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

AIR-COOLED CHILLERS

**1 to 52**
NOMINAL TONS

# SCROLL - R407C

## PACKAGED AND SPLIT-SYSTEMS

**EPA COMPLIANT**

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**Along with a complete line of standard products that Legacy Chiller Systems Inc. offers, we also have the ability to custom build units to each customers particular needs.**

Please contact the factory or your Legacy representative for a special application.

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

# NOMENCLATURE

**Example: P AC 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<br>T3 = 208/230-3-60<br>S4 = 460-1-60<br>T4 = 460-3-60<br>T5 = 575-3-60<br>S6 = 220-1-50<br>T7 = 200/208-3-50<br>T9 = 380-3-50 |
| **Z** | Compressor Type Z = Scroll | |

**Low ambient, or lower leaving water temperatures, can require the recirculation of gycol solutions or other fluid blends.**

These solutions can effect unit capacities. Please consult the factory on these or other special applications for proper sizing.

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## 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:**

Consult factory on sizing chillers with glycol or any fluid other than 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 | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER | 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 |

1. 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.
2. KW input is for compressor(s) only.
3. EER = Energy Efficiency Ration (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s) and control power.

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LEGACY CHILLER SYSTEMS

## Capacity Table

# 70S - 380S SCROLL CHILLERS

| MODEL | COMPRESSOR | LWT °F | 80 | | | 90 | | | 95 | | | 100 | | | 105 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER | 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 |

1. 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.
2. KW input is for compressor(s) only.
3. EER = Energy Efficiency Ration (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 | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER | 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 |

1. 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.
2. KW input is for compressor(s) only.
3. EER = Energy Efficiency Ration (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s) and control power.

