

**MUELLER®**  
**SEMI-HERMETIC PACKAGED**  
**AND SPLIT SYSTEM CHILLERS**  
**1 TO 90 NOMINAL TONS**



**MUELLER®**

REFRIGERATION PRODUCTS

# Mueller® Semi-Hermetic Packaged and Split System Chillers

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# Product Nomenclature

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## EXAMPLE: P AC L 301 S 6 - T3 - S

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

AC            AC = Air-Cooled Condenser

L            L = Low Temperature Model            Blank = Standard Unit

301            **Nominal HP**                    (Example: 301 = 30 HP, 010 = 1 HP, etc.)

S            S = Single-Circuit Unit                    D = Dual-Circuit Unit

6            1 = R-134a            2 = R-22            6 = R-404A, R-507

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

S            **Compressor Type:**            S = Semi-Hermetic

**Note:**  
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.

## AIR-COOLED SELECTION PROCEDURE

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

- The required cooling capacity, Btuh.
- Delta T of entering and leaving fluid temperatures.
- Fluid factor (Example: Water = 500).
- GPM of process fluid to be circulated.
- Design ambient air temperature.

If you know any three of 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 58 GPM of 100% water from 54°F to 44°F.  
Design ambient air temperature 95°F.

### Find:

A) Air-cooled chiller model

### Solution:

- A) 1. Chilled fluid Delta T = 54°F - 44°F = 10°F  
2. Capacity (in Btuh) = 58 GPM x 10°F Delta T x 500 = 290,000 Btuh  
3. From the PAC chiller capacity tables, it can be determined that the PAC301S has the capacity to meet the requirements.

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

# Air-Cooled Chiller Capacities - 010S to 075S

AIR-COOLED CHILLER CAPACITIES																	
Mueller Model	Compressor	LWT °F	Ambient Air Temperature - °F/Btuh														
			80			90			95			100			105		
		Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	
010S	KAM-0100	42	1.1	1.2	8.1	1.0	1.3	7.3	1.0	1.3	6.9	1.0	1.4	7.3	0.9	1.4	8.1
		44	1.1	1.2	8.3	1.1	1.3	7.5	1.0	1.4	7.1	1.0	1.4	7.5	1.0	1.4	8.4
		45	1.1	1.2	8.5	1.1	1.3	7.6	1.0	1.4	7.2	1.0	1.4	7.6	1.0	1.5	8.5
		50	1.2	1.3	9.0	1.2	1.4	8.0	1.1	1.4	7.4	1.1	1.5	8.0	1.1	1.5	9.0
020S	KAK-0200	42	1.7	1.8	9.3	1.6	1.9	8.3	1.5	2.0	7.9	1.5	2.0	8.3	1.4	2.1	9.3
		44	1.7	1.8	9.5	1.6	1.9	8.5	1.6	2.0	8.0	1.6	2.1	8.5	1.5	2.2	9.5
		45	1.8	1.8	9.7	1.7	2.0	8.6	1.6	2.0	8.1	1.6	2.1	8.6	1.5	2.2	9.7
		50	2.0	1.9	10.2	1.8	2.1	9.1	1.8	2.1	8.6	1.7	2.2	9.1	1.7	2.3	10.2
030S	EAD-320	42	2.5	2.6	10.0	2.4	2.8	9.0	2.3	2.8	8.6	2.2	2.9	8.1	2.2	3.0	7.7
		44	2.6	2.7	10.3	2.5	2.8	9.3	2.4	2.9	8.8	2.3	3.0	8.3	2.2	3.1	7.8
		45	2.7	2.7	10.4	2.5	2.8	9.4	2.4	2.9	8.9	2.4	3.0	8.4	2.3	3.1	8.0
		50	2.9	2.8	11.1	2.8	2.9	10.0	2.7	3.0	9.4	2.6	3.1	8.9	2.5	3.2	8.4
031S	ERF-0310	42	2.7	3.3	8.0	2.5	3.4	7.3	2.5	3.5	7.0	2.4	3.6	6.6	2.3	3.7	6.3
		44	2.8	3.3	8.2	2.6	3.5	7.5	2.6	3.6	7.1	2.5	3.7	6.8	2.4	3.8	6.4
		45	2.8	3.3	8.3	2.7	3.5	7.6	2.6	3.6	7.2	2.5	3.7	6.9	2.5	3.8	6.5
		50	3.1	3.5	9.0	2.9	3.7	8.0	2.9	3.8	7.6	2.8	3.9	7.2	2.7	4.0	6.8
040S	NRB-0400	42	3.9	5.0	8.1	3.7	5.2	7.4	3.5	5.3	7.1	3.4	5.4	6.7	3.3	5.5	6.4
		44	4.0	5.1	8.3	3.8	5.3	7.5	3.7	5.4	7.2	3.6	5.5	6.8	3.4	5.6	6.5
		45	4.1	5.2	8.4	3.9	5.4	7.6	3.8	5.5	7.3	3.6	5.6	6.9	3.5	5.7	6.6
		50	4.5	5.4	8.8	4.2	5.6	8.0	4.1	5.7	7.6	3.9	5.8	7.2	3.8	6.0	6.9
050S	2DC-0500	42	4.7	4.1	11.6	4.4	4.3	10.4	4.3	4.5	9.8	4.1	4.6	9.3	4.0	4.8	8.8
		44	4.8	4.1	11.9	4.6	4.4	10.6	4.4	4.6	10.0	4.3	4.7	9.5	4.2	4.8	9.0
		45	4.9	4.1	12.1	4.7	4.5	10.8	4.5	4.6	10.2	4.4	4.8	9.6	4.3	4.9	9.1
		50	5.4	4.3	12.9	5.1	4.6	11.4	4.9	4.8	10.8	4.8	4.9	10.1	4.6	5.1	9.6
051S	2DD-0500	42	5.4	4.7	11.9	5.1	5.1	10.6	5.0	5.3	10.0	4.8	5.4	9.4	4.7	5.6	8.8
		44	5.6	4.8	12.3	5.3	5.2	10.9	5.2	5.3	10.2	5.0	5.5	9.6	4.8	5.7	9.1
		45	5.8	4.8	12.4	5.4	5.2	11.0	5.3	5.4	10.4	5.1	5.6	9.8	4.9	5.8	9.2
		50	6.3	5.0	13.2	5.9	5.3	11.7	5.8	5.6	11.0	5.6	5.8	10.3	5.4	6.0	9.7
075S	3DA-0750	42.0	9.2	8.2	11.5	8.8	8.8	10.2	8.5	9.1	9.6	8.3	9.4	9.1	8.0	9.7	8.6
		44.0	9.6	8.3	11.7	9.0	8.9	10.4	8.8	9.2	9.9	8.6	9.6	9.3	8.3	9.9	8.8
		45.0	9.8	8.3	11.9	9.3	9.0	10.6	9.0	9.3	10.0	8.8	9.7	9.4	8.5	10.0	8.9
		50.0	10.5	8.6	12.6	10.0	9.3	11.1	9.8	9.6	10.5	9.4	10.0	9.9	9.2	10.4	9.3

- Note:**
- Capacities on this chart are based on refrigerant 22. 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.

