



Standard Features

All CPC Series 5 to 40 hp (3.73 to 29.83 kW) portable chillers have an operating **leaving water temperature range of 30°F to 65°F (-1°C to 18°C)**. For applications outside this range, consult factory. CPC Series portable chillers come standard with:

Mechanical

- Compressor: 5-30 hp, hermetic scroll, with compressor staging on 20-30 hp tandems; 35-40 hp, semi-hermetic discus® with cylinder unloading
- Evaporator: 5-30 hp, stainless steel copper-brazed plate; 35-40 hp, shell & tube
- Condenser: aluminum fin/copper tube with washable filters
- Reservoir: 5-7.5 hp 20 gal, 10-15 hp 40 gal, 20-30 hp 80 gal. polyethylene; 35-40 hp 80-gal. 304 SS
- Piping: Non-ferrous construction, 5-30 hp; ferrous construction, 35-40 hp
- Pump 304 SS: (5-7.5) 1 hp, (10-15) 2 hp, (20-30) 5 hp, (35-40) hp 7.5 hp

Other mechanical features

- External fill/drain/sight glass
- Valved Process water connections

- Low process water flow switch
- NEMA-rated ODP fan motors
- Swivel casters: 5-15 hp 4", 20-40 hp 5" with lock
- Single pump models only: Pressure-actuated Process water bypass valve for system protection
- To Process 2.5" dual scale liquid-filled pressure gauge
- Fully insulated refrigeration and process piping

Electrical

- Fully accessible NEMA 12-style electrical control enclosure
- Non-fused disconnect switch with branch fusing
- Single-point power and ground wiring connection

Refrigeration

- High and low refrigerant pressure cut-outs
- High-discharge temperature cut-out (5-10 hp models)

- High pressure spring-actuated relief valve
- Filter dryer, sight glass, balanced-port thermal expansion valve, multiple refrigeration access ports
- Hot gas bypass capacity control
- Hot gas bypass and liquid line shutoff valves
- Compressor service valves 5-15, and 35-40 hp
- 5 to 30 hp: Fan/blower cycling switch
- R-22 refrigerant

Controls

- Off-the-shelf microprocessor-based PID auto-tuning controller with To Process and Set Point LED readout
- Low and high process water temperature electronic cut-out switch with LCD display
- Graphic control panel with status lights

Other features

- 1 year warranty on compressor and labor
- 2 year parts warranty, 3 year limited warranty on controller

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CPC Series Available Options

Configure-to-Order and Field-Retrofittable Options • No additional lead time ✓ denotes availability

Option Description	Add'l lead time (wks)	HP		
		-5 to -15	-20 to -30	-35 & -40
Automatic water makeup valve Process water sidestream 50-micron filter with monitoring flow meter	<i>Configure-to-Order</i>	✓	✓	✓
General fault indicator ①: • 85 dB @ 2 ft. (61 cm) audible alarm buzzer and silence button • 100 dB @ 10 ft. (3 m) audible alarm horn / 108,000 peak candle-power, 80 flash/min. visual alarm strobe and silence button	<i>Configure-to-Order</i>	✓	✓	✓
Compressor hour meter	<i>Configure-to-Order</i>	✓	✓	✓

Configure-to-Order Options • No additional lead time ✓ denotes availability

Option Description	Add'l lead time (wks)	HP			
		-5 to -15	-20 to -30	-35 & -40	
Communications: • RS232 • RS485	<i>Configure-to-Order</i>	✓	✓	✓	
Recirculation pump		✓	✓	✓	
High pressure fans; provides an additional 0.30" WG (75 Pa) static pressure on fan discharge ② Crankcase pressure regulating (CPR) valve ③ Stainless steel (304 SS) reservoir tank	<i>Configure-to-Order</i>	✓	N/A	✓	Standard
5" (127 mm) swivel locking casters Mounting rails (standard w/PSR remote air-cooled condensers) Mounting feet UL-labeled electrical subpanel	<i>Configure-to-Order</i>	NC	N/A	N/A	N/A
		NC	N/A	N/A	N/A
		✓	✓	✓	✓
Pump Options ④					
		-5 & -7.5	-10 & -15	-20 to -30	-35 & -40
0.75 hp Bronze Turbine	<i>Configure-to-Order</i>	N/A	N/A	N/A	N/A
1.0 hp SS		Standard	N/A	N/A	N/A
1.5 hp SS		N/A	N/A	N/A	N/A
2.0 hp SS		✓	Standard	N/A	N/A
2.0 hp SS dual stage		✓	N/A	N/A	N/A
3.0 hp SS		✓	✓	N/A	N/A
3.0 hp SS dual stage		✓	✓	N/A	N/A
5.0 hp SS		✓	✓	Standard	N/A
5.0 hp SS dual stage		✓	✓	N/A	N/A
7.5 hp Bronze		✓	✓	N/A	N/A
7.5 hp SS		N/A	N/A	✓	Standard
10.0 hp SS		N/A	✓	✓	✓
15.0 hp SS		N/A	N/A	✓	✓

① Alarm conditions include High- and Low-Water Temperature, Low Water Flow, and High- and Low Refrigerant Pressure.

