

# Carbonator-Mount Rotary Close-Coupled External Gear Pumps

## Description

SherTech self-priming, positive displacement, external rotary gear pumps are ideal for a wide range of intermittent and light-duty industrial, marine, agricultural, and commercial applications, providing a nearly pulseless flow. Close-coupled models are available directly mounted to NEMA framed, AC ODP single-phase, thermally overload-protected motors or as pump heads only for custom installations. All models include a pressure relief valve. Motor-driven models are HP configured to handle up to 500 SSU at 100 psi (specific gravity of 1.0).

Uses: For use with non-particulate and non-abrasive fluids compatible with pump wet-end construction component materials.

- Flows to 4.4 GPM.
- Max. RPM: 1725.
- Max. PSI: 100.
- Maximum viscosity of 500 SSU at 1725 RPM (max. input torque of 45 in.-lbs.).
- Pumps can operate bi-directionally (reversible). In reverse operation, the pressure relief valve will not function.
- Temperature ranges from -20° to 210° F.
- Maximum working pressure: 150 PSI.

**CARBONATOR-MOUNT CAST IRON PUMPS (INTERMITTENT DUTY)** – Specifically designed for use with oil-based fluids. Not to be used with water-based fluids. Pumps include steel spur gears with steel shafts and cast iron shaft support; standard pressure relief valves that can be ported internally or externally and a Viton mechanical carbon/ceramic-faced seal with temperature range of 32° to 280° F. Wet-end parts are constructed from cast iron, steel, stainless steel (302, 303 and/or 18-8), carbon, ceramic, and Viton.

**CARBONATOR-MOUNT BRONZE PUMPS (INTERMITTENT DUTY)** – Excellent for water-based fluids. Feature 303 stainless steel shafts, carbon graphite bushings, and Buna-N mechanical carbon/ceramic faced seal with a temperature range of -20° to 210° F. Standard pressure relief valves can be ported internally or externally. Wet-end parts are constructed from bronze, brass, stainless steel (302, 303 and/or 18-8), graphite, carbon, and Buna-N.

**PUMP HEADS (NO MOTOR)** – Close-coupled gear pump heads are designed to direct couple to carbonator pump motors (See NEMA Spec. MGI-18.739, Dimensions of Carbonator Motor mounting). The face of this gear pump has been machined to match the carbonator motor face. Pump and motor held together with a stainless steel beveled "V" band clamp. Coupling of shafts is done by mating the carbonator motor's slot with the pump's slot using the Oldham coupling (See Figure 2 in the owner's manual). This positive displacement characteristic offers a wide range of applications.

**NOTE:** See Rotary Gear Pump Selection Guide in the Motor Manual for suggestions concerning installation, selection, options, and accessories.



**WARNING:** Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres. When pumping hazardous or dangerous materials, use only in room or area designated for that purpose. For your protection, always wear proper clothing, eye protection, etc. in case of any malfunction. For proper handling techniques and cautions, contact your chemical supplier, insurance company and local agencies (fire dept., etc.). Failure to comply with this warning could result in personal injury and/or property damage.

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## Model Ordering Codes and Options



Example Model: GCBN33V

1st	2nd	3rd	4th	5th	6th
Mounting	Material	Sealing	Gear Size: Ports	AC Motor	Options
GC: Gear Carbonator	B: Bronze C: Cast Iron	N: Nitrile (Buna-N) V: Viton	2: 1/4" 3: 1/2"	1: 1/4 HP 2: 1/3 HP 3: 1/2 HP  If blank, motor is not included with pump head.	V: Pressure Relief Valve (Standard)

**NOTE:** Not all order code combinations (configurations) are standard models available from the manufacturer. Custom model configurations may require ordering standard components and/or optional parts that will need to be assembled by the customer. Manufacturer reserves the right to change model order codes, standard models, specifications, and performance without notification.

Maximum motor speed is 1725 RPM.

Cast iron is not for use with water-based fluids.

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## Performance

Bronze Models	Cast Iron Models	Port Size*	Motor HP	RPM	Max. Input Torque in.-lbs.	Suction Lift**	GPM Pumping 10 Wt. Oil at 70° F (500 SSU)					
							Free Flow GPM	20 PSI GPM	40 PSI GPM	60 PSI GPM	80 PSI GPM	100 PSI GPM
<b>Models with Motors</b>			<b>Equipped</b>									
GCBN22V	GCCV22V	1/4	1/3	1725	45	3.2	2.2	2.1	2.0	1.8	1.7	1.6
GCBN33V	GCCV33V	3/8	1/2	1725	45	3.6	4.4	4.3	4.2	4	3.8	3.6
<b>Models without Motors</b>			<b>Suggested</b>									
GCBN2V	GCCV2V	1/4	1/3***	1725	45	3.2	2.2	2.1	2.0	1.8	1.7	1.6
GCBN3V	GCCV3V	3/8	1/2***	1725	45	3.6	4.4	4.3	4.2	4	3.8	3.6

Test data taken on SAE 10 wt. oil at 70° F (500 SSU).

