CONTINENTAL

PROGRESSIVE CAVITY PUMPS

QUALITY FROM START TO FINISH

CM Model

CP Model

CG Model

CPM Model

CL Model

CPML Model

CK 2000 Series Model™

CONTINENTAL® PROGRESSING CAVITY ULTRAPUMP

CONTENTS **Page(s)**

CM Model

CONTINENTAL PROGRESSING CAVITY ULTRAPUMP

Our experience and knowledge — along with our broad product line, short lead times, and additional features and services — make Continental Pump the company you can rely on for your progressive cavity pump needs.

Experience

We offer a complete line of Progressing Cavity Pumps for the commercial waste water and numerous industrial markets. Our goal is to offer quality products and service at a competitive price. Our success is supported by a long standing relationship to quality, a service oriented sales staff, a facility housing thousands of parts and pumps, and a commitment to helping our valued distributors and customers. We strive to keep you informed by providing all the materials and knowledge we have to offer through our staff, engineers and website.

Continental Pump Company has grown its distributorship from a small handful to over 300 distributors in North America, Canada and overseas. So, no matter your location we have a wide network to handle your needs.

We pride ourselves in the manufacturing and delivery of our pumps and parts. We sell to our distributors and Original Equipment Manufacturers, in addition to contractors and utility and municipal plants.

Progressive cavity pumps are most commonly used in these industries: gas and oil, mining and industrial wastes with by-products but are very versatile. They are the perfect pumps for: abrasives, transferring, circulating, metering, pastes, slurries, sludge, waste water, sewage and more.

With a variety of models to choose from Continental Progressive Cavity Pumps are the solution to handling many types of fluids.

THE PERFECT PUMP FOR:

• Transferring	• Circulating	• Metering
• Filling	• Irrigating	• Washing
• Spraying	• Sampling	• Abrasives
• Cementing	• Caulking	• Mixing
• Aerating	• Sprinkling	• Water Systems
• Cleaning	• Pastes	• Slurries
• Industrial Waste	• Sewage	• Waste Water
• Sludge	• Viscous Products	

Continental Progressive Cavity Pumps have been time tested with proven unique characteristics that excel in performance unlike other types of Pumps. They are built from various materials and come in many sizes with capacities from less than 1 gpm to 400 and pressures to 450 psi.

MATERIALS OF CONSTRUCTION

All Continental Pump casting materials are Class 40# grey cast iron and CF8M (316) stainless steel. The best metal for your application would depend on the corrosiveness of your liquid. We offer an epoxy coating for an additional charge and can be applied to the suction housing and reducer. The epoxy seals the cast iron from the material being pumped.

Stators are available in 4 types of elastomers. The rubber materials are: Buna Nitrile, Natural Rubber, EPDM and Viton®. The rubber that is best for your application depends on what liquid you are pumping and the temperature, as it plays a vital role in which to select. Maximum allowable temperatures for stators: B (EPDM) 240°F, (Viton®) 400°F, Q (Buna Nitrile) 250°F, R (Natural Rubber) 175°.

The rotors are available in chrome plated alloy steel and stainless steel, but is dependent on the pH level and if your liquid is corrosive. In certain pH levels, a non plated rotor may be needed as it could lift the chrome off of the rotor.

When 'D' rotors are used the drive shaft and connecting rod will be Carbon Steel (CS). When 'S' rotors are used the drive shaft and connecting rod will be Stainless Steel (S).

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Products

PUMPS

Our **Rigid Stator Pump Line** consist of our CL, CM and CG Models. Based on your piping situation the suction housing can be rotated from 90° to 270° upon request.

The **CL Model** is suitable for a wide variety of applications and are the most frequently used. When properly applied they give excellent long life performance at the most economical cost.

The **CM Model** is similar to the CL Model, except has a larger drive head to handle the increased horsepower that is needed to produce the higher pressures that can be developed by these pumps.

Our **Crown Gear Joint Pumps** consist of our CG and CK 2000 Series Models. This model's suction housing can also be rotated from 90° to 270° upon request.

The **CG and CK 2000 Series Models** are designed to handle the heavier applications of sewage, industrial waste, polluted liquids and slurries. Incorporated into this more rugged pump is a drive train using crown gear joint connections to the rotor and drive shaft.

Our **Wobble Stator Pump Line** consist of our CP, CPM and CPML Models. These models are available with horizontal or vertical suctions based on your piping or space limitations.

The **CP Model,** also known as a bare shaft pump, operates with low costs and are compact making them ideal for light duty use.

The **CPM Model** is similar to the CP Model, except it is a close coupled type pump that is driven by a Continental spec. motor that is directly bolted to the pump.

The **CPML Model** is similar to the CPM Model, except it is driven by a standard motor attached by a specific motor coupling for different drive arrangements.

CPML Pump End Kit

Component Seal

CL Model
With Rotated Housing

CK 2000 Series Model™ PUMPS AND PARTS AVAILABLE!

All Moyno® Parts, models and identification numbers are listed for reference purposes only. Continental Pump Co, Inc. is not affiliated with or a representative of neither Moyno® nor its parent company.

People/Service

Get personal interaction every time you call.

Since 1946, the driving force behind Continental Pump Company has been the ability to build relationships and adapt to customer's needs. This is evident in every aspect of the company from it's knowledgeable sales and service staff to it's product engineers.

We offer extensive service

We stand behind our distributors. Continental Pump is centrally located. Our location provides our distributors with economical and quick delivery transit times to anywhere in the US. We have dedicated ourselves to provide quality pumps and parts with unmatched delivery. We have been able to do this by striving to build our inventory to support you our customers. Our sales staff is always ready to help assist in sizing the best pump for your application, as well as quick replies on part and pump quotes so you can get the job. Continental Pump has a full in-house service department to handle all your repair needs.

We offer:

Continental pump manufactures the CG Model that is equivalent to the discontinued Moyno® Centennial SWG Series.

1. CK 2000 Series Model™ pumps and parts
2. Pre-assembled drive ends
3. Pump end kits for our CP Model
4. Pump rebuild kits for our CP Model
   - Continental Pumps are interchangeable with other progressive cavity brands
   - Vast inventory of parts readily available to support our pump line
   - Quality OEM parts
   - In stock orders ship same day

We also offer:

- Abrasive resistant seals
- Stator barriers
- Epoxy coating
- Base units

We provide detailed support

Our knowledgeable and experienced sales and engineering force offers detailed technical support that is backed by our full product line.

No time for down time?

Ask about our expedited service. We are centrally located in the USA for prompt domestic shipments.

PARTS

Continental Pump provides replacement parts for some of the most common progressive cavity pump manufacturers. With growing relationships with other pump manufacturers, we offer other types of replacement pumps and parts.

Connecting Rod Kits

Connecting Rods are used in our standard CL and CM models. The kits are available in either carbon steel or stainless steel components as well as connecting rod washers of Buna Nitrile, EPDM, Natural Rubber or Viton®.

CP "Wobble Stator" Pump Rebuild Kits

Continental CP model rebuild kits are offered in 3 different types of elastomers: Buna Nitrile, EPDM, Viton® and stainless steel metal components. Other options consist of mechanical seal or packed seal and pinned or threaded flex joint, drive shaft and rotor.

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Gear Joint Kits

Continental CG Model pumps have a more unique drive train which uses two crown gear joint connections for these rugged pumps. It consists of a splined connecting rod with a ball and ring gear, along with front and rear thrust plates which help make a very strong connection between the rotor and driveshaft.

Sealing Options

Whether it is application based or personal preference Continental can provide you with many options.

- Component Seal and Gland
- Mechanical Seals
- Graphite and Teflon Packing Sets

Upgrade your mechanical seal to a hard-faced seal for abrasive applications.

A stator barrier is a great option for negative vacuum applications. Contact your Continental Pump representative to see which options will be suitable for your application.

CUSTOM PUMPS

CP pump base unit with driprail, packed seal and gas motor

CPML pump with air motor

CL piggy back base unit driven with v-belt and motor

CG inline base unit with suction housing cleanouts, gear reduction and motor

CUSTOM PUMPS

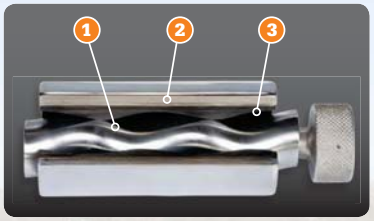
CP inline base unit with hydraulic motor

CL inline base unit with gear reduction and motor

Custom build base unit
CL inline base unit with flanged reducers, gear reduction and motor

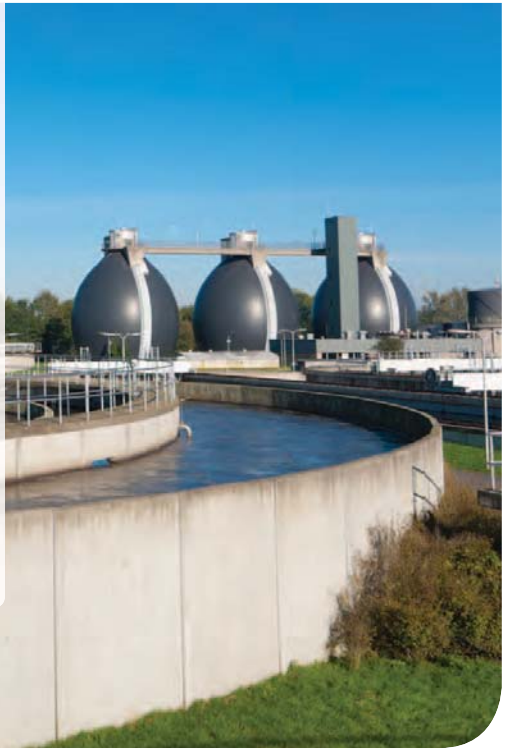
CL piggy back base unit driven with a V-Belt

HOW THEY WORK



1. **Rotor turns within the flexible rubber stator**
2. **Tightly sealed cavities are formed**
3. **Forces materials to the discharge port**

Pumping action begins when the rotor turns. Liquid acts as a lubricant.



CHOOSING THE RIGHT PUMP

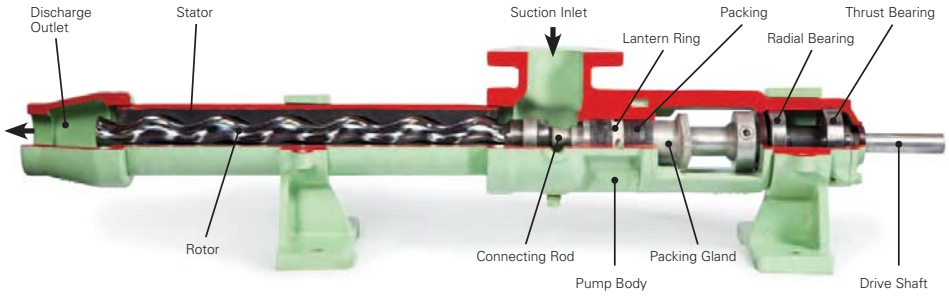
Progressive Cavity Pumps have similar characteristics to rotary or reciprocating pumps, such as piston, diaphragm, lobe, and screw pumps. The one common feature being the sealed cavities with operational similarities like being able to pump at extremely low rates, to even high pressures.

The similarity between other pumps and progressive cavity pumps generally ends there. Of all the types of pumps available, progressive cavity pumps are able to handle a wider range of fluid viscosities and properties than any other type of pump. The unique design of the pump makes them useful for a variety of pumping applications, such as transferring and metering while handling shear sensitive, abrasive and viscous fluids.

The Rotor seals tightly against the flexible rubber inside the stator as it rotates, forming tightly sealed cavities which carry the liquid diagonally toward the discharge port. The liquid does not change in shape or size when pumped due to the tightly sealed cavities. The effect of the progressive cavity design is that the fluid is moved at a very predictable and steady rate. Positive displacement of the pump starts the instant the Rotor turns. **The liquid acts as the lubricant between the pumping elements and should not run dry.**

CP Model
Packed

The reason Progressive Cavity pumps are used are because they are durable with only one moving part, rated for longevity. In operation our pumps are primarily a fixed flow rate pump and offers long life and reliable service transporting thick, viscous fluids. Abrasive fluids can shorten the life of the stator, but by slowing down the RPM's will help reduce wear. Slurries can also be pumped reliably if the slurry is viscous enough to maintain a lubrication layer around the particles and protect the stator.