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## Capacity Table

# 240D - 760D SCROLL CHILLERS

| MODEL | COMPRESSOR | LWT °F | 80 | | | 90 | | | 95 | | | 100 | | | 105 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER | TONS | KW | EER |
| 240D | ZB95KCE | **42.0** | 22.4 | 20.1 | 12.3 | 21.3 | 22.4 | 10.6 | 20.7 | 23.5 | 9.9 | 20.1 | 24.8 | 9.1 | 19.5 | 26.2 | 8.4 |
| | | **44.0** | 23.4 | 20.2 | 12.6 | 22.3 | 22.4 | 10.9 | ***21.6*** | ***23.6*** | ***10.1*** | 21.0 | 25.0 | 9.3 | 20.4 | 26.3 | 8.6 |
| | | **45.0** | 23.9 | 20.4 | 12.8 | 22.7 | 22.5 | 11.1 | 22.0 | 23.7 | 10.3 | 21.4 | 25.1 | 9.5 | 20.8 | 26.4 | 8.8 |
| | | **50.0** | 26.3 | 20.9 | 13.8 | 24.9 | 23.1 | 11.9 | 24.3 | 24.2 | 11.1 | 23.6 | 25.6 | 10.2 | 23.0 | 26.9 | 9.5 |
| 360D | ZB114KCE | **42.0** | 26.2 | 24.7 | 11.4 | 24.8 | 27.1 | 10.0 | 24.2 | 28.4 | 9.3 | 23.6 | 29.8 | 8.7 | 22.8 | 31.4 | 8.0 |
| | | **44.0** | 27.2 | 24.9 | 11.7 | 25.7 | 27.4 | 10.2 | ***25.2*** | ***28.6*** | ***9.5*** | 24.5 | 30.1 | 8.9 | 23.7 | 31.6 | 8.2 |
| | | **45.0** | 27.8 | 25.1 | 11.9 | 26.3 | 27.5 | 10.4 | 25.6 | 28.8 | 9.7 | 25.0 | 30.2 | 9.1 | 24.2 | 31.8 | 8.4 |
| | | **50.0** | 30.4 | 25.8 | 12.7 | 28.9 | 28.3 | 11.1 | 28.3 | 29.5 | 10.5 | 27.7 | 31.0 | 9.8 | 26.8 | 32.4 | 9.1 |
| 500D | ZR250KCE | **42.0** | 35.3 | 31.9 | 11.7 | 33.5 | 35.2 | 10.2 | 32.6 | 37.0 | 9.5 | 31.5 | 39.0 | 8.8 | 30.6 | 41.2 | 8.2 |
| | | **44.0** | 36.8 | 32.2 | 12.1 | 34.9 | 35.4 | 10.5 | ***34.1*** | ***37.3*** | ***9.8*** | 32.9 | 39.4 | 9.1 | 32.1 | 41.4 | 8.4 |
