

 **GOULDS PUMPS**

# Goulds Trash Hog<sup>®</sup>

Self-Priming Solids Handling Pump



**ITT**

ENGINEERED FOR LIFE

# Goulds Trash Hog<sup>®</sup>

## Self-Priming Pumps Designed for Toughest Solids Handling Services

- Capacities to 6,000 GPM (1,363 m<sup>3</sup>/h)
- Heads to 140 feet (43 m)
- Temperatures to 225°F (107°C)
- Pressures to 85 PSIG (586 kPa)
- Suction Lifts to 25 feet (7.6 m)
- Spherical Solids to 3 inches (76 mm)

### Applications

#### Pulp and Paper Industry

- Black Liquor Sump
- Paper Machine Floor Sump
- Knotters Discharge Pump
- White Water Service

#### General Industry

- Wash Down Sump
- Food Wastes
- Fish Farming
- Rendering Wastes
- Machine Coolant Sump

#### Mining and Metal Fabrication

- Mine Dewatering
- Mill Scale Runoff
- Cutting Oil Transfer
- Construction Site Dewatering

#### Performance Features for Self-Priming, Solids Handling Services

##### Large Capacity Priming Chamber

For reliable priming and repriming

##### Heavy Duty Power End

For extended life in toughest services

##### Non-Clog Impeller

Capable of passing spherical solids to 3 inches (76 mm)

##### External Impeller Adjustment

Easily renews optimum hydraulic performance

##### Trimable Impeller

Permits most efficient use of motor horsepower



Goulds Trash Hog is designed for superior solids handling capability, optimum pump performance and extreme ease of maintenance for a wide range of industrial, pulp and paper, mining and municipal wastewater services. Whether handling raw sewage, sludge, debris or plant wastes, there's no other pump that compares to the Trash Hog.

# Proven Performance

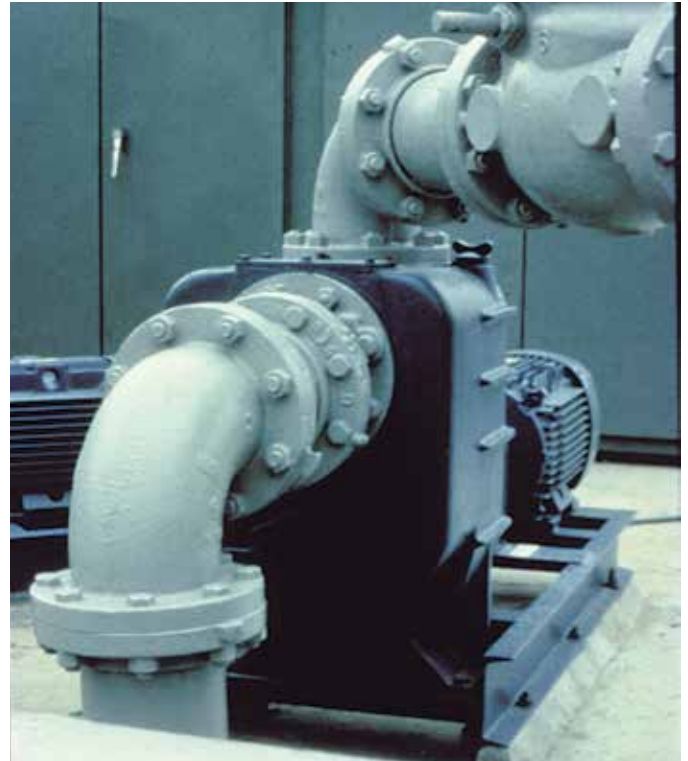
Goulds Trash Hog has been designed to meet the waste handling needs of our industrial customers. Whether it be a remote lift station, an on-site treatment facility or transfer of your process wastes, Goulds has the experience to provide the engineered solution you need.



Trash Hogs are utilized in remote sewage lift stations to pump municipal waste from outlying residential areas to the local treatment plant. Here, Trash Hogs are being driven by overhead belt drives to conserve lift station space. Service will be performed by removing the rotating element to the rear as typical suction piping restricts access to the front of the pumps.



In this installation, two 3" Trash Hogs are being used to control the level of the liquid in these settling ponds. Liquid level controls in the sump determine whether either or both pumps are needed to maintain proper pond level. Trash Hogs were chosen due to their reliable priming capabilities.



Here, one of several 6" self-priming Trash Hogs is being used to pump process waste at an industrial treatment plant. Trash Hog was specified and installed due to its ability to pass a 3" diameter solid and prime and reprime a 15 feet static suction lift.

# Goulds Trash Hog<sup>®</sup>

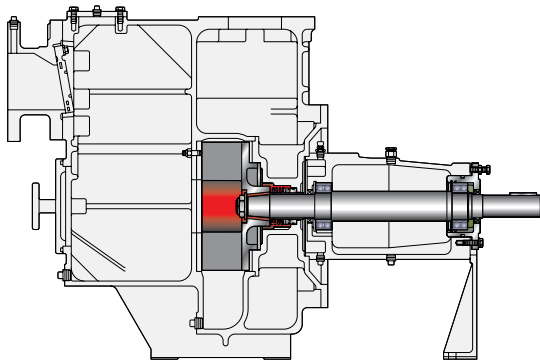
## Designed for Ease of Maintenance

### Easily Renewed Performance

It's common knowledge that as a pump wears, the performance decreases. The Trash Hog's open impeller can be adjusted, simply and quickly, to compensate for wear and renew performance.



