



## PCA SERIES AIR-COOLED PORTABLE CHILLERS

PCA Series air-cooled portable chillers by AEC are specially engineered for small, demanding industrial applications. Each self-contained unit is designed for immediate hook-up and is ready to supply clean, cooling water at constant temperatures. A wide range of economical options are available to meet or exceed the demands of almost any application.

The off-the-shelf microprocessor-based PID auto-tuning controller features To Process and Set Point LED readout.



PCA Portable Chiller

### STANDARD FEATURES

- Hermetic reciprocating compressor
- Tube-in-tube evaporator
- Aluminum fin/copper tube condenser
- Six gallon polyethylene reservoir w/external fill/drain sight glass
- Non-ferrous piping, fully insulated refrigeration and process piping
- Regenerative turbine, horizontally-mounted non-ferrous, pump
- Fully-accessible NEMA 1-style electrical control enclosure, single-point power and ground connection
- Structural steel frame and panels with 2" (51 mm) swivel casters
- Pressure-actuated process water bypass valve for system protection only
- To Process 2.5" -dia. dual scale liquid-filled water pressure gauge
- Patented fixed orifice-plate bypass
- 1 year compressor and labor warranty; 2 years on parts; 3 year limited warranty on controller
- Filter dryer
- HFC-134A refrigerant for PCA-050 and PCA-100 models; HCFC-22 refrigerant for PCA-150 models
- High and low refrigerant pressure cut-outs, and hot gas bypass capacity control
- High-pressure spring-actuated pressure relief valve, and thermal expansion valve
- Sight glass
- Multiple refrigeration access ports

### OPTIONAL FEATURES

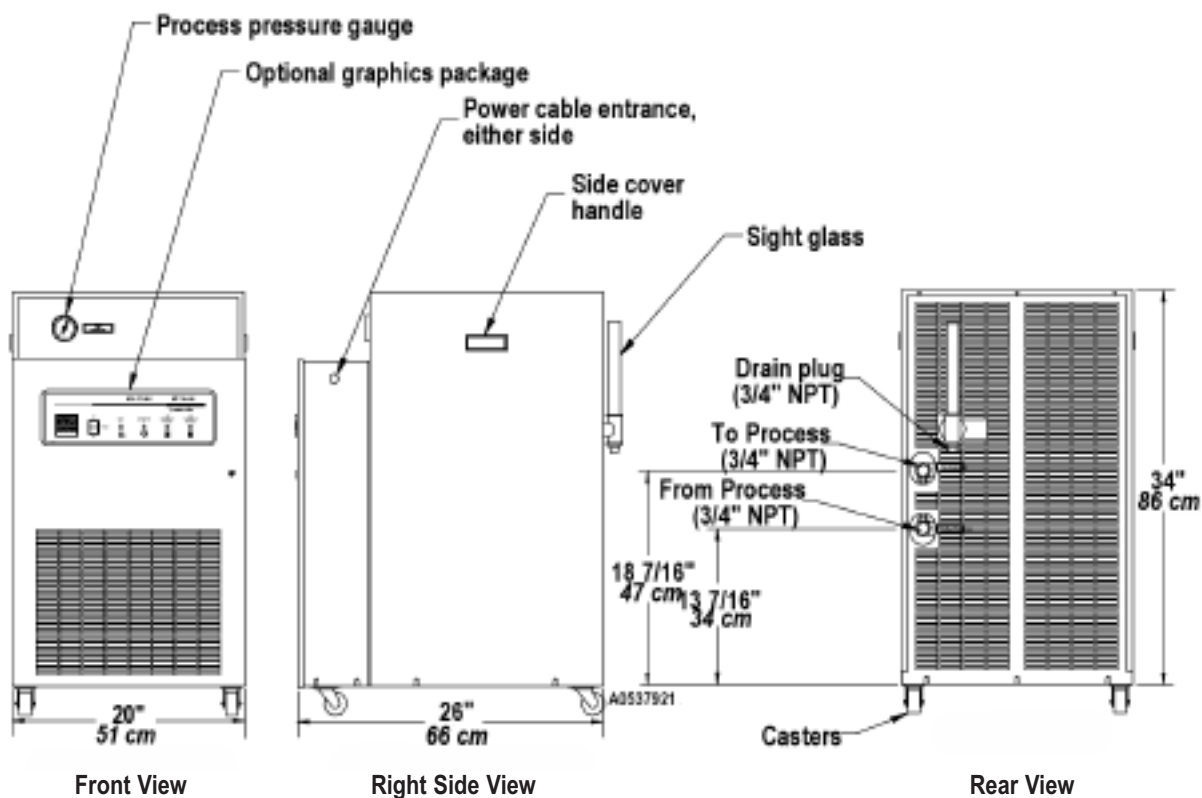
- Cast iron, 1/3 hp centrifugal pump (does not maintain non-ferrous construction integrity)
- Bronze pump (BZ050, BZ100, BZ150 A, B, or C)
- Crankcase pressure regulating (CPR) valve (required for a chilled water supply temperature range of 66° F to 75° F; CPR valve prevents compressor motor overloading)
- Graphic display package: pump on, compressor on, low refrigerant pressure, high refrigerant pressure, hot gas bypass
- High temperature audible/visual alarm: 85 dB @ 2 ft audible alarm buzzer/108,000 peak candlepower, 80 flash/min. visual strobe and silence button
- Power cord (without plug)
- Process piping brass 20 mesh strainer, shipped loose
- Sight glass guard
- External communications
- IEG-1 inhibited ethylene glycol
- Four-year additional compressor warranty

