



ITT

B4GV

Wastewater

Goulds Pumps

4GV Submersible Vortex Sewage Pump
Up to 73 HP

Dual Seal with Seal Sensor Probe



Shown with optional stand



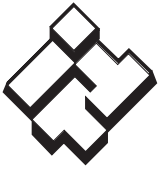
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www.goulds.com

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FEATURES

- **Impeller:** Ductile iron, vortex style, dynamically balanced with pump out vanes for mechanical seal protection.
- **Casing:** Heavy duty cast iron, volute type for maximum efficiency. 4" flange conforms to 125 # ANSI standard. Connects to A10-40 or A10-60 guide rail system.
- **Dual Mechanical Seals:** Silicon carbide vs. silicon carbide outer seal and ceramic vs. ceramic inner seal, stainless steel metal parts, BUNA-N elastomers. Upper and lower shaft seals are positioned independently and are separated by an oil-filled chamber.
- **Seal Sensor Probe:** Located in oil-filled chamber. If pumpage should begin to leak past lower seal it indicates to pump control panel a fault has occurred. **Requires Seal Fail Circuit in the control panel.**
- **Standard High Temperature Sensor:** Requires optional high temperature in panel.
- **Shaft:** Corrosion resistant, 400 series stainless steel. Key and impeller bolt on all models to guard against component damage on accidental reverse rotation.
- **Fasteners:** 300 series stainless steel.
- Capable of running dry without damage to components.
- Designed for continuous operation, when fully submerged.



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APPLICATIONS

Used in a variety of residential, commercial and industrial applications such as:

- Sewage systems
- Flood and pollution control
- Dewatering/Effluent
- Farms
- Hospitals
- Trailer courts
- Motels

SPECIFICATIONS

Pump:

- Maximum solid size: 3" and 4" solids
- Discharge size: 4", 125 # ANSI flange
- Maximum capacity: 1200 GPM
- Maximum total head: 290 feet
- 300 Series stainless steel fasteners
- 50' Power cord
- Standard silicon carbide/silicon carbide outer seal

Motor:

- Maximum ambient temperature: 104° F (40° C) continuous duty, 140° F (60° C) intermittent duty
- Rated for continuous duty when fully submerged
- Insulation: Class F
- 60 Hertz
- Single row ball bearings
- 400 Series stainless steel keyed shaft

Three Phase:

- 2.3 - 73.7 HP
- 230 and 460 volts, up to 5.4 HP
- 460 volts, up to 73.7 HP
- Requires overload protection in panel

AIR-FILLED MOTOR

- Efficient heat dissipation.
- Run dry capability.
- **Class F insulation.**
- **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits and can be operated continuously without damage when fully submerged.
- **Bearings:** Upper and lower heavy duty ball bearing construction for precision positioning of parts and to carry thrust loads.
- High temperature winding protection
- **Cable:** Severe duty rated, oil and water resistant. 50 foot standard.
- **O-ring:** Assures positive sealing against contaminants and oil leakage.



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MODEL AND MOTOR INFORMATION

Part No.	Discharge	HP	Phase	Volts	RPM	Impeller Diameter	Power Cable	Resistance		Weight (lbs.)	Solids	AMP Draw			
								Start	Line-Line						
4GVC72B3AF	4"	2.3	3	230	1750	4.72	14/7	—	2.2	114	3"	7.4			
4GVC72B4AF				460				—	8.6			3.5			
4GVC72C3AF		3.4		230		—		2.2	10.4						
4GVC72C4AF				460		—		8.6	5.0						
4GVC72E3BF		5.4		230		5.51		12/7	—			3.2	16.0		
4GVC72E4BF						460		14/7	—			4.3	7.7		
4GVC72E3AF				460		230		6.89	12/7			—	3.2	16.0	
4GVC72E4AF						—		4.3	180			7.7			
4GVC72G4AF						7.8		7.68	14/7			—	—	233	10.9
4GVC72H4AF						11.5		8.47	—			—	240	15.3	
4GVC72K4AF		16.5		9.06	12/4 - 14/4	—	—	282	20.0						
4GVC71L4AF		19.7		3500	6.30	10/4 -	—	—	264	24.1					
4GVC71L4BF					6.62	14/4	—	—		24.1					
4GVC72M4AF		20.0		1750	9.65	8/4 - 14/4	—	—	282	26.3					
4GVC71N4AF		30.8		3500	6.50	6/4 - 14/4	—	—	407	36.4					
4GVC71P4AF		43.6			7.29	8/4 - 4/4	—	—	572	50.7					
4GVC71R4AF		72.1			8.47	6/4 - 14/4	—	—	726	79.4					
4GVD72C3AF		4"			3.4	3	230	1750	6.69	14/7	—	2.2	172	4"	10.4
4GVD72C4AF				460			—				8.6	5.0			
4GVD72E3AF				5.4	230		7.68		—		3.2	16.0			
4GVD72E4AF	—		4.3		7.7										
4GVD72G4AF	7.8		8.27	—	—		233		10.9						
4GVD72H4AF	11.5		9.06	—	—		240		15.3						
4GVD72K4AF	16.5		8.47	12/4 - 14/4	—		—		288		20.0				
4GVD72M4AF	20.0		9.06	8/4 - 14/4	—		—		297		26.3				
4GVD72O4AF	33.5		10.83	6/4 - 14/4	—		—		572		46.1				
4GVD72Q4AF	52.3		12.41	8/4 - 14/4	—		—		616		66.2				
4GVD72S4AF	73.7		13.20	6/4 - 14/4	—		—	770	86.1						