| | | **45.0** | 37.3 | 32.3 | 12.2 | 35.6 | 35.6 | 10.7 | 34.6 | 37.4 | 9.9 | 33.5 | 39.6 | 9.2 | 32.6 | 41.6 | 8.5 |
| | | **50.0** | 41.0 | 33.0 | 13.2 | 39.0 | 36.4 | 11.5 | 39.0 | 38.3 | 10.7 | 36.8 | 40.6 | 9.8 | 35.9 | 42.4 | 9.2 |
| 600D | ZR300KCE | **42.0** | 43.5 | 37.8 | 12.0 | 41.3 | 41.4 | 10.5 | 40.3 | 43.4 | 9.9 | 39.3 | 45.6 | 9.2 | 38.3 | 47.8 | 8.6 |
| | | **44.0** | 45.3 | 38.1 | 12.3 | 43.1 | 41.8 | 10.8 | ***42.0*** | ***43.7*** | ***10.2*** | 40.9 | 46.0 | 9.5 | 39.8 | 48.2 | 8.8 |
| | | **45.0** | 46.2 | 38.3 | 12.5 | 44.0 | 42.1 | 11.0 | 42.9 | 44.0 | 10.4 | 41.8 | 46.3 | 9.6 | 40.7 | 48.4 | 9.0 |
| | | **50.0** | 50.6 | 39.3 | 13.5 | 48.3 | 43.2 | 11.9 | 47.1 | 45.1 | 11.1 | 45.8 | 47.4 | 10.3 | 44.7 | 49.6 | 9.7 |
| 760D | ZR380KCE | **42.0** | 52.5 | 48.3 | 11.7 | 49.9 | 53.4 | 10.1 | 47.8 | 56.2 | 9.4 | 47.4 | 58.8 | 8.8 | 45.8 | 61.4 | 8.2 |
| | | **44.0** | 54.5 | 49.0 | 11.9 | 51.8 | 54.0 | 10.4 | ***50.7*** | ***56.8*** | ***9.7*** | 49.2 | 59.4 | 9.1 | 47.8 | 62.0 | 8.4 |
| | | **45.0** | 55.4 | 49.2 | 12.1 | 52..7 | 54.3 | 10.5 | 51.5 | 57.0 | 9.8 | 50.0 | 59.6 | 9.2 | 48.6 | 62.1 | 8.6 |
| | | **50.0** | 60.2 | 50.7 | 12.8 | 57.5 | 55.7 | 11.2 | 56.2 | 58.5 | 10.5 | 54.8 | 61.0 | 9.8 | 53.3 | 63.5 | 9.2 |

1. 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.
2. KW input is for compressor(s) only.
3. EER = Energy Efficiency Ration (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s) and control power.

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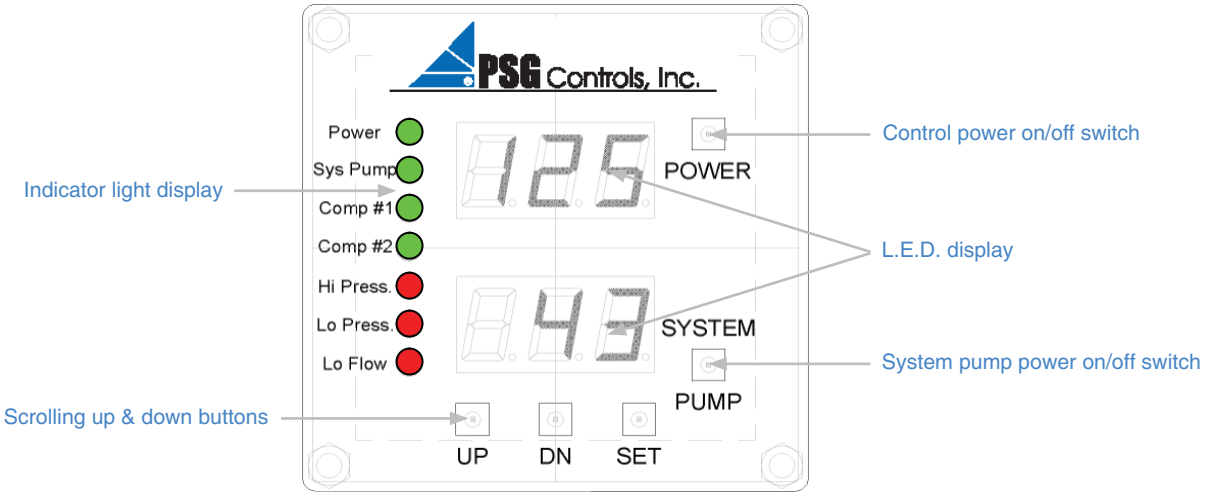
# MICROPROCESSOR FEATURES