CL Model

CHOOSING THE RIGHT PUMP

We offer a variety of options for our pumps, such as:

Vertical and rotated suctions are used if the piping is different and our normal horizontal pumps are not needed. The vertical suction is available for our CP, CPM and CPML Models and the rotated suction is available for our CL, CM, and CG models.

Close-coupled is an option when both a pump and motor are needed. This combines the pump and motor together.

A **V-Belt** is a pulley-type system that is driven by an electric or gas motor.

A **gas engine** is an option when a portable unit is needed.

We offer **hydraulic adapter** units when hydraulics are the source of power to drive the pump.

The **complete base unit** includes pump, gear box, motor, and steel base, which we can build to your particular specifications.

A **gearbox** is required to control the maximum RPM of the pump. It also provides added torque at low start up speeds.

VFD or **Variable Frequency Drive**, is an option to control the pump at various speeds.

The most common types of **motors** offered are: general purpose, explosion proof, inverter duty, severe duty, wash down, and single or three-phase. Contact us for more types that are available.

Looking for simplicity?

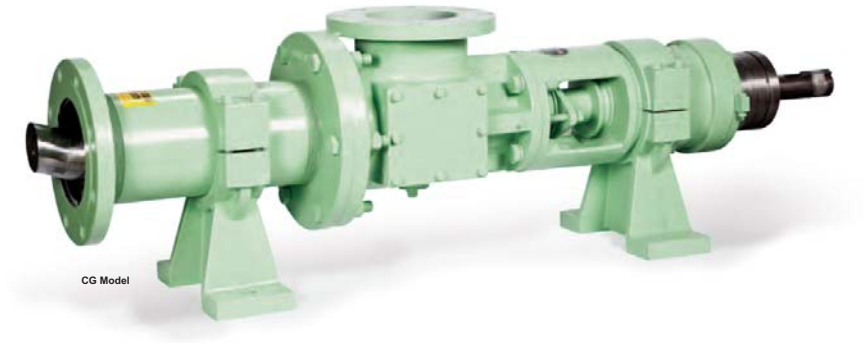
We offer complete progressive cavity pump units. They are constructed on a steel base to fit your specific application needs. The unit consists of a pump, a steel base and guard, a gear reducer and motor. Also available are belt drive units and many other base options.

Space Challenged?

If you are needing a different arrangement from traditional piping, we can rotate the housing up to 270° for the CL, CM & CG model pumps, or piggyback base unit.

Don't need a complete pumping unit but looking for drive options?

We can still help, whether attached to a pump or sold separately we can supply you with hydraulic adapters, VFD's, gear boxes and motors.



CG Model

THE 7 KEY ADVANTAGES OF PROGRESSING CAVITY PUMPS

Positive Displacement

This occurs at the turning of the rotor which develops a positive pumping action similar to a piston moving through a cylinder. The pump pressure developed does not depend upon the speed of the rotating rotor. The capacity of the pump, the approximate viscosity, and pressure can be projected for particular operating conditions.

Uniform Discharge Flow

Fluids are uniformly discharged without pulsation in a constant steady flow. Displacement remains the same with each revolution of the rotor permitting accurate and predictable metering relative to the fluid being pumped. Due to the unique flow characteristics, these pumps are well suited for low-shear applications.

Internal Velocity of Fluids

When the pump is in process, all fluids are pumped with a minimum amount of turbulence, agitation, pulsation or separation disturbance.

Self-Priming

Pumping action starts at the time the rotor is turned and it is capable of 28 feet of suction lift based on water in an appropriate installation. The liquid being pumped acts as a lubricant between the rotor and stator, and forms a continuous seal to create good suction and discharge capabilities. **Do Not Run Dry.**

Solids in Suspension

Solid particles over a wide range of size and shapes, as large as 1 1/8 inches in diameter, are pumped with no difficulty.

Reversible

Our pumps can be operated clockwise or counter-clockwise with effective performance in most installations. Contact us to see if your application is suitable for reverse operation.

Installation

Our pumps can be purchased separately or built into complete units. These units can be mounted on welded steel bases with specified couplings or belt guards and can either be driven by flexible couplings, v belts, gearbox reducers, or hydraulic motor adapters. If variable speed drives are needed the units can be driven by either electric motors, gasoline engines, diesel engines or air motors. Our pumps can also be mounted horizontally or vertically and the suction port can be rotated up to 270 ° position for appropriate entry of the liquid.

CPML Model

PUMP SELECTION GUIDE

Understanding the pump terminology helps to properly select the best performing Continental Progressive Cavity Pump to fit your pumping needs. Here are a few things you should know:

The **Capacity or Volume** is the rate of flow in Gallons Per Minute or GPM.

Pressure is determined by how much is required to move the liquid that is being pumped through the piping system and the kind of liquid being handled. The difference between the pressure required at the pump discharge and the pressure being introduced into the pump suction is the differential pressure and is expressed as Pounds per Square Inch or PSI.

Viscosity is the resistance to flow as expressed by various scales of measurement; however, the most commonly used is centipoise. The viscosity usually changes with temperature and should always be considered.

Temperature refers to the maximum and minimum temperatures at which the fluid is to be pumped. This is a highly important factor in pump selection. High temperatures can cause distortion and swelling of the stator materials and low temperatures can affect viscosity that reflects in flow characteristics and horsepower requirements.

Operating time or the operating cycle of the pump should also be considered; whether the pump is to run continuously or intermittently can be a factor in the selection of the drive.

Corrosion depends on whether the fluid being pumped is neutral, acid or alkaline. All should be considered when selecting the proper materials of pump construction. The pH value of the fluid should be known or determined. A pH of 7 is neutral, below 7 is acid and above 7 is alkaline.

Abrasion: The abrasive properties of the fluid to be pumped should be classified. Abrasives can look alike and appear to have similar properties; however, they can wear differently. You must classify the fluid in order to select the proper pump construction and operating speed. These 4 classifications will serve as a guide and help in the determination of the necessary materials needed in the pump construction:

NO ABRASIVES
Example: Clear Water, Gasoline, Fuel Oil, Lubricating Oil.

LIGHT ABRASIVES
Example: Dirty Water containing Silt and/or small amounts of Sand or Earth.

MEDIUM ABRASIVES
Example: Clay Slurries, Potters Glazes, Porcelain Enamel, Frit, Sludge, Wood Dust in Water.

HEAVY ABRASIVES
Example: Slurries containing large amounts of Sand, Emery Dust, Lapping Compounds, Mill Scale, Plaster, Grout, Roof Gypsum.

PUMP FAILURE IS A POSSIBILITY IF INACCURATE PUMP APPLICATION INFORMATION IS GIVEN.

The various materials used in the manufacturing of Continental Pumps allows our pumps to handle almost any fluid.

If it will push through pipe, you can pump it with Continental Progressive Cavity Pumps. Whether it be acidic, abrasive or viscous, we can help you with your application needs.

Please see the compatibility chart on the following pages for a few of the liquids that can be handled by our progressive cavity pumps. Your liquid not listed? Please contact us for assistance.

LIQUID COMPATIBILITY

Set forth in the accompanying chart are a partial list of liquids that have been successfully handled along with an indication of the basic materials for the pump body, the rotor and stator.

PART	LETTER	MATERIAL
Pump Body	C	Cast Iron
	S	Stainless Steel (CS8M)
Rotor	D	Chrome Plated Alloy Steel
	S	Chrome Plated Stainless Steel
Stator	B	Butyl/EPDM Rubber
	F	Viton® Rubber
	Q	Buna Nitrile Rubber
	R	Natural Rubber

LIQUID COMPATABILITY CHART

LIQUID	PUMP BODY		ROTOR		STATOR			
Acetic Acid (cold dilute)		S		S*	B		Q	R
Acetone	C	S	D	S	B			
Acid Mine Water	C			S			Q	R
Alcohol, Ethyl (grain)	C		D				Q	R
Alcohol, Methyl (wood)	C		D				Q	R
Alum (paper mill)		S		S	B	F	Q	R
Aluminum Hydroxide	C		D				Q	R
Aluminum Sulfate		S		S	B	F	Q	R
Ammonium Bicarbonate	C	S	D	S	B			R
Ammonium Chloride		S		S*	B		Q	R
Ammonium Phosphate	C	S	D	S	B		Q	R
Ammonuim Nitrate	C	S	D	S	B		Q	R
Ammonium Sulfate	C	S		S*	B		Q	R
Aromatic Hydrocarbons	C	S	D	S		F		
Asphalt	C	S	D	S		F		
Barium Chloride	C	S		S	B	F	Q	R
Barium Hydroxide	C	S	D	S	B	F	Q	R
Barium Nitrate	C	S	D	S			Q	R
Barium Sulfate	C	S	D	S			Q	R
Beer		S		S			Q	R
Beer Wort		S		S				R
Beer Sugar Liquor		S		S	B	F	Q	R
Benzene (coal tar product)	C		D	S		F		
Benzine (petroleum product)	C	S	D			F	Q	
Black Liquor	C	S	D	S		F	Q	
Boiler Feed Water	C		D				Q	
Bordeaux Mixture	C		D				Q	R
Boric Acid		S		S		F	Q	R
Brine, Calcium Chloride	C	S		S*	B	F	Q	R
Brine, Sodium Chloride	C	S		S*	B	F	Q	R
Calcium Chlorate	C	S	D	S		F		
Calcium Chloride	C	S	D	S	B	F	Q	R
Calcium Hypochlorite	C	S		S	B	F		
Calgon (sodium hexametaphosphate)		S		S			Q	R
Carbon Bisulfide	C	S	D	S		F		
Carbon Disulphide	C	S	D	S		F		
Carbonic Acid	C			S			Q	R
Castor Oil	C	S	D	S		F	Q	R
Caustic Potash (lye)	C	S	D	S			Q	R
Caustic Soda (lye)	C	S	D	S	B		Q	R
Caustic Zinc Chloride		S		S			Q	R
China Wood or Tung Oil								
-Drying Oil	C		D				Q	
-Vegetable Oils	C		D				Q	

LIQUID COMPATIBILITY

LIQUID COMPATABILITY CHART

LIQUID	PUMP BODY		ROTOR		STATOR			
Chlorinated Hydrocarbons								
-Chloroform		S		S		F		
-Dichloroethylene	C	S	D	S			Q	
-Methyl Chloride	C	S	D	S		F		
-Tri Chloroethyline		S		S		F		
Chromic Acid (diluted)		S		S		F		
Citric Acid		S		S	B	F	Q	R
Clay Slip	C		D			F	Q	R
Copper Nitrate		S		S			Q	R
Copper Sulphate		S		S*		F	Q	R
Copperas		S		S*			Q	R
Corn Oil	C	S	D	S		F	Q	
Cotton Seed Oil	C	S		S		F	Q	
Creosote	C	S	D	S		F	Q	
Cyanide	C		D				Q	R
Cyanide of Potassium	C		D		B	F	Q	R
Diethylene Glycol (alcohol)	C	S	D	S		F	Q	R
Distilled Water or Deionized	C	S		S			Q	R
Distillery Wort	C	S	D	S			Q	R
Epsom Salts	C	S	D	S	B	F	Q	
Ethyl Alcohol	C	S	D	S	B	F		
Fatty Acids	C	S	D	S		F		
Ferric Hydroxide		S		S	B		Q	R
Ferrous Sulphate		S		S*			Q	R
Formaldehyde		S		S		F	Q	
Formic Acid		S		S		F		
Fuel Oils	C	S	D	S		F	Q	
Furural	C	S	D	S	B			
Fusel Oils	C		D				Q	
Gasoline	C		D				Q	
Glucose	C	S	D	S	B	F	Q	R
Glue	C	S	D	S	B	F	Q	R
Glycerine	C	S	D	S	B	F	Q	R
Glycerol	C	S	D	S	B	F	Q	R
Grain Alcohol	C		D				Q	R
Hops	C	S	D	S			Q	R
Hydrocyanic Acid		S		S	B	F		
Hydrogen Peroxide		S		S		F		
Hydrogen Sulfide		S		S	B	F		
Kerosene	C		D				Q	
Lard	C	S	D	S		F	Q	
Lime Water	C		D				Q	R
Linseed Oil	C	S	D	S	B	F	Q	
Lubricating Oils	C		D				Q	
Lye (sodium hydroxide)	C	S	D	S	B	F	Q	R
Magnesium Chloride	C	S	D	S	B	F	Q	R
Magnesium Sulphate	C	S	D	S*	B	F	Q	
Mercury	C	S	D	S			Q	R
Methanol	C	S	D	S	B		Q	R
Methyl Chloride	C		D				Q	R
Milk of Lime	C			S			Q	R
Mine Water	C			S			Q	R
Molasses	C		D	S	B	F	Q	R
Naphtha	C		D				Q	
Nickel Chloride		S		S	B	F	Q	R

