



CPE SYSTEMS INC



C+100MD

PORTABLE PUMP ASSEMBLY



The C+100 is CPE's next generation centrifugal pump targeted at small applications. This pump takes the popular C-100 pump and adds design improvements to increase capability and durability. It is attached to our efficient stainless steel washdown motor. At the same price as the C100, the C+100 is the ultimate small, affordable brewery pump.

DESIGN

The C+100 is an excellent entry level pump. It's small, compact design is easy to clean and repair. The C+ series maintains general compatibility with the C-100 line, while bringing new innovation in pump design. This includes a collar (see figure 2) that clamps down on the drive shaft over the full 360° degrees removing the minor wobble that can occur from set screwed shafts. This pump features a thicker heavy-duty casing and casing o-ring. The C+ is equipped with a single mechanical external D seal. No other seals are available for this size. Most parts are interchangeable with other C-100 pumps.

FEATURES

- 1 1/2" X 1" Tri-Clamp connections
- Stainless steel washdown motor
- 316L stainless steel construction
- 304 stainless steel adapter
- External mechanical D seal

HORSEPOWER

Horsepower	Max. Flow rate	Shut Off Head
0.5 HP	34 GPM	17 ft
0.75 HP	58 GPM	40 ft
1 HP	68 GPM	51 ft
1.5 HP	75 GPM	58 ft



Figure 2: Shaft Collar



Figure 3: Impeller



TECHNICAL SPECIFICATIONS

Materials

Parts in Contact With Product:	316L Stainless Steel
Other Steel Parts:	304 Stainless Steel
Gaskets in Contact With Product:	Buna (EPDM optional)
Weight Without Motor:	10 lbs

Mechanical Seal

Rotary Seal:	Carbon
Stationary Seal:	Stainless Steel
External Surface Finish:	Bright Polish
Internal Surface Finish:	32 RA
Connection Type:	Tri-Clamp
Connection Size:	1.5" x 1"
Max. Impeller Diameter:	3.75"

Motor

Type:	S.S Premium Efficiency
Motor Frame Size:	NEMA 56C C-Face
Speeds:	1750 & 3450 RPM

Operating Limits

Nomial Pressure:	5 bar (60 PSI)
Temperature Range:	14°F (-10°C) - 248°F (120°C)
Maximum Flow:	70 GPM (50 m ³ /h)
Maximum Differential Head:	60 ft (21 m)
Maximum Speed:	3500RPM - 60Hz
Viscosity:	0-600 cPs

Optimum Operating System

Flow:	40 GPM
Head:	45 ft

Approvals

Certification:	3A- Authorization #1537, 02-11 (centrifugal pumps) for CIP
----------------	--



Variable Speed Controller

The Lenze i550 Protec is our new inverter series in the ½ HP to 20 HP range. The slim and sleek casing is also extremely durable, featuring both impact resistance and IP66 washdown protection. A micro USB interface is provided for more efficient programming. This user-friendly VFD is programmable and has scalable functionality. This trustworthy and powerful VFD can be implemented into your operations with ease. The i550 can be controlled by the keypad, a potentiometer, or a remote control (the remote control is available at additional cost). Our portable pump assemblies feature this VFD to achieve optimal efficiency.



FEATURES

- IP66 (NEMA 4X) approved; it is both dust and water resistant.
- Equipped with a Micro USB interface for programming and diagnostics.
- Full onboard PID programming for interfacing with flow meters, level controls, pressure sensors, and can/bottle fillers.
- The i550 Protec has a sensorless vector control for synchronous motors.
- Equipped with multiple digital and analog inputs for remote control and safety interlocks.
- Compatible with our wireless remote controls, pressure switches, and run dry protection.
- Equipped with a potentiometer.