# PCA AIR-COOLED PORTABLE CHILLERS

# HEAT AND COOL

## SPECIFICATIONS

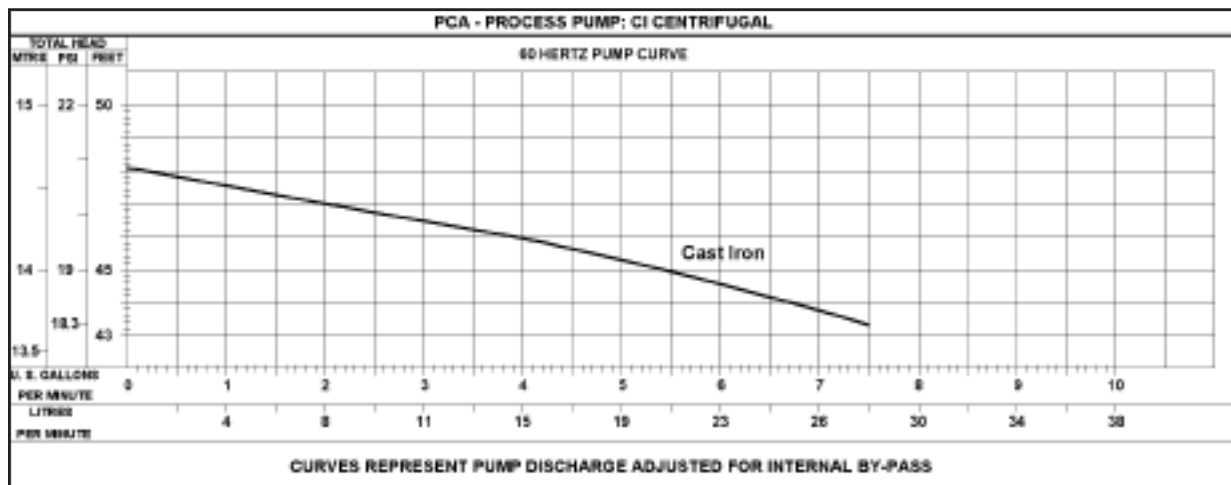
Model	Comp., HP (kW)	Standard pump	Nominal chilled water, gpm (lpm)	Capacity @ 65°F (18°C) LWT, 75°F (24°C) ambient BTUH (watts)	Capacity @ 50°F (10°C) LWT, 90°F (32°C) ambient BTUH (watts)	Refrigerant	Process connection, in. NPT	FLA: 208- 230/1/60	Oper. weight, lbs. (kg)	Ship. weight, lbs. (kg)
PCA 050	0.5 (0.373)	1.5 gpm @ 24 psig (4.5 lpm @ 207 kPa)	1.2 (4.5)	8100 (2374)	4800 (1407)	HFC 134A	0.75	10A	265 (121)	275 (125)
PCA 100	1 (0.746)	2.4 gpm @ 34 psig (9.0 lpm @ 234 kPa)	2.4 (9.0)	14000 (4103)	9550 (2800)	HFC 134A	0.75	13A	325 (148)	335 (153)
PCA 150	1.5 (1.12)	3.6 gpm @ 24 psig (13.6 lpm @ 07 kPa)	3.6 (13.6)	25400 (7444)	16000 (4690)	HCFC-22	0.75	19A	345 (157)	355 (162)