LIQUID COMPATIBILITY

LIQUID COMPATABILITY CHART

LIQUID	PUMP BODY		ROTOR		STATOR			
Nickel Sulphate		S		S*	B	F	Q	
Oil - Paraffin Base	C		D				Q	
Oil - Vegetable	C		D				Q	
Paints - Water Base	C		D				Q	R
Palmitic Acid	C		D			F	Q	
Phosphoric Acid		S		S		F		
Potassium Carbonate	C		D				Q	R
Potassium Chloride	C		D		B	F	Q	R
Potassium Nitrate	C		D		B	F	Q	R
Potassium Phosphate	C		D				Q	R
Potassium Sulphate	C		D		B	F	Q	
Salammoniac		S		S	B		Q	R
Salt Brine (to 30%)	C	S		S			Q	R
Sea Water	C			S			Q	R
Sewage	C		D				Q	R
Shellac	C		D				Q	
Soap Liquor (thin)	C	S	D	S	B	F	Q	
Sodium Aluminate	C		D		B		Q	R
Sodium Bicarbonate	C			S	B	F	Q	R
Sodium Bisulfite		S		S	B		Q	R
Soduim Carbonate	C			S	B	F	Q	R
Sodium Chloride	C	S		S*	B	F	Q	R
Sodium Hydroxide	C	S	D	S	B		Q	R
Sodium Nitrate	C		D		B			
Sodium Silicate	C		D		B	F	Q	R
Sodium Sulfate		S		S	B	F	Q	
Soy Bean Oil	C		D			F	Q	
Starch	C	S	D	S	B		Q	R
Steric Acid		S	D				Q	
Sugar	C		D				Q	R
Tar	C		D				Q	
Tar & Ammonia in Water	C		D				Q	
Titanium Chloride		S		S		F		
Toluene (toluol)	C		D			F		
Trub Sludge	C		D				Q	R
Turpentine	C		D			F	Q	
Varnish	C		D			F		
Vinegar		S		S*	B	F	Q	
Vitriol - Blue		S		S	B	F	Q	
Vitriol - Green		S		S			Q	R
Waste Water	C		D				Q	R
Whiskey	C	S	D	S			Q	R
Wine		S		S	B		Q	R
Wood Pulp	C		D				Q	R
Yeast		S		S	B		Q	R
Zinc Chloride		S		S*	B	F	Q	R
Zinc Nitrate		S		S			Q	R
Zinc Sulfate		S		S*	B		Q	R

Note:
* Non-plated Rotor
When "D" rotors are used the drive shaft and connecting rod will be of carbon steel (CS).
When "S" rotors are used the drive shaft and connecting rod will be of stainless steel (S).
Maximum allowable temperatures for stators: B (EPDM) 240°F, (Viton®) 400°F, Q (Buna Nitrile) 250°F, R (Natural Rubber) 175°.

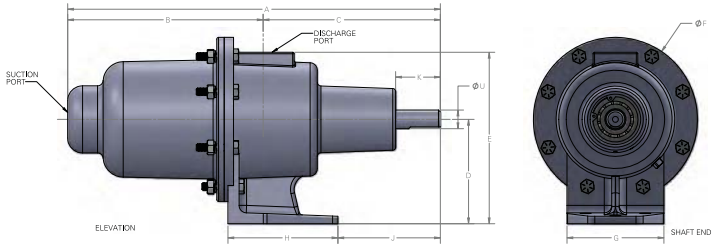
MODEL CP

CP Model

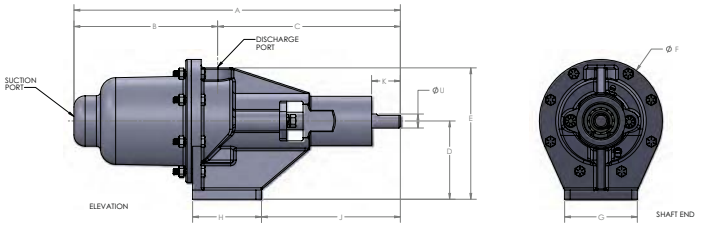
Performance data based on gallons per minute (water at 70°F)

PERFORMANCE DATA - MODEL CP

PUMP	DIFFERENTIAL PRESSURE	PUMP SPEED					MOTOR HORSE POWER
		1750 RPM	1150 RPM	870 RPM	580 RPM	430 RPM	
	0	1.9	1.3	1.0	0.7	0.5	
	25	1.7	1.0	0.5	0.2	0.1	
	50	1.5	0.9	0.2			
CP15	75	1.2	0.8				1/2
	100	1.0	0.7				
	125	0.8	0.5				
	150	0.6	0.4				
	0	4.9	3.2	2.0	1.6	1.2	
	25	4.1	2.7	2.0	1.3	0.9	
CP22	50	3.4	2.2	1.6	1.0	0.7	1/2
	75	2.6	1.7	1.3	0.8	0.6	
	100	2.0	1.5	1.0	0.6	0.4	
	0	9.4	6.0	4.6	3.1	2.3	
CP33	25	7.0	4.5	3.4	2.3	1.7	1/2
	50	4.2	2.7	2.0	1.3	0.9	
	0	15.0	9.7	7.3	4.9	3.6	
CP44	25	12.0	7.8	5.9	4.0	3.0	3/4
	50	9.4	6.1	4.6	3.1	2.3	
	0	24.0	15.6	11.7	7.9	5.8	
CP56	25	22.0	14.3	10.7	7.2	5.3	1-1/2
	35	20.5	13.3	10.0	6.7	4.9	
	50	19.5	12.7	9.5	6.4	4.1	
	0	53.0	34.5	26.0	17.5	13.0	
	10	48.0	31.0	23.4	15.8	11.7	
CP67	20	43.0	28.0	21.0	14.0	10.3	2
	35	34.0	22.0	16.5	11.0	8.1	
	50	25.0	16.3	12.3	8.3	6.1	



CP15 - CP22 - CP33 - CP44 - CP56 - CP67
MECHANICAL SEAL PUMP



CP15 - CP22 - CP33 - CP44 - CP56 - CP67
PACKED SEAL PUMP

MODEL CP

Model CP are great for low GPM and viscous applications and can pump many different types of materials. It's a low cost pump that is compact with many drive options as well as the availability of horizontal or vertical suction housings.

Continental CP Model pumps and parts are interchangeable with many progressing cavity pump brands.

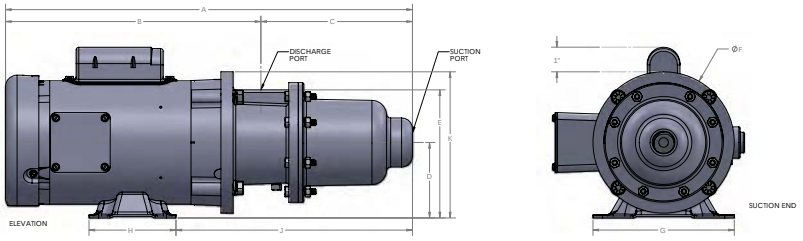
Ø = Diameter

DIMENSIONS AND WEIGHTS – MODEL CP

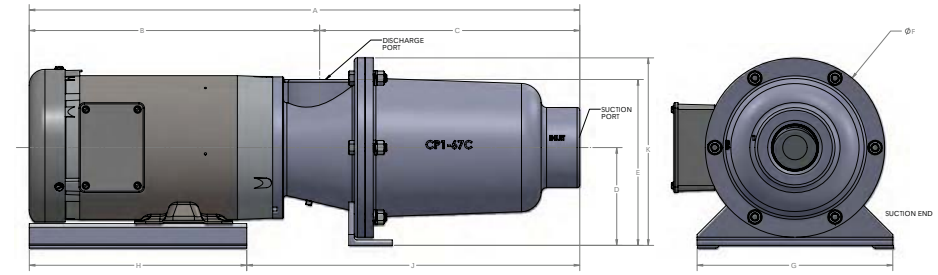
PUMPS	DIMENSIONS (INCHES)												WEIGHT (LBS)	PORT SIZES	
	A	B	C	D	E		F	G	H	J	K	U		INLET SUCTION	OUTLET DISCHARGE
CP15, CP22, CP33, CP44	12-7/16	6-13/16	5-5/8	3-1/2	5-3/4		5-1/2	3-1/4	3-11/16	3-3/8	1-7/16	5/8	15	3/4"	3/4"
CP56	16-11/16	9-3/4	6-15/16	4-9/32	7-9/32		7-1/2	6	4-3/4	3-9/16	2-3/8	3/4	40	1-1/2"	1-1/4"
CP67	19-9/16	11-15/16	7-5/8	4-1/2	8-1/4		8-1/4	6	4-7/8	4-9/16	2-1/8	1	85	2"	2"
PACKED CP15, CP22, CP33, CP44	14-3/4	6-1/4	8-1/2	3-1/2	5-7/8		5-1/2	3-1/4	3	6-7/16	1-7/16	5/8	18	3/4"	3/4"
PACKED CP56	18-13/16	9-3/4	9-1/16	4-9/32	7-9/32		7-1/2	6	4-3/4	5-11/16	2-3/8	3/4	44	1-1/2"	1-1/4"
PACKED CP67	22	12	10	4-1/2	8-1/4		8-1/4	6	4-3/4	7-1/8	2-1/8	1	90	2"	2"
CPM15, CPM22, CPM33, CPM44	18-3/4	12	6-13/16	3-1/2	5-7/8		5-3/4	6-1/2	4	10-3/4	7		48	3/4"	3/4"
CPM56	22-15/16	13-3/16	9-3/4	4-1/2	7-1/2		7-1/2	9	10	12-15/16	8-1/4		80	1-1/2"	1-1/4"
CPM67	25-1/4	13-5/16	12	4-1/2	7-3/4		8-1/4	9	10	15-5/16	8-5/8		117	2"	2"
CPML15, CPML22, CPML33, CPML44	20-3/8	13-9/16	6-13/16	3-1/2	5-3/4		6-1/2	6-1/2	4	13-1/8	6-3/4		52	3/4"	3/4"
CPML56	25-3/8	13-3/4	9-3/4	4-1/2	7-1/2		7-1/2	9	10	13-1/12	8-1/4		85	1-1/2"	1-1/4"
CPML67	27-7/8	15-7/8	12	4-1/2	7-3/4		8-3/8	9	10	17-7/8	8-11/16		125	2"	2"

MODEL CP

CPM Model



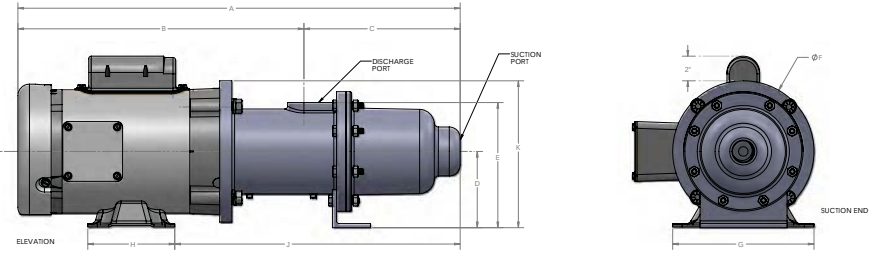
CPM15 - CPM22 - CPM33 - CPM44
CLOSE-COUPLED PUMP DRIVEN WITH A CONTINENTAL SPEC. MOTOR



