suction accumulator**
- **Water flow switch**
- **Hot gas by-pass capacity control**
- **24V control transformer**
- Direct drive condenser fan motor
- Rust resistant, high CFM, aluminum condenser fan blade
- Condenser(s): copper tube/aluminum fin
- Compressor motor contactor
- Condenser motor and control circuit fusing
- Painted, galvanized sheet metal cabinet
- 1/2" insulation on all water and refrigerant lines
- Liquid line drier, sightglass, solenoid, TXV
- Complete refrigerant charge from factory

**Tank Models Only**

- **STAINLESS STEEL** storage tank with 3/4" insulation
- Fused, **STAINLESS STEEL** re-circulation pump for tank operation with ball valve and cleanable strainer
- Tank pressure relief valve, vent and drain connections


**PACT60S Models** *(shown)*
**Available Options** *(most models)*

- **ChillerGuard® Internet Interface Device**
- **Remote microprocessor panel**
- 4 year extended compressor warranty
- Casters *(factory mounted)*
- 115 volt (rain tight) service outlet
- Fused disconnect
- Phase monitor
- **Compressor fusing**
- Fan cycle control on PAC90 and 120 units only (+40°F)
- Variable fan speed control (+20°F)
- Flooded condenser with receiver/head pressure control (-20°F)
- Heated, flooded condenser with receiver/head pressure control (-20°F)
- Factory installed evaporator heat tape freeze protection thermostatically controlled
- Water pressure gauge set
- Fused, **STAINLESS STEEL** system process pump
- Pump suction isolation valve
- Dual system pump with manual changeover
- Dual system pump with auto changeover
- Low flow by-pass valve
- "Gold" finned condenser coil *(coastal protection)*
- "Copper" finned condenser coil *(coastal protection)*
- Heresite-coated condenser coil *(coastal protection)*
- Semi-hermetic compressor
- Shell and tube chiller barrel
- Water flow meter
- Auto city water make up solenoid
- Auto city water changeover panel with 5 micron filter
- Special piping for de-ionized and reverse osmosis water systems

**Tank Models Only**

- Storage tank sight glass
- Tank low liquid level indicator with dry contacts

# PACT

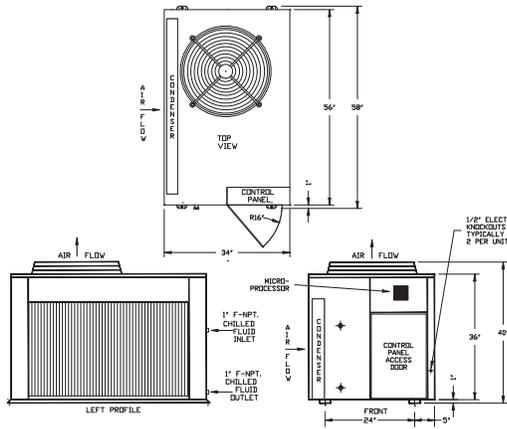
R407C Packaged, Air-Cooled Chillers with Tank

## Dimensional and Electrical Specifications

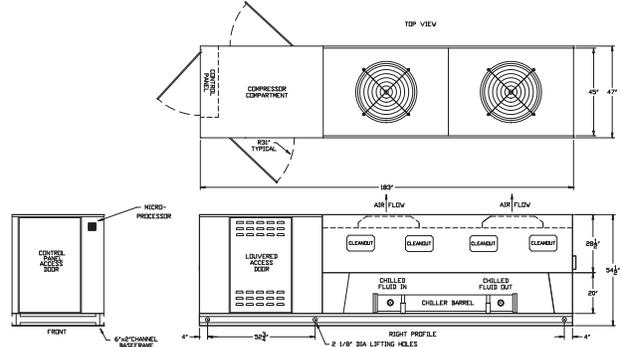
	MODEL	BTUH @ 95°F AMB. 45°F Lwt	LENGTH IN.	WIDTH IN.	HEIGHT IN.	TANK GAL.	FLUID CONN.	COMPRESSOR		RLA EA	LRA EA	FAN MOTOR		EVAP. PUMP FLA	MCA	M.O.P.	WT. LBS.													
								QTY	HP			QTY	FLA EA.																	
SINGLE	12S3-S2-Z	14,000	36	34	60	30	3/4" FPT	1	1.3	10	42	1	3.3	5.1	25	30	550													
	18S3-S2-Z	18,000																3.3	5.1	30	40									
	18S3-T3-Z																					2.0	8.9	55	3.3	5.1	20	25		
	18S3-T4-Z																												4.3	27
	24S3-S2-Z																					22,000	2.5	15.7	73	3.3	5.1	30		
	24S3-T3-Z	8.2																63	3.3	5.1	20								25	
	24S3-T4-Z																													4.3
	30S3-S2-Z	28,800																3.5	20.7	127	3.3	5.1	35	50						
	30S3-T3-Z																								13.9	88	3.3	5.1	30	35
	30S3-T4-Z																													
	30S3-T5-Z																								5.0	34	1.72	0.72	15	15
	36S3-S2-Z	36,000																4	25.0	132	3.3	5.1	40	60						
	36S3-T3-Z		15.0	115	3.3	5.1	30	40																						
	36S3-T4-Z								7.4	48	1.6	1.3	15	15																
	36S3-T5-Z		6.4	40	1.72	0.72	15	15																						
	48S3-S2-Z	49,200							5	30.1	175	3.3	5.1	50	70															
	48S3-T3-Z		20.7	115	3.3	5.1	35	50																						
	48S3-T4-Z															8.9	63	1.6	1.3	15	20									
	48S3-T5-Z		7.1	50	1.72	0.72	15	15																						
	50S3-S2-Z	51,600							5	27.9	129	3.3	5.1	45	70															
	60S3-T3-Z		20.7	156	3.3	5.1	35	50																						
	60S3-T4-Z															11.5	70	1.6	1.3	20	25									
	60S3-T5-Z		7.9	54	1.72	0.72	15	20																						
	70S3-T3-Z	75,600							8	32.1	195	3.3	6.7	60	80															
70S3-T4-Z	16.4		95	1.6	1.7	25	35																							
70S3-T5-Z								12.0								80	1.72	1	20	30										
80S3-T3-Z	84,000		9	33.6	225	3.3	7.9														60	80								
80S3-T4-Z		17.3						114	1.6	2.0	30	40																		
80S3-T5-Z													13.5	80	1.72	1.6	25	35												
90S3-T3-Z		98,400						10	41.4	239	3.3	10.0							70	100										
90S3-T4-Z	19.2		125	1.6	2.8	30	45																							
90S3-T5-Z													13.8	80	1.72	1.8	25	35												
120S3-T3-Z	122,400		12	55.0	300	3.3	10.0														90	125								
120S3-T4-Z		25.7						150	1.6	2.8	40	60																		
120S3-T5-Z													20.7	109	1.72	1.8	35	50												
72D3-S2-Z		73,200						4	25.0	132	3.3	6.7							70	90										
72D3-T3-Z	15.0		115	3.3	6.7	50	60																							
72D3-T4-Z													7.4	48	1.6	1.7	25	25												
72D3-T5-Z	6.4		40	1.72	1	20	25																							
96D3-S2-Z		96,000						5	30.1	175	3.3	10.0	90	110																
96D3-T3-Z	20.7		115	3.3	10.0	70	80																							
96D3-T4-Z															8.9	63	1.6	2.8	30	35										
96D3-T5-Z	7.1		50	1.72	1.8	25	25																							
100D3-S2-Z		102,000						5	27.9	129	3.3	10.0	80	100																
120D3-T3-Z	20.7		156	3.3	10.0	70	80																							
120D3-T4-Z															11.5	70	1.6	2.8	35	40										
120D3-T5-Z	7.9		54	1.72	1.8	25	30																							
140D3-T3-Z		147,000						8	32.1	195	3.3	10.5	90	110																
140D3-T4-Z	16.4		95	1.6	3.2	45	50																							
140D3-T5-Z															12.0	80	1.72	2.3	35	40										
160D3-T3-Z	167,000		9	33.6	225	3.3	7.9														100	110								
160D3-T4-Z		17.3						114	1.6	2.0	45	60																		
160D3-T5-Z													13.5	80	1.72	1.6	40	45												
180D3-T3-Z		190,800						10	41.4	239	3.3	5.6							110	125										
180D3-T4-Z	19.2		125	1.6	2.8	50	60																							
180D3-T5-Z													13.8	80	1.72	1.8	40	50												