# Air-Cooled Chiller Capacities - 100S to 351S

AIR-COOLED CHILLER CAPACITIES																	
Mueller Model	Compressor	LWT °F	Ambient Air Temperature - °F/Btuh														
			80			90			95			100			105		
			Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER
100S	3DB-1000	42	10.9	9.5	11.2	10.3	10.3	9.9	10.1	10.7	9.4	9.8	11.1	8.8	9.5	11.5	8.3
		44	11.3	9.6	11.5	10.7	10.4	10.2	10.4	10.8	9.6	10.2	11.2	9.0	9.8	11.7	8.5
		45	11.5	9.6	11.7	11.0	10.5	10.3	10.7	10.9	9.7	10.3	11.3	9.2	10.1	11.8	8.6
		50	12.4	9.9	12.3	11.8	10.8	10.9	11.5	11.3	10.2	11.2	11.7	9.6	10.9	12.2	9.1
120S	3DF-1200	42	12.4	11.7	10.7	11.8	12.6	9.5	11.5	13.1	9.0	11.1	13.6	8.4	10.8	14.1	7.9
		44	12.9	11.8	11.0	12.3	12.8	9.7	11.9	13.3	9.2	11.5	13.9	8.6	11.3	14.4	8.1
		45	13.1	11.9	11.1	12.4	12.9	9.9	12.1	13.4	9.3	11.8	14.0	8.7	11.5	14.5	8.2
		50	14.3	12.4	11.7	13.5	13.4	10.4	13.2	13.9	9.8	12.8	14.5	9.2	12.4	15.0	8.7
150S	3DS-1500	42	14.4	13.0	10.4	13.7	14.0	9.3	13.3	14.5	8.8	12.9	15.1	8.3	12.5	15.6	7.9
		44	14.8	13.2	10.7	14.2	14.2	9.6	13.8	14.7	9.0	13.4	15.3	8.5	13.0	15.8	8.1
		45	15.2	13.3	10.8	14.4	14.3	9.7	14.0	14.8	9.2	13.6	15.4	8.6	13.2	15.9	8.2
		50	16.5	13.6	11.5	15.7	14.8	10.3	15.3	15.3	9.7	14.8	15.9	9.2	14.3	16.5	8.6
200S	4DA-2000	42	15.6	14.0	10.7	14.7	15.2	9.4	14.3	15.8	8.9	13.9	16.3	8.4	13.5	16.8	7.9
		44	16.2	14.2	10.9	15.3	15.4	9.7	14.8	16.0	9.1	14.4	16.6	8.6	14.0	17.1	8.1
		45	16.4	14.3	11.1	15.5	15.5	9.8	15.1	16.2	9.2	14.7	16.7	8.7	14.2	17.2	8.2
		50	17.8	14.8	11.7	16.8	16.1	10.4	16.3	16.8	9.7	15.8	17.3	9.2	15.4	17.9	8.6
220S	4DB-2200	42	17.8	17.0	10.5	16.9	18.2	9.3	16.3	18.9	8.7	15.8	19.5	8.2	15.3	20.2	7.8
		44	18.5	17.2	10.7	17.4	18.5	9.5	16.9	19.3	8.9	16.4	19.9	8.4	15.8	20.5	7.9
		45	18.8	17.4	10.8	17.8	18.7	9.6	17.3	19.4	9.0	16.8	20.1	8.5	16.3	20.7	8.0
		50	20.3	18.0	11.4	19.3	19.4	10.1	18.7	20.2	9.4	18.2	20.8	9.0	17.5	21.6	8.4
250S	4DH-2500	42	19.3	18.8	10.4	18.3	20.2	9.3	17.8	20.9	8.7	17.2	21.6	8.2	16.7	22.2	7.7
		44	19.9	19.1	10.6	18.8	20.5	9.4	18.3	21.3	8.8	17.8	21.9	8.4	17.2	22.6	7.9
		45	20.3	19.2	10.7	19.2	20.6	9.5	18.6	21.4	8.9	18.1	22.1	8.5	17.9	22.8	8.0
		50	21.8	19.9	11.1	20.6	21.4	10.0	20.0	22.3	9.3	19.5	22.9	8.8	18.8	23.7	8.3
301S	6DB-3000	42	25.5	25.2	10.7	24.3	27.1	9.5	23.7	28.0	9.0	22.9	29.0	8.5	22.3	29.8	8.0
		44	26.3	25.6	10.9	25.0	27.5	9.7	24.4	28.5	9.1	23.7	29.4	8.6	23.0	30.4	8.1
		45	26.8	25.8	11.0	25.4	27.7	9.8	24.8	28.7	9.2	24.1	29.7	8.7	23.3	30.6	8.2
		50	29.0	30.6	11.6	27.3	28.8	10.2	26.6	29.8	9.6	25.8	30.8	9.1	25.2	31.8	8.5
351S	6DG-3500	42	30.9	30.4	10.9	29.2	32.6	9.7	28.3	33.8	9.1	27.5	34.8	8.6	26.7	36.0	8.1
		44	31.8	30.8	11.1	30.1	33.1	9.9	29.3	34.3	9.3	28.4	35.6	8.7	27.5	36.6	8.2
		45	32.4	31.0	11.2	30.7	33.4	10.0	29.8	34.6	9.4	29.0	35.7	8.8	28.0	36.9	8.3
		50	34.9	32.3	11.7	33.1	34.7	10.4	32.2	36.0	9.7	31.2	37.1	9.2	30.2	38.5	8.6

- Note:**
1. Capacities on this chart are based on refrigerant 22. 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 Ratio (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s), and control power.