② Provides an additional 0.30" WG static pressure on fan discharge. High-pressure fans are necessary and

must be included in chiller installations where the exiting air is to be exhausted through ductwork.

③ CPR valve **required** for process water leaving temperature of 66° to 75°F; CPR valve prevents compressor motor overloading.

④ Process flow less than 1.92 gpm per ton or greater than 3.6 gpm per ton **requires a recirculation pump.**

Additional Lead Time Options • Additional lead time required

✓ denotes availability

Option description	Add'l lead time (wks.)	HP	
		-5 to -30	-35 & -40
Y-strainer pressure drop gauge	2 weeks	✓	N/A
380/3/50 operating voltage	2 weeks	✓	✓
575/3/60 operating voltage	Consult factory		
Less reservoir tank	2 weeks	✓	✓
Less reservoir tank and pump	2 weeks	✓	✓
Variable-speed fans (low ambient) ①	2 weeks	✓	✓
NEMA-12 Control Access Window	2 weeks	✓	✓

① Includes a variable-speed fan; provides sound attenuation in ambient temperatures below 95°F.

Remote Air-Cooled Startup Option

- Includes **on-site labor only**; consult factory for travel, living expenses, and scheduling.
- Remote condenser units **must** be installed, evacuated, and precharged **before** Colortronic arrives on site

Optional Pump Amperages

Optional pump full load amps (FLA) at 208-230/1/60									
hp	amps	hp	amps	hp	amps	hp	amps	hp	amps
0.75 hp bronze turbine	5.4 amps	1 hp ss	6.4 amps	1.5 hp ss	7.5 amps	2 hp ss	9.6 amps	3 hp ss	12.7 amps

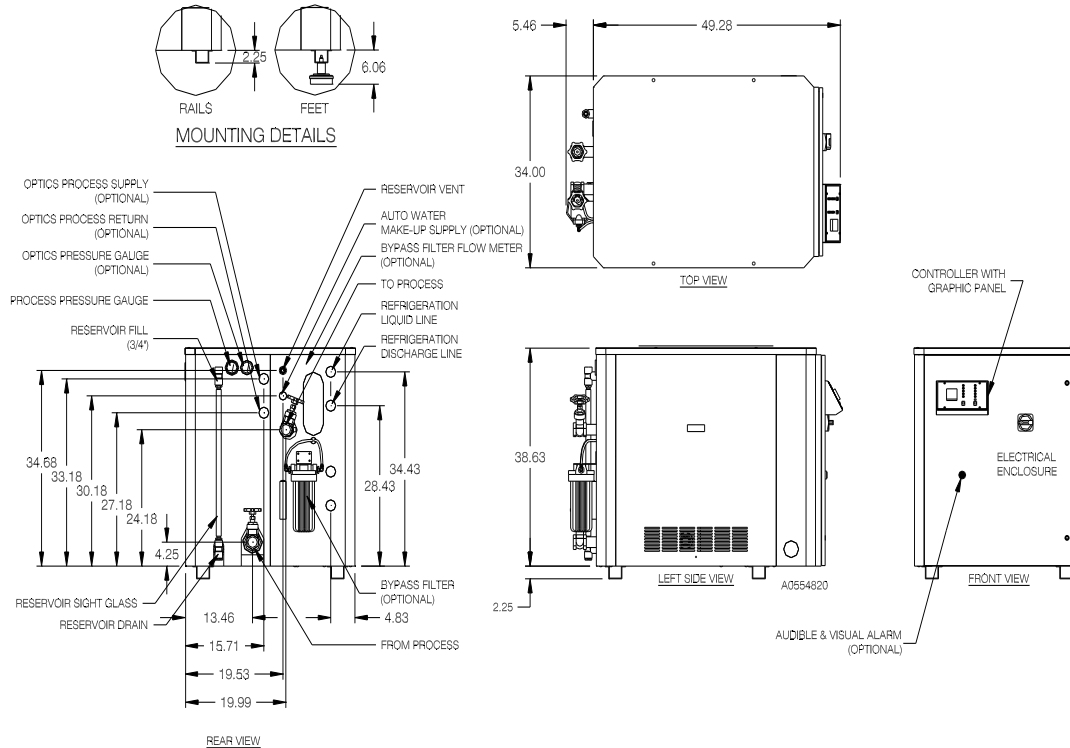
Optional pump full load amps (FLA) at 460/3/60									
hp	amps	hp	amps	hp	amps	hp	amps	hp	amps
0.75 hp bronze turbine	1.5 amps	1 hp ss	1.8 amps	1.5 hp ss	2.3 amps	2 hp ss	3.1 amps	3 hp ss	4.2 amps
5 hp ss	6.2 amps	7.5 hp ss	9.8 amps	10 hp ss	13.2 amps	15 hp ss	19.0 amps	2 hp dual ss	2.7 amps
3 hp dual ss	4.5 amps	5 hp dual ss	6.6 amps	7.5 hp bronze	9.0 amps				