Original performance can be re-set in a matter of minutes with external impeller adjustment



Adjustable cartridge style bearing housing allows adjustment of impeller to wearplate clearance. No shims are required. No need to disassemble or drain pump.

### Back Pull-Out

The power end is entirely outside the pump casing. Jacking bolt holes are provided to ease the separation of the power end from the casing.

- No special tools or "T" handles are required to remove the power end.
- No shims are used on the casing bolt circle for clearance adjustments.
- No risk of injury from "wrestling" with an awkward back pull-out design.



The tapered shaft and woodruff key design allow easy removal of the impeller from the rotating assembly.

# Goulds Trash Hog<sup>®</sup>

## Designed for Extended Pump Life

Goulds Trash Hog is a true heavy duty solids handling pump. No other self-priming solids handling pump is designed with the "beef" of a Trash Hog. All parts are engineered for maximum performance and service life.

The Trash Hog features the heaviest shaft and bearing assembly in the industry. Long bearing span minimizes bearing loads for extended bearing life. Large shaft diameter for minimal deflection, maximum mechanical seal life.



Removable wearplate provides added protection to pump casing from abrasive wear. Easily replaced.



The power end is supported by a rigid cast iron frame foot that provides excellent support for the shaft and thrust bearing. Bearing life is extended.



The Trash Hog uses two-vane or three-vane impellers for non-clog solids handling. Trash Hog is engineered for optimum efficiency and priming performance.





# Goulds Trash Hog<sup>®</sup>

## Self-Priming, Solids Handling Pumps

Heavy Duty Design Features for Wide Range Solids Handling Services

### EXTERNAL IMPELLER ADJUSTMENT

Continuous high performance maintained by simple adjustment. Absolutely no shims required.

### INDUSTRIAL-DUTY POWER END

Provides rigid shaft support. Ample oil volume results in cooler running bearings for extended life.

### BACK PULL-OUT DESIGN

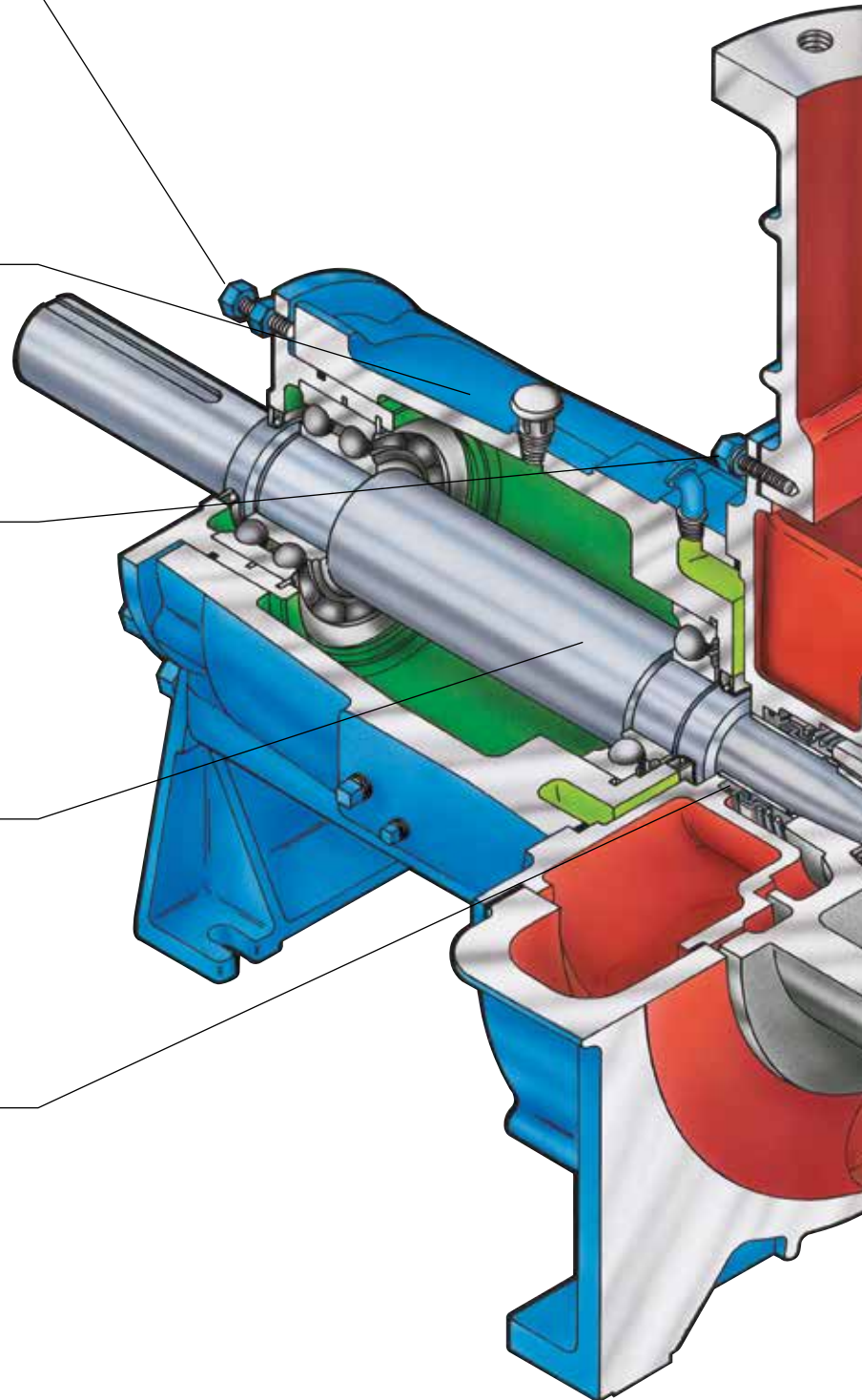
Complete power end with seal chamber can be easily removed from casing without disturbing suction and discharge piping. No need for special tools.

