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xylem
Let's Solve Water

TECHNICAL BROCHURE
B3887BHF R5



WS_BHF Series

Model 3887BHF

SUBMERSIBLE SEWAGE PUMP

BUILT IN THE USA
ENGINEERED, ASSEMBLED & TESTED

GOULDS WATER TECHNOLOGY
a xylem brand

FEATURES

Impeller: Cast iron, enclosed, non-clog, dynamically balanced with pump out vanes for mechanical seal protection.

Casing: Cast iron flanged volute type for maximum efficiency. Designed for easy installation on A10-20 slide rail or base elbow rail systems.

Mechanical Seal: Silicon carbide vs. silicon carbide sealing faces for superior abrasive resistance, stainless steel metal parts, BUNA-N elastomers.

Shaft: Corrosion-resistant, 300 series stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

Fasteners: 300 series stainless steel.

Capable of running dry without damage to components.

Designed for continuous operation when fully submerged.

Extended Warranty available for residential applications.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Water transfer
- Sewage systems
- Light industrial
- Dewatering/Effluent
- Commercial applications

Anywhere waste or drainage must be disposed of quickly, quietly and efficiently.

SPECIFICATIONS

Pump

- **Solids handling capabilities:** 2" maximum
- **Capacities:** up to 220 GPM
- **Total heads:** up to 81 feet TDH
- **Discharge size:** 2" NPT threaded companion flange as standard. 3" option available but must be ordered separately. (Order no. A1-3)
- **Temperature:** 104°F (40°C) continuous
  140°F (60°C) intermittent.

MOTORS

- Fully submerged in high grade turbine oil for lubrication and efficient heat transfer. All ratings are within the working limits of the motor.
- **Class B insulation on ⅓-1½ HP models.**
- **Class F insulation on 2 HP models.**

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ⅓ – 1 HP models have NEMA three prong grounding plugs.
- 1½ HP and larger units have bare lead cord ends.

Three phase (60 Hz):

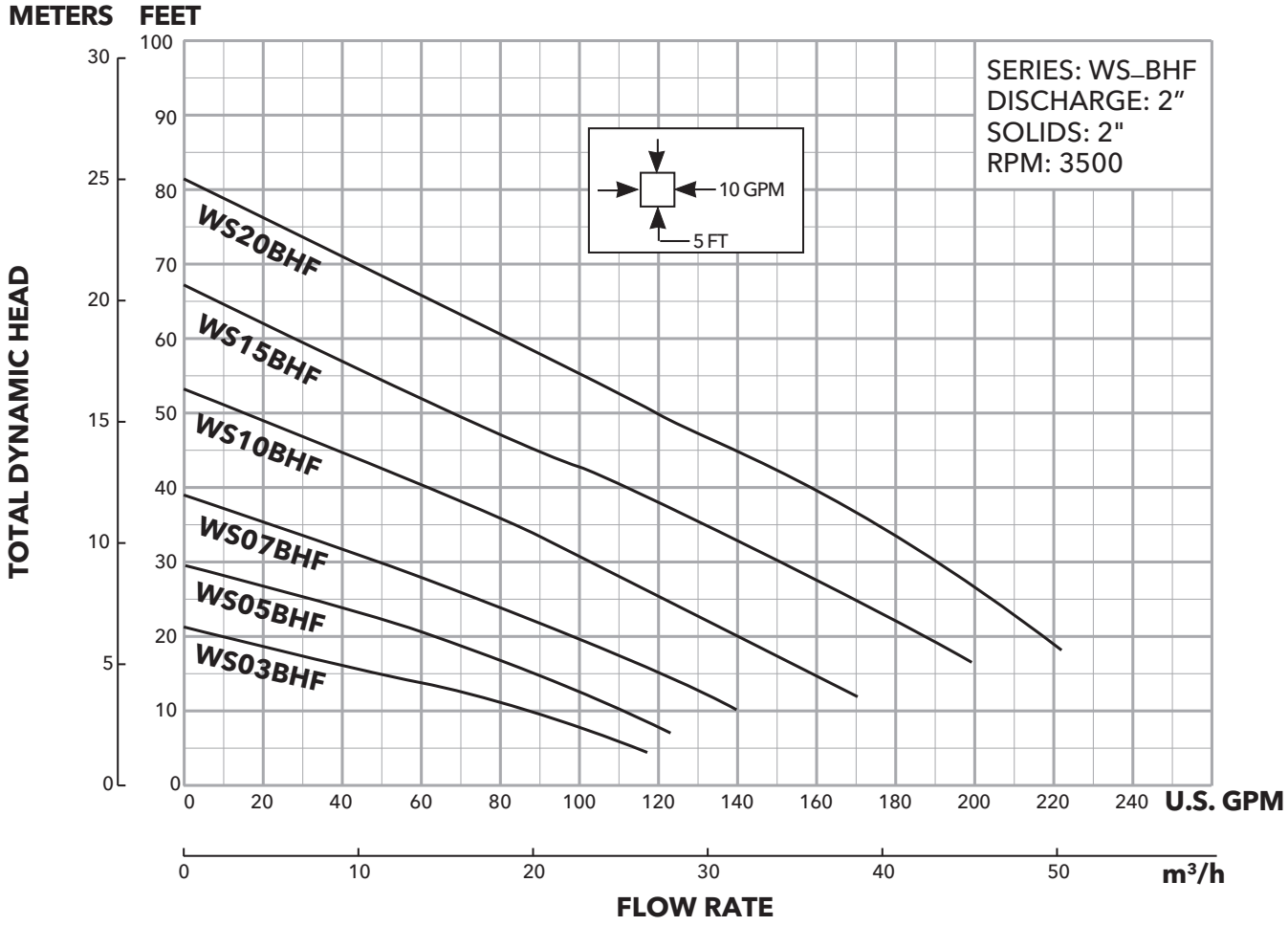
- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