# Air-Cooled Chiller Capacities - 400S to 400D

AIR-COOLED CHILLER CAPACITIES																		
Mueller Model	Compressor	LWT °F	Ambient Air Temperature - °F/Btuh															
			80				90				95				100			105
			Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	
400S	6DJ-4000	42	33.4	34.2	10.2	31.7	36.7	9.0	30.8	38.0	8.5	29.9	39.3	8.1	29.0	40.5	7.6	
		44	34.6	34.7	10.4	32.6	37.4	9.2	31.8	38.6	8.7	30.8	39.9	8.2	29.9	41.1	7.7	
		45	35.0	34.9	10.5	33.2	37.7	9.3	32.4	38.8	8.8	31.3	40.3	8.3	30.4	41.5	7.8	
		50	37.8	36.3	10.9	35.7	39.1	9.7	34.8	40.2	9.1	33.7	41.9	8.6	32.7	43.2	8.1	
500S	8DP-5000	42	41.5	40.8	10.8	39.3	43.5	9.7	38.3	44.8	9.1	37.1	46.2	8.6	36.0	47.5	8.2	
		44	42.7	41.5	10.9	40.7	44.1	9.8	39.4	45.6	9.3	38.3	47.0	8.8	37.3	48.4	8.3	
		45	43.4	41.8	11.1	41.3	44.5	9.9	40.2	46.0	9.4	39.1	47.5	8.9	38.0	48.7	8.4	
		50	46.8	43.5	11.5	44.6	46.2	10.4	43.3	47.8	9.8	42.2	49.2	9.3	41.0	50.6	8.8	
600S	8DS-6000	42	48.3	51.6	10.2	45.3	54.4	9.1	43.8	55.9	8.6	42.5	57.1	8.2	40.9	58.4	7.7	
		44	49.8	52.3	10.3	46.8	55.1	9.3	45.1	56.6	8.7	43.8	58.0	8.3	42.4	59.4	7.8	
		45	50.7	52.7	10.4	47.6	55.6	9.4	45.9	57.3	8.8	44.6	58.6	8.4	43.2	60.0	7.9	
		50	54.2	54.7	10.8	51.3	57.9	9.7	49.3	59.5	9.1	48.0	61.0	8.7	46.4	62.5	8.2	
150D	3DA-0750	42	18.1	16.6	10.7	17.2	17.8	9.6	16.7	18.4	9.1	16.3	19.1	8.6	15.8	19.6	8.1	
		44	18.7	16.8	11.0	17.8	18.1	9.8	17.3	18.7	9.3	16.8	19.4	8.7	16.3	19.9	8.3	
		45	19.0	16.9	11.1	18.1	18.2	10.0	17.6	18.9	9.4	17.1	19.6	8.9	16.6	20.1	8.4	
		50	20.4	17.5	11.7	19.5	18.8	10.5	18.9	19.5	9.9	18.4	20.2	9.3	17.5	20.8	8.9	
200D	3DB-1000	42	20.8	20.0	10.6	19.8	21.4	9.5	19.3	22.1	9.0	18.7	23.0	8.5	17.3	23.7	8.0	
		44	21.4	20.2	10.8	20.4	21.7	9.7	19.9	22.5	9.1	19.3	23.4	8.6	18.2	24.1	8.1	
		45	21.9	20.4	11.0	20.8	21.9	9.8	20.3	22.7	9.2	19.7	23.6	8.7	18.8	24.4	8.2	
		50	23.7	21.0	11.5	22.5	22.8	10.3	21.9	23.6	9.7	21.3	24.6	9.1	20.7	25.4	8.6	
240D	3DF-1200	42	24.4	23.8	10.7	23.1	25.8	9.5	22.5	26.8	8.9	21.8	27.8	8.4	21.3	28.7	7.9	
		44	25.3	24.1	10.9	23.9	26.1	9.7	23.3	27.1	9.1	22.6	28.2	8.5	22.0	29.2	8.0	
		45	25.7	24.3	11.1	24.4	26.3	9.8	23.8	27.3	9.2	23.0	28.4	8.6	22.3	29.4	8.1	
		50	27.8	25.2	11.6	26.3	27.3	10.3	25.7	28.3	9.7	25.0	29.4	9.1	24.2	30.4	8.6	
300D	3DS-1500	42	27.3	27.8	10.4	25.9	29.7	9.4	25.3	30.7	8.8	24.1	31.7	8.3	23.8	32.8	7.8	
		44	28.2	28.2	10.7	26.8	30.2	9.5	26.1	31.2	9.0	25.3	32.3	8.5	24.6	33.4	8.0	
		45	28.8	28.6	10.8	27.3	30.5	9.6	26.6	31.5	9.1	25.8	32.6	8.6	25.0	33.6	8.1	
		50	31.2	29.5	11.3	29.7	31.6	10.1	28.8	32.7	9.6	27.9	33.9	8.9	27.1	35.0	8.4	
400D	4DA-2000	42	30.8	28.6	11.5	29.2	30.8	10.2	28.3	32.0	9.6	27.5	33.0	9.1	26.7	33.8	8.6	
		44	31.8	29.0	11.7	30.2	31.3	10.4	29.2	32.4	9.8	28.4	33.4	9.2	27.5	34.4	8.7	
		45	32.3	29.2	11.8	30.6	31.5	10.5	29.7	32.7	9.9	28.8	33.7	9.3	28.0	34.7	8.8	
		50	34.8	30.3	12.4	33.0	32.7	11.0	32.0	34.0	10.3	31.3	35.0	9.8	30.3	36.1	9.2	

**Notes:**

1. Capacities on this chart are based on refrigerant 22. 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 Ratio (BTU/watt-hour). Power inputs include compressor(s), condenser fan motor(s), and control power.