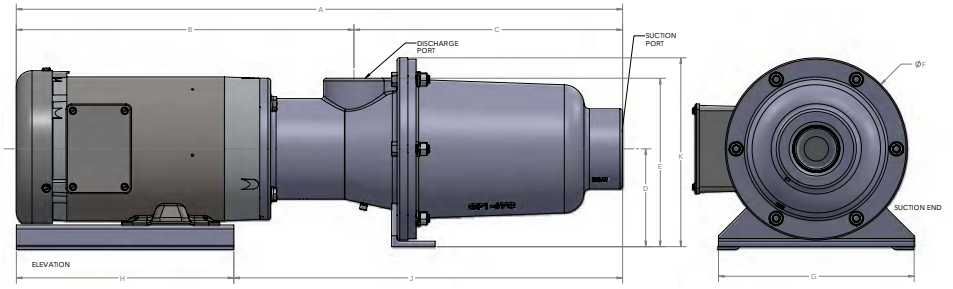
CPM56 - CPM67
CLOSE-COUPLED PUMP DRIVEN WITH A CONTINENTAL SPEC. MOTOR

MODEL CP

CPML Model



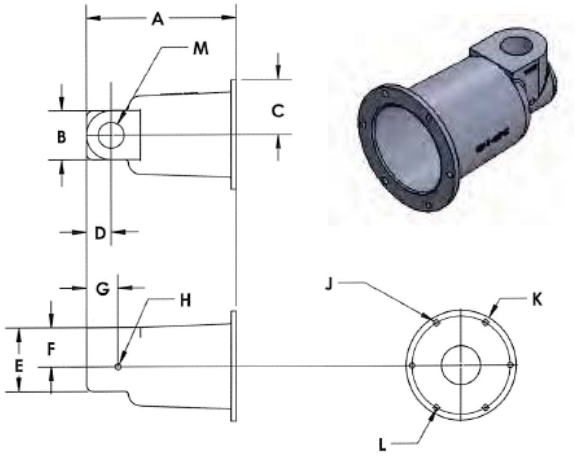
CPML15 - CPML22 - CPML33 - CPML44
CLOSE-COUPLED PUMP DRIVEN WITH A STANDARD MOTOR



CPML56 - CPML67
CLOSE-COUPLED PUMP DRIVEN WITH A STANDARD MOTOR

MODEL CP

Vertical CP Model



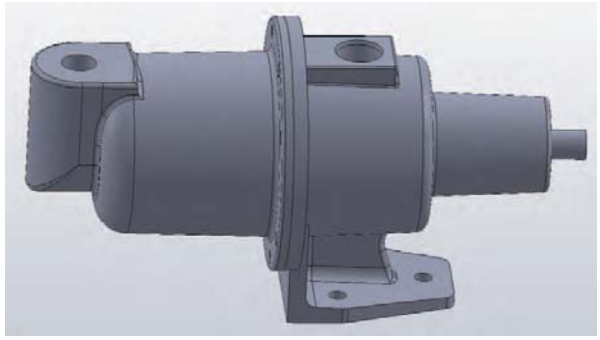
DIMENSIONS AND WEIGHTS – VERTICAL CP MODEL												
VERTICAL HOUSING P/N	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
CPV1-15	5-1/2	2-1/16	2-3/4	1	3	1-15/16	NA	NA	1/4 x 8	5-1/2	4-7/8	3/4 NPT
CPV1-56	9	3	3-3/4	1-7/8	4-1/8	2-5/8	1-1/2	1/4	7/16 x 6	7-1/2	6-3/4	1-1/2 NPT
CPV1-67	11-1/4	3-11/16	4-1/8	1-13/16	4-3/4	2-15/16	2-3/8	1/4	7/16 x 6	8-1/4	7-3/8	2 NPT

Refer to page 20-21 for more dimensions.

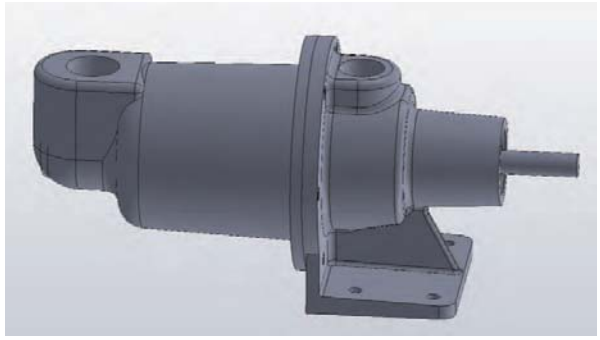
MODEL CP

Features and Benefits of Vertical Pumps:

- Offers better flow with flooded suction
- Space-saving construstion
- Solution for non-traditional piping configurations



CP15, CP22, CP33, CP44



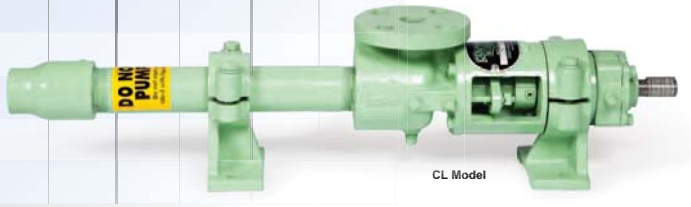
CP56, CP67

MODEL CL

Performance data based on gallons per minute (water at 70°F)

PERFORMANCE DATA - MODEL CL

FRAME SIZE	GAL./100 REV.	PUMP SPEED DIFF. PRESS PSI	300 RPM GPM	300 RPM MIN. HP	450 RPM GPM	450 RPM MIN. HP	600 RPM GPM	600 RPM MIN. HP	750 RPM GPM	750 RPM MIN. HP	900 RPM GPM	900 RPM MIN. HP	1200 RPM GPM	1200 RPM MIN. HP
1CL2	.260	0 30 60	.54 .51 .40	1/8 1/8 1/8	1.1 .95 .50	1/6 1/6 1/6	1.5 1.3 .9	1/6 1/6 1/6	2.0 1.8 1.4	1/4 1/4 1/4	2.2 2.1 1.7	1/4 1/4 1/4	3.0 2.8 2.3	1/3 1/3 1/3
2CL2	.260	0 60 120	.54 .51 .40	1/4 1/4 1/4	1.1 .95 .50	1/4 1/4 1/4	1.5 1.3 .9	1/4 1/4 1/4	2.0 1.8 1.4	1/3 1/3 1/3	2.2 2.1 1.7	1/3 1/3 1/3	3.0 2.8 2.3	1/2 1/2 1/2
3CL2	.260	0 90 180	.54 .51 .40	1/4 1/4 1/4	1.1 .95 .50	1/4 1/4 1/4	1.5 1.3 .9	1/3 1/3 1/3	2.0 1.8 1.4	1/3 1/3 1/3	2.2 2.1 1.7	1/3 1/3 1/3	3.0 2.8 2.3	3/4 3/4 3/4
1CL3	.860	0 40 75	2.5 1.6 –	1/3 1/3 –	3.8 3.0 1.5	1/3 1/3 1/3	5.1 4.3 2.7	1/3 1/3 1/3	6.4 5.5 4.2	1/3 1/2 1/2	7.5 6.8 5.0	1/2 1/2 3/4	10 9.3 7.7	3/4 3/4 3/4
2CL3	.860	0 80 150	2.5 1.6 –	1/3 1/3 –	3.8 3.0 1.4	1/3 1/3 1/3	5.1 4.3 2.7	1/2 1/2 1/2	6.4 5.5 4.2	1/2 3/4 3/4	7.5 6.8 5.0	3/4 3/4 1	10 9.3 7.7	1 1 1-1/2
3CL3	.860	0 120 225	2.5 1.6 –	1/3 1/3 –	3.8 3.0 1.6	1/2 1/2 3/4	5.1 4.3 2.7	3/4 3/4 1	6.4 5.5 4.2	3/4 1 1-1/2	7.5 6.8 5.0	3/4 1 1-1/2	10 9.3 7.7	1 1-1/2 2
1CL4	2.02	0 40 75	5.8 4.0 –	1/2 1/2 –	9.0 6.7 2.7	1/2 1/2 3/4	2.0 9.5 5.5	1/2 1/2 3/4	15 12.5 8.5	1/2 3/4 1	18 16 12	3/4 1 1-1/2	24 22 18	1 1 1-1/2
2CL4	2.02	0 80 150	5.8 4.0 –	3/4 3/4 –	9.0 6.7 2.7	1/2 3/4 1	12.0 9.5 5.5	3/4 1 1-1/2	15 12.5 8.5	3/4 1-1/2 2	18 16 12	1 1-1/2 2	24 22 18	1-1/2 2 3
3CL4	2.02	0 120 225	5.0 4.0 2.0	3/4 3/4 1	9.0 6.7 3.7	3/4 1 1-1/2	12.0 9.5 5.5	1 1-1/2 2	15 12.5 8.5	1 1-1/2 3	18 16 12	1-1/2 2 3	24 22 18	2 3 5
1CL6	5.20	0 40 75	15 11 6.5	1 1 1	23 19 13	1 1 1-1/2	31 27 21	1-1/2 1-1/2 2	39 35 28	1-1/2 2 3	47 43 36	2 2 3		
2CL6	5.20	0 80 150	15 11 5	1 1 2	23 19 13	1-1/2 1-1/2 3	31 27 21	2 2 5	39 35 28	2 3 5	47 43 36	3 3 5		
3CL6	5.20	0 120 225	15 11 5	1-1/2 1-1/2 3	23 19 13	2 3 5	31 27 21	3 3 5	39 35 28	3 2 7-1/2	47 43 36	5 5 7-1/2		
1CL8	11.7	0 40 75	33 27 17	2 2 2	51 45 35	2 2 3	68 62 52	3 3 5	87 76 66	3 5 7-1/2	100 94 84	5 5 7-1/2		
2CL8	11.7	0 80 150	33 27 18	3 3 5	51 45 35	3 5 7-1/2	68 62 52	5 5 7-1/2	87 76 66	5 7-1/2 10	100 94 84	7-1/2 7-1/2 10		
3CL8	11.7	0 120 225	33 27 18	5 5 7-1/2	51 45 35	5 5 10	68 62 52	7-1/2 7-1/2 10	87 76 66	7-1/2 10 15	100 94 84	10 10 15		
1CL10	18.8	0 40 75	56 46 26	2 2 5	84 74 53	3 3 5	115 105 84	5 5 7-1/2	140 130 106	5 7-1/2 10				
2CL10	18.8	0 80 150	56 46 24	3 5 7-1/2	84 74 53	5 7-1/2 10	115 105 84	7-1/2 7-1/2 15	140 130 106	7-1/2 10 20				
3CL10	18.8	0 120 225	56 46 22	5 5 10	84 74 53	7-1/2 10 15	115 105 84	10 10 20	140 130 106	10 15 25				
1CL10H	27.7	0 40 75	83 73 55	3 3 5	127 117 100	5 5 7-1/2	168 158 143	7-1/2 7-1/2 10	210 202 187	7-1/2 10 15				
2CL10H	27.7	0 80 150	83 73 64	5 5 10	127 117 100	7-1/2 7-1/2 15	168 158 143	10 10 20	210 202 187	10 15 25				
1CL12	43.5	0 40 75	130 118 85	5 7-1/2 10	196 184 149	7-1/2 10 15	255 240 210	10 15 20						
2CL12	43.5	0 80 150	130 118 85	10 10 15	196 184 149	15 15 25	255 240 208	20 20 30						
3CL12	43.5	0 120 225	130 118 85	15 15 25	196 184 149	20 20 30	255 240 210	25 25 40						
1CL12H	66.2	0 40 75	195 173 123	7-1/2 7-1/2 15	293 272 220	10 15 20	380 363 310	15 20 25						
2CL12H	66.2	0 80 150	195 173 123	15 15 25	293 272 220	20 20 30	380 363 300	25 30 50						

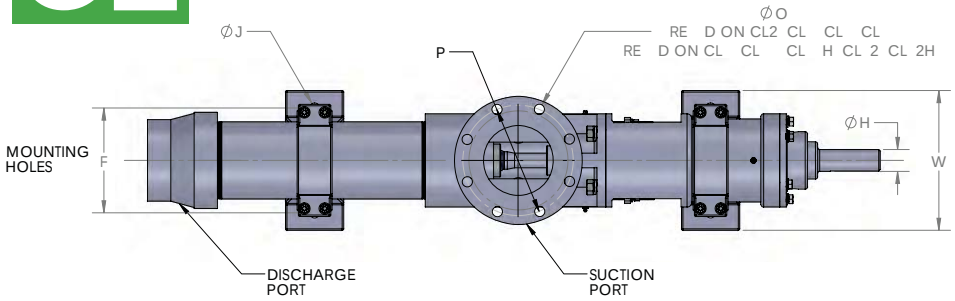


CL Model

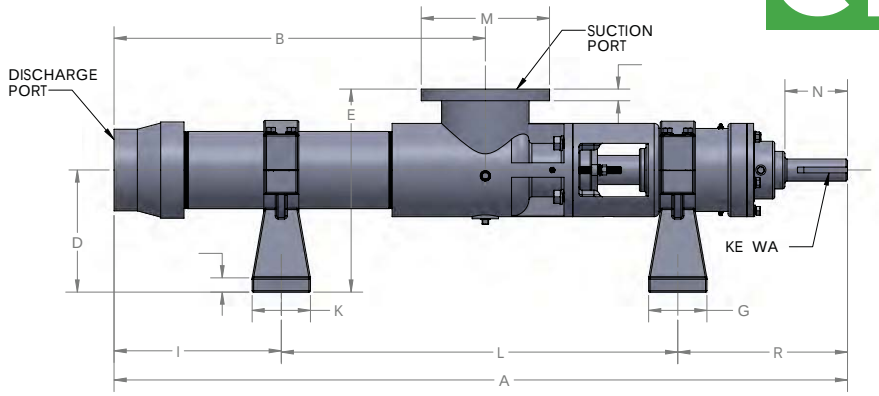
MODEL CL

Model CL pumps are suitable for a wide variety of applications and are the most frequently used. When properly applied they give excellent long life performance at the most economical cost.