- **Bearings:** Upper and lower heavy duty ball bearing construction.
- **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- **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. Standard cord is 20'. Optional lengths are available.
- **Motor Cover O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

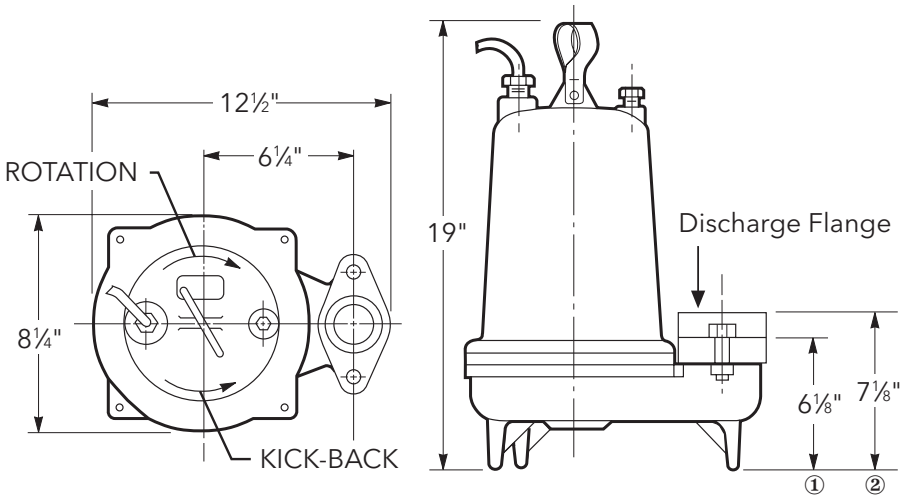
Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

CURVES



DIMENSIONS

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



Discharge Flange:

① 2" NPT standard

② 3" NPT optional (order an A1-3)

