

# Monarch/Little Giant

## Product Catalog

### Water Systems



### Wastewater



### Industrial



995896



*Pumps. People. Partnerships.*



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### Industrial

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# Water Systems

# Water Systems

## Pump Selection Table

# WaterSystems

## Pump Selection Table



### Water Systems

PUMP TYPE	SHALLOW WELL & CONVERTIBLE JET PUMPS	DEEP WELL SUBMERSIBLE PUMPS	PRESSURE TANKS	SUMP & SEWAGE
SERIES	MJS & MJC JP, JPC	W5G, W8G W12G, W22G	PC T Series	UP, SP, ESP, BE, WS & WSV
APPLICATION	Supplies fresh water to rural homes, farms and cabins.	Supplies fresh water to rural homes, farms and cabins from minimum 4" drilled wells.	Provides even pressure and flow to fresh water supply systems.	Removes waste water, liquid effluent and raw sewage for residential to light industrial applications.
DESCRIPTION	Cast iron casing, with plastic impeller, nozzle and venturi; open drip proof motor, includes 30/50 PSI pressure switch, pressure gauge and deep well injector on MJC. CSA approved.	Stainless shell with either stainless steel or thermoplastic discharge head and motor bracket; motors are 115 or 230 volts, 2 wire or 3 wire with ground. CSA approved.	Challenger series precharged diaphragm well tanks use controlled action all butyl diaphragm.	Submersible pumps have oil filled motors with rugged cast iron or corrosion resistant stainless steel motor casings, with plastic or cast iron bases. CSA approved.
SUCTION & DISCHARGE	1¼" x 1"	1¼" Discharge MSS 30, 50, and 85 have a 2" discharge.	¾" to 1¼" System connection	1¼" up to 2" Discharge
PERFORMANCE - FLOW - HEAD	Up to 24.8 U.S. GPM Up to 80 PSI	Up to 32 U.S. GPM Up to 266 PSI	<b>Physical Performance:</b> 4½ to 120 Gallons. <b>Drawdown:</b> 1.4 to 36.8 Gallons <b>Max. Operating Pressure:</b> 100 PSI	Up to 155 U.S. GPM Up to 90 feet
HORSEPOWER	½ to 1 HP	½ to 1½ HP	N/A	1/3 to 2 HP
PAGES	6 to 9	10 to 27	28 to 29	31 to 49

# WaterSystems

## Pump Selection Table



### Multi-Purpose & Utility Pumps

LAWN SPRINKLER	ELECTRIC MOTOR DRIVEN	ENGINE DRIVEN	FRAME MOUNT	HAND PUMPS	IRRIGATION & INDUSTRIAL PUMPS
MJSE, NSPHE, SPHE	ACE, B50S, BSE, BSEF	ACGF, NG, BSGF, NSGF, TSP, MIG	ACT, AOT, BSTF, MIT, TT	V110, L-30A	ECE, HCE
Lawn sprinkling and turf irrigation, where both pressure and volume is required.	Compact electric motor driven utility pumps for pressure boosting, spraying and transfer including some ag-chemicals.	Compact gas engine driven utility pumps for pressure boosting, ag-chemical transfer or spraying, contractor dewatering and trash water removal.	Frame mount, shaft drive utility pumps for pressure boosting, ag-chemical transfer, general dewatering and trash water removal.	Transfer of small volumes of petroleum products from 45 Gallon drum (V110, L-30A) or delivery of fresh water from shallow depths (No. 3).	Irrigation & Industrial where both high volume and/or high pressure are required.
Self priming cast iron casing with plastic impellers to 2 HP; cast iron impellers on 3 and 5 HP. CSA approved.	Rugged cast iron casing with plastic and cast iron impellers; mechanical seal is Buna or Viton.	Rugged cast iron casing with cast iron impellers and a variety of internationally known engines.	Rugged cast iron casing with cast iron impellers; keyed shaft for coupling to motor or engine by direct coupling or belts and pulleys.	Rugged cast iron construction with brass vanes (V110), Nitrile rubber diaphragm (L-30A), or closed spout 3" diameter cylinder (No. 3 Cistern).	End suction centrifugal pumps available with close coupled electric, or frame mount.
1¼" x 1" to 2½" x 2"	1¼" x 1" to 3" x 3"	1½" x 1¼" to 4" x 4"	1¼" x 1" to 4" x 4"	¾" NPT male discharge or 1¼" open spout	ECE 2" x 1½" to 4" x 4" Threaded 1½" x 1" to 4" x 3" Flanged HCE 3" x 2" to 4" x 3" Flanged
Up to 170 U.S. GPM Up to 73 PSI	Up to 290 U.S. GPM Up to 70 PSI	Up to 615 U.S. GPM Up to 113 PSI	Up to 900 U.S. GPM Up to 75 PSI	N/A N/A	Up to 800 U.S. GPM Up to 210 PSI
½ to 5 HP	½ to 7½ HP	¾ to 25 HP	1½ to 40 HP	N/A	3 to 60 HP
52 to 55	56 to 65	66 to 73	74 to 84	85	86 to 107



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Form 995698 — 03/09



# WaterSystems

## MJS Series



MJS-50



MJS-50/PC25S



### Applications

Pump - motor assembly with internal injector and 30-50 PSI pressure switch and pressure gauge. All pumps have 1 ¼" NPT suction and 1" NPT discharge. Model MJSH-50 is recommended for 40-60 PSI pressure setting.

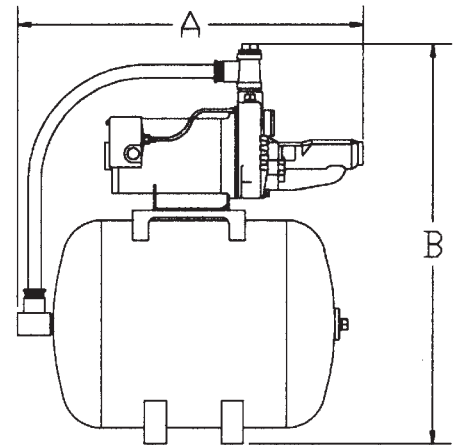
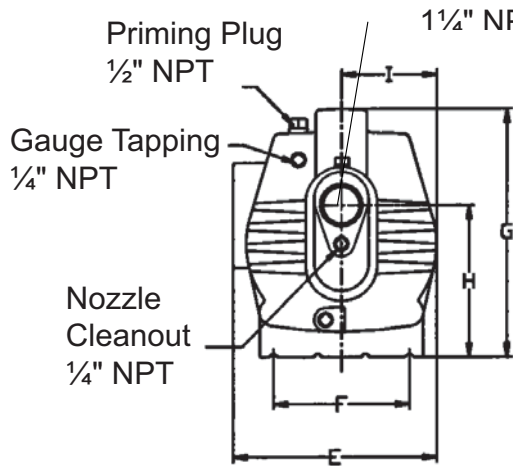
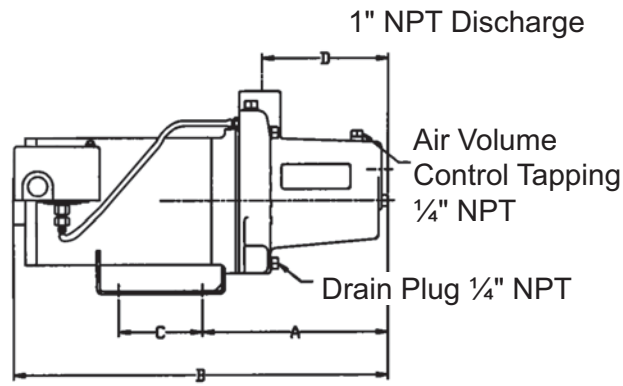
Ideal for supplying pressurized freshwater to rural homes, farms and cabins. For use where the vertical distance from the water supply does not exceed 25 feet.

### Features

- Cast Iron casing and seal plate ensures durability and long life.
- Precision engineered thermoplastic impeller, diffuser, nozzle and venturi.
- A.O. Smith **higher than standard Nema service factor** dual compartment motors.
- Dual voltage (115/230) Stainless Steel Motor Shaft, Dual Ball Bearing.
- Square D pressure switch preset at 30-50 PSI for today's modern living conditions.
- John Crane type 6 mechanical seal ensures years of leak free operation.
- Fully serviceable with two year over the counter warranty.
- Clean out plug to easily unclog nozzle.
- Pressure gauge included on all models.



## Dimensional Outline



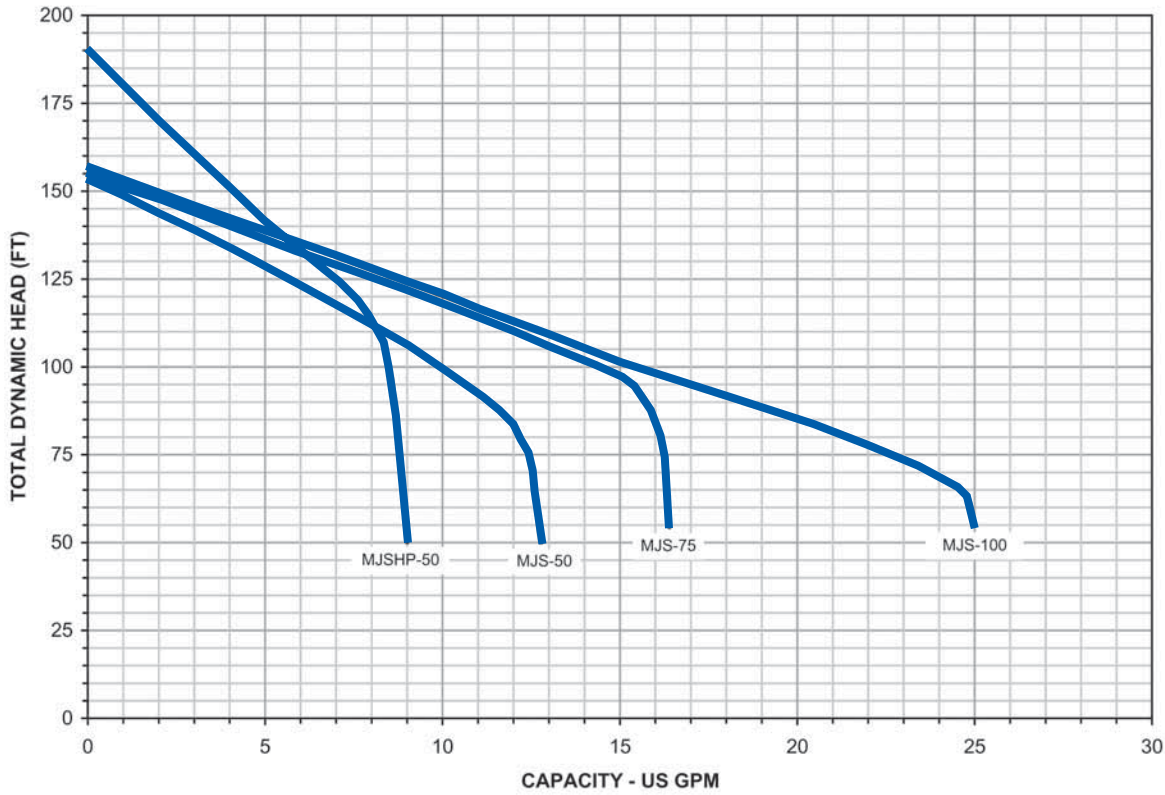
## Specifications

Monarch Item No.	Model No.	Little Giant Item No.	Model No.	Suction NPT	Discharge NPT	A	B	C	D	E	F	G	H	I	Ship Wt. (lbs)
602002	MJS-50	558274	JP-050-C	1 1/4"	1"	9.38	17.3	3	6	9	4.85	9.8	4.62	3.5	36
602003	MJS-75	558275	JP-075-C	1 1/4"	1"	9.38	17.3	3	6	9	4.85	9.8	4.62	3.5	37
602004	MJS-100	558276	JP-100-C	1 1/4"	1"	9.38	17.3	3	6	9	4.85	9.8	4.62	3.5	38
602011	MJSHP-50	-	-	1 1/4"	1"	9.38	17.3	3	6	9	4.85	9.8	4.62	3.5	36

\*Dimensions measured in inches

Model	HP	Tank (Gal.)	Length	Width	Height	Ship Wt. (lbs)
MJS-50/PC25S	1/2	8.5	25"	13"	29"	57

## Performance Data



Pump Model	Motor HP	Total Suction Lift (ft.)	Pump Capacity in U.S. GPM													Maximum Pressure
			Discharge Pressure in PSI													
			20	25	30	35	40	45	50	55	60	65	70	75	80	
MJS-50	1/2	5	12.8	12.5	12.3	12.1	11.2	9.5	6.9	4.3	2.0	-	-	-	-	64.2
		10	11.5	11.3	11.0	10.8	10.4	8.5	6.0	3.4	1.0	-	-	-	-	62.0
		15	9.8	9.7	9.6	9.5	9.4	7.3	4.7	2.2	-	-	-	-	-	59.9
		20	8.3	8.1	7.8	7.7	7.6	5.7	3.5	1.0	-	-	-	-	-	57.7
		25	5.6	5.55	5.5	5.4	5.3	4.1	2.3	0.2	-	-	-	-	-	55.5
MJS-75	3/4	5	16.2	16.0	15.8	15.6	15.4	12.1	8.7	5.7	2.9	-	-	-	-	65.0
		10	14.3	14.0	13.7	13.5	13.2	10.6	7.6	4.6	1.6	-	-	-	-	62.8
		15	12.1	11.7	11.3	11.0	10.6	9.3	6.3	3.2	0.2	-	-	-	-	60.6
		20	9.9	9.6	9.3	9.0	8.7	7.8	4.8	1.9	-	-	-	-	-	58.5
		25	7.2	7.1	7.0	6.9	6.8	6.7	3.5	0.6	-	-	-	-	-	56.3
MJS-100	1	5	24.8	24.7	23.2	19.8	16.5	13.1	9.5	6.3	3.4	0.5	-	-	-	66.2
		10	21.5	21.2	20.1	18.4	15.2	11.5	7.9	4.9	2.4	-	-	-	-	64.2
		15	18.1	17.8	17.4	16.7	13.8	10.3	6.9	4.0	1.3	-	-	-	-	62.1
		20	14.4	14.3	14.2	14.6	12.3	9.0	5.3	2.3	0.2	-	-	-	-	60.1
		25	10.5	10.5	10.4	10.3	8.8	7.0	4.2	1.3	-	-	-	-	-	57.2
MJS HP-50 High Pressure	1/2	5	8.8	8.9	8.6	8.4	8.3	8.1	7.4	6.0	4.7	3.4	2.2	1.2	0.15	80.6
		10	7.8	7.7	7.55	7.4	7.25	7.2	6.6	5.4	4.15	2.8	1.8	0.7	-	78.5
		15	6.5	6.4	6.3	6.2	6.1	6.0	5.3	4.8	3.6	2.3	1.3	0.3	-	76.3
		20	5.3	5.2	5.1	4.9	4.8	4.7	4.6	4.1	2.9	1.7	0.7	-	-	74.1
		25	3.7	3.65	3.6	3.55	3.5	3.5	3.5	3.45	2.4	2.3	1.3	0.3	-	-

## Performance Data

### MJS Series - For Shallow Wells To 25 Feet

Model No.	Item No.	HP	SF	Amps	Voltage	Ship Wt. (lbs.)	Description
MJS-50	602002	½	1.90	9.0/4.5	115/230	36	½ HP Shallow well jet pump, with gauge
MJS-75	602003	¾	1.65	14.8/7.4	115/230	37	¾ HP Shallow well jet pump, with gauge
MJS-100	602004	1	1.65	19.2/9.6	115/230	39	1 HP Shallow well jet pump, with gauge
MJSHP-50	602011	½	1.90	9.0/4.5	115/230	36	½ HP High Pressure Shallow well jet, with gauge

### Shallow Well Jet Pump & Tank Packaged Systems

MJS-50/PC25S	602013	½	1.90	9.0/4.5	115/230	64	Jet pump with 8.5 gallon Flexcon tank, with gauge
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**Franklin Electric**

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# WaterSystems

## MJC Series



MJC-50



MJC-50/PC25S



### Applications

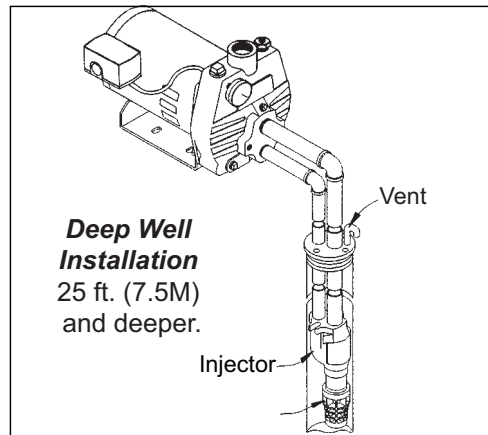
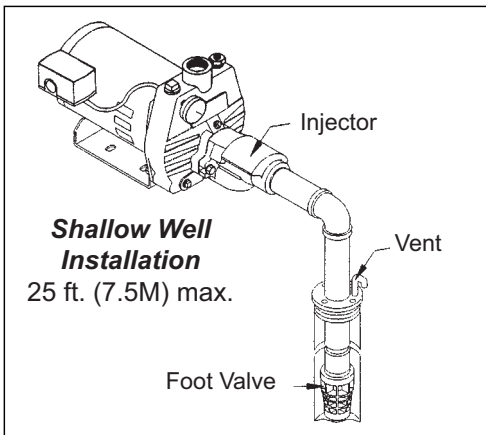
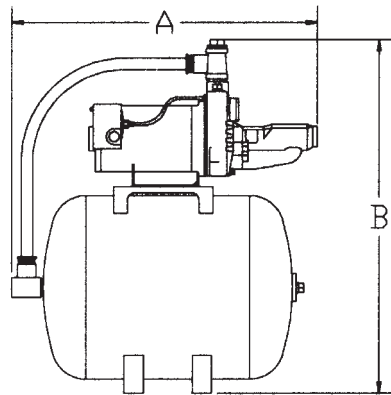
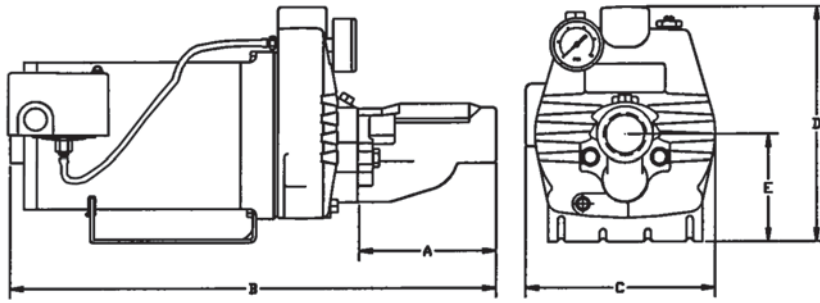
Pump - motor assembly with deep well injector and extra venturi. All pumps have 30-50 PSI pressure switch, pressure gauge, 1¼" suction, 1" discharge, and brass flow control valve.

Ideal for supplying pressurized freshwater to rural homes, farms and cabins. For use where the vertical distance from the water supply does not exceed 90 feet. The injector can be attached to the pump casing for shallow well performance.

### Features

- Cast Iron casing and seal plate ensures durability and long life.
- Precision engineered thermoplastic impeller, diffuser, nozzle and venturi.
- A.O. Smith **higher than standard Nema service factor** dual compartment motors.
- Dual voltage (115/230) Stainless Steel Motor Shaft, Dual Ball Bearing.
- Square D pressure switch preset at 30-50 PSI for today's modern living conditions.
- John Crane type 6 mechanical seal ensures years of leak free operation.
- Fully serviceable with two year over the counter warranty.
- Pressure gauge included on all models.
- Deep well venturi supplied loose in carton on all models.

## Dimensional Outline



## Specifications

Monarch		Little Giant		Suction NPT	Discharge NPT	A	B	C	D	E	Ship Wt. (lbs)
Item No.	Model No.	Item No.	Model No.								
602032	MJC-50	558281	JPC-050-C	1 1/4"	1"	5.38	18.78	9.0	10.0	4.3	36
602033	MJC-75	558282	JPC-075-C	1 1/4"	1"	5.38	19.58	9.0	10.0	4.3	37
602034	MJC-100	558283	JPC-100-C	1 1/4"	1"	5.38	20.58	9.0	10.0	4.3	38

\*Dimensions measured in inches

Model	HP	Tank (Gal.)	Length	Width	Height	Ship Wt. (lbs)
MJC-50/PC25S	1/2	8.5	25"	13"	29"	57

## Performance Data

Pump Model	Motor HP	Configuration	Total Suction Lift (ft.)	Pump Capacity in U.S. GPM									Maximum Pressure
				Discharge Pressure in PSI									
				20	25	30	35	40	45	50	55	60	
MJC-50	½	Shallow	5	11.1	11.0	10.9	10.8	10.7	9.2	7.4	5.9	4.5	76.2
			15	8.1	8.0	7.9	7.8	7.7	7.3	5.9	4.4	3.1	71.7
			25	4.8	4.8	4.7	4.7	4.6	4.5	4.4	3.2	1.9	67.5
		Deep	20		10.7	9.2	7.8	6.5	5.4	4.5	3.6	2.9	85.0
			50		6.8	5.8	4.8	4.0	3.2	2.4	1.8	1.3	72.0
MJC-75	¾	Shallow	5	18.2	17.9	17.7	16.6	14.3	12.0	9.7	7.4	5.1	71.0
			15	12.7	12.5	12.4	12.2	12.0	9.9	7.5	5.3	3.0	66.7
			25	7.7	7.5	7.4	7.1	6.9	6.7	5.0	3.0	1.0	62.4
		Deep	20	-	11.5	9.8	7.6	6.8	5.7	4.7	3.8	3.0	86.0
			50	-	7.4	6.1	5.1	4.1	3.3	2.5	1.9	1.3	73.0
MJC-100	1	Shallow	5	20.2	20.1	19.9	19.5	16.7	13.9	11.1	8.3	5.6	71.0
			15	14.5	14.3	14.1	13.8	13.6	11.4	8.7	6.0	3.3	66.7
			25	9.1	8.9	8.8	8.7	8.6	8.5	6.0	3.6	1.2	62.1
		Deep	20	-	12.8	10.5	8.7	7.3	6.6	5.2	4.4	3.6	87.0
			50	-	8.4	7.2	6.0	5.0	4.2	3.4	2.6	1.9	74.0
			90	-	4.3	3.4	2.7	1.9	1.8	0.7	-	56.7	

### MJC Series - For Wells to 90 Feet

Model No.	Item No.	HP	SF	Amps	Voltage	Ship Wt. (lbs.)	Description
MJC-50	602032	½	1.90	9.0/4.5	115/230	36	Pump - motor assembly with deep well injector, includes gauge.
MJC-75	602033	¾	1.65	14.8/7.4	115/230	37	
MJC-100	602034	1	1.65	19.2/9.6	115/230	39	

### Shallow Well Jet Pump & Tank Packaged Systems

MJC-50/PC25S	602058	½	1.65	9.0/4.5	115/230	64	Jet pump with 8.5 gallon Flexcon tank, includes gauge.
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Form 995692 — 03/09



# WaterSystems

## 4" Submersible Deep Well Pumps



### Features

- 4 performance ranges – 5, 8, 12, and 22 GPM.
- Available with thermoplastic discharge and motor bracket, or stainless steel discharge and motor bracket.
- Ceramic bearing sleeve for durability.
- Hex rubber bearing has an extra large surface to assure shaft stability and multiple flow channels to keep small particles away from bearing surfaces.
- Celcon® disk allows for close tolerances for increased performance.
- Stainless steel up thrust washer prevents excessive wear in severe applications.
- Built-in, Flomatic® check valve keeps water in the system at all times.
- Removable suction screen on both thermoplastic and stainless steel units prevents debris from clogging impellers and provides full flow performance.
- Stainless steel shaft features high quality, premium materials at a competitive price.
- Powered by Franklin Electric Super Stainless Motor.

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Flomatic® is a registered trademark of the Danfus Corporation.