## 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 revcovery 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

# PAC & PACT
R407C Packaged, Air-Cooled Chillers

**PAC90S Models** (*shown*)

**PACT60S Models** (*shown*)

## 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

## 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

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# PAC - SINGLE CIRCUIT
R407C Packaged, Air-Cooled Chillers

## Dimensional and Electrical Specifications

| MODEL | BTUH @ 95°F AMB. 45°F Lwt | LENGTH IN. | WIDTH IN. | HEIGHT IN. | FLUID CONN. | COMPRESSOR | | RLA EA | LRA EA | FAN MOTOR | | MCA | M.O.P. | WT. LBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | QTY | HP | | | QTY | FLA EA. | | | |
| 12S3-S2-Z | 14,400 | 36 | 34 | 40 | 3/4" FPT | 1 | 1.3 | 10 | 42 | 1 | 3.3 | 20 | 25 | 250 |
| 18S3-S2-Z | 20,400 | | | | | | 2.0 | 15.7 | 61 | | 3.3 | 25 | 40 | 250 |
| 18S3-T3-Z | | | | | | | | 8.9 | 55 | | 3.3 | 15 | 20 | |
| 18S3-T4-Z | | | | | | | | 4.3 | 27 | | 1.6 | 15 | 15 | |
| 24S3-S2-Z | 24,000 | | | | 1" FPT | | 2.5 | 15.7 | 73 | | 3.3 | 25 | 40 | 275 |
| 24S3-T3-Z | | | | | | | | 8.2 | 63 | | 3.3 | 15 | 20 | |
| 24S3-T4-Z | | | | | | | | 4.3 | 31 | | 1.6 | 15 | 15 | |
| 30S3-S2-Z | 32,400 | | | | | | 3.5 | 20.7 | 127 | | 3.3 | 30 | 45 | 300 |
| 30S3-T3-Z | | | | | | | | 13.9 | 88 | | 3.3 | 25 | 30 | |
| 30S3-T4-Z | | | | | | | | 7.1 | 44 | | 1.6 | 15 | 15 | |
| 30S3-T5-Z | | | | | | | | 5.0 | 35 | | 1.72 | 15 | 15 | |
| 36S3-S2-Z | 39,600 | 56 | | | | | 4 | 25.0 | 132 | | 3.3 | 35 | 50 | 500 |
| 36S3-T3-Z | | | | | | | | 15.0 | 115 | | 3.3 | 25 | 35 | |
| 36S3-T4-Z | | | | | | | | 7.4 | 48 | | 1.6 | 15 | 15 | |
| 36S3-T5-Z | | | | | | | | 6.4 | 40 | | 1.72 | 15 | 15 | |
| 48S3-S2-Z | 52,800 | | | | | | 5 | 30.1 | 175 | | 3.3 | 45 | 70 | 550 |
| 48S3-T3-Z | | | | | | | | 20.7 | 115 | | 3.3 | 30 | 45 | |
| 48S3-T4-Z | | | | | | | | 8.9 | 63 | | 1.6 | 15 | 20 | |
| 48S3-T5-Z | | | | | | | | 7.1 | 50 | | 1.72 | 15 | 15 | |
| 50S3-S2-Z | 56,400 | | | | | | 5 | 27.9 | 129 | | 3.3 | 40 | 60 | 575 |
| 60S3-T3-Z | 60,000 | | | | | | 6 | 20.7 | 156 | | 3.3 | 30 | 45 | 600 |
| 60S3-T4-Z | | | | | | | | 11.5 | 70 | | 1.6 | 20 | 25 | |
| 60S3-T5-Z | | | | | | | | 7.9 | 54 | | 1.72 | 15 | 15 | |
| 70S3-T3-Z | 84,000 | 85 | | | 1.25" FPT | | 8 | 32.1 | 195 | 2 | 3.3 | 50 | 70 | 700 |
| 70S3-T4-Z | | | | | | | | 16.4 | 95 | | 1.6 | 25 | 40 | |
| 70S3-T5-Z | | | | | | | | 12.0 | 80 | | 1.72 | 20 | 30 | |
| 80S3-T3-Z | 92,400 | | | | | | 9 | 33.6 | 225 | | 3.3 | 50 | 80 | 725 |
| 80S3-T4-Z | | | | | | | | 17.3 | 114 | | 1.6 | 25 | 40 | |
| 80S3-T5-Z | | | | | | | | 13.5 | 80 | | 1.72 | 25 | 30 | |
| 90S3-T3-Z | 108,000 | | | | | | 10 | 41.4 | 238 | | 3.3 | 50 | 90 | 750 |
| 90S3-T4-Z | | | | | | | | 19.2 | 125 | | 1.6 | 30 | 45 | |
| 90S3-T5-Z | | | | | | | | 13.8 | 80 | | 1.72 | 25 | 30 | |
| 120S3-T3-Z | 134,400 | | | | | | 12 | 55.0 | 300 | | 3.3 | 80 | 125 | 850 |
| 120S3-T4-Z | | | | | | | | 25.7 | 150 | | 1.6 | 40 | 60 | |
| 120S3-T5-Z | | | | | | | | 20.7 | 109 | | 1.72 | 30 | 50 | |
| 180S3-T3-Z | 148,800 | 143 | 44 | 54 | 2" MPT | 1 | 15 | 60.0 | 340 | 3 | 2.3 | 80 | 125 | 1600 |
| 180S3-T4-Z | | | | | | | | 31.4 | 173 | | 1.2 | 45 | 70 | |
| 180S3-T5-Z | | | | | | | | 23.6 | 132 | | 0.9 | 35 | 50 | |
| 250S3-T3-Z | 210,000 | 183 | | | 2.5" MPT | | 20 | 81.4 | 505 | | 2.3 | 100 | 175 | 1700 |
| 250S3-T4-Z | | | | | | | | 37.9 | 225 | | 1.2 | 60 | 80 | |
| 250S3-T5-Z | | | | | | | | 32.1 | 180 | | 0.9 | 45 | 70 | |
| 300S3-T3-Z | 253,200 | | | | 2.5" MPT | | 25 | 100.0 | 500 | | 2.3 | 125 | 225 | 1800 |
| 300S3-T4-Z | | | | | | | | 48.6 | 250 | | 1.2 | 70 | 110 | |
| 300S3-T5-Z | | | | | | | | 36.4 | 198 | | 0.9 | 50 | 80 | |
| 380S3-T3-Z | 295,200 | 223 | | | 2.5" MPT | | 30 | 121.4 | 599 | 4 | 2.3 | 150 | 250 | 2000 |
| 380S3-T4-Z | | | | | | | | 59.3 | 310 | | 1.2 | 80 | 125 | |
| 380S3-T5-Z | | | | | | | | 47.1 | 239 | | 0.9 | 70 | 100 | |

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# PAC - DUAL CIRCUIT
R407C Packaged, Air-Cooled Chillers

