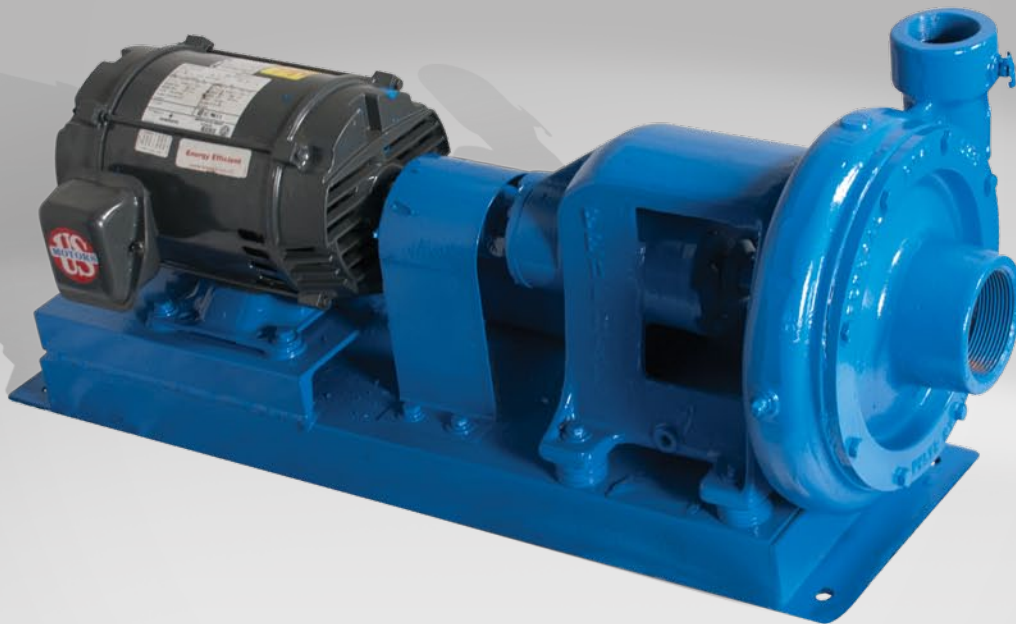


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**TYPE**  
**CCB/CGB/CKB**

**FLEXIBLE COUPLED PUMP**



Flows to 1000 gpm, Heads to 375 feet,  
1/4 thru 40 hp, discharge size 1" thru  
4", 3450 and 1750 rpm operation.

**HIGHLIGHTS**

- ☞ End Suction Enclosed Impellers
- ☞ Vertically Split Back Pull-Out Casings
- ☞ 1750 rpm and 3450 rpm Selections
- ☞ Leakless Mechanical Shaft Seals
- ☞ Centerline Discharge for Automatic Venting
- ☞ Steel or Cast Iron Bases
- ☞ Standard NEMA Motors
- ☞ Flanged Suction and Discharge for Easy Installation
- ☞ Applications: Hot Water Heating Systems, Air Conditioning Systems, Pressure Boosting, Process Circulation, General Pumping

## FEATURES

**CASING:** Cast iron construction; tapped for drain, vent cock, and pressure gauge. Suction and discharge connections are standard ASA flanged type for easier installation. These pumps are of the back pull-out design to permit removal of all rotating parts without breaking suction and discharge connections. Casings are centerline discharge for automatic venting when used in the standard vertical discharge position. Discharge can be field rotated for 90 degree position changes.

**IMPELLER:** Single piece enclosed bronze casting, fully balanced with the diameter cut for specific condition points. Cast iron impellers are available for all-iron pumps.

**SHAFT:** Alloy steel, of large diameter to insure power transmission with minimum deflection or vibration. Stainless steel shafts are available as an option.

**SHAFT SLEEVE:** Renewable bronze shaft sleeve prevents contact between the shaft and the liquid being pumped. Stainless steel shaft sleeves are available as an option.

**WEARING RING:** Renewable bronze wearing ring pressed into the pump casing is standard on CKB models and optional on CCB and CGB models.

**MECHANICAL SHAFT SEALS:** Leakless mechanical shaft seals with ceramic and carbon faces, plus stainless steel components eliminate maintenance and adjustment problems. A copper by-pass line (standard on CGB and CKB models, optional on CCB models) prevents dead-ending of abrasives in the seal chamber. Non-standard mechanical shaft seals are available for special operating conditions.

**BEARING FRAME:** Single piece cast iron construction for maximum strength and rigidity. Bearings are sized and spaced to absorb radial and axial loading. Bearings are greased at the factory prior to shipment, but require periodic greasing in the field.

**FLEXIBLE COUPLING:** Precision machined with one-piece load cushion to prevent wear on the metal jaws. Couplings are sized for long life under the specified load.