**Little GIANT**  
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## Specifications Thermoplastics

### 5 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558551	W5G05S13-21P	1-1/4"	Thermoplastic	5	1/2	13	115	2	364	26	0 10121 11836 2
558537	W5G05S13-22P	1-1/4"	Thermoplastic	5	1/2	13	230	2	320	26	0 10121 13628 8
558554	W5G05S13-32P	1-1/4"	Thermoplastic	5	1/2	13	230	3	364	25	0 10121 11839 3
558552	W5G07S18-22P	1-1/4"	Thermoplastic	5	3/4	18	230	2	528	29	0 10121 11837 9
558555	W5G07S18-32P	1-1/4"	Thermoplastic	5	3/4	18	230	3	528	30	0 10121 11840 9
558553	W5G10S21-22P	1-1/4"	Thermoplastic	5	1	21	230	2	614	33	0 10121 11838 6
558556	W5G10S21-32P	1-1/4"	Thermoplastic	5	1	21	230	3	614	34	0 10121 11841 6

### 8 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558557	W8G05S9-21P	1-1/4"	Thermoplastic	8	1/2	9	115	2	275	24	0 10121 11842 3
558558	W8G05S9-22P	1-1/4"	Thermoplastic	8	1/2	9	230	2	275	24	0 10121 11843 0
558561	W8G05S9-32P	1-1/4"	Thermoplastic	8	1/2	9	230	3	275	24	0 10121 11846 1
558559	W8G07S12-22P	1-1/4"	Thermoplastic	8	3/4	12	230	2	365	28	0 10121 11844 7
558562	W8G07S12-32P	1-1/4"	Thermoplastic	8	3/4	12	230	3	365	28	0 10121 11847 8
558560	W8G10S15-22P	1-1/4"	Thermoplastic	8	1	15	230	2	455	33	0 10121 11845 4
558563	W8G10S15-32P	1-1/4"	Thermoplastic	8	1	15	230	3	455	33	0 10121 11848 5

### 12 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558564	W12G05S7-21P	1-1/4"	Thermoplastic	12	1/2	7	115	2	231	24	0 10121 11849 2
558536	W12G05S7-31P	1-1/4"	Thermoplastic	12	1/2	7	115	3	223	24	0 10121 13631 1
558565	W12G05S7-22P	1-1/4"	Thermoplastic	12	1/2	7	230	2	231	24	0 10121 11850 8
558569	W12G05S7-32P	1-1/4"	Thermoplastic	12	1/2	7	230	3	231	24	0 10121 11854 6
558566	W12G07S9-22P	1-1/4"	Thermoplastic	12	3/4	9	230	2	291	28	0 10121 11851 5
558570	W12G07S9-32P	1-1/4"	Thermoplastic	12	3/4	9	230	3	291	28	0 10121 11855 3
558567	W12G10S12-22P	1-1/4"	Thermoplastic	12	1	12	230	2	399	31	0 10121 11852 2
558571	W12G10S12-32P	1-1/4"	Thermoplastic	12	1	12	230	3	399	32	0 10121 11856 0
558568	W12G15S17-22P	1-1/4"	Thermoplastic	12	1-1/2	17	230	2	545	38	0 10121 11853 9
558572	W12G15S17-32P	1-1/4"	Thermoplastic	12	1-1/2	17	230	3	545	39	0 10121 11857 7

### 22 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558573	W22G10S7-22P	1-1/4"	Thermoplastic	22	1	7	230	2	221	30	0 10121 11858 4
558574	W22G10S7-32P	1-1/4"	Thermoplastic	22	1	7	230	3	221	33	0 10121 11859 1

## Specifications Stainless Steel

### 5 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558575	W5G05S13-21S	1-1/4"	Stainless Steel	5	1/2	13	115	2	364	26	0 10121 11860 7
558599	W5G05S13-22S	1-1/4"	Stainless Steel	5	1/2	13	230	2	360	26	0 10121 13316 7
558578	W5G05S13-32S	1-1/4"	Stainless Steel	5	1/2	13	230	3	364	25	0 10121 11863 8
558576	W5G07S18-22S	1-1/4"	Stainless Steel	5	3/4	18	230	2	528	29	0 10121 11861 4
558579	W5G07S18-32S	1-1/4"	Stainless Steel	5	3/4	18	230	3	528	30	0 10121 11864 5
558577	W5G10S21-22S	1-1/4"	Stainless Steel	5	1	21	230	2	614	33	0 10121 11862 1
558580	W5G10S21-32S	1-1/4"	Stainless Steel	5	1	21	230	3	614	34	0 10121 11865 2

### 8 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558581	W8G05S9-21S	1-1/4"	Stainless Steel	8	1/2	9	115	2	275	24	0 10121 11883 6
558582	W8G05S9-22S	1-1/4"	Stainless Steel	8	1/2	9	230	2	275	24	0 10121 11866 9
558585	W8G05S9-32S	1-1/4"	Stainless Steel	8	1/2	9	230	3	275	24	0 10121 11869 0
558583	W8G07S12-22S	1-1/4"	Stainless Steel	8	3/4	12	230	2	365	28	0 10121 11867 6
558586	W8G07S12-32S	1-1/4"	Stainless Steel	8	3/4	12	230	3	365	28	0 10121 11870 6
558584	W8G10S15-22S	1-1/4"	Stainless Steel	8	1	15	230	2	455	33	0 10121 11868 3
558587	W8G10S15-32S	1-1/4"	Stainless Steel	8	1	15	230	3	455	33	0 10121 11871 3

### 12 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558588	W12G05S7-21S	1-1/4"	Stainless Steel	12	1/2	7	115	2	231	24	0 10121 11872 0
558589	W12G05S7-22S	1-1/4"	Stainless Steel	12	1/2	7	230	2	231	24	0 10121 11873 7
558600	W12G05S7-31S	1-1/4"	Stainless Steel	12	1/2	7	115	3	228	24	0 10121 11679 5
558593	W12G05S7-32S	1-1/4"	Stainless Steel	12	1/2	7	230	3	231	24	0 10121 11877 5
558590	W12G07S9-22S	1-1/4"	Stainless Steel	12	3/4	9	230	2	291	28	0 10121 11874 4
558594	W12G07S9-32S	1-1/4"	Stainless Steel	12	3/4	9	230	3	291	28	0 10121 11878 2
558591	W12G10S12-22S	1-1/4"	Stainless Steel	12	1	12	230	2	399	31	0 10121 11875 1
558595	W12G10S12-32S	1-1/4"	Stainless Steel	12	1	12	230	3	399	32	0 10121 11879 9
558592	W12G15S17-22S	1-1/4"	Stainless Steel	12	1-1/2	17	230	2	545	38	0 10121 11876 8
558596	W12G15S17-32S	1-1/4"	Stainless Steel	12	1-1/2	17	230	3	545	39	0 10121 11880 5

### 22 GPM

Item Number	Model Number	Discharge Size (FNPT)	Discharge Type	GPM	HP	Stages	Volts	Wire	Shut Off (ft.)	Weight (lbs.)	UPC Code
558597	W22G10S7-22S	1-1/4"	Stainless Steel	22	1	7	230	2	221	30	0 10121 11881 2
558598	W22G10S7-32S	1-1/4"	Stainless Steel	22	1	7	230	3	221	33	0 10121 11882 9



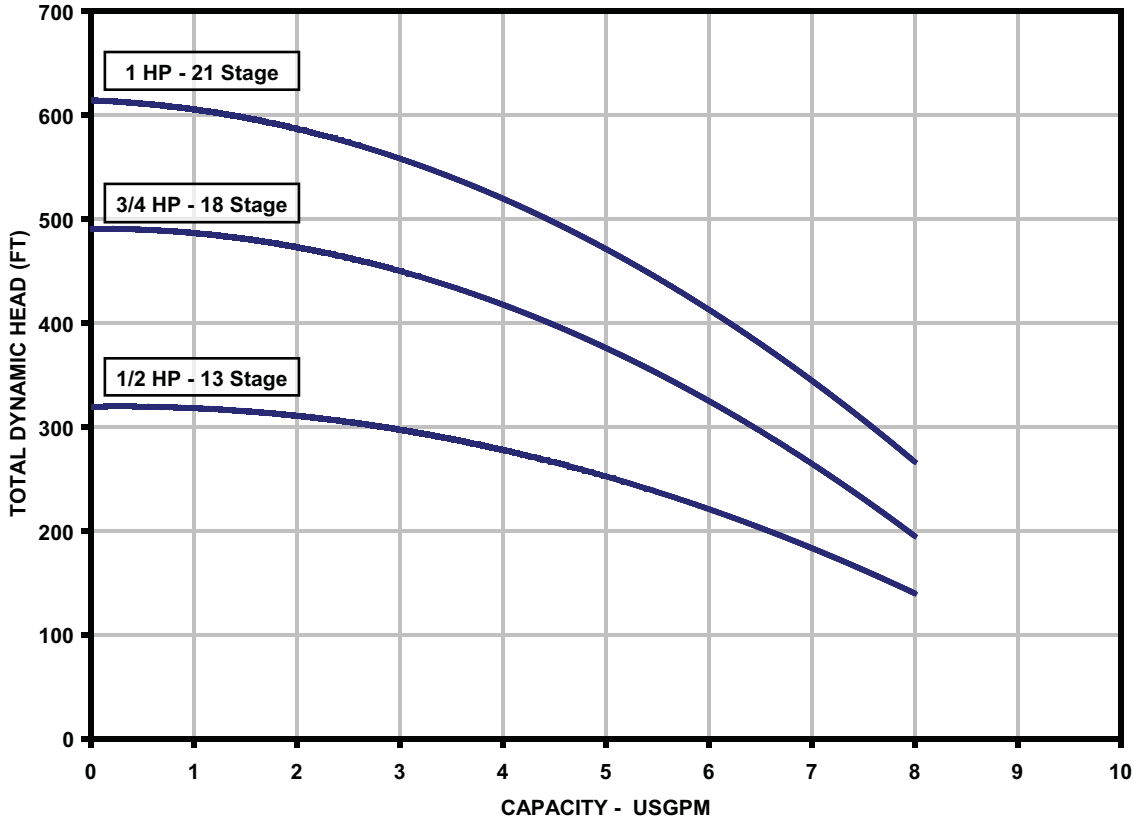




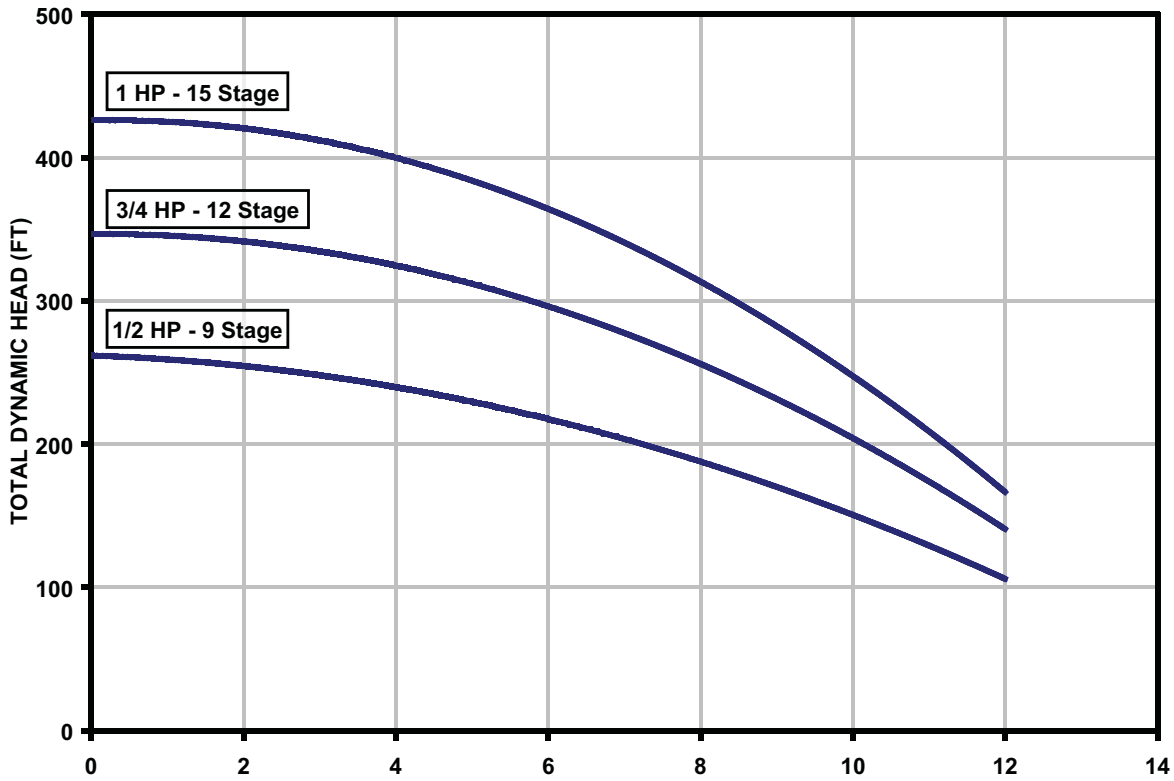




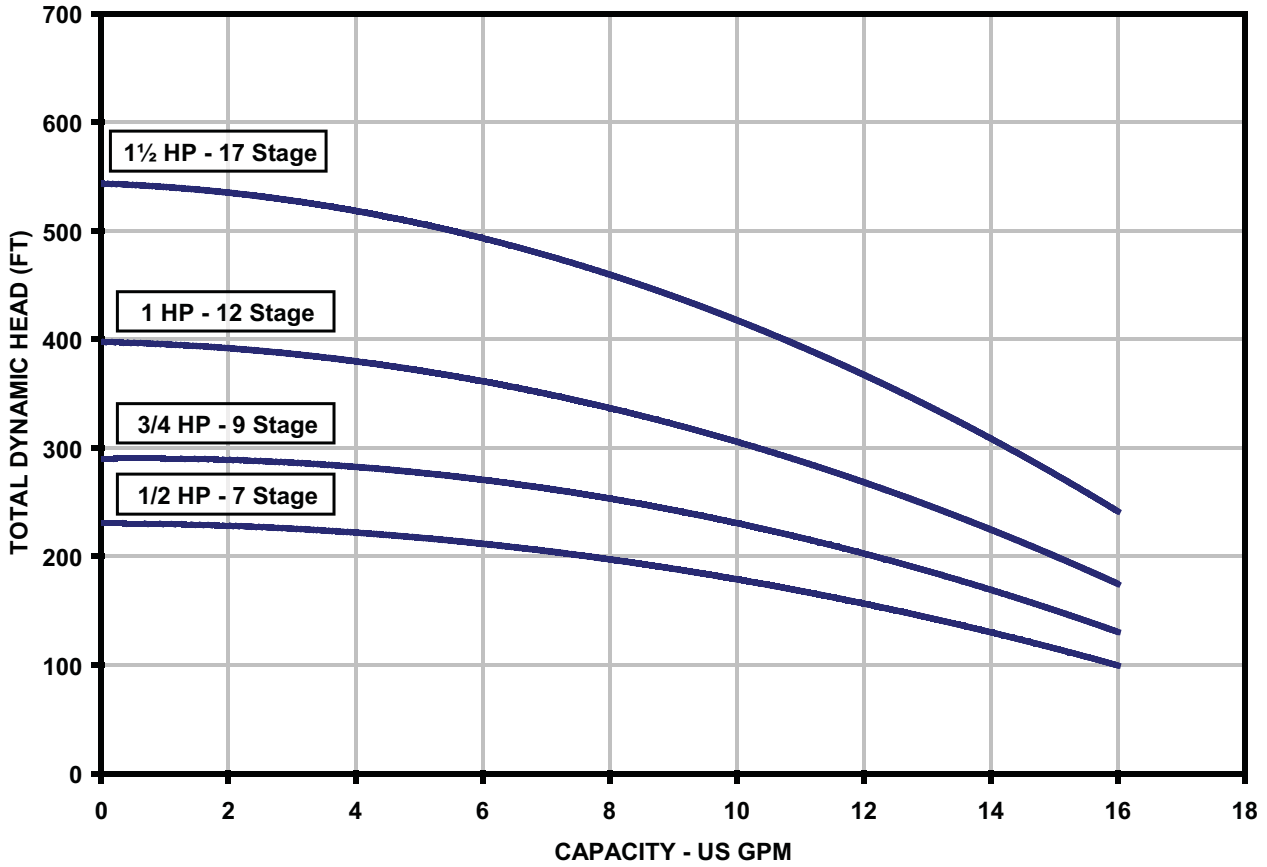
5 GPM



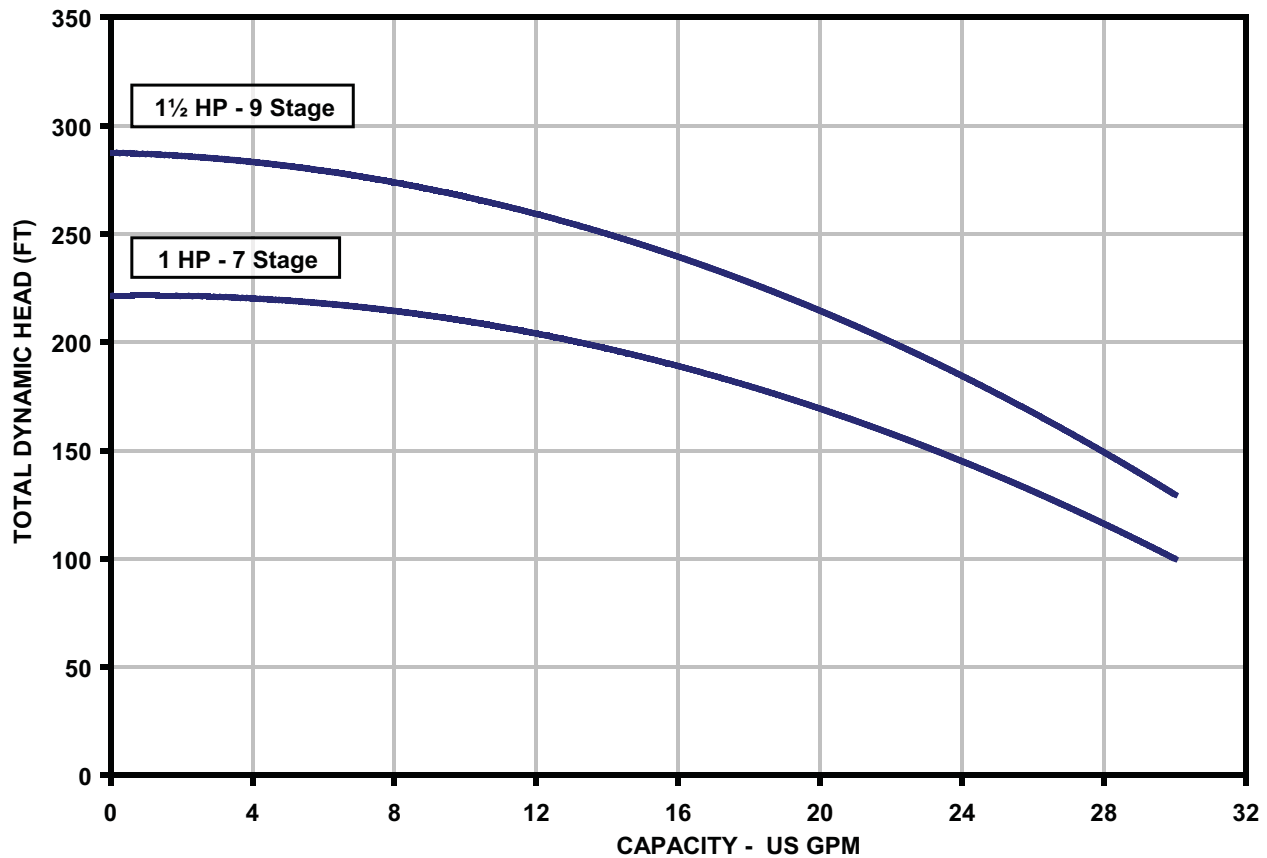
8 GPM



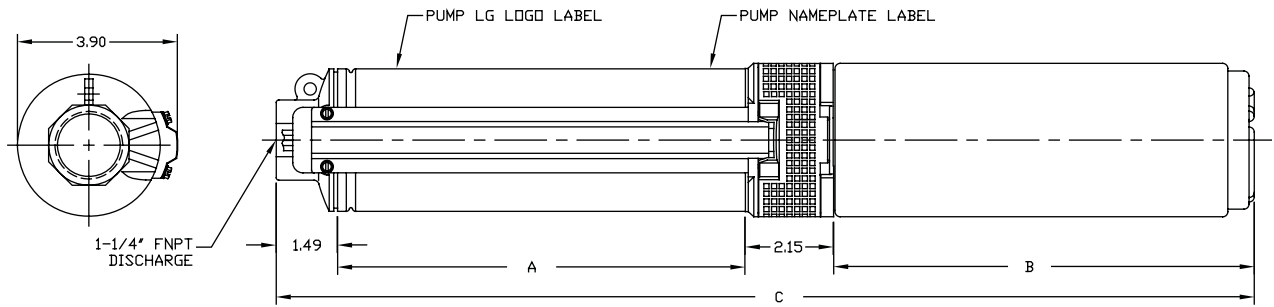
12 GPM



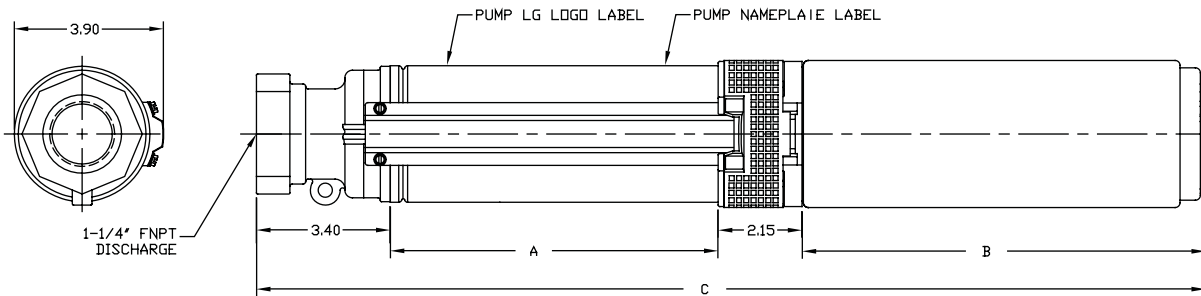
22 GPM



# Dimensional Data



Item	Model	GPM	Dimension "A"	Dimension "B"	Dimension "C"	Quick Disconnect Control Box (QD)
555575	W5G05S13-21S	5	13.75	9.51	26.90	-
558599	W5G05S13-22S	5	13.75	9.51	26.9	-
558576	W5G07S18-22S	5	16.00	10.64	32.17	-
558577	W5G10S21-22S	5	20.09	11.73	35.46	-
558578	W5G05S13-32S	5	13.75	9.51	26.90	558814
558579	W5G07S18-32S	5	17.71	10.64	36.63	558823
558580	W5G10S21-32S	5	20.09	11.73	35.46	558833
558581	W8G05S9-21S	8	10.55	9.51	23.70	-
558582	W8G05S9-22S	8	10.55	9.51	23.70	-
558583	W8G07S12-22S	8	12.92	10.64	27.20	-
558584	W8G10S15-22S	8	15.29	11.73	30.66	-
558585	W8G05S9-32S	8	10.55	9.51	23.70	558814
558586	W807S12-32S	8	12.92	10.64	27.20	558823
558587	W8G10S15-32S	8	15.29	11.73	30.66	558833
558588	W12G05S7-21S	12	8.97	9.51	22.12	-
558589	W12G05S7-22S	12	8.97	9.51	22.12	-
558600	W12G05S7-31S	12	8.85	9.51	22.66	2801044915
558590	W12G07S9-22S	12	10.55	10.64	24.83	-
558591	W12G10S12-22S	12	12.92	11.73	28.29	-
558592	W12G15S17-22S	12	16.87	15.1	35.61	-
558593	W12G05S7-32S	12	8.97	9.51	22.12	558414
558594	W12G07S9-32S	12	10.55	10.64	24.83	558823
558595	W12G10S12-32S	12	12.92	11.73	28.29	558833
558596	W12G15S17-32S	12	16.87	13.6	34.11	558842
558597	W22G10S7-22S	22	10.84	11.73	26.11	-
558598	W22G10S7-32S	22	10.84	11.73	26.21	558834



Item	Model	GPM	Dimension "A"	Dimension "B"	Dimension "C"	Quick Disconnect Control Box (QD)
558551	W5G05S13-21P	5	12.03	9.51	27.07	-
558537	W5G05S13-22P	5	12.03	9.51	27.05	-
558554	W5G05S13-32P	5	12.03	9.51	27.07	558814
558552	W5G07S18-22P	5	16.00	10.64	32.17	-
558555	W5G07S18-32P	5	16.00	10.64	32.17	558823
558553	W5G10S21-22P	5	18.37	11.73	36.63	-
558556	W5G10S21-32P	5	18.00	11.73	35.63	558833
558557	W8G05S9-21P	8	8.83	9.51	23.87	-
558558	W8G05S9-22P	8	8.83	9.51	23.87	-
558561	W8G05S9-32P	8	8.83	9.51	23.87	558814
558559	W8G07S12-22P	8	11.20	10.64	27.37	-
558562	W8G07S12-32P	8	11.20	10.64	27.37	558823
558560	W8G10S15-22P	8	13.57	11.73	30.83	-
558563	W8G10S15-32P	8	13.57	11.73	30.83	558833
558564	W12G05S7-21P	12	7.25	9.51	22.29	-
558536	W12G05S7-31P	12	7.22	9.51	22.49	2801044915
558565	W12G05S7-22P	12	7.25	9.51	22.29	-
558569	W12G05S7-32P	12	7.25	9.51	22.29	558814
558566	W12G07S9-22P	12	8.83	10.64	25.00	-
558570	W12G07S9-32P	12	8.83	10.64	25.00	558823
558567	W12G10S12-22P	12	11.20	11.73	28.46	-
558571	W12G10S12-32P	12	11.20	11.73	28.46	558833
558568	W12G15S17-22P	12	15.15	15.10	35.78	-
558572	W12G15S17-32P	12	15.15	13.60	34.28	-
558573	W22G10S7-22P	22	9.13	11.73	26.39	-
558574	W22G10S7-32P	22	9.13	11.73	26.39	558833





**Franklin Electric**

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# WaterSystems

## Control Boxes for 4" Submersible Well Pumps



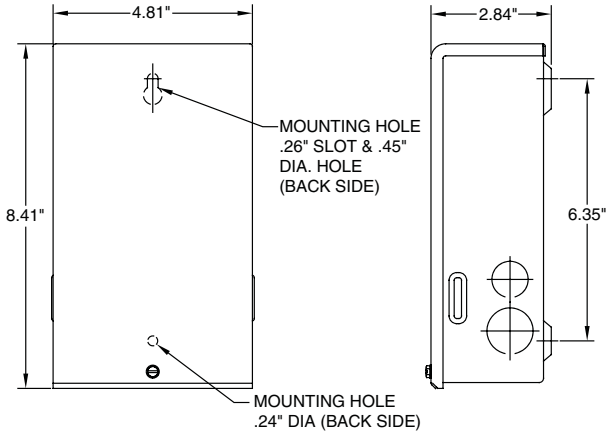
### Applications:

- These control boxes are designed for use with our 3-wire, single-phase submersible deep well pumps.

