

# 4WS

## Submersible Sewage Pump 4" Flanged Discharge, 3" Solids Handling



*Specifically designed for the following uses: Sewage systems, flood and pollution control, dewatering/effluent, farms, hospitals, trailer courts, motels.*

### **MOTOR INFORMATION**

#### **General:**

Class "F" insulation  
Oil-filled design

#### **Single Phase:**

Built-in automatic reset overload  
208 V – 1.5-3 HP  
230 V – 1.5-5 HP

#### **Three Phase:**

Overloads required in control panel  
200 V – 1.5-5 HP  
230 V – 1.5-7.5 HP  
460 V – 1.5-7.5 HP  
575 V – 1.5-7.5 HP

Maximum solid size: 3"

Discharge Size: 4", 125# ANSI flange

Maximum capacity: 620 GPM

Maximum Total Head: 60 feet

300 Series stainless steel fasteners

20' Power cord

Standard silicon carbide/silicon carbide outer (lower) seals

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

Casing: Heavy duty gray cast iron, ASTM A48, Class 30. Volute type casing with 4", 125#, flanged, horizontal discharge conforming to ANSI standards. Compatible with A10-40, A10-60 cast iron or A10-40B, A10-60B 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 tandem mounted shaft seals are positioned independently and are separated by an oil-filled chamber.

Components: Capable of running dry without damage to components.



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

Red Jacket Water Products is a licensed trademark.

The ITT Engineered Blocks symbol is a registered trademark and tradename of ITT Industries.

Visit us at: [www.redjacketwaterproducts.com](http://www.redjacketwaterproducts.com)

Effective March, 2003

BRI4WS-R0

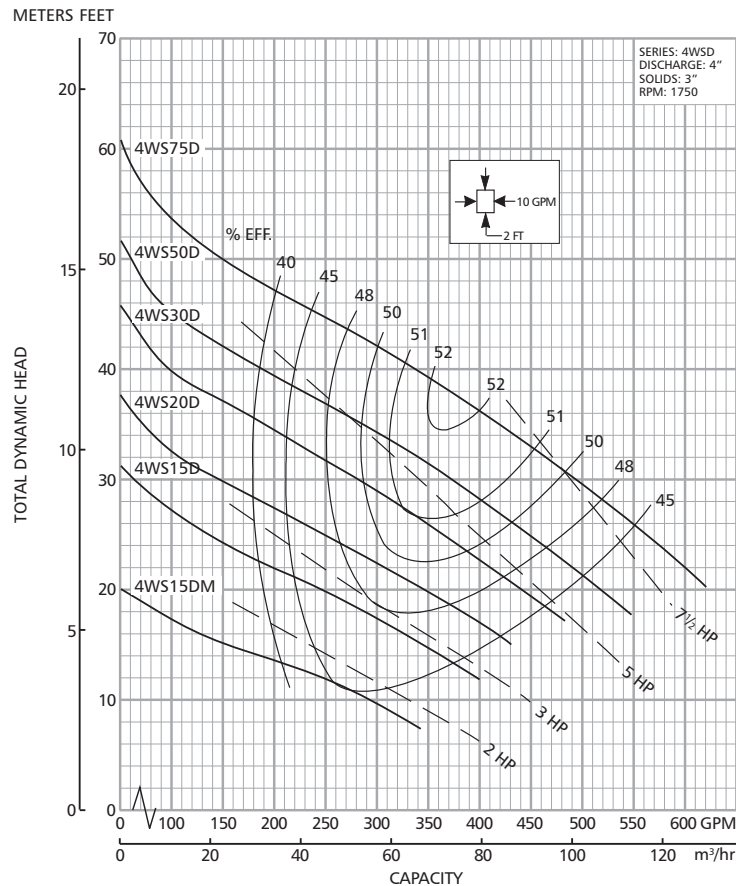


**ITT Industries**

# 4WS

## Submersible Sewage Pump 4" Flanged Discharge, 3" Solids Handling

### PERFORMANCE CURVE



### MOTOR FEATURES

Maximum ambient temperature: 104° F (40° C) continuous duty; 140° F (60° C) intermittent duty

Rated for continuous duty when fully submerged

RPM: 1750

60 Hertz

Single row ball bearings

300 Series stainless steel keyed shaft

Oil-filled: Fully submerged in O-ring sealed, 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.