NOMENCLATURE DESCRIPTION

1st, 2nd, 3rd and 4th Character –

Discharge Size and Type

4GVC = 4" discharge, 3" solids, dual seal with seal fail

4GVD = 4" discharge, 4" solids, dual seal with seal fail probe in pump and high temperature.

5th Character – Mechanical Seals

7 = Silicon carbide/silicon carbide/BUNA – lower seal and carbon/ceramic/BUNA – upper seal (standard)

6th Character – Cycle/RPM

1 = 60 Hz/3500 RPM 2 = 60 Hz/1750 RPM

7th Character – Horsepower

B = 2.3 HP K = 16.5 HP P = 43.6 HP

C = 3.4 HP L = 19.7 HP Q = 52.3 HP

E = 5.4 HP M = 20.0 HP R = 72.1 HP

G = 7.8 HP N = 30.8 HP S = 73.7 HP

H = 11.5 HP O = 33.5 HP

8th Character – Phase/Voltage

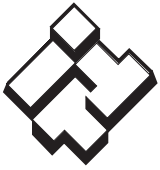
3 = three phase, 230 V 4 = three phase, 460 V

9th Character

A/B = Standard *Trims not available

10th Character – Cord Length

F = 50' (no options)



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APPLICATION DATA

Maximum Solid Size	3", 4"
Maximum Working Pressure	150 PSI
Maximum Submergence	66 feet
Minimum Submergence	Fully submerged for continuous operation
Maximum Environmental Temperature	40° C (104° F) continuous operation

CONSTRUCTION DETAILS

Power and Sensor Cable	12/7, type: three phase 14/7, type: single and three phase		
Motor Cover	Gray Cast Iron – ASTM A48 Class 35		
Seal/Bearing Housing	Gray Cast Iron – ASTM A48 Class 35		
Casing	Gray Cast Iron – ASTM A48 Class 35		
Impeller	Ductile Iron – ASTM A395 Gr. 60-46-18		
Motor Shaft	AISI 400 Series Stainless Steel		
Motor Design	Air filled Class F		
Single Phase Capacitors	HP	Volt	Rating of Capacitors
	1	115	50 mfd/450
	1	230	25 mfd/450
Motor Overload Protection	2.8	230	50 mfd/450
	Single/Three Phase: require ambient compensated Class 10, quick trip overloads in the control panel.		
Motor Seal Fail / High Temp. (Moisture) Detection	Seal fail sensor and high temp. in an oil-filled seal chamber. Connect to optional relays in control panel.		
External Hardware	300 Series Stainless Steel		
Impeller Type	Vortex with pump out vanes on back shroud		
Oil Capacity – Seal Chamber	20.3 ounces		

STANDARD PARTS

Ball Bearing	Upper	Single row ball – 6304 2RS C3
	Lower	Single row ball – 6305 2RS C3
Mechanical Seals – Standard	Upper	Carbon/Ceramic
	Lower	Silicon Carbon
O-Ring – Stuffing	BUNA-N	
O-Ring – Motor Cover	BUNA-N	

MATERIALS OF CONSTRUCTION

Item No.	Part Name	Material Standard					
		1	Impeller	Ductile Iron GR 60			
2	Castings	Cast Iron CI - 35					
3	Shaft-keyed	400 Series SS					
4	Fasteners	300 Series SS					
5	Ball bearings	Steel					
6	Cord	SOW, 50 feet					
7	O-ring	BUNA-N					
8	Outer Mech. Seal	Service	Rotary	Stationary	Elastomers	Metal Parts	
		STD	Mild abrasives	Silicon Carbide	BUNA-N	300 Series SS	
	Lower Mech. Seal	Service	Rotary	Stationary	Elastomers	Metal Parts	
		STD	Mild abrasives	Carbon / Ceramic	BUNA-N	300 Series SS	



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

B4GV March, 2009

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