

Standard Features

All CPC Series 2 to 30 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 chillers come standard with:

Mechanical

Compressor: 2-30 hp, hermetic scroll, with compressor staging on 20-30 hp tandems
Evaporator: 2-30 hp, stainless steel copper-brazed plate
Condenser: Aluminum fin/cooper tube with washable filters
Reservoir: 2-3.5 hp 6 gal, 5-7.5 hp 20 gal, 10-15 hp 40 gal, 20-30 hp 80 gal.
Polyethylene piping: Non-ferrous construction, 2-30 hp;
Pump 304 SS: (2-7.5) 1 hp, (10-15) 2 hp, (20-30) 5 hp

Other mechanical features

External fill/drain/sight glass
Valved process water connections
Low process water: Pressure switch 2-3.5 hp, flow switch 5-30 hp
NEMA-rated ODP fan motors

Swivel casters: 2-3.5 hp, 5-15 hp 4," 20-30 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 (2-10 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
5 to 30 hp: Hot gas bypass and liquid line shutoff valves
Compressor service valves on 2-15 hp models
5 to 30 hp: Fan/blower cycling switch
R-22 refrigerant

Controls

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

Other features

1 year warranty on compressor
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		
		-2 & -3.5	-5 to -15	-20 to -30
Automatic water makeup valve	Configure-to-Order	✓	✓	✓
Process water sidestream 50-micron filter with monitoring flow meter		✓	✓	✓
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. Compressor hour meter	Configure-to-Order	✓	✓	✓
		✓	✓	✓
	Configure-to-Order	✓	✓	✓

Configure-to-Order Options No additional lead time

✓ denotes availability

Option Description	Add'l lead time (wks)	HP			
		-2 & 3.5	-5 to -15	-20 to -30	
Communications: RS232	Configure-to-Order	✓	✓		✓
RS485		✓	✓		✓
Recirculation pump:	Configure-to-Order	N/A	✓		✓
High pressure fans: provides an additional 0.30" WG (75 Pa) static pressure on fan discharge ②	Configure-to-Order	N/A	✓		N/A
Crankcase pressure regulating (CPR) valve ③		✓	✓		✓
Stainless steel (304 SS) reservoir tank		CF	✓		✓
5" (127 mm) swivel looking casters	Configure-to-Order	N/A	✓		Standard
Mounting rails (standard w/PSR remote air-cooled condensers)		N/A			N/A
Mounting feet		N/A	NC		N/A
UL-labeled electrical subpanel		N/A	NC		✓
Pump Options ④		-2 & -3.5	-5 & -7.5	-10 & -15	-20 to -30
Configure-to-Order	0.75 hp Bronze Turbine	✓	N/A		N/A
	1.0 hp SS	Standard	Standard	N/A	
	1.5 hp SS	✓	N/A		
	2.0 hp SS	✓	✓	Standard	N/A
	2.0 hp SS dual stage	N/A	✓	N/A	
	3.0 hp SS	✓	✓	✓	
	3.0 hp SS dual stage		✓	✓	
	5.0 hp SS	N/A	✓	✓	Standard
	5.0 hp SS dual stage		✓	✓	
7.5 hp Bronze		✓	✓	N/A	
7.5 hp SS			N/A	✓	
10.0 hp SS		N/A	✓	✓	
15.0 hp SS			N/A	✓	

① Alarm conditions include High-and-Low Water Temperature, Low Water Temperature, and High-and-Low Flow 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°F to 75°F; CPR valve prevents compressor motor overloading

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

Additional Lead Time Options Additional lead time required ✓ denotes availability

Option description	Add'l lead time (wks.)	Tons	
		-2 & -3.5	-5 to -30
Y-strainer pressure drop gauge	2 weeks	✓	✓
380/3/50 operating voltage	2 weeks	CF	✓
575/3/60 operating voltage	Consult factory		
Less reservoir tank	2 weeks	CF	✓
Less reservoir tank and pump	2 weeks	CF	✓
Variable-speed fans (low ambient) ①	2 weeks	N/A	✓
NEMA-12 Control Access Window	2 weeks	✓	✓

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

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-A Series 2 hp and 3.5 hp (1.49 and 2.61 kW) Air-Cooled Chiller Capacities

Nominal operating parameters for CPC-A Series air-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (9.1 lpm per 3.517 kW) 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 in tons		Water flow gpm ②	Compressor hp	Nominal Pump hp	Discharge air		Power in Amps ③ 460/3/60 ④	
	no pump	1 pump				openings	cfm ⑤	rated	running
CPCA2	1.9	1.7	4.6	2.0	1.0	1 @ 18.5"	1,475	8.0	6.9
CPCA3.5	3.3	3.1	7.9	3.5	1.0	1 @ 18.5"	2,350	10.9	8.8