MODEL CL



MODEL CL



DIMENSIONS AND WEIGHTS - MODEL CL

PUMP SIZE	DIMENSIONS (INCHES)																					WEIGHT (LBS)	PORT SIZES	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	W	Z	KEYWAY		SUCTION	DISCHARGE
1CL2	17	7-5/16	N/A	3-1/4	5-7/8	3-1/8	2	5/8	4-1/4	3/8	2	8-1/2	4-1/4	1-1/2	9/16	3-1/8	3/8	4-1/4	4	7/16	3/16 x 3/4	22	1″	3/4″
2CL2	20-1/2	10-7/8	N/A	3-1/4	5-7/8	3-1/8	2	5/8	5-3/4	3/8	2	10-1/2	4-1/4	1-1/2	9/16	3-1/8	3/8	4-1/4	4	7/16	3/16 x 3/4	25	1″	3/4″
3CL2	24-1/16	14-7/16	N/A	3-1/4	5-7/8	3-1/8	2	5/8	7-13/16	3/8	2	12	4-1/4	1-1/2	9/16	3-1/8	3/8	4-1/4	4	7/16	3/16 x 3/4	31	1″	3/4″
1CL3	22-3/4	10-1/8	N/A	4-1/8	7-5/16	4-1/4	3	3/4	5-9/16	7/16	3	11-1/2	5	2-1/8	9/16	3-7/8	1/2	5-11/16	5-3/8	9/16	3/16 x 1-1/2	47	1-1/2″	1-1/4″
2CL3	28-1/16	15-7/16	N/A	4-1/8	7-5/16	4-1/4	3	3/4	9-3/8	7/16	3	13	5	2-1/8	9/16	3-7/8	1/2	5-11/16	5-3/8	9/16	3/16 x 1-1/2	51	1-1/2″	1-1/4″
3CL3	33-3/8	20-3/4	N/A	4-1/8	7-5/16	4-1/4	3	3/4	11-3/16	7/16	3	16-1/2	5	2-1/8	9/16	3-7/8	1/2	5-11/16	5-3/8	9/16	3/16 x 1-1/2	55	1-1/2″	1-1/4″
1CL4	30	13-1/8	N/A	5-1/2	9-7/8	5-1/2	3-1/2	15/16	7-1/4	9/16	3	15-3/4	7	3-1/8	3/4	5-1/2	5/8	7	7	11/16	1/4 x 2	85	2-1/2″	2″
2CL4	37-1/8	20-1/4	N/A	5-1/2	9-7/8	5-1/2	3-1/2	15/16	8-1/8	9/16	3	22	7	3-1/8	3/4	5-1/2	5/8	7	7	11/16	1/4 x 2	91	2-1/2″	2″
3CL4	44-1/4	27-5/8	N/A	5-1/2	9-7/8	5-1/2	3-1/2	15/16	14-1/2	9/16	3	22-3/4	7	3-1/8	3/4	5-1/2	5/8	7	7	11/16	1/4 x 2	97	2-1/2″	2″
1CL6	39-1/8	17-13/16	N/A	6-1/4	11-1/4	7	4	1-1/8	10-9/16	11/16	4	20	7-1/2	4-3/8	3/4	6	11/16	8-9/16	8-5/8	7/8	1/4 x 2-1/4	141	3″	2-1/2″
2CL6	49-3/4	28-7/16	N/A	6-1/4	11-1/4	7	4	1-1/8	15-3/16	11/16	4	26	7-1/2	4-3/8	3/4	6	11/16	8-9/16	8-5/8	7/8	1/4 x 2-1/4	159	3″	2-1/2″
3CL6	60-3/8	39-1/16	18	6-1/4	11-1/4	7	4	1-1/8	13-13/16	11/16	4	20	7-1/2	4-3/8	3/4	6	11/16	8-9/16	8-5/8	7/8	1/4 x 2-1/4	192	3″	2-1/2″
1CL8	46	20-3/16	N/A	8	14	9	5	1-3/8	9-3/4	7/8	5	27	9	4-9/16	3/4	7-1/2	1-1/8	9-1/4	11-1/2	15/16	3/8 x 3	303	4″	4″
2CL8	58-3/8	32-5/8	N/A	8	14	9	5	1-3/8	17-1/8	7/8	5	32	9	4-9/16	3/4	7-1/2	1-1/8	9-1/4	11-1/2	15/16	3/8 x 3	332	4″	4″
3CL8	70-13/16	45	24	8	14	9	5	1 3/8	12-9/16	7/8	5	25	9	4-9/16	3/4	7-1/2	1-1/8	9-1/4	11-1/2	15/16	3/8 x 3	372	4″	4″
1CL10	53-1/8	21-7/8	N/A	9-3/4	16-11/16	9	5	1-7/8	9-5/8	7/8	5	30	11	5-3/8	7/8	9-1/2	1-1/8	13-1/2	11-1/2	1	1/2 x 3-1/2	412	6″	5″
2CL10	63-1/2	32-1/4	N/A	9-3/4	16-11/16	9	5	1-7/8	14-1/2	7/8	5	35-1/2	11	5-3/8	7/8	9-1/2	1-1/8	13-1/2	11-1/2	1	1/2 x 3-1/2	500	6″	5″
3CL10	73-7/8	42-5/8	18	9-3/4	16-11/16	9	5	1-7/8	12-3/8	7/8	5	30	11	5-3/8	7/8	9-1/2	1-1/8	13-1/2	11-1/2	1	1/2 x 3-1/2	545	6″	5″
1CL10H	58-1/2	27-1/4	N/A	9-3/4	16-11/16	9	5	1-7/8	15	7/8	5	30	11	5-3/8	7/8	9-1/2	1-1/8	13-1/2	11-1/2	1	1/2 x 3-1/2	424	6″	5″
2CL10H	73-7/8	42-5/8	18	9-3/4	16-11/16	9	5	1-7/8	12-3/8	7/8	5	30	11	5-3/8	7/8	9-1/2	1-1/8	13-1/2	11-1/2	1	1/2 x 3-1/2	545	6″	5″
1CL12	70	31	N/A	12-1/2	21	12-5/8	6	2-1/4	14-1/2	1	6	37-1/2	13-1/2	6	7/8	11-3/4	1-1/8	18	14-1/2	1-1/8	1/2 x 4	880	8″	6″
2CL12	85-1/2	46-1/2	20-1/2	12-1/2	21	12-5/8	6	2-1/4	12	1	6	35	13-1/2	6	7/8	11-3/4	1-1/8	18	14-1/2	1-1/8	1/2 x 4	1075	8″	6″
3CL12	101-1/8	62-1/8	27	12-1/2	21	12-5/8	6	2-1/4	14-1/8	1	6	42	13-1/2	6	7/8	11-3/4	1-1/8	18	14-1/2	1-1/8	1/2 x 4	1200	8″	6″
1CL12H	77-3/4	38-3/4	N/A	12-1/2	21	12-5/8	6	2-1/4	17-3/4	1	6	42	13-1/2	6	7/8	11-3/4	1-1/8	18	14-1/2	1-1/8	1/2 x 4	945	8″	6″
2CL12H	101-1/8	62-1/8	27	12-1/2	21	12-5/8	6	2-1/4	14-1/8	1	6	42	13-1/2	6	7/8	11-3/4	1-1/8	18	14-1/2	1-1/8	1/2 x 4	1205	8″	6″

MODEL CM

Model CM Pumps are similar to the Model CL Pumps, except they have a larger drive head to handle the increased horsepower that is needed to produce the higher pressures that can be developed by these pumps.

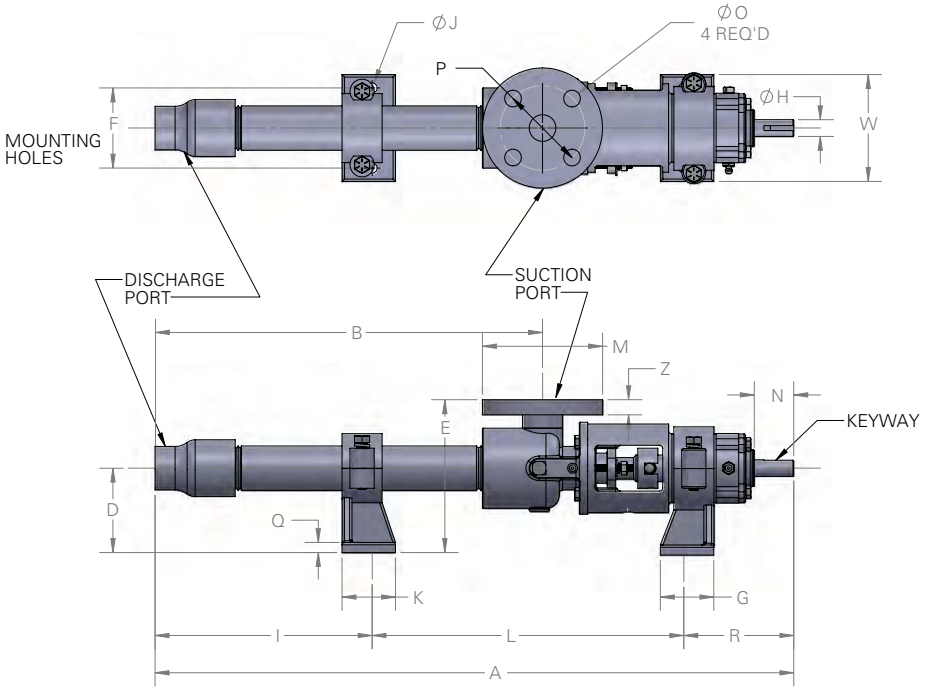
CM Model

Performance data based on gallons per minute (water at 70°F)

PERFORMANCE DATA - MODEL CM

FRAME SIZE	GAL./100 REV.	PUMP SPEED DIFF. PRESS PSI	300 RPM GPM	300 RPM MIN. HP	450 RPM GPM	450 RPM MIN. HP	600 RPM GPM	600 RPM MIN. HP	750 RPM GPM	750 RPM MIN. HP	900 RPM GPM	900 RPM MIN. HP	1200 RPM GPM	1200 RPM MIN. HP
2CM1	.056	0	.14	1/8	.22	1/8	.29	1/4	.37	1/4	.43	1/4	.58	1/4
		60	.12	1/8	.20	1/8	.26	1/4	.33	1/4	.41	1/4	.55	1/4
		120	.10	1/8	.15	1/8	.22	1/4	.30	1/4	.37	1/4	.51	1/4
6CM1	.056	0	.14	1/8	.22	1/6	.29	1/4	.37	1/4	.43	1/3	.58	1/3
		180	.12	1/8	.20	1/6	.26	1/4	.33	1/4	.41	1/3	.55	1/3
		360	.10	1/8	.15	1/6	.22	1/4	.30	1/4	.37	1/3	.51	1/3
6CM2	.260	0	.54	1/4	1.1	1/2	1.5	3/4	2.0	1/3	2.2	1/2	3.0	3/4
		180	.51	1/4	.9	1/2	1.3	3/4	1.8	1/3	2.1	1/2	2.8	3/4
		360	.50	1/4	.45	1/2	.9	3/4	1.4	1/2	1.7	1	2.3	3/4
6CM3	.860	0	2.50	1/2	3.8	3/4	5.1	1	6.4	1-1/2	7.5	1-1/2	10	2
		240	1.80	1/2	2.9	3/4	4.3	1	5.5	1-1/2	6.8	1-1/2	9.3	2
		450	–	–	1.7	1-1/2	2.7	1-1/2	4.2	2	5.0	2	7.7	3
6CM4	2.02	0	6.00	1-1/2	9.0	2	12	3	15	5	18	5	24	5
		240	5.00	2	7.4	2	10	3	12.5	5	16	5	22	5
		450	1.80	2	4.5	3	7	5	8.5	7-1/2	13	7-1/2	19	7-1/2

