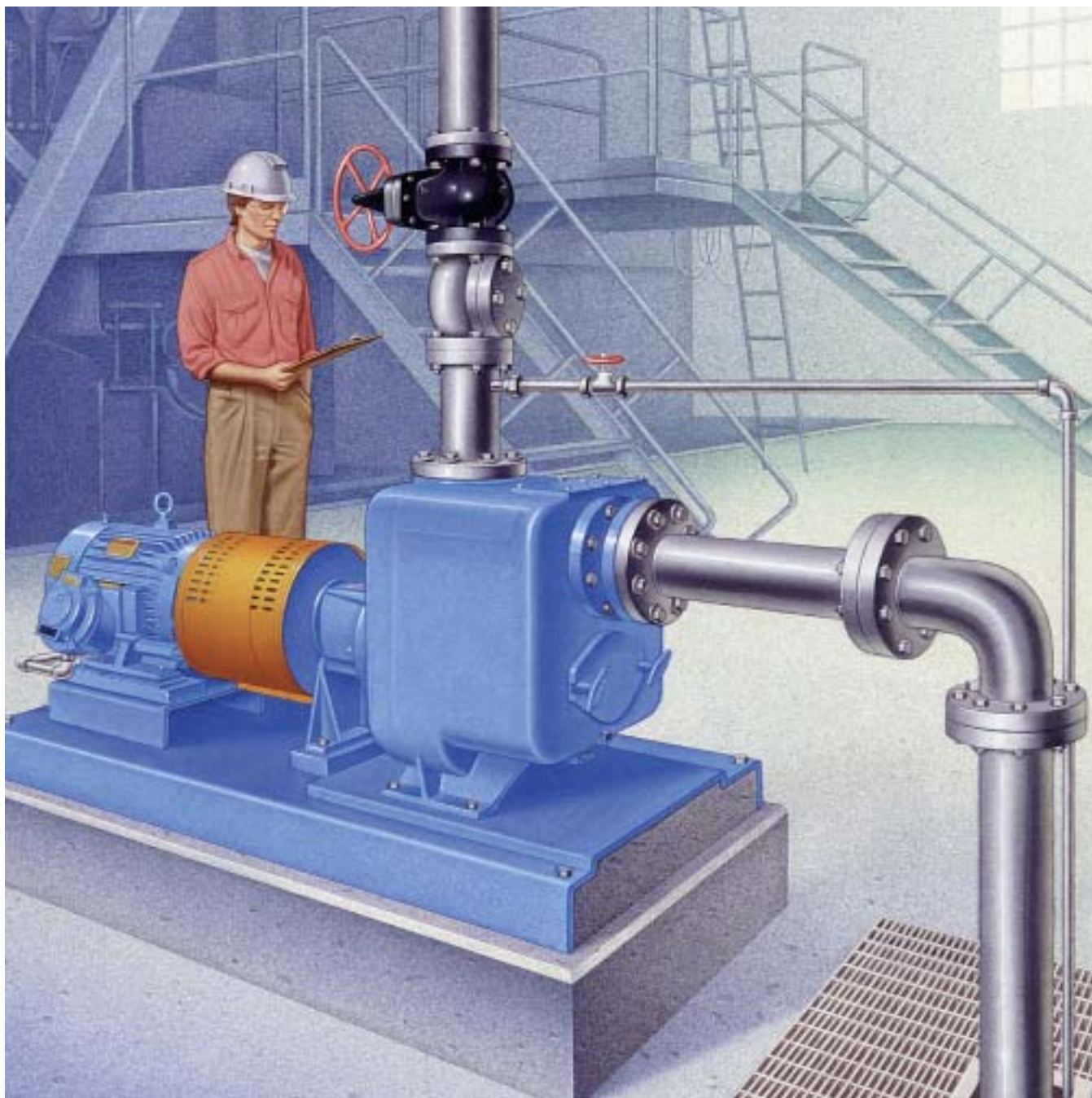




# GOULDS PUMPS

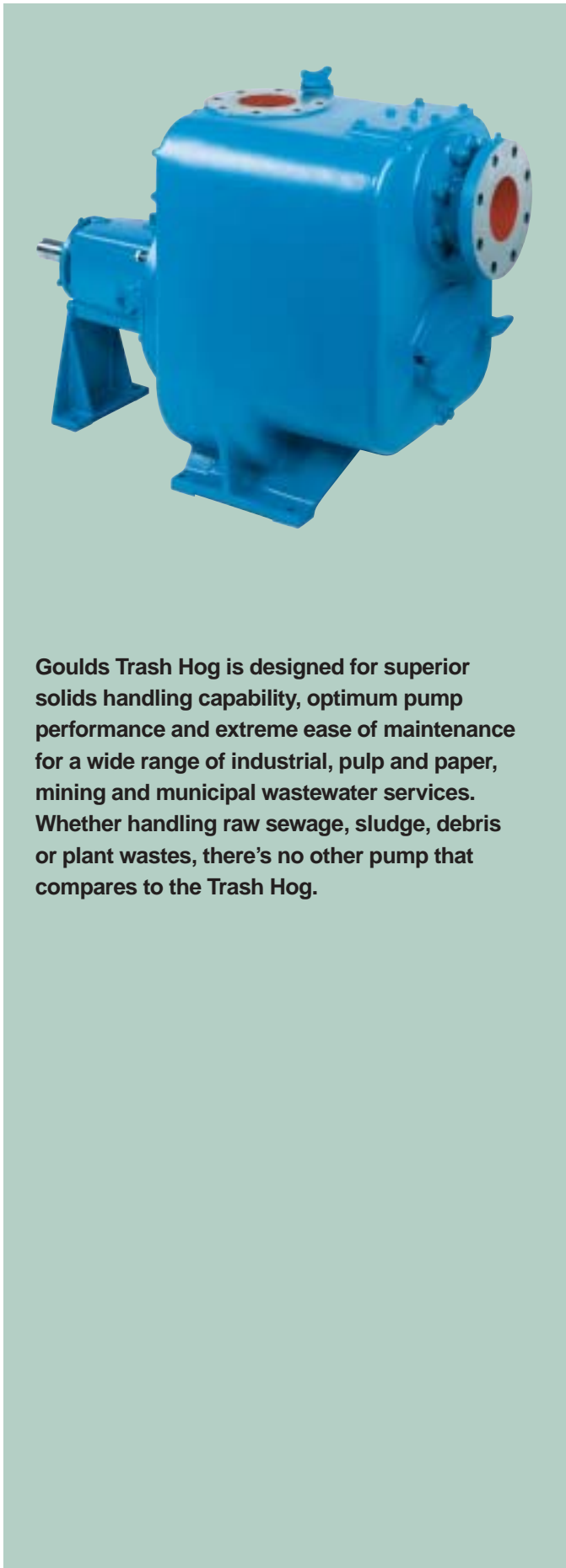
## Goulds *Trash Hog*<sup>®</sup> Self-Priming Solids Handling Pumps



Goulds Pumps



ITT Industries  
*Engineered for life*



Goolds 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.

# Goolds Trash Hog<sup>®</sup>

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

- Capacities to 6000 GPM (1363 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)

## 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*

## Services

### 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 & Metal Fabrication

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





# Trash Hog® 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. Easy to sling power end makes pull-out safe and simple. 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.

### CHECK VALVE COVERPLATE

Simplifies check valve replacement and facilitates inspection of check valve and impeller without draining pump.

### 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 safe and easy access to remove any debris.

### HEAVY VANED OPEN IMPELLER

Designed for superior performance in toughest solids handling services.