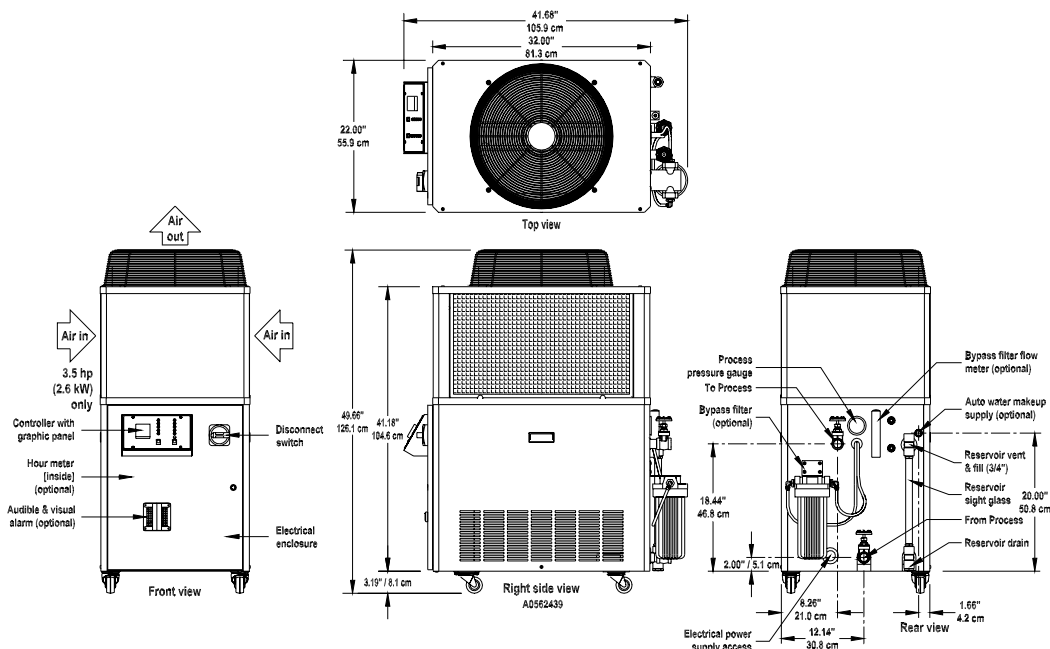
① Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) tower water. Optional additional process pump hp (kW) reduces chiller capacity by 0.2 tons per hp (0.703 kW ref. cap. per 0.746 kW pump power).

② Based on 2.4 gpm per ton (9.1 lpm per 3.517 kW), nominal 1 pump.

③ 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 tables on Page 3), and add it to the chiller rated or running amperage.

④ Multiply 460/3/60 amperage by 2.0 for 208-230/3/60 amperages.

⑤ To convert cfm to cmh, multiply by 1.699.



Specifications

CPC-A portable chillers come standard with 2.5" (63 mm) swivel casters.

Model number	Compressor hp	Process connections in. NPT	Dimensions in inches ①			Weights		
						Dry ②	Shipping ②	Operating ② ③
			height	width	depth	lbs.	lbs.	lbs.
CPCA2	2.0	1.0"	49.7"	22.0"	41.7"	387	417	437
CPCA3.5	3.5	1.0"	49.7"	22.0"	41.7"	410	440	460

① To convert to cm, multiply by 2.54. Add to height dimension based on mounting options.

② Weight is for standard chiller. Some optional features will increase weight. Multiply by 0.454 to calculate Kg.

