



# CPE C114 MD CENTRIFUGAL PUMP ASSEMBLY (1 - 2 HP)

FOR CRAFT FOOD AND BEVERAGE INDUSTRIES



**PUMPS**

-

**HOSES**

-

**HEAT EXCHANGERS**

-

**FLOW METERS**

-

**GASKETS**

-

**VALVES**

-

**FITTINGS**

-

**THERMOMETERS**

-

**PORTABLE SYSTEMS**

-

**AND MORE**



# C-114-MD Centrifugal Pump

## Technical Specifications



### Materials

Parts in contact w/ product: Stainless steel AISI 316L  
 Other steel parts: Stainless steel AISI 304  
 Gaskets in contact w/ product: Buna (EPDM Optional)

### Mechanical seal

Rotary Seal: Carbon or Silicon carbide (SiC)  
 Stationary Seal: SS, SiC or Ceramic  
 Gaskets: Buna (EPDM Optional)  
 Surface finish: Bright polish  
 Motor: S.S Premium Efficiency Nema C Face

### Operating limits

Nominal pressure: 10 bar 145 PSI  
 Temperature range: 14 °F to 248 °F  
 284 °F (SIP, max. 30 min.)

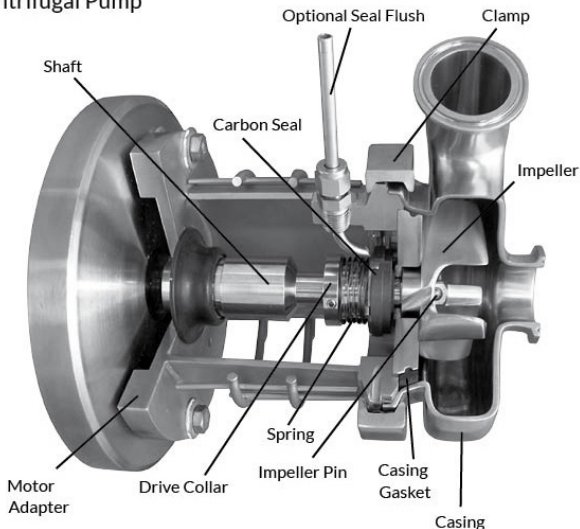
Maximum flow: 90 m<sup>3</sup>/h 125US GPM  
 Maximum differential head: 21 m 75 ft  
 Maximum speed: 3500 rpm

C-series (Close Coupled) Centrifugal Pumps are the most common pumps used in Craft Breweries. Our C-Series is made in North America, 3A approved and provides high capacity at a low price. They feature heavy duty stainless steel construction with a stainless steel washdown motor that make cleaning easier and if well maintained, will last a lifetime. These pumps will give you years of excellent service and when needed, replacement parts are interchangeable with most major brands of sanitary C-series pumps.



HorsePower	Flow Rate	Head
1 HP	75 GPM	65 ft.
1 1/2 HP	100 GPM	75ft.
2 HP	125 GPM	75 ft.

Centrifugal Pump



## Port Connection

Come standard with M Tri-Clamp style connections. but we can provide any connection style possible. Including Acme Bevel Seat Thread, NPT, Flanged or Weld.

Model	Inlet Opt.	Outlet Opt.	Max Impeller
C100	1 1/2"	1"	3.68"
C114	1 1/2" - 2"	1 1/2"	4"
C216	2"	1 1/2"	6"
C218	2" - 3"	1 1/2"	8"
C328	3" - 4"	2"	8"



# Variable Speed Controller

Our AC VFDs provide variable speed for 3ph AC Induction motors from 1/8 through 5 horsepower. They are available in 115, 208/230, and 400/460 VAC - 50/60 Hz with 1ph and 3ph input. All KB's AC Drives contain Sensorless Flux Vector Compensation with Static-Auto-Tune. This provides excellent speed regulation from zero to full load over a wide frequency range. These drives provide auto energy savings at light loads and smooth motor torque operation.



## Features

- Jog-Local Remote
- Short Circuit Protection, phase to phase
- Ride-Through momentary power loss
- Regeneration eliminates tripping
- Die-Cast Aluminum Enclosure with hinged cover
- Powerful 200% Starting Torque
- Digital Display with LED Status Indicators
- Sensorless Flux Vector Control
- Electronic Inrush Current Limit (EICLTM) Protection
- Run/Fault Relay Output Contacts
- Built-in Potentiometer
- Holding Torque at Zero Speed in "Stop" mode
- Undervoltage and Overvoltage Protection

Horsepower	3/4 to 3 HP
1Ø Input	115/230 VAC, 50/60 Hz
3Ø Output	230 VAC, 50/60 Hz
Dimensions approx.	9.5" X 5.5" X 5.9"
Enclosure	Diecast Aluminum NEMA IV

## Pump Cart



Custom designed for the craft food and beverage industry, this is our smallest pump cart built for up to 2HP pumps. This cart is aerodynamic, tilt draining, has a small footprint and has easy maneuverability. All parts hand whelded in Canada for quality assurance and durability.

