



#### **TECHNICAL BROCHURE**

BAGSSERIES

# AGS Series





### Goulds Water Technology

#### Wastewater

#### FEATURES

**Design:** Capable of grinding domestic sewage in the modern wastewater stream.

**Cutter System:** Stainless steel, axial lobe-cutter design with 8-hole cutting plate, capable of 4.9 million bites per hour and TDH up to 66 feet.

Impeller: Cast Iron semi open 2 vane impeller.

**Casing:** Cast iron, volute type for high efficiency. Adaptable for guide rail system.

**Motor:** Fully submerged in oil-filled chamber. High grade turbine oil surrounds motor for more efficient heat dissipation, permanent lubrication of bearings and mechanical seal, and protection against outside environment.

Motor Shaft: 300 series stainless steel.

**Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged. **Bearings:** Upper and lower single row sealed ball bearings for precision positioning of parts and to carry all radial and thrust loads.

**Mechanical Seal:** Hardfaced silicon carbide on silicon carbide for longer life, stainless steel metal parts, BUNA-N elastomers.

**Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking.

**O-Ring:** Assures positive sealing against contaminants and oil leakage.

**Paint:** Electro-coat paint process protects all casting surfaces.

May be used with optional guide rail. See Fittings or Pump Removal Systems.

#### AGENCY LISTINGS



**Tested to UL 778 and CSA 22.2 108 Standards** By Canadian Standards Association

#### APPLICATIONS

Designed for residential sewage applications where a gravity system is not practical. Ideal for pressure sewage systems.

#### SPECIFICATIONS

#### Pump:

- Capacities: to 53 gpm
- Total heads: to 66' TDH
- Discharge: 2" NPT
- Temperature: Class F insulation 104°F (40°C) maximum continuous, 140°F (60°C) maximum intermittent
- Single mechanical seal: silicon carbide rotary/silicon carbide stationary, 300 series stainless steel metal parts, BUNA-N elastomers
- Fasteners: 300 series stainless steel
- Axial cutter and plate: 440C hardened stainless steel

#### Motor:

- Single-phase, 0.5 and 1 hp 60 Hz, 3500 rpm, 115V and 230V CSCR motor with on winding thermal prtector. No external capacitor kits required.
- Class F insulation
- Shaft: 300 series stainless steel threaded design
- Bearings: Single row sealed ball bearings, upper and lower
- Power cord with a 115V or 230V NEMA three prong grounding plug. Allows connection to a piggyback float switch. 20 foot long cable.



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#### **MODEL INFORMATION**

| Order<br>Number | НР   | Phase | Volts | RPM  | Operation | Maximum<br>Amps | Discharge<br>Size | Impeller Diameter | Power Cord                 | Weight<br>(lbs.) |
|-----------------|------|-------|-------|------|-----------|-----------------|-------------------|-------------------|----------------------------|------------------|
| AGS0511         | 0.5  |       | 115   |      | Manual*   | 9               | 2"                | 3.5"              | - 20' SJTOW with NEMA plug | 65               |
| AGS0512         | 10.5 | - 1   | 230   | 2500 |           | 4.5             |                   |                   |                            |                  |
| AGS1011         |      |       | 115   | 3500 |           | 11              |                   | 4.25"             |                            |                  |
| AGS1012         |      |       | 230   |      |           | 5.5             |                   |                   |                            |                  |

\* Use piggyback float for automatic operation

#### **MOTOR DATA**

| ЦБ  | Volts | Phase | RPM  | Maximum Amps | LRA  | Resistance | Dawar Cabla | Fuse/Circuit Breaker |
|-----|-------|-------|------|--------------|------|------------|-------------|----------------------|
| пр  |       |       |      |              |      | Line-Line  | Power Cable |                      |
| 0.5 | 115   | 1     | 3500 | 9            | 46   | 0.6        | SJTOW 14/3  | 15                   |
| 0.5 | 230   |       |      | 4.5          | 25.5 | 2.6        |             | 10                   |
| 1 - | 115   |       |      | 11           | 46   | 0.6        |             | 15                   |
|     | 230   |       |      | 5.5          | 25.5 | 2.6        |             | 10                   |

#### **APPLICATION DATA**

| Minimum Casing Thickness                                | 5⁄ <sub>16</sub> "   |
|---|--|
| Casing Corrosion Allowance                              | 1/8"   |
| Maximum Working Pressure                                | 50 psi   |
| Maximum Submergence                                     | 50 feet  |
| Minimum Cubmorgoneo                                     | Fully submerged for continuous operation                                     |
| Minimum Submergence                                     | 6 " below top of motor for intermittent operation                            |
| Maximum Environmental                                   | 40°C (104°F) continuous operation  |
| Temperature   | 60°C (140°F) intermittent operation  |
| Maximum Number of Evenly<br>Distributed Starts per hour | 10   |
| Bearings  | B-10 life of 30,000 hours min.   |
| Minimum Pasin Siza                                      | Simplex - 24" x 24"  |
|   | Duplex - 36" x 36" Fiberglass  |
| 2" Maximum Discharge<br>Pipe Diameter                   | Requires a minimum flow of 21 gpm to maintain a 2 ft./sec. scouring velocity |

Single row ball - SKF 6203-2Z

Single row ball - SKF 6204-2Z

BUNA-N, AS 568A-166

Silicon carbide/silicon carbide; Type 16

#### **CONSTRUCTION DETAILS**

| Power Cable - type              | 14/3 SJTOW with NEMA Plug                         |  |  |  |
|---------------------------------|---|--|--|--|
| Motor Cover                     | Gray cast iron - ASTM A48, Class 30               |  |  |  |
| Bearing Housing                 | Gray cast iron - ASTM A48, Class 30               |  |  |  |
| Seal Housing                    | Gray cast iron - ASTM A48, Class 30               |  |  |  |
| Casing                          | Gray cast iron - ASTM A48, Class 30               |  |  |  |
| Impeller                        | Gray cast iron - ASTM A48, Class 30               |  |  |  |
| Motor Shaft                     | AISI 300 series stainless steel                   |  |  |  |
| Motor Design                    | NEMA 48 frame, oil filled with Class F insulation |  |  |  |
| Motor Overload Protection       | On winding thermal protector - auto reset         |  |  |  |
| External Hardware               | 300 series stainless steel                        |  |  |  |
| Impeller Type                   | Semi-opened with pump out vanes on back shroud    |  |  |  |
| Cutter                          | Type 440C hardened stainless steel                |  |  |  |
| Oil Capacity - motor<br>chamber | .57 gallons                                       |  |  |  |

#### **CUTTER ASSEMBLY**



3 lobe cutter



## DIMENSIONS

Mechanical Seal

**STANDARD PARTS** 

Ball Bearing - upper

Ball Bearing - lower

O-Ring - motor cover

(All dimensions are in inches. Do not use for construction purposes.)







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