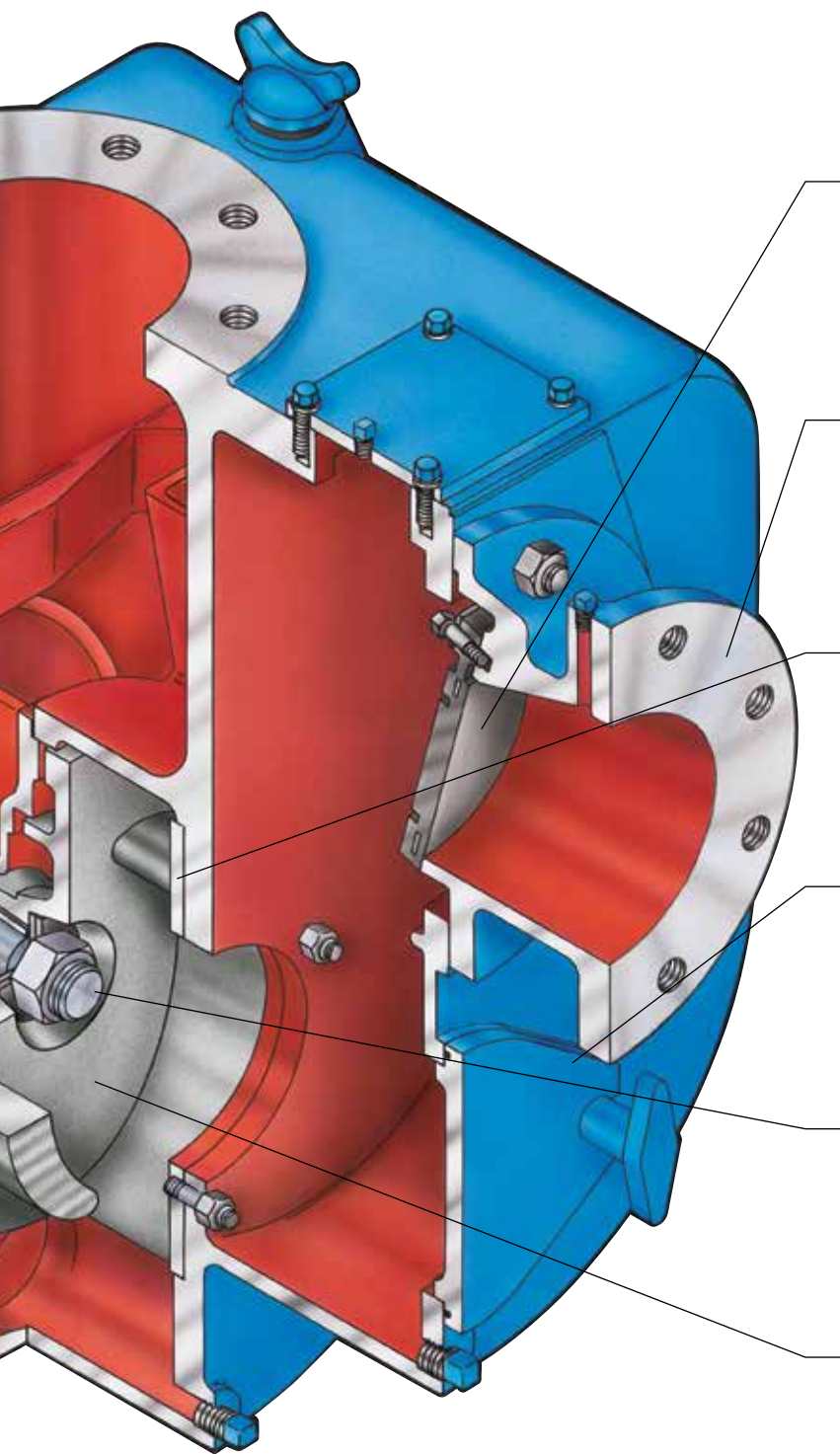
### HIGH STRENGTH STAINLESS STEEL TAPERED SHAFT

Maximum strength and corrosion resistance. Tapered impeller fit facilitates easy impeller removal.