Single phase: 1.5 and 2 HP have 14/3 STOW and 3 to 7.5 HP have 10/3 STOW cords. Built-in capacitors and on-winding overload protection.

Three phase: Have 14/4 STOW cords except 5 HP 200/230 volt and 7.5 HP 230 volt which have 10/4 STOW cords. Overload protection must be provided in control panel or starter unit.

Continuous duty design: Motor is designed for continuous operation when fully submerged.

Ratings: Pump ratings are within the motor manufacturer's working limits.

Bearings: Upper and lower ball bearing construction to carry all radial and 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. Standard cord is 20'. Optional lengths are available.

Pump/Motor Options:  
Silicon bronze impeller.

Tungsten carbide outer seals.

Longer power cords: 30', 50' and 100'.



# 4WS

## Submersible Sewage Pump 4" Flanged Discharge, 3" Solids Handling

### MODEL INFORMATION

Order Number	HP	Phase	Volts	RPM	Impeller Dia. (in.)	Max. Amps	LRA	KVA Code	Full Load Motor Eff.	Resistance		Wt. (lbs.)
										Start	Line-Line	
4WS1518DM*	1.5	1	208	1750	5.62	17.2	50.8	B	80	1.1	0.9	195
4WS1512DM*			230			13.2	32.7	F	73	1.5	1.4	
4WS1538DM*		3	200			11.5	43.0	H	81	NA	1.7	
4WS1532DM*			230			10.0	40.0	K	81	NA	2.3	
4WS1534DM*			460			5.0	20.0	E	74	NA	9.3	
4WS1537DM*			575			4.0	11.8	E	74	NA	14.8	
4WS1518D		1	208		17.2	50.8	B	80	1.1	0.9		
4WS1512D			230		13.2	32.7	F	73	1.5	1.4		
4WS1538D		3	200		11.5	43.0	H	81	NA	1.7		
4WS1532D			230		10.0	40.0	K	81	NA	2.3		
4WS1534D			460		5.0	20.0	E	74	NA	9.3		
4WS1537D			575		4.0	11.8	E	74	NA	14.8		
4WS2018D	2	1	208	1750	6.62	20.3	50.8	B	80	1.1	0.9	200
4WS2012D			230			16.3	37.4	D	76	1.4	1.3	
4WS2038D		3	200			13.3	43.0	H	81	NA	1.7	
4WS2032D			230			11.6	40.0	F	83	NA	2.3	
4WS2034D			460			5.8	20.0	F	83	NA	9.3	
4WS2037D			575			4.6	14.4	H	74	NA	14.8	
4WS3018D	3	1	208	1750	7.00	25.5	50.8	B	80	1.1	0.9	208
4WS3012D			230			21.5	46.4	C	79	1.0	1.0	
4WS3038D		3	200			16.6	43.0	G	85	NA	1.3	
4WS3032D			230			14.4	49.5	H	83	NA	1.9	
4WS3034D			460			7.2	24.8	H	83	NA	7.5	
4WS3037D			575			6.6	17.3	G	78	NA	11.6	
4WS5012D	5	1	230	1750	7.25	26.5	57.7	A	80	1.0	0.8	213
4WS5038D			200			19.1	77.8	F	84	NA	0.9	
4WS5032D		3	230			16.6	63.6	E	85	NA	1.2	
4WS5034D			460			8.3	31.8	E	85	NA	4.8	
4WS5037D			575			6.6	22.8	E	80	NA	7.4	
4WS7532D			7.5			230	23.0	105.0	G	83	NA	0.7
4WS7534D	460	11.5		53.0	G	83	NA	2.8				
4WS7537D	575	9.2		50.0	E	84	NA	4.4				

\* M denotes a minimum trim impeller.