CPC-R Series 5 and 7.5 hp (3.73 and 5.59 kW) Remote Air-Cooled Chiller Capacities

- Nominal operating parameters for CPC-R Series remote air-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr) with 95°F (35°C) ambient air. **For 50 Hz applications, multiply capacity by 0.83. Nominal 60 Hz capacity flow rate must be maintained.**

Model number	Nominal cooling capacity ①			Nom. water flow gpm ②	Compressor hp	Nom. pump hp	Refrigeration connections		Power in amps ③					
	tons						in. dia. ODS		460/3/60 ④		1 pump		2 pumps	
	no pump	1 pump	2 pump				Discharge	Liquid	rated	running	rated	running		
CPCR5	4.8	4.6	4.5	11.1	5.0	1.0	5/8"	5/8"	12.2	9.2	13.1	10.1		
CPCR7.5	6.6	6.4	6.3	15.3	7.5	1.0	7/8"	5/8"	16.2	12.8	17.3	13.7		

- Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) ambient air. Optional additional process pump hp (kW) reduces chiller capacity by 0.2 tons per hp (811 Kcal/hr per kW).
- Based on 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr), nominal 1 pump.
- An optional oversized process pump adds to the total rated or running chiller amperage. To find the new total chiller amperage, subtract the standard process pump amperage from the optional pump amperage (see Page 3), and add it to the chiller rated or running amperage.
- Multiply 460/3/60 amperage by 2.0 for 208-230/3/60 amperages; multiply by 0.8 for 575/3/60 amperages.



Specifications

- CPC-R portable chillers come standard with mounting rails.
- CPC-R portable chillers are charged with 25 psi (172.4 kPa/1.7 bars) nitrogen for shipping purposes.

Model number	Compressor hp	Process connections, in. NPT					Dimensions			Weights		
		1 pump	2 pumps	no pump, no tank	1 pump, no tank, to/from	height	width	depth	Dry ②	Ship. ②	Oper. ② ③	
		in.	in.	in.	in.	in.	in.	in.	lbs.	lbs.	lbs.	
CPCR5	5.0	1.5"	2.0"	1.5"	1.5" / 2.0"	40.9"	34.0"	48.5"	597	748	930	
CPCR7.5	7.5	1.5"	2.0"	1.5"	1.5" / 2.0"	40.9"	34.0"	48.5"	644	794	977	

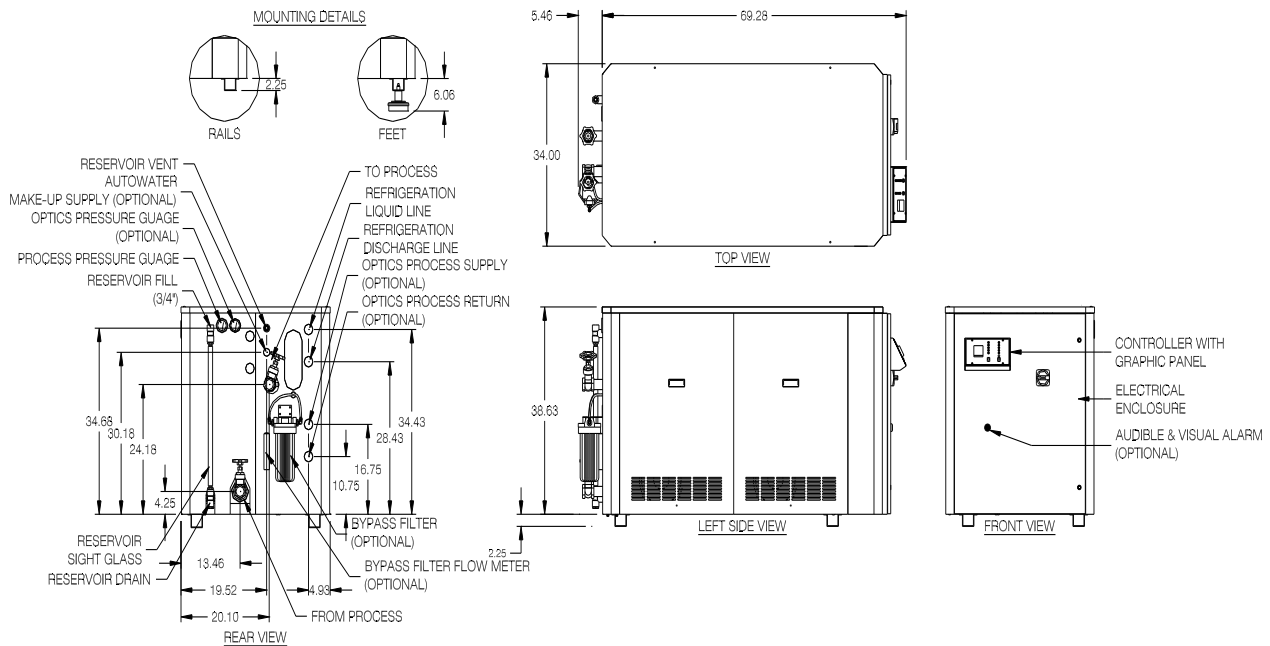
- To convert to cm, multiply by 2.54. Add to height dimension based on mounting options.
- Weight is for standard chiller. Some optional features will increase weight.
- Operating weight is with a full 20-gallon (76 liter) reservoir tank of water.

