

**xylem**  
Let's Solve Water

**TECHNICAL BROCHURE**  
BAGSSERIES R5



# AGS Series

AXIAL GRINDER PUMPS



 **GOULDS**  
WATER TECHNOLOGY  
a xylem brand

## 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 120 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.

### APPLICATIONS

Designed for residential/light commercial/small office sewage (2" pump replacement and new construction) or anywhere modern wastewater flushables are creating clogging issues.

### SPECIFICATIONS

#### Pump:

- Capacities: to 53 gpm
- Total heads: to 120' TDH
- 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

### MODEL INFORMATION

| Order Number | HP  | Phase | Volts   | RPM                    | Float Switch Style     | Maximum Amps | Discharge Size | Impeller Diameter | Power Cord               | Weight (lbs.) |
|--------------|-----|-------|---------|------------------------|------------------------|--------------|----------------|-------------------|--------------------------|---------------|
| AGS0511      | 0.5 | 1     | 115     | 3500                   | Manual / No Switch     | 9            | 2"             | 3.5"              | 20' SJTOW with NEMA plug | 65            |
| AGS0511PB    |     |       |         |                        | Piggyback Float Switch |              |                |                   |                          |               |
| AGS0512      |     |       | 208-230 |                        | Manual / No Switch     | 4.5          |                |                   |                          |               |
| AGS0512PB    |     |       |         |                        | Piggyback Float Switch |              |                |                   |                          |               |
| AGS1011      | 1   | 1     | 115     | Manual / No Switch     | 11                     | 4.25"        |                |                   |                          |               |
| AGS1011PB    |     |       |         | Piggyback Float Switch |                        |              |                |                   |                          |               |
| AGS1012      |     |       | 208-230 | Manual / No Switch     | 5.5                    |              |                |                   |                          |               |
| AGS1012PB    |     |       |         | Piggyback Float Switch |                        |              |                |                   |                          |               |
| AGS2012      | 2   | 1     | 208-230 | Manual / No Switch     | 15                     | 1.25"        | 5.69"          | 96                |                          |               |
| AGS2012PB    |     |       |         | Piggyback Float Switch |                        |              |                |                   |                          |               |

**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.

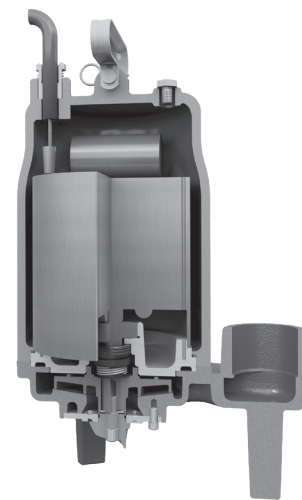
### AGENCY LISTINGS

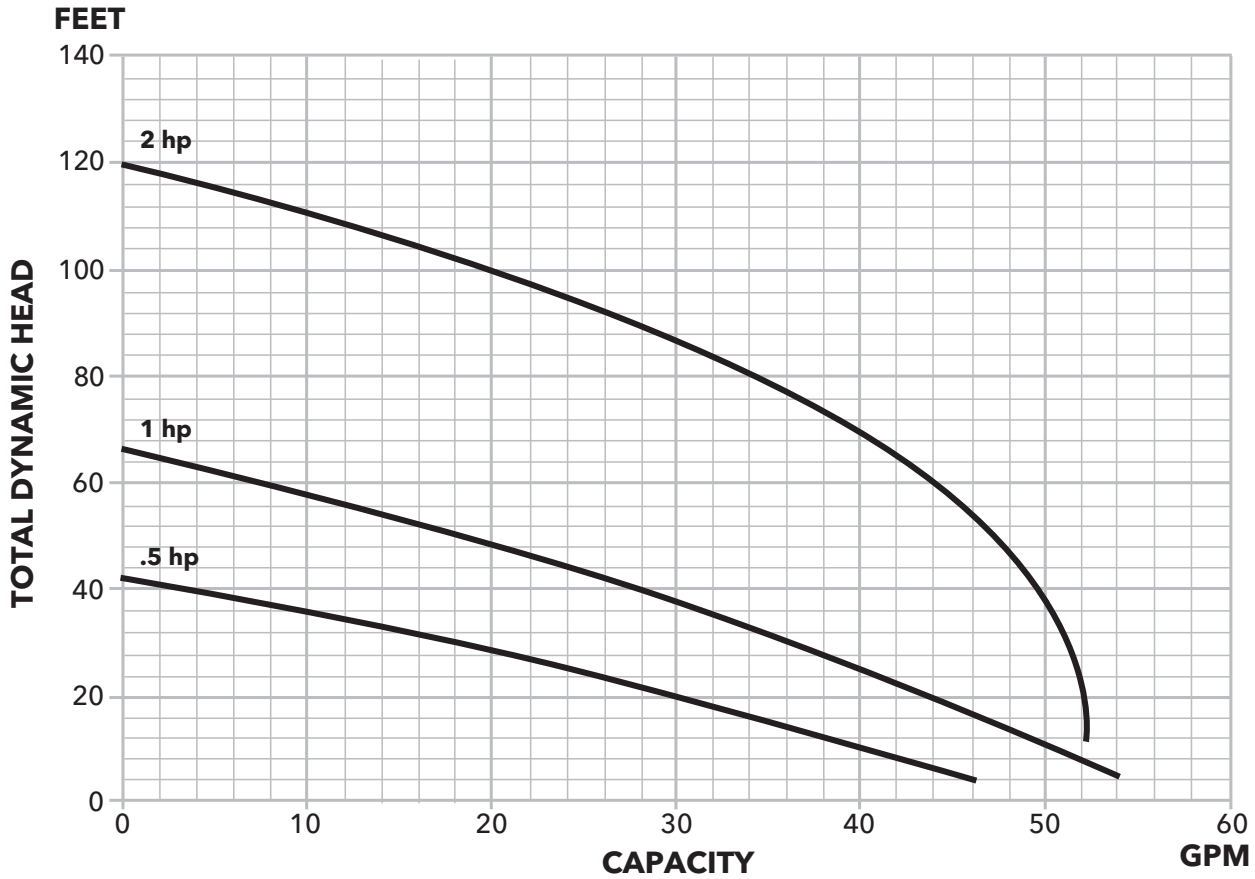


Tested to UL 778 and CSA 22.2 108 Standards  
By Canadian Standards Association

#### Motor:

- Single-phase motor with on winding thermal protector. 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.