# Air-Cooled Chiller Capacities - 440D to 1200D

AIR-COOLED CHILLER CAPACITIES																		
Mueller Model	Compressor	LWT °F	Ambient Air Temperature - °F/Btuh															
			80				90				95				100			105
			Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	Tons	kW	EER	
440D	4DB-2200	42	35.1	34.7	10.6	33.3	37.2	9.4	32.3	38.5	8.8	31.2	39.7	8.3	30.2	41.0	7.8	
		44	36.5	35.3	10.8	34.3	37.8	9.5	33.3	39.2	9.0	32.4	40.4	8.5	31.3	41.7	8.0	
		45	36.9	35.5	10.9	35.0	38.3	9.6	34.0	39.5	9.1	32.8	40.7	8.6	31.8	42.1	8.1	
		50	40.0	37.0	11.4	37.8	39.9	10.1	36.8	41.1	9.5	35.8	42.5	9.0	34.5	44.0	8.4	
500D	4DH-2500	42	38.3	37.7	10.7	36.1	40.6	9.5	35.1	42.0	8.9	34.1	43.3	8.4	32.9	44.5	7.9	
		44	39.4	38.2	10.9	37.3	41.2	9.6	35.3	42.7	9.0	35.1	44.0	8.5	34.1	45.3	8.1	
		45	40.1	38.5	11.0	37.9	41.5	9.7	36.8	43.0	9.1	35.8	44.4	8.6	34.6	45.8	8.2	
		50	43.3	39.8	11.5	40.8	43.0	10.2	39.6	44.6	9.5	38.3	46.2	9.0	37.2	47.5	8.5	
601D	6DB-3000	42	50.3	51.0	10.4	47.8	54.7	9.3	46.5	56.6	8.8	45.1	58.5	8.3	43.8	60.3	7.8	
		44	52.0	51.9	10.6	49.3	55.6	9.5	48.1	57.5	8.9	46.7	59.3	8.5	45.3	61.4	7.9	
		45	52.8	52.4	10.7	50.2	56.1	9.6	48.8	58.0	9.0	47.5	59.9	8.6	46.0	61.9	8.0	
		50	57.0	54.5	11.1	54.1	58.6	9.9	52.5	60.5	9.3	51.3	62.3	8.9	49.7	64.6	8.3	
701D	6DG-3500	42	61.2	62.0	10.6	58.1	66.4	9.5	56.5	68.6	8.9	54.8	70.7	8.5	52.8	73.0	7.9	
		44	63.2	63.0	10.8	59.9	67.5	9.6	58.3	69.8	9.1	56.6	71.9	8.6	54.8	74.4	8.0	
		45	64.2	63.5	10.9	60.8	68.0	9.7	59.2	70.4	9.2	57.5	72.5	8.7	55.7	75.0	8.1	
		50	69.3	65.8	11.4	65.7	70.8	10.2	63.6	73.3	9.5	61.8	75.5	9.0	59.9	78.2	8.4	
800D	6DJ-4000	42	67.4	68.0	10.2	62.8	73.2	9.0	61.2	75.5	8.5	59.3	78.1	8.0	57.7	80.5	7.6	
		44	68.4	69.0	10.3	64.8	74.4	9.1	62.9	76.7	8.6	60.9	79.4	8.2	59.2	82.0	7.7	
		45	69.7	69.6	10.4	65.9	75.1	9.2	64.2	77.5	8.7	62.4	80.2	8.3	60.5	82.8	7.8	
		50	75.0	72.2	10.9	71.7	78.0	9.6	69.0	80.5	9.1	66.8	83.3	8.5	64.9	86.2	8.1	
1000D	8DP-5000	42	82.9	81.5	10.8	78.8	87.0	9.7	76.8	89.5	9.2	74.5	92.4	8.7	72.4	95.0	8.2	
		44	85.8	82.9	11.0	81.3	88.3	9.9	79.3	90.9	9.4	76.9	93.7	8.8	74.1	96.5	8.3	
		45	87.1	83.5	11.1	82.8	89.0	10.0	80.8	91.6	9.5	78.3	94.6	8.9	76.1	97.5	8.4	
		50	93.8	86.5	11.6	89.2	92.5	10.4	87.1	95.2	9.9	84.5	98.3	9.3	82.1	101.5	8.8	
1200D	8DS-6000	42	95.4	103.4	9.7	89.6	108.7	8.8	86.7	111.5	8.3	84.2	114.0	7.9	81.3	116.6	7.4	
		44	98.8	105.0	9.9	92.9	110.8	8.9	89.8	113.6	8.4	87.1	116.0	8.0	91.3	118.6	7.6	
		45	100.4	105.8	10.0	94.6	111.7	9.0	91.3	114.6	8.5	88.8	117.2	8.1	85.4	120.0	7.7	
		50	107.9	109.5	10.5	102.1	116.0	9.4	98.3	119.2	8.9	95.4	122.0	8.2	92.5	125.0	8.0	

**Notes:**

- Capacities on this chart are based on refrigerant 22. 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.

# PAC Semi-Hermetic Standard Features and Options

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## STANDARD FEATURES

- Microprocessor controller
- Control transformer
- Refrigerant suction accumulator
- (1-12 hp) 316 stainless steel (copper) brazed-plate evaporator with 1/2" insulation, secured in a steel bracket
- (15-120 hp) shell-and-tube chiller barrel
- Water flow switch
- Condenser fan and control circuit fusing
- Semi-hermetic compressor with crankcase heater
- Compressor vibration eliminators and spring isolator kit
- Compressor oil safety control
- Compressor and condenser motor contactors
- Direct drive condenser fan motor
- Fan cycle control (+40°F)
- Rust-resistant, high-CFM aluminum condenser fan blade
- Condenser(s): copper tube/aluminum fin
- Condenser clean-out ports
- Liquid line drier, sight glass, solenoid, TEV
- Replaceable core liquid line drier (15 to 120 hp)
- Removable, hinged access panels
- Galvanized steel sheet metal cabinet and base frame
- 1/2" insulation on all water and refrigerant suction lines
- Complete refrigerant charge from factory
- Computerized factory run test under load conditions

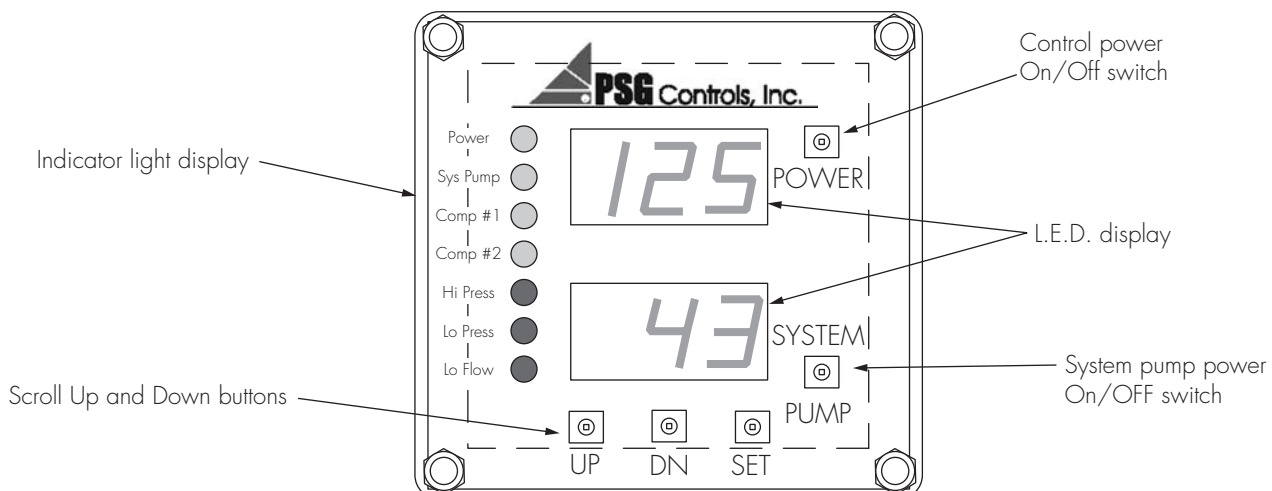
## AVAILABLE OPTIONS

- Compressor cylinder unloading (7.5 hp and up)
- Compressor fusing
- Fused disconnect
- Non-fused disconnect
- Flooded condenser with receiver/head pressure control (-20°F)
- Flooded condenser with heated receiver and head pressure control (-20°F)
- Factory-installed heat tape freeze protection, thermostatically controlled
- Special piping for deionized and reverse osmosis water systems
- Shell-and-tube chiller barrel (1 to 12 hp)
- Fused stainless steel system process pump
- Dual system process pump with manual or auto changeover
- Water flow meter
- Phase monitor
- Condenser herosite coating (coastal protection)
- Copper condenser coil (coastal protection)
- "Gold" finned condenser coil (coastal protection)
- Four-year extended compressor warranty
- Hot gas bypass capacity control with solenoid valve and time delay relay
- Factory-assisted startup



