



**FEATURES**

**Impeller:** Cast iron, ASTM A48, Class 30, two vane semi-open, non-clog design with pump out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller is an option.

**Casing:** Heavy duty gray cast iron, ASTM A48, Class 30. Volute type casing with 3", 125#, ANSI flanged, horizontal discharge. Compatible with A10-30 cast iron or A10-30B cast iron and brass (non-sparking) guide rail assembly.

**Dual Mechanical Seals:** Silicon carbide vs. silicon carbide outer seal and ceramic vs. carbon 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.

**Shaft:** 300 series stainless steel keyed design.

**Fasteners:** 300 series stainless steel.

Capable of running dry temporarily without damage to seals or motor.

# WS\_D3 Series

## Model 3888ZD3 50 Hz

SUBMERSIBLE SEWAGE PUMPS

## 50 Hz Wastewater

### 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: 2.5"
- Discharge size: 3", 125 # ANSI flange
- Maximum capacity: 440 GPM
- Maximum total head: 45 feet
- 300 Series stainless steel fasteners
- 20' 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
- 50 Hertz
- Single row ball bearings
- 300 Series stainless steel keyed shaft

#### Single Phase:

- 1.5 - 3 HP; 220 volts
- Built-in thermal overloads with automatic reset
- Built-in capacitors

#### Three Phase:

- 1.5 - 3 HP; 200, 380 volts
- Class 10 overload protection must be provided in control panel