**MOTORS:** Motors are of NEMA drip-proof design in standard frame sizes. Totally enclosed and explosion proof motors are also available. Motor bearings are factory lubricated and sealed for long life without field lubrication. Fractional hp single phase motors have built-in overload protection. All other motors should be provided with magnetic starters.

**BASES:** Standard units are furnished with formed steel bases. Cast iron drip-rim bases are available as an option.

## MODIFICATIONS & ACCESSORIES

Standard pumps are of bronze-fitted construction. Liquid ends can also be furnished in all-bronze and all-iron construction. Pumps can be furnished in close-coupled style, if preferred.

Accessory items are available including coupling guards, vibration eliminator rails, flexible metal hose connections, motor starters, control panels, etc. (NOTE: CCB pump construction may vary slightly from the standard CGB and CKB pump construction described.)

### SUGGESTED SPECIFICATION:

Furnish and install as shown on plans, flexibly coupled, bronze-fitted, ball bearing, end suction centrifugal pump and motor units, Federal Type CCB, CGB and CKB. Pump capacity, head and hp ratings shall be as shown on the pump schedule. Pumps shall have cast iron back pullout design casing with flanged suction and discharge connections and centerline discharge for automatic venting of vapors plus enclosed bronze balanced impeller, bronze wearing ring, bronze shaft sleeve, mechanical shaft seal, copper by-pass line into the seal chamber, and cast iron bearing frame with ball bearings sized and spaced for full load conditions. Motors shall be in standard NEMA frames and mounted with the pumps on formed steel bases with flexible coupling sized for the full load. Motors shall be \_\_\_\_\_ phase, \_\_\_\_\_ cycle, \_\_\_\_\_ volts, \_\_\_\_\_ rpm, in drip-proof enclosures.