| MODEL | BTUH @ 95°F AMB. 45°F Lwt | LENGTH IN. | WIDTH IN. | HEIGHT IN. | FLUID CONN. | COMPRESSOR | | RLA EA | LRA EA | FAN MOTOR | | MCA | M.O.P. | WT. LBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | QTY | HP | | | QTY | FLA EA. | | | |
| 72D3-S2-Z | 80,400 | 75 | 34 | 47 | 1.25" FPT | 2 | 4 | 25.0 | 132 | 2 | 3.3 | 70 | 80 | 900 |
| 72D3-T3-Z | | | | | | | | 15.0 | 115 | | 3.3 | 45 | 50 | |
| 72D3-T4-Z | | | | | | | | 7.4 | 48 | | 1.6 | 20 | 25 | |
| 72D3-T5-Z | | | | | | | | 6.4 | 40 | | 1.72 | 20 | 20 | |
| 96D3-S2-Z | 105,800 | | | | | | 5 | 30.1 | 175 | | 3.3 | 80 | 100 | 1000 |
| 96D3-T3-Z | | | | | | | | 20.7 | 115 | | 3.3 | 60 | 70 | |
| 96D3-T4-Z | | | | | | | | 8.9 | 63 | | 1.6 | 25 | 30 | |
| 96D3-T5-Z | | | | | | | | 7.1 | 50 | | 1.72 | 20 | 25 | |
| 100D3-S2-Z | 111,600 | | | | | | 5 | 27.9 | 129 | | 3.3 | 70 | 80 | 1100 |
| 120D3-T3-Z | 118,800 | | | | | | 6 | 20.7 | 156 | | 3.3 | 60 | 70 | 1150 |
| 120D3-T4-Z | | | | | | | | 11.5 | 70 | | 1.6 | 30 | 40 | |
| 120D3-T5-Z | | | | | | | | 7.9 | 54 | | 1.72 | 25 | 25 | |
| 140D3-T3-Z | 162,000 | 85 | 40 | | | | 8 | 32.1 | 195 | | 3.3 | 80 | 110 | 1400 |
| 140D3-T4-Z | | | | | | | | 16.4 | 95 | | 1.6 | 45 | 50 | |
| 140D3-T5-Z | | | | | | | | 12.0 | 80 | | 1.72 | 35 | 40 | |
| 160D3-T3-Z | 183,600 | | | | | | 9 | 33.6 | 225 | | 3.3 | 90 | 110 | 1450 |
| 160D3-T4-Z | | | | | | | | 17.3 | 114 | | 1.6 | 45 | 50 | |
| 160D3-T5-Z | | | | | | | | 13.5 | 80 | | 1.72 | 35 | 45 | |
| 180D3-T3-Z | 210,000 | | | | 1.5" FPT | | 10 | 41.4 | 239 | | 3.3 | 100 | 125 | 1500 |
| 180D3-T4-Z | | | | | | | | 19.2 | 125 | | 1.6 | 50 | 60 | |
| 180D3-T5-Z | | | | | | | | 13.8 | 80 | | 1.72 | 35 | 45 | |
| 240D3-T3-Z | 264,000 | 66 | 75 | 49 | 1.5" FPT | 2 | 12 | 55.0 | 300 | 4 | 3.3 | 150 | 175 | 1750 |
| 240D3-T4-Z | | | | | | | | 25.7 | 150 | | 1.6 | 70 | 80 | |
| 240D3-T5-Z | | | | | | | | 20.7 | 109 | | 1.72 | 60 | 70 | |
| 360D3-T3-Z | 307,200 | 143 | 84 | 54 | 2.5" MPT | 2 | 15 | 60.0 | 340 | 4 | 2.3 | 150 | 200 | 2600 |
| 360D3-T4-Z | | | | | | | | 31.4 | 173 | | 1.2 | 80 | 100 | |
| 360D3-T5-Z | | | | | | | | 23.6 | 132 | | 0.9 | 60 | 80 | |
| 500D3-T3-Z | 415,200 | 183 | | | 3" MPT | | 20 | 81.4 | 505 | 6 | 2.3 | 200 | 250 | 2900 |
| 500D3-T4-Z | | | | | | | | 37.9 | 225 | | 1.2 | 100 | 125 | |
| 500D3-T5-Z | | | | | | | | 32.1 | 180 | | 0.9 | 80 | 100 | |
| 600D3-T3-Z | 514,800 | 223 | | | | | 25 | 100.0 | 500 | 8 | 2.3 | 225 | 300 | 3200 |
| 600D3-T4-Z | | | | | | | | 48.6 | 250 | | 1.2 | 125 | 150 | |
| 600D3-T5-Z | | | | | | | | 36.4 | 198 | | 0.9 | 90 | 100 | |
| 760D3-T3-Z | 618,000 | | | | 4" VIC | | 30 | 121.4 | 599 | | 2.3 | 300 | 400 | 4000 |
| 760D3-T4-Z | | | | | | | | 59.3 | 310 | | 1.2 | 125 | 200 | |
| 760D3-T5-Z | | | | | | | | 47.1 | 239 | | 0.9 | 125 | 150 | |