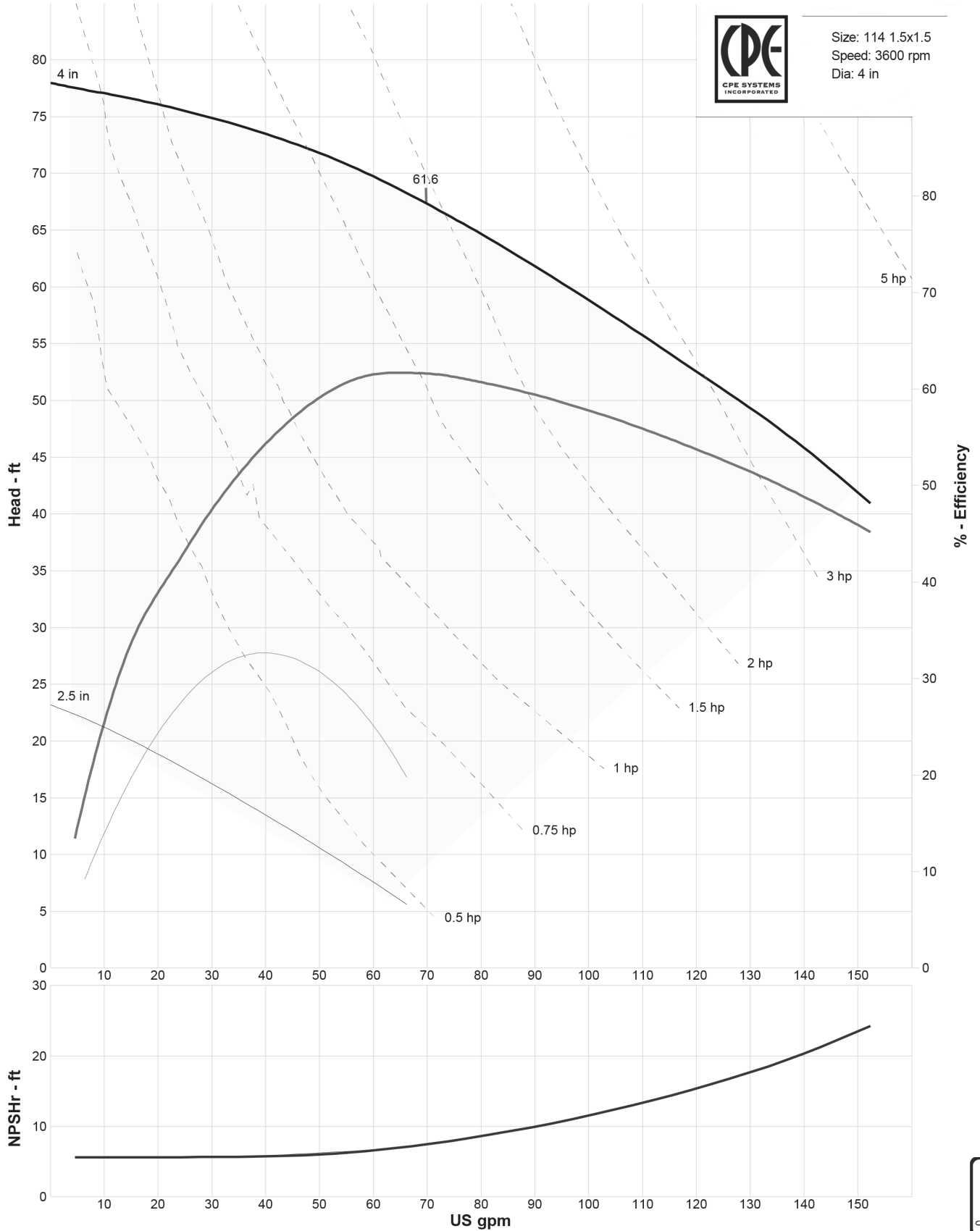
### Material

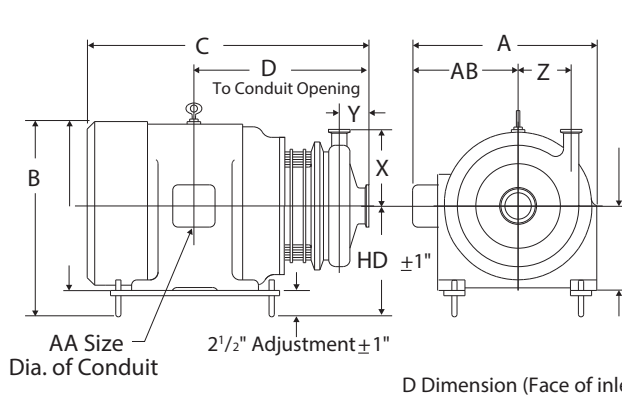
Frame	16 ga stainless steel square tube
Handle	16 ga stainless steel square tube
Platform	14 ga Stainless steel AISI 304
Axle	1/2 ga Stainless steel rod axle
Wheels	5" non marking neoprene wheels with sliding pin clips



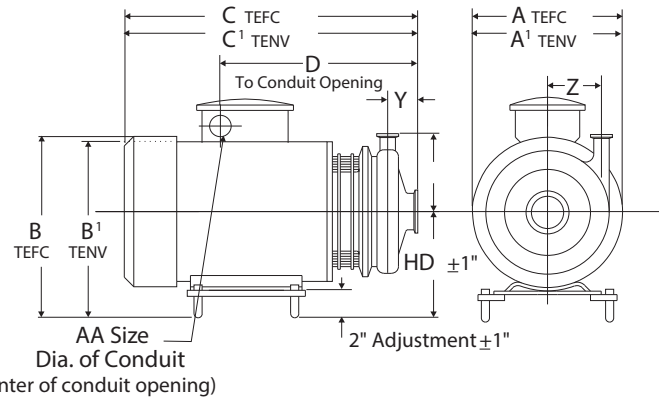
# Pump Capacity Curves

Based on water at 70°F (22°C)