MODEL CM

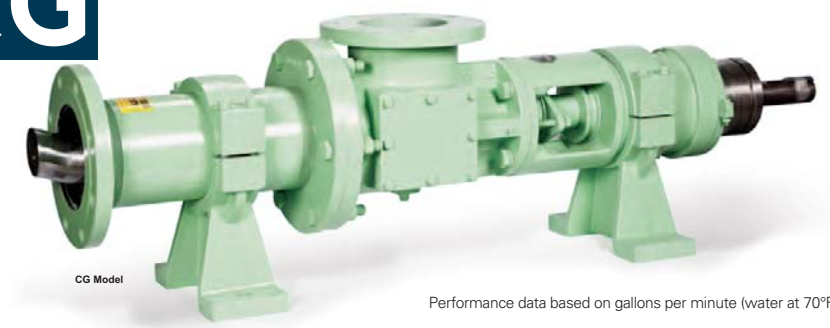


Ø = Diameter

DIMENSIONS AND WEIGHTS – MODEL CM

PUMPS	DIMENSIONS (INCHES) A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	W	Z	KEYWAY	WEIGHT (LBS)	PORT SIZES INLET SUCTION	OUTLET DISCHARGE
2CM1	17-1/2	7-13/16	–	3-1/4	5-7/8	3-1/8	2	5/8	4-1/2	3/8	2	8-3/4	4-1/4	1-1/2	5/8	3-1/8	3/8	4-1/4	4	9/16	3/16 X 7/8	22	1"	3/4"
6CM1	24-7/8	15-1/4	–	3-1/4	5-7/8	3-1/8	2	5/8	4-7/8	3/8	2	15-3/4	4-1/4	1-1/2	5/8	3-1/8	3/8	4-1/4	4	9/16	3/16 X 7/8	30	1"	3/4"
6CM2	39-1/8	26-3/8	14	4-1/8	7-5/16	4-1/4	3	3/4	7-15/16	7/16	3	11-1/2	5	2-1/8	5/8	3-7/8	1/2	5-11/16	5-3/8	9/16	3/16 X 1- 1/2	55	1-1/2"	3/4"
6CM3	55	38	22	5-1/2	9-7/8	5-1/2	3-1/2	15/16	9-7/8	9-16	3	15-1/2	7	3-1/8	3/4	5-1/2	5/8	7	7	11/16	1/4 X 2	105	2-1/2"	2"
6CM4	70-7/8	49-3/4	25	6-1/4	11-1/4	7	4	1-1/8	17-7/16	11/16	4	20	7-1/2	4-3/8	3/4	6	11/16	8-9/16	8-5/8	7/8	1/4 X 2	171	3"	2-1/2"

MODEL CG



CG Model

Performance data based on gallons per minute (water at 70°F)

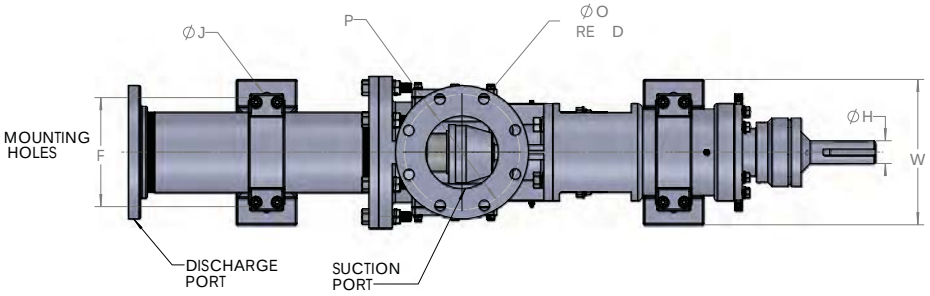
MODEL CG

Model CG pumps are designed to handle the heavier applications of sewage, industrial waste, polluted liquids, and slurries. Incorporated into this more rugged pump is a unique drive train using gear joint connections to the rotor and drive shaft.

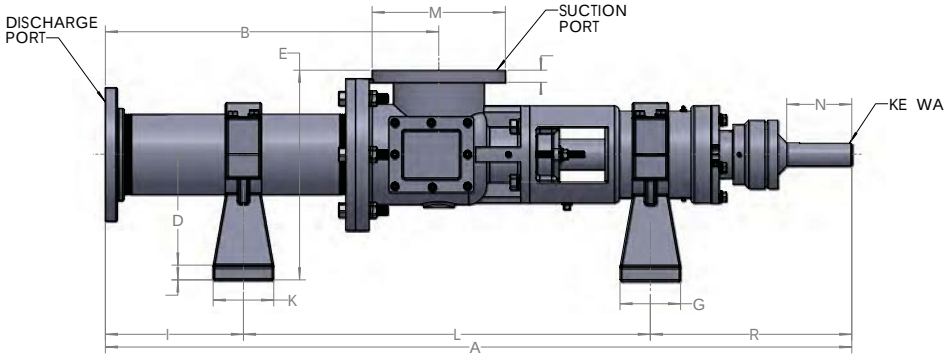
PERFORMANCE DATA - MODEL CG

FRAME SIZE	GAL./100 REV.	PUMP SPEED DIFF. PRESS PSI	100 RPM		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM		400 RPM	
			GPM	MIN. HP	GPM	MIN. HP	GPM	MIN. HP	GPM	MIN. HP	GPM	MIN. HP	GPM	MIN. HP	GPM	MIN. HP
1CG8	11.7	0	12	3/4	17	1	26	1-1/2	29	1-1/2	34	2	40	2	45	3
		25	8	3/4	13	1-1/2	18	1-1/2	24	1-1/2	21	2	37	2	41	3
		50	3	1	7	1-1/2	14	1-1/2	18	2	25	2	32	3	35	3
2CG8	11.7	0	12	1	17	1-1/2	22	2	27	2	33	3	40	3	45	3
		50	8	1	13	1-1/2	18	2	24	3	29	3	35	5	42	5
		100	2	1	8	2	14	3	21	3	25	3	32	5	35	5
3CG8	11.7	50	9	2	14	2	20	3	25	3	34	5	36	5	43	5
		100	6	2	11	3	15	3	22	5	28	5	33	5	39	5
		150	2	2	7	3	11	5	19	5	24	5	29	7-1/2	34	7-1/2
1CG10	18.8	0	19	1	28	1	36	1-1/2	48	1-1/2	56	2	64	2	74	3
		25	12	1	22	1	32	1-1/2	42	2	52	2	60	3	70	5
		50	2	1	14	1-1/2	22	2	35	2	42	3	50	5	59	5
2CG10	18.8	0	18	2	26	3	36	3	46	3	54	3	66	5	72	5
		50	12	2	20	3	30	3	40	5	50	5	58	5	68	7-1/2
		100	3	3	12	3	22	5	32	5	41	5	50	7-1/2	59	7-1/2
3CG10	18.8	50	14	3	22	3	32	3	41	5	52	5	60	7-1/2	72	7-1/2
		100	10	3	18	3	28	5	36	5	48	7-1/2	56	7-1/2	67	10
		150	2	3	10	5	22	5	30	5	41	7-1/2	50	10	63	10
1CG10H	27.7	0	26	1	40	2	54	1	70	3	82	3	96	5	108	5
		25	20	1	36	2	48	2	64	3	76	3	90	5	104	5
		50	12	2	26	2	40	3	54	3	68	5	82	5	96	5
2CG10H	27.7	0	30	2	44	3	58	5	70	5	84	5	98	7-1/2	112	7-1/2
		50	24	2	38	5	52	5	66	5	78	5	92	7-1/2	106	10
		100	16	3	30	5	45	5	58	7-1/2	72	7-1/2	86	10	100	10
1CG12	43.5	0	42	3	62	5	84	5	108	5	127	5	147	7-1/2	169	7-1/2
		25	35	3	56	5	78	5	100	5	123	7-1/2	142	7-1/2	165	10
		50	22	5	42	5	65	5	87	7-1/2	108	7-1/2	128	7-1/2	153	10
2CG12	43.5	0	42	5	65	5	85	7-1/2	105	10	125	10	145	15	167	15
		50	36	5	58	5	80	7-1/2	100	10	120	10	140	15	163	15
		100	21	6	48	7-1/2	67	7-1/2	90	10	108	15	133	15	150	15
3CG12	43.5	50	40	7-1/2	60	7-1/2	82	10	103	15	125	15	145	15	168	15
		100	35	7-1/2	53	7-1/2	78	10	97	15	119	15	140	15	161	20
		150	25	7-1/2	45	10	67	10	90	15	110	20	130	20	152	25
1CG12H	65.2	0	60	5	95	5	125	5	180	5	190	7-1/2	220	7-1/2	252	10
		25	55	5	85	5	120	5	175	7-1/2	185	7-1/2	215	10	249	10
		50	33	5	65	5	98	7-1/2	130	10	160	10	190	15	225	15
2CG12H	65.2	0	60	5	95	7-1/2	125	10	155	15	190	15	220	20	253	20
		50	55	7-1/2	85	7-1/2	120	10	150	15	182	15	215	15	247	20
		100	35	7-1/2	75	10	95	10	130	15	160	15	195	20	225	25

MODEL CG



MODEL CG



Ø = Diameter

DIMENSIONS AND WEIGHTS – MODEL CG

PUMP SIZE	DIMENSIONS (INCHES)																					WEIGHT (LBS)	PORT SIZES	
	A	B	C	D	E	F	G	H	I	J	K	L			M	N	O	P	Q	R	W	Z	KEYWAY		SUCTION	DISCHARGE
1CG8	52-3/4	19-1/2	-	9-3/4	16-11/16	9	5	1-7/8	6-1/8	7/8	5	31			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	450	6"	5"
2CG8	65-3/16	31-15/16	-	9-3/4	16-11/16	9	5	1-7/8	15-9/16	7/8	5	34			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	545	6"	5"
3CG8	77-5/8	44-3/8	27	9-3/4	16-11/16	9	5	1-7/8	6	7/8	5	29			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	596	6"	5"
1CG10	50-11/16	17-7/16	-	9-3/4	16-11/16	9	5	1-7/8	5-1/16	7/8	5	30			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	492	6"	6"
2CG10	61-1/8	27-7/8	-	9-3/4	16-11/16	9	5	1-7/8	10-1/2	7/8	5	35			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	580	6"	6"
3CG10	71-7/16	38-3/16	18	9-3/4	16-11/16	9	5	1-7/8	7-13/16	7/8	5	30			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	615	6"	6"
1CG10H	56	22-3/4	-	9-3/4	16-11/16	9	5	1-7/8	10- 3/8	7/8	5	30			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	494	6"	6"
2CG10H	71-7/16	38-3/16	18	9-3/4	16-11/16	9	5	1-7/8	7-13/16	7/8	5	30			11	5-3/8	7/8	9-1/2	1-1/8	15-5/8	11-1/2	1	1/2 X 3-1/2	615	6"	6"
1CG12	63-3/4	24-3/4	-	12-1/2	21	12-5/8	6	2-1/4	8-1/4	1	6	37-1/2			13-1/2	6-1/8	7/8	11-3/4	1-1/8	18	14-1/2	1	1/2 x 4	960	8"	8"
2CG12	79-7/16	40-7/16	18	12-1/2	21	12-5/8	6	2-1/4	5-15/16	1	6	37-1/2			13-1/2	6-1/8	7/8	11-3/4	1-1/8	18	14-1/2	1	1/2 x 4	1155	8"	8"
3CG12	95-1/16	56	27	12-1/2	21	12-5/8	6	2-1/4	8-1/16	1	6	42			13-1/2	6-1/8	7/8	11-3/4	1-1/8	18	14-1/2	1	1/2 x 4	1285	8"	8"
1CG12H	71-9/16	32-9/16	-	12-1/2	21	12-5/8	6	2-1/4	11-9/16	1	6	42			13-1/2	6-1/8	7/8	11-3/4	1-1/8	18	14-1/2	1	1/2 x 4	1025	8"	8"
2CG12H	95	56	27	12-1/2	21	12-5/8	6	2-1/4	8	1	6	42			13-1/2	6-1/8	7/8	11-3/4	1-1/8	18	14-1/2	1	1/2 x 4	1285	8"	8"

MODEL CK 2000 SERIES

CK 2000 Series Model™

MODEL CK 2000 SERIES

Continental CK 2000 Series Model pumps are built with rugged gear-type universal joint which is the effective solution to handle heavy radial thrust load. The design ensures the best performance with very minimal maintenance, low wear and tear of rotating parts and longer pump life.