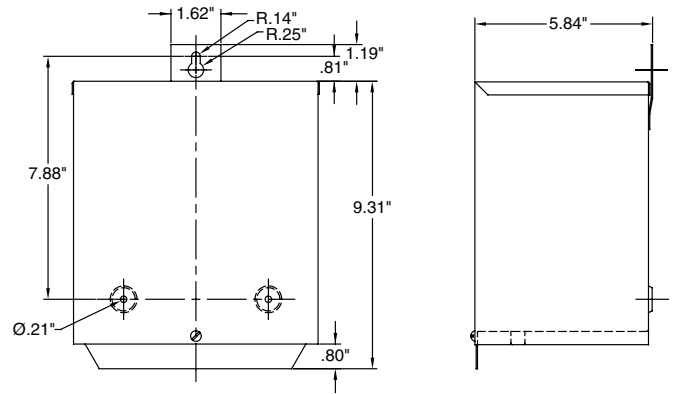
### Features:

- Suitable for outdoor mounting
- Rain-tight, two-piece enclosure (NEMA 3R, IP23)
- Quick Disconnect control box is equipped with Franklin Electric exclusive QD relay
- Capacitor start/capacitor run design (except QD Box)
- UL 778 recognized and CSA certified for 60Hz
- Standard capacitor control box includes overloads, relays and capacitors

## Dimensional Outline



Quick Disconnect & Capacitor Run Control Box



Standard Capacitor Start Capacitor Run Control Box

## Engineering Data

Quick Disconnect Control Boxes (QD)				Capacitor Run Control Box (CRC)				Standard Capacitor Start Capacitor Run Control Box			
Item No.	HP	Recommended For Pump Item Model		Item No.	HP	Recommended For Pump Item Model		Item No.	HP	Recommended For Pump Item Model	
558814	1/2	558554	W5G05S13-32P	558815	1/2	558554	W5G05S13-32P	558842	1-1/2	558572	W12G15S17-32P
	1/2	558561	W8G05S9-32P		1/2	558561	W8G05S9-32P			558596	W12G15S17-32S
	1/2	558569	W12G05S7-32P		1/2	558569	W12G05S7-32P				
	1/2	558578	W5G05S13-32S		1/2	558578	W5G05S13-32S				
	1/2	558585	W8G05S9-32S		1/2	558585	W8G05S9-32S				
	1/2	558593	W12G05S7-32S		1/2	558593	W12G05S7-32S				
558823	3/4	558555	W5G07S18-32P	558824	3/4	558555	W5G07S18-32P				
	3/4	558562	W8G07S12-32P		3/4	558562	W8G07S12-32P				
	3/4	558570	W12G07S9-32P		3/4	558570	W12G07S9-32P				
	3/4	558579	W5G07S18-32S		3/4	558579	W5G07S18-32S				
	3/4	558586	W8G07S12-32S		3/4	558586	W8G07S12-32S				
	3/4	558594	W12G07S9-32S		3/4	558594	W12G07S9-32S				
558833	1	558556	W5G10S21-32P	558834	1	558556	W5G10S21-32P				
	1	558563	W8G10S15-32P		1	558563	W8G10S15-32P				
	1	558571	W12G10S12-32P		1	558571	W12G10S12-32P				
	1	558574	W22G10S7-32P		1	558574	W22G10S7-32P				
	1	558580	W5G10S21-32S		1	558580	W5G10S21-32S				
	1	558587	W8G10S15-32S		1	558587	W8G10S15-32S				
	1	558595	W12G10S12-32S		1	558595	W12G10S12-32S				
	1	558598	W22G10S7-32S		1	558598	W22G10S7-32S				

Item No.	Model No.	FE Item No.	HP	Volts	Wire	Weight/Lbs.
-	WC-QD05	2801044915	1/2	115	3	3
558814	WC-QD05	2801054915	1/2	230	3	3
558823	WC-QD07	2801074915	3/4	230	3	3
558833	WC-QD10	2801084915	1	230	3	3
558815	WC-CRC05	2824055015	1/2	230	3	5
558824	WC-CRC07	2824075015	3/4	230	3	5
558834	WC-CRC10	2824085015	1	230	3	5
558842	WC-CRC15	2823008110	1-1/2	230	3	7



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# WaterSystems

## Cable Selection Charts

**Canadian** Cable selection  
Based on a 3% Voltage drop.

Motor		(AWG) Copper Wire Size							
HP	Volts	14	12	10	8	6	4	3	2
1/3	115	75	125	205	325	505	780	965	1175
	230	330	528	834	1314	2040	3150	3912	4775
1/2	115	60	95	150	235	370	575	715	875
	230	240	390	610	965	1505	2325	2885	3525
3/4	230	180	285	455	720	1120	1735	2145	2620
1	230	150	240	375	595	925	1425	1775	2165
1 1/2	230	115	185	285	460	720	1120	1390	1710
2	230	90	150	235	370	580	915	1145	1415
3	230	70*	115	180	280	450	715	895	1110
5	230	0	0	105	165	270	425	535	665
7 1/2	230	0	0	0	117	180	285	355	437

1ft = .3048 meters

**American** Cable selection  
Based on a 5% Voltage drop.

Motor		(AWG) Copper Wire Size							
HP	Volts	14	12	10	8	6	4	3	2
1/3	115	130	210	340	540	840	1300	1610	1960
	230	550	880	1390	2190	3400	5250	6520	7960
1/2	115	100	160	250	390	620	960	1190	1460
	230	400	650	1020	1610	2510	3880	4810	5880
3/4	230	300	480	760	1200	1870	2890	3580	4370
1	230	250	400	630	990	1540	2380	2960	3610
1 1/2	230	190	310	480	770	1200	1870	2320	2850
2	230	150	250	390	620	970	1530	1910	2360
3	230	120*	190	300	470	750	1190	1490	1850
5	230	0	0	180	280	450	710	890	1110
7 1/2	230	0	0	0	200	310	490	610	750

1ft = .3048 meters



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# WaterSystems

## Pressure Tanks



### Applications

- Well water storage.
- Pressure-boosting applications in homes, mobile homes and office buildings.

### Features

- Vertical and horizontal tanks from 2 to 119 gallons.
- Heavy-duty steel construction.
- Appliance-quality paint finish over primer coat.
- Welded malleable water connection, will not break during installation.
- Butyl rubber diaphragm system isolates the air charge from system water.
- Condensation-reducing design.
- 5 year warranty.
- ANSI/NSF Standard 61 approved.

## Specifications

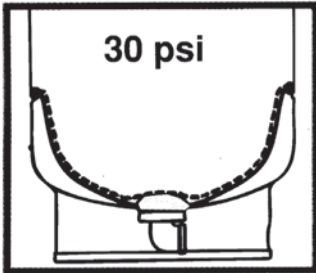
Item No.	Model No.	Diameter		Length		System Connect.	Volume		Shipping (Box) Volume		Weight (lbs.)
		In.	Cm.	In.	Cm.		Gal.	Liter	Cu. Ft.	Cu. M.	
14942302	T2	8.0	20.1	12	30	3/4" FNPT	2	8	0.5	0.02	5
14942303	T5	11.0	27.8	14.5	37	3/4" FNPT	5	18	1.1	0.03	10
14942304	T5H	11.4	28.9	17.5	44.4	3/4" FNPT	5	18	1.5	0.04	13.3
14942305	T9H	12.5	32	17	43	3/4" FNPT	9	32	2.5	0.07	13
14942311	T14H	16.3	41.4	20.8	52.8	3/4" FNPT	14	53	3.7	0.11	27
14942306	T20	16	40.5	29	73.7	1" FNPT	20	50	4.7	0.13	36
14942307	T33	16	40.6	42.8	108.6	1" FNPT	33	130	6.9	0.19	49
14942308	T44	21	53.3	36.2	92.1	1-1/4" FNPT	44	170	10.2	0.28	67
14942309	T81	21	53.3	62	157.5	1-1/4" FNPT	81	310	16.5	0.46	99
14942312	T119	26	66	59.8	150.5	1-1/4" FNPT	119	450	26.2	0.73	153

Total drawdown assumes tank pre-charge set at 2 psi below cut-in pressure

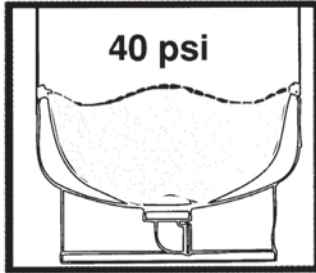
Drawdown can be affected by many factors, including temperature, pressure and elevation

## Tank System Operation

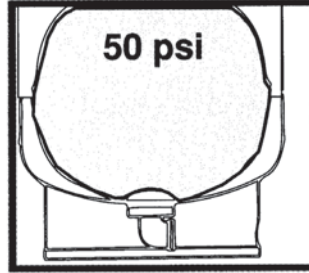
Pump comes on and begins to fill tank.



Pump continues to run compressing air charge in tank.



Pump shuts off. Drawdown water is available on demand.



## Quick Sizing Guide

Model	Total Tank Volume		Total Drawdown					
			20/40		30/50		40/60	
	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters
T2	2.1	8	0.8	2.9	0.7	2.5	0.6	2.1
T5	4.8	18	1.7	6.6	1.5	5.6	1.3	4.8
T5H	5.3	20	1.9	7.3	1.6	6.2	1.4	5.4
T9H	8.5	32	3.1	11.7	2.6	9.8	2.3	8.7
T14H	14	53	5.1	19.3	4.3	16.4	3.8	14.2
T20	20	80	8.1	30.5	6.8	25.8	5.9	22.3
T33	33	130	13.3	50.3	11.3	42.6	9.7	36.8
T44	44	170	17.7	67.1	15	56.8	13	49.1
T81	81	310	32.6	123.6	27.6	104.5	23.9	90.4
T119	119	450	48	181.5	40.6	153.6	35.1	132.9

\*Total drawdown assumes tank pre-charge set at 2 PSI below cut in-pressure. Drawdown can be affected by many factors, including temperature, pressure and elevation.

# Tank Replacement Guide

Flexcon				Amtrol								
Little Giant	Challenger	Well-Rite	H2 Pro	Well-X-Trol	Wel-Flow	Champion	How 2 Tank	Goulds A.O. Smith	State Perma Tank	Well Mate	Pro-Source	Standard Galvanized
T2	PJR6	PJR6	PJR6	WX-101	WF6	CM1001	HT2	V6P	PIL-2	WM8L	N/A	5 GAL.
N/A	PC15	PJR15	PJR15	WX-102	WF15	CM1002	HT4.4	VIP5	PIL-5	WM18L	N/A	12 GAL.
N/A	PJR20	PJR20	PJR20	WX-105	N/A	N/A	N/A	N/A	N/A	WM25L	PS15-502	18 GAL.
N/A	PC25	PJR25	PJR25	WX-103	WF25	CM1003	HT8.6	V25P	PIL-7	N/A	N/A	21 GAL.
N/A	PC44	WR45	WWT-14	WX-201	WF45	CM3001	HT14	V45	PAD-20	WM4	PS30T01	30 GAL.
T20	PC66	WR60	WWT-20	WX-202	WF60	CM4202	HT20	V60	PAD-20	WM6	PS42T-T02	42 GAL.
N/A	PC88	WR80	N/A	WX-202XL	N/A	N/A	N/A	V80	N/A	N/A	N/A	82 GAL.
N/A	PC111	WR100	WWT-30	WX-205	WF110	CM8205	HT32	N/A	N/A	N/A	PS75T-T03	82 GAL.
T33	PC122	WR120	WWT-35	WX-203	WF1100	CM8003	HT32	V100	WM9	WM9	PS82T-T05	82 GAL.
T44	PC144	WR140	WWT-45	WX-250	WF140	CM10050	HT44	V140	WM14	WM14	PS120-T50	82 GAL.
N/A	PC211	WR200	WWT-65	WX-251	WF200	CM12051	HT44	V200	WM20	WM20	PS200-T51	120 GAL.
T81	PC244	WR240	WWT-80	WX-252	N/A	N/A	N/A	V260	N/A	N/A	N/A	220 GAL.
N/A	PC266	WR260	WWT-85	WX-302	WF260	CM17002	HT86	V250	WM25	WM25L	PS220-T52	220 GAL.
T119	PC366	WR360	WWT-120	WX-350	WF360	CM22050	HT119	V350	WM35	WM35	N/A	315 GAL.

\* Add "S" for horizontal models with pump stand.  
 All Models: 20 PSI/1.9 bar pre-charge  
 Maximum Working Pressure: All Models 125PSI/8.5 bar  
 Maximum Working Temperature: all Models 140° F/60° Celsius

## Tank Sizing Information

There are three factors to consider when selecting the proper size for your water system:

- The pump delivery rate in gallons/liters per minute (GPM/LPM).
- The recommended minimum running time of the pump.
- The minimum (cut-in) and maximum (cut-out) system pressure parameters.

Once these factors are known, the following calculations will determine, in most cases, the correct model to meet your specifications.\*

### Calculating Drawdown

- 1) Pump delivery rate \_\_\_\_\_ GPM/LPM
- 2) Desired minimum pump running time in minutes \_\_\_\_\_ Minutes  
(1 minute, 45 seconds = 1.75 minutes).
- 3) Multiply line #1 by line #2. \_\_\_\_\_ Gallons/Liters  
This is the minimum drawdown or available water volume required.\*

### Calculating Tank Size

- 4) Minimum system pressure (cut-in) \_\_\_\_\_ PSIG/kPa/bar
- 5) Maximum system pressure (cut-out) \_\_\_\_\_ PSIG/kPa/bar
- 6) Using table #2, find the drawdown \_\_\_\_\_ Factor applicable to lines #4 and #5.
- 7) Divide line #3 by line #6 to determine the minimum total volume required. \_\_\_\_\_ Gallons/Liters
- 8) Refer to the design data and select \_\_\_\_\_ Model the model with the lowest total capacity that is greater than or equal to line #7.

**Example:** An application using an 8 GPM pump with a minimum run time of 1 minute and a 30-50 PSIG system pressure range;

$$\frac{8 \text{ GPM} \times 1 \text{ minute}}{.30 \text{ (factor)}} = 26.7 \text{ gallon minimum tank capacity}$$

\*If a volume of water needed is greater than the amount calculated on line #3, enter that amount on line #3 in place of the calculated volume.

## Table #2 - Drawdown Factors

Maximum System Pressure (Cut-Out) PSIG/(kPa)/bar	Minimum System Pressure (Cut-In) -- PSIG/(kPa)/bar																			
	20 (138)	25 (173)	30 (207)	35 (242)	40 (276)	45 (311)	50 (345)	55 (380)	60 (414)	65 (449)	70 (483)	75 (518)	80 (552)	85 (587)	90 (621)	95 (656)	100 (690)	105 (725)	110 (759)	
30/(207)/2.06	.21																			
35/(242)/2.41	.28	.19																		
40/(276)/2.76	.34	.26	.17																	
45/(311)/3.10	.39	.32	.24	.16																
50/(345)/3.45	.44	.37	.30	.22	.15															
55/(380)/3.80	.47	.41	.34	.28	.21	.14														
60/(414)/4.16	.50	.44	.38	.32	.26	.19	.13													
65/(449)/4.48	.53	.48	.42	.36	.30	.24	.18	.12												
70/(483)/4.83	.56	.50	.45	.40	.34	.29	.23	.17	.11											
75/(518)/5.17		.53	.48	.43	.38	.32	.27	.22	.16	.11										
80/(552)/5.51			.50	.46	.41	.36	.31	.26	.21	.15	.10									
85/(587)/5.86				.48	.43	.39	.34	.29	.24	.20	.15	.10								
90/(621)/6.20					.46	.42	.37	.32	.28	.23	.19	.14	.09							
95/(656)/6.55						.44	.40	.35	.31	.27	.22	.18	.13	.09						
100/(690)/6.89							.42	.38	.34	.30	.26	.21	.17	.13	.09					
105/(725)/7.24								.41	.37	.33	.29	.25	.20	.16	.13	.08				
110/(759)/7.58									.39	.35	.31	.27	.24	.20	.16	.12	.08			
115/(794)/7.92										.38	.34	.30	.26	.23	.19	.15	.11	.08		
120/(828)/8.27											.36	.33	.29	.25	.22	.18	.15	.11	.08	
125/(863)/8.62												.35	.32	.28	.25	.21	.18	.14	.11	.07

In keeping with current industry standards, drawdown factors are based on Boyle's law. Actual drawdowns will vary depending upon system variables, including the accuracy and operation of the pressure switch and gauge, actual precharge pressure, and operating temperature of the system.



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# WaterSystems

## ACE-S Series



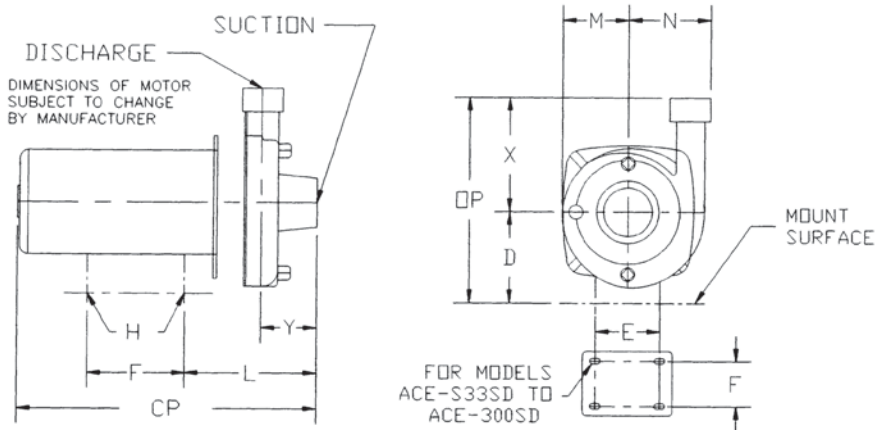
### Applications

Ideal for booster and lift applications for irrigation.

### Features

- **POWER** - 3600 RPM, single phase; square flange motors.
- **PORTS** - For air bleeding when priming; for draining to prevent frost damage.
- **SHAFT FLINGER** – Combined with large drain hole in adapter bracket prevents moisture from damaging bearings.
- **SEAL** – Standard Buna with carbon-ceramic mechanical seal.
- **CASING** – Cast gray iron, thick wall.
- **IMPELLER** – Enclosed glass filled Noryl impeller with reinforced SS hub, providing a smooth surface for high efficiency.

## Dimensional Outline



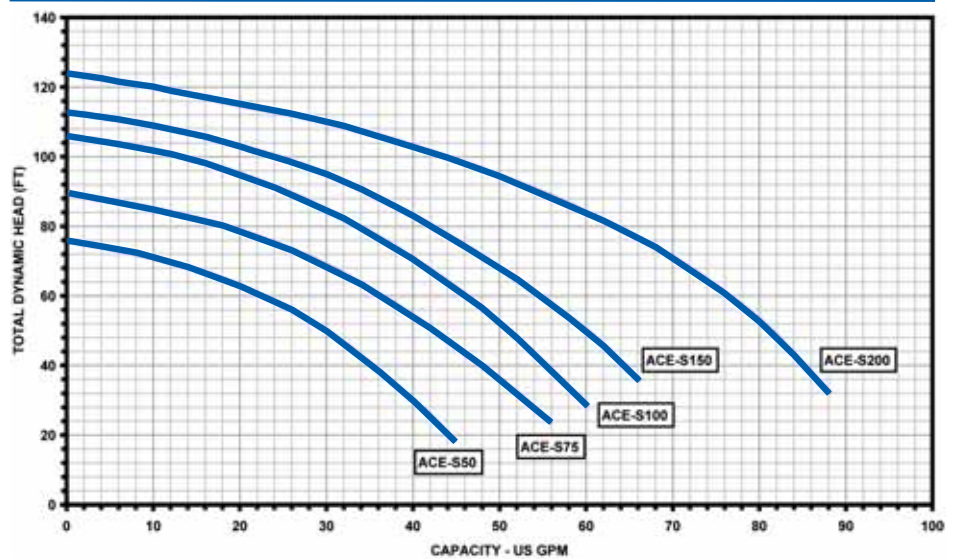
Model	Suct. NPT	Disch. NPT	CP	Information for Mounting									
				D	E	F	H 4 Slots	L	M	N	OP	X	Y
ACE-S50SD	1 1/2	1	13.75	4.00	4.88	3.00	7/16x15/16	5.53	3.69	4.00	8.90	4.90	2.63
ACE-S75SD			14.07										
ACE-S100SD			15.57										
ACE-S150SD			15.90										
ACE-S200SD	1 1/2	1 1/4	15.82	4.46	4.88	3.00	-	5.88	4.12	4.72	10.78	6.31	2.88

\*Dimensions measured in inches

## Specifications

Model No.	Item No.	Little Giant Item No.	HP	Volts	Suct. NPT	Discharge	Total Head in Feet										Ship Wt. (lbs.)
							20	30	40	50	60	70	80	100	120		
							Capacities in U.S. GPM										
ACE-S50SD	614561	558240	1/2	1/60/115/230V	1 1/4"	1"	46	38	32	24	15	-	-	-	-	-	31
ACE-S75SD	614562	558241	3/4	1/60/115/230V	1 1/4"	1"	55	52	47	38	32	25	15	-	-	-	32
ACE-S100SD	614563	558242	1	1/60/115/230V	1 1/4"	1"	60	57	54	49	44	39	32	12	-	-	37
ACE-S150SD	614564	558243	1 1/2	1/60/115/230V	1 1/4"	1"	67	65	63	59	54	49	39	24	-	-	42
ACE-S200SD	614565	558244	2	230V	1 1/2"	1 1/4"	104	97	92	88	81	75	66	48	15	-	46

## Performance Data



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# WaterSystems

## MJSE-50 Series



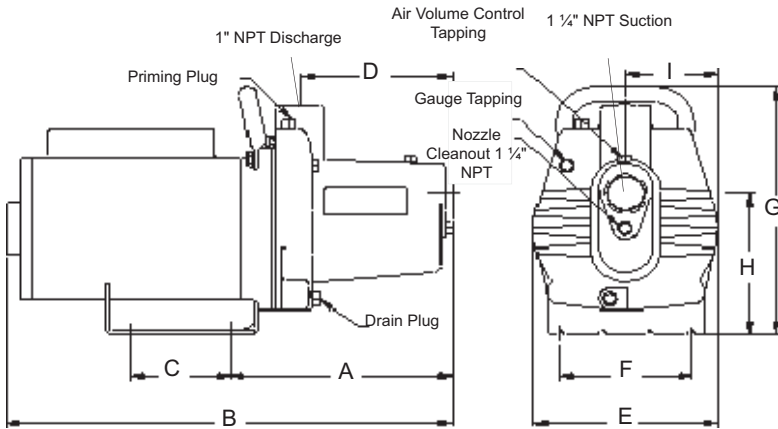
### Applications

The Monarch MJSE jet sprinkler pump is a versatile pump for pressure boosting, small underground lawn sprinklers and a multitude of other general purpose clean water applications.

### Features

- **SEAL PLATE AND CASING** - Built from rugged cast iron and specially treated with an anti-rust primer coating, to ensure years of dependable service.
- **MOTOR** - CSA approved, **higher than NEMA service factor** dual compartment motors, open drip proof, capacitor start and thermal overload protected for safety; single phase, convenient electrical connection; 3600 RPM, square flange design, with threaded motor shaft for positive impeller alignment.
- **POWER CORD** - Includes an 8 foot grounded power cord for easy connection to any standard 115 volt outlet.
- **GARDEN HOSE ADAPTER** - Provides easy connection to any standard garden hose.
- **IMPELLER** - Precision molded glass filled thermoplastic is extra smooth, for highest pump efficiency.
- **VENTURI AND BUILT-IN NOZZLE** - Made of abrasion resistant thermoplastic, engineered for optimum pressure and flow.