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# TANK SECTION

Dimensional Specifications, Features and Options

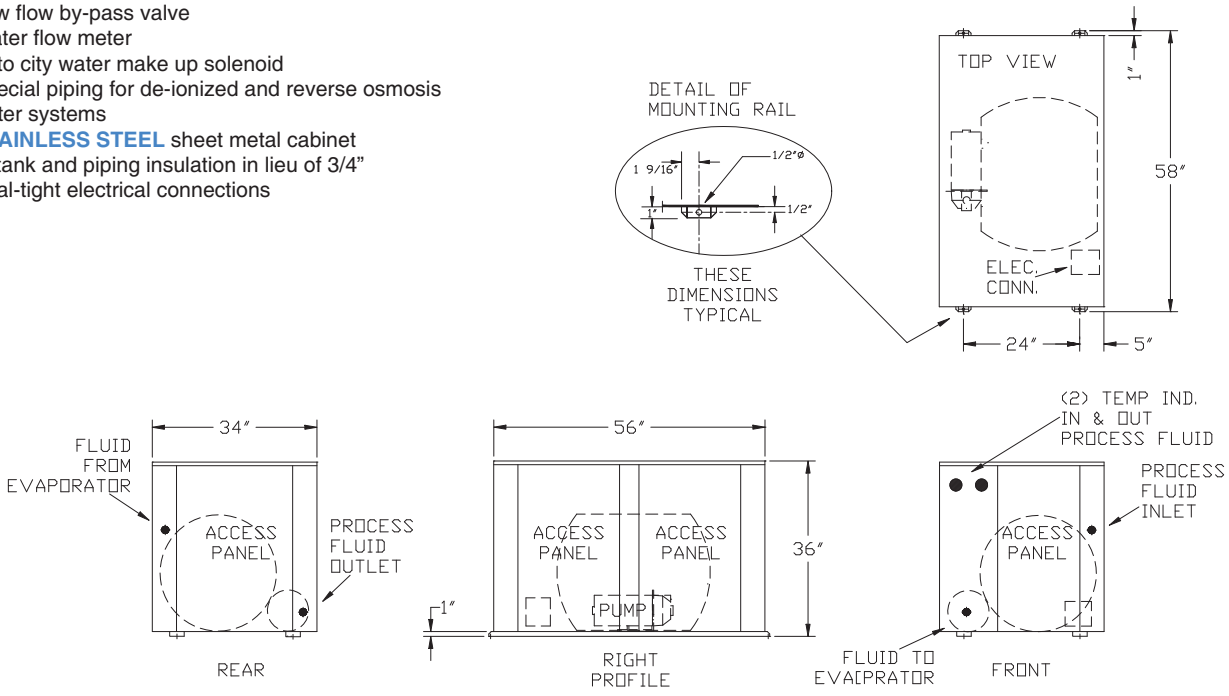
| MODEL | LENGTH IN. | WIDTH IN. | HEIGHT IN. | WATER CONN. | TANK CAPACITY | RECIRCULATION PUMP | FLA 230/3Ø | FLA 460/3Ø | WT. LBS. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| **TS30S** | 36 | 34 | 36 | 1" FPT | 30 GALLONS | 1/3HP | 2.8 | 1.4 | 500 |
| **TS60S** | 56 | | | 1" FPT | 60 GALLONS | 1/3HP | 2.8 | 1.4 | 525 |
| **TS90S** | 75 | | | 1 1/4" FPT | 90 GALLONS | 1/2HP | 3.6 | 1.8 | 600 |
| **TS135S** | 85 | | | 1 1/2" FPT | 135 GALLONS | 3/4HP | 2.6 | 1.3 | 625 |

## Standard Features

- **STAINLESS STEEL** storage tank
- 3/4" tank and fluid piping insulation
- Copper fluid piping
- Tank vent and drain connections
- Tank pressure relief valve
- Fused evaporator fluid re-circulating **STAINLESS STEEL** pump
- Fluid pump discharge ball valve and cleanable "Y" strainer
- Control box with pump terminal block
- Painted, galvanized steel sheet metal cabinet
- 24 volt L.E.D. process fluid thermometers