Legacy Chiller Systems, Inc.  
www.Legacychillers.com  
877-988-5464

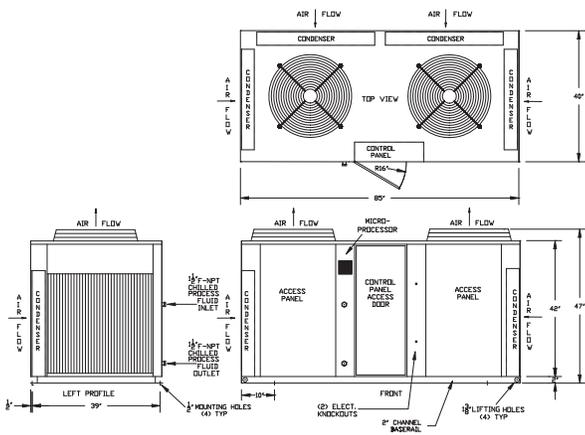




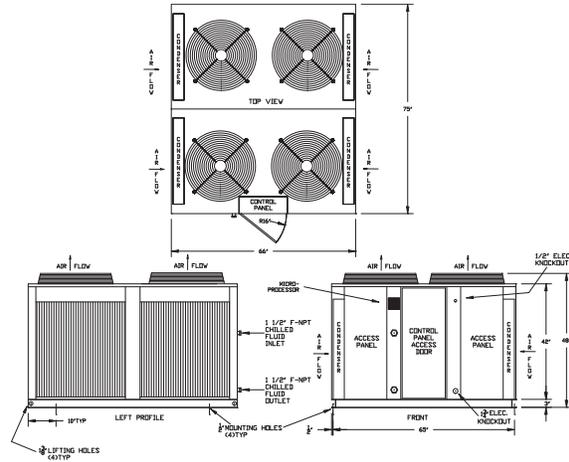
PAC36S - 60S



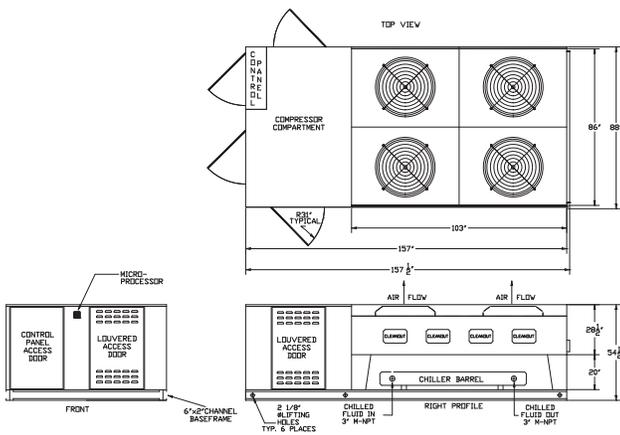
PAC380S



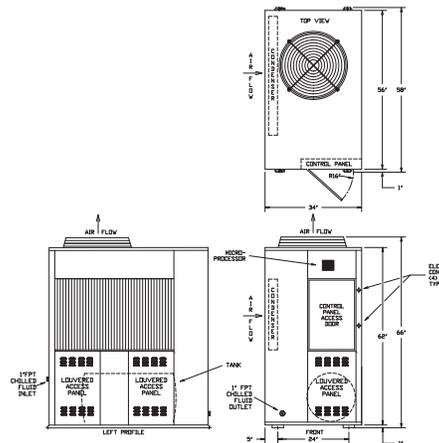
PAC140D - 180D



PAC240D



PAC500D



PACT36S, 48S, 50S, & 60S

## GLYCOL FACTOR TABLES

**PROPYLENE GLYCOL CAPACITY CORRECTION FACTOR TABLE**

PERCENT PROPYLENE GLYCOL BY WEIGHT	15%	20%	25%	30%	35%	40%	50%
FREEZING POINT IN °F	24	18	15	9	5	-5	-30
CAPACITY FACTOR MULTIPLIER*	0.992	0.986	0.972	0.960	0.950	0.928	0.878
PRESSURE DROP MULTIPLIER	1.04	1.08	1.13	1.21	1.26	1.47	2.79

**ETHYLENE GLYCOL CAPACITY CORRECTION FACTOR TABLE**

PERCENT ETHYLENE GLYCOL BY WEIGHT	10%	15%	20%	25%	30%	35%	40%
FREEZING POINT IN °F	25	21	17	11	5	0	-10
CAPACITY FACTOR MULTIPLIER*	0.98	0.96	0.95	0.93	0.92	0.91	0.89
PRESSURE DROP MULTIPLIER	1.08	1.11	1.16	1.21	1.27	1.32	1.38

\* At standard ARI 590 conditions: 54°F entering fluid temperature, 44°F leaving fluid temperature, 95°F ambient temperature, 0.0005 fouling.



Legacy Chiller Systems, Inc.  
[www.Legacychillers.com](http://www.Legacychillers.com)  
 877-988-5464

# Scroll Series SUPPLEMENTAL INFORMATION



**Due to manufacturer's policy of continuous product improvement, the manufacturer reserves the right to make changes without notice. Drawings in this submittal are representations of the equipment shown. Contact the factory for specific unit drawings.**

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## Package Air-Cooled With Integrated Tank System PACT Application Markets

Market		Applications
<p style="text-align: center;"><b>Bio-Medical</b></p> <p>As medical imaging systems such as MRI and CT continue to become more powerful, demand for Mission Critical cooling systems has also increased. Legacy Chillers PACT line has become the standard for most major imaging system manufacturers such as GE, Seimens, Toshiba and Philips to name a few.</p>		<ul style="list-style-type: none"> <li>• Magnetic Resonance Imaging (MRI).</li> <li>• Computed Tomography (CT).</li> <li>• Positron Emission Tomography (PET).</li> <li>• Solid-state lasers.</li> <li>• Gas lasers.</li> <li>• Chemical lasers.</li> <li>• Metal-vapor lasers.</li> <li>• Hypothermia blankets.</li> </ul>
<p style="text-align: center;"><b>SEMI- Conductors &amp; Hi-Tech</b></p> <p>In 1994, Legacy Chiller Systems developed the first OEM fluid cooling system for the Hewlett Packard 83000 digital IC test platform. As the concept of fluid cooled hi-tech applications grew, Legacy's cooling solutions for this complex market also became the standard.</p>		<ul style="list-style-type: none"> <li>• Hewlett Packard 8300 SOC test.</li> <li>• Agilent 9300 SOC test.</li> <li>• LTX Fusion SOC test.</li> <li>• Semi lasers.</li> <li>• Advance <u>Server</u> cooling systems.</li> <li>• Advance <u>Router</u> cooling systems.</li> <li>• Controlled environment centers.</li> <li>• Jacket cooling.</li> </ul>
<p style="text-align: center;"><b>Fermentation &amp; Food Process</b></p> <p>The fermentation and food processing industry presents unique challenges for chiller systems and process design. Reliability is paramount where food quality and safety are concerned. Legacy Chiller System's product lineup and manufacturing process are ideal in this highly diverse market.</p>		<ul style="list-style-type: none"> <li>• Commercial wine making.</li> <li>• Commercial beer (WORT) making.</li> <li>• Climate controlled storage.</li> <li>• Process pre-cooling systems.</li> <li>• Commercial distilleries.</li> <li>• Commercial baking.</li> <li>• Commercial fishing vessels.</li> <li>• Fruit and vegetables washing.</li> </ul>
<p style="text-align: center;"><b>General Purpose</b></p> <p>In addition to our lineup of Mission Specific OEM chiller solutions, Legacy also provides a complete line of General Purpose chillers that are easily adapted to just about any market. Using the on-line Quote Wizard system makes selections easy. If you get stuck, no problem. Just call our HELP LINE for assistance.</p>		<ul style="list-style-type: none"> <li>• Concrete batch plants.</li> <li>• Injection molding.</li> <li>• Welder cooling.</li> <li>• Oil coolers.</li> <li>• Press roller cooling.</li> <li>• Photo processing.</li> <li>• Commercial fish tanks.</li> <li>• Potable water.</li> </ul>