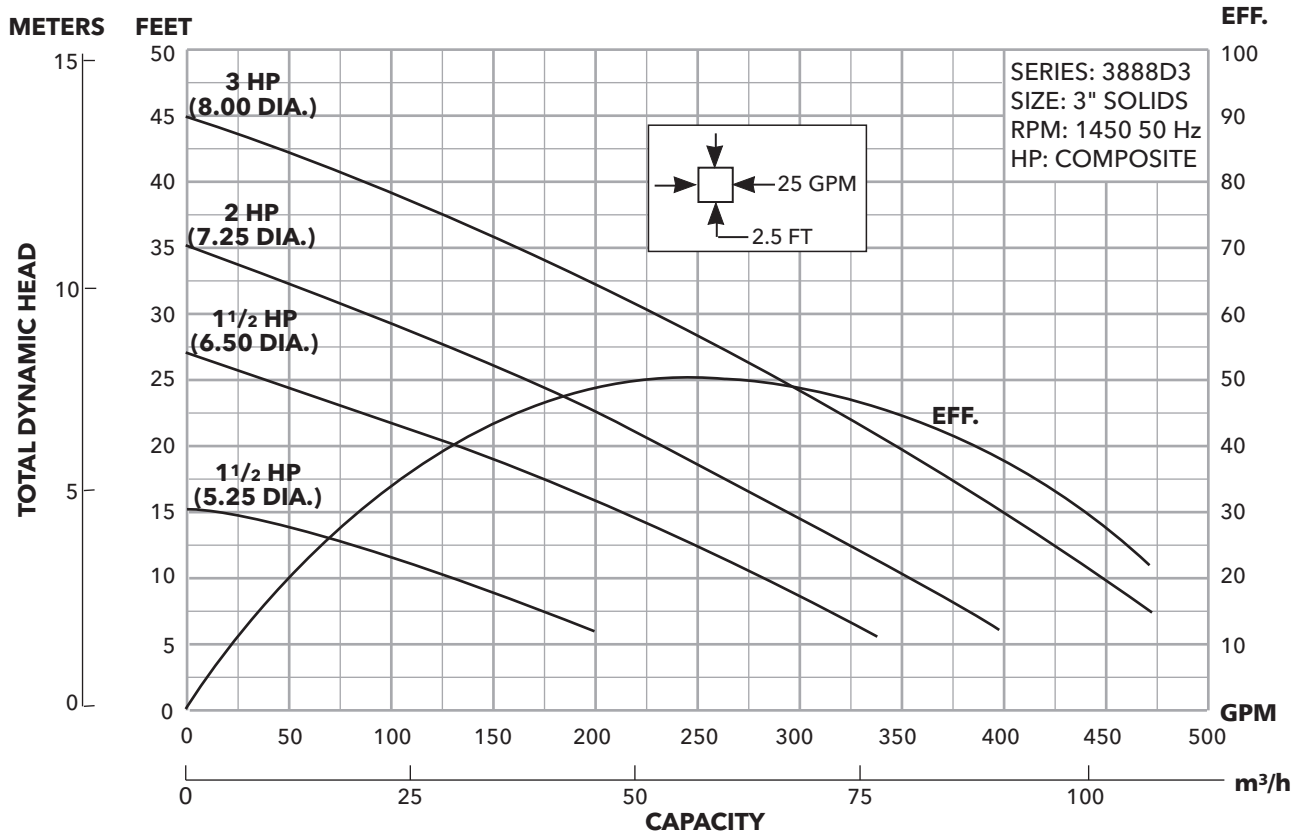
### MOTORS

- Fully submerged in oil-filled chamber. High grade turbine oil surrounds motor for more efficient heat dissipation, permanent lubrication of bearings and mechanical seal for complete protection against outside environment.
- 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.
- 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. 20 foot standard with optional lengths available.
- O-ring: Assures positive sealing against contaminants and oil leakage.

### AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards  
By Canadian Standards Association File #LR38549

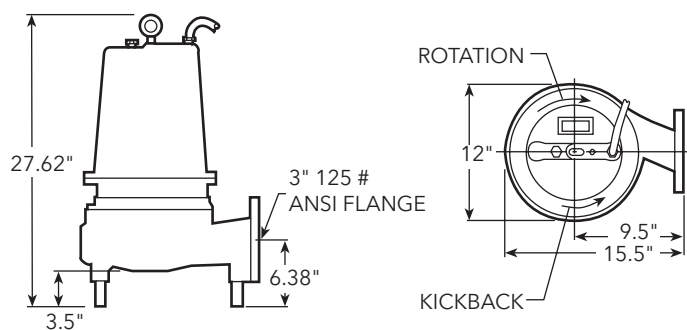


### SEWAGE PUMP 50 HZ: 3" FLANGED DISCHARGE, 2.5" SOLIDS MODEL AND MOTOR INFORMATION

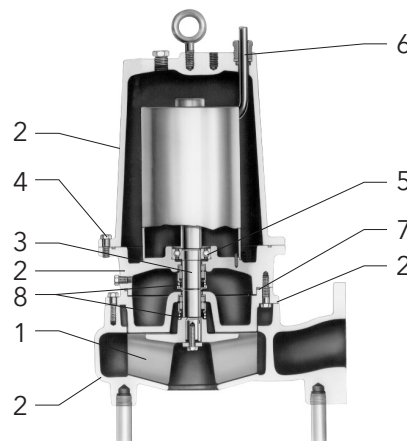
| Order No. | HP  | Phase | Volts | RPM  | Impeller Dia. (in.) | Maximum Amps | L.R. Amps | KVA Code | Power Cable | F.L. Motor Eff. % | Resistance |           | Wt. (lbs.) |
|-----------|-----|-------|-------|------|---------------------|--------------|-----------|----------|-------------|-------------------|------------|-----------|------------|
|           |     |       |       |      |                     |              |           |          |             |                   | Start      | Line-Line |            |
| WS1529D3M | 1.5 | 1     | 220   | 1450 | 5.25"               | 5.8          | 32.7      | D        | 14/3        | 80                | 2.1        | 1.2       | 192        |
| WS1546D3M |     | 3     | 380   |      |                     | 2.6          | 24.2      | F        | 14/4        | 83                | N/A        | 9.3       | 190        |
| WS1548D3M |     | 3     | 200   |      |                     | 5.2          | 48.4      | F        | 14/4        | 83                | N/A        | 2.3       | 190        |
| WS1529D3  | 1.5 | 1     | 220   |      | 6.5"                | 8.9          | 32.7      | D        | 14/3        | 80                | 2.1        | 1.2       | 192        |
| WS1546D3  |     | 3     | 380   |      |                     | 3.8          | 24.2      | F        | 14/4        | 83                | N/A        | 9.3       | 190        |
| WS1548D3  |     | 3     | 200   |      |                     | 7.6          | 48.4      | F        | 14/4        | 83                | N/A        | 2.3       | 190        |
| WS2029D3  | 2   | 1     | 220   |      | 7.25"               | 11.9         | 32.7      | D        | 14/3        | 80                | 2.1        | 1.2       | 196        |
| WS2046D3  |     | 3     | 380   |      |                     | 4.9          | 24.2      | F        | 14/4        | 83                | N/A        | 9.3       | 194        |
| WS3029D3  | 3   | 1     | 220   |      | 8.0"                | 18.6         | 52.1      | A        | 10/3        | 80                | 1.3        | 0.9       | 205        |
| WS3046D3  |     | 3     | 380   | 7.2  |                     | 30.0         | H         | 14/4     | 83          | N/A               | 7.5        | 200       |            |
| WS3048D3  |     | 3     | 200   | 14.4 |                     | 60.0         | H         | 14/4     | 83          | N/A               | 1.9        | 200       |            |