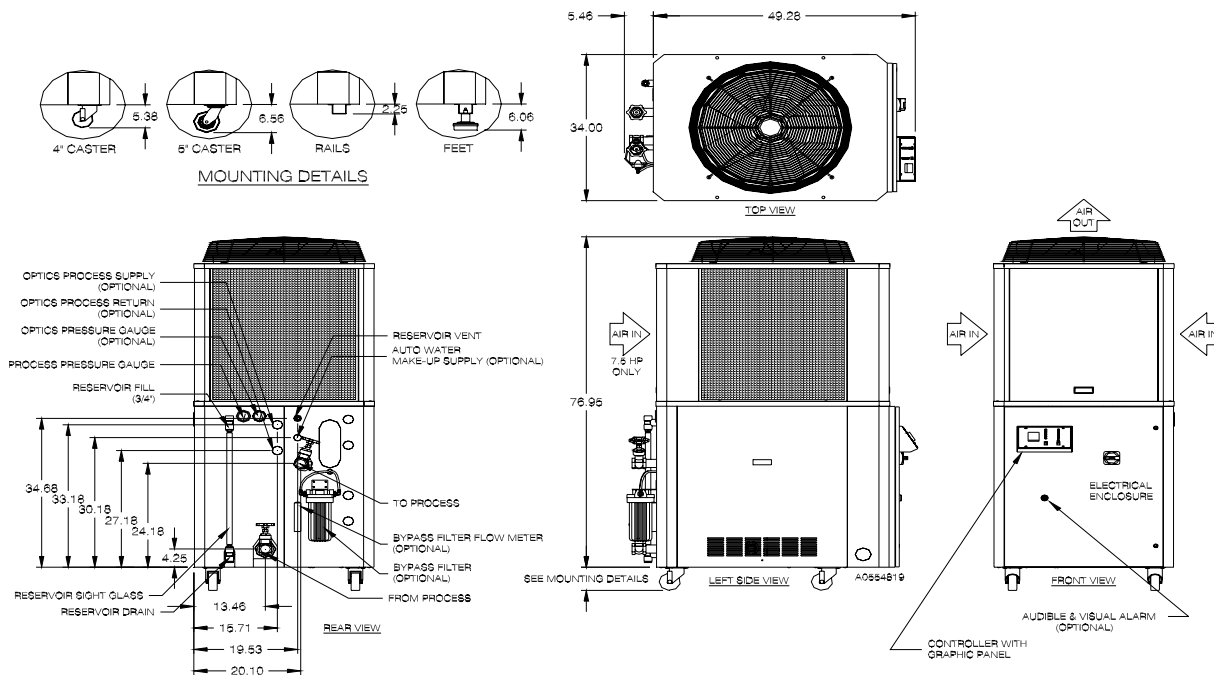
③ Operating weight is with a full 6-gallon (22.7 liter) reservoir tank of water.

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

Nominal operating parameters for CPC-A Series air-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (300 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			Water flow gpm ②	Com-pressor hp	Nom. pump hp	Discharge air ③		Power in amps ④, 460/3/360 ⑤			
	no pump	1 pump	2 pump				openings	cfm ⑥	1 pump		2 pumps	
									rated	running	rated	running
CPCA5	4.8	4.6	4.5	11.1	5.0	1.0	1 @ 27"	3,400	14.0	11.0	14.9	11.9
CPCA7.5	6.6	6.4	6.3	15.2	7.5	1.0	1 @ 27"	5,100	18.2	14.6	19.1	15.5

- ① Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) ambient air. Optional additional process pump hp (kW) r reduces chiller capacity by 0.2 tons per hp (811 Kcal/hr per kW).
- ② Based on 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr), nominal 1 pump.
- ③ Customer use of ductwork requires optional high-pressure fan for 5 hp to 15 hp (3.73 kW to 11.20 kW) models.
- ④ 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.
- ⑤ Multiply 460/3/60 amperage by **2.0** for 208-230/3/60 amperages; multiply by **0.8** for 575/3/60 amperages.
- ⑥ To convert cfm to cmh, multiply by **1.699**.



Specifications

CPC-A portable chillers come standard with 4" (101 mm) swivel casters.

Model number	Com-Pressor 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			
CPCA5	5.0	1.5/2.0	2.0"	1.5"	1.5" / 2.0"	82.3"	34.0"	48.5"	872	1,047	1,205
CPCA7.5	7.5	1.5/2.0	2.0"	1.5"	1.5" / 2.0"	82.3"	34.0"	48.5"	922	1,097	1,255