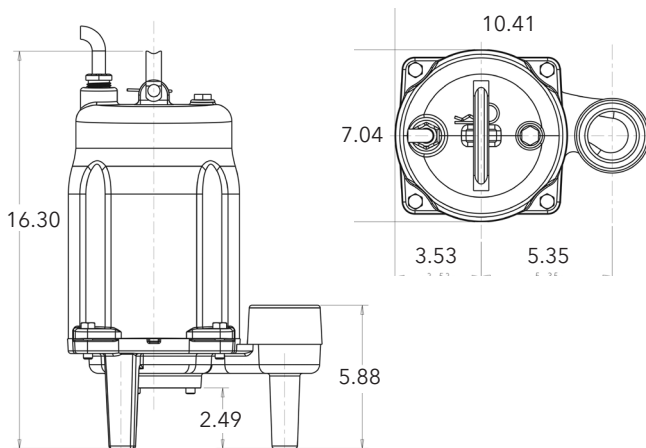


### MOTOR DATA

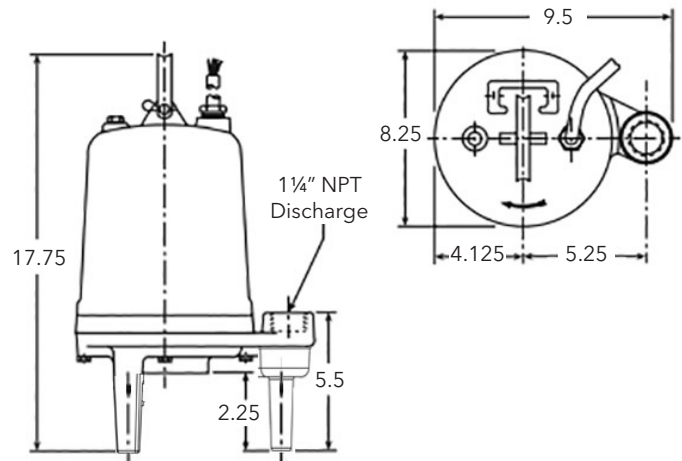
| HP  | Volts   | Phase | RPM  | Maximum Amps | LRA  | Resistance | Power Cable | Fuse/Circuit Breaker |
|-----|---------|-------|------|--------------|------|------------|-------------|----------------------|
|     |         |       |      |              |      | Line-Line  |             |                      |
| 0.5 | 115     | 1     | 3500 | 9            | 46   | 0.6        | SJTOW 14/3  | 15                   |
|     | 208-230 |       |      | 4.5          | 25.5 | 2.6        |             | 10                   |
| 1   | 115     |       |      | 11           | 46   | 0.6        |             | 15                   |
|     | 208-230 |       |      | 5.5          | 25.5 | 2.6        |             | 10                   |
| 2   | 208-230 |       |      | 15           | 59   | 1.1        |             | 30                   |

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

**AGS 0511, 0512 & 1011** (in inches):



**AGS 2012** (in inches):



## APPLICATION DATA

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

## STANDARD PARTS

|                      |  |
|----------------------|--|
| Ball Bearing - upper | Single row ball - SKF 6203-2Z            |
| Ball Bearing - lower | Single row ball - SKF 6204-2Z            |
| Mechanical Seal      | Silicon carbide/silicon carbide; Type 16 |
| O-Ring - motor cover | BUNA-N, AS 568A-166                      |

## STANDARD PANEL OPTIONS

| Pump Order Number | K-Series  |           | Boulay Series |        |
|-------------------|-----------|-----------|---------------|--------|
|                   | Simplex   | Duplex    | Simplex       | Duplex |
| AGS0511           | KS19020WF | KD19020WF | S10020        | D10020 |
| AGS0512           | KS19020WF | KD19020WF | S10020        | D10020 |
| AGS1011           | KS19020WF | KD19020WF | S10020        | D10020 |
| AGS1012           | KS19020WF | KD19020WF | S10020        | D10020 |
| AGS2012           | KS19020WF | KD19020WF | S10020        | D10020 |



### K-SERIES

- NEMA 4X dead front outdoor rated enclosure
- Red LED alarm beacon
- HOA selector switch
- Field wiring terminal block
- Single phase models handle 120, 208 and 230V service
- Three phase models handle 200, 230 and 460V service
- Requires separate control/alarm power feed
- See brochure "BCPKSDPANELS" for additional information



### BOULAY SERIES

- NEMA 4X outdoor rated enclosure
- Red alarm beacon
- HOA selector switch
- Through door pump run light(s)
- Through door alarm test and horn silence button
- Single phase models handle 120, 208 and 230V service
- Three phase models handle 200, 230, 460 and 575V service
- Accepts single or dual power feed
- See brochure "BCP3 R11" for additional information on simplex models
- See brochure "BCP4 R14" for additional information on duplex models

## CUTTER ASSEMBLY

8-hole cutting ring



3 lobe cutter



## 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 chamber | .57 gallons                                       |

**xylem**  
Let's Solve Water

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