## Legacy Support Services

Services	Recourses
<p style="text-align: center;"><b>Legacy Help Line</b></p> <p>If it's your first time researching and buying a chiller, the selection process can be overwhelming especially if you have limited prior experience with chillers. Understanding these challenges, Legacy has set up a <b>FREE Help Line</b> where customers can get answers to basic chiller design questions and help with selections. <b>Call Toll FREE 877-988-5464.</b></p> 	<ul style="list-style-type: none"> <li>• Assistance to determine cooling needs.</li> <li>• Chiller type selection.</li> <li>• Chiller capacity selection.</li> <li>• Chiller pump selection.</li> <li>• Chiller options selection.</li> <li>• Answer questions about startup.</li> <li>• Provide maintenance information.</li> <li>• Basic system engineering assistance.</li> <li>• How to use Legacy design tools.</li> </ul>
<p style="text-align: center;"><b>OEM System Engineering</b></p> <p>Since 1994, Legacy Chiller Systems has worked with many Fortune 500 companies to design, specify and manufacture specialty OEM Mission Specific fluid cooling systems. Our design build engineering department is capable of addressing complex cooling challenges and turning these challenges into successful, cost effective projects.</p> 	<ul style="list-style-type: none"> <li>• Semi-Conductor test.</li> <li>• MRI,CT,PET imaging systems.</li> <li>• Bio-Diesel processing.</li> <li>• Advanced laser applications.</li> <li>• Advance <u>Server</u> cooling systems.</li> <li>• Advance <u>Router</u> cooling systems.</li> <li>• Controlled environment centers.</li> <li>• Jacket cooling.</li> <li>• Injection molding applications.</li> <li>• Food processing.</li> </ul>
<p style="text-align: center;"><b>Factory Training Program</b></p> <p>The key to successful planning, purchase, installation and service of your chiller system is understanding how chiller system work. Legacy offers basic, as well as, advanced chiller factory training programs that covers all aspects of chillers.</p> 	<ul style="list-style-type: none"> <li>• Chiller system design and applications.</li> <li>• Understanding system layout.</li> <li>• Closed and open loop piping systems.</li> <li>• Pumps and pump selection.</li> <li>• Proper installation practices.</li> <li>• Chiller system operation.</li> <li>• Chiller system startup/commissioning.</li> <li>• Chiller system maintenance.</li> <li>• Process fluid service and maintenance.</li> </ul>
<p style="text-align: center;"><b>Getting Help on the Web</b></p> <p>In addition to free engineering phone support, Legacy offers many web-based tools to make the chiller selection process considerably easier. We also maintain an extensive on-line KnowledgeBase system that can provide answers to most common questions.</p> 	<ul style="list-style-type: none"> <li>• Our FREE XL based SystemSyzer software can be requested from our Quote Wizard system.</li> <li>• Legacy Chiller System's Sizing &amp; Troubleshooting Slide Chart Tool. Copies can be purchased from the Legacy on-line store.</li> </ul>



**Try the Legacy  
SystemSizer**

## Basic Chiller Sizing Formulas



**Try the Legacy  
Slide Chart**

### Air-Cooled Chiller Selection Procedures

To properly select an Air-Cooled condenser package chiller, the following information will be needed:

1. The required cooling BTUH.
2. Entering and leaving process fluid temperatures. Delta T = Leaving temp (Minus) Entering temp.
3. Gallons Per Minute (GPM) flow rate through your process.
4. Design outdoor ambient temperature. For proper option selection you need to know highest and lowest temperatures.

Basic formulas:

1. How to determine BTUH = GPM x Delta T x 500.

**Example: GPM = 10, Delta T = 15., BTUH = 10 x 15 x 500, BTUH = 75,000**

---

2. How to determine 
$$\text{GPM} = \frac{\text{BTUH}}{\text{Delta T} \times 500}$$

**Example: BTUH = 75,000, Delta T = 15., GPM = 75,000 / 15 x 500, GPM = 10**

---

3. How to determine 
$$\text{Delta T} = \frac{\text{BTUH}}{\text{GPM} \times 500}$$

**Example: BTUH = 75,000, GPM = 10., Delta T = 75,000 / 10 x 500, Delta T = 15**

---

For applications using glycols or fluids other than water  
call the HELP LINE.

## Legacy System Design Tools

If you are not familiar with designing fluid process systems, Legacy Chillers offers two system design tools that can make this task much easier; our SystemSyzer and Slide Chart Tool.

### SystemSyzer

**Description:** When the need to purchase a chiller comes around, getting answers to basic chiller and system design questions can turn out to be very challenging. If you are like most people, such challenges can be very time consuming without highly specialized training. Well, the Legacy SystemSyzer program can be a considerable help saving you time and money. Legacy Quote Wizard users can request and receive a FREE copy of SystemSyzer in just minutes.



**Legacy SystemSyzer  
Available for FREE**

### SystemSyzer Features

- Microsoft XL based.
- Menu driven and easy to use.
- Provides required chiller capacity.
- Provides header piping sizes.
- Provides branch piping sizes.
- Calculates total system pressure drop.
- Calculates total system flow rate.
- Allows for glycol adjustment.
- Calculates Legacy Economizer savings.
- Links to Legacy's on-line training system.
- SystemSyzer is FREE to Quote Wizard users.

### Slide Chart Tool

**Description:** This easy to use slide chart tool is designed for hard work in the field helping service professionals and engineers get fast answers to chiller related challenges. Since its release in late 2007, the Legacy Slide Chart Tool has become a must-have in your service vehicle or briefcase.

**Added Bonus  
(for a limited time)**

Each slide chart includes discount codes good for up to **10 % savings** on chillers and other products.



**Available  
in our on-line store**

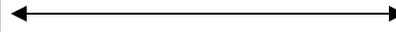
### Slide Chart Tool Features

- Made with heavy high gloss card stock material.
- Provides basic refrigeration diagnosis information.
- R22,134A,404A,410A and other temperature pressure charts.
- Calculate required chiller capacity.
- Perform 60 hz to 50 hz capacity adjustment conversions.
- Includes Propylene and Ethylene Glycol freeze point tables.
- Includes the most common chiller related formulas and conversions.
- Calculates Legacy Economizer energy savings

## Micro-Processor Controllers Remote Controller



Wall Mounted REMOTE  
Micro-Processor  
(Optional)



Cat 5 connection cable  
Standard cable 100'  
(Max cable length 500')



PACT with HOST  
Micro-Processor  
(Standard)

**General Description:** The Legacy remote micro-processor is a self powered device. This device make remote operation of the chiller possible from up to 500 feet away. Interface is password protected with the same review and user functions available at the host chiller's interface. This device is ideal for projects sites where adverse weather conditions can interfere with set-point changes needing to be made.

**Operation:** After the proper clearance code has been entered on the remote device the operator can either review or make adjustments to the chillers operating parameters at any time remotely. The ability to make program changes remotely is ideal for colder climates or site where the chiller is not easily accessible.

**Distances:** The optional remote controller comes with a 100' Cat 5 interface cable. Customers who need additional cable can purchase an upgraded 500' interface cable. Extending the interface cable over 500' is not recommended.

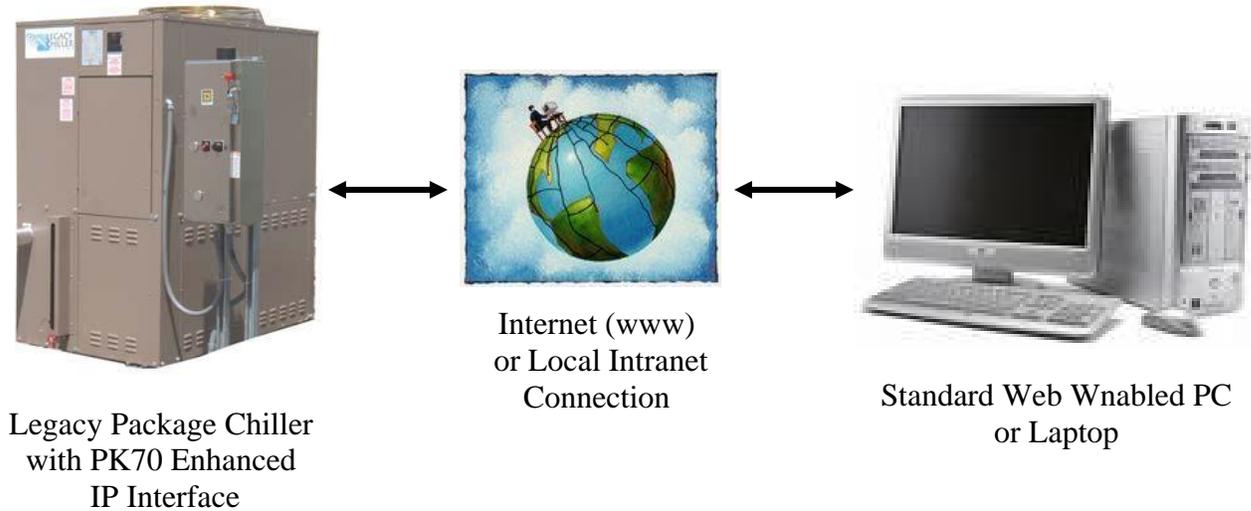
**Power Requirements:** The optional remote controller is completely powered by the chillers single point wiring connection and internal control transformer. Connection of the CAT 5 interface cable between the chiller's host micro-processor and the remote control unit is the only connection needed. No additional power connections are required.

**Installation:** The remote controller (above left) comes encased in a heavy duty, splash resistant, metal enclosure. The most common installation for this device is on a wall surface easily accessible to chiller operator.