180 to 360 Frame Motors



56 to 140 Frame Motors

## Pump and Motor Dimensions with "Easy-Clean" Totally Enclosed Motors

Pump Model	Frame	A	A <sup>1</sup>	B	B <sup>1</sup>	C*	C <sup>1*</sup>	C**	C <sup>1**</sup>	D*	D**	HD	AA	AB
C114	FF56C	7 <sup>9/32</sup>	6 <sup>1/2</sup>	9 <sup>1/8</sup>	8 <sup>3/4</sup>	21 <sup>1/4</sup>	20 <sup>9/16</sup>	21 <sup>1/2</sup>	20 <sup>13/16</sup>	17 <sup>3/16</sup>	17 <sup>7/16</sup>	5 <sup>1/2</sup>	1 <sup>1/2</sup>	—
	184TC	11 <sup>7/8</sup>		11 <sup>11/16</sup>		21 <sup>1/8</sup>		21 <sup>3/8</sup>		13 <sup>13/16</sup>	14 <sup>1/16</sup>	7	3/4	7 <sup>3/16</sup>
C216	FF56C	7 <sup>9/32</sup>	6 <sup>1/2</sup>	9 <sup>1/8</sup>	8 <sup>3/4</sup>	21 <sup>3/8</sup>	20 <sup>3/4</sup>	21 <sup>5/8</sup>	21	17 <sup>5/16</sup>	17 <sup>9/16</sup>	5 <sup>1/2</sup>	1 <sup>1/2</sup>	—
	184TC	11 <sup>7/8</sup>		11 <sup>11/16</sup>		21 <sup>7/8</sup>		21 <sup>1/8</sup>		14 <sup>9/16</sup>	14 <sup>13/16</sup>	7	3/4	7 <sup>3/16</sup>
	215TC	14 <sup>1/2</sup>		13 <sup>3/16</sup>		25 <sup>9/16</sup>		25 <sup>13/16</sup>		16 <sup>11/16</sup>	16 <sup>15/16</sup>	7 <sup>3/4</sup>	1	9 <sup>1/16</sup>
	256TC	16 <sup>7/16</sup>		15 <sup>1/4</sup>		29 <sup>15/16</sup>		30 <sup>3/16</sup>		18 <sup>11/16</sup>	18 <sup>15/16</sup>	8 <sup>3/4</sup>	1 <sup>1/4</sup>	10
C218	FF140TC	7 <sup>9/32</sup>	6 <sup>1/2</sup>	9 <sup>1/8</sup>	8 <sup>3/4</sup>	22	21	22 <sup>1/4</sup>	21 <sup>1/4</sup>	17 <sup>19/32</sup>	17 <sup>27/32</sup>	5 <sup>1/2</sup>	1 <sup>1/2</sup>	—
	184TC	11 <sup>7/8</sup>		11 <sup>11/16</sup>		22 <sup>1/4</sup>		22 <sup>1/2</sup>		14 <sup>15/16</sup>	15 <sup>3/16</sup>	7	3/4	7 <sup>3/16</sup>
	215TC	14 <sup>1/2</sup>		13 <sup>3/16</sup>		25 <sup>13/16</sup>		26 <sup>1/16</sup>		16 <sup>15/16</sup>	17 <sup>3/16</sup>	7 <sup>3/4</sup>	1	9 <sup>1/16</sup>
	256TC	16 <sup>7/16</sup>		15 <sup>1/4</sup>		31 <sup>1/16</sup>		31 <sup>5/16</sup>		19 <sup>13/16</sup>	20 <sup>1/16</sup>	8 <sup>3/4</sup>	1 <sup>1/4</sup>	10
	284TC	19 <sup>5/16</sup>		16 <sup>3/4</sup>		32		32 <sup>1/4</sup>		20 <sup>3/16</sup>	20 <sup>7/16</sup>	9 <sup>1/2</sup>	1 <sup>1/2</sup>	12 <sup>1/16</sup>
C328	FF140TC	7 <sup>9/32</sup>	6 <sup>1/2</sup>	9 <sup>1/8</sup>	8 <sup>3/4</sup>	22 <sup>5/8</sup>	21 <sup>5/8</sup>	23 <sup>1/8</sup>	22 <sup>1/8</sup>	18 <sup>7/32</sup>	18 <sup>23/32</sup>	5 <sup>1/2</sup>	1 <sup>1/2</sup>	—