MOTOR AND MODEL INFORMATION

Order Number	HP	Phase	Volts	RPM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Motor Efficiency %	Resistance	
										Start	Line-Line
WS0311BHF	0.33	1	115	3500	2.94	12.4	46.0	M	54	7.5	1.0
WS0318BHF			208			6.8	31.0	K	68	9.7	2.4
WS0312BHF			230			6.2	34.5	M	53	9.6	4.0
WS0511BHF	0.5		115		3.19	14.5	46.0	M	54	7.5	1.0
WS0518BHF			208			8.4	31.0	K	68	9.7	2.4
WS0512BHF			230			7.6	34.5	M	53	9.6	4.0
WS0538BHF		3	200			4.9	22.6	R	68	-	3.8
WS0532BHF			230			3.6	18.8	R	70	-	5.8
WS0534BHF			460			1.8	9.4	R	70	-	23.2
WS0537BHF			575			1.5	7.5	R	62	-	35.3
WS0718BHF	0.75	1	208		3.44	11.0	31.0	K	68	9.7	2.4
WS0712BHF			230			10.0	27.5	J	65	12.2	2.7
WS0738BHF		3	200			6.2	20.6	L	64	-	5.7
WS0732BHF			230			5.4	15.7	K	68	-	8.6
WS0734BHF			460			2.7	7.9	K	68	-	11
WS0737BHF			575			2.2	9.9	L	78	-	26.5
WS1018BHF	1	1 1	208		3.75	14.5	59.0	K	68	9.3	1.1
WS1012BHF			230			13.0	36.2	J	69	10.3	2.1
WS1038BHF		3	200			8.6	27.6	M	77	-	2.7
WS1032BHF			230			7.5	24.1	L	79	-	4.1
WS1034BHF			460			3.8	12.1	L	79	-	16.2
WS1037BHF			575			3.1	9.9	L	78	-	26.5
WS1512BHF	1.5	1	230		4.00	18.0	52.0	J	67	2.76	0.53
WS1538BHF		3	200			10.0	42.4	K	78	-	1.7
WS1532BHF			230			9.6	42.4	K	78	-	1.7
WS1534BHF			460			4.8	21.2	K	78	-	6.6
WS1537BHF			575			3.9	16.3	L	78	-	10.5
WS2012BHF	2	1	230		4.44	18.0	49.6	F	78	3.2	1.1
WS2038BHF		3	200			12.0	42.4	K	78	-	1.7
WS2032BHF			230			11.6	42.4	K	78	-	1.7
WS2034BHF			460			5.8	21.2	K	78	-	6.6
WS2037BHF			575			4.7	16.3	L	78	-	10.5

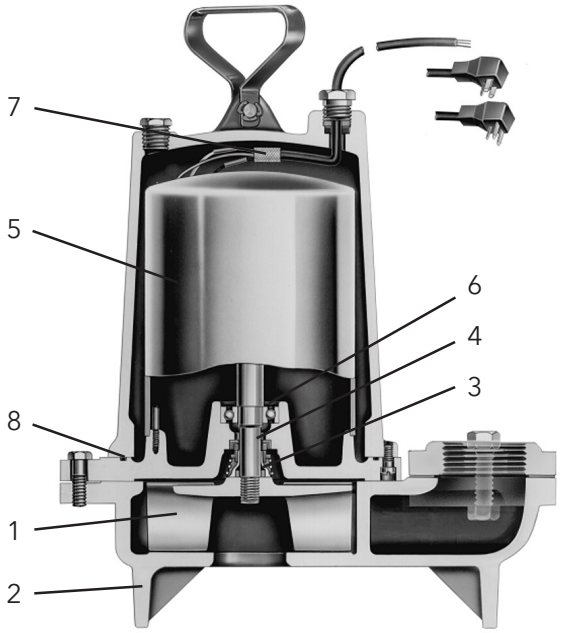
PERFORMANCE RATINGS (gallons per minute)

Order No.		WS03-BHF	WS05-BHF	WS07-BHF	WS10-BHF	WS15-BHF	WS20-BHF
Total Head Feet of Water	**HP**	⅓	½	¾	1	1½	2
	RPM	3500	3500	3500	3500	3500	3500
	10	86	110	140	–	–	–
	15	48	88	120	158	–	–
	20	–	62	98	139	186	217
	25	–	32	74	120	170	204
	30	–	–	49	101	150	190
	35	–	–	21	82	130	175
	40	–	–	–	60	110	159
	45	–	–	–	38	88	140
	50	–	–	–	–	67	120
	55	–	–	–	–	47	100
	60	–	–	–	–	29	80
	65	–	–	–	–	–	62
	70	–	–	–	–	–	43
	75	–	–	–	–	–	23