## Dimensional Outline



Model	A	B	C	D	E	F	G	H	I
MJSE-50	9.38	17.3	3.0	6.0	7.0	4.85	10.5	4.62	3.5

\*Dimensions measured in inches

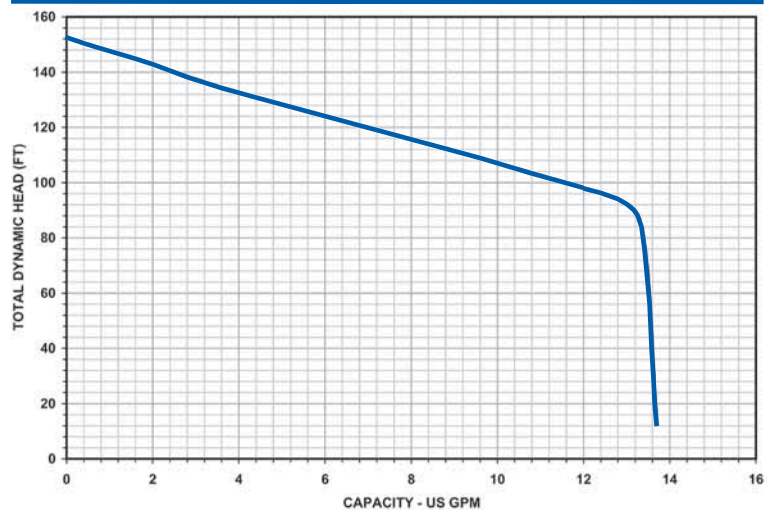
## Specifications

Model No.	Item No.	Listing	HP	Volts	Discharge	Suction	SF	Cord Length (ft.)	Ship Wt. (lbs.)
MJSE-50	614431	CSA	1/2	115	1" NPT	1 1/4" NPT	1.90	8	36

## Performance Chart

Total Suction Lift (ft.)	Capacities in U.S. GPM										Shut-Off Head (ft.)
	Discharge Pressure in PSI										
	20	25	30	35	40	45	50	55	60	65	
5	12.8	12.5	12.3	12.1	11.2	9.5	6.9	4.3	2.0	-	64.2
10	11.5	11.3	11	10.8	10.4	8.5	6.0	3.4	1.0	-	62.0
15	9.8	9.7	9.6	9.5	9.4	7.3	4.7	2.2	-	-	59.9
20	8.3	8.1	7.8	7.7	7.6	5.7	3.5	1.0	-	-	57.7
25	5.6	5.5	5.5	5.4	5.3	4.7	2.3	0.2	-	-	55.5

## Performance Data



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# WaterSystems

## SPHE Series



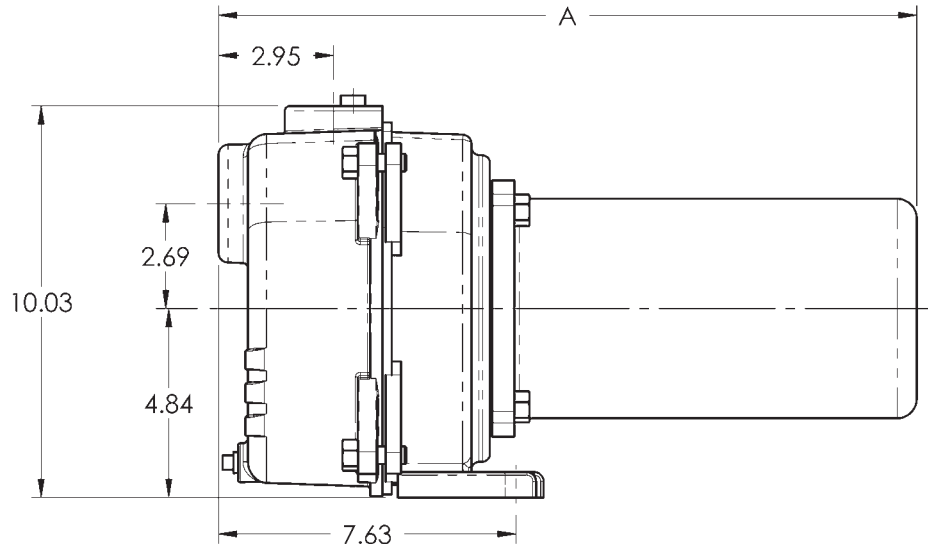
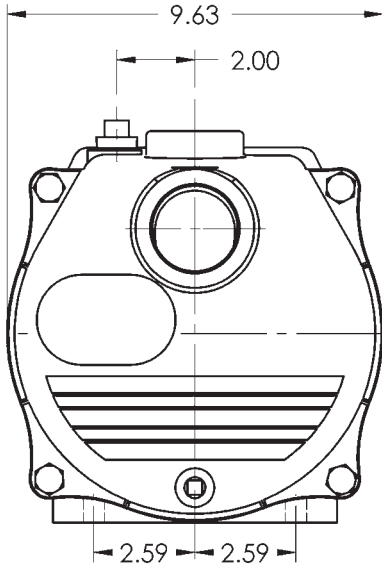
### Applications

Ideal for both residential and commercial lawn and turf sprinkler systems.

### Features

- **CASING AND SEAL PLATE** - Built from rugged cast iron.
- **SHAFT SEAL** - Standard 5/8" rotating mechanical seal, for a reliable seal against water leakage.
- **IMPELLER** - Precision molded glass filled thermoplastic is extra smooth, for highest pump efficiency and longevity.
- **REPLACEABLE DIFFUSER** - Glass filled engineered thermoplastic, can be serviced easily and inexpensively to maintain high pump efficiency.
- **SUCTION** - 2" NPT Suction.
- **DISCHARGE** - 1½" NPT Discharge.
- **DRAINING PLUG** - For easy drainage of pump.
- **PRIMING PLUG** - To facilitate rapid priming.
- **O-RING CASING SEAL** - For positive seal and ease of service.
- **BRASS WEAR RING** - Installed in diffuser to maximize hydraulic pump efficiency.
- **O-RING CASING SEAL** - For positive seal and ease of service.
- **BRASS WEAR RING** - Installed in diffuser to maximize hydraulic pump efficiency.
- **MOTOR** - Single phase capacitor start, 115/230 volt with **higher than NEMA service factors**. Stainless Steel motor shaft for corrosion resistance.

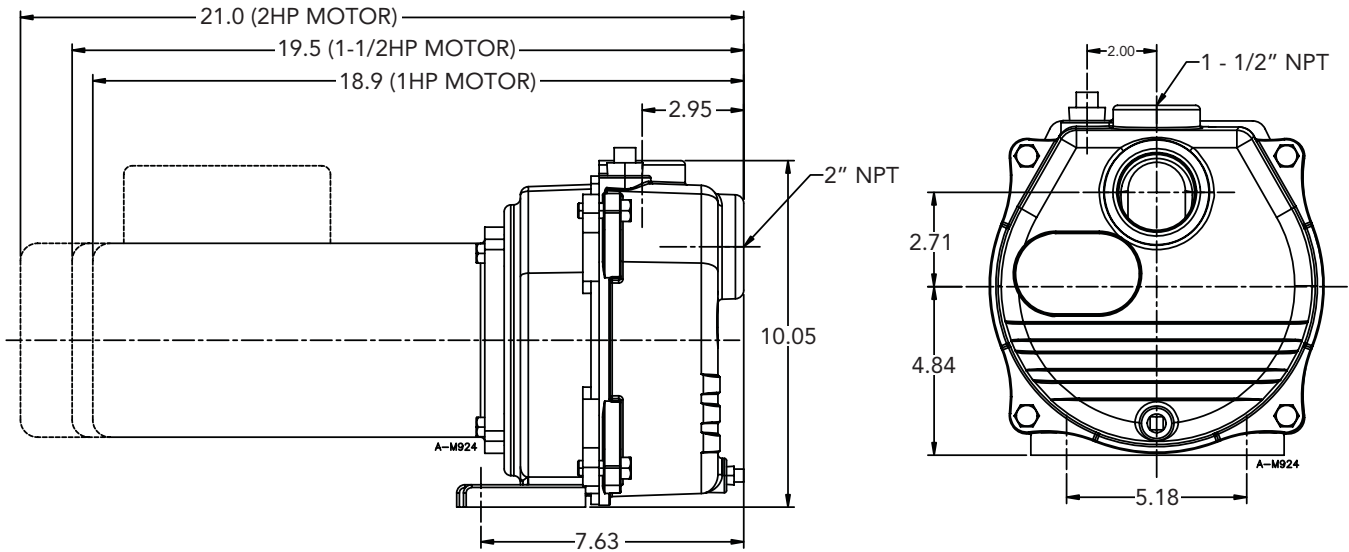
# Dimensional Outline



"A" Dimensions	
SPHE-S75	10.88"
SPHE-S100	11.88"
SPHE-S150	12.63"
SPHE-S200	12.65"

LSP-100-C	18.9"
LSP-150-C	19.5"
LSP-200-C	21.0"

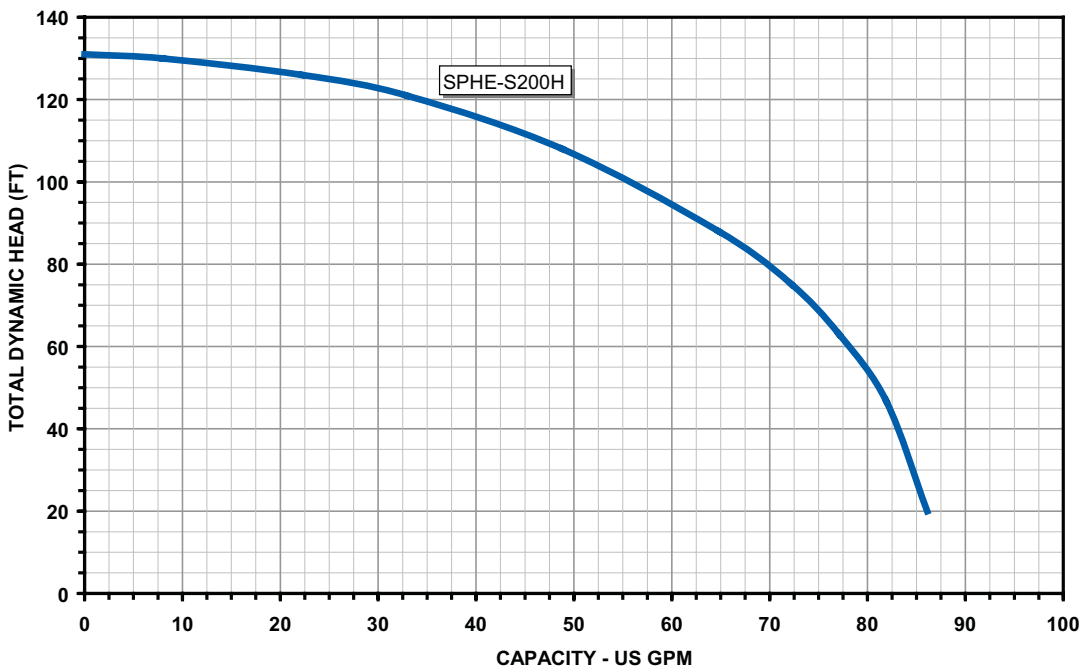
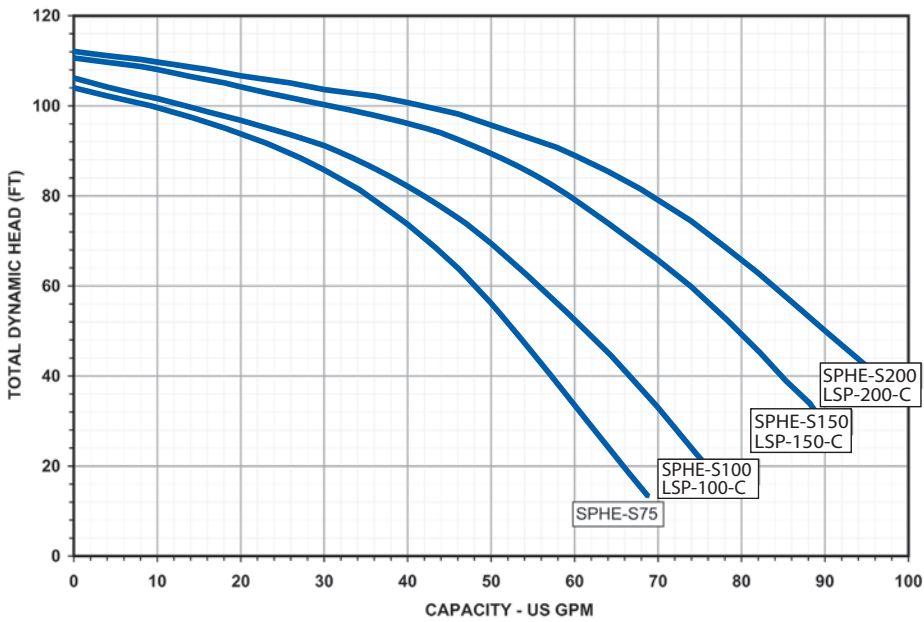
\*Dimensions measured in inches



## Specifications

Model No.	Item No.	Little Giant Item No.	Listing	HP	SF	Suct. NPT	Volts	Discharge	Discharge Pressure in PSI at 5 ft. Lift					Max. PSI	Ship Wt. (lbs.)
									10	20	30	40	50		
									Capacities in U.S. GPM						
SPHE-S75	614661	-	cCSAus	3/4	14.8/7.4	2"	115/230	1 1/2"	63	52	40	12	33	45	64
SPHE-S100	614662	558294	cCSAus	1	19.2/9.6	2"	115/230	1 1/2"	72	62	46	20	33	46	66
SPHE-S150	614663	558295	cCSAus	1 1/2	24.0/12.0	2"	115/230	1 1/2"	90	80	64	40	33	47	72
SPHE-S200	614664	558296	cCSAus	2	11.2	2"	230	1 1/2"	97	90	74	47	33	48	76
SPHE-S200H	614668	-	cCSAus	2	11.2	2"	230	1 1/2"	84	81	73	58	33	57	76

## Performance Curve





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# WaterSystems

## NSPHE Series



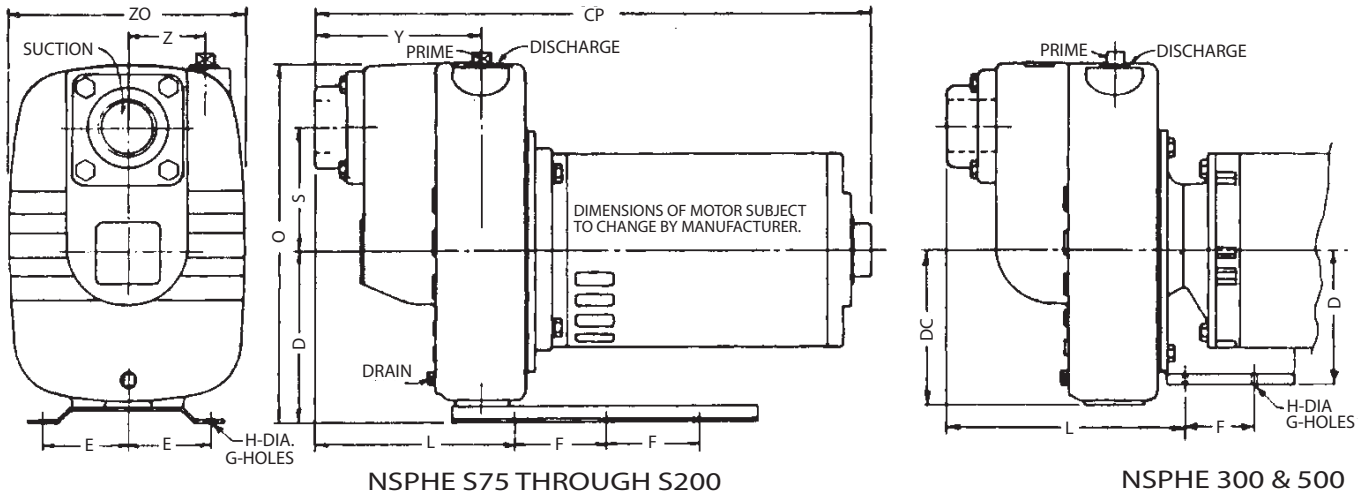
### Applications

Designed for both high pressure and high capacity, these pumps cover a wide range of applications and are ideal for lawn or turf sprinkling and can also be used as a standby pump for fire protection.

### Features

- **BUILT-IN CHECK VALVE** - Suction check valve facilitates priming and prevents back flow or syphoning, 1½", 2" & 2½" NPTF.
- **DISCHARGE** - NPTF 1½" or 2".
- **IMPELLER** – Noryl glass filled, provides smooth surface for efficient operation, corrosion resistant, enclosed type for higher pressures; the 3 & 5 HP units have cast gray iron impellers.
- **SEAL** – Mechanical, self-lubricating, self-adjusting for wear, no maintenance required.
- **CASING** – Cast gray iron, large housing to assure self priming, eliminating need for foot valve or priming device.
- **DIFFUSER** – Cast gray iron, built-in on all models, improves pump efficiency.
- **MOTOR** – CSA approved motors ranging in sizes from ¾ to 5 HP.  
1, 1½, and 2 HP single phase are square flange jet pump motors, with higher than NEMA service factor.  
1, 1½, and 2 HP have thermal overload protection.  
3 HP and 5 HP motors are JM frame, without thermal overload protection.

## Dimensional Outline



NSPHE S75 THROUGH S200

NSPHE 300 & 500

Model	Suction NPT	Discharge NPT	CP	D	DC	E	F	G	H	L	O	S	Y	Z	ZO
NSPHE-300	2"	2"	23.25	4.50	5.00	3.75	5.00	4.00	0.44	14.75	13.25	6.00	6.38	3.00	9.75
NSPHE-300-3	2"	2"	23.75	3.50	5.56	2.75	5.00	4.00	0.38	14.50	12.00	6.00	6.38	3.00	9.75
NSPHE-500	2 1/2"	2"	23.38	4.50	5.56	3.75	2.75	4.00	0.40	15.12	13.88	5.75	6.38	3.00	9.75
NSPHE-500-3	2 1/2"	2"	23.38	4.50	5.56	3.75	2.25	4.00	0.40	15.12	13.88	5.75	6.38	3.00	9.75

\*Dimensions measured in inches

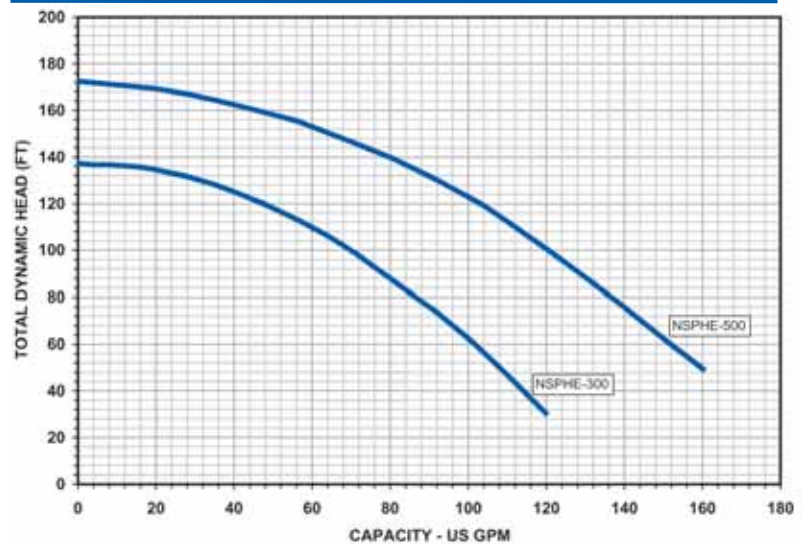
## Performance Chart

Model No.	HP	Discharge Pressure in PSI at 5 ft. Lift						Max. PSI
		10	20	30	40	50	60	
Capacities in U.S. GPM								
NSPHE-300	3	124	110	95	77	54	-	59
NSPHE-500	5	170	165	146	128	109	85	74

## NSPHE Series - Electric Motor Driven

NSPHE SERIES - ELECTRIC MOTOR DRIVEN						
Model No.	Order No.	HP	SF	Suct. NPT	Disch. NPT	Ship Wt. (lbs.)
NSPHE-300	614404	3	1.15	2"	2"	134
NSPHE-300-3	614405	3	1.15	2"	2"	110
NSPHE-500	614406	5	1.15	2 1/2"	2"	140
NSPHE-500-3	614407	5	1.15	2 1/2"	2"	130

## Performance Curve



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# WaterSystems

## Accessories

### Pressure Switches

Model No.	Order No.	Maximum HP Rating				Max PSI	Press. Switch Press. PSI	Setting Connection	Replacement Points System No.
		1 Phase		3 Phase					
		115V HP	230V HP	230V HP	460/575V HP				
9013-FSG-2	224310	1½	2	3	1	65	20-40	¼" NPTF	224360
9013-FSG-2P	224311	1½	2	3	1	65	20-40	¼" NPTF	224360
*9013-FSG-2M4	224520	1½	2	3	1	60	20-40	¼" NPTF	224360
9013-FSG-2	224312	1½	2	3	1	65	30-50	¼" NPTF	224360
9013-FSG-2U	224314	1½	2	3	1	65	30-50	¼" NPTF	224360
*9013-FSG-2M4	224521	1½	2	3	1	60	30-50	¼" NPTF	224360
9013-FSG-10U	224231	1½	2	3	1	65	30-50	BAYONET (barb)	224360
9013-GSG-2U	224331	2	3	5	5	80	30-50	¼" NPTF	224350
9013-FSG-2	224315	1½	2	3	1	65	40-60	¼" NPTF	224360
*9013-FSG-2M4	224522	1½	2	3	1	60	40-60	¼" NPTF	224360
9013-GSG-2U	224330	2	3	5	5	80	40-60	¼" NPTF	224350



9013FSG-2



9013FSG-2M4

\*Form M4 comes with low pressure cut off set at 10 PSI.

### Jet Pump to Tank Mounting Base Plate

Model No.	Order No.	Ship Wt. (lbs.)	Description
PS-1621	604051	2	Fits PC-44, PC-66, PC-88, PC-111, PC-122
PS-2126	604052	3	Fits PC-144, PC-211, PC-244, PC-266



PS-1621

### Tee Fittings

Model No.	Order No.	Material	Ship Wt. (lbs.)	Description
S702	604041	Solid Bronze	2	Each leg tapped 1" NPT female and 1¼" NPT male with 3 female tappings on side, ¼" NPT each.
S703	604042	Solid Bronze	2	Tee for tank, for 1" NPT tapping.
OLT-100	604002	Brass	2	1" Tank Tee for On-Line Tank.
OLT-125	604003	Brass	2	1 ¼" Tank Tee for On-Line Tank.



189560



S703

## Cable Splicing Kit

(For-AWG #14, #12 & #10 Cable)

Order No.	Description
622044	Includes Heat Shrink tubing with built-in sealant.

## Automatic Submersible Water System Kit

Model No.	Order No.	Ship Wt. (lbs.)	Description
P-SWSK-10B	626101	3	Kit includes: Bronze tee, M4 Combination low pressure cut-off/pressure control switch, and pressure gauge.

## Control Boxes - QD (Quick Disconnect)

HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs.)
1/2	115	660805	-	2801044915	4
1/2	230	660806	558814	2801054915	4
3/4	230	660807	558823	2801074915	4
1	230	660808	558833	2801084915	4

## Control Boxes - QRC (Capacitor Run)

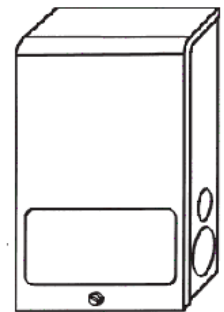
HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs.)
1/2	230	-	558815	2824055015	5
1/2	230	-	558824	2824075015	5
1	230	-	558834	2824085015	5

## Control Boxes - Standard

HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs.)
1 1/2	230	660809	-	2823008610	7
2	230	660820	-	2823018110	7

## Control Boxes - Deluxe

HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs.)
2	230	660821	-	2823018310	7



## Submersible Pumping System Monitor

Model No.	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs)
Pumptec W/ IR Control	626298	-	5800020600	3
Pumptec Plus	626306	-	5800060100	7
QD Pumptece	626305	-	5800070600	3

## Constant Pressure Controllers

Model No.	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs)
CP - MonoDrive	660824	-	5870203110	17
CP - MonoDrive XT	660842	-	5870204110	21
SubDrive 75	660822	-	5870203380	17
SubDrive 150	660823	-	5870204150	21

## Franklin 4" Submersible Motors - 2 Wire

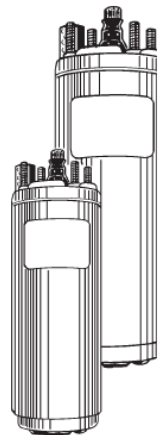
HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs)
1/2	115	660221	-	2445049004S	18
1/2	230	660231	-	2445059004S	18
3/4	230	660241	-	2445079004S	21
1	230	660251	-	2445089003S	24
1 1/2	230	660269	-	2443099004S	31

## Franklin 4" Submersible Motors - 3 Wire - Single Phase

HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs)
1/2	115	660220	-	2145049004S	19
1/2	230	660230	-	2145059004S	19
3/4	230	660240	-	2145079004S	21
1	230	660250	-	2145089003S	24
1 1/2	230	660279	-	2243009203S	28
2	230	451300	-	2243019204S	33

## Franklin 4" Submersible Motors - 3 Wire - Three Phase

HP	Voltage	Mon No.	LG No.	FE Item No.	Ship Wt. (lbs)
1 1/2	230	451270	-	2345149203S	29





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Form 995737 — 05/09

# W a s t e w a t e r

# Wastewater

## UP16M Series



163025  
C  US  
CSA 108  
UL 778

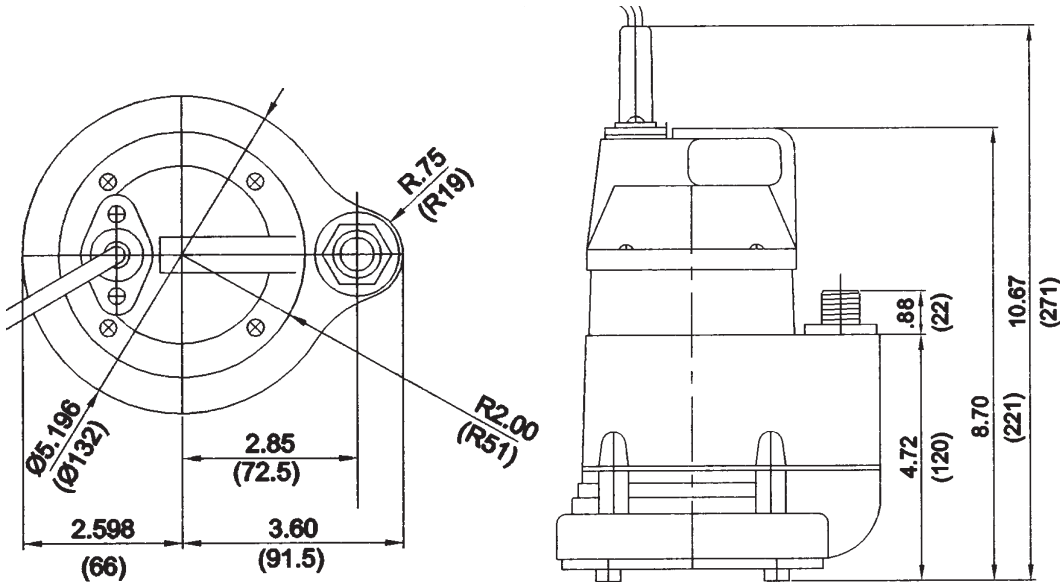
### Applications

Manually operated Submersible Utility pump ideal for dewatering and water transfer

### Features

- **SOLIDS HANDLING CAPABILITY** - 1/8".
- **MOTOR** - 1/6 HP, 115 volt, thermal overload protected. 2.1 full load amps. 10 foot power cord. Stainless steel heat treated shaft. Continuous duty "oil free" motor. Lubricated lip seal.
- **PUMP CASING** - Corrosion resistant aluminum for superior heat dissipation. 3/4" NPT discharge.
- **IMPELLER** - Constructed of durable glass reinforced thermoplastic.
- **GARDEN HOSE ADAPTER** - For convenient hook up.
- **BOTTOM SUCTION DESIGN** - Built-in suction strainer to eliminate internal damage from possible debris. Removable filter screen for easy cleaning.