### 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.

# Designed for Extreme Ease of Maintenance

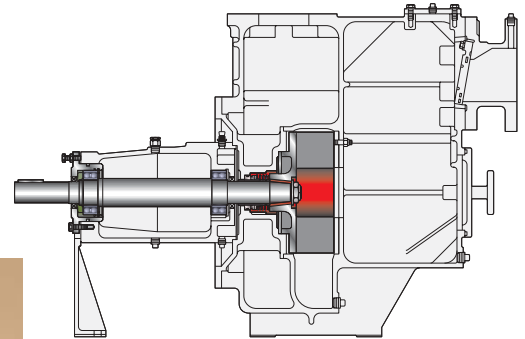
## Easily Renewed Performance

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.



## Safe and Easy Back Pull-Out

The power end is entirely outside the pump casing allowing a safe and easy "sling point" for removal. 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.

## Easy and Safe Clean-Out and Inspection



The inspection plate provides convenient access for replacing the suction check valve and removing small casing clogs without draining the casing.

The front cover access plate weighs only 6 pounds...it's easy to remove and cannot be frozen in place from corrosion.



## Easy to Install – Easy to Repair



Class 125 flat face flanges are standard for easy installation.



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



# 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

Goulds 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.



## 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 shaft bearing life. Large shaft diameter for minimal deflection, maximum mechanical seal life.



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.



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



Trash Hog offers the heaviest impellers in the self-priming, solids handling industry. Extra thick vanes and back shroud stand up to the toughest services.

# 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.



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.