**Alarms:** Alarms are shown exactly as they are shown on the host chiller controller. The remote display unit will also sound a buzzer at 50% duration while the alarm is active. If during this time the "up" key is pressed, the buzzer will be silenced for 10 minutes while still in the same alarm. If another different alarm occurs within those 10 minutes then the buzzer would sound again. If after 10 minutes of silence the error still exists the buzzer will sound again. If applicable to the particular alarm, momentarily pressing the power key will clear the error and silence the buzzer. Alarm relay on the Legacy remote display unit will function the same as the Legacy chiller controller.

For more detailed information on optional remote controller operation please consult the Scroll Series Installation Operations Guide.

## Micro-Processor Controllers Remote IP interface



**General Description:** The optional Legacy PK70 enhanced IP interface offers customers the ability to administer all chiller operational functions using local Intranet or remote Internet connections.

**Operation:** The optional Legacy PK70 provides a self hosted web page interface with easy to use point and click functionality. Once the user has logged into the PK70 interface using a standard web browser, a multitude of chiller functions are at your finger tips.

**Basic PK70 Interface Control Points Include:**

- Review and programming level security modes with encrypted password protection.
- Set-point review or edit.
- Alarm history review.
- Alarm trigger edit.
- Alarm email notification edit.
- Cooling performance trending.
- Remote shutdown.

**Power Requirements:** The PK70 is completely powered by the chiller's single point wiring connection and internal control transformer.

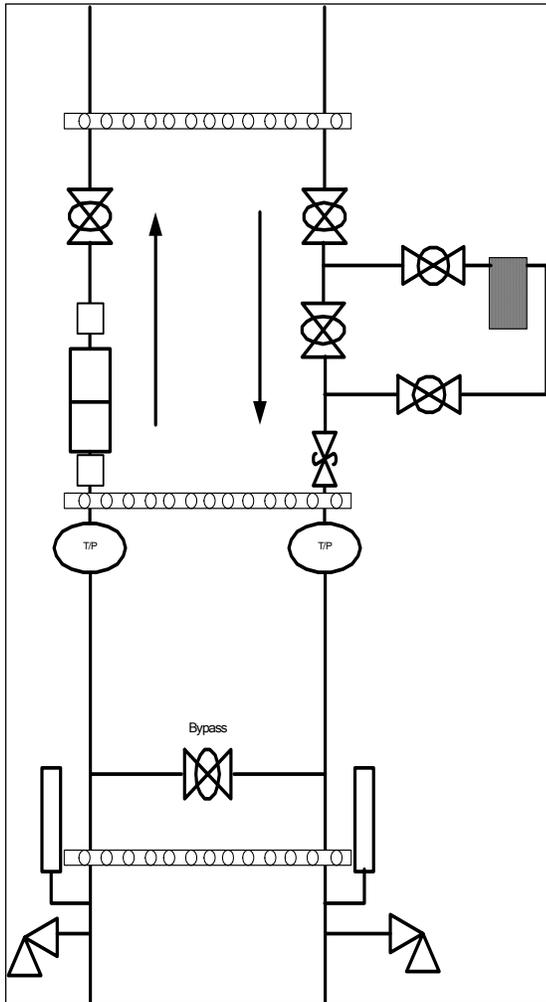
**Installation:** An RJ-45 Ethernet socket connection is provided on all chillers equipped with the IP interface option. Customers who have site firewalls or other network protection systems running will require some network administration support to allow for PK70 connection to your network. LEGACY CHILLER SYSTEMS INC. DOES NOT OFFER SUPPORT FOR YOUR LOCAL NETWORK.

**Release:** Legacy Chiller Systems Inc. anticipates availability of this option in the fourth quarter, 2008. Once released, Legacy will also be offering an upgrade package for all current micro-processor equipped chillers.

For more detailed information on Remote IP access / control operation please consult the Scroll Series Installation Operations Guide.

## Legacy Process Drop Assembly

**Wall Drop Assembly Description:** Free supporting hydronic process connection point designed for easy field installation for Mission Critical fluid cooled applications. Wall Drop Assembly comes fully equipped with all valves, filters, flow measurement, pressure measurement and temperature measurement items needed.



### Features:

- All 1" Type L copper construction.
- Jomar "Slow Ball" hand operated ball valves with ball position indicator.
- Secured with three heavy steel pre-punched uni-strut with rubber isolators.
- Process inlet filter bypass for easy filter media replacement.
- Big-Blue filter housing with standard 50 Micro pleated filter. Filter housing tool provided with each drop.
- B & G supply circuit setter with pressure ports.
- Supply and return combination temperature - pressure gauges.
- Supply and return water hammer arrestors.
- Supply / return bypass for easy branch pressure / flow adjustments.
- Supply and return hose bibb valves with brass seal caps provided for easy process drain down.
- Blue and white flow meter with stainless steel slide. Flow ranging GPM and LPM. Standard flow scale 0-10 GPM.
- Dielectric unions at flow meter inlet and outlet for easy servicing.
- Each assembly is factory tested with compressed air to 75 PSI.

### Other Information:

- Custom wall drop assemblies available upon request.
- Replacement filter media can be purchased at [www.legacychillers.com](http://www.legacychillers.com).
- This item is normally in stock.
- Pricing available through Legacy's on-line store or Legacy Quote Wizard System.

### Dimensional Information:

- **Height:** Approximately 80"
- **Width:** Approximately 24"
- **Weight:** Approximately 75 LBS
- Supply and return process connections are 1" FIP.
- Recommended to mount assembly no less than 20" from finished floor.

## Legacy Auto City Water Bypass Assembly

**Automatic City Water Bypass Description:** Wall mounted, automatic emergency city water bypass system. Panel is powered by PACT or EST package chiller system. In the event of power failure or chiller fault, panel will isolate the process chiller loop and begin cooling process with city water. This system is ideal for Mission Critical applications. Available in filtered and non-filtered configurations.



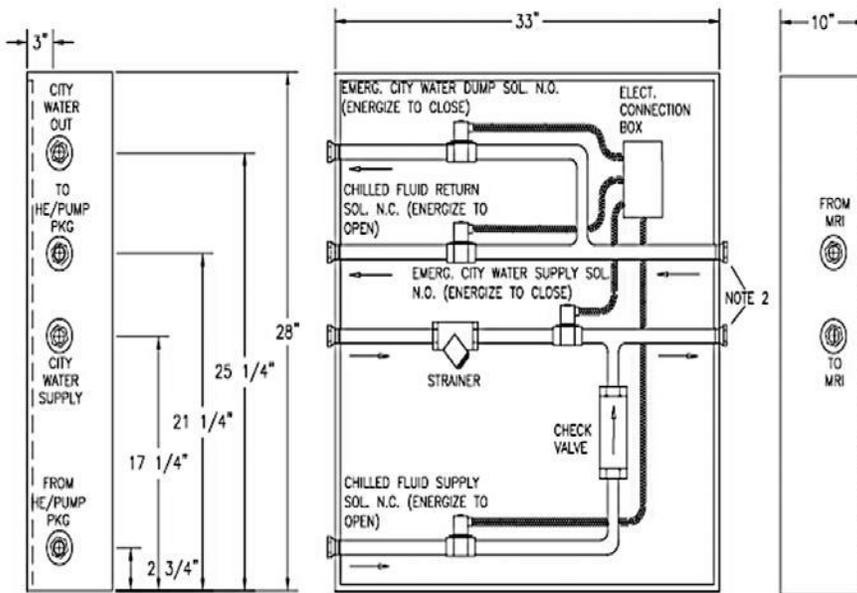
**Legacy Wall Mounted  
Automatic City Water Bypass Panel**

### Features:

- All 1" Type L copper construction.
- Designed for low pressure drop.
- Powered by PACT or EST control system. **No external power needed.**
- Single point electrical connections. Some field wiring between chiller and panel is required.
- Rapid cycle industrial grade 24v solenoid valves.
- Internal city water supply strainer to protect process.
- Standard copper FIP process fluid connections.
- Heavy gauge galvanized steel enclosure.
- Internal fluid check valve preventing backflow.
- Models with internal process filter available.

### Dimensional information:

- **Height:** Approximately 28"
- **Width:** Approximately 33"
- **Depth:** Approximately 10"
- **Weight:** Approximately 75 LBS
- Supply and return process connections are 1" FIP.
- Panels with internal filtration system are larger.