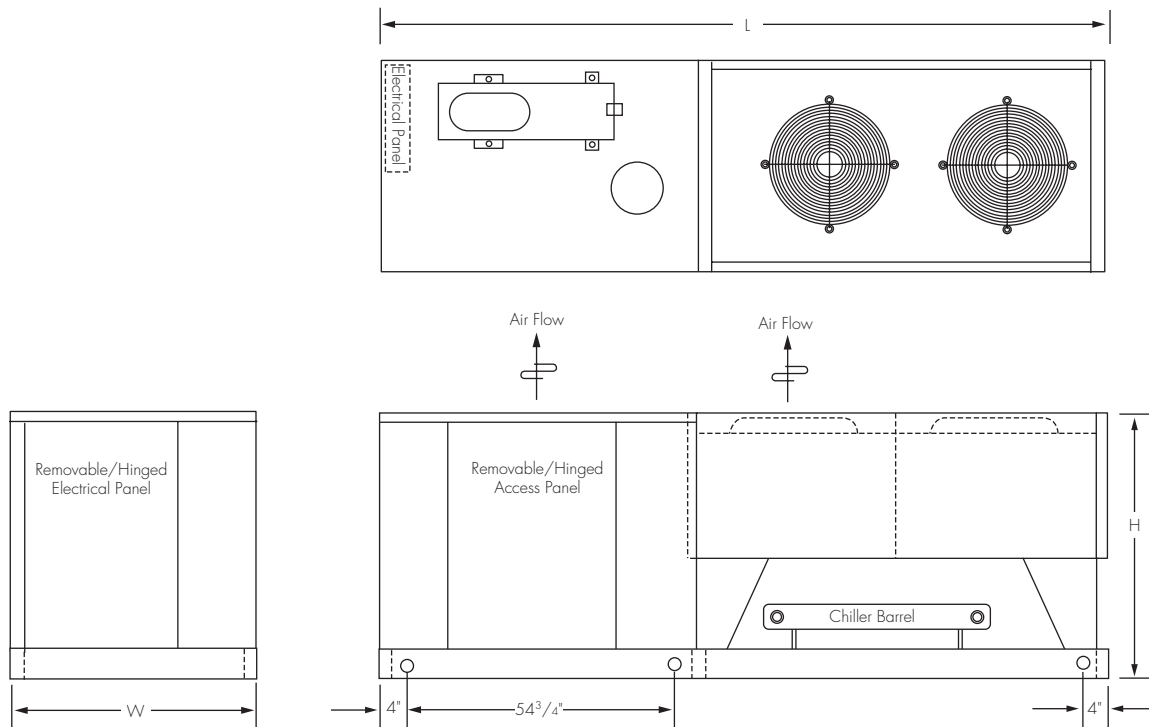
# Microprocessor Standard Features

- 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 or °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:
  - ▲ Displays inlet and outlet temperature during chiller operation.
  - ▲ Displays refrigerant high- and low-pressure in review mode.
- No cap tubes to break causing a loss of refrigerant and down time.
- No refrigerant recovery to change out the pressure transducer.
- Chiller control power on/off switch with green indicator.
- System pump on/off switch with green indicator.
- Compressor run indicator lights.
- High and low refrigerant pressure red fault indicator.
- Low fluid flow red indicator.
- Display flashes all chiller safety faults:
  - ▲ High fluid temperature outlet alarm (display only — does not shut down the chiller).
  - ▲ Low fluid temperature outlet alarm (shuts down the chiller and requires manual reset).
  - ▲ High refrigerant pressure (shuts down the chiller and requires manual reset).
  - ▲ Low refrigerant pressure (shuts down the chiller and requires manual reset).
  - ▲ Low water flow through evaporator (shuts down the chiller and automatically resets when flow is restored).
- Monitors and logs compressor run hours.



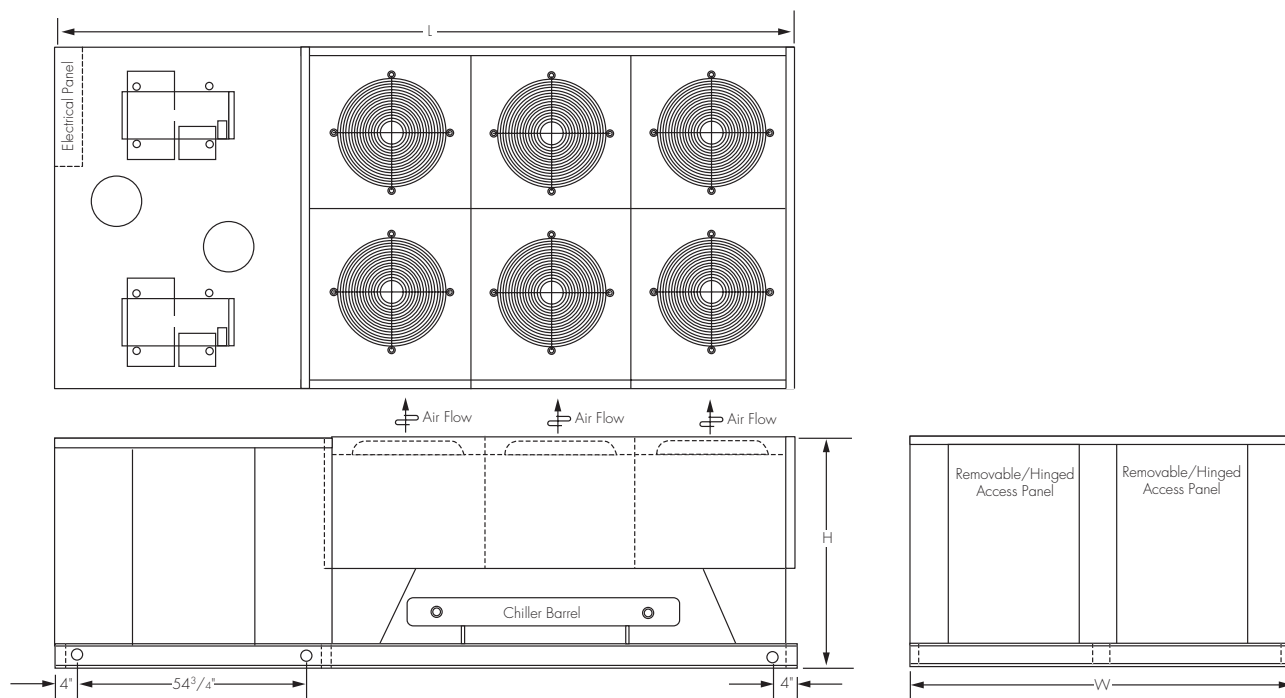
# PAC Semi-Hermetic Dimensional and Electrical Specifications