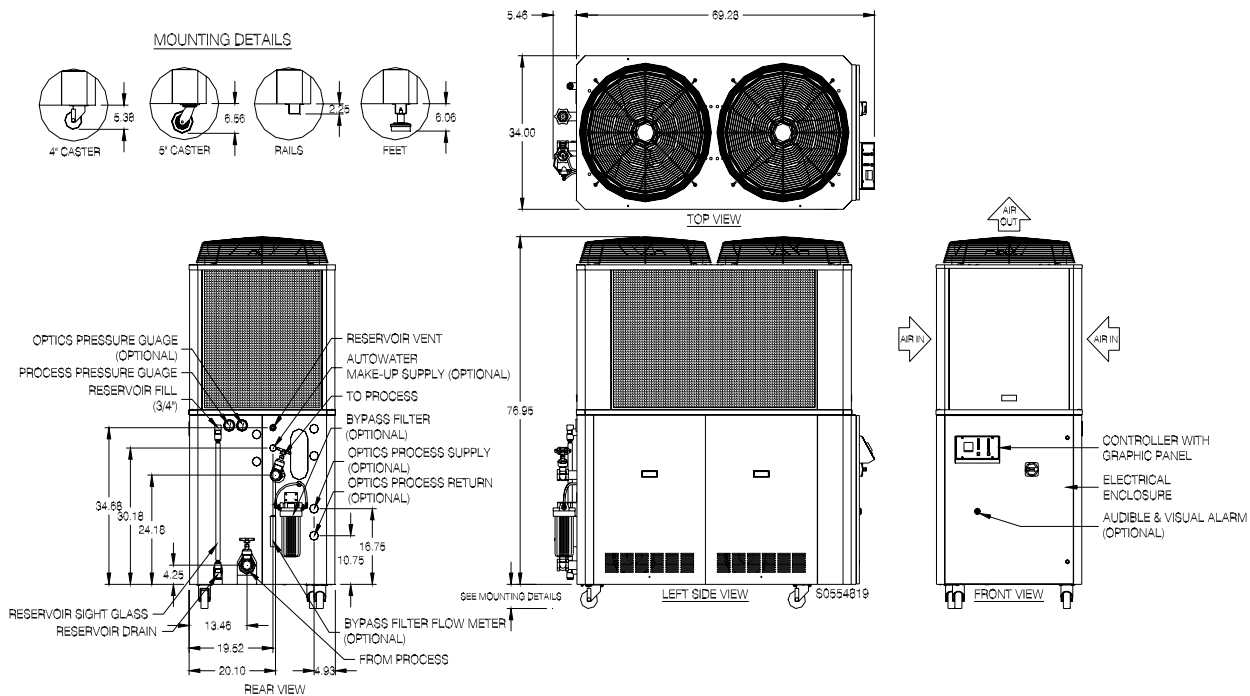
- ① To convert to cm, multiply by **2.54**. Add to height dimension based on mounting options.
- ② Weight is for standard chiller. Some optional features will increase weight. Multiply by **0.454** to calculate Kg.
- ③ Operating weight is with a full 20-gallon (76 liter) reservoir tank of water.

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

Nominal operating parameters for CPC-A Series water-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (300 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			Water flow gpm ②	Com-pressor hp	Nom. pump hp	Discharge air ③		Power in amps ④, 460/3/360 ⑤			
	no pump	1 pump	2 pump				openings	cfm ⑥	1 pump		2 pumps	
									rated	running	rated	running
CPCA10	9.9	9.5	9.4	22.8	10.0	2.0	2 @ 27"	5,800	26.1	21.8	27.8	23.5
CPCA15	14.5	14.1	14.0	33.9	15.0	2.0	2 @ 27"	10,000	33.3	27.5	35.0	29.2

- ① Based on 50°F (10°C) chilled water supply temperature and 95°F (35°C) ambient air. Optional additional process pump hp (kW) r reduces chiller capacity by 0.2 tons per hp (811 Kcal/hr per kW).
- ② Based on 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr), nominal 1 pump.
- ③ Customer use of ductwork requires optional high-pressure fan for 5 hp to 15 hp (3.73 kW to 11.20 kW) models.
- ④ 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
- ⑤ Multiply 460/3/60 amperage by **2.0** for 208-230/3/60 amperages; multiply by **0.8** for 575/3/60 amperages.
- ⑥ To convert cfm to cmh, multiply by **1.699**.



Specifications

CPC-A portable chillers come standard with 4" (101 mm) swivel casters.

Model number	Com-pressor 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 lbs.	Ship ② lbs.	Oper. ② ③ lbs.
						height	width	depth			
CPCA10	10.0	1.5/3	2.0/3	1.5"	1.5" / 2.0"	82.3"	34.0"	68.6"	1,305	1,570	1,637
CPCA7.5	15.0	2.0/3	2.5/3	2.0"	2.0" / 3.0"	82.3"	34.0"	68.6"	1,388	1,653	1,720