### Selection Table 3450 RPM

Total Dynamic Head Feet

<b>GPM</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>120</b>	<b>140</b>	<b>160</b>
10	1.25CCB-.33-2	1.25CCB-.5-2	1.25CCB-.75-2	1.25CCB-1-2	1CGB-1.5-2	1CGB-2-2	1CGB-2-2
20	1.25CCB-.33-2	1.25CCB-.75-2	1.25CCB-.75-2	1.25CCB-1-2	1CGB-2-2	1CGB-2-2	1CGB-3-2
30	1.25CCB-.5-2	1.25CCB-.75-2	1.25CCB-1-2	1.25CCB-1.5-2	1CGB-2-2	1CGB-3-2	1CGB-3-2
40	1.25CCB-.75-2	1.25CCB-.75-2	1.25CCB-1-2	1CGB-2-2	1CGB-3-2	1CGB-3-2	1CGB-5-2
50	1.25CCB-.75-2	1.25CCB-1-2	1.25CCB-1.5-2	1CGB-3-2	1CGB-3-2	1CGB-5-2	1CGB-5-2
60	1.5CCB-1-2	1.25CCB-1.5-2	1.5CCB-2-2	1.5CGB-3-2	1.5CGB-3-2	1.5CGB-5-2	1CGB-5-2
70	1.5CCB-1-2	1.5CCB-1.5-2	1.5CCB-3-2	1.5CGB-3-2	1.5CGB-5-2	1.5CGB-5-2	1.5CGB-5-2
80	1.5CCB-1-2	1.5CCB-2-2	1.5CCB-3-2	1.5CGB-3-2	1.5CGB-5-2	1.5CGB-5-2	1.5CGB-7.5-2
90	1.5CCB-1.5-2	1.5CCB-2-2	1.5CCB-3-2	1.5CCB-5-2	1.5CGB-5-2	1.5CGB-5-2	1.5CGB-7.5-2
100	1.5CCB-1.5-2	1.5CCB-2-2	1.5CCB-3-2	1.5CCB-5-2	1.5CGB-5-2	1.5CGB-7.5-2	1.5CGB-7.5-2
125	1.5CCB-1.5-2	1.5CCB-3-2	1.5CCB-3-2	1.5CCB-5-2	1.5CGB-7.5-2	1.5CGB-7.5-2	1.5CGB-7.5-2
150	2CGB-3-2	1.5CCB-3-2	1.5CCB-5-2	2CGB-7.5-2	2CGB-7.5-2	2CGB-10-2	1.5CGB-10-2
175	2.5CGB-3-2	2CGB-5-2	2CGB-5-2	2CGB-7.5-2	2CGB-7.5-2	2CGB-10-2	2CGB-15-2
200	2.5CGB-3-2	2CGB-5-2	2CGB-7.5-2	2CGB-7.5-2	2CGB-10-2	2CGB-10-2	2CGB-15-2
225	2.5CGB-5-2	2.5CGB-5-2	2.5CGB-7.5-2	2CGB-10-2	2CGB-10-2	2CGB-15-2	2CGB-15-2
250	3CGB-5-2	2.5CGB-7.5-2	2.5CGB-7.5-2	2.5CGB-10-2	2.5CGB-15-2	2CGB-15-2	2CGB-15-2
300	3CGB-5-2	3CGB-7.5-2	2.5CGB-10-2	2.5CGB-10-2	2.5CGB-15-2	2.5CGB-15-2	2.5CGB-20-2
350	3CGB-5-2	3CGB-7.5-2	3CGB-10-2	2.5CGB-15-2	2.5CGB-15-2	2.5CGB-20-2	2.5CGB-20-2
400	3CGB-7.5-2	3CGB-10-2	3CGB-10-2	3CGB-15-2	3CGB-20-2	3CGB-20-2	3CGB-25-2
450	-	3CGB-10-2	3CGB-15-2	3CGB-15-2	3CGB-20-2	3CGB-20-2	3CKB-25-2
500	-	-	3CGB-15-2	3CGB-20-2	3CGB-20-2	3CGB-30-2	3CGB-30-2
<b>GPM</b>	<b>180</b>	<b>200</b>	<b>220</b>	<b>240</b>	<b>260</b>	<b>280</b>	<b>300</b>
10	1CGB-3-2	1CGB-3-2	1CGB-5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	-	-
20	1CGB-3-2	1CGB-5-2	1CGB-5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	-	-
30	1CGB-5-2	1CGB-5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	-	-
40	1CGB-5-2	1CGB-5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-10-2	-
50	1CGB-5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-10-2
60	1.5CGB-7.5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-15-2
70	1.5CGB-7.5-2	1.5CKB-7.5-2	1.5CKB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-15-2	1.5CKB-15-2
80	1.5CGB-7.5-2	1.5CKB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-15-2
90	1.5CGB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-15-2
100	1.5CGB-7.5-2	1.5CKB-10-2	1.5CKB-10-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-20-2
125	1.5CGB-10-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-15-2	1.5CKB-20-2	1.5CKB-20-2	1.5CKB-20-2
150	2CGB-15-2	1.5CKB-15-2	2CKB-20-2	1.5CKB-20-2	1.5CKB-20-2	1.5CKB-20-2	1.5CKB-20-2
175	2CGB-15-2	2CKB-15-2	2CKB-20-2	2CKB-20-2	2CKB-20-2	1.5CKB-25-2	-
200	2CGB-15-2	2CKB-20-2	2CKB-20-2	2CKB-20-2	2CKB-25-2	-	-
225	2CGB-15-2	2CKB-20-2	2CKB-20-2	2CKB-25-2	2.5CKB-25-2	-	-
250	2.5CGB-20-2	2CKB-20-2	2CKB-25-2	2CKB-25-2	2.5CKB-30-2	-	-
300	2.5CGB-20-2	2.5CKB-25-2	2CKB-25-2	2.5CKB-30-2	2.5CKB-30-2	-	-
350	3CGB-25-2	2.5CKB-25-2	2.5CKB-30-2	2.5CKB-30-2	3CKB-40-2	-	-
400	3CGB-30-2	2.5CKB-30-2	2.5CKB-30-2	3CKB-40-2	3CKB-40-2	-	-
450	3CKB-30-2	2.5CKB-30-2	3CKB-40-2	3CKB-40-2	-	-	-
500	3CKB-30-2	3CKB-40-2	3CKB-40-2	3CKB-40-2	-	-	-