CPC-R Series 10 and 15 hp (7.46 and 11.20 kW) Remote Air-Cooled Chiller Capacities

- Nominal operating parameters for CPC-R Series remote air-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr) with 95°F (35°C) ambient air. **For 50 Hz applications**, multiply capacity by **0.83**. **Nominal 60 Hz capacity flow rate must be maintained.**

Model number	Nominal cooling capacity ①			Nom. water flow gpm ②	Compressor hp	Nom. pump hp	Refrigeration connections		Power in amps ③			
	tons						in. dia. ODS		460/3/60 ④			
	no pump	1 pump	2 pump				Discharge	Liquid	1 pump		2 pumps	
	rated	running	rated	running	rated	running	rated	running				
CPCR10	9.9	9.5	9.4	22.8	10.0	2.0	1 1/8"	5/8"	22.5	18.2	24.2	19.9
CPCR15	14.5	14.1	14.0	33.9	15.0	2.0	1 1/8"	5/8"	29.7	23.9	31.4	25.6

- Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) ambient air. Optional additional process pump hp reduces chiller capacity by 0.2 tons per hp (811 Kcal/hr per kW).
- Based on 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr), nominal 1 pump.
- An optional oversized process pump adds to the total rated or running chiller amperage. To find the new total chiller amperage, subtract the standard process pump amperage from the optional pump amperage (see Page 3), and add it to the chiller rated or running amperage.
- Multiply 460/3/60 amperage by 2.0 for 208-230/3/60 amperages; multiply by 0.8 for 575/3/60 amperages.



Specifications

- CPC-R portable chillers come standard with mounting rails.
- CPC-R portable chillers are charged with 25 psi (172.4 kPa/1.7 bars) nitrogen for shipping purposes.

Model number	Compressor hp	Process connections, in. NPT				Dimensions			Weights		
		1 pump	2 pumps	no pump, no tank	1 pump, no tank, to/from	inches ①			Dry ②	Ship. ②	Oper. ② ③
		height	width	depth	lbs.	lbs.	lbs.				
CPCR10	10.0	1.5"	2.0"	1.5"	1.5" / 2.0"	40.9"	34.0"	68.6"	827	1,052	1,159
CPCR15	15.0	2.0"	2.5"	2.0"	2.0" / 3.0"	40.9"	34.0"	68.6"	870	1,095	1,202