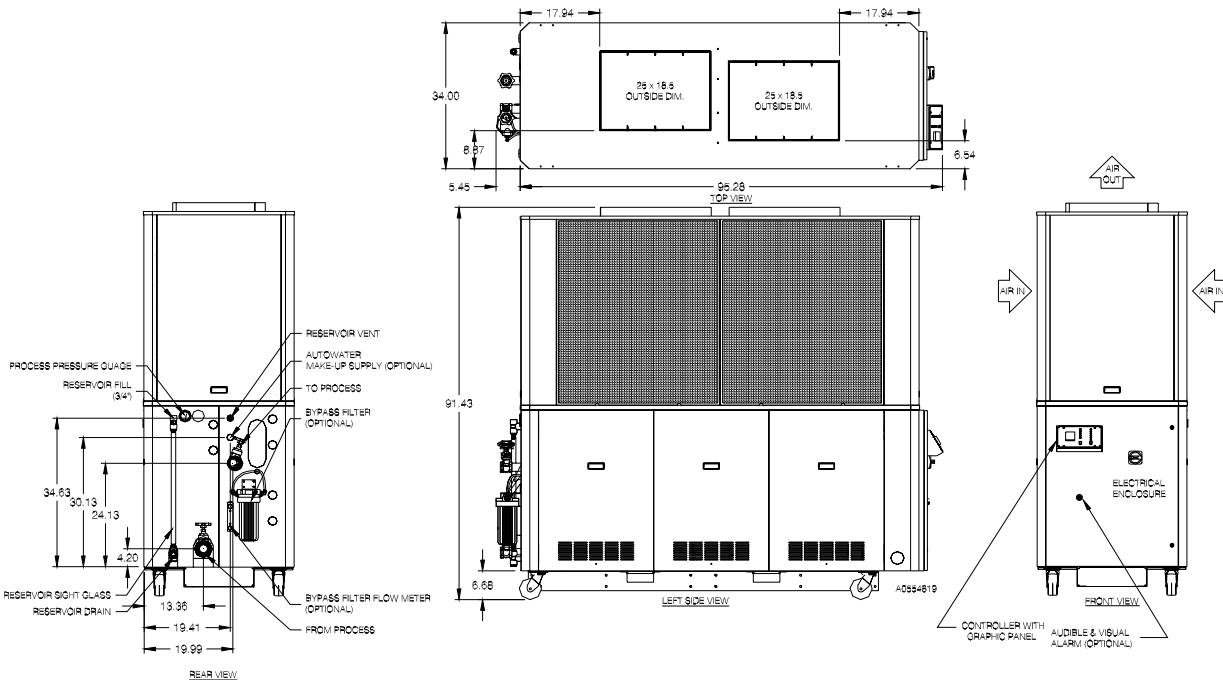
- ① To convert to cm, multiply by **2.54**. Add to height dimension based on mounting options.
- ② Weight is for standard chiller. Some optional features will increase weight. Multiply by **0.454** to calculate Kg.
- ③ Operating weight is with a full 40-gallon (151 liter) reservoir tank of water.

CPC-A Series 20 and 30 hp (14.91 and 22.37 kW) Air-Cooled Chiller Capacities

Nominal operating parameters for CPC-A Series water-cooled models are 50°F (10°C) leaving water temperature at 2.4 gpm per ton (9.1 lpm per 3.517 kW) 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			Water flow gpm ②	Compressor hp	Nom. pump hp	Discharge air ③		Power in amps ④, 460/3/360 ⑤			
	no pump	1 pump	2 pump				openings	cfm ⑥	1 pump		2 pumps	
									rated	running	rated	running
CPCA20	19.4	18.4	18.0	46.5	2 @ 10	5	25" x 18.5"	10,200	48.3	42.0	51.4	45.1
CPCA25	23.9	22.8	22.4	57.2	2 @ 13	5	25" x 18.5"	13,300	62.1	48.3	65.2	51.4
CPCA30	29.2	28.2	27.8	70.2	2 @ 15	5	25" X 18.5"	18,150	74.1	64.4	77.2	67.5

- ① 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).
- ② Based on 2.4 gpm per ton (3.00 lpm per 1,000 Kcal/hr), nominal 1 pump.
- ③ Customer use of ductwork requires optional high-pressure fan for 5 hp to 15 hp (3.73 kW to 11.20 kW) models.
- ④ 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.
- ⑤ Multiply 460/3/60 amperage by 2.0 for 208-230/3/60 amperages; multiply by 0.8 for 575/3/60 amperages.
- ⑥ To convert cfm to cmh, multiply by 1.699.



Specifications

CPC-A portable chillers come standard with 5" (127 mm) swivel casters.