## WATER CIRCUIT PRESSURE DROP TABLE

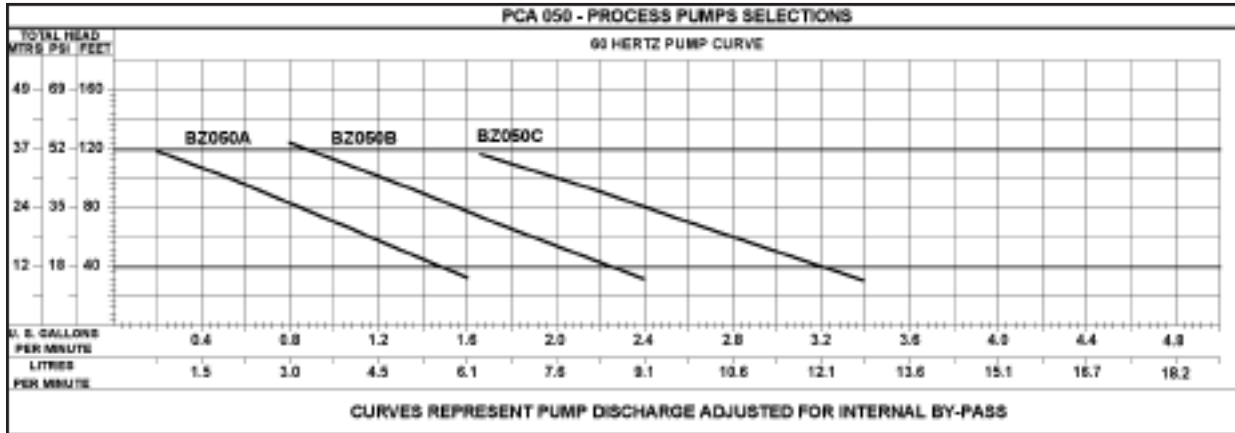
Model	gpm	lpm	$\Delta P$ (psig)	$\Delta P$ (kPa)	$\Delta P$ (bars)
PCA-050	2.0	7.5	2.5	17.3	0.17
	2.4	9.0	4.0	27.6	0.28
	3.6	13.6	7.5	51.8	0.52
	4.8	18.1	12.5	86.2	0.86
PCA-100	2.0	7.5	2.5	17.3	0.17
	2.4	9.0	2.5	17.3	0.17
	3.6	13.6	3.0	20.7	0.21
	4.8	18.1	5.0	34.5	0.35
PCA-150	2.0	7.5	2.5	17.3	0.17
	2.4	9.0	2.5	17.3	0.17
	3.6	13.6	3.0	20.7	0.21
	4.8	18.1	3.5	24.2	0.24