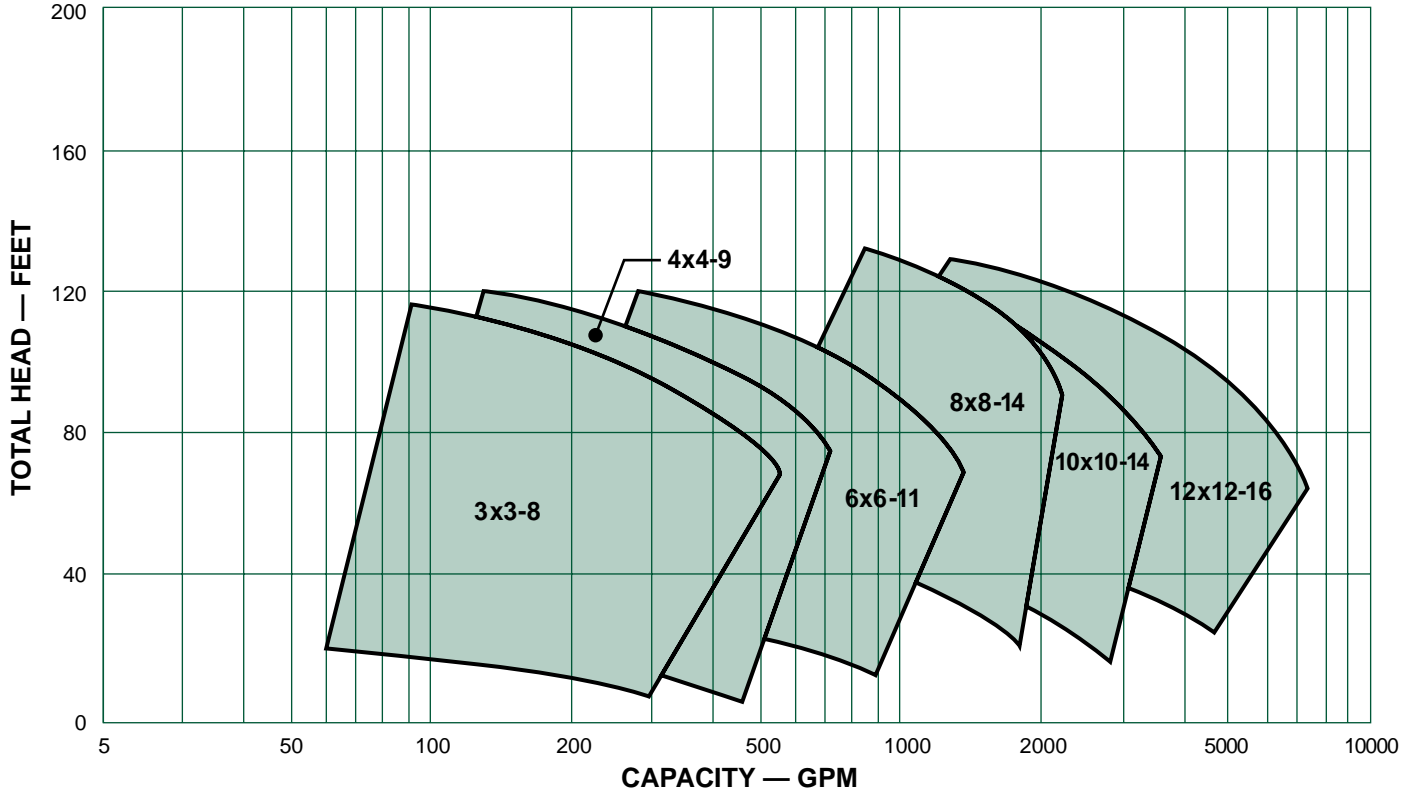


In this installation, two 3" Trash Hogs are being used to control the level of the liquid in these settling ponds. Liquid level controls in the sump determine whether either or