Model number	Com-Pressor 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			
CPCA20	2 @ 10	2" / 3"	2.5"	2.0"	2" / 3"	91.4"	34.0"	100.7	2,305	2,605	2,971
CPCA25	2 @ 10	2" / 3"	2.5"	2.0"	2" / 3"	91.4"	34.0"	100.7	2,348	2,648	3,014
CPCA30	2 @ 15	2" / 3"	2.5"	2.0"	2" / 3"	91.4"	34.0"	100.7	2,610	2,910	3,276

- ① To convert to cm, multiply by 2.54. Add to height dimension based on mounting options.
- ② Weight is for standard chiller. Some optional features will increase weight. Multiply by 0.454 to calculate Kg.
- ③ Operating weight is with a full 80-gallon (303 liter) reservoir tank of water.

Flow and Pressure Considerations for CPC Series Portable Chillers

Model number	Design flow		Design ΔP		Standard pump power		To Process pressure		
	gpm	lpm	psig	kPa	hp	kW	psi	kPa	bars
CPCA2	4.6	17.5	4.4	30.4	1	0.746	34.1	235.3	2.4
CPCA3.5	7.9	29.9	4.9	33.7	1	0.746	33.0	227.5	2.3
CPCA5	11.6	43.8	2.0	13.7	1	0.746	34.9	240.8	2.4
CPCA7.5	15.7	59.6	2.8	19.0	1	0.746	32.7	225.7	2.3
CPCA10	23.8	90.1	5.1	35.2	2	1.492	43.4	299.0	3.0
CPCA15	34.9	132.1	6.1	41.8	2	1.492	38.0	262.1	2.6
CPCA20	46.5	175.9	7.1	49.0	5	3.73	54.0	372.3	3.7
CPCA25	57.2	216.4	8.1	55.9	5	3.73	52.0	358.5	3.6
CPCA30	70.2	265.6	10.5	72.4	5	3.73	47.5	327.5	3.3

Recirculation Pump Specifications

Model number	Recirc. power		Flow Rate		ρ pressure		Model number	Recirc. power		Flow Rate		ρ pressure	
	hp	kW	gpm	lpm	psi	kPa		hp	kW	gpm	lpm	psi	kPa
CPC5	0.75	0.373	13.0	49.2	2.3	16.0	CPC25	2.0	1.492	63.0	238.4	9.0	62.0
CPC7.5	0.75	0.373	17.0	64.3	3.1	21.4	CPC30	2.0	1.492	76.0	287.6	10.8	74.1
CPC10	0.75	0.595	26.0	98.4	6.3	43.3	CPC35	3.0	2.238	82.0	310.4	5.4	37.2
CPC15	0.75	0.595	38.0	143.8	7.0	48.0	CPC40	3.0	2.238	98.0	370.9	8.2	56.5
CPC20	2.0	1.492	50.0	189.2	8.8	60.3							