### SILICON CARBIDE MECHANICAL SEAL

Hard faces provide substantially higher resistance to wear. Carbon/ceramic seal is optional.





**REPLACEABLE ELASTOMERIC CHECK VALVE**

With integral blow-out disc — provides for instant repriming while preventing over-pressurization of casing.

**CLASS 125 FLANGES**

Standard on suction and discharge for positive sealing in all industrial services.

**RENEWABLE WEARPLATE**

Reduces maintenance costs; allows running clearances to be maintained for maximum pumping efficiency and priming capability.

**LIGHTWEIGHT CLEAN-OUT COVER**

Maintenance-friendly cover allows access to remove any debris.

**BACK PUMP-OUT VANES AND REAR IMPELLER RING**

Reduces seal chamber pressure and axial thrust for extended bearing and seal life. Prevents solids from entering seal chamber. Close radial clearance eliminates need to shim behind impeller.

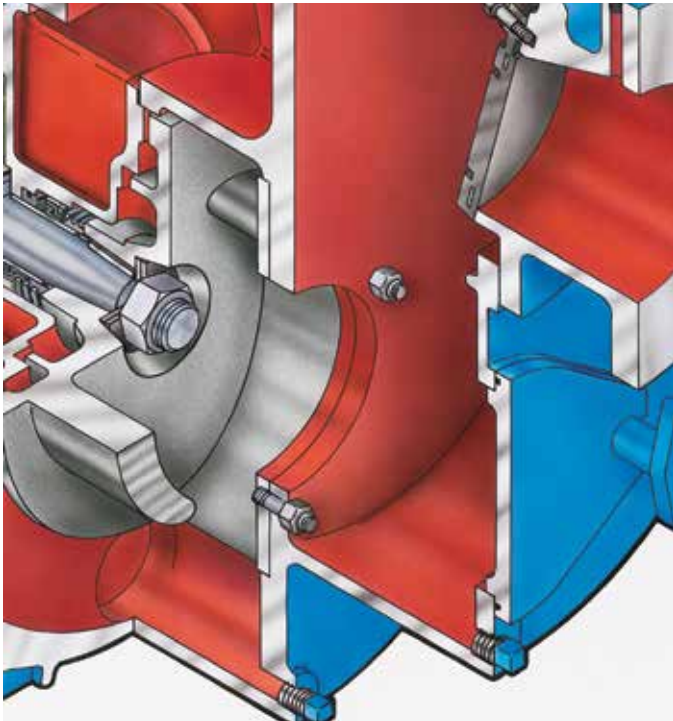
**HEAVY VANED OPEN IMPELLER**

Designed for superior performance in toughest solids handling services.

# Reliable Self-Priming Operation

## Consistent Priming and Repriming

Self-priming pumps require liquid in the priming chamber in order to prime properly. Too small a volume of liquid can adversely affect priming performance or possibly create a dangerous situation by raising the liquid temperature.



The large capacity priming chamber retains plenty of liquid for consistent priming and repriming.

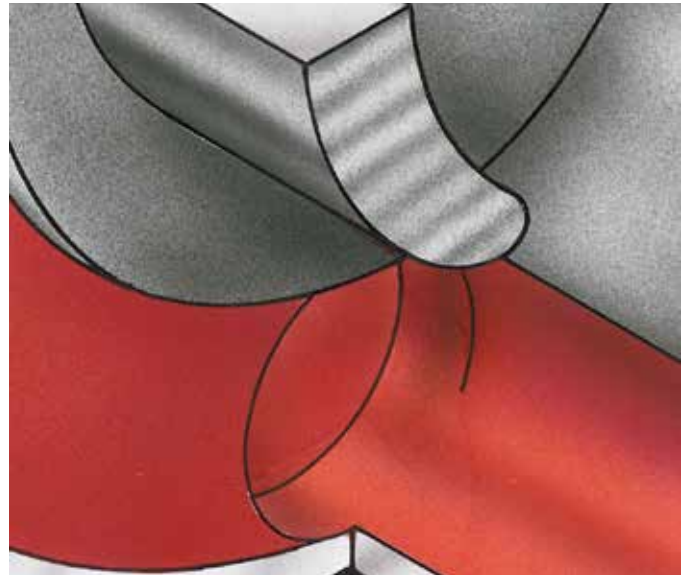
The Trash Hog is designed with an elevated suction inlet to keep liquid in the priming chamber even if the check valve fails. All Trash Hog sizes will prime up to 25 feet in under 5 minutes.



The casing fill plug provides convenient access for filling the priming chamber and provides a connection for an air release system.