TECHNICAL SPECIFICATIONS

Horsepower:	0.5 to 1.5 HP
1Ø/3Ø Input:	1Ø 115/230 VAC ; 3Ø 230/460 VAC
3Ø Output:	208-230/460 VAC
Ambient Temperature:	-22°F - 131°F (-30°C - 55°C)
Standard IO:	5x digital input, 1x digital output, 2x analog input, 1x analog output
Communication Networks: (optional)	CANopen, Modbus RTU, Modbus TCP, IO-Link, EtherCAT, EtherNet/IP, PROFINET
Approvals:	CE, UL, CSA, EAC, RoHS

Pump Cart



Custom designed for the craft food and beverage industry, this is our smallest pump cart, built for pumps up to 2 HP. This cart is aerodynamic, tilt draining, maneuverable, and has a small footprint. The knockdown cart handle is removable, creating a compact cart that can be easily stored or wheeled into tight spaces. All parts are hand welded in Canada for quality assurance and durability.

Frame:	16 ga stainless steel square tube with foot
Handle:	16 ga stainless steel square tube
Platform:	14 ga Stainless steel AISI 304 Pre-drilled to fit 56 and 143 NEMA frame
Axle:	1/2 ga Stainless steel rod axle
Wheels:	2" x 5" non marking neoprene wheels