## Dimensional Outline

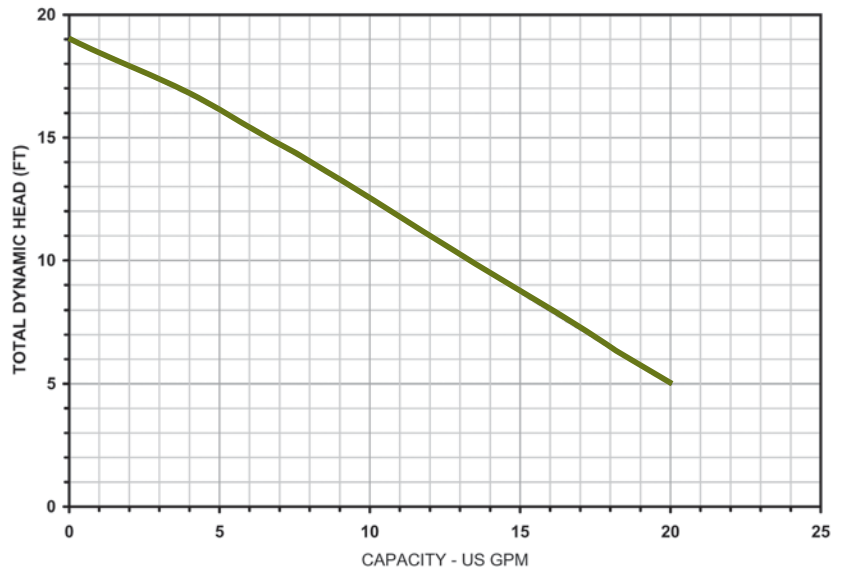


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	Volts	Discharge	Total Head in Feet			Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
						5	10	15			
UP16M	620137	cCSAus	1/6	115	3/4"	Capacities in U.S. GPM			19	10	3
						20	14	7			

## Performance Data



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# Wastewater

## SP25A Series



163025  
C SA US  
CSA 108  
UL 778

### Applications

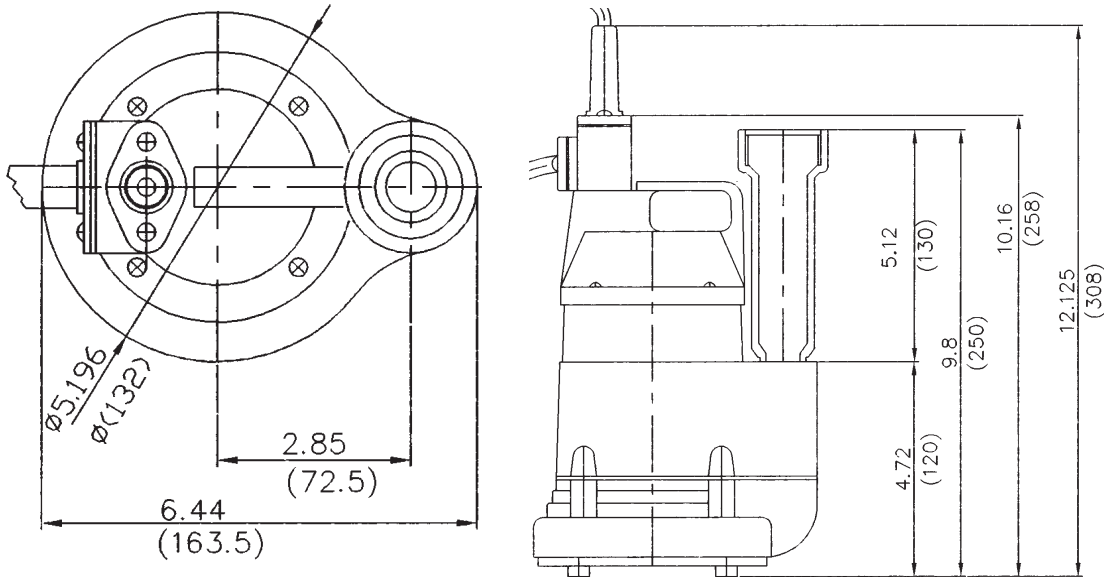
Automatic utility pump ideal for dewatering and water transfer.

### Features

- **SOLIDS HANDLING CAPABILITY** - 1/8".
- **MOTOR** - 1/4 HP, 115 volt, thermal overload protected. 3.2 full load amps. 10 foot power cord. Stainless steel heat treated shaft. Continuous duty "oil free" motor. Permanently lubricated lip seal.
- **PUMP CASING** - Corrosion resistant aluminum for superior heat dissipation. 1 1/4" NPT discharge.
- **IMPELLER** - Constructed of durable glass reinforced thermoplastic.
- **SWITCH** - Automatic, mechanical float switch.  
On Level 13.4" [340mm]  
Off Level 7.5" [190mm]
- **BOTTOM SUCTION DESIGN** - Built-in suction strainer to eliminate internal damage from possible debris. Removable filter screen for easy cleaning.



## Dimensional Outline

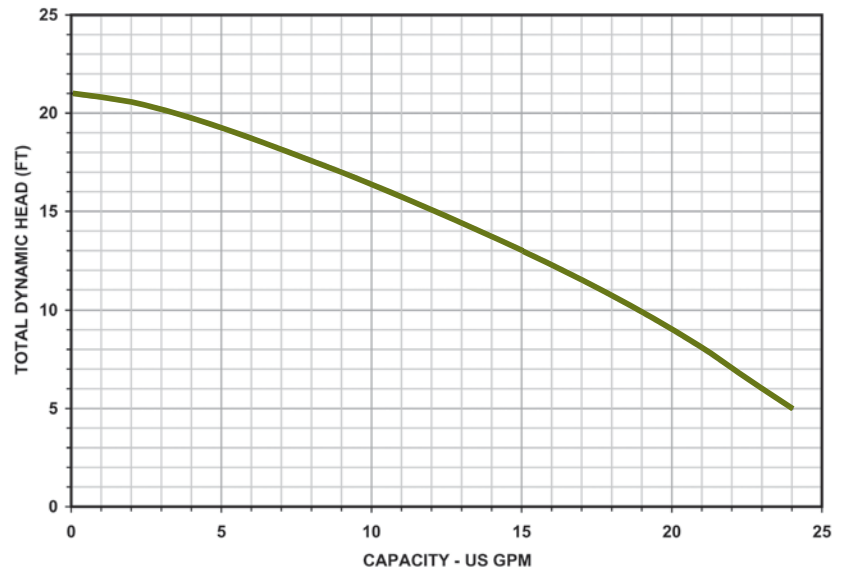


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	Volts	Discharge	Total Head in Feet			Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
						5	10	15			
						Capacities in U.S. GPM					
SP25A	620136	cCSAus	1/4	115	1 1/4"	24	19	12	21	10	8.5

## Performance Data



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# Wastewater

## SP33A Series



163025  
C  US  
CSA 108  
UL 778

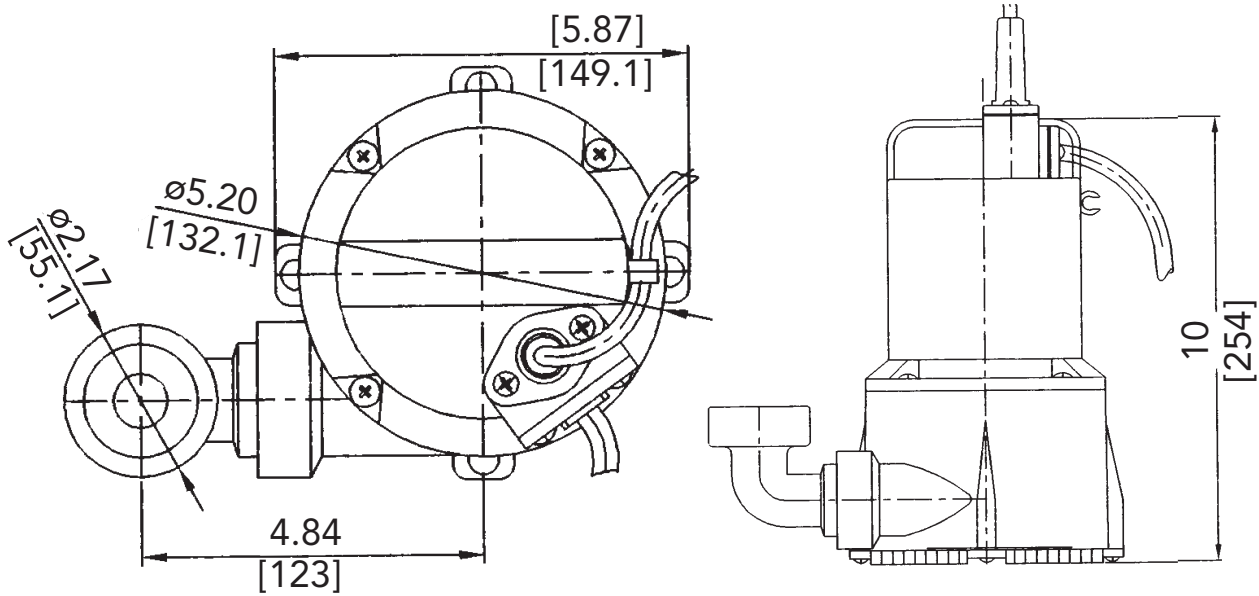
### Applications

Automatic utility pump ideal for dewatering and water transfer.

### Features

- **SOLIDS HANDLING CAPABILITY** - 1/4".
- **MOTOR** - 1/3 HP, 115 volt, thermal overload protected. 3.5 full load amps  
Continuous duty "oil free" motor  
Stainless steel motor housing improves heat dissipation for longer motor life  
Complete with a 10 foot power cord.  
Stainless steel heat treated shaft  
Permanently lubricated lip seal.
- **PUMP CASING** - Fully constructed of durable reinforced thermoplastic for excellent corrosion resistance. 1 1/4" NPT discharge for ease of installation.
- **IMPELLER** - Non clogging design constructed of durable reinforced thermoplastic.
- **SWITCH** - Automatic, mechanical float switch.  
On level 11.8" [300mm]  
Off level 5.9" [150mm]
- **BOTTOM SUCTION DESIGN** -  
Built-in suction strainer to eliminate internal damage from possible debris.  
Removable filter screen for easy cleaning.

## Dimensional Outline

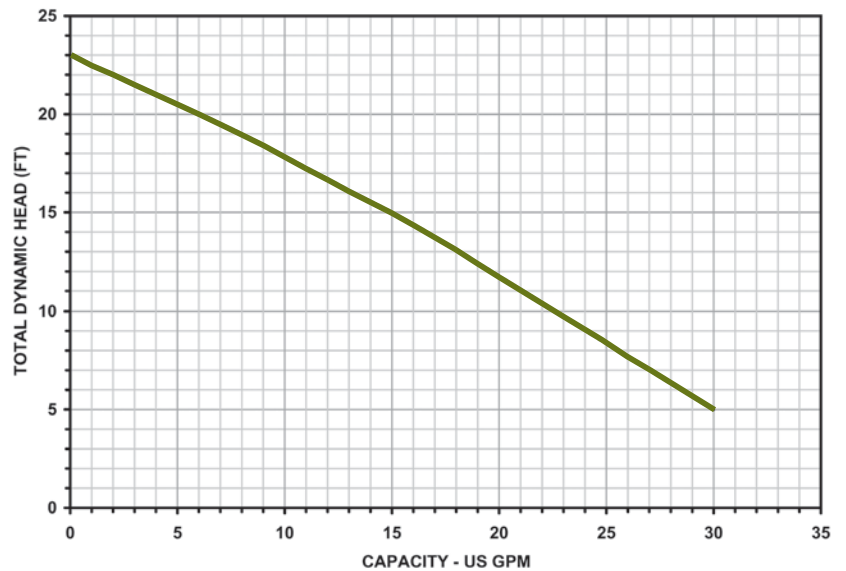


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	Volts	Discharge	Total Head in Feet			Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
						5	10	15			
						Capacities in U.S. GPM					
SP33A	620135	cCSAus	1/3	115	1 1/4"	30	23	15	23	10	10

## Performance Data



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# Wastewater

## ESP33 Series



163025  
C  US  
CSA 108  
UL 778

 MONARCH

### Applications

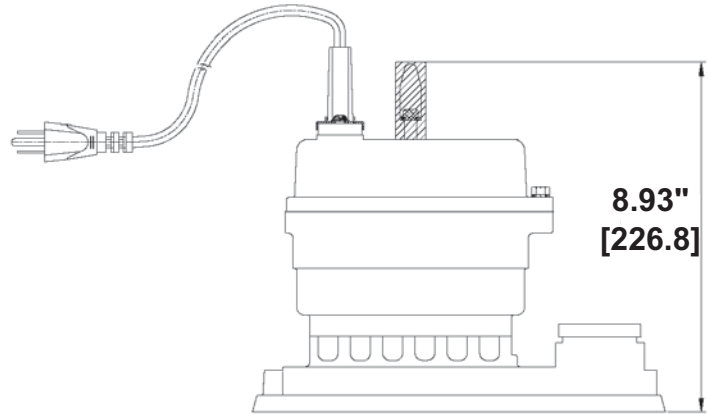
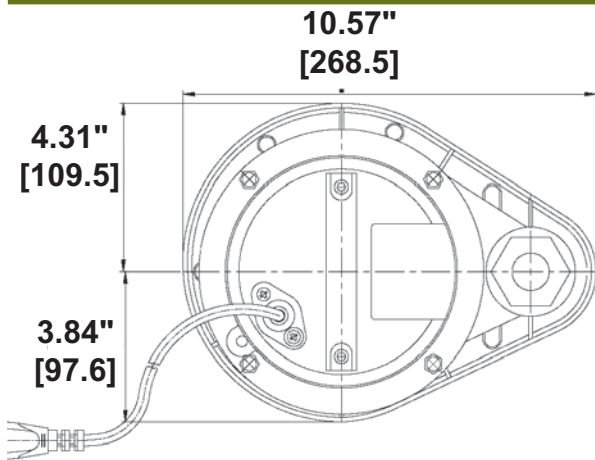
Ideal for basement sump or for pumping liquid effluent.

### Features

- **SOLIDS HANDLING CAPABILITY** - 1/2"
- **CONSTRUCTION** - Rugged cast iron motor housing dissipates heat away from motor. Cast Iron pump casing. Models ending in -P have thermoplastic motor cover and casing.
- **MOTOR** - 115 volt thermal overload protected, continuous duty "oil free" motor. Stainless steel heat treated shaft, upper and lower permanently lubricated ball bearings. 5.6 full load amps.
- **IMPELLER** - 5 vane reinforced polypropylene, handles 1/2" spherical solids - with brass insert.
- **SWITCH** - Automatic with piggy-back mechanical float switch or vertical float switch. Also available in manual operation.
- **POWER CORD** - 10 ft. power cord
- **DISCHARGE** - 1 1/2" NPT. Reducer bushing for 1 1/4" discharge included.
- **SEAL** - Permanently lubricated double lip seal.

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## Dimensional Outline

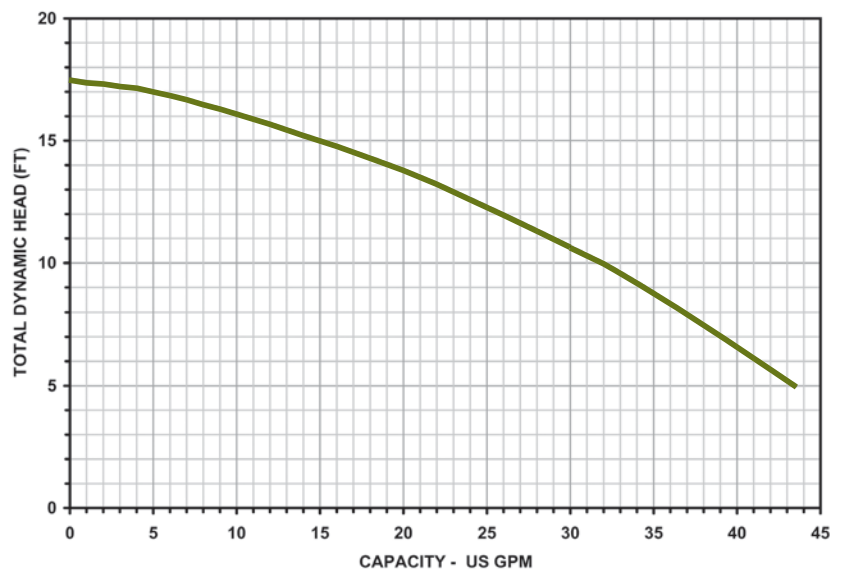


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	SFA	Volts	Discharge	Switch Type	Total Head in Feet			Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
								5	10	15			
								Capacities in U.S. GPM					
ESP33AM	620186	cCSAus	1/3	5.6	115	1½ - 1 ¼	Piggyback style float	44	33	13	17.5	10	20
ESP33AM-P	620185	cCSAus	1/3	5.6	115	1½ - 1 ¼	Piggyback style float	44	33	13	17.5	10	19
ESP33AV	620120	cCSAus	1/3	5.6	115	1½ - 1 ¼	Vertical float	44	33	13	17.5	10	20
ESP33M	620089	cCSAus	1/3	5.6	115	1½ - 1 ¼	Manual	44	33	13	17.5	10	17
ESP33M-20	620122	cCSAus	1/3	5.6	115	1½ - 1 ¼	Manual	44	33	13	17.5	20	20
ESP33AV-P	620121	cCSAus	1/3	5.6	115	1½ - 1 ¼	Vertical float	44	33	13	17.5	10	19

## Performance Data



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# Wastewater

## ESP-33S-FP Series



 US (pump only)

### Applications

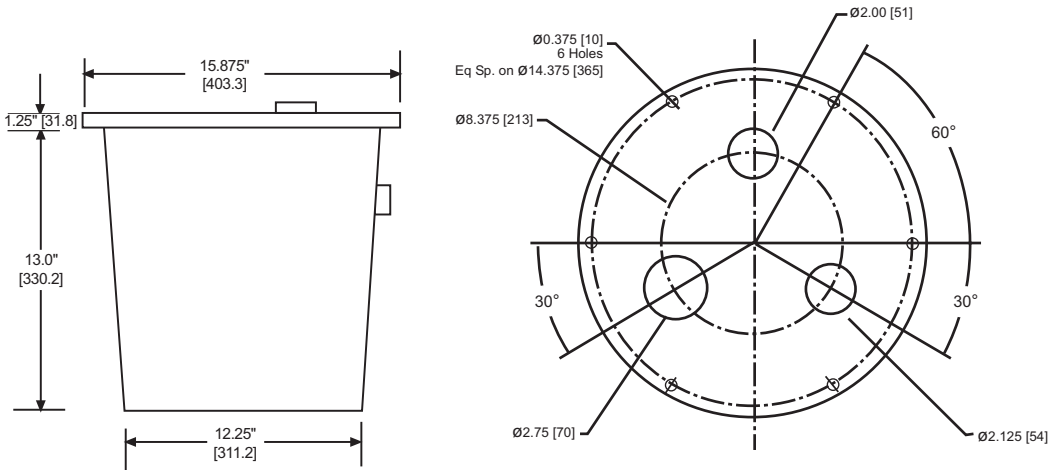
Economical, above floor system for use in laundry tray, bar sink, and other applications where drain lines are not available. Pre-packaged for quick and simple installation.

### Features

- **PUMP** - 1/3 HP, oil free ESP33AV-P with automatic operation via integral float control.
- **MOTOR** - 115 volt, with automatic reset overload protection.
- **TANK** - Heavy duty 5.5 gallon polypropylene tank.
- **HARDWARE** - Stainless Steel.

## Dimensional Outline

\*Dimensions measured in inches [mm]



## Specifications

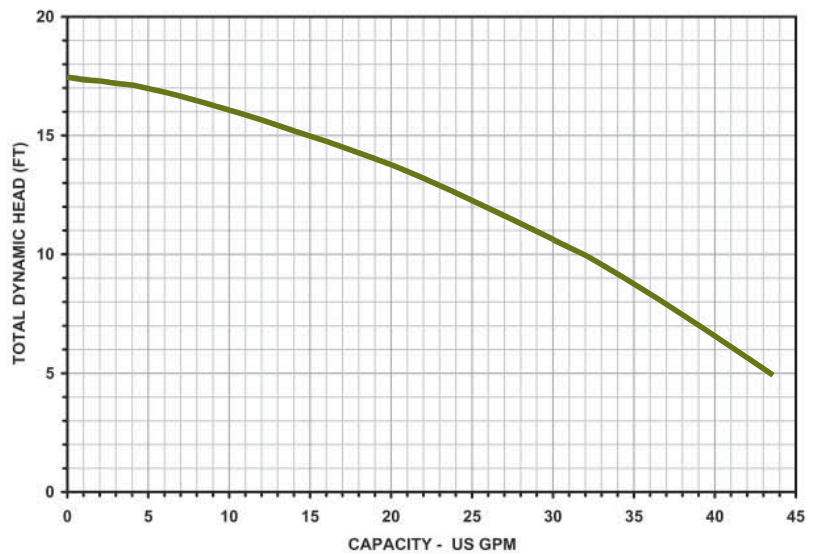
### ESP33-FP Series Pump & Tank System Submersible Effluent

Model No.	Item No.	HP	Solids Handling	Ship Wt. (lbs.)	Description
ESP33S-FP	620098	1/3	1/2"	32	Prepackaged Sump Pump and Tank System

## Performance Chart

Model No.	Total Head in Feet				Shut-Off Head (ft.)
	5	10	15	20	
Capacities in U.S. GPM					
ESP33	44	33	13	0	17.5

## Performance Data





# Wastewater

## WRS Series



(Pump Only)

### Applications

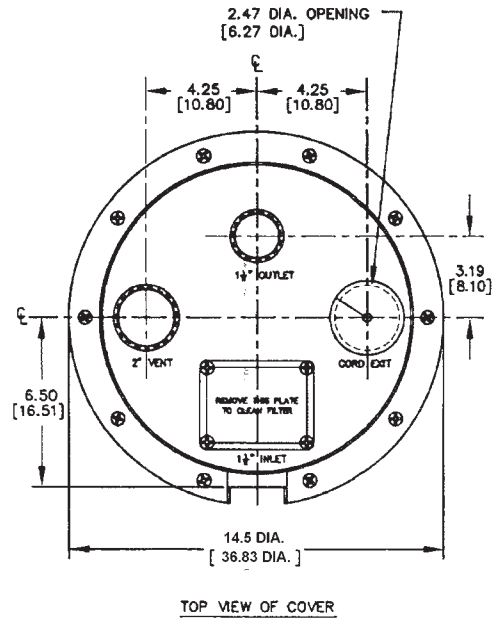
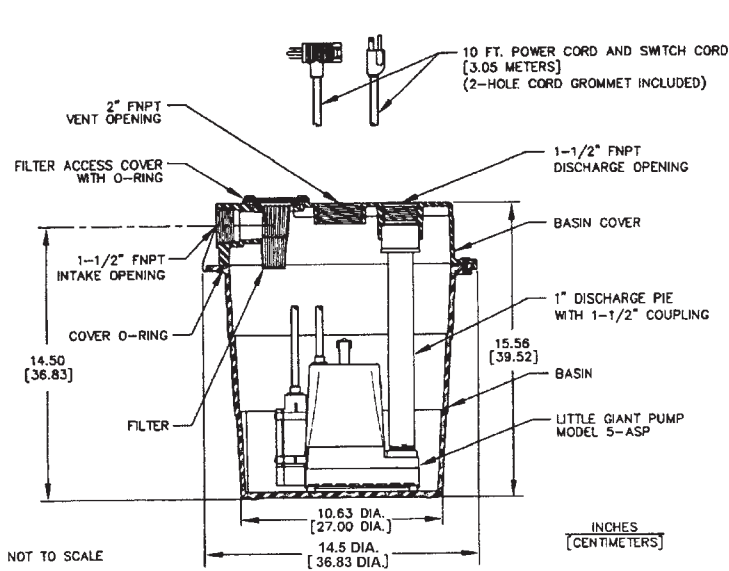
Economical, above floor system for use in laundry tray, bar sink, and other applications where drain lines are not available. Pre-packaged for quick and simple installation.