### DIMENSIONS

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



### MATERIALS OF CONSTRUCTION



| Item No.             | Part Name          |                | Material                      |                  |                    |               |
|----------------------|--------------------|----------------|-------------------------------|------------------|--------------------|---------------|
|                      |                    |                | Standard                      |                  | Optional           |               |
| 1                    | Impeller, non-clog |                | 1003                          |                  | 1179               |               |
| 2                    | Castings           |                | 1003                          |                  |                    |               |
| 3                    | Shaft-keyed        |                | 300 Series SS                 |                  |                    |               |
| 4                    | Fasteners          |                | 300 Series SS                 |                  |                    |               |
| 5                    | Ball bearings      |                | Steel                         |                  |                    |               |
| 6                    | Power cable        |                | STOW, 20 feet                 |                  | Additional lengths |               |
| 7                    | O-ring             |                | BUNA-N                        |                  |                    |               |
| 8                    | Outer Mech. Seal   | Service        | Rotary                        | Stationary       | Elastomers         | Metal Parts   |
|                      | OPT                | Heavy duty     | Silicon Carbide               | Tungsten Carbide | BUNA-N             | 300 Series SS |
|                      | STD                | Mild abrasives | Silicon carbide               |                  | BUNA-N             | 300 Series SS |
| <b>Material Code</b> |                    |                | <b>Engineering Standard</b>   |                  |                    |               |
| 1003                 |                    |                | Cast iron – ASTM A48 Class 30 |                  |                    |               |
| 1179                 |                    |                | Silicon bronze – ASTM C87600  |                  |                    |               |

## APPLICATION DATA AND CONSTRUCTION DETAILS

|                                                                  |                                                                            |                                          |
|------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------|
| Maximum Solid Size                                               | 2.5"                                                                       |                                          |
| Minimum Casing Thickness                                         | 5/16"                                                                      |                                          |
| Casing Corrosion Allowance                                       | 1/8"                                                                       |                                          |
| Maximum Working Pressure                                         | 30 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 |                                          |
| Power Cable - Type<br>(See Motor Information for AWG data/size.) | Type SJTOW: single phase, 1½ and 2 HP                                      |                                          |
|                                                                  | Type STOW: single phase, 1½ - 3 HP and 5 HP, 380 V                         |                                          |
|                                                                  | Type STOW: single phase, 3 HP, three phase 5 HP, 200 V                     |                                          |
| Motor Cover, Bearing Housing, Seal Housing, Casing               | Gray Cast Iron - ASTM A48, Class 30                                        |                                          |
| Impeller - Standard, Optional                                    | Gray Cast Iron - ASTM A48 or Cast Bronze - ASTM B584 C87600                |                                          |
| Motor Shaft                                                      | AISI 300 Series Stainless Steel                                            |                                          |
| Motor Design                                                     | NEMA 56 Frame, oil filled with Class F Insulation                          |                                          |
| Motor Overload Protection                                        | Single phase: on winding thermal overload protection auto reset            |                                          |
|                                                                  | Three phase: requires Class 10 overloads in control panel                  |                                          |
| External Hardware                                                | 300 Series Stainless Steel                                                 |                                          |
| Impeller Type                                                    | Semi-open with pump out vanes on back shroud                               |                                          |
| Oil Capacity - Seal Chamber                                      | 1.5 quarts                                                                 |                                          |
| Oil Capacity - Motor Chamber                                     | 1½-5 HP single and three phase: 7 quarts                                   |                                          |
| Mechanical Seals - Standard                                      | Upper                                                                      | Carbon/Ceramic; Type 21                  |
|                                                                  | Lower                                                                      | Silicon Carbide/Silicon Carbide; Type 31 |
| Mechanical Seals - Optional Lower                                | Silicon Carbide/Tungsten Carbide; Type 31                                  |                                          |



Xylem, Inc.  
 2881 East Bayard Street Ext., Suite A  
 Seneca Falls, NY 13148  
 Phone: (866) 325-4210  
 Fax: (888) 322-5877  
[www.xylem.com/brands/gouldswatertechnology](http://www.xylem.com/brands/gouldswatertechnology)

Goulds is a registered trademark of Goulds Pumps, Inc. and is used under license.  
 © 2012 Xylem Inc. B3888ZD3 March 2011