Heavy duty drive train

- Gear-type universal joint offers tight sealing of rubber boot to prevent contamination of joints and entry of foreign particles while pumping fluids.
- Grease lubricated gear joints can operate up to 195° F, which is far higher than other oil lubricated joints.
- Thrust plates are clamped by pins ensuring maximum life of the gear joints and smooth operation.
- The lengthy connecting rod design maintains shaft angularity of less than 1.5° for reduced stress on gear joints and bearings.

Drive shaft assembly

- The hollow single shaft design reduces run-out for extended packed gland or mechanical seal life.
- The stuffing box assembly can accommodate singe/double mechanical seal or different types of packing.

Unique pumping elements

- Precision machined rotor and stator reduces slippage for higher efficiency and improved volumetric efficiency.
- Chrome plated rotors provide high abrasion resistance and longer service life.
- Variety of elastomers available for every application with proven qualities.

Suction and bearing housing assembly

- CK 2000 Series Model pumps are built with great packed tapered roller bearings for withstanding better load conditions of the rotating parts.
- Sturdy castings improve pump performance by reducing vibration to the drive shaft and bearings.
- The gear joint reduces the radial thrust on drive shaft and bearings which requires minimal pump disassembly.

Additional features

- Suction housing can be rotated 360° for easier piping installation.
- Suction and discharge flanges are per ANSI, BS, ASA, DIN or JIS for easy installation.
- Drain plug allows liquid to be drained before inspection or performing maintenance.
- All pumps are provided with two inspection ports for efficient cleaning.
- Gland area is drilled and tapped for easy disposal of stuffing box leakage.

OPTIONS FOR EVERY APPLICATION

Flush gland

- Allows packing gland leakage to be flushed away from the pump preventing severe damage to seal or packing.
- Permits controlled leakage process or flush fluid to reduce friction and dissipate heat.
- Inlet and outlet connections for flushing leakage away to drain.
- Ideal for waste water treatment, sugar, petrochemical and paper industry applications.

Foreign particle deflector

- Prevents ragging around pump connecting rod and rotor head.
- Eliminates down time of costly equipment and damages due to blockages.

Shaft sleeve design

- Protects the shaft from high wear and tear from abrasive materials.
- Minimizes drive shaft and bearing replacement for economical maintenance.

Dry running protection

- Prevents dry running and over pressure situations. Suitable pressure switch or dry running sensors at stator are available as options.
- Ideal for high and low viscosity fluids, suspended solids, abrasive and volatile fluids.
- Solid drive shaft for slurry applications where pumping fluid could harden inside the hollow drive shaft.
- Augur or larger augur design for CK 2000 Series Model wide throat and bridge breaker models available. Wide variety of driven options, couplings, mechanical seals, packing gland, motor controls, anti-rotation devices and jacketing versions available upon request.

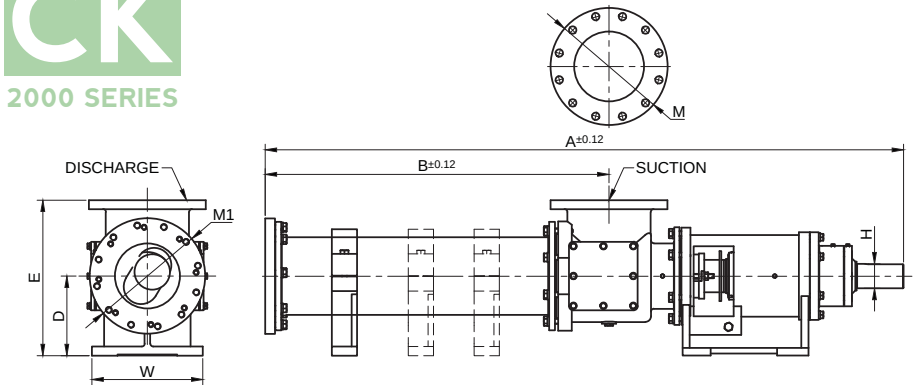
Long-lasting, low-maintenance construction, packed in a small space

- Connecting rod operates within a hollow drive shaft allowing it to be longer without adding to total pump length for reduced angularity and extended universal joint life. Radial loads are transmitted to pump end behind the bearing making the rear joint accessible for easier, faster maintenance.
- Drive shaft "floats" in bearing and stuffing box without placing radial loads directly on the stuffing box end of the drive shaft. This minimizes drive train wear, provides tight, leak-free stuffing box sealing and reduces overall maintenance costs.

Benefits and features of CK 2000 Series Model progressive cavity pumps

- Low total cost of ownership
- Positive displacement
- Non-pulsating flow
- Accurate, predictable flow
- Head independent of pump speed
- Low NPSH requirement
- Self-priming
- High suction lift up to 28 feet
- Low shear
- Particles up to 2.8" in diameter
- Reversible
- Viscosities up to 1,000,000 centipoise
- No valves to clog, stick or vapor lock
- No timing gear adjustments
- High volumetric and mechanical efficiency
- Smooth fluid discharge
- No vibration
- Easy to regulate
- Wide temperature range to 400°F
- Ideal for metering applications
- Easy to regulate
- Superior abrasion resistance

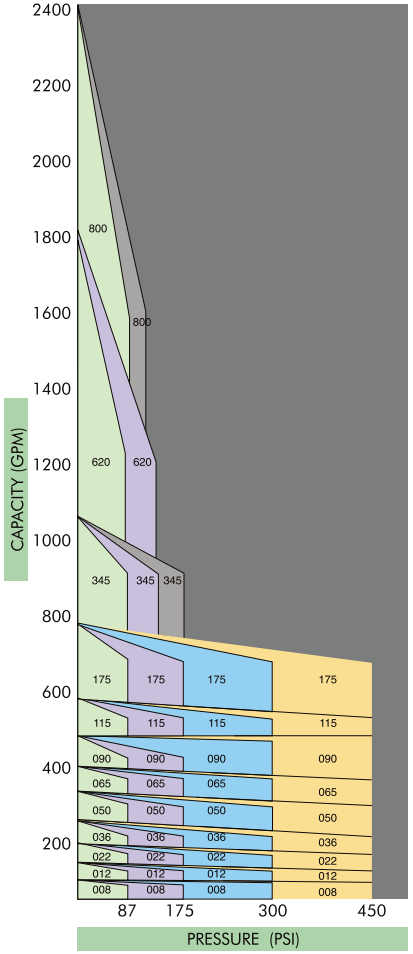
MODEL CK 2000 SERIES



NOTE: ALL DIMENSIONS ARE IN INCHES

MODEL NO:	STANDARD PUMP DIMENSIONS						SUCTION FLANGE DATA		DISCHARGE FLANGE DATA		APPROX WEIGHT (LBS)
	A	B	D	E	H	W	SIZE	M	SIZE	M1	
4E008	63.50	37.62	6.00	11.50	1.88	8.00	4	9.00	4	9.00	375
6E008	79.50	53.62	6.00	11.50	1.88	8.00	4	9.00	4	9.00	425
1E012	42.00	16.12	6.00	11.50	1.88	8.00	4	9.00	4	9.00	300
2E012	53.12	27.25	6.00	11.50	1.88	8.00	4	9.00	4	9.00	325
4E012	75.62	49.75	6.00	11.50	1.88	8.00	4	9.00	4	9.00	380
1E022	43.31	17.19	6.00	12.50	1.88	8.00	6	11.00	6	11.00	330
2E022	56.19	30.06	6.00	12.50	1.88	8.00	6	11.00	6	11.00	370
4E022	82.94	56.81	6.00	12.50	1.88	8.00	6	11.00	6	11.00	500
1E036	46.09	19.50	6.00	13.00	1.88	8.00	6	11.00	6	11.00	400
2E036	60.59	34.00	6.00	13.00	1.88	8.00	6	11.00	6	11.00	465
1E050	51.63	24.93	6.00	13.00	1.88	8.00	6	11.00	6	11.00	490
2E050	71.34	44.74	6.00	13.00	1.88	8.00	6	11.00	6	11.00	515
6F012	102.38	72.50	7.00	13.50	2.12	10.00	6	11.00	6	11.00	605
4F022	86.69	56.81	7.00	13.50	2.12	10.00	6	11.00	6	11.00	675
6F022	112.19	82.31	7.00	13.50	2.12	10.00	6	11.00	6	11.00	735
2F036	63.12	34.12	7.00	14.00	2.12	10.00	6	11.00	6	11.00	560
4F036	92.12	63.12	7.00	14.00	2.12	10.00	6	11.00	6	11.00	760
2F050	73.75	44.75	7.00	14.00	2.12	10.00	6	11.00	6	11.00	610
4F050	113.50	84.50	7.00	14.00	2.12	10.00	6	11.00	6	11.00	835
1F065	54.11	23.62	7.00	15.50	2.12	10.00	8	13.50	8	13.50	580
2F065	71.98	41.49	7.00	15.50	2.12	10.00	8	13.50	8	13.50	700
1F090	60.71	30.21	7.00	15.50	2.12	10.00	8	13.50	8	13.50	620
2F090	85.21	54.71	7.00	15.50	2.12	10.00	8	13.50	8	13.50	785
6G022	116.88	84.75	9.00	16.00	2.38	11.50	6	11.00	6	11.00	915
4G036	97.06	64.94	9.00	16.00	2.38	11.50	6	11.00	6	11.00	920
6G036	125.81	93.69	9.00	16.00	2.38	11.50	6	11.00	6	11.00	1160
4G050	118.44	86.31	9.00	16.00	2.38	11.50	6	11.00	6	11.00	1020
6G050	158.19	126.06	9.00	16.00	2.38	11.50	6	11.00	6	11.00	1305
2G065	74.75	41.62	9.00	17.50	2.38	11.50	8	13.50	8	13.50	882
4G065	110.50	77.38	9.00	17.50	2.38	11.50	8	13.50	8	13.50	1210
2G090	87.88	54.75	9.00	17.50	2.38	11.50	8	13.50	8	13.50	960
4G090	136.88	103.75	9.00	17.50	2.38	11.50	8	13.50	8	13.50	1270
1G115	62.25	29.12	9.00	17.50	2.38	11.50	8	13.50	8	13.50	825
2G115	85.62	52.49	9.00	17.50	2.38	11.50	8	13.50	8	13.50	1005
1J175	74.77	34.08	11.00	21.52	3.37	15.35	10	16.19	10	16.19	1568
2J175	101.46	60.72	11.00	21.52	3.37	15.35	10	16.19	10	16.19	1840
4J175	154.8	114.1	11.00	21.52	3.37	15.35	10	16.19	10	16.19	2560

MODEL CK 2000 SERIES



PUMP APPLICATION REFERENCE GUIDE

The **Pump Application Data Sheet** is a convenient tool used to transmit the required information to our Application Specialists for proper selection of Pumps.

Step 1:

For proper selection of a pump it is necessary to determine the size required for your application. The Model Selection table below relates capacity and pressure required to the three models available. The size is also determined by how other variables (viscosity, and abrasiveness) affect horsepower requirements. The CL Model is the standard bearing unit that is a pin driven pump. The CM Model is similar to the CL Model but utilizes the bearing drive unit from the next larger pump size. The CG Model is also a standard bearing-drive unit but is a crown gear joint driven pump. Select the size which will most appropriately meet your application needs.