### Features

- Pump made of cast aluminum housing with protective epoxy coating for corrosion resistance.
- Screened intake.
- 1/6 HP motor with thermal overload protection.
- Automatic diaphragm pressure switch enclosed in nylon housing with "on" level at 7"-10" and "off" level at 1"-4".
- Basin made of polypropylene — light weight, and corrosion resistant.
- Basin designed with O-rings to provided a water-tight seal.
- Basin cover comes with a removable filter screen for easy cleaning.
- Cover comes with 1-1/2" FNPT discharge opening, a 1-1/2" FNPT intake opening and a 2" FNPT vent opening.
- IAPMO listed basin.
- Pre-assembled, ready to be installed.



## Dimensional Outline



## Specifications

Model No.	Item No.	Discharge	Listing	HP	Volts	Hz.	Running Amps/Watts	Flow (GPM @ Head)			Shutoff Head (ft.)	Weight (lbs.)	Dimensions (W x H) (in.)
								5'	10'	15'			
WRS-5	505055	1-1/2"	UL/CSA/IAPMO	3/10	115	60	5/380	15	11	8	21	19	14.5 x 15.56

UL/CSA listing for pump only

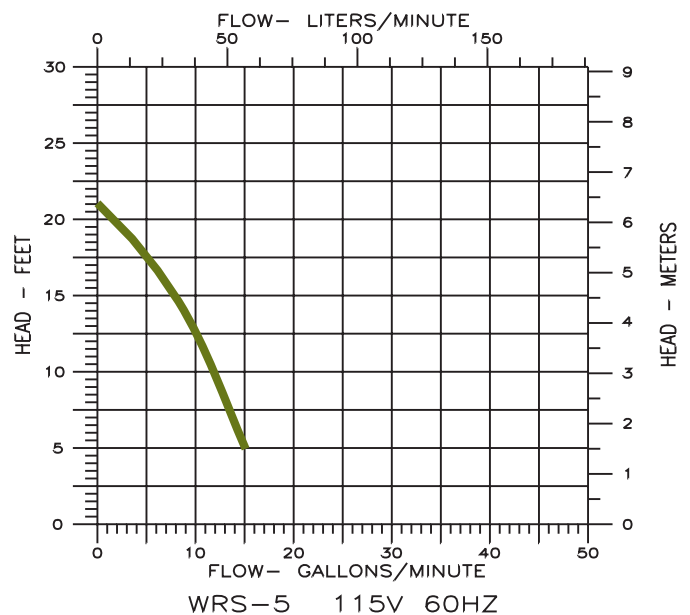
## Pump Construction

Motor Housing	Epoxy-coated cast aluminum
Impeller Material	Nylon
Volute	Nylon
Power Cord	18/3, SJTW
Mechanical Shaft Seal	Double lip Viton®
Fasteners	Stainless steel
Shaft	Stainless steel

## Basin Construction

Basin/Cover	Polypropylene
Basin Fluid Capacity	5 gallons (approx.)
Discharge Size	1-1/2" FNPT
Intake Size	1-1/2" FNPT
Vent Size	2" FNPT

## Performance Data



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# Wastewater

## ESP50 Series



163025  
C SA US  
CSA 108  
UL 778

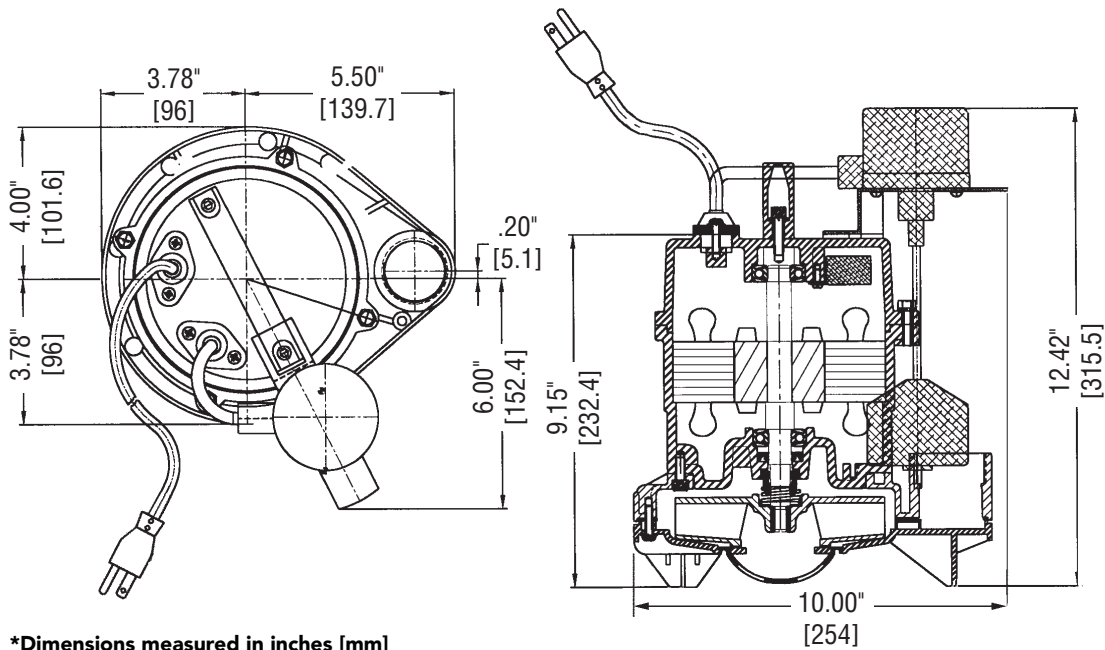
### Applications

Ideal for basement sump or for pumping liquid effluent.

### Features

- **SOLIDS HANDLING CAPABILITY** - 3/4".
- **CONSTRUCTION** - Rugged cast iron motor housing dissipates heat away from motor. Rugged corrosion resistant, molded polypropylene pump body.
- **MOTOR** - 115 volt thermal overload protected, continuous duty "oil free" motor. Stainless steel heat treated shaft. Upper and lower ball bearings. 6.7 full load amps.
- **IMPELLER** - Reinforced polypropylene, handles 3/4" spherical solids - with brass insert.
- **SWITCH** - Automatic with piggy-back mechanical float switch or vertical float switch.  
**ESP50AM**  
On level 11.4" [290mm]  
Off level 4.7" [120mm]  
**ESP50AV**  
On level 6.7" [170mm]  
Off level 4" [100mm]  
Also available in manual operation.
- **POWER CORD** - 20 ft. power cord
- **DISCHARGE** - 1 1/2" NPT.
- **2 Year Warranty**

## Dimensional Outline

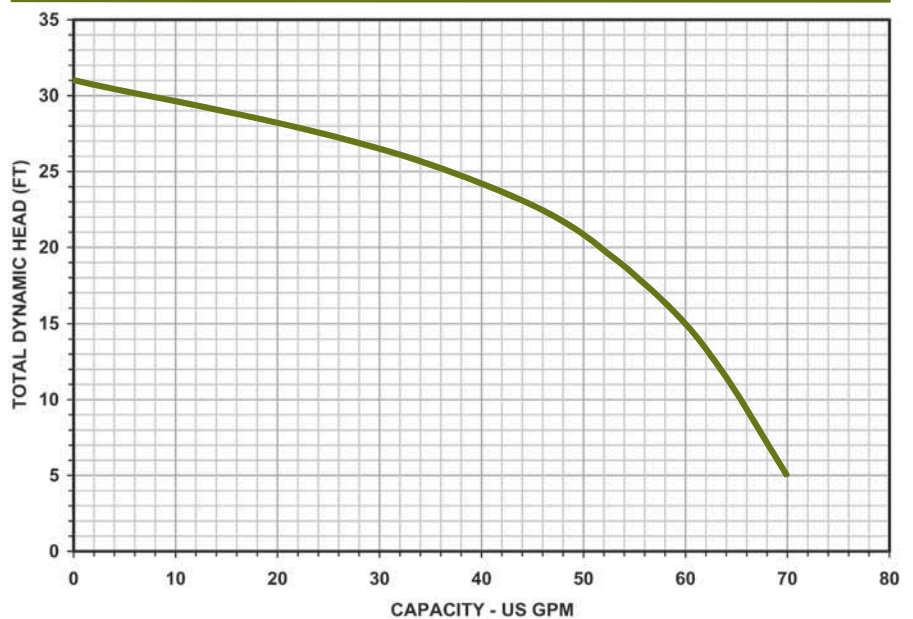


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	SFA	Volts	Discharge	Switch	Total Head in Feet						Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
								5	10	15	20	25	30			
								Capacities in U.S. GPM								
ESP50AM	620187	cCSAus	1/2	6.7	115	1 1/2"	Piggyback-style Float	70	65	61	51	36	2	31	20	24
ESP50AV	620178	cCSAus	1/2	6.7	115	1 1/2"	Vertical Float	70	65	61	51	36	2	31	20	24
ESP50M	620174	cCSAus	1/2	6.7	115	1 1/2"	Manual Operation	70	65	61	51	36	2	31	20	24

## Performance Data



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# Wastewater

## WS Effluent Series



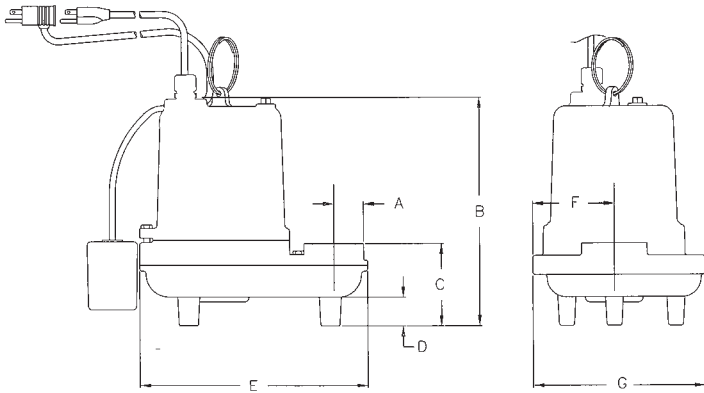
### Applications

Ideal for liquid effluent pumping applications, as well as light commercial applications with up to 3/4" diameter solids.

### Features

- **CONSTRUCTION** - Motor and pump housing is Cast Iron.
- **CORD** - Power cord sealed at motor housing.
- **IMPELLER** - Cast Iron. Solids handling non-clog impeller.
- **SEAL** - Mechanical carbon/ceramic.
- **SHAFT** - Motor shaft is 416 stainless steel.
- **MOTOR** - Oil filled chamber with double ball bearing. Designed for hi-torque and is thermally protected with automatic reset (single phase only).
- **SWITCH** - Mechanical float switch for automatic on-off operation; piggyback style WS30.
- **DISCHARGE** - 2" NPT.
- **FASTENERS** - Stainless steel fasteners throughout, for serviceability.

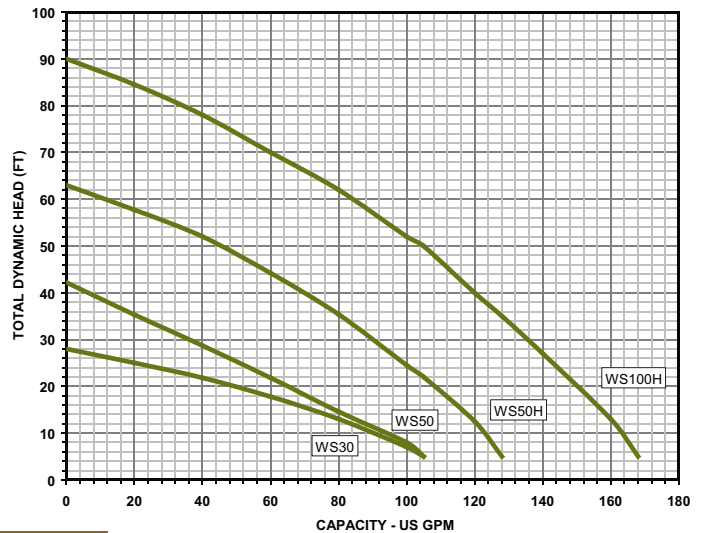
## Dimensional Outline



\*Dimensions measured in inches [mm]

Model	A	B	C	D	E	F	G
WS30	1.75" [44.5]	11.25" [285.8]	3.75" [95.3]	1" [25.4]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS50	1.75" [44.5]	13.75" [349.3]	3.75" [95.3]	1" [25.4]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS50H	1.75" [44.5]	13.75" [349.3]	3.75" [95.3]	1" [25.4]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS100H	1.75" [44.5]	13.75" [349.3]	3.75" [95.3]	1" [25.4]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]

## Performance Data



## Specifications

Model No.	Item No.	Listing	HP	Volts	SFA	Phase	Solids Handling	Discharge	Cord Length (ft.)	Ship Wt. (lbs.)
WS30M	620010	cCSAus	1/3	115 V	10.4	1	3/4"	2"	20'	51
WS30AM	620000	cCSAus	1/3	115 V	10.4	1	3/4"	2"	20'	53
WS50M-20	620231	cCSAus	1/2	115 V	11.6	1	3/4"	2"	20'	55
WS50AM-20	620233	cCSAus	1/2	115 V	11.6	1	3/4"	2"	20'	57
WS50M-12-20	620251	cCSAus	1/2	208-230V	9.7	1	3/4"	2"	20'	56
WS50AM-12-20	620253	cCSAus	1/2	208-230V	9.7	1	3/4"	2"	20'	58
WS50HM-20	620218	cCSAus	1/2	115V	15.0	1	3/4"	2"	20'	56
WS50HAM-20	620219	cCSAus	1/2	115V	15.0	1	3/4"	2"	20'	58
WS50HM-12-20	620220	cCSAus	1/2	208-230V	10.0	1	3/4"	2"	20'	56
WS50HAM-12-20	620221	cCSAus	1/2	208-230V	10.0	1	3/4"	2"	20'	58
WS100HM-12-20	620222	cCSAus	1	208-230V	13.3	1	3/4"	2"	20'	57
WS100HAM-12-20	620223	cCSAus	1	208-230V	13.3	1	3/4"	2"	20'	59
WS100HM-32	620207	cCSAus	1	208-230V	5.8 - 6.4	3	3/4"	2"	30'	62
WS100HM-34	620206	cCSAus	1	460V	2.9	3	3/4"	2"	30'	62

30' cord length models are available, please contact factory.

M = Manual

AM = Automatic with piggyback SJE float switch

## Performance Chart

Model No.	RPM	Total Head in Feet											Shut-Off Head (ft.)
		5	10	15	20	25	30	40	50	60	70	80	
WS30	1750	105	90	70	45	15	-	-	-	-	-	-	28
WS50	3450	105	92	80	64	50	-	-	-	-	-	-	42
WS50H	3450	130	124	116	108	98	88	70	44	-	-	-	63
WS100H	3450	168	164	156	150	142	136	120	104	84	60	32	90



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# Wastewater

## High Head Filtered Effluent Pumps



### Applications:

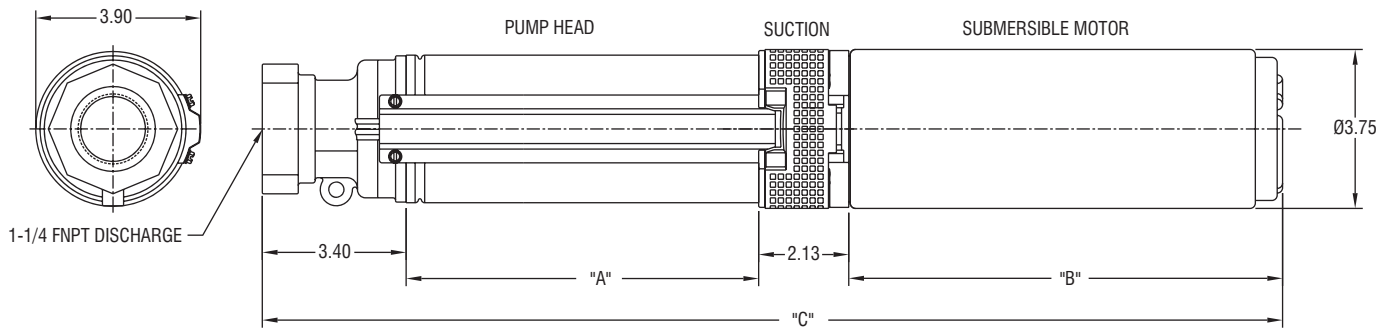
- Filtered effluent service
- Aeration
- Ornamental fountains/waterfalls

### Features

- Ideal for filtered effluent pumping
- Thermoplastic discharge and motor brackets are tough and non-corrosive
- Heavy duty, 300 volt, 10' SJOW Jacketed cord with stripped leads
- 1-1/4" FNPT discharge
- High quality top bearing for maximum durability and years of reliable service
- Proven Noryl® staging allows close tolerances and increased performance
- Stainless steel up thrust washer prevents excessive wear in services applications
- Removable built-in check valve
- Powered by Franklin Electric super stainless submersible motor
- Built-in lightning protection

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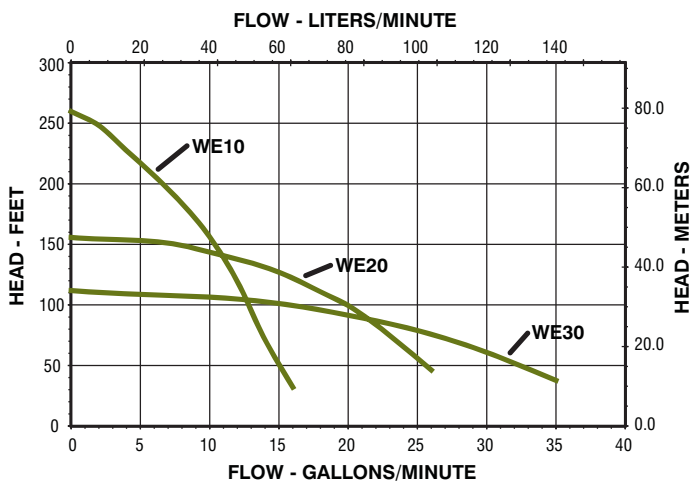
## Dimensional Outline



Item No.	Dimension	Dimension	Dimension
	A	B	C
558221	7.00	9.38	21.91
558222	7.00	9.38	21.91
558223	9.00	9.38	23.91
558224	9.00	9.38	23.91
558225	6.50	9.38	21.41
558226	6.50	9.38	21.41

## Specifications

Model No.	Item No.	HP	Volts/Hz	Discharge (dia. in.)	Performance (GPM@Head)					Wire	Cord
					50'	100'	150'	200'	250'		
WE10G05P4-21	558221	1/2	115/60	1-1/4	15	13	10	7	2	2 Wire	SJOW/300V/10' Stripped Leads
WE10G05P4-22	558222	1/2	230/60	1-1/4	15	13	10	7	2	2 Wire	SJOW/300V/10' Stripped Leads
WE20G05P4-21	558223	1/2	115/60	1-1/4	26	20	8	—	—	2 Wire	SJOW/300V/10' Stripped Leads
WE20G05P4-22	558224	1/2	230/60	1-1/4	26	20	8	—	—	2 Wire	SJOW/300V/10' Stripped Leads
WE30G05P4-21	558225	1/2	115/60	1-1/4	32	14	—	—	—	2 Wire	SJOW/300V/10' Stripped Leads
WE30G05P4-22	558226	1/2	230/60	1-1/4	32	14	—	—	—	2 Wire	SJOW/300V/10' Stripped Leads



## Construction

Motor housing	Stainless Steel
Impeller material	Celcon
Diffuser	Glass Filled PPO (Noryl®)
Power cord	10' SJOW
Check Valve	Celcon
Fasteners	Stainless steel
Shaft	Stainless steel
Bearings	PEEK
Discharge	Glass Filled Polypropylene



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# Wastewater

## BE Series



### Applications

These centrifugal, self-priming effluent pumps are designed for installations with septic tanks in areas with drainage problems. Ideal for pumping out flooded basements, livestock watering, flood irrigation, and general dewatering.

### Features

- **CASING** - Cast iron; 1/4" NPT suction & discharge.
- **MOTOR** - Continuous duty rated, **higher than NEMA service factor** dual compartment motors equipped with stainless steel shaft and automatic thermal overload protection.
- **BUILT-IN CHECK VALVE** - Facilitates fast priming and guards against syphoning action.
- **IMPELLER** - 4 vane, semi-open gray cast iron, with "Blind Hole" for motor shaft protection.
- **SEAL** - Carbon/ceramic 5/8" mechanical.