Performance in water will decrease by about 10%, and HP required will also be reduced by 10%. (Don't use water with Cast Iron.)

Pump performance when pump is new. As pump wears, the performance will decrease.

(\*) NPT inlet and outlet (in inches).

(\*\*) Suction lift requires wetted gears and primed seal chamber.

(\*\*\*) Motor not provided.

**NOTES:** Pumps with motors are HP rated to handle up to 500 SSU at 100 PSI and specific gravity of 1.0.

Max. PSI = 100

Max. Viscosity = 500 SSU

Max. RPM = 1725

Max. Specific Gravity = 1.1 at 100 PSI, up to 1.6 at lower PSI & viscosity.

Max. Input Torque = See chart above.

Reverse Rotation = Pumps are equipped with pressure relief valves and can be run in reverse rotation; however, pressure relief valve will not function when pump is reversed unless pump relief valve cover is rotated 180°.

The pump relationship between volume (GPM), pressure (PSI), speed (RPM) and horsepower is shown on performance chart in SherTech Motor Manual form L-4082. When pumping a more viscous liquid, a slower speed, a larger pipe size pump, and possibly a larger motor should be selected. Manufacturer reserves the right to change performance without notification.

## Price List and Specifications

List Price	NEMA Motor Frame Model	Min Motor HP Req	Motor Voltage	Motor Amps	AC Motor Frame	Insulation Hz	Thermal Overload Protection Class	Motor Duty	Motor Bearings	MAX RPM	PUMP CONSTRUCTION (Wet End)							Ship Wt. (lbs.)		
											Port Size ***	Body & Cover	Gear	Shaft	Bushings	Pressure Relief Valve****	O-Rings & Seals**			
<b>Models with Motors</b>																				
\$	GCBN22V	48Y	1/3	115	6.0	ODP	60	A	Yes†	Cont.	Sleeve	1725	1/4	BZ	BZ	303 SS	CG	BR & SS	Buna Mech	19.8
\$	GCBN33V	48Y	1/2	115/208-230	6.8-3.4	ODP	50/60	B	Yes†	Cont.	Ball	1450/1725	3/8	BZ	BZ	303 SS	CG	BR & SS	Buna Mech	22.8
\$	GCCV22V	48Y	1/3	115	6.0	ODP	60	A	Yes†	Cont.	Sleeve	1725	1/4	CI	CRS	CRS	CI	CRS & SS	Viton Mech	19.3
\$	GCCV33V	48Y	1/2	115/208-230	6.8-3.4	ODP	50/60	B	Yes†	Cont.	Ball	1450/1725	3/8	CI	CRS	CRS	CI	CRS & SS	Viton Mech	22.3
<b>Models without Motors</b>																				
\$	GCBN2V*	48Y	-	-	-	-	-	-	-	-	-	1725	1/4	BZ	BZ	303 SS	CG	BR & SS	Buna Mech	4.3
\$	GCBN3V*	48Y	-	-	-	-	-	-	-	-	-	1725	3/8	BZ	BZ	303 SS	CG	BR & SS	Buna Mech	4.8
\$	GCCV2V*	48Y	-	-	-	-	-	-	-	-	-	1725	1/4	CI	CRS	CRS	CI	CRS & SS	Viton Mech	4.0
\$	GCCV3V*	48Y	-	-	-	-	-	-	-	-	-	1725	3/8	CI	CRS	CRS	CI	CRS & SS	Viton Mech	4.3

BZ = Bronze BR = Brass CG = Carbon Graphite CI = Cast Iron CRS = Cold Rolled Steel ODP = Open Drip-Proof

(\*) Motor not provided.

(\*\*) In addition to elastomer noted, mechanical seal components have carbon on ceramic faces and 18-8 SS metal components.

(\*\*\*) NPT inlet and outlet (in inches).

(\*\*\*\*) Bronze models are made of brass and/or bronze, stainless steel (302, 303 and/or 18-8). Cast Iron models are made of cast iron, cold rolled steel and stainless steel (302, 303 and/or 18-8 SS).

(†) Thermal overload protection reset may be automatic or manual.

**NOTES:** 48Y motor frame also referred to as carbonator motor.

Motor base may be removable, movable or fixed.

Motor may be split-phase or capacitor start.

Motor driver subject to change without notice (refer to motor nameplate).

Manufacturer reserves the right to change specifications without notification.

## To Order Optional Motors

For custom applications or configurations, select a pump head from above and a Carbonator-Mount motor from the motor section of this catalog.

Source: Owner's Manual L-4083 (11/07)