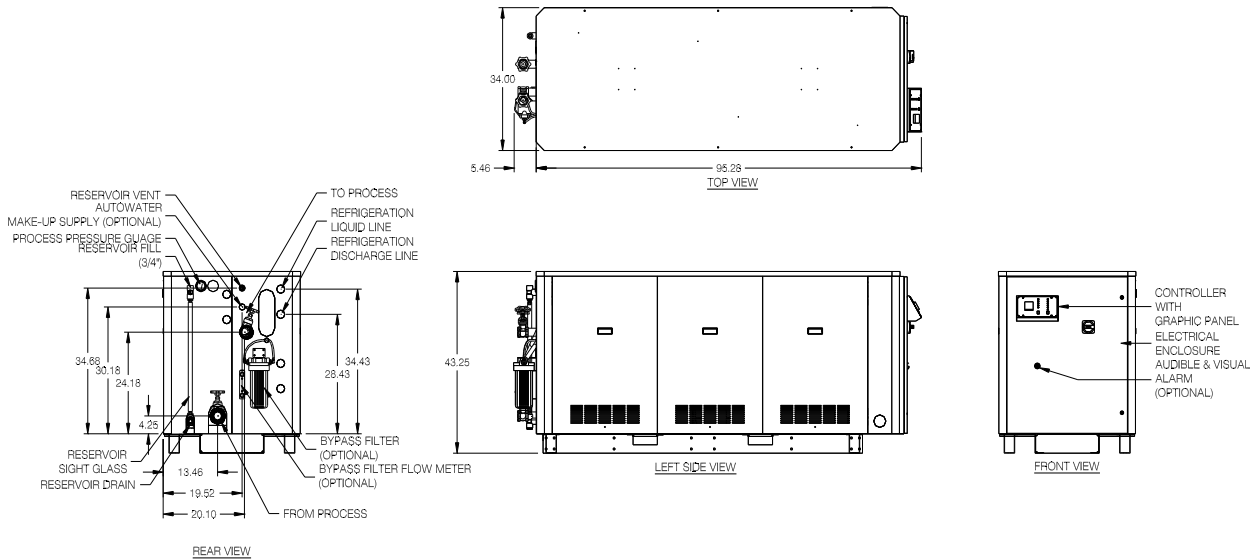
- To convert to cm, multiply by 2.54. Add to height dimension based on mounting options.
- Weight is for standard chiller. Some optional features will increase weight.
- Operating weight is with a full 40-gallon (151 liter) reservoir tank of water.

CPC-R Series 20 to 40 hp (14.91 to 29.83 kW) Remote Air-Cooled Chiller Capacities

- Nominal operating parameters for CPC-R Series remote air-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr) with 95°F (35°C) ambient air. **For 50 Hz applications**, multiply capacity by **0.83**. **Nominal 60 Hz capacity flow rate must be maintained.**

Model number	Nominal cooling capacity ① tons			Nom. water flow gpm ②	Compressor hp	Nom. pump hp	Refrigeration connections		Power in amps ③					
	no pump	1 pump	2 pump				in. dia. ODS		460/3/60 ④		1 pump		2 pumps	
							Discharge	Liquid	rated	running	rated	running		
CPCR20	19.4	18.4	18.0	46.5	2 @ 10	5	1 ³ / ₈ "	7 ⁷ / ₈ "	43.9	37.6	47.0	40.7		
CPCR25	23.8	22.8	22.4	57.2	2 @ 13	5	1 ³ / ₈ "	7 ⁷ / ₈ "	55.9	42.1	59.0	45.2		
CPCR30	29.2	28.2	27.8	70.2	2 @ 15	5	1 ³ / ₈ "	7 ⁷ / ₈ "	60.0	50.4	63.2	53.5		
CPCR35	30.6	29.1	28.7	73.5	35	7.5	1 ⁵ / ₈ "	1 ¹ / ₈ "	64.4	60.3	67.5	63.4		
CPCR40	36.9	35.4	35.0	88.6	40	7.5	1 ⁵ / ₈ "	1 ¹ / ₈ "	81.9	68.8	85.0	58.0		

- Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) ambient air. Optional additional process pump hp reduces chiller capacity by 0.2 tons per hp (0.703 kW ref. cap. per 0.746 kW pump power).
- Based on 2.4 gpm per ton (9.1 lpm per 3.517 kW), nominal 1 pump.
- An optional oversized process pump adds to the total rated or running chiller amperage. To find the new total chiller amperage, subtract the standard process pump amperage from the optional pump amperage (see Page 3), and add it to the chiller rated or running amperage.
- Multiply 460/3/60 amperage by **2.0** for 208-230/3/60 amperages; multiply by **0.8** for 575/3/60 amperages.