#### Motors are:

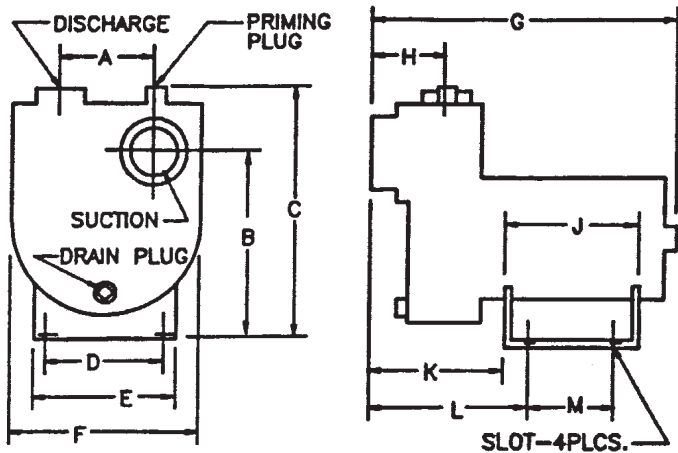
1/3 HP(115V) 9.4 full load amps

1/2 HP(115/230V) 12.4/6.2 full load amps

3/4 HP(115/230V) 14.8/7.4 full load amps



## Dimensional Outline



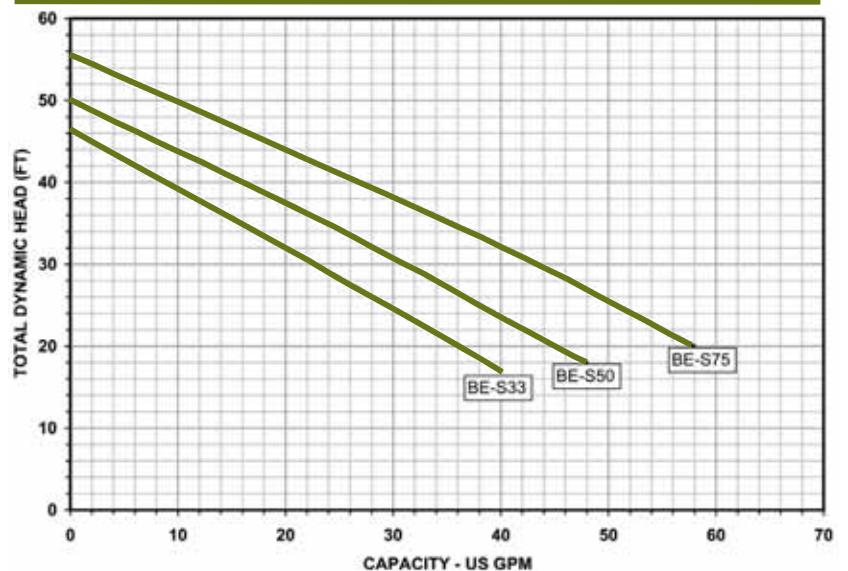
Model	Suct. NPT	Disch. NPT	Priming Plug NPT	Drain Plug NPT	Slots	A	B	C	D	E	F	G	H	J	K	L	M
BE-S33	1/4	1/4	1/2	1/2	.43" x .93" [10.9mm x 23.6mm]	4.25" [107.9mm]	7.25" [184.2]	10" [254]	4.9" [124.5]	6.5" [165.1]	7.6" [193.1]	14.4" [365.8]	3.1" [78.8]	4.9" [124.5]	5.5" [139.7]	6.8" [172.7]	3" [76.2]
BE-S50	1/4	1/4	1/2	1/2	.43" x .93" [10.9mm x 23.6mm]	4.25" [107.9mm]	7.25" [184.2]	10" [254]	4.9" [124.5]	6.5" [165.1]	7.6" [193.1]	14.4" [365.8]	3.1" [78.8]	4.9" [124.5]	5.5" [139.7]	6.8" [172.7]	3" [76.2]
BE-S75	1/4	1/4	1/2	1/2	.43" x .93" [10.9mm x 23.6mm]	4.25" [107.9mm]	7.25" [184.2]	10" [254]	4.9" [124.5]	6.5" [165.1]	7.6" [193.1]	14.4" [365.8]	3.1" [78.8]	4.9" [124.5]	5.5" [139.7]	6.8" [172.7]	3" [76.2]

\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	SF	Volts	Total Head in Feet							Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
						20	25	30	35	40	45	50			
						Capacities in U.S. GPM									
BE-S33	621805	CSA	1/3	1.95	115	36	30	23	16	9	-	-	46	20	41
BE-S50	621815	CSA	1/2	1.90	115/230	45	39	31	24	16	8	-	50	20	42
BE-S75	621825	CSA	3/4	1.65	115/230	58	53	44	36	26	18	10	56	20	43

## Performance Curve



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# Wastewater

## WSV52H Series



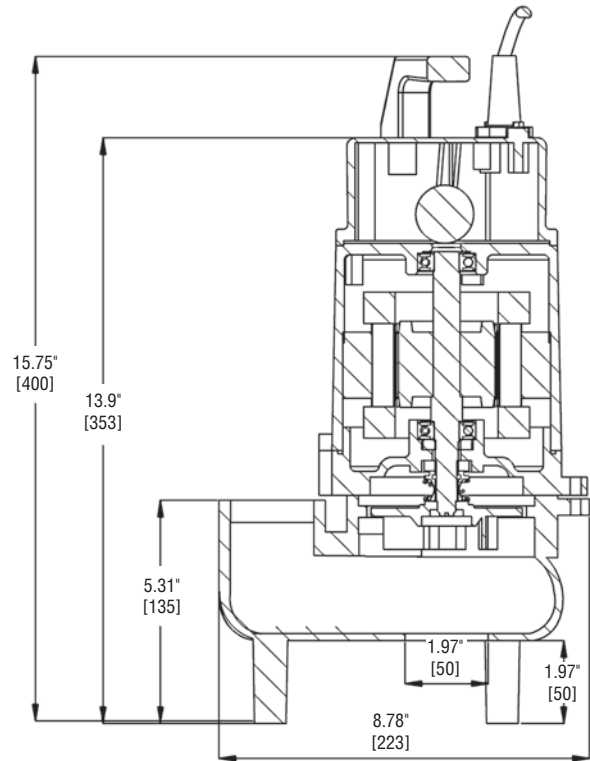
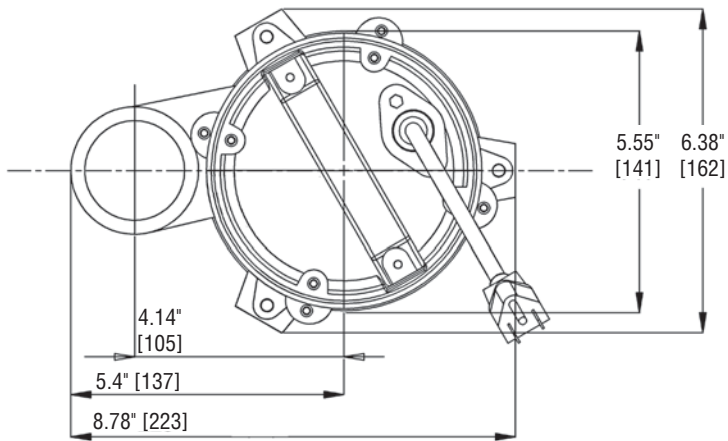
### Applications

Ideal for handling raw sewage as well as commercial dewatering sump applications with up to 2" solids.

### Features

- **CONSTRUCTION** - Motor housing, pump volute, and impeller are cast iron.
- **CORD** - 20 foot power cord sealed at motor housing.
- **IMPELLER** - A high capacity cast iron vortex impeller, designed for superior solids handling capabilities. This impeller is able to pass 2" solids by creating a vortex. This provides superior clog free operation.
- **MOTOR** - Powerful 115 volt, oil free PSC motor. Rated for continuous duty, with thermal overload protection and double ball bearings for reliability.
- **SWITCH** - Mechanical Piggy-back float switch for automatic on-off operation.
- **DISCHARGE** - 2" NPT.
- **FASTENERS** - 300 Series Stainless fasteners throughout, for serviceability.
- **SEAL** - Carbon Ceramic mechanical seal.
- **SHAFT** - 300 Series stainless steel for corrosion resistance.

## Dimensional Outline

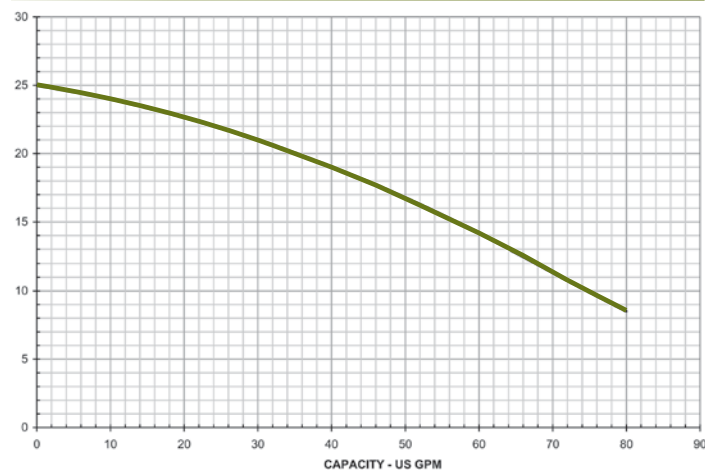


Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Listing	HP	Volts	Discharge	Total Head in Feet				Shut-Off Head (ft.)	Cord Length (ft.)	Ship Wt. (lbs.)
						5	10	15	20			
WSV52HM	620235	cCSAus	1/2	115	2" NPT	90	75	57	35	25	20	36
WSV52HAM	620236	cCSAus	1/2	115	2" NPT	90	75	57	35	25	20	38

## Performance Data



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# Wastewater

## WS Sewage Series



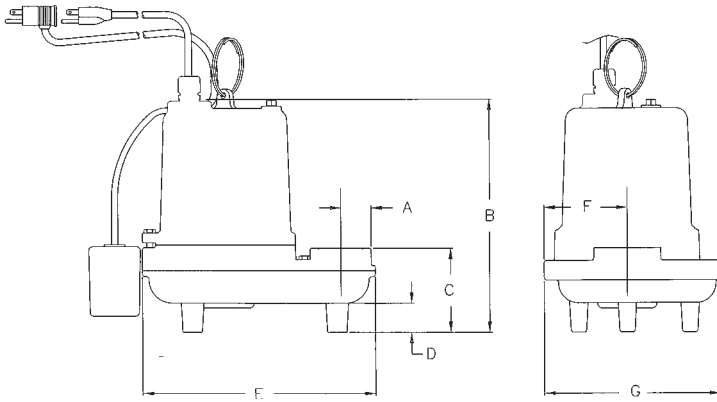
### Applications

Ideal for handling raw sewage as well as commercial dewatering sump applications with up to 2" solids.

### Features

- **CONSTRUCTION** - Motor and pump housing is Cast Iron.
- **CORD** - Power cord sealed at motor housing.
- **IMPELLER** - Cast Iron solids handling non-clog impeller.
- **SEAL** - Mechanical carbon/ceramic.
- **SHAFT** - Motor shaft is stainless steel.
- **MOTOR** - Oil filled chamber with double ball bearing. Designed for hi-torque and is thermally protected with automatic reset (single phase only).
- **SWITCH** - Mechanical float switch for automatic on-off operation; piggyback style.
- **DISCHARGE** - 2" NPT.
- **FASTENERS** - Stainless steel fasteners throughout, for serviceability.

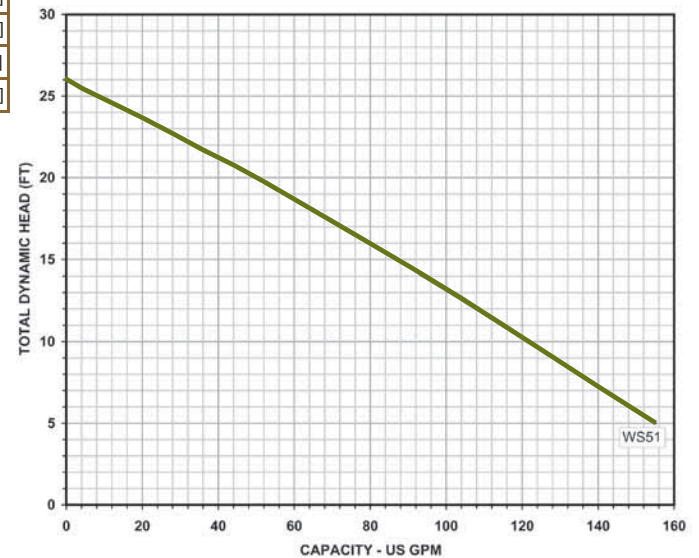
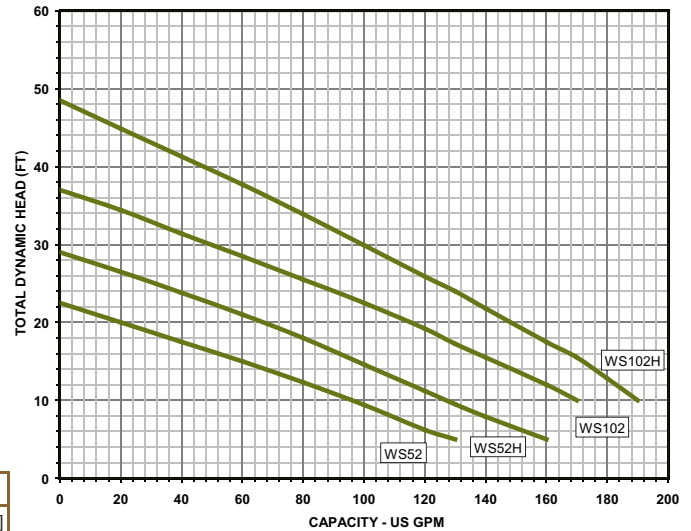
## Dimensional Outline



\*Dimensions measured in inches [mm]

Model	A	B	C	D	E	F	G
WS51	1.75" [44.5]	13.25" [336.6]	5.25" [133.4]	2" [50.1]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS52	1.75" [44.5]	14" [355.6]	6.38" [162.1]	2.31" [58.7]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS52H	1.75" [44.5]	15.1" [383.6]	6.38" [162.1]	2.31" [58.7]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS102	1.75" [44.5]	15.1" [383.6]	6.38" [162.1]	2.31" [58.7]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]
WS102H	1.75" [44.5]	15.1" [383.6]	6.38" [162.1]	2.31" [58.7]	12.25" [311.2]	4.68" [118.9]	9.38" [238.3]

## Performance Data



## Performance Chart

Model No.	RPM	Total Head in Feet							Shut-Off Head (ft.)
		5	10	15	20	25	30	35	
		Capacities in U.S. GPM							
WS51	1750	155	120	83	52	-	-	-	27
WS52	1750	135	90	56	14	-	-	-	23
WS52H	3450	156	128	97	68	32	-	-	29
WS102	1750	-	168	144	118	85	46	-	37
WS102H	3450	-	190	170	148	124	100	74	48

## Specifications

Model No.	Item No.	Listing	HP	Volts	SFA	Phase	Solids Handling	Discharge	Switch	Cord Length (ft.)	Ship Wt. (lbs.)
WS51M	620012	cCSAus	1/2	115	11.6	1	1 3/8"	2"	Manual	20	55
WS51AM	620002	cCSAus	1/2	115	11.6	1	1 3/8"	2"	Automatic	20	57
WS52M	620013	cCSAus	1/2	115	11.6	1	2"	2"	Manual	20	57
WS52AM	620003	cCSAus	1/2	115	11.6	1	2"	2"	Automatic	20	59
WS52HM	620254	cCSAus	1/2	115	11.6	1	2"	2"	Manual	30	58
WS52HAM	620255	cCSAus	1/2	115	11.6	1	2"	2"	Automatic	30	60
WS52HM-12	620256	cCSAus	1/2	208-230	11.6	1	2"	2"	Manual	30	58
WS52HAM-12	620257	cCSAus	1/2	208-230	11.6	1	2"	2"	Automatic	30	60
WS102M-12	620203	cCSAus	1	208-230	9.8 - 10.7	1	2"	2"	Manual	20	62
WS102AM-12	620215	cCSAus	1	208-230	9.8 - 10.7	1	2"	2"	Automatic	20	64
WS102M-32	620208	cCSAus	1	208-230	4.30 - 4.58	3	2"	2"	Manual	20	63
WS102M-34	620209	cCSAus	1	460	2.15	3	2"	2"	Manual	20	63
WS102HM-12	620258	cCSAus	1	230	13.3	1	2"	2"	Manual	30	61
WS102HAM-12	620259	cCSAus	1	230	13.3	1	2"	2"	Automatic	30	63



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# Wastewater

## Packaged Sewage System



 US (pump only)

### Applications

The Monarch WS pump was designed specifically for handling effluent and raw sewage. Ideal for country homes, cottages, city homes and in any application where sewage must be lifted to a low pressure sewage main or storage tank.

### Features

#### NS - NESTING STYLE, (UNASSEMBLED)

- **PUMP** - Choice of ½ HP Monarch WS52 (non-clog) or WSV52 (vortex) sewage pump
- **TANK** - 50 gal. (24" dia. x 32" high) Stackable to reduce shipping costs and warehouse space.

#### FP - FACTORY PACKAGE, (ASSEMBLED)

- **PUMP** - Choice of ½ HP Monarch WS52 (non-clog) or WSV52 (vortex) sewage pump.
- **TANK** - 35 gal. (18" dia. x 30" high, 20.5" dia. lid)
- **Check Valve** - 2" Sewage check valve included.



## Specifications

### WS Series Pump & Tank Systems - Submersible for Raw Sewage

Model No.	Item No.	HP	Solids Handling	Ship Wt. (lbs.)	Description
WSV52HAM-NS	620155	1/2	2"	75	Simplex stackable style polyethylene 50 gal. tank (620152) lid (620153), and hardware (620154), with 1 separate pump. Shipped unassembled.
WSV52S-FP	620054	1/2	2"	79	Assembled, WSV52HAM pump, 35 gal. tank (627832) with 2" check valve (627831) & pipe

### Stackable Polyethylene Receive Tank Kits

Model No.	Item No.	Ship Wt. (lbs.)	Description
SB-NS	620152	14	50 gal. Total tank volume, 24" dia. x 32" high, stackable.
Lid	620153	3	Stackable tank lid.
Hardware	620154	1	Stackable tank hardware.

### Polyethylene Receive Tank Kits

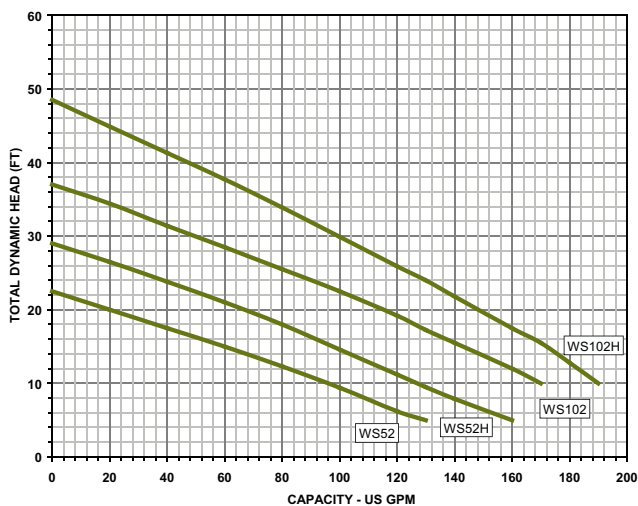
Model No.	Item No.	Ship Wt. (lbs.)	Description
SB-04	627832	20	35 gal. Total tank volume, 18" dia. x 30" high, 20.5" dia. lid.

**Kits Include: Tank, lid and hardware.**

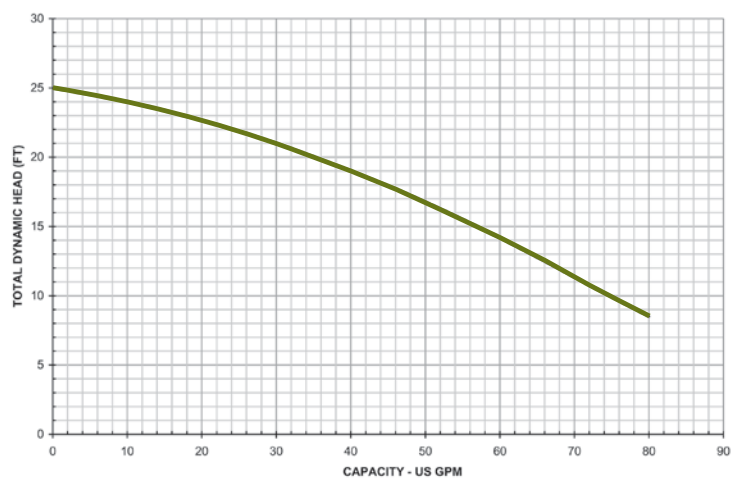
## Performance Chart

Model No.	HP	RPM	Total Head in Feet				Shut-Off Head (ft.)
			5	10	15	20	
			Capacities in U.S. GPM				
WS52	1/2	1750	135	90	47	14	23
WSV52	1/2	3450	90	75	57	35	25

## Performance Curve



WS52 FLOW CURVE



WSV52 FLOW CURVE



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# Wastewater

## WSV202HM Series



### Applications

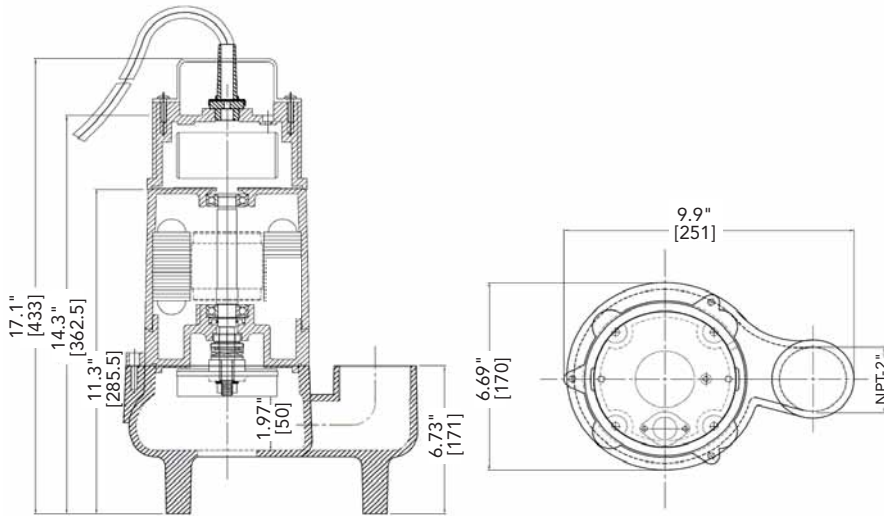
Effluent and sewage waste transfer.

### Features

- **CONSTRUCTION** - Motor Housing, Pump Volute, and impeller are cast iron.
- **CORD** - 20 foot power cord sealed at motor housing.
- **IMPELLER** - High capacity cast iron vortex impeller, designed for superior solids handling. This impeller is able to pass a 2" spherical solid by creating a vortex.
- **MOTOR** - Powerful 230 V, PSC motor. With thermal overload protection and dual ball bearing for reliability. Oil Free.
- **DISCHARGE** - 2" NPT.
- **FASTENERS** - Stainless steel fasteners throughout for servicability.
- **SEAL** - Carbon Ceramic Mechanical Seal, Buna Elastomers.
- **MOTOR SHAFT** - 300 Series stainless steel for corrosion resistance.



## Dimensional Outline

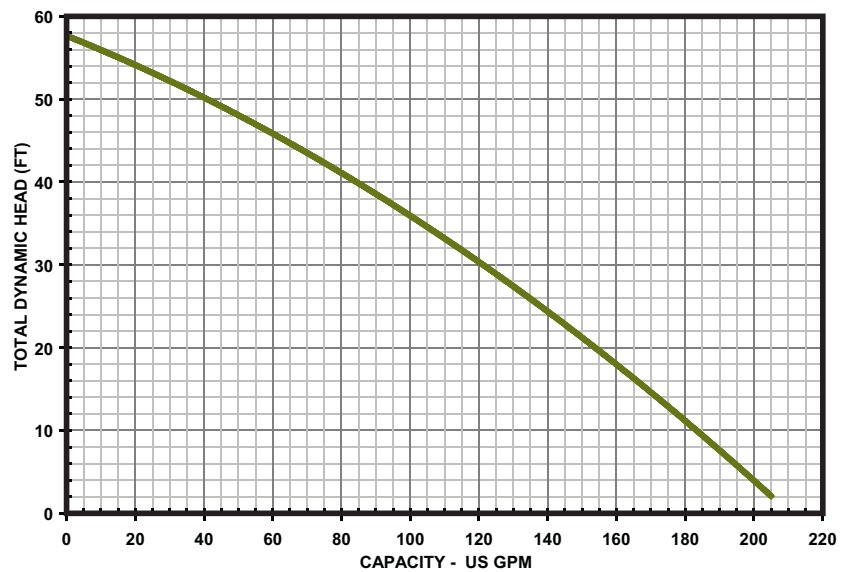


Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Solids	Max Flow (gpm)	Shut Off	HP	Volts	PH.	FLA	RPM	Cord	Switch	Ship Wt. (lbs.)
WSV202HM	620270	2"	205	58'	2	230	1	12	3450	20'	Manual	56

## Performance Curve



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# Wastewater

## WSG200 Series



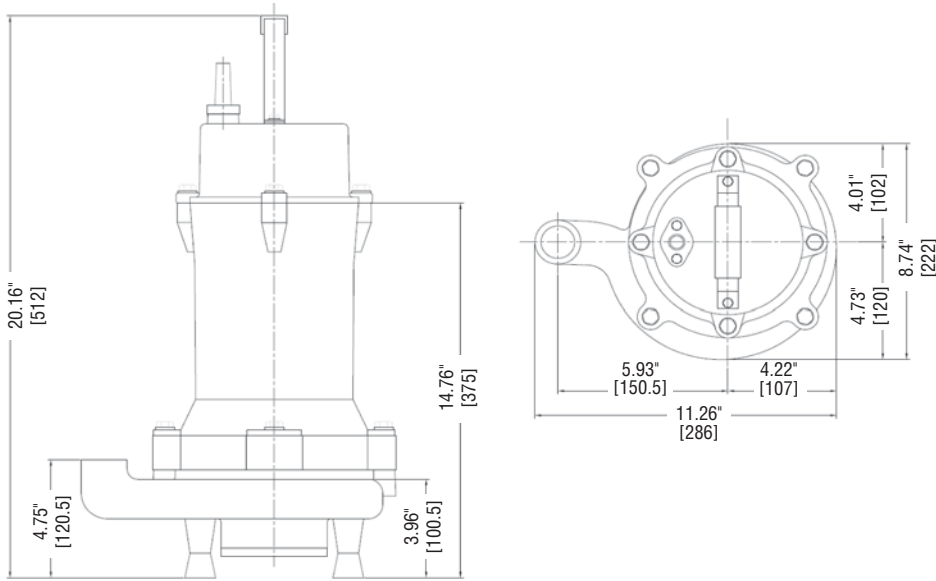
### Applications

Residential sewage waste transfer where high head conditions exist.

### Features

- **CONSTRUCTION** - Motor Housing, Pump Volute, and impeller are cast iron. 1 1/4" NPT Discharge.
- **CORD** - 20 foot power cord sealed at motor housing.
- **IMPELLER** - Ductile iron, recessed, semi open with pump out vanes for mechanical seal protection.
- **CUTTER** - High chrome steel 2 blade cutter with hardness of 55 – 58 Rockwell C hardeness. Reversible and replacable.
- **MOTOR** - 2 hp, Single Phase, 230V, 15 FLA, Capacitor Start Oil Free motor with automatic thermal overload, Upper and lower ball bearing construction.
- **FASTENERS** - 300 Series stainless steel fasteners throughout for servicability
- **SEAL** - Double Silicon Carbide seals with NBR elastomer.