## Industrial Duty Solids Handling

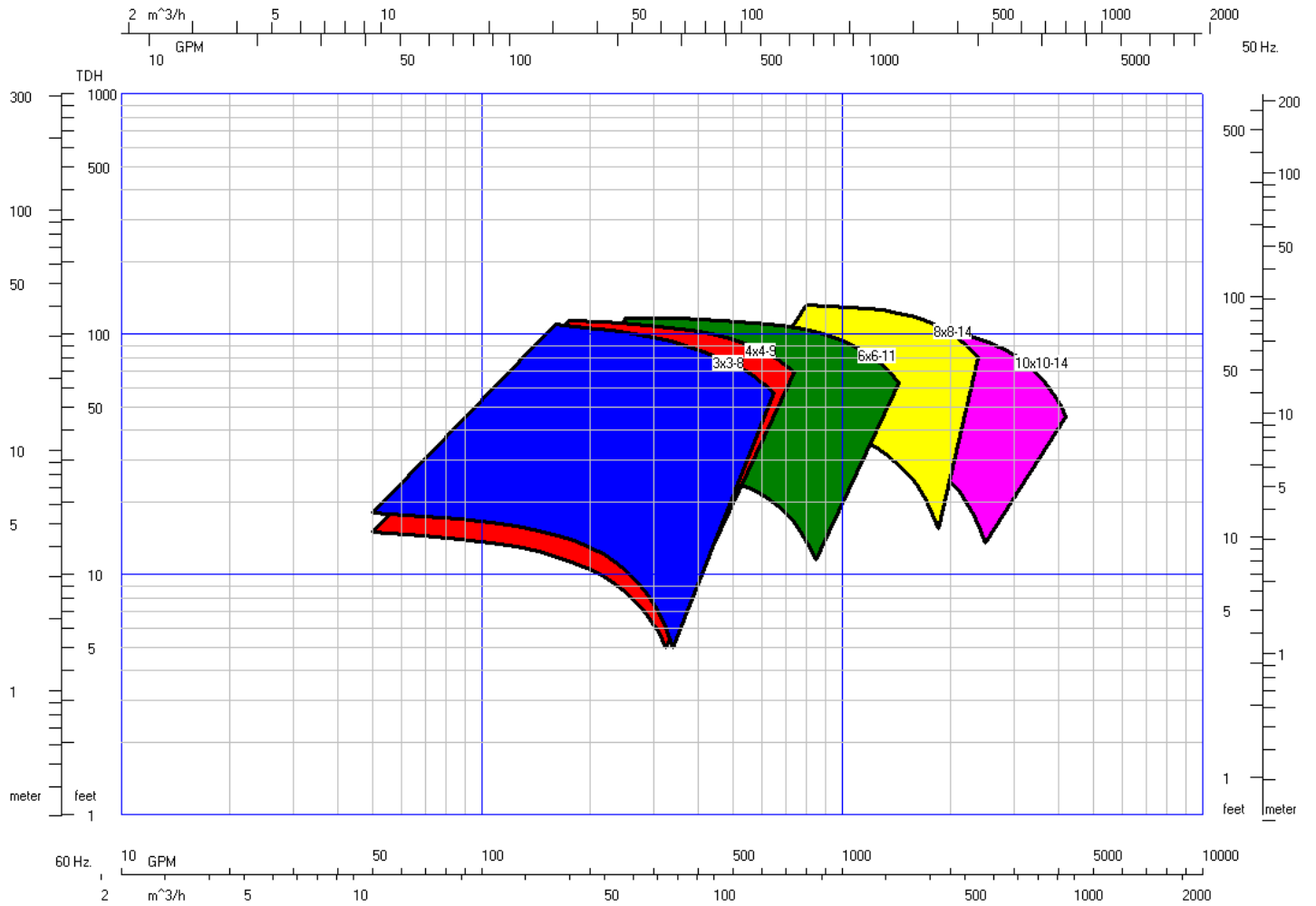
Goolds Trash Hog is designed to handle up to 3-inch spherical solids in some of the toughest solids handling services. Other manufacturers' light duty pumps cannot match the solids handling or self-priming capability of the Trash Hog.