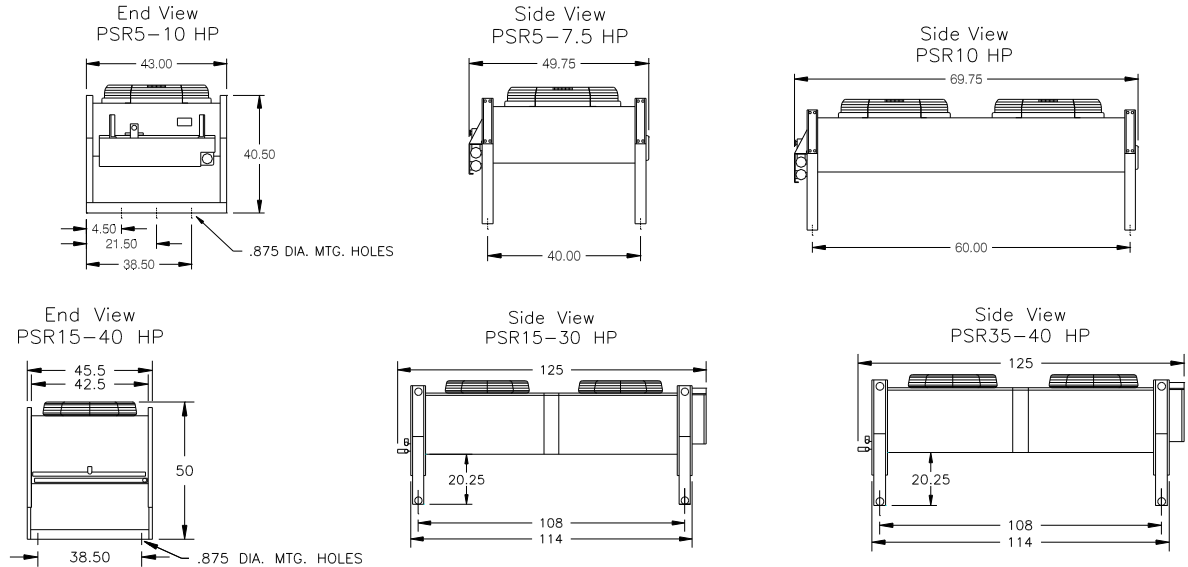
Specifications

- CPC-R portable chillers come standard with mounting rails.
- CPC-R portable chillers are charged with 25 psi (172.4 kPa/1.7 bars) nitrogen for shipping purposes.

Model number	Compressor hp	Process connections, in. NPT					Dimensions			Weights		
		1 pump to/from	2 Pump to/from	no pump, no tank	1 pump, no tank, to/from	inches ①			Dry ② lbs.	Ship. ② lbs.	Oper. ② ③ lbs.	
						height	width	depth				
CPCR20	2 @ 10	2" / 3"	2.5" / 3"	2.0"	2" / 3"	43.3"	34.0"	100.7"	1,299	1,549	1,965	
CPCR25	2 @ 13	2" / 3"	2.5" / 3"	2.0"	2" / 3"	43.3"	34.0"	100.7"	1,305	1,555	1,971	
CPCR30	2 @ 15	2" / 3"	2.5" / 3"	2.0"	2" / 3"	43.3"	34.0"	100.7"	1,607	1,857	2,273	
CPCR35	35	2.5" / 3"	2.5" / 3"	2.5"	2.5" / 3"	43.3"	34.0"	100.7"	2,235	2,462	2,901	
CPCR40	40	2.5" / 3"	2.5" / 3"	2.5"	2.5" / 3"	43.3"	34.0"	100.7"	2,243	2,470	2,909	

- To convert to cm, multiply by **2.54**. Add to height dimension based on mounting options.
- Weight is for standard chiller. Some optional features will increase weight.
- Operating weight is with a full 80-gallon (303 liter) reservoir tank of water.