## Available Options

- Fused, **STAINLESS STEEL** process pump
- Dual system pump with manual changeover
- Dual system pump with auto changeover
- Tank fluid sight glass
- Tank liquid level indicator with dry contacts
- Low flow by-pass valve
- Water flow meter
- Auto city water make up solenoid
- Special piping for de-ionized and reverse osmosis water systems
- **STAINLESS STEEL** sheet metal cabinet
- 1" tank and piping insulation in lieu of 3/4"
- Seal-tight electrical connections




**TS60S**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LEGACY CHILLER SYSTEMS

# TANK SECTION

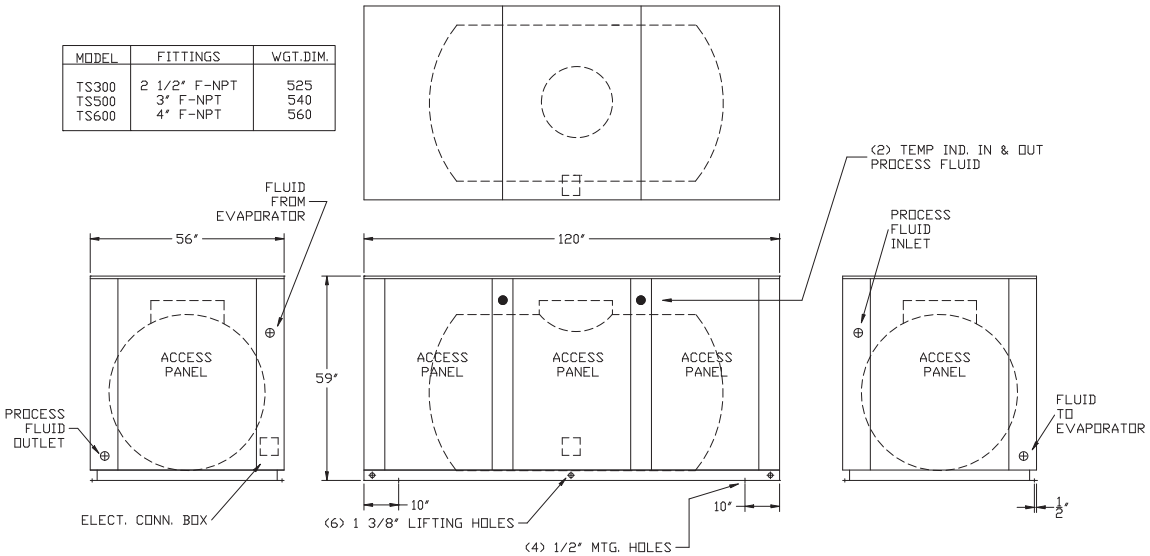
| MODEL | LENGTH IN. | WIDTH IN. | HEIGHT IN. | WATER CONN. | TANK CAPACITY | RECIRCULATION PUMP | FLA 230/3Ø | FLA 460/3Ø | WT. LBS. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| **TS200S** | 120 | 56 | 59 | 1 1/2" FPT | 200 GALLONS | 2HP | 6.4 | 3.2 | 500 |
| **TS300S** | | | | 2" FPT | 300 GALLONS | | | | 525 |
| **TS500S** | | | | 3" FPT | 500 GALLONS | 3HP | 9.4 | 4.5 | 540 |
| **TS600S** | | | | 4" FPT | 600 GALLONS | | | | 560 |

## Standard Features

- Open, vented **polyethylene** storage tank
- 1/2" tank and fluid piping insulation
- Copper fluid piping
- Tank vent and drain connections
- Fused evaporator fluid re-circulating **STAINLESS STEEL** pump
- Fluid pump discharge ball valve and cleanable "Y" strainer
- Control box with pump terminal block
- Painted, galvanized steel sheet metal cabinet
- 24 volt L.E.D. process fluid thermometers

## Available Options

- **STAINLESS STEEL** (welded) tank
- Water flow meter
- Fused, **STAINLESS STEEL** process pump
- Tank fluid sight glass
- Tank liquid level indicator with dry contacts
- Special piping for de-ionized and reverse osmosis water systems
- **STAINLESS STEEL** sheet metal cabinet
- 1" tank and piping insulation
- Seal-tight electrical connections
- Low flow by-pass loop