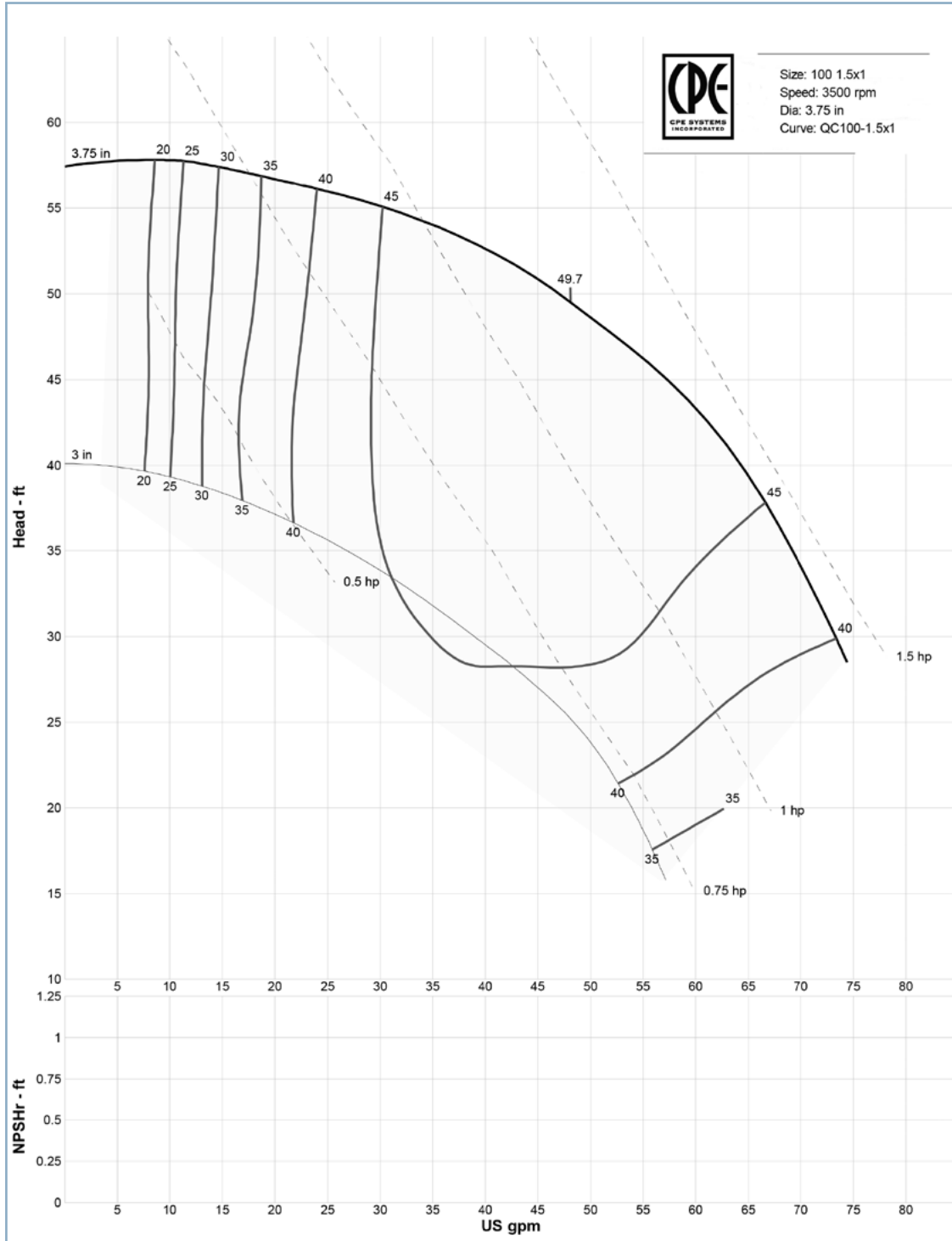
Capacity Curves

MODEL: C100

Frequency: 60hz

RPM: 3500

Size: 1.5" x 1.0" x 3.75"





Viscosity and Specific Gravity Table

Product	Specific Gravity	Viscosity
Acetic Acid		
5%	1.01	
10%	1.01	31.7 SSU @ 59°F
50%	1.06	33.0 SSU @ 59°F
80%	1.08	35.0 SSU @ 59°F
Animal Fat	0.9	130 SSU @ 115°F 50 SSU @ 200°F
Barbecue Sauce	1.05	11,500 SSU @ 40-75°F
Beer	1.02	32 SSU @ 68°F
Blood - Animal	0.93-0.98	15,000 SSU @ 55°F
Butter	0.93-0.98	15,000 SSU @ 55°F 440 SSU @ 90°F 220 SSU @ 115°F
Coconut Oil	0.92	125 SSU @ 106°F
Corn Oil	0.92	135 SSU @ 130°F 54 SSU @ 212°F
Corn Starch Solutions		
22 Baume	1.18	150 SSU @ 70°F 130 SSU @ 100°F
24 Baume	1.2	600 SSU @ 70°F 440 SSU @ 100°F
25 Baume	1.21	1400 SSU @ 70°F 800 SSU @ 100°F
Cottage Cheese	1.02	4,300 SSU
Cream (sweet)	1 0.99 0.99	73 SSU 140 SSU 215 SSU
Egg Yolk	1.12	21,500 @ 35°F
Gelatin	1.01	1,380-2,580 SSU @ 160°F
Glucose	1.35 - 1.44	35M-100M SSU @ 100°F 4M-11M @ 150°F
Honey	1.3	1250-1425 SSU @ 100°F
Ice Cream Mix	1.15	1050 SSU @ 46°F
Lard	0.96	287 SSU @ 100°F
Linseed Oil	0.92 - 0.94	143 SSU @ 100°F 93 SSU @ 130°F
Malt Syrup	1.41	85,400 SSU @ 77°F
Maple Syrup	1.37	2,000 SSU @ 68°F

Margarine	0.93	13,900 SSU @ 84°F
Milk	1.02 - 1.05	31.5 SSU @ 68°F
Molasses		
A. First	1.4 - 1.46	1,300 - 23,500 SSU @ 100°F 700 - 8,160 SSU @ 130°F
B. Second	1.43 - 1.48	6,536 - 61,180 SSU @ 100°F 3058 - 15,294 SSU @ 130°F
C. Blackstrap	1.46 - 1.49	12,190 - 23,500 SSU @ 100°F
Mustard	1	17,000 SSU @ 85°F
Olive Oil	0.91 - 0.92	200 SSU @ 100°F
Peanut Butter	1.2	77,400 SSU @ 110-140°F
Sesame Seed Oil	0.92	184 SSU @ 100°F 110 SSU @ 130°F
Soy Bean Oil	0.91	500 SSU @ 44°F
Tomato Paste	1.14	60M-80M SSU 21M SSU Approx.
Water	1	31 SSU @ 68°F

Figure 3: Expanded View