both pumps are needed to maintain proper pond level. Trash Hogs were chosen due to their reliable priming capabilities.

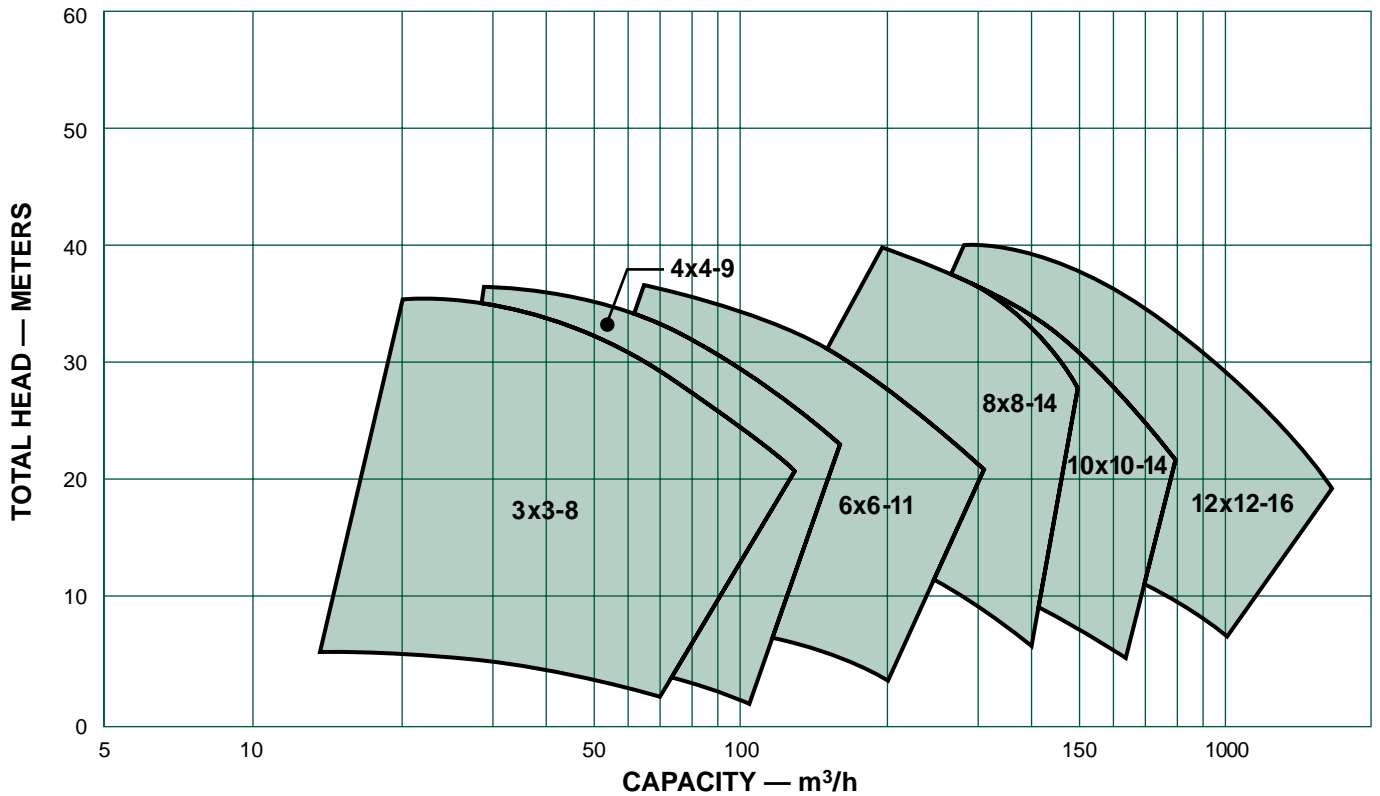
## Construction Details All dimensions in inches and (mm).