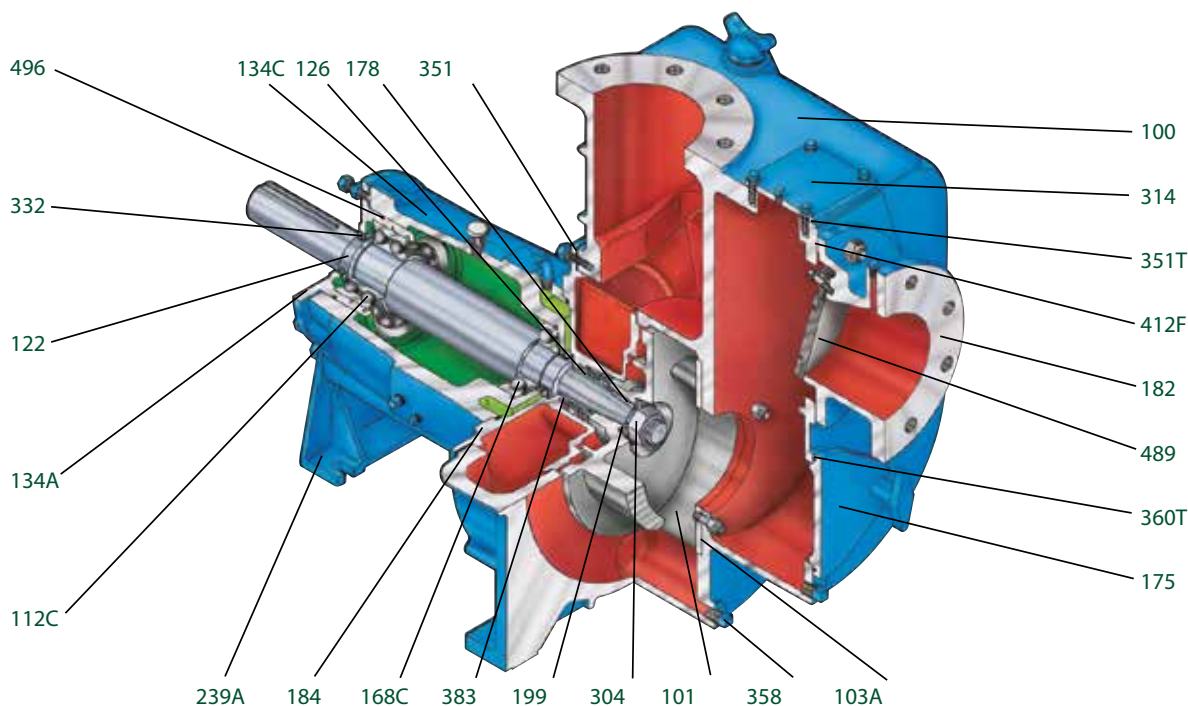
The Trash Hog uses two-vane or three-vane impellers for non-clog solids handling. Trash Hog is engineered for optimum efficiency and priming performance.



# Hydraulic Coverage



# Sectional View



## Parts List and Materials of Construction

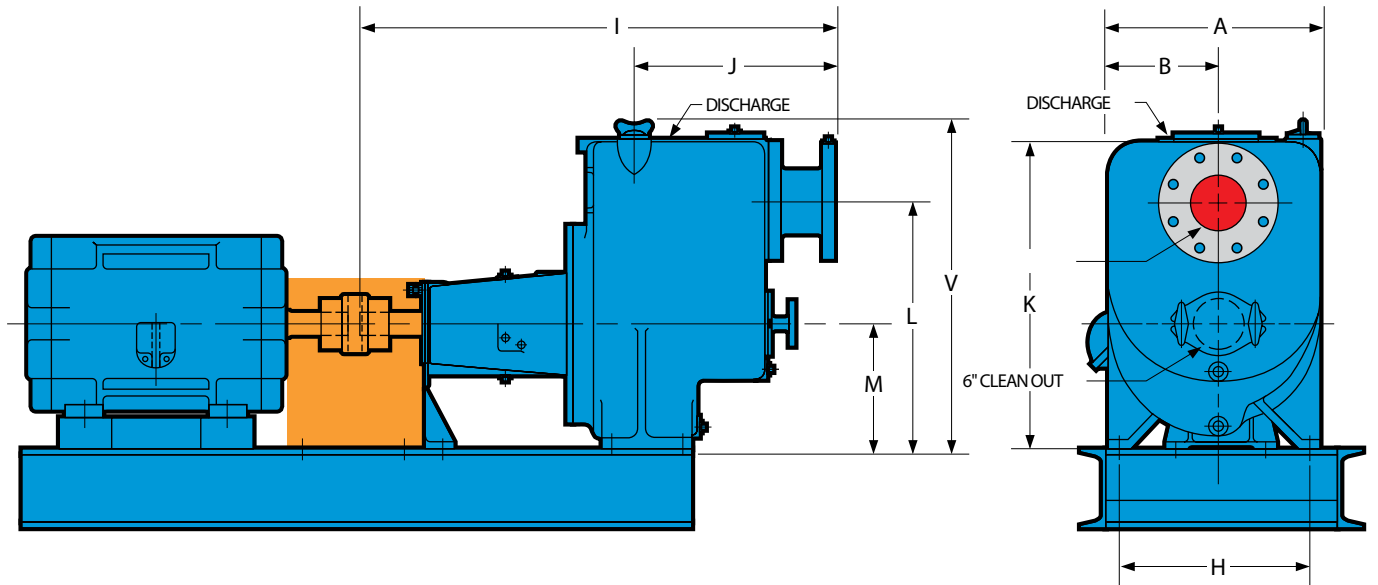
| Item Number | Part Name                | Material   |        |                       |           |        |           |            |
|-------------|--------------------------|--|--------|-----------------------|-----------|--------|-----------|------------|
|             |                          | All Cast Iron                                      | CI/316 | CI/316 w/316 SB Cover | CI/HC600  | CI/CD4 | All 316SS | All CD4MCu |
| 100         | Casing                   | Cast Iron  |        |                       |           |        | 316SS     | CD4MCu     |
| 101         | Impeller                 | Ductile Iron                                       | 316SS  |                       | HC600     | CD4    | 316SS     | CD4MCu     |
| 103A        | Wear Plate               | Ductile Iron                                       | 316SS  |                       | HC600     | CD4    | 316SS     | CD4MCu     |
| 112C        | Thrust Bearing           | Double Row Angular Contact <sup>(3)</sup>          |        |                       |           |        |           |            |
| 122         | Shaft                    | 17-4PH <sup>(2)</sup>                              |        |                       |           |        |           |            |
| 126         | Shaft Sleeve (Optional)  | 416 SS   |        |                       |           |        |           |            |
| 134A        | Bearing Carrier          | Cast Iron  |        |                       |           |        |           |            |
| 134C        | Bearing Frame            | Cast Iron  |        |                       |           |        |           |            |
| 168C        | Radial Bearing           | Double Row Angular Contact <sup>(1)</sup>          |        |                       |           |        |           |            |
| 175         | Clean Out Cover          | Cast Iron  |        |                       |           |        | 316SS     | CD4MCu     |