## CAST IRON CENTRIFUGAL PUMP CURVE

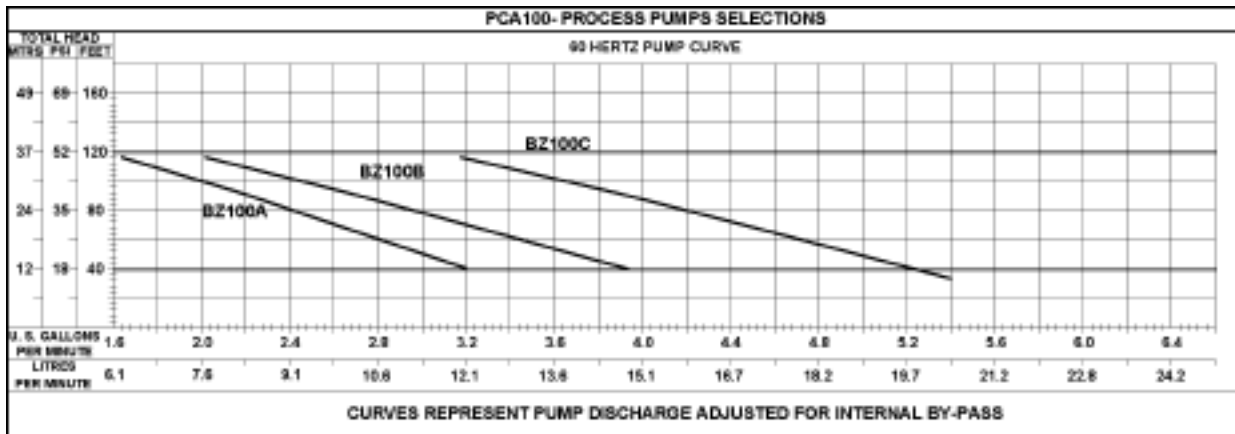


Do not extrapolate pump curves.

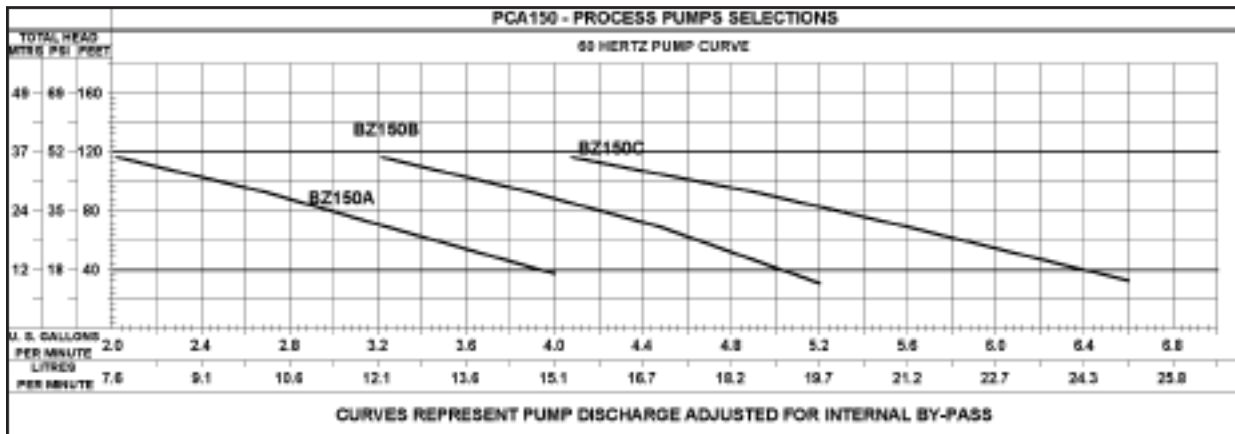
## PCA 050 PUMP CURVES



## PCA 100 PUMP CURVES



## PCA 150 PUMP CURVES



Do not extrapolate pump curves.