		3x3-8	4x4-9	6x6-11	8x8-14	10x10-14	12x12-16
<b>Casing</b>	Suction/Discharge Flange	3, Class 125	4, Class 125	6, Class 125	8, Class 125	10, Class 125	12, Class 125
	Maximum Pressure	85 PSIG (586 kPa)			65 PSIG (448 kPa)		80 PSIG (552 Kpa)
	Minimum Thickness	0.38 (10)			0.44 (11)	0.50 (13)	0.50 (13)
	Volume	10 Gal. (38L)	14 Gal. (53L)	21 Gal. (80L)	31 Gal. (117L)	95 Gal. (360L)	70 Gal. (265L)
<b>Shaft</b>	Diameter at Impeller	1.38 (35)	1.75 (45)		2.0 (51)		
	Diameter in Stuffing Box	1.38 (35)	1.75 (45)			2.0 (51)	
	Diameter Between Bearings	2.0 (51)	2.25 (57)	3.0 (76)			
	Diameter at Coupling	1.38 (35)	1.63 (41)	2.0 (51)			
<b>Bearings</b>	Radial Bearing	308	5210	313		5313	
	Thrust Bearing	308	5210	5313			
	Bearing Span	9.66 (245)	9.75 (248)	10.94 (278)		10.75 (273)	
	Avg L <sub>10</sub> Bearing Life	120,000 Hrs					
	Oil Sump Capacity	1.75 Qts. (1.7L)			2.12 Qts. (2.0L)		
<b>Max Speed</b>	2200 RPM	2000 RPM	1750 RPM	1450 RPM			
<b>Max Temp</b>	225°F (107°C)						
<b>Solids</b>	Maximum Diameter Solids	2.5 (64)	3.0 (76)				