| 178         | Impeller Key             | Steel  | 316 SS |                       |           |        |           |            |
| 182         | Suction Piece            | Cast Iron  |        |                       |           |        | 316SS     | CD4MCu     |
| 184         | Stuffing Box Cover       | Cast Iron  | 316SS  |                       | Cast Iron | 316SS  | CD4MCu    |            |
| 199         | Impeller Washer          | Carbon Steel                                       |        |                       |           |        | 316SS     | Alloy 20   |
| 239A        | Frame Foot               | Cast Iron  |        |                       |           |        |           |            |
| 304         | Impeller Nut             | Carbon Steel                                       |        |                       |           |        | 316SS     | Alloy 20   |
| 314         | Inspection Cover         | Cast Iron  |        |                       |           |        | 316SS     | CD4MCu     |
| 332         | Oil Seal                 | Lip Seal (Buna/Steel)                              |        |                       |           |        |           |            |
| 351         | Casing Gasket            | Lexide   |        |                       |           |        |           |            |
| 351T        | Gasket, Inspection Cover | Lexide   |        |                       |           |        |           |            |
| 358         | Casing Drain Plug        | Carbon Steel                                       |        |                       |           | 316SS  | Alloy 20  |            |
| 360T        | O-ring                   | Buna N   |        |                       |           | Viton  |           |            |
| 383         | Mechanical Seal          | Single (Silicon Carbide vs. Silicon Carbide/Viton) |        |                       |           |        |           |            |
| 412F        | Gasket, Suction Piece    | Lexide   |        |                       |           |        |           |            |
| 489         | Check Valve              | Buna N   |        |                       |           | Viton  |           |            |
| 496         | O-ring                   | Buna N   |        |                       |           |        |           |            |