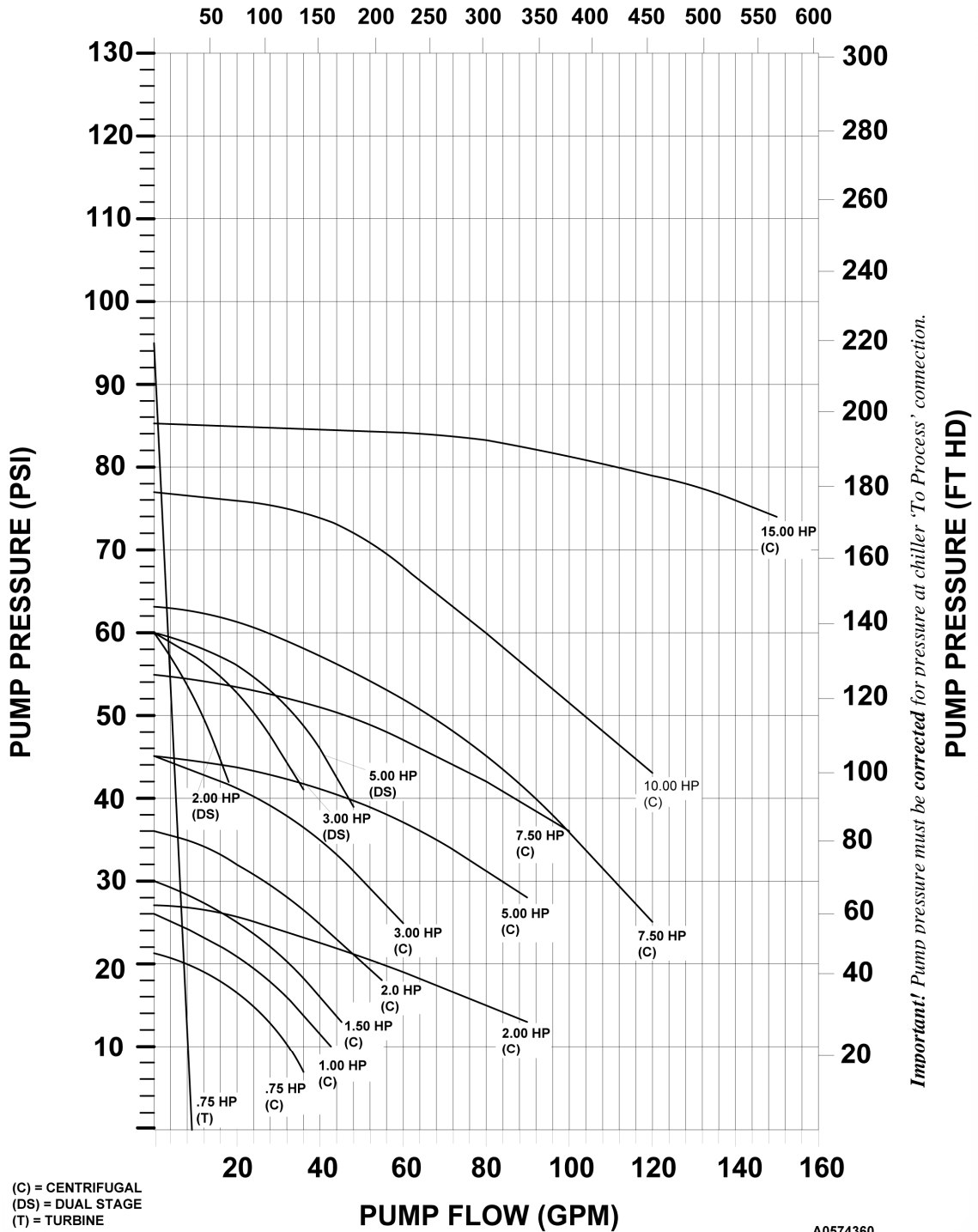
Minimum and Maximum Flow Rates for CPC Series Portable Chillers

Pressure drops in ΔP , psig and kPa															
CPC-2				CPC-3.5				CPC-5				CPC-7.5			
Flow		ΔP		Flow		ΔP		Flow		ΔP		Flow		ΔP	
gpm	lpm	psig	kPa	gpm	lpm	psig	kPa	gpm	lpm	psig	kPa	gpm	lpm	psig	kPa
4.06	15.4	3.5	24.1	8.03	30.4	4.0	27.6	10.0	37.9	1.5	10.5	12.0	45.4	2.3	16.1
6.01	22.8	7.0	48.3	10.00	37.9	6.5	44.8	12.0	45.4	2.2	14.8	16.0	60.6	2.9	20.1
8.02	30.4	11.5	79.3	12.00	45.4	10.0	69.0	18.0	68.1	4.7	32.1	20.0	75.7	5.0	34.5
10.00	37.9	18.0	124.1	14.00	53.0	13.0	89.6	24.0	90.8	7.3	50.2	24.0	90.8	6.9	47.4
				16.00	60.6	18.0	124.1					18.0	124.1	9.6	65.9
												33.0	124.9	12.7	87.8
CPC-10				CPC-15				CPC-20				CPC-25			
Flow		ΔP		Flow		ΔP		Flow		ΔP		Flow		ΔP	
gpm	lpm	psig	kPa	gpm	lpm	psig	kPa	gpm	lpm	psig	kPa	gpm	lpm	psig	kPa
22.0	83.3	4.7	32.6	30.0	113.6	4.5	31.3	40.0	151.4	4.0	27.6	55.0	208.2	5.5	37.9
30.0	113.6	8.28	57.1	40.0	151.4	7.5	51.7	45.0	170.3	4.0	27.6	58.0	219.5	5.8	40.0
38.0	143.8	12.91	89.0	50.0	189.3	12.4	85.2	50.0	189.3	5.0	34.5	61.0	230.9	6.0	41.4
46.0	174.1	16.77	115.6	60.0	227.1	17.8	122.8	52.0	196.8	6.0	41.4	70.0	264.9	8.5	58.6
50.0	189.3	20.00	137.9	70.0	264.9	24.2	166.6	55.0	208.2	6.5	44.8				
CPC-30															
Flow		ΔP													
gpm	lpm	psig	kPa												
72.0	272.5	6.0	41.1												
75.0	283.9	6.5	44.8												
80.0	302.8	8.0	55.2												
85.0	321.7	9.5	65.5												

Pressure drop values are valid for single-pump and no-pump CPC Series portable chillers.
Subtract chiller ΔP from pump curve pressure for actual to process pressure.
Recirculation pump is required for flow rate values exceeding maximums.