SINGLE CIRCUIT AIR-COOLED PACKAGED CHILLER															
Mueller Model	Nominal Btuh	Length (in)	Width (in)	Height (in)	Fluid Connection	Compressor			RLA ea.	LRA ea.	Fan Motor			Weight (lbs)	
						Qty	HP	Model			Qty	FLA ea.	MCA		MOP
PAC100S2-T3-S	128,400	85	34	40	1.25" FPT	1	10	3DB-1000	43.6	215	2	3.3	61.1	100	1,000
PAC100S2-T4-S	128,400	85	34	40	1.25" FPT	1	10	3DB-1000	20.0	106	2	1.6	28.2	45	1,000
PAC120S2-T3-S	145,200	85	34	40	1.5" FPT	1	12	3DF-1200	48.2	275	2	3.3	66.9	110	1,200
PAC120S2-T4-S	145,200	85	34	40	1.5" FPT	1	12	3DF-1200	23.6	138	2	1.6	32.7	50	1,200
PAC150S2-T3-S	160,000	123	46	54.5	2" MPT	1	15	3DS-1500	59.6	275	2	6.6	87.7	125	1,600
PAC150S2-T4-S	160,000	123	46	54.5	2" MPT	1	15	3DS-1500	29.0	138	2	3.1	42.5	70	1,600
PAC200S2-T3-S	176,000	157	46	54.5	2" MPT	1	20	4DA-2000	66.0	308	2	6.6	95.7	150	1,700
PAC200S2-T4-S	176,000	157	46	54.5	2" MPT	1	20	4DA-2000	33.0	154	2	3.1	47.5	80	1,700
PAC220S2-T3-S	205,000	157	46	54.5	2" MPT	1	22	4DB-2200	65.6	374	2	6.6	95.2	150	1,700
PAC220S2-T4-S	205,000	157	46	54.5	2" MPT	1	22	4DB-2200	32.8	187	2	3.1	47.2	80	1,700
PAC250S2-T3-S	222,000	157	46	54.5	2" MPT	1	25	4DH-2500	82.2	428	2	6.6	116.0	175	1,900
PAC250S2-T4-S	222,000	157	46	54.5	2" MPT	1	25	4DH-2500	41.1	214	2	3.1	57.6	90	1,900
PAC301S2-T3-S	300,000	157	46	54.5	2.5" MPT	1	30	6DB-3000	105.0	565	2	6.6	144.5	250	2,050
PAC301S2-T4-S	300,000	157	46	54.5	2.5" MPT	1	30	6DB-3000	52.5	283	2	3.1	71.8	125	2,050
PAC351S2-T3-S	355,000	183	46	54.5	2.5" MPT	1	35	6DG-3500	125.0	594	2	6.6	169.5	275	2,400
PAC351S2-T4-S	355,000	183	46	54.5	2.5" MPT	1	35	6DG-3500	62.5	297	2	3.1	84.3	125	2,400
PAC400S2-T3-S	383,000	204	46	54.5	2.5" MPT	1	40	6DJ-4000	142.0	594	3	6.6	197.3	300	2,900
PAC400S2-T4-S	383,000	204	46	54.5	2.5" MPT	1	40	6DJ-4000	71.0	297	3	3.1	98.1	150	2,900
PAC500S2-T3-S	480,000	243	46	54.5	3" MPT	1	50	8DP-5000	180.0	1070	3	6.6	244.8	400	3,100
PAC500S2-T4-S	480,000	243	46	54.5	3" MPT	1	50	8DP-5000	90.0	535	3	3.1	121.8	200	3,100
PAC600S2-T3-S	547,000	243	46	56.5	3" MPT	1	60	8DS-6000	224.0	1070	3	6.6	299.8	500	4,900
PAC600S2-T4-S	547,000	243	46	56.5	3" MPT	1	60	8DS-6000	112.0	535	3	3.1	149.3	250	4,900



# PAC Semi-Hermetic Dimensional and Electrical Specifications

DUAL CIRCUIT AIR-COOLED PACKAGED CHILLER																
Mueller Model	Nominal Btuh	Length (in)	Width (in)	Height (in)	Fluid Connection	Compressor			RLA ea.	LRA ea.	Fan Motor		Weight		(lbs)	
						Qty	HP	Model			Qty	FLA ea.	MCA	MOP		
PAC150D2-T3-S	210,000	157	46	54.5	2.5" MPT	2	7.5	3DA-0750	41.0	215	2	6.6	105.5	125	1800	
PAC150D2-T4-S	210,000	157	46	54.5	2.5" MPT	2	7.5	3DA-0750	20.0	106	2	3.1	51.2	70	1800	
PAC200D2-T3-S	245,000	157	46	54.5	2.5" MPT	2	10	3DB-1000	43.6	215	2	6.6	111.3	150	2100	
PAC200D2-T4-S	245,000	157	46	54.5	2.5" MPT	2	10	3DB-1000	20.0	106	2	3.1	51.2	70	2100	
PAC240D2-T3-S	286,000	157	46	54.5	2.5" MPT	2	12	3DF-1200	48.2	275	2	6.6	121.7	150	2250	
PAC240D2-T4-S	286,000	157	46	54.5	2.5" MPT	2	12	3DF-1200	23.6	138	2	3.1	53.1	80	2250	
PAC300D2-T3-S	316,000	157	46	54.5	2.5" MPT	2	15	3DS-1500	59.6	275	2	6.6	147.3	200	2600	
PAC300D2-T4-S	316,000	157	46	54.5	2.5" MPT	2	15	3DS-1500	29.0	138	2	3.1	71.5	100	2600	
PAC400D2-T3-S	355,000	183	46	54.5	2.5" MPT	2	20	4DA-2000	66.0	308	2	6.6	148.5	225	3100	
PAC400D2-T4-S	355,000	183	46	54.5	2.5" MPT	2	20	4DA-2000	33.0	154	2	3.1	74.3	100	3100	
PAC440D2-T3-S	406,000	204	46	54.5	3" MPT	2	22	4DB-2200	65.6	374	3	6.6	147.6	225	2900	
PAC440D2-T4-S	406,000	204	46	54.5	3" MPT	2	22	4DB-2200	32.8	187	3	3.1	73.8	110	2900	
PAC500D2-T3-S	438,000	204	46	54.5	3" MPT	2	25	4DH-2500	82.2	428	3	6.6	185.0	250	2900	
PAC500D2-T4-S	438,000	204	46	54.5	3" MPT	2	25	4DH-2500	41.1	214	3	3.1	92.5	125	2900	
PAC601D2-T3-S	590,000	157	90	56.5	3" MPT	2	30	6DB-3000	105.0	565	4	6.6	262.7	400	5500	
PAC601D2-T4-S	590,000	157	90	56.5	3" MPT	2	30	6DB-3000	52.5	283	4	3.1	130.5	200	5500	
PAC701D2-T3-S	702,000	183	90	56.5	4" V	2	35	6DG-3500	125.0	594	4	6.6	307.7	400	5700	
PAC701D2-T4-S	02,000	183	90	56.5	4" V	2	35	6DG-3500	62.5	297	4	3.1	153.0	200	5700	
PAC800D2-T3-S	768,000	204	90	56.5	4" V	2	40	6DJ-4000	142.0	594	6	6.6	359.1	500	5800	
PAC800D2-T4-S	768,000	204	90	56.5	4" V	2	40	6DJ-4000	71.0	297	6	3.1	178.4	250	5800	
PAC1000D2-T3-S	962,000	243	90	56.5	4" V	2	50	8DP-5000	180.0	1070	6	6.6	444.6	600	6400	
PAC1000D2-T4-S	962,000	243	90	56.5	4" V	2	50	8DP-5000	90.0	535	6	3.1	221.1	300	6400	
PAC1200D2-T3-S	1,090,000	303	90	58.5	5" V	2	60	8DS-6000	224.0	1070	8	6.6	556.8	700	6500	
PAC1200D2-T4-S	1,090,000	303	90	58.5	5" V	2	60	8DS-6000	112.0	535	8	3.1	276.8	350	6500	