**TS300 - 600S**

# 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 |

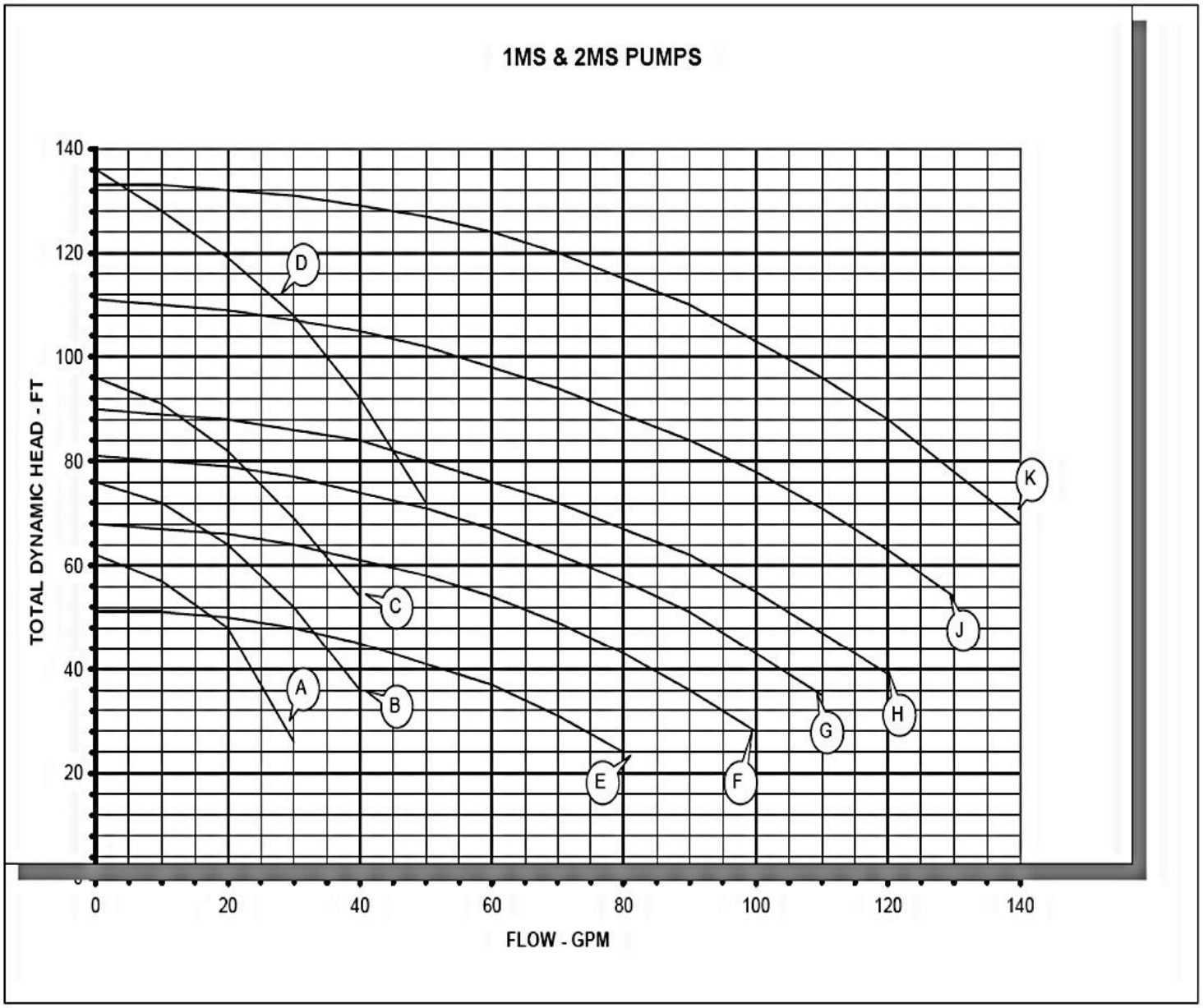
| ETHYLENE GLYCOL CAPACITY CORRECTION FACTOR TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| **PERCENT ETHYLENE GLYCOL BY WEIGHT** | 10% | 15% | 20% | 25% | 30% | 35% | 40% |
| **FREEZING POINT IN °F** | 25 | 21 | 17 | 11 | 5 | 0 | -10 |
| **CAPACITY FACTOR MULTIPLIER*** | 0.98 | 0.96 | 0.95 | 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

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

# 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.