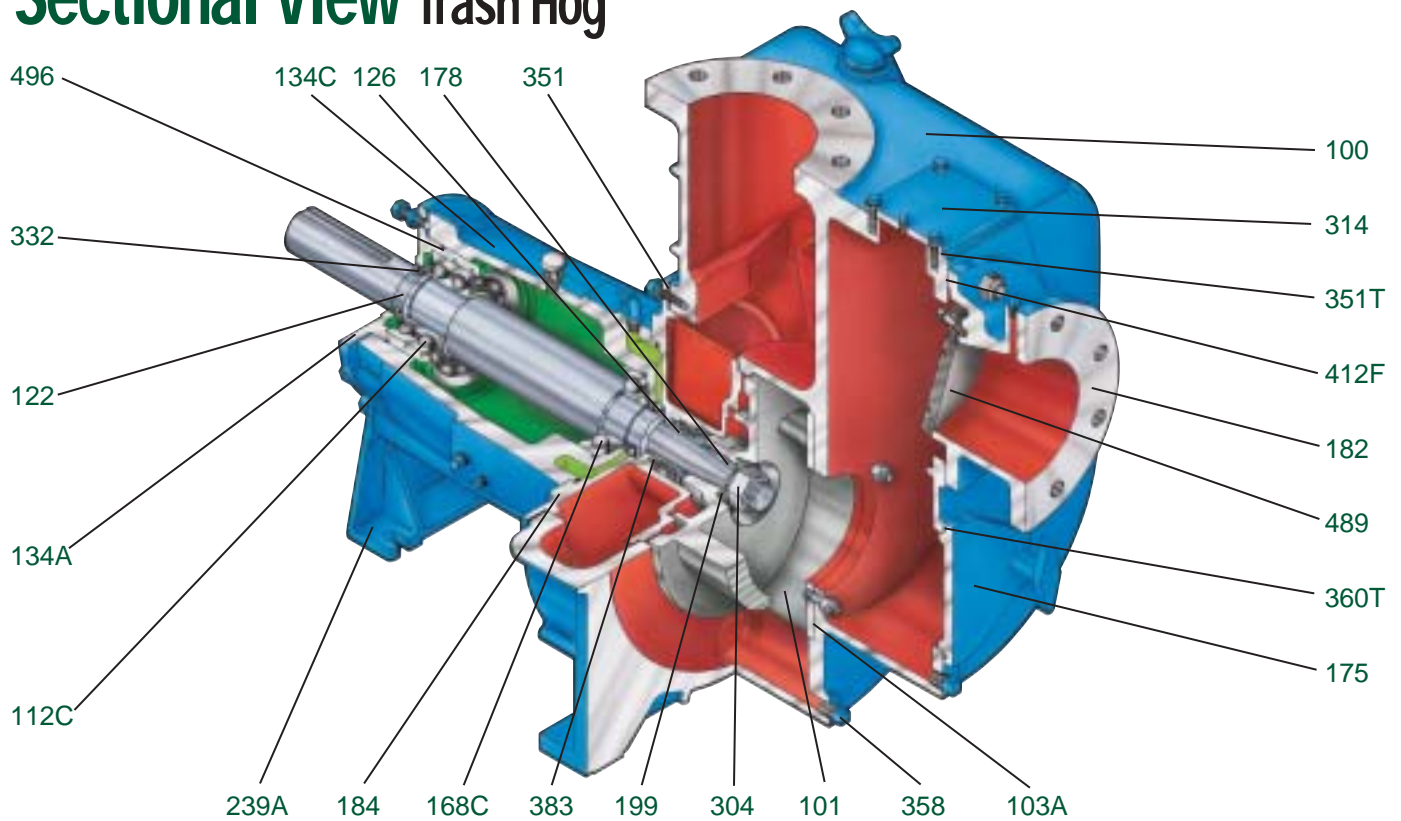
# Hydraulic Coverage Trash Hog® 60 Hz



# Hydraulic Coverage Trash Hog® 50 Hz



# Sectional View Trash Hog®



## Parts List and Materials of Construction

Item Number	Part Name	Material						
		All Cast Iron	CI316	CI316 w/316 SB Cover	CI/HC600	CI/CD4	All 316SS	All CD4MCu
100	Casing	Cast Iron					316SS	CD4MCu
358	Casing Drain Plug	Carbon Steel					316SS	Alloy 20
304	Impeller Nut	Carbon Steel					316SS	Alloy 20
199	Impeller Washer	Carbon Steel					316SS	Alloy 20
351	Casing Gasket	Lexide						
184	Stuffing Box Cover	Cast Iron		316SS	Cast Iron	316SS	CD4MCu	
383	Mechanical Seal	Single (Silicon Carbide vs. Silicon Carbide/Viton)						
126	Shaft Sleeve (Optional)	416 SS						
134C	Bearing Frame	Cast Iron						
239A	Frame Foot	Cast Iron						
168C	Radial Bearing	Double Row Angular Contact <sup>(1)</sup>						
178	Impeller Key	Steel	316 SS					
122	Shaft	17-4PH <sup>(2)</sup>						
332	Oil Seal	Lip Seal (Buna\Steel)						
412F	Gasket, Suction Piece	Lexide						
182	Suction Piece	Cast Iron				316SS	CD4MCu	
489	Check Valve	Buna N				Viton		
314	Inspection Cover	Cast Iron				316SS	CD4MCu	
351T	Gasket, Inspection Cover	Lexide						
175	Clean Out Cover	Cast Iron				316SS	CD4MCu	
360T	O-ring	Buna N				Viton		
103A	Wear Plate	Ductile Iron		316SS	HC600	CD4	316SS	CD4MCu
101	Impeller	Ductile Iron		316SS	HC600	CD4	316SS	CD4MCu
496	O-ring	Buna N						
134A	Bearing Carrier	Cast Iron						
112C	Thrust Bearing	Double Row Angular Contact <sup>(3)</sup>						