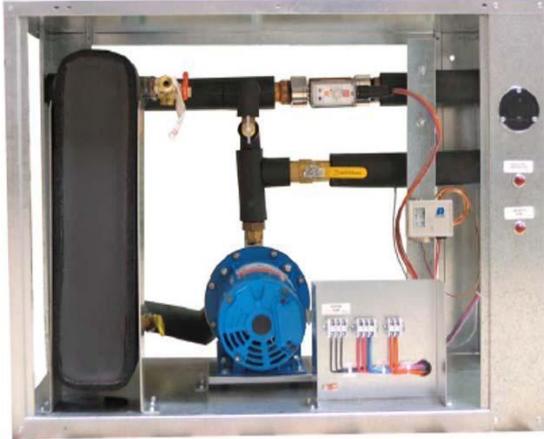


**Automatic City Water Bypass Panel  
Internal Piping Configuration  
(Filterless model shown)**

Custom designed Automatic City Water Bypass systems are available upon request. For more information, please contact Legacy Chiller Systems HELP LINE at the number below for immediate assistance.

## Legacy Dual Loop Glycol Free System

**Dual Loop Glycol Free System Description:** Self-contained, secondary heat exchanger designed for indoor installation. Secondary loop is ideal for transition between outdoor mounted glycol based PACT chillers and Mission Critical process equipment that is not compatible with glycol or other freeze protecting fluids.

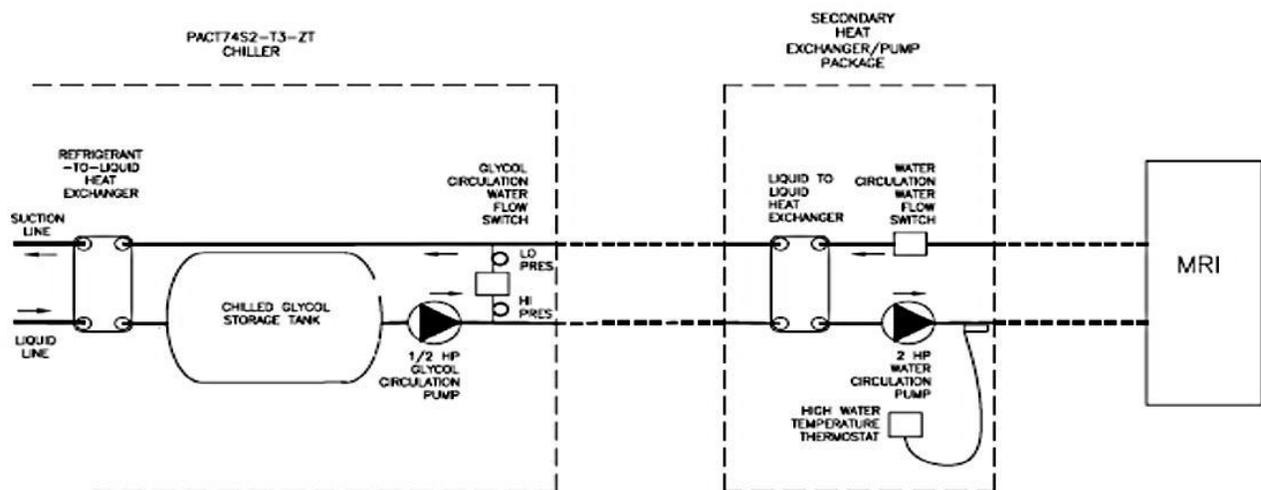


### Features:

- All 1" Type L copper construction.
- Sturdy galvanized steel cabinet.
- Fused 316 stainless steel pump system pump with many upgraded pumps available.
- Electronic flow meter with cabinet mounted low flow indicator.
- Alfa Laval -316 stainless steel brazed plate evaporator with 1/2" insulation.
- Can be shelf mounted off vertical surface or floor mounted.
- High temperature indicator with adjustable thermostat.
- Digital "to process" temperature LED readout.
- Adjustable pressure relief.
- Pump low flow bypass.
- Single point wiring connection.

### Dimensional Information:

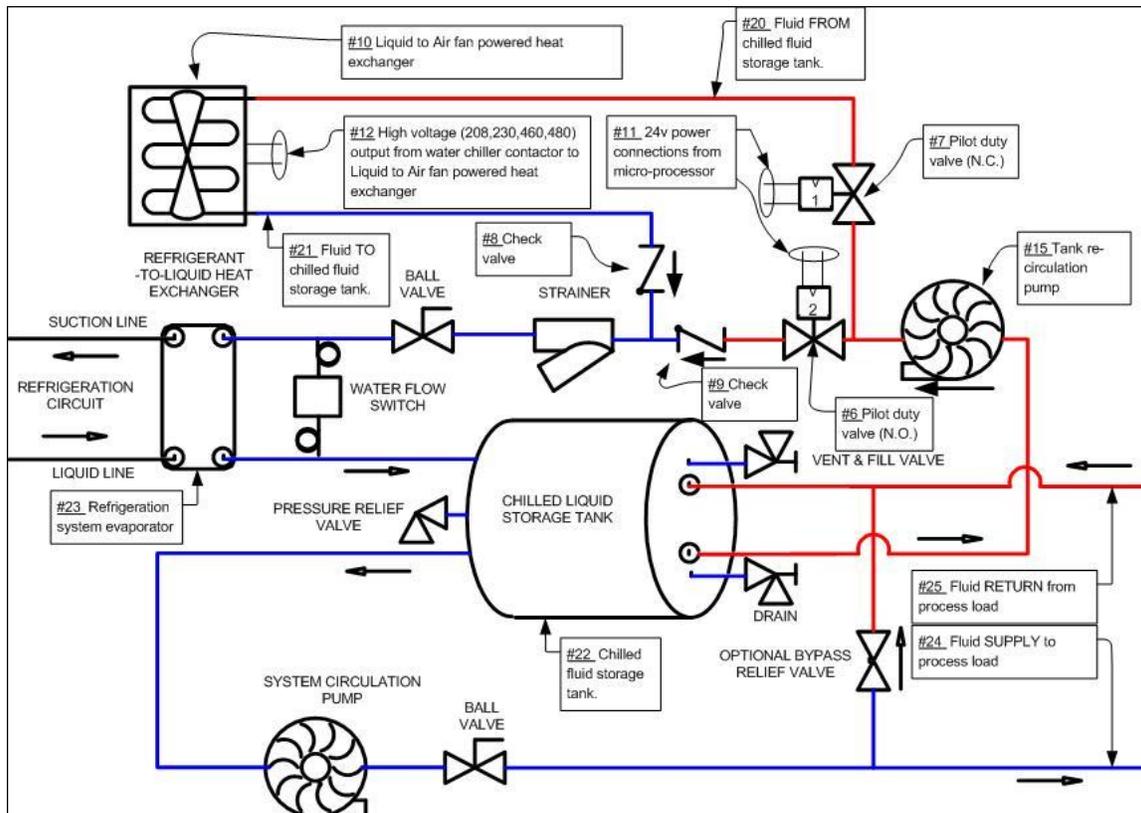
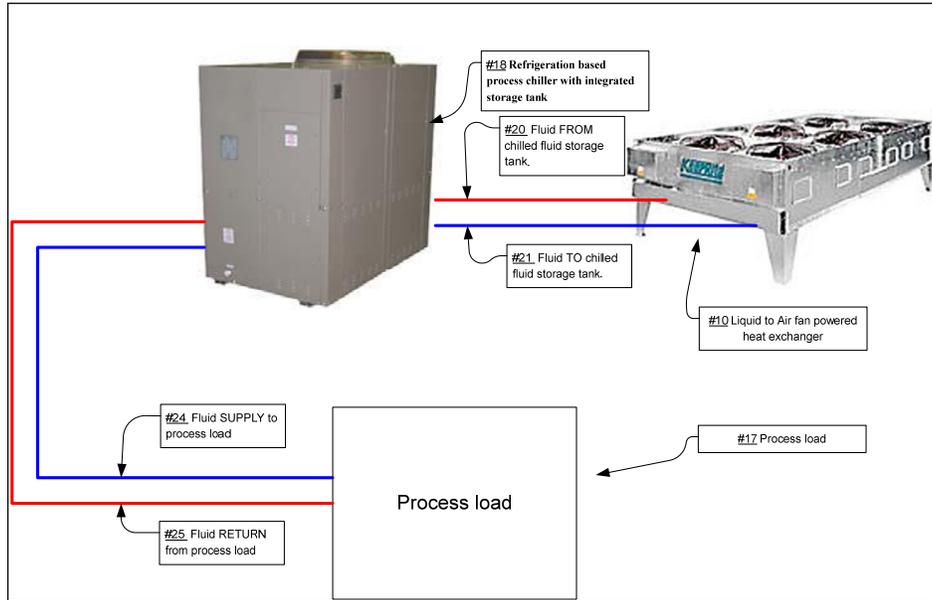
- **Height:** Approximately 27.5"
- **Width:** Approximately 34"
- **Depth:** Approximately 24"
- **Weight:** Approximately 140 LBS
- Supply and return process connections are 1-1/4" FIP.