	184TC	11 <sup>7/8</sup>		11 <sup>11/16</sup>		22 <sup>3/4</sup>		23 <sup>1/4</sup>		15 <sup>7/16</sup>	15 <sup>15/16</sup>	7	3/4	7 <sup>3/16</sup>
	215TC	14 <sup>1/2</sup>		13 <sup>3/16</sup>		26 <sup>5/16</sup>		26 <sup>13/16</sup>		17 <sup>7/16</sup>	17 <sup>15/16</sup>	7 <sup>3/4</sup>	1	9 <sup>1/16</sup>
	256TC	16 <sup>7/16</sup>		15 <sup>1/4</sup>		31 <sup>11/16</sup>		32 <sup>3/16</sup>		20 <sup>7/16</sup>	20 <sup>15/16</sup>	8 <sup>3/4</sup>	1 <sup>1/4</sup>	10
	284TC	19 <sup>5/16</sup>		16 <sup>3/4</sup>		32 <sup>5/8</sup>		33 <sup>1/8</sup>		20 <sup>13/16</sup>	21 <sup>5/16</sup>	9 <sup>1/2</sup>	1 <sup>1/2</sup>	12 <sup>1/16</sup>
	286TC	19 <sup>5/16</sup>		16 <sup>3/4</sup>		34 <sup>3/8</sup>		34 <sup>7/8</sup>		21 <sup>13/16</sup>	22 <sup>5/16</sup>	9 <sup>1/2</sup>	1 <sup>1/2</sup>	12 <sup>1/16</sup>

\* With Tri-Clamp connections.

\*\* With threaded bevel seat connections.

Dimensions are approximate and for guidance only. On application where exact dimensions are required, request a certified print from Tri-Clover.

NOTES: 1—Dimensions for single phase #140 frame motors longer.

--These dimensions are for pumps using standard "C" Flange Motors.

--Tri-Flo C Series pumps will not accept TSC Frame Motors.



# 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 SSU @ 59°F
80%	1.08	35 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	.93-.98	15,000 SSU @ 55°F
Butter	.93-.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
Dressing		
Cream (Sweet)	1	73 SSU
	.99	140 SSU
	.99	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

Product	Specific Gravity	Viscosity
Honey	1.3	1250 - 1425 SSU @ 100°F
Ice Cream Mix	1.15	1050 SSU @ 46°F
Lard	0.96	287 @ 100°F
Linseed Oil	.92-.94	143 @ 100°F 93 @ 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 @ 68°F
Molasses		
A. First	1.4 - 1.46	1300 - 23,500 SSU @ 100°F 700 - 8160 SSU @ 130°F
B. Second	1.43 - 1.48	6535 - 61,180 SSU @ 100°F 3058 - 15294 SSU @ 130°F
C. Blackstrap	1.46 - 1.49	12,190 - 255M @ 100°F
Mustard	1	17,000 SSU @ 85°F
Olive Oil	.91 - .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 @ 130°F
Soy Bean Oil	0.91	500 SSU @ 44°F
Tomato Paste	1.14	60M - 80 M SSU 21M SSU approx.
Water	1	31 SSU @ 68°F