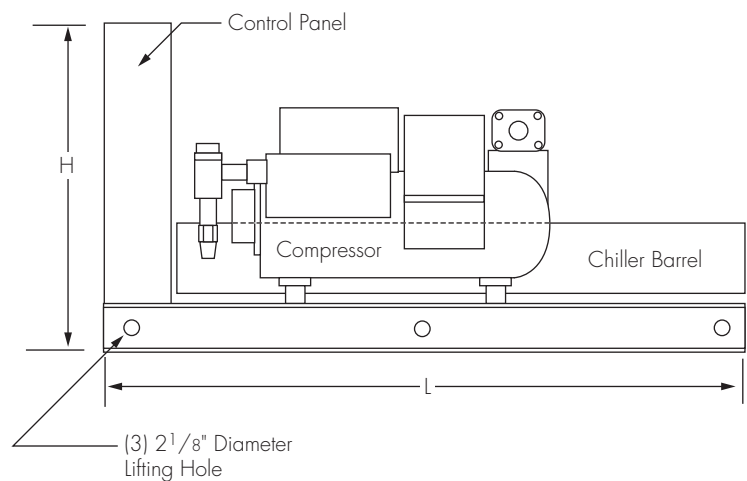


# ES Single Circuit Split System Dimensions

SPLIT SYSTEM / EVAPORATOR SECTION										
Mueller Model	Length (in)	Width (in)	Height (in)	Compressor Quantity	Compressor HP	Water Connection	Refrigerant Discharge	Refrigerant Liquid	Weight (lb)	Condenser Model
ES100S	65	34	42	1	10	1.25" FPT	1 <sup>1</sup> / <sub>8</sub> "	5/8"	800	CS120S
ES120S	65	34	42	1	12	1.25" FPT	1 <sup>1</sup> / <sub>8</sub> "	5/8"	800	CS120S
ES150S	65	34	42	1	15	2" MPT	1 <sup>3</sup> / <sub>8</sub> "	7/8"	850	DVC022C
ES200S	65	34	60	1	20	2" MPT	1 <sup>3</sup> / <sub>8</sub> "	7/8"	950	DVC022C
ES220S	65	34	60	1	22	2 <sup>1</sup> / <sub>2</sub> " MPT	1 <sup>3</sup> / <sub>8</sub> "	7/8"	1,000	DVC022C
ES250S	65	34	60	1	25	2 <sup>1</sup> / <sub>2</sub> " MPT	1 <sup>3</sup> / <sub>8</sub> "	7/8"	1,000	DVC022C
ES301S	65	34	60	1	30	2 <sup>1</sup> / <sub>2</sub> " MPT	2 <sup>1</sup> / <sub>8</sub> "	7/8"	1,100	DVC027C
ES351S	95	34	60	1	35	2 <sup>1</sup> / <sub>2</sub> " MPT	2 <sup>1</sup> / <sub>8</sub> "	7/8"	1,300	DVC032C
ES400S	95	34	60	1	40	3" MPT	2 <sup>1</sup> / <sub>8</sub> "	7/8"	1,400	DVC037C
ES500S	110	34	60	1	50	3" MPT	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "	1,600	DVC043C
ES600S	110	34	60	1	60	3" MPT	2 <sup>5</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "	1,700	DVC048C

## STANDARD FEATURES

- Microprocessor controller
- Compressor motor contactor
- (1-12 hp) stainless steel brazed-plate evaporator
- Compressor oil safety control
- (15-120 hp) shell-and-tube chiller barrel
- 24V control transformer
- Water flow switch
- Liquid line drier, sightglass, solenoid, TEV
- Suction accumulator
- Refrigerant discharge / liquid access valves
- Remote condenser
- Galvanized steel base frame
- Condenser fan and control circuit fusing
- 1/2" insulation on all water and refrigerant lines
- Condenser fan motor contactors
- Complete refrigerant charge from factory
- Semi-hermetic compressor with crankcase heater
- Factory run test under load conditions
- Compressor vibration eliminators and spring isolator kit



**Note:**

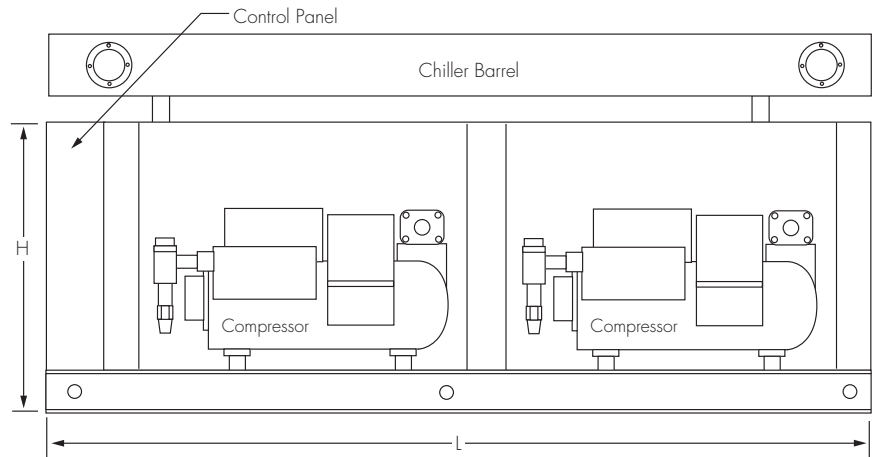
Electrical specifications are the same as the packaged units found on page 9.