**Typical Dual Loop System with a PACT  
Package Chiller System.**

## Legacy's Patented Economizer System

**Legacy Economizer System Description:** When outdoor ambient temperatures drop to approximately 10°F below chiller set-point, the economizers micro-processor controller automatically diverts process fluid to a remote closed loop fluid cooler. This process utilizes outdoor FREE COOLING reducing electrical consumption as much as 40%.



For more comprehensive documentation and video presentations on how the Legacy Patented Economizer system works, visit our on-line KnowledgeBase system and search for "Economizer Operation".

### Legacy's Patented Economizer System Fluid Cooler Matching Table

Legacy Model	ARI tons water	40% PG	Flow rate Nom water (GPM)	Flow rate 40 % PG (GPM)	Flow rate Min (GPM)	Flow rate Max (GPM)	Cooler Selection	Cooler Feeds	Target flow Rate GPM	Target Leaving Temp (F)
12S	1.2	1.2	2.88	2.88	8	15	DFT005	8 feeds	8	45.7
18S	1.7	1.6	4.08	3.84	8	15	DFT005	8 feeds	8	45.7
24S	1.9	1.8	4.56	4.32	8	15	DFT005	8 feeds	8	45.7
30S	3	2.8	7.2	6.72	8	15	DFT005	8 feeds	8	45.7
36S	3.4	3.2	8.16	7.68	8	15	DFT005	8 feeds	8	45.7
48S	4.2	4	10.08	9.6	8	15	DFT005	8 feeds	9.6	44.6
50S	4.7	4.5	11.28	10.8	8	15	DFT005	8 feeds	10.8	45.4
60S	5.2	5	12.48	12	8	20	DFT008	12 feeds	12	41.6
70S	6.6	6.2	15.84	14.88	8	20	DFT008	12 feeds	14.88	43.6
80S	7.6	7.2	18.24	17.28	15	30	DFT010	16 Feeds	17.28	42.9
90S	8.8	8.4	21.12	20.16	15	30	DFT010	16 Feeds	20.16	44.4
120S	10.2	9.6	24.48	23.04	15	30	DFT010	16 Feeds	23.04	46.3
180S	12.9	12.2	30.96	29.28	15	30	DFT010	16 Feeds	29.28	49.9
250S	18.4	17.4	44.16	41.76	40	110	DFT021	48 Feeds	41.76	45.4
300S	22.2	21	53.28	50.4	40	110	DFT021	48 Feeds	50.4	48.5
72D	6.8	6.4	16.32	15.36	15	30	DFT010	16 Feeds	15.36	41.7
96D	8.4	7.9	20.16	18.96	15	30	DFT010	16 Feeds	18.96	43.8
100D	9.3	8.8	22.32	21.12	15	30	DFT010	16 Feeds	21.12	45
120D	10.4	9.8	24.96	23.52	15	30	DFT010	16 Feeds	23.52	46.4
140D	13.1	12.4	31.44	29.76	15	30	DFT010	16 Feeds	29.76	50.2
160D	15.2	14.3	36.48	34.32	20	60	DFT010	24 Feeds	34.32	51.8
180D	17.6	16.6	42.24	39.84	40	110	DFT021	48 Feeds	40	44.8
180M	12.7	12	30.48	28.8	40	110	DFT021	48 Feeds	40	44.8
240D	20.1	19	48.24	45.6	40	110	DFT021	48 Feeds	45.6	46.8
360D	25.8	24.4	61.92	58.56	40	110	DFT021	48 Feeds	58.56	50.9
500D	36.5	34.5	87.6	82.8	40	110	DFT021	48 Feeds	82.8	45.9
600D	44.3	41.9	106.32	100.56	40	110	DFT021	48 Feeds	100.56	48.4



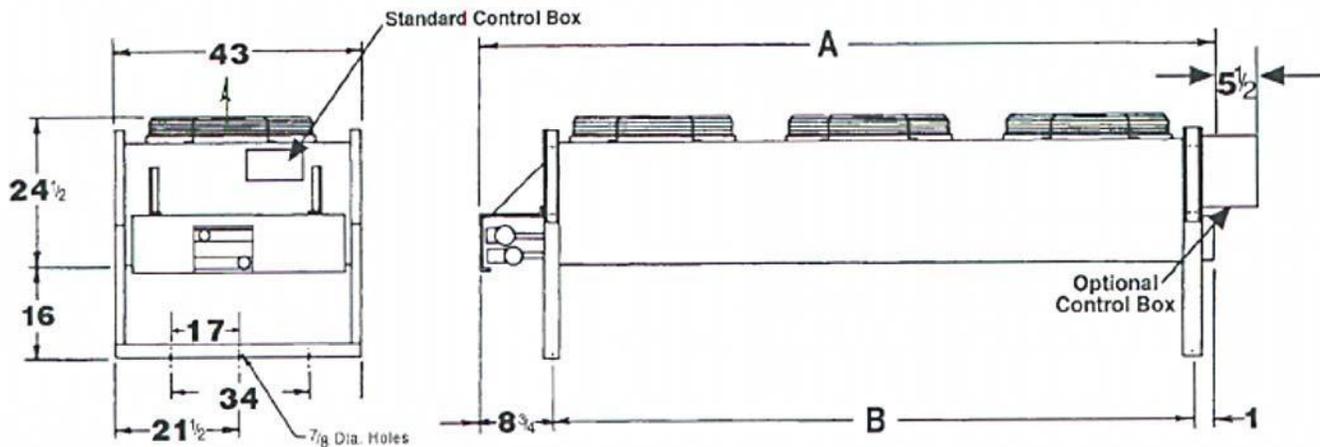
For more comprehensive documentation and video presentations on how the Legacy Patented Economizer system works, visit our on-line KnowledgeBase system and search for "Economizer Operation".

## Legacy's Patented Economizer System Fluid Cooler Specifications

Model	Dimensions (in.)		CFM	Fan		Motor Data				Approx. Net Wt. (Lbs.)
	A	B		No.	Dia.	HP <sup>1</sup>	FLA <sup>1</sup>	HP <sup>2</sup>	FLA <sup>2</sup>	
DFT005	39-3/4	30	5,050	1	24	1/3	3.4	1/3	2.6/1.3	205
DFT008	49-3/4	40	6,450	1	26	1/2	3.9	1/3	2.6/1.3	260
DFT010	69-3/4	60	10,100	2	24	1/3	6.8	1/3	5.2/2.6	330
DFT012	69-3/4	60	12,400	2	26	1/2	7.8	1/3	5.2/2.6	348
DFT014	89-3/4	80	13,700	2	26	1/2	7.8	1/3	5.2/2.6	420
DFT016	89-3/4	80	12,900	2	26	1/2	7.8	1/3	5.2/2.6	436
DFT021	129-3/4	120	20,500	3	26	1/2	11.7	1/3	7.8/3.9	565
DFT023	129-3/4	120	19,900	3	26	1/2	11.7	1/3	7.8/3.9	580
DFT026	129-3/4	120	19,400	3	26	1/2	11.7	1/3	7.8/3.9	610

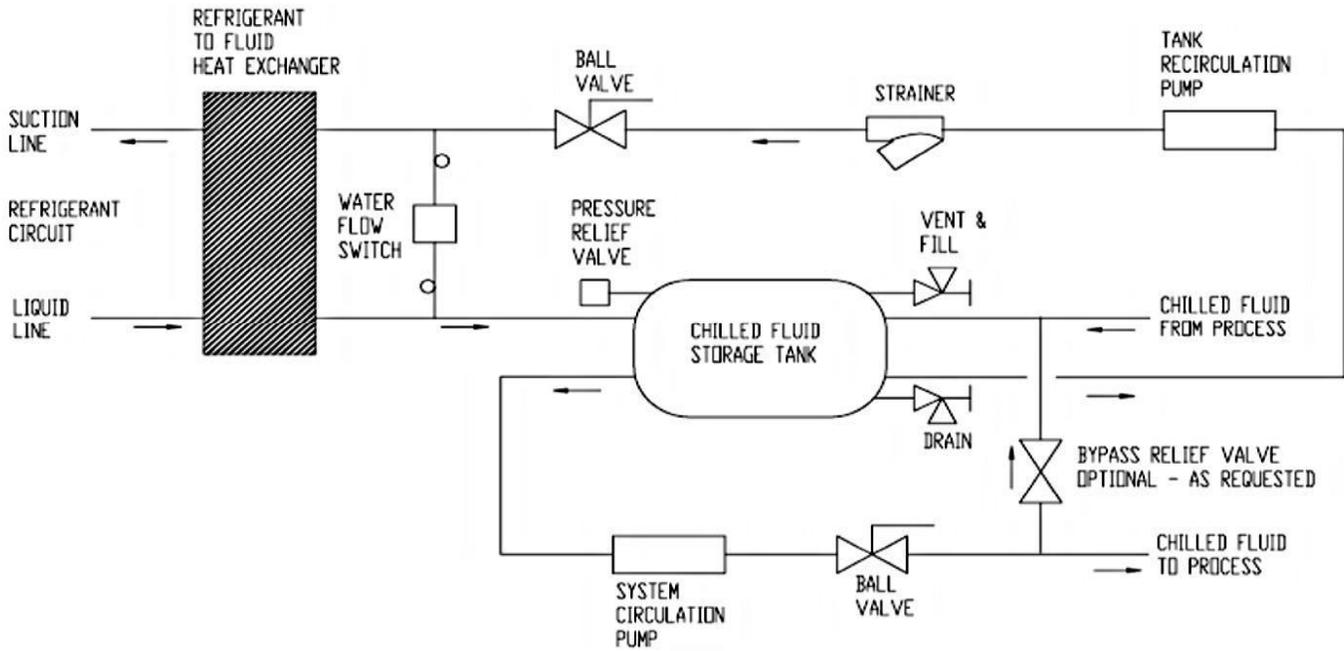
<sup>1</sup> Motor voltage 208-230/1/60; 1075 RPM