(1) Single row bearings standard on 3x3-8, 6x6-11 and 8x8-14 pumps.

(2) Carbon steel shaft standard on 3x3-8 and 4x4-10 pumps for all iron construction.

(3) Single row bearings standard on 3x3-8 pump.

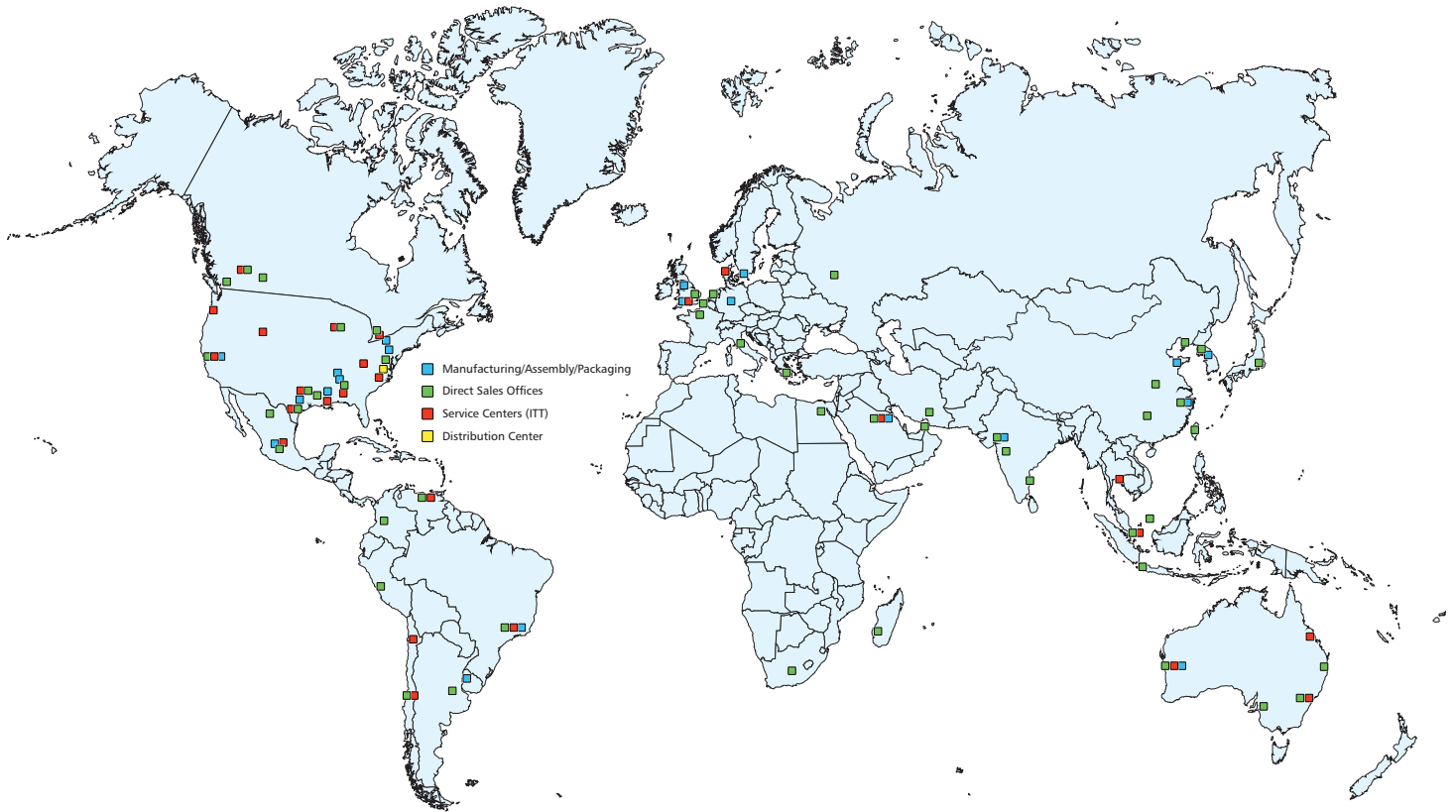
# Dimensions



| DIMENSIONS |           |         |             |             |             |              |             |             |             |             |              |                  |       |
|------------|-----------|---------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|------------------|-------|
| Pump Size  | Discharge | Suction | A           | B           | H           | I            | J           | K           | L           | M           | V            | Weight Bare Pump |       |
|            |           |         |             |             |             |              |             |             |             |             |              | Lbs.             | Kgs.  |
| 3x3-8      | 3         | 3       | 14.25 (368) | 7.56 (192)  | 13.38 (340) | 38.75 (984)  | 17.19 (437) | 25.31 (643) | 21.5 (546)  | 11.5 (292)  | 26.63 (676)  | 480              | (218) |
| 4x4-9      | 4         | 4       | 16.44 (418) | 8.63 (219)  | 15.63 (397) | 40.13 (1019) | 18.56 (472) | 25.75 (654) | 21 (533)    | 11.5 (292)  | 27.06 (687)  | 600              | (273) |
| 6x6-11     | 6         | 6       | 19.81 (503) | 10.25 (260) | 18.56 (472) | 42.69 (1084) | 16.5 (419)  | 27 (686)    | 21 (533)    | 10 (254)    | 28.56 (726)  | 705              | (320) |
| 8x8-14     | 8         | 8       | 23.25 (591) | 10.56 (268) | 20.25 (514) | 45.56 (1157) | 19.75 (502) | 34 (864)    | 26.63 (676) | 12 (305)    | 35.56 (903)  | 1150             | (523) |
| 10x10-14   | 10        | 10      | 28.94 (735) | 13 (330)    | 24.5 (622)  | 54.13 (1375) | 25.63 (651) | 44 (1118)   | 33.5 (851)  | 14.75 (375) | 45.31 (1151) | 1800             | (818) |

Visit our website at  
[www.gouldspumps.com](http://www.gouldspumps.com)

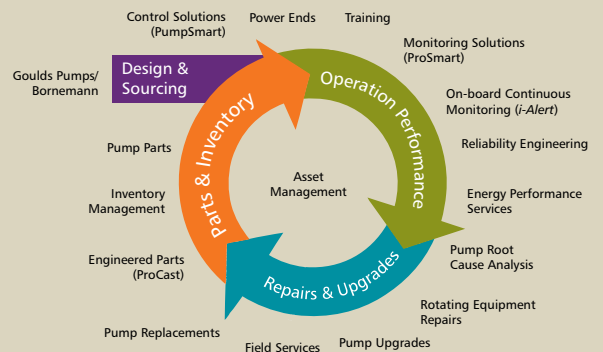
# Wherever you are, we're there too.



Reliability has no quitting time.

Building on over 160 years of Goulds Pumps experience, PRO Services provides an array of services focused on reducing equipment total cost of ownership (TCO) and increasing plant output, including predictive monitoring, maintenance contracts, field service, engineered upgrades, inventory management, and overhauls for pumps and other rotating equipment.

### Your Total Solution For Equipment Life Cycle Optimization



240 Fall Street  
 Seneca Falls, NY 13148  
[www.itt.com](http://www.itt.com)

© 2015 ITT Corporation, Inc.

B.TrashHog.en-US.2015-10