# ES Dual Circuit Split System Dimensions

SPLIT SYSTEM / EVAPORATOR SECTION										
Mueller Model	Length (in)	Width (in)	Height (in)	Compressor Quantity	Compressor HP	Water Connection	Refrigerant Discharge	Refrigerant Liquid	Weight (lb)	Condenser Model
ES150D	85	34	42	2	7.5	2 1/2" MPT	(2) 5/8"	(2) 5/8"	1,100	DVC022C
ES200D	85	34	42	2	10	2 1/2" MPT	(2) 1 1/8"	(2) 5/8"	1,200	DVC022C
ES240D	85	34	42	2	12	2 1/2" MPT	(2) 1 1/8"	(2) 5/8"	1,300	DVC027C
ES300D	85	34	42	2	15	2 1/2" MPT	(2) 1 1/8"	(2) 7/8"	1,500	DVC027C
ES400D	85	34	60	2	20	2 1/2" MPT	(2) 1 3/8"	(2) 7/8"	1,650	DVC032C
ES440D	85	34	60	2	22	3" MPT	(2) 1 3/8"	(2) 7/8"	1,700	DVC037C
ES500D	85	34	60	2	25	3" MPT	(2) 1 3/8"	(2) 7/8"	1,800	DVC041C
ES601D	110	34	60	2	30	3" MPT	(2) 1 5/8"	(2) 1 1/8"	1,900	DVC049C
ES701D	110	34	60	2	35	4" V	(2) 1 5/8"	(2) 1 1/8"	2,000	DVC057C
ES800D	110	34	60	2	40	4" V	(2) 1 5/8"	(2) 1 1/8"	2,400	DVC073C
ES1000D	120	34	60	2	50	4" V	(2) 1 5/8"	(2) 1 1/8"	2,800	DVC086C
ES1200D	120	34	60	2	60	5" V	(2) 2 1/8"	(2) 1 1/8"	3,000	DVC112C

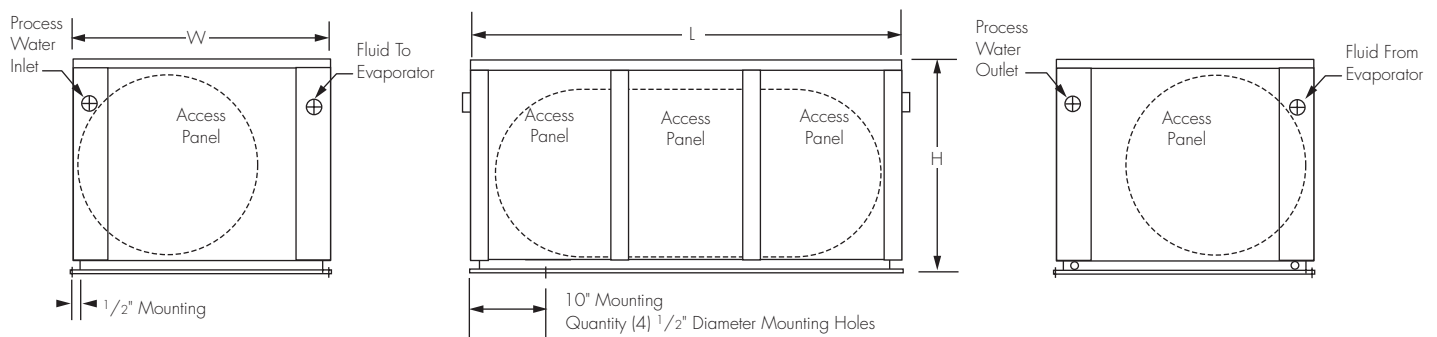
## STANDARD FEATURES

- Microprocessor controller
- Compressor motor contactor
- Compressor oil safety control
- (15-120 hp) shell-and-tube chiller barrel
- 24V control transformer
- Water flow switch
- Liquid line drier, sightglass, solenoid, TEV
- Suction accumulator
- Refrigerant discharge / liquid access valves
- Remote condenser
- Galvanized steel base frame
- Condenser fan and control circuit fusing
- 1/2" insulation on all water and refrigerant lines
- Condenser fan motor contactors
- Complete refrigerant charge from factory
- Semi-hermetic compressor with crankcase heater
- Factory run test under load conditions
- Compressor vibration eliminators and spring isolator kit



# Tank Section Dimensional Specifications

TANK SECTION DIMENSIONAL SPECIFICATIONS									
Mueller Model	Length (in)	Width (in)	Height (in)	Water Connection	Tank Capacity (gal)	Recirculation Pump (hp)	RLA 230/3Ø	RLA 460/3Ø	Weight (lbs)
TS200S	120	56	59	1½" FPT	200	2	6.4	3.2	500
TS300S	120	56	59	2" FPT	300	2	6.4	3.2	525
TS500S	120	56	59	3"	500	3	9.4	4.5	540
TS600S	120	56	59	4"	600	3	9.4	4.5	560



## STANDARD FEATURES

- Open-vented polyethylene storage tank
- ½" tank and fluid piping insulation
- Copper fluid piping
- Tank vent and drain connections
- Fused stainless steel evaporator fluid recirculating pump
- Fluid pump discharge ball valve and cleanable "Y" strainer
- Control box with pump terminal block
- Painted, galvanized steel sheet metal cabinet
- 24V LED process fluid thermometers

## AVAILABLE OPTIONS

- Stainless steel (welded) tank
- Fluid flow meter
- Fused stainless steel process pump
- Tank fluid sight glass
- Tank liquid level indicator with dry contacts
- Piping for reverse osmosis or deionized water applications
- Stainless steel sheet metal cabinet
- 1" tank and piping insulation
- Seal-tight electrical connections
- Low flow bypass loop

# Glycol Factor Tables

PROPYLENE GLYCOL CAPACITY CORRECTION FACTOR TABLE							
Propylene Glycol By Weight	15%	20%	25%	30%	35%	40%	50%
Freezing Point In °F	24°F	18°F	15°F	9°F	5°F	-5°F	-30°F
Capacity Factor Multiplier*	0.922	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							
Ethylene Glycol By Weight	15%	20%	25%	30%	35%	40%	50%
Freezing Point In °F	25°F	21°F	17°F	11°F	5°F	0°F	-10°F
Capacity Factor Multiplier*	0.98	.96	.95	.93	.92	.91	.89
Pressure Drop Multiplier	1.08	1.11	1.16	1.21	1.27	1.32	1.38

**Note:**

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





## MUELLER® SEMI-HERMETIC PACKAGED AND SPLIT SYSTEM CHILLERS

Along with the complete line of standard products that Paul Mueller Company offers, we have the ability to custom build units to each customer's particular needs. Please contact the Refrigeration Products Department at 1-800-MUELLER or your local representative for your special application.



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- ▲ Tankless Falling Film Chillers
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- ▲ Bakery Chillers
- ▲ Condensing Units
- ▲ Semi-Welded Evaporators
- ▲ Brazed-Plate Heat Exchangers
- ▲ Fre-Heater®
- ▲ Model "QPX" Heat Exchangers
- ▲ MaximICE®

Due to the manufacturer's policy of continuous product improvement, the manufacturer reserves the right to make changes without notice.

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