<sup>2</sup> Motor voltage 208-230-460/3/60; 1140 RPM

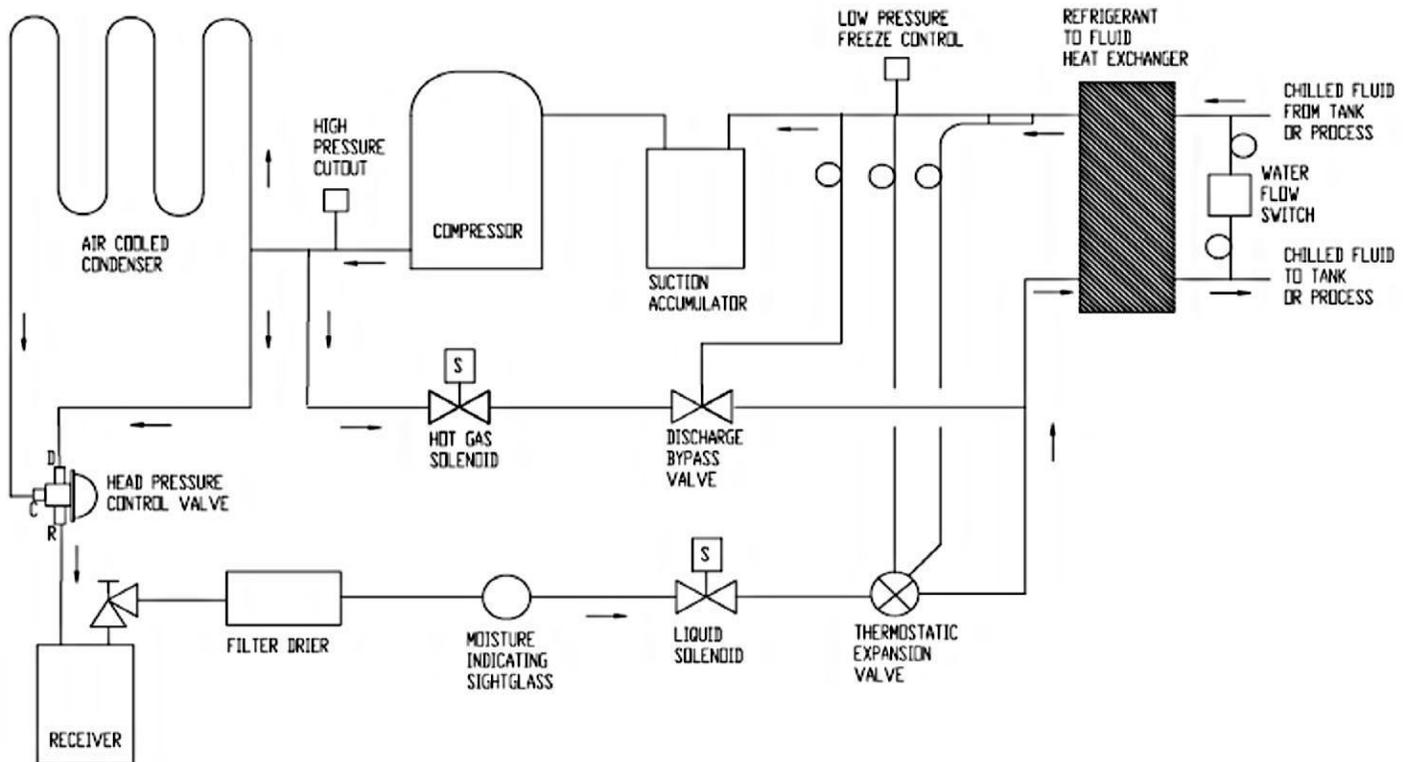


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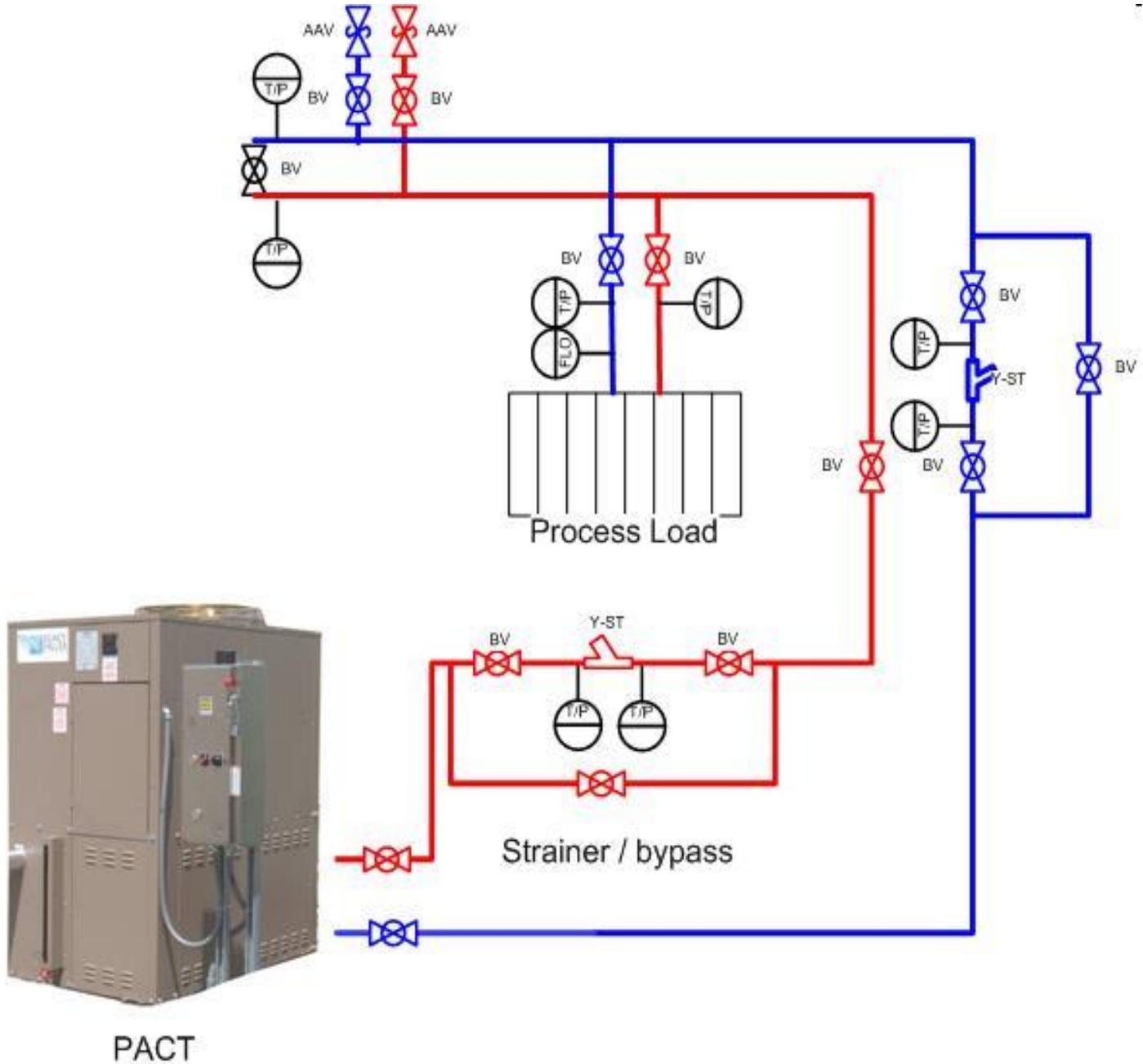
### Standard PACT Fluid Flow Diagram with Optional SYSTEM CIRCULATION PUMP and BYPASS RELIEF.