CPC-R Series Remote Condenser Assembly Models
CPC-R5 to CPC-R40 Models



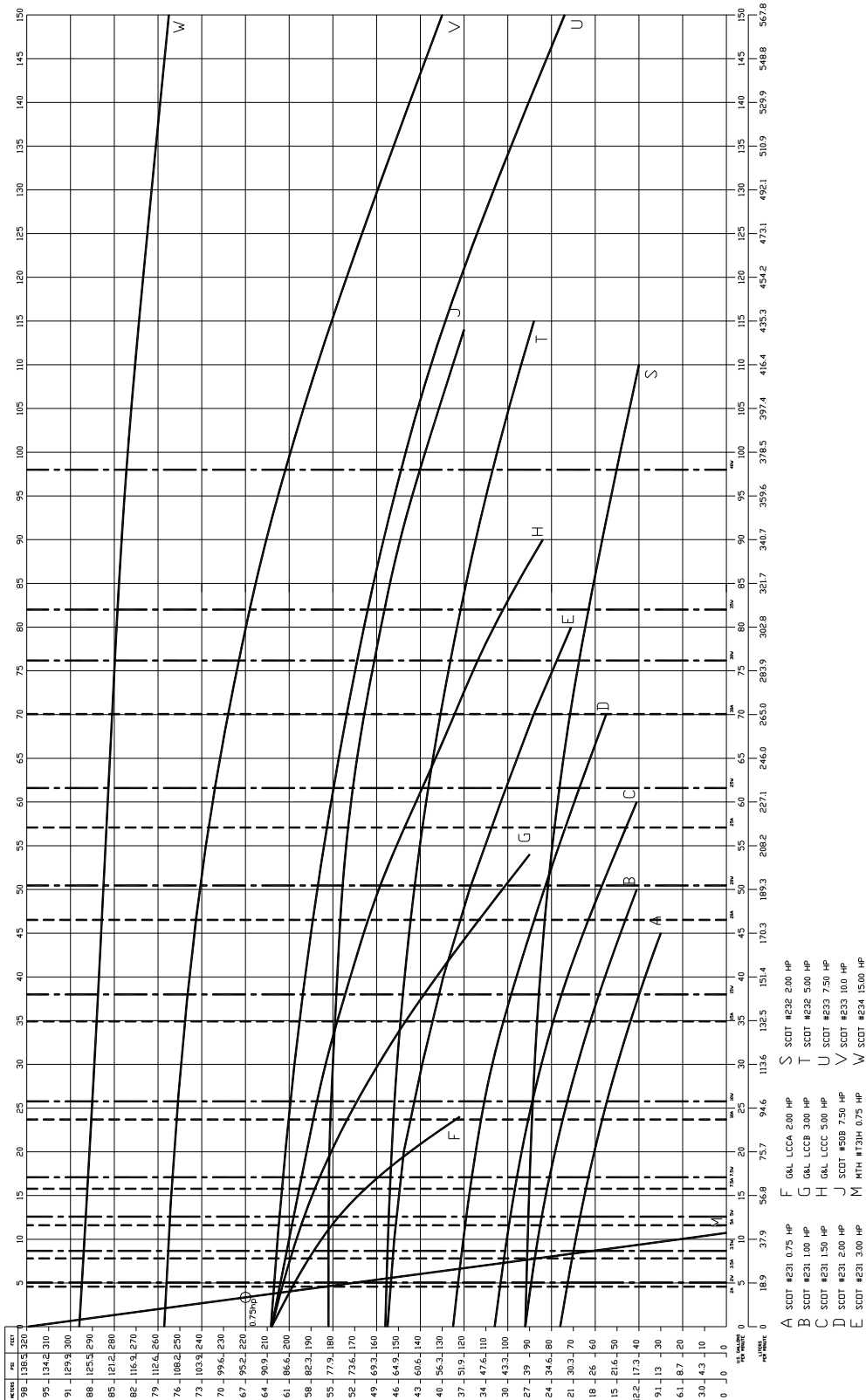
To convert inches to *cm*, multiply dimension by **2.54**.

CPC-R Series Remote Condenser Models

Model Number	Fan(s) ② ③ ④						Remote Condenser				Refrigeration ⑤		
	Each			Totals ③ ④			Overall Dimensions				Connections		Charge
	Dia. in.	Motor hp ①	Amps 460V	Fans	Air flow cfm ⑥	Net wt. lbs. ⑥	Length 'A'(in.)	Width 'B'(in.)	Height 'C'(in.)	Mtg. 'D'(in.)	Discharge ODS(in.)	Liquid ODS(in.)	R-22 lbs. ⑥
CPCR5	26	.75 hp 1 ø	2.4	1	6,450	390	49.8	43.0	40.5	40.0	1 ¹ / ₈	⁷ / ₈	9.0
CPCR7.5	26	.75 hp 1 ø	2.4	1	6,450	390	69.8	43.0	40.5	60.0	1 ¹ / ₈	⁷ / ₈	9.0
CPCR10	26	.33 hp 3 ø	2.4	2	12,400	520	89.8	43.0	40.5	80.0	(2) 1 ¹ / ₈	(2) ⁷ / ₈	9.5
CPCR15	26	1.5 hp 3 ø	2.4	2	23,000	790	125.0	43.0	50.0	108.0	1.375	1.375	8.0
COCR20	26	1.5 hp 3 ø	2.4	2	23,000	800	125.0	45.5	50.0	108.0	1.375	1.375	8.0
CPCR25	26	1.5 hp 3 ø	2.4	2	21,900	860	125.0	45.5	50.0	108.0	1 ⁵ / ₈	1 ⁵ / ₈	12.0
CPCR30	26	1.5 hp 3 ø	2.4	2	20,700	950	125.0	45.5	50.0	108.0	1 ⁵ / ₈	1 ⁵ / ₈	15.0
CPCR35	26	1.5 hp 3 ø	2.4	3	34,800	1,280	180.0	45.5	50.0	⑦	2 ¹ / ₈	2 ¹ / ₈	19.0
CPCR40	26	1.5 hp 3 ø	2.4	3	32,900	1,300	180.0	45.5	50.0	⑦	2 ¹ / ₈	2 ¹ / ₈	19.0