## Selection Table 1750 RPM

Total Dynamic Head Feet

GPM	20	30	40	50	60	70	80
20	1.25CCB-.25-4	1.25CCB-.25-4	1CGB-.5-4	1CGB-.75-4	1.5CKB-1-4	1.5CKB-1.5-4	1.5CKB-1.5-4
40	1.5CCB-.33-4	1.5CGB-.75-4	1.5CGB-1-4	1.5CGB-1.5-4	1.5CKB-1.5-4	1.5CKB-1.5-4	1.5CKB-2-4
50	1.5CCB-.5-4	1.5CGB-.75-4	1.5CGB-1-4	1.5CGB-1.5-4	1.5CKB-1.5-4	1.5CKB-2-4	1.5CKB-2-4
60	1.5CCB-.5-4	1.5CGB-.75-4	1.5CGB-1-4	1.5CKB-1.5-4	1.5CKB-2-4	1.5CKB-2-4	1.5CKB-3-4
70	1.5CCB-.5-4	1.5CGB-1-4	1.5CGB-1.5-4	1.5CKB-1.5-4	1.5CKB-2-4	1.5CKB-3-4	1.5CKB-3-4
80	1.5CCB-.75-4	1.5CGB-1-4	1.5CGB-1.5-4	2CKB-2-4	2CKB-3-4	1.5CKB-3-4	1.5CKB-3-4
90	1.5CCB-.75-4	2CGB-1-4	2CGB-1.5-4	2CKB-2-4	2CKB-3-4	2CKB-3-4	2CKB-5-4
100	1.5CCB-.75-4	2CGB-1.5-4	2CGB-2-4	2CKB-2-4	2CKB-3-4	2CKB-3-4	2CKB-5-4
125	2CGB-1-4	2CGB-1.5-4	2CGB-2-4	2CKB-3-4	2CKB-3-4	2CKB-5-4	2CKB-5-4
150	2.5CGB-1-4	2CGB-2-4	2.5CGB-3-4	2CKB-3-4	2CKB-5-4	2CKB-5-4	2CKB-5-4
175	3CGB-1.5-4	2.5CGB-2-4	2.5CGB-3-4	2.5CKB-3-4	2CKB-5-4	2CKB-5-4	2.5CKB-7.5-4
200	3CGB-1.5-4	2.5CGB-3-4	2.5CGB-3-4	2.5CKB-5-4	2.5CKB-5-4	2.5CKB-5-4	2.5CKB-7.5-4
225	3CGB-1.5-4	3CGB-3-4	3CGB-5-4	2.5CKB-5-4	2.5CKB-5-4	2.5CKB-7.5-4	2.5CKB-7.5-4
250	3CGB-2-4	3CGB-3-4	3CGB-5-4	2.5CKB-5-4	2.5CKB-7.5-4	2.5CKB-7.5-4	3CKB-7.5-4
300	3CGB-2-4	3CGB-3-4	3CGB-5-4	3CKB-5-4	3CKB-7.5-4	3CKB-7.5-4	3CKB-10-4
350	3CGB-3-4	3CGB-5-4	4CKLB-5-4	3CKB-7.5-4	3CKB-7.5-4	3CKB-10-4	3CKB-10-4
400	3CGB-3-4	3CGB-5-4	4CKLB-7.5-4	3CKB-7.5-4	3CKB-10-4	3CKB-10-4	3CKB-15-4
450	4CKLB-5-4	4CKLB-5-4	4CKLB-7.5-4	3CKB-7.5-4	3CKB-10-4	3CKB-10-4	4CKLB-15-4
500	4CKLB-5-4	4CKLB-5-4	4CKLB-7.5-4	4CKLB-10-4	4CKLB-10-4	4CKLB-15-4	4CKLB-15-4
600	-	-	4CKLB-7.5-4	4CKLB-10-4	4CKLB-15-4	4CKLB-15-4	4CKB-15-4
700	-	-	4CKLB-10-4	4CKLB-15-4	4CKLB-15-4	4CKB-15-4	4CKB-20-4
GPM	90	100	110	120	130	140	150
20	1.5CKB-2-4	-	-	-	-	-	-
40	1.5CKB-2-4	2CKHB-5-4	2CKHB-5-4	2CKHB-5-4	2CKHB-7.5-4	-	-
50	1.5CKB-3-4	2CKHB-5-4	2CKHB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4
60	1.5CKB-3-4	2CKHB-5-4	2CKHB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4
70	2CKB-5-4	2CKHB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4
80	2CKB-5-4	2CKHB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4
90	2CKB-5-4	2CKHB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4
100	2CKB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4
125	2.5CKB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4	2CKHB-10-4	2CKHB-10-4
150	2.5CKB-5-4	2CKHB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4	2CKHB-10-4	2CKHB-15-4
175	3CKB-7.5-4	2CKHB-7.5-4	2CKHB-10-4	2CKHB-10-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4
200	3CKB-7.5-4	2CKHB-10-4	2CKHB-10-4	2CKHB-10-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4
225	3CKB-10-4	2CKHB-10-4	2CKHB-10-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4
250	3CKB-10-4	4CKB-10-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4	2CKHB-15-4
300	4CKLB-15-4	4CKB-10-4	4CKB-15-4	4CKB-15-4	4CKB-15-4	4CKB-20-4	-
350	4CKLB-15-4	4CKB-15-4	4CKB-15-4	4CKB-15-4	4CKB-20-4	4CKB-20-4	-
400	4CKLB-15-4	4CKB-15-4	4CKB-15-4	4CKB-20-4	4CKB-20-4	4CKB-25-4	-
450	4CKLB-15-4	4CKB-15-4	4CKB-20-4	4CKB-20-4	4CKB-20-4	-	-
500	4CKLB-20-4	4CKB-20-4	4CKB-20-4	4CKB-20-4	4CKB-25-4	-	-
600	4CKLB-20-4	4CKB-20-4	4CKB-25-4	4CKB-25-4	4CKB-30-4	-	-
700	4CKB-20-4	4CKB-25-4	4CKB-25-4	4CKB-30-4	4CKB-30-4	-	-



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