### Standard PACT Refrigeration Flow Diagram with Optional HEAD PRESSURE CONTROL VALVE and RECEIVER



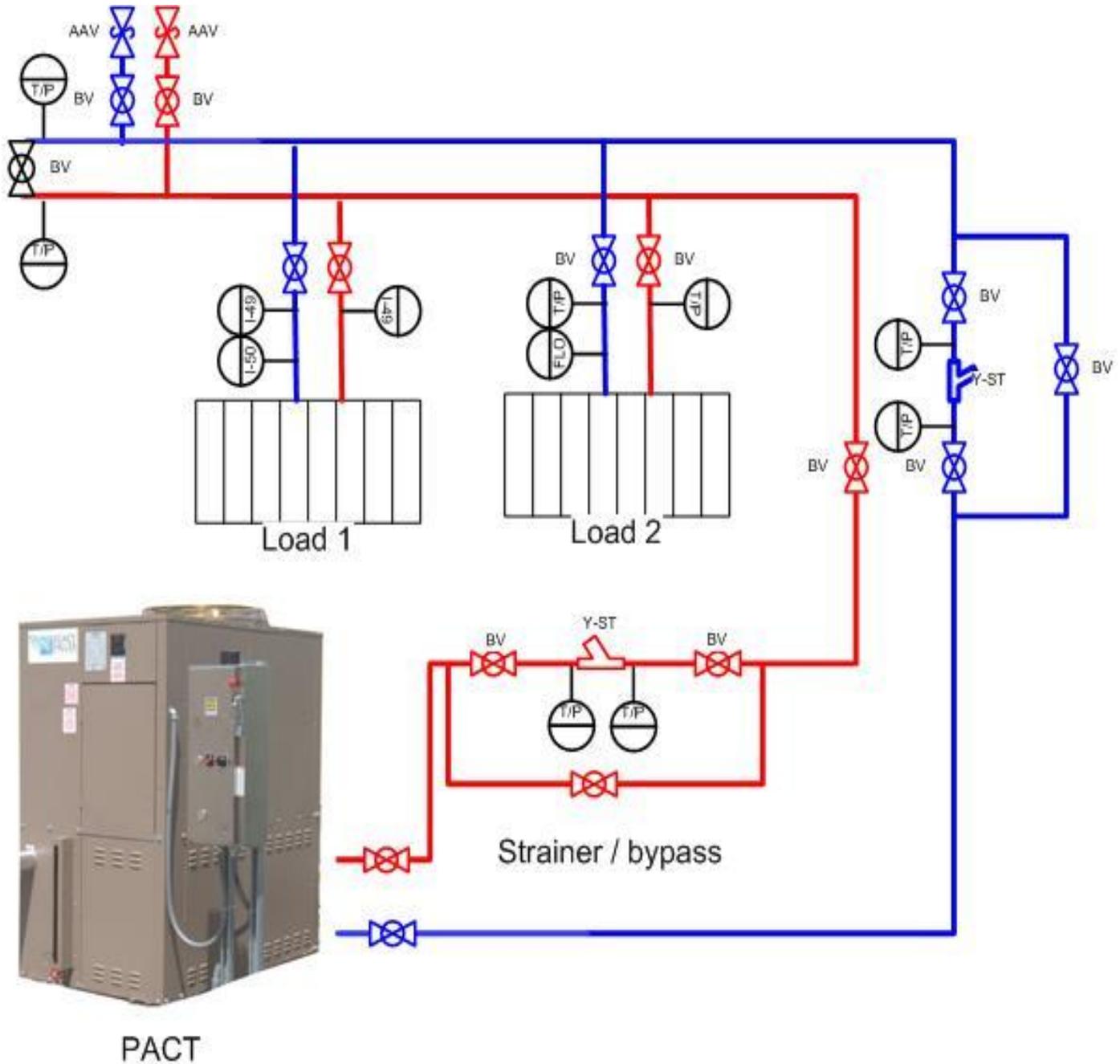
## Generic Process Fluid Piping SINGLE LOAD PROCESS



**Disclaimer:** The above illustration is for reference purposes only and SHOULD NOT be used for field system construction. For best results, Legacy recommends consultation with a qualified (local) mechanical engineer who is familiar with local codes and site specific requirements. Legacy Chiller Systems also provides free on-line resources (such as the **SystemSyzer** and **Slide Chart Tool**) that can be very helpful with basic system design as well as equipment and pump selection. To access these tools, visit our website.

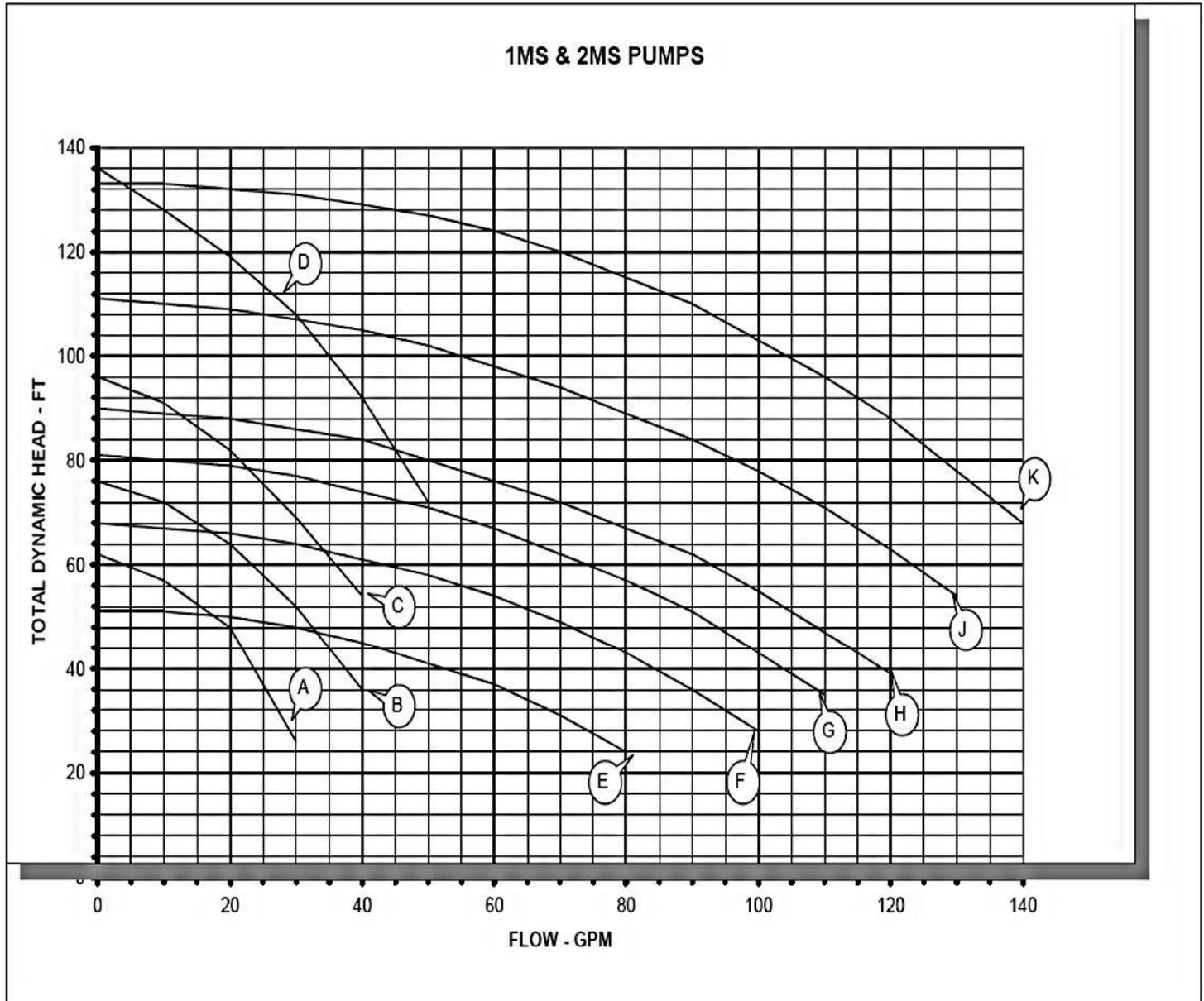
## Generic Process Fluid Piping

### MULTIPLE LOAD PROCESS



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## Standard Available Stainless Steel Process System Pumps



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

\*\* Legacy chillers are not limited to the pumps shown on this curve. Contact the factory @ (877) 988-5464 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.