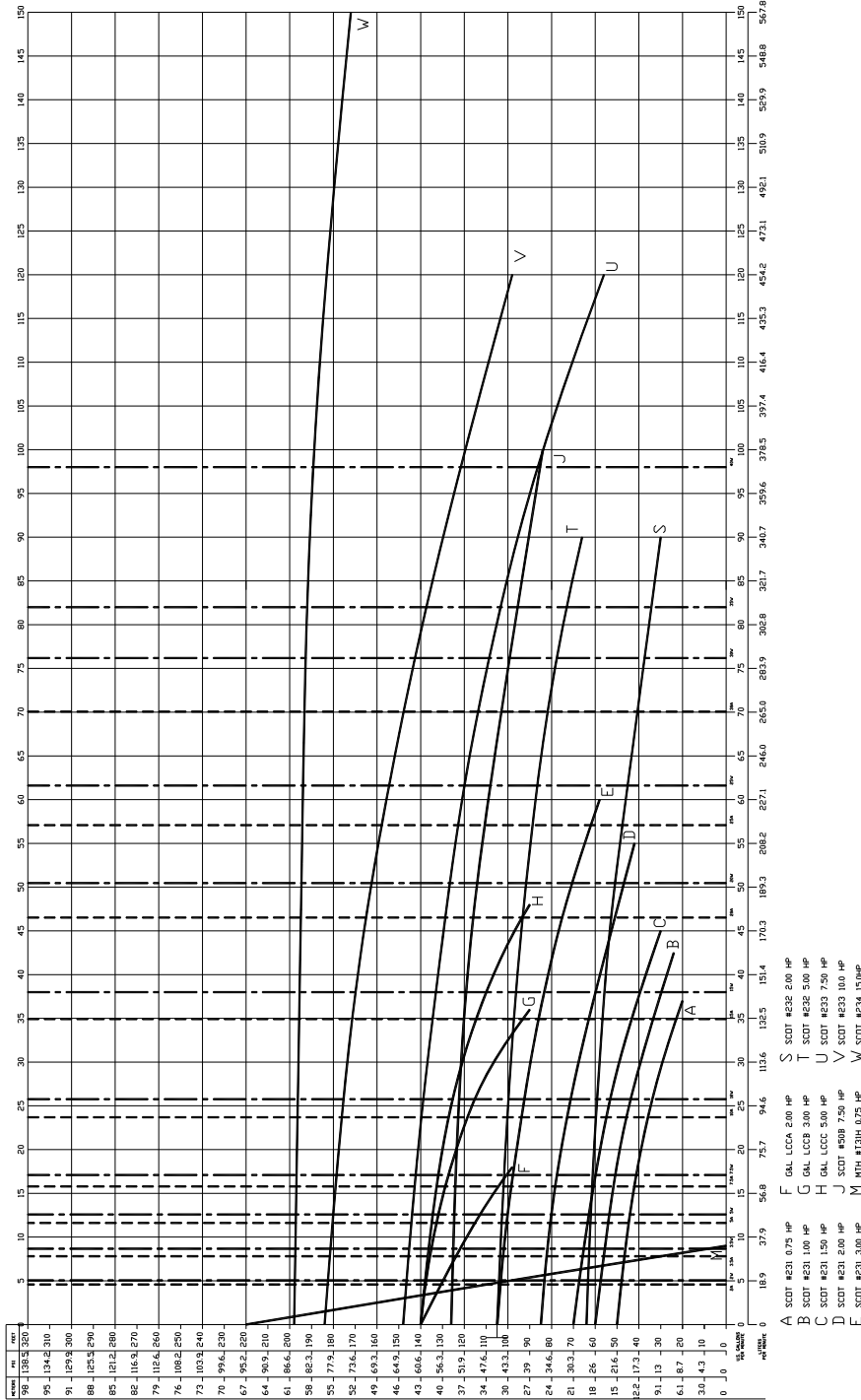
- ① ø represents electrical phase; all motors are 1,140 rpm. Multiply hp by **0.746** to convert to *kW*.
- ② All first fan motors (Header Side) are 0.75 hp (0.56 *kW*) single phase variable speed.
- ③ Multiply 460V amperages by **2.0** for 208-230V amperages.
- ④ Multiply 460 V amperages by **0.8** for 575 V amperages.
- ⑤ Refrigeration charge is for **remote condenser only!**
- ⑥ To convert cfm to *cmh*, multiply by **1.699**. To convert lbs. to *Kg*, multiply by **0.454**.
- ⑦ See drawing above.

CPC Series Pump Curves • 60 Hz



Important! Pump pressure must be corrected for pressure at chiller 'To Process' connection.

CPC Series Pump Curves • 50 Hz



Important! Pump pressure must be corrected for pressure at chiller 'To Process' connection.

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