MODEL SELECTION FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Pump Model	Approximate GPM Range	Approximate Maximum Pressure	Frame Size
CL	.9 - 400	225 PSI	2, 3, 4, 6, 8, 10, 10H, 12, 12H
CM	.1 - 24	450 PSI	1, 2, 3, 4
CG	3 - 400	225 PSI	8, 10, 10H, 12, 12H

How to Size Example: Application request: 10 GPM, 100 PSI, 3500 centipoise (viscosity), .30" particle size, with light abrasives.

CL Model is for general commercial use, CM Model is for high pressure applications and the CG Model is for Industrial uses.

For this application the CL Model is the best option.

Step 2:

The size of the rotor and stator that are to deliver the required capacity at the viscosity of the fluid are set forth in the Viscosity for Single Fluids Table. Select the pump that is large enough to deliver more than the required capacity when operating at the maximum speed shown.

This table is based on viscosities for one fluid and will not be correct for slurries or emulsions where each of which have different viscosities. The recommended pump speed for a mixture of fluids having different viscosities should be an approximate average of the fluids.

VISCOSITY FOR SINGLE FLUIDS FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Pump Model	Maximum RPM and GPM	Viscosity Measured in Centipoise						
		1 to 1000	1000 to 2500	2500 to 5000	5000 to 10,000	10,000 to 50,000	50,000 to 100,000	100,000 to 150,000
2CM1, 6CM1	Max RPM	1200	900	450	250	125	40	20
	Max GPM	0.58	0.50	0.25	.014	0.07	0.02	0.01
1CL2, 2CL2, 3CL3, 6CM2	Max RPM	1200	900	450	250	125	40	20
	Max GPM	3	2.4	1.2	0.7	0.35	0.1	0.05
1CL3, 2CL3, 3CL3, 6CM3	Max RPM	1200	900	450	250	125	40	20
	Max GPM	10	7.8	3.9	2.2	1.1	0.35	0.17
1CL4, 2CL4, 3CL4, 6CM4	Max RPM	1200	900	450	250	125	40	20
	Max GPM	24	18	9	5	2.5	0.8	0.04
1CL6, 2CL6, 3CL6	Max RPM	900	900	450	250	125	40	20
	Max GPM	47	47	23.5	13	6.5	2	1
1CL8, 2CL8, 3CL8	Max RPM	900	900	450	250	125	40	20
	Max GPM	100	100	53	29	14.5	4.7	2.3
1CL10, 2CL10, 3CL10	Max RPM	750	750	450	250	125	40	20
	Max GPM	140	140	85	47	24	7.5	3.8
1CL10H, 2CL10H	Max RPM	750	750	450	250	125	40	20
	Max GPM	210	210	125	70	35	11	5.5
1CL12, 2CL12, 3CL12	Max RPM	600	600	450	250	125	40	20
	Max GPM	261	261	196	109	54.4	17.4	8.7
1CL12H, 2CL12H	Max RPM	600	600	450	250	125	40	20
	Max GPM	391	391	293	163	81.5	26	13

PUMP APPLICATION REFERENCE GUIDE

How to Size Example: Determine the maximum RPM and GPM for this application. What we already know is that we need 10 GPM and have a fluid with 3500 centipoise. Go to the Viscosity Measured in Centipoise columns and choose the one that fits the application. Once at the 2500 to 5000 column we see that the maximum RPM is 450 for all pumps with this viscosity. We now need to determine which pump can run the required 10 GPM. The 1CL4, 2CL4, 3CL4, 6CM4 states it is 9, which is too low so we move down to the next pump where the maximum GPM is 23.5, which is 1CL6, 2CL6, 3CL6 and fits within our requested application.

Step 3:

If particles in suspension are to be pumped, determine the pump that will handle the maximum dimension of the particle. Refer to the Maximum Particle Size table.

MAXIMUM PARTICLE SIZE FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Pump Model								
	2CM1 6CM1	1CL2 2CL2 3CL2 6CM2	1CL3 2CL3 3CL3 6CM3	1CL4 2CL4 3CL4 6CM4	1CL6 2CL6 3CL6	1CL8 2CL8 3CL8	1CL10 2CL10 3CL10 1CL10H 2CL10H	1CL12 2CL12 3CL12 1CL12H 2CL12H
Maximum Particle Size	.08"	.15"	.20"	.30"	.40"	.60"	.80"	1.0"

How to Size Example: Our application has .30" particle size and the CL6 pump can handle .40". Our chosen pump still meets the requirements with no adjustments to be made.

Step 4:

If the fluid has abrasive characteristics, refer to the Abrasive Characteristics table below for the proper operating speed of the pump. When the speed selected results in a lower capacity than required a change to the selection of the pump is needed even though it will operate below the maximum recommended speed. Keep in mind that the speed requirements for viscosity must also be considered and in general where there is a difference you should select the lower of the speeds.

ABRASIVE CHARACTERISTICS FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Pump Model	Maximum RPM and GPM	Abrasive Characterstics			
		None	Light	Medium	Heavy
2CM1, 6CM1	Max RPM	1200	900	600	300
	Max GPM	0.58	0.50	0.34	.17
1CL2, 2CL2, 3CL2, 6CM2	Max RPM	1200	900	600	300
	Max GPM	3	2.4	1.6	0.8
1CL3, 2CL3, 3CL3, 6CM3	Max RPM	1200	900	600	300
	Max GPM	10	7.8	5.2	2.6
1CL4, 2CL4, 3CL4, 6CM4	Max RPM	1200	900	600	300
	Max GPM	24	18	12	6
1CL6, 2CL6, 3CL6	Max RPM	900	675	450	225
	Max GPM	47	35.5	23.5	12
1CL8, 2CL8, 3CL8	Max RPM	900	675	450	225
	Max GPM	100	70	52.5	26.5
1CL10, 2CL10, 3CL10	Max RPM	750	565	375	190
	Max GPM	140	106	70	36
1CL10H, 2CL10H	Max RPM	750	565	375	190
	Max GPM	210	156	105	52.5
1CL12, 2CL12, 3CL12	Max RPM	600	450	300	150
	Max GPM	261	196	130	65
1CL12H, 2CL12H	Max RPM	600	450	300	150
	Max GPM	391	293	195	97.5

How to Size Example: The application states they are pumping light abrasive materials. Find the light abrasive characteristic column and the CL6 pump model to see what the maximum RPM and Maximum GPM are allowed. The maximum RPM is 675 and 35.5 GPM which falls within the application since the requirements are below the maximums.

PUMP APPLICATION REFERENCE GUIDE

Step 5:

The length of the rotor and stator are designated by stages. The approximate Pressure Per Stage (PSI) where the fluid pumped has no abrasives or is laden with light, medium or heavy abrasives is shown in the Pressure by Stage of Rotor/Stator table below.

PRESSURE BY STAGE OF ROTOR/STATOR FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Frame Size	Approximage Pressure Per State (PSI) Abrasive Characteristics			
	None	Light	Medium	Heavy
1 and 2	60	40	25	10
3 thru 12	75	60	35	15

How to Size Example: Our pumping fluid has light abrasives and the frame size is 6 which states that the pressure per stage for a 1CL6 is 60 PSI; if it is a 2CL6 the total pressure would be 120 PSI, and a 3 stage would be 180 PSI. Our application states that the required PSI is 100 so a 2CL6 would be the appropriate stage.

Step 6:

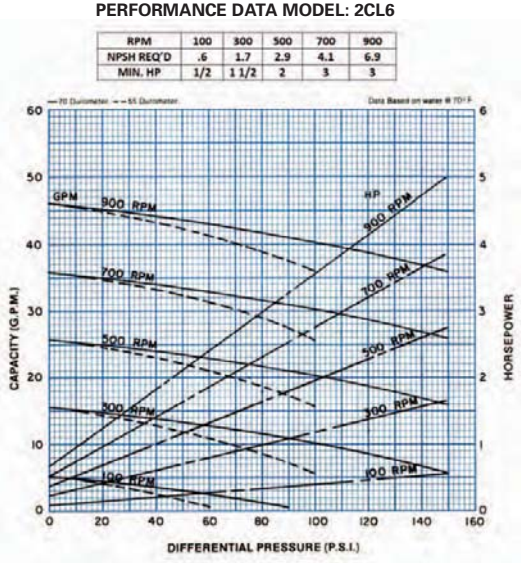
The performance data sheet at the right, also known as a pump curve, helps determine the pumps pumping abilities in measurements of GPM, RPM and HP (Horsepower).

The pump curve lists all 3 items listed above, left side is for GPM, Bottom is PSI and the right is HP but not within the graph. The graph indicates the RPM's for both GPM and HP.

On the chart locate 10 GPM and 100 PSI, follow both lines to the intersection of the graph. The intersection occurs at the 300 RPM. This determines the RPM that the pump will be operating to get the capacity and PSI needed. This pump will be operating at: 10 GPM, 100 PSI and 300 RPM. *Please note that this solid line is for a 70 durometer elastomer and not 55 durometer, which is dotted.

How to Size Example: Review your application information: 10 GPM/ 100 PSI/ maximum 450 RPM

PERFORMANCE DATA MODEL: 2CL6



Step 7:

The required horsepower will need to be determined by using the same pump curve shown above.

How to Size Example: On the right side of the graph translates RPM for horsepower. The HP lines start at the right of the graph and runs diagonally to the left. Find the 300 RPM in the HP section of the pump curve. Find the intersection of the 300 RPM in HP diagonal line and the 100 PSI from the bottom of the graph. Follow the straight blue line to the right from that intersection and notice that the required horsepower states 1.3 HP. Always step up to the next size with progressive cavity pumps to ensure starting torque.

PUMP APPLICATION REFERENCE GUIDE

Step 8:

Having selected the pump, the number of stages of the rotor/stator, and the performance data for the initial horsepower required to drive the pump handling fluid with relatively no viscosity (1 to 2500 Centipoises). For fluids containing increasing amounts of abrasives the horsepower needed will be greater, refer to the Horsepower Adder due to Viscosity table below for the additional HP needed for the application.

HORSEPOWER ADDER DUE TO VISCOSITY FOR CONTINENTAL PROGRESSIVE CAVITY PUMPS

Pump	Horsepower Adder per 100 Revolutions and per Stage Viscosity Measured in Centipoise						
	1 to 2500	2500 to 5000	5000 to 10,000	10,000 to 50,000	50,000 to 100,000	100,000 to 150,000	150,000 to 200,000
2CM1, 6CM1	0	0.002	0.0025	0.003	0.007	0.01	0.0142
1CL2, 2CL2, 3CL2, 6CM2	0	0.01	0.015	0.016	0.032	0.046	0.056
1CL3, 2CL3, 3CL3, 6CM3	0	0.03	0.04	0.05	0.11	0.15	0.19
1CL4, 2CL4, 3CL4, 6CM4	0	0.06	0.09	0.12	0.25	0.35	0.44
1CL6, 2CL6, 3CL6	0	0.17	0.23	0.31	0.64	0.91	1.12
1CL8, 2CL8, 3CL8	0	0.37	0.52	0.71	1.43	2.05	2.52
1CL10, 2CL10, 3CL10	0	0.6	0.83	1.13	2.3	3.29	4.06
1CL10H, 2CL10H	0	0.88	1.22	1.67	3.39	4.83	5.97
1CL12, 2CL12, 3CL12	0	1.4	2	2.7	5.3	4.7	9
1CL12H, 2CL12H	0	2.1	2.9	4	8	11.3	13.2

How to Size Example: Our application states the viscosity is 3500 centipoise, so additional HP will be required to perform up to the required standards. Using the chart above find the column for the needed 3500 centipoise and the 2CL6 model, which is 0.17. Multiply the increased horsepower (0.17) per 100 revolutions (3 for 300 RPM) per stage (2 stage rotor/stator). 0.17 x 3 x 2 = 1.02. Add this amount to the initial horsepower to determine the final horsepower required. 1.3 + 1.02 = 2.32. Rounding up the final HP needed is 2.5 HP

We know for this specific application that a 2CL6 pump can be used. Please refer to the **How Progressive Cavity Pumps Work** reference sheet for the **Model Number Nomenclature** and **Chemical Compatibility** to determine for the material of construction for your Continental Progressive Cavity Pump.

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