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

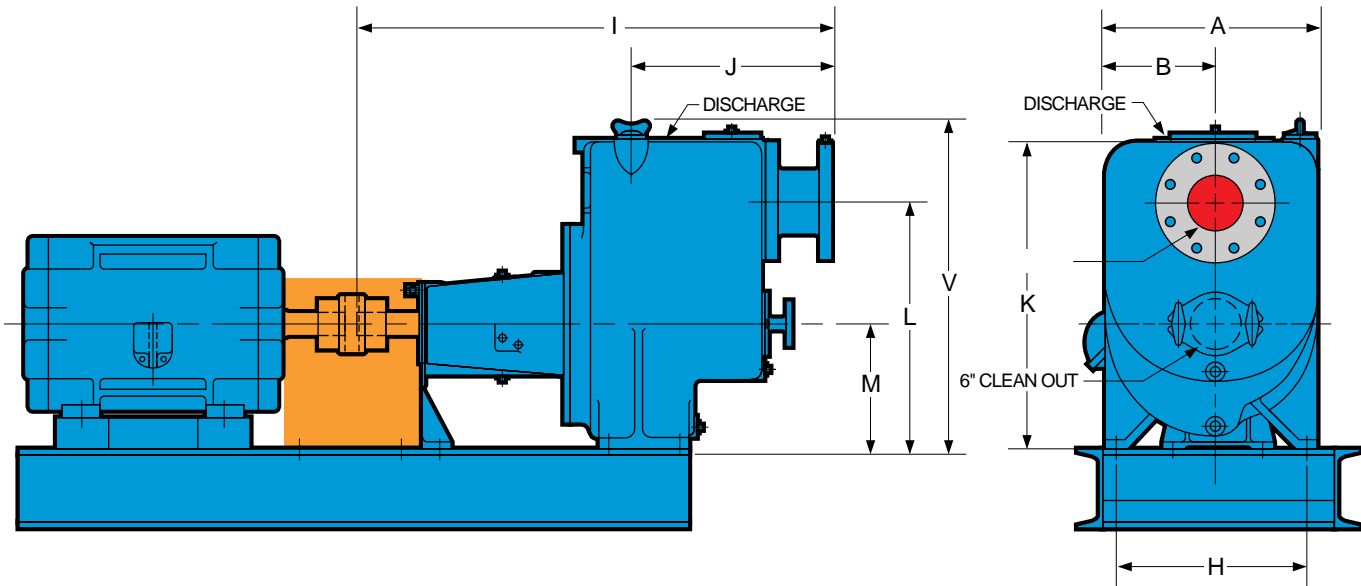
(2) Carbon steel shaft standard on 3x3-8 and 4x4-10 pumps for all iron construction.

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



# Dimensions Trash Hog®

All dimensions in inches and (mm). Not to be used for construction.



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)
12x12-16	12	12	36.38 (924)	16.5 (419)	31.5 (800)	64.25 (1632)	39.0 (991)	71.94 (1827)	38.88 (987)	16.38 (416)	71.94 (1827)	2470 (1123)



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