### PERFORMANCE RATINGS

Series No. ▶	4WS15DM	4WS15D	4WS20D	4WS30D	4WS50D	4WS75D	
HP ▶	1½	1½	2	3	5	7½	
RPM ▶	1750						
Total Head Feet of Water	10	300	395				
	15	170	310	370			
	20		225	300	440	520	
	25		115	205	365	440	
	30			100	270	360	490
	35				160	275	415
	40				75	175	330
	45					90	240
	50						150
	55						75

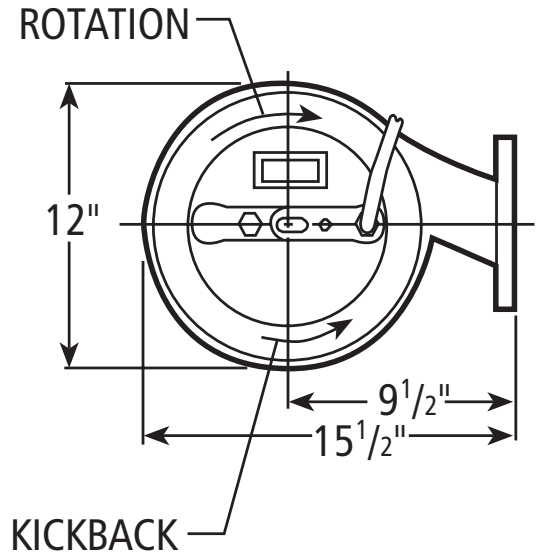
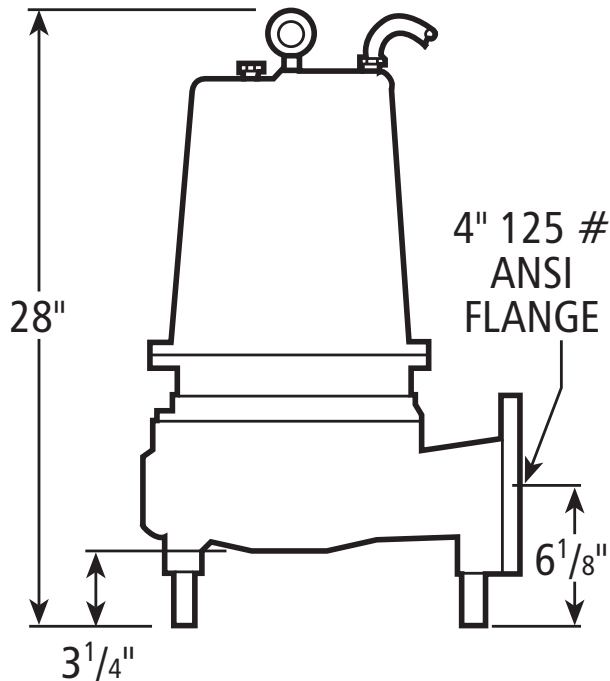


# 4WS

## Submersible Sewage Pump 4" Flanged Discharge, 3" Solids Handling

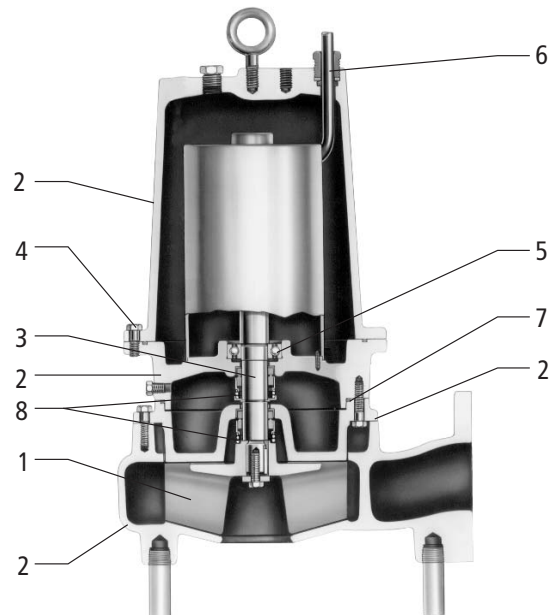
### DIMENSIONS

(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		1101		
2	Castings		1003				
3	Shaft-keyed		300 Series SS				
4	Fasteners		300 Series SS				
5	Ball bearings		Steel				
6	Power cable		STOW, 20 feet		Addl. lengths		
7	O-ring		BUNA-N				
8	Mechanical Seals		Service	Rotary	Stationary	Elastomers	Metal Parts
	Inner (Upper)	All					
	Outer (Lower)	STD	Mild abrasives	Silicon carbide			
		OPT	Heavy Duty	Tungsten carbide			
Material Code			Engineering Standard				
1003			Cast iron — ASTM A48 Class 30				
1101			Bronze — ASTM C87500				



Red Jacket Water Products reserves the right to make design improvements and pricing modifications as necessary and without notice.

PRINTED IN U.S.A.

© 2003 Red Jacket Water Products



**ITT Industries**