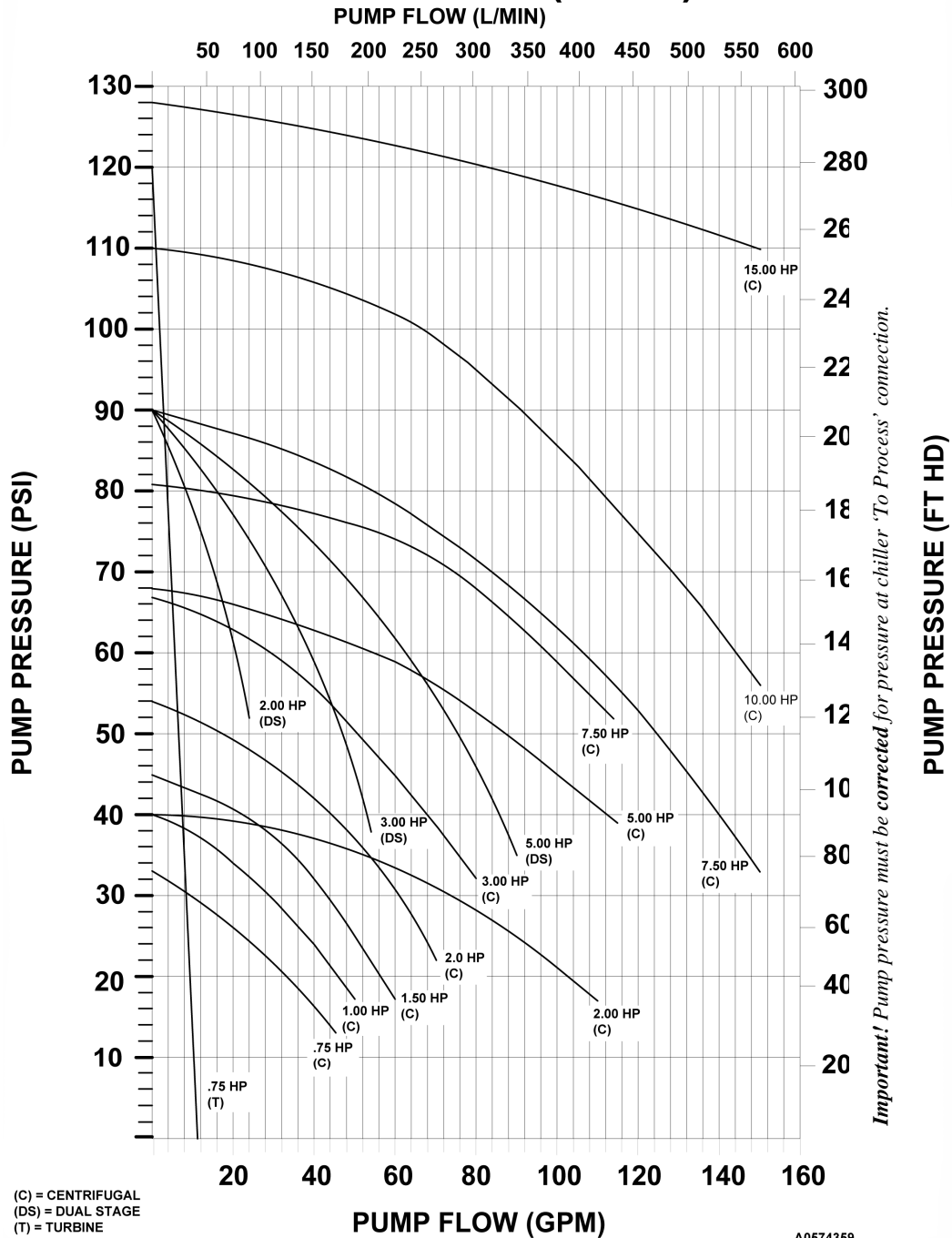
PUMP CURVES (50 HZ)

PUMP FLOW (L/MIN)



(C) = CENTRIFUGAL
(DS) = DUAL STAGE
(T) = TURBINE

PUMP CURVES (60 HZ)



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