COMPONENTS *(for reference only)*

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring

**** For repair parts, reference repair parts book.***



PUMP-TO-PANEL PART NUMBERS

Pump	HP	Phase	Voltage	Amps	Simplex Panel	Duplex Panel
WS0311BHF	0.33	1	115	12.4	C4S10020	C4D10020
WS0318BHF	0.33	1	208	6.8	C4S10020	C4D10020
WS0312BHF	0.33	1	230	6.2	C4S10020	C4D10020
WS0511BHF	0.5	1	115	14.5	C4S10020	C4D10020
WS0518BHF	0.5	1	208	8.4	C4S10020	C4D10020
WS0512BHF	0.5	1	230	7.6	C4S10020	C4D10020
WS0538BHF	0.5	3	200	4.9	C4S34063	C4D34063
WS0532BHF	0.5	3	230	3.6	C4S32540	C4D32540
WS0534BHF	0.5	3	460	1.8	C4S31625	C4D31625
WS0537BHF	0.5	3	575	1.5	C4S31625	C4D31625
WS0718BHF	0.75	1	208	11	C4S10020	C4D10020
WS0712BHF	0.75	1	230	10	C4S10020	C4D10020
WS0738BHF	0.75	3	200	6.2	C4S34063	C4D34063
WS0732BHF	0.75	3	230	5.4	C4S34063	C4D34063
WS0734BHF	0.75	3	460	2.7	C4S32540	C4D32540
WS0737BHF	0.75	3	575	2.2	C4S31625	C4D31625
WS1018BHF	1	1	208	14.5	C4S10020	C4D10020
WS1012BHF	1	1	230	13	C4S10020	C4D10020
WS1038BHF	1	3	200	8.6	C4S36310	C4D36310
WS1032BHF	1	3	230	7.5	C4S36310	C4D36310
WS1034BHF	1	3	460	3.8	C4S32540	C4D32540
WS1037BHF	1	3	575	3.1	C4S32540	C4D32540
WS1512BHF	1.5	1	230	18	C4S10020	C4D10020
WS1538BHF	1.5	3	200	10	C4S31016	C4D31016
WS1532BHF	1.5	3	230	9.6	C4S36310	C4D36310
WS1534BHF	1.5	3	460	4.8	C4S34063	C4D34063
WS1537BHF	1.5	3	575	3.9	C4S32540	C4D32540
WS2012BHF	2	1	230	18	C4S10020	C4D10020
WS2038BHF	2	3	200	12	C4S31016	C4D31016
WS2032BHF	2	3	230	11.6	C4S31016	C4D31016
WS2034BHF	2	3	460	5.8	C4S34063	C4D34063
WS2037BHF	2	3	575	4.7	C4S34063	C4D34063

SERIES "CORE 4" CONTROL PANELS

Series “Core 4” Control Panels provide outstanding, automatic, liquid level control to help manage and maintain pump operation for a variety of effluent, sewage, and water transfer applications.

FEATURES

- Rugged, NEMA 4X construction withstands even the most severe weather conditions and prevents corrosion
- Solid-state control board displays float status for ease of installation and trouble-shooting
- Hinged door with lockable stainless-steel latch for safe operation indoors and out
- Through-door mounted alarm test switch ensures proper operation of the alarm circuit without the need to open the panel
- Panel can be wired for a single power feed and control circuit, or the control circuit can be wired to a separate power supply to ensure alarm integrity in case of a tripped pump breaker
- Top-mounted, high intensity, flashing red light provides 360° visibility
- Auxiliary alarm contacts provided for remote alarm connection
- Field wiring diagram, panel schematic and installation instructions included
- Entire unit is UL and CUL listed

PRODUCT SPECIFICATIONS

- Hand-off-automatic (H-O-A) pump selection switch(es)
- On-off control circuit switch
- Float switches:
  - o Normally open (pump down) mechanical float switches with 20’ cords
  - o Simplex panels (three switches)
  - o Duplex panels (four switches)
- Duplex panels include alternation
- NEMA 4X:
  - o Flashing red alarm light
  - o Fiberglass enclosure with gasketed, hinged door and stainless-steel hardware
  - o Alarm horn (95db)
- Solid state printed circuit control board with float indicator lights
- Auxiliary alarm dry contact
- Elapsed time meter(s)
- Cycle counter(s)
- Single Phase
  - o Field adjustable for 115 or 230V, 60Hz
- Three Phase
  - o Field adjustable for 208/230/460/575 V, 60 Hz
  - o 115V control circuit transformer
  - o Adjustable motor overload protectors



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Xylem |'zīləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com

COMPLETE. RELIABLE. BLUE.
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