## Dimensional Outline

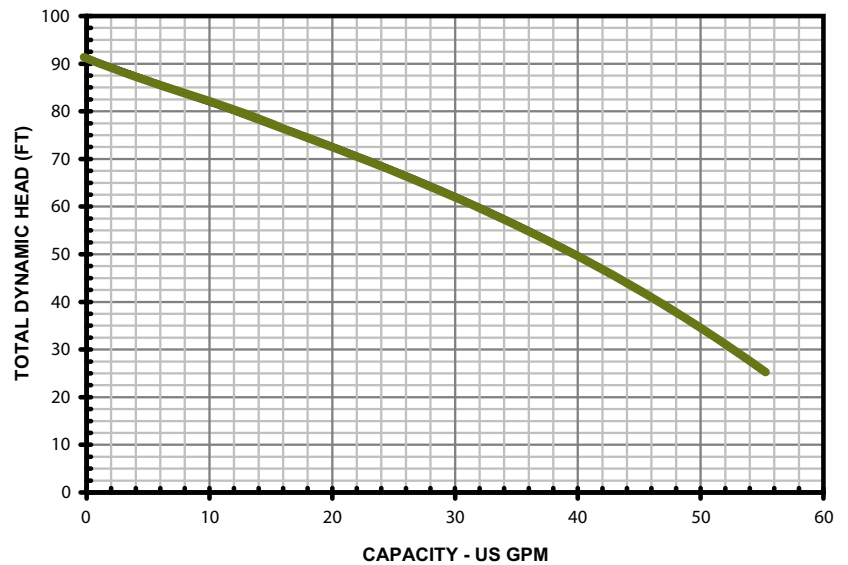


Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Solids	Max Flow (gpm)	HP	Volts	PH.	FLA	RPM	Discharge	Shut-Off Head (ft.)	Cord Length (ft.)	Switch	Ship Wt. (lbs.)
WSG200M	620268	-	50	2	230	1	15	3450	1 1/4"	91	20	Manual	80
WSG200AM	620269	-	50	2	230	1	15	3450	1 1/4"	91	20	Auto	82

## Performance Curve



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# Wastewater

## FLS-400 Series



### Applications

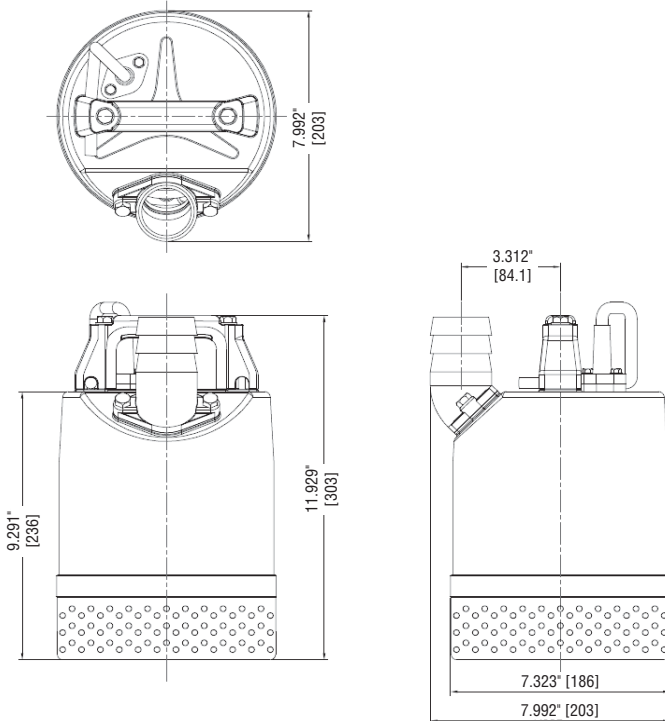
Portable submersible pump for general construction dewatering.

### Features

- **CONSTRUCTION** - Stainless steel shell and suction strainer.
- **CORD** - 20 foot power cord sealed at motor housing.
- **IMPELLER** - Urethane rubber semi-vortex impeller for maximum durability.
- **MOTOR** - Permanent Split Capacitor (PSC) motor, with thermal overload protection. Upper and lower permanently lubricated ball bearings for reliability.
- **DISCHARGE** - 2" NPT.
- **SEALS** - Double mechanical seals (lower - silicon carbide, upper - carbon on ceramic).
- **MOTOR SHAFT** - Stainless steel for corrosion resistance.

## Dimensional Outline

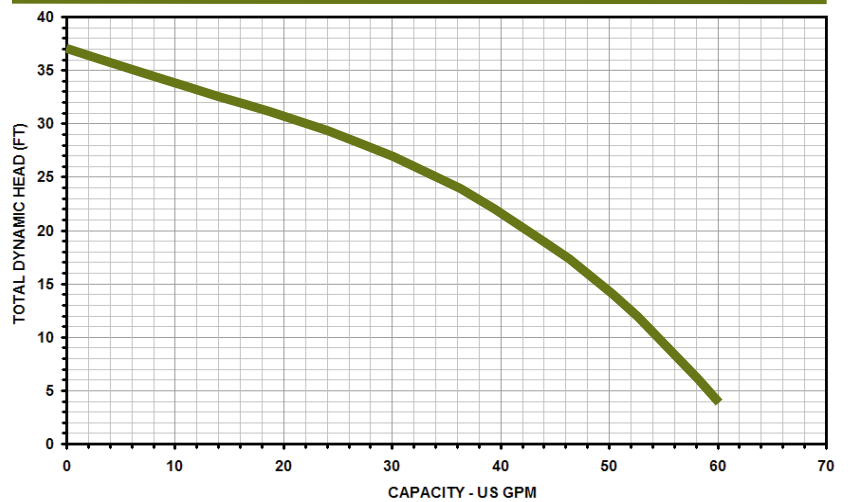
\*Dimensions measured in inches [mm]



## Specifications

Model No.	Item No.	Max Flow (gpm)	HP	Volts	PH.	FLA	RPM	Discharge	Shut-Off Head (ft.)	Cord Length (ft.)	Switch	Ship Wt. (lbs.)
FLS-400	620240	60	1/2	115	1	5	3450	2" NPT	37	20	Manual	24

## Performance Curve



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# Wastewater

## FS-750 Series



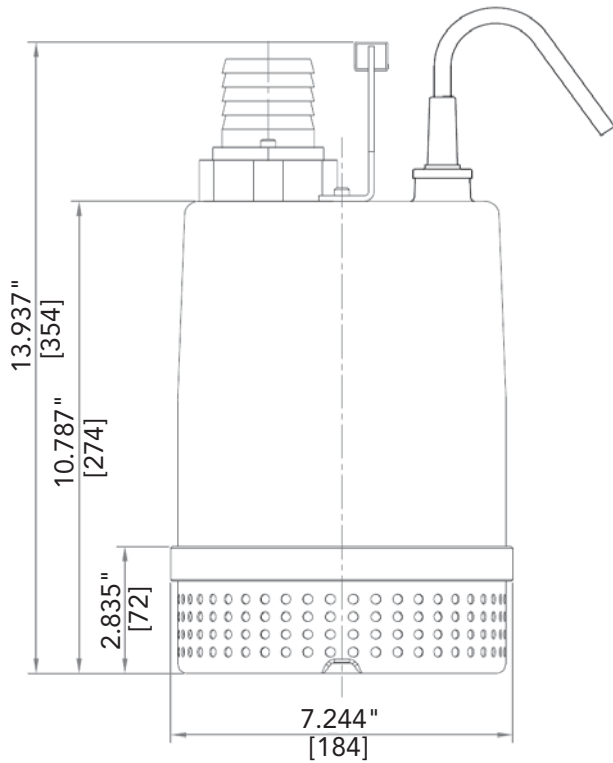
### Applications

Portable submersible pump for general construction dewatering.

### Features

- **CONSTRUCTION** - Stainless outer shell, motor cover, motor casing, and suction strainer.
- **CORD** - 20 foot power cord sealed at motor housing.
- **IMPELLER** - Dynamically balanced ductile iron impeller.
- **MOTOR** - Permanent Split Capacitor (PSC) motor, with thermal overload protection. Upper and lower permanently lubricated ball bearings for reliability.
- **DISCHARGE** - 2" Hose Barb.
- **SEALS** - Double mechanical seals (lower - silicon carbide on silicon carbide, upper - carbon on ceramic).
- **MOTOR SHAFT** - Stainless steel for corrosion resistance.

## Dimensional Outline

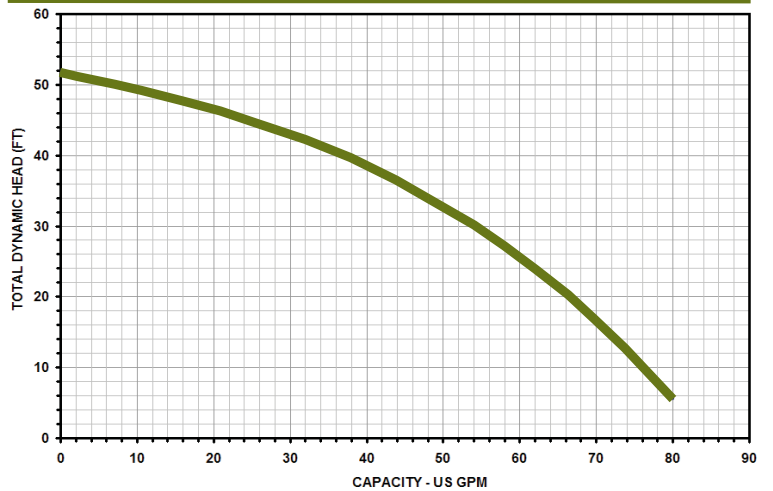


\*Dimensions measured in inches [mm]

## Specifications

Model No.	Item No.	Max Flow (gpm)	HP	Volts	PH.	FLA	RPM	Discharge	Shut-Off Head (ft.)	Cord Length (ft.)	Switch	Ship Wt. (lbs.)
FS-750	620241	80	1	115	1	10	3450	2"	52	20	Manual	35

## Performance Curve



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# Wastewater

## Sump & Sewage Accessories

### Accessories

#### Mechanical Alternators

##### Applications

- Provides a simple positive means of alternating the operation of two pumps on a duplex system with a common tank

##### Features

- Open Tank Operation
- Mechanical Type

Item #	Model	Maximum HP Rating				Ship Weight
		1 Phase		3 Phase		
		115V	230V	230V	460/575	
224500	9038AG1	1-1/2	2	3	1	2

#### Liquid Level Controls

##### Applications

##### Features

- Open Tank Operation
- Mechanical Type

Item #	Model	Maximum HP Rating				Poles	Replacement Points	Ship Weight
		1 Phase		3 Phase				
		115V	230V	230V	460/575			
224410	9036-DG2	1-1/2	2	3	1	2	224360	2
224420	9036-GG2	2	3	5	5	2	224350	2

#### Copper Floats & Brass Rods

##### Applications

- For Liquid Level Controls

##### Features

Item #	Diameter	Float
224610	6"	Spud type, 1/4" 20 UNC.
224630	7"	Center hole type, 1/2" I.D.

Item #	Diameter	Rods
622250	1/4" O.D.	6' long brass rod threaded 1/4" 20 UNC less float stops
224720	3/8" O.D.	6' long brass tube, less float stops
263920	-	12" long brass tube, less float stops
435960	-	Float stops for brass tubing, (usable on 1/4" or 3/8" tubing)

#### Liquid Level Controls Electrode Type

(May also be used with Probe Holder and Rods)

##### Applications

- For sump or sewage pump applications with high level cut-in and low level cut-out operations

##### Features

Item #	Max. HP	Voltage	Ship Wgt.
622190	4	115	4
622170	4	230	4



## Accessories

### Double-Float Piggyback Mechanical Float Switch



#### Applications

- Pump control

#### Features

- Controls pumps up to 1 HP (120v) and 2 HP (230v)
- Adjustable pumping range of 1.75" (4.4 cm) to 48" (122 cm)
- Consists of two floats, one of which contains a holding relay, enabling the floats to function in series
- / CSA listing

Item #	Model	Volts	Max. Amps
14940410	15DFMMD1WP	115	13
14940411	15DFMMD2WOP	230 (w/o plug)	13

### Vertical Diaphragm Switch



#### Applications

- For automatic control of a pump in water and sewage effluent applications

#### Features

- Designed to operate in applications with limited space, such as small sump chambers
- The VDS features models with either a 6" (15.2 cm) or 10" (25.4 cm) pumping range, max 1/2 HP, 13 amps
- UL / CSA listing

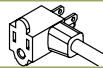
Item #	Model	Volts	Cord	Pumping Range
599165	VDS1006	115	10'	6"
			3 m	15.2 mm
599168	VDS1010	115	10'	10"
			3 m	25.4 mm
599166	VDS1506	115	15'	6"
			4.6 m	15.2 mm
599169	VDS1510	115	15'	10"
			4.6 m	25.4 mm
599167	VDS2010	115	20'	10"
			6 m	25.4 mm

### Piggyback Mechanical Float Switch



#### Applications

- Converts manual pumps to automatic operation



#### Features

- RFSN-6, RFSN-9 and RFSN-10 convert any manual pump, up through 1/2 HP (115v) or 1 HP (230v)
- FSN-16 and RFSN-20 convert any manual pump, up through 3/4 HP (115v), or 2 HP (230v)
- UL / CSA listing

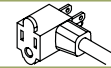
Item #	Model	Volts	Max. Amps	Cord
599118	RFSN-6	115/230	13	10'
				3 m
599117	RFSN-9	115/230	13	15'
				4.6 m
599128	RFSN-9	208/230	13	15'
				4.6 m
599210	RFSN-10	115/230	13	20'
				6 m
599119	RFSN-10	115/230	13	25'
				7.6 m
599211	RFSN-16	115/230	15	20'
				6 m
599318	RFSN-20	115/230	20	20'
				6 m (w/o plug)

### Piggyback Vertical Mechanical Float Switch



#### Applications

- Converts manual pumps to automatic operation



#### Features

- Converts any manual pump, up through 1/2 HP (115v) or 1 HP (230v)
- Adjustable pumping range from 6.5" (16.5 cm) to .75" (1.9 cm)
- Designed for use in confined areas
- Not sensitive to turbulence
- / CSA listing

Item #	Model	Volts	Max. Amps	Cord
599261	RVMS-10	115/230	13	10'
				3 m
599262	RVMS-15	115/230	13	15'
				4.6 m
599263	RVMS-20	115/230	13	20'
				6 m

## Accessories

### HWAB Alarm



#### Applications

- Indoor high water alarm

#### Features

- NEMA 1 thermoplastic enclosure
- Mechanical float switch with 15' (4.6 m) cable
- Alarm has red LED warning light, horn with silence switch and test button
- 9 VDC battery backup
- UL / CSA listing

Item #	Model	Volts	Cord
513288	HWAB	115	6' 1.83 m

### 303HWXT Alarm



#### Applications

- Indoor/outdoor high water alarm

#### Features

- Type 3R watertight thermoplastic enclosure
- Mechanical float switch with 15' (4.6 m) cable
- Alarm has red warning light, horn with silence switch and test button
- Includes pre-mounted terminal block so enclosure can also be used as a junction box
- UL / CSA listing

Item #	Model	Volts
513273	303HWXT	115

### Indoor Duplex Pump Alternator and Alarm System



#### Applications

- Indoor control/alarm device

#### Features

- Easy-to-install, NEMA 1, 3/4 HP device
- Low-cost alternative to conventional duplex control panels
- Operates two automatic sump, sewage or effluent pumps
- Alternates to second pump if first pump fails to turn on
- Alarm sounds when the water level rises too high
- Remote alarm contacts can be tied to home security system or auto dialer
- Operates single phase pumps with 15 max. run amps
- UL / C-UL listing

Item #	Model	Volts	Max. Amps	Cord
513325	HWD-115	115	15	9.5' 2.9 m

### Low Voltage Water Alarm



#### Applications

- Remote water sensor and alarm

#### Features

- Remote sensor detects water and sounds alarm
- Sensor and alarm connected by 6' (1.83 m) of wire
- Adaptable with additional wire (not included) for locating up to 50' (15.2 m) apart
- Solid state electronics powered by 9v battery (not included)
- 5-decibel alarm sounds for 3 days
- Low battery warning
- Test bar for system check

Item #	Model	Volts
513350	HW-9	9v/DC

## Accessories

# Controls Simplex Systems

### Applications

- Indoor/outdoor simplex alarm system and pump control

### Features

- NEMA 4X waterproof fiberglass enclosure
- Includes control panel with audible alarm, silence switch and red alarm beacon
- Three floats, one each for high water, pump on and pump off
- Floats have 20' (6 m) power cords
- HOA switch offers either hand, off or automatic operations
- Two floats - pump on/off and alarm, 513257 only
- UL / C-UL listing

### Single Phase

Item #	Model	Volts	Hz	Amps
513267	1121W120H17A	120/208/230	60	15 - 20
513257	1151W200H17A	115/230	60	0 - 15

### Three Phase

Item #	Model	Volts	Hz	FLA
513265	3121W611H	208/240	60	13.0 - 18.0
513282	3121W201H17A	208/240/480	60	2.5 - 4.0
513284	3121W401H17A	208/240/480	60	6.0 - 10.0
513286	3121W511H17A	208/240/480	60	9.0 - 14.0

## Junction Boxes



Item #	Model
513290	JBP120V

# Controls Duplex Systems

### Applications

- Indoor/outdoor duplex alarm system and pump control

### Features

- NEMA 4X waterproof fiberglass enclosure
- Includes duplex pump control and alarm devices
- Pump alternator
- Visual and audible alarm and light system with silence switch
- Three floats, one each for high water, pump on and pump off
- Floats have 20' (6 m) power cords
- HOA switch offers either hand, off or automatic operations
- UL / C-UL listing

### Single Phase

Item #	Model	Volts	Hz	FLA
513258	1221W120H6A17A	115/208/230	60	0 - 20

### Three Phase

Item #	Model	Volts	Hz	FLA
513283	3221W201H17A	208/240/480	60	2.5 - 4.0
513285	3221W401H17A	208/240/480	60	6.0 - 10.0
513287	3221W511H17A	208/240/480	60	9.0 - 14.0
513266	3221W611H17A	208/240/480	60	13 - 18

## LG Plugger



### Applications

- For wiring a pumping station installation

### Features

- Utilizes a receptacle to accept a 120v or 230v piggyback plug and a pump plug
- Liquid-tight seal and strain relief for the cable entering the junction box from the pumping station
- Terminal strip that can be used for connecting an alarm system to the junction box
- UL / CSA listing

Item #	Model	Volts	Alarm	Float
513290	JBP120V	120	-	-
513292	JBP120V-TA1	120	101HW	Yes
513294	JBP120V-TAXT	120	303HWXT	Yes
513295	JBP230V-TAXT	230	303HWXT	Yes

## Accessories

# Pump Disconnect



### Applications

- When discharge is no lower than 18" (46 cm) below grade or where guide rails are not necessary

### Features

- Non guide rail disconnect
- Point of discharge should be above the liquid level

Item #	Model	Disconnect
513302	PD-2	2" 51 mm

# Guide Rail Systems



### Applications

- For installations with a total depth of over 5' (1.5 m) when the discharge pipe is 18" (46 cm) or more below grade, particularly when the liquid level is above the discharge level\*

### Features

- 3/4" (19 mm) IPS (Iron Pipe Size) pipe rails should be used on the 1-1/4" (31.7 mm) and 2" (51 mm) system and 1-1/4" (31.7 mm) IPS pipe rail on the 3" (76 mm) system
- Brass foot guide supplied for use with steel pipe
- Guide rail brackets and steel stand-off brackets included with each system to support the upper end of the guide rail pipes
- One intermediate guide rail bracket is required for every 10' (3 m) of rail. (Guide rail pipes, lifting chain and pull rod not included.)

Item #	Model	Discharge
513305	GR-3/4-114D	1-1/4" 31.7 mm
513301	GR-3/4	2" 51 mm
513300	GR-1-1/4	3" 76 mm

All guide rail products can be used with any of the Franklin Electric, Little Giant effluent and sewage pumps having a 1-1/4" (31.7 mm), 2" (51 mm) or 3" (76 mm) discharge.

\* NOTE: Not for duplex installations. For guide rail information on duplex installations, please consult the factory.

# Intermediate Guide Rail Brackets



### Applications

- For use with guide rail systems

### Features

Item #	Model	Guide Rail
513303	IGR-3/4	3/4" 19 mm (for use with GR-3/4)
513304	IGR-1-1/4	1-1/4" 31.7 mm (for use with GR-1-1/4)

# Cord Connectors



### Applications

- Provides strain relief

### Features

- Cord connector is liquid tight
- Polyamid and neoprene gland resist salt water, weak acids/alkalis and other chemicals

Item #	Model	Cord	Wire/Cable (AWG)
599207	CC-1	.270" to .480" 6.9 mm - 12.2 mm	18/2, 18/3, 18/4, 16/2, 16/3, 16/4, 14/2, 14/3
599213	CC-3	.545" to .709" 13.8 mm - 18 mm	14/2, 14/3, 14/4, 12/2, 12/3, 12/4, 10/2, 10/3

## Accessories

### Discharge Adapters



#### Applications

- Allows use of garden hose with utility and sump pumps

#### Features

- Polypropylene, rust resistant

Item #	Model	Size
599030	GH-1 Adapter (fits 5-MSP/ASP)	1" MNPT x 3/4" GHT 2.54 mm x 19 mm
599025	GH-3/4 Adapter	1-1/4" MNPT x 3/4" GHT 31.7 mm x 19 mm
599026	AD-6 Adapter (6-pk)	1-1/2" MNPT x 1-1/4" FNPT 38 mm x 31.7 mm

### Cast Iron Full Flow Check Valves



#### Features

- Vertical or horizontal installation
- Full-flow design
- Stops back flow of water
- Rated at 50 psi (115' [35 m] head) at 130°F (55°C)
- Cast iron NPT

Item #	Model	NPT
599131	CVCI-114NPT	1-1/4" 31.7 mm
599132	CVCI-112NPT	1-1/2" 38 mm
599133	CVCI-2NPT	2" 51 mm
599134	CVCI-3NPT	3" 76 mm

### Cast Iron Slip x Slip Union Check Valve



#### Features

- Vertical or horizontal installation
- Allows passage of 1-1/2" (38 mm) solids
- Checks backflow of water and sewer gas
- 2" (51 mm) ABS, PVC, steel pipe or copper piping
- Rated at 4.3 psi (10' [3 m] head) at 130°F (55°C)
- Cast iron NPT

Item #	Model
599135	CVCI-2

## Accessories

### CV-114 Check Valve



#### Features

- Universal check valve for sump pumps
- 1-1/4" MNPT (31.7 mm) x 1-1/2" (38 mm) ID tubing

Item #	Model	Material
577105	CV-114	-

### CV-SE Check Valve



#### Features

- Hose-connected check valve for 2" (51 mm) IPS pipe
- Allows passage of 3/4" (19 mm) solids

Item #	Model	Material
940021	CV-SE	ABS

### CV-SE2 Check Valve



#### Features

- Uses compression gaskets to connect to 2" (51 mm) IPS pipe
- Full-flow design passes 2" (51 mm) solids

Item #	Model	Material
940022	CV-SE2	PVC

### CVBV-2 Check Valve



#### Features

- PVC check valve/ball valve combination uses compression gaskets to connect to 2" (51 mm) IPS pipe
- Full-flow design passes 2" (51 mm) solids

Item #	Model	Material
599160	CVBV-2	PVC

### CV-114/112 Check Valve



#### Features

- Sump pump check valve fits both 1-1/4" (31.7 mm) and 1-1/2" (38 mm) pipe
- Full-flow, slip x slip design passes 1" (25.4 mm) solids

Item #	Model	Material
599059	CV-114/112	ABS

### CV-SE1 Check Valve



#### Features

- Uses compression gaskets to connect to 1-1/2" (38 mm) IPS pipe
- Full-flow design passes 1-1/2" (38 mm) solids

Item #	Model	Material
940019	CV-SE1	PVC

### CV-SE3 Check Valve



#### Features

- Uses compression gaskets to connect to 3" (76 mm) IPS pipe
- Full-flow design passes 3" (76 mm) solids

Item #	Model	Material
940023	CV-SE3	PVC

### CVBV-2U Check Valve



#### Features

- PVC check valve/ball valve combination uses union fittings to connect to 2" (51 mm) IPS pipe
- Full-flow design passes 2" (51 mm) solids
- Pressure rating: 100 psi @ 72BF

Item #	Model	Material
599161	CVBV-2U	PVC



**Franklin Electric**

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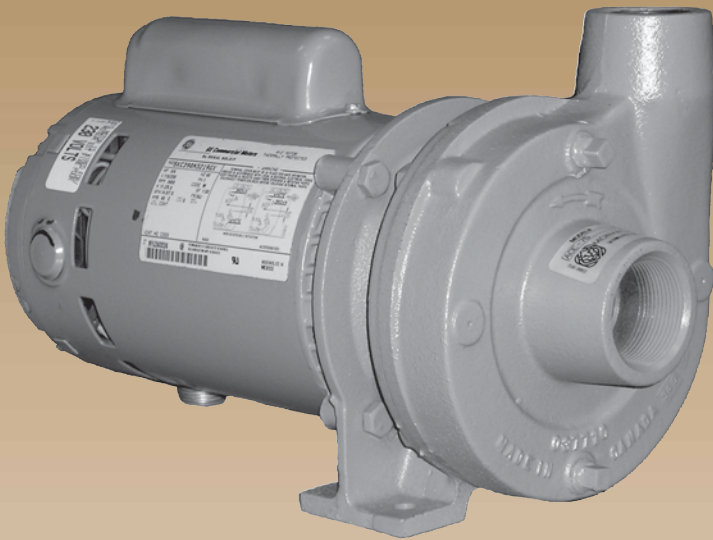
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# I n d u s t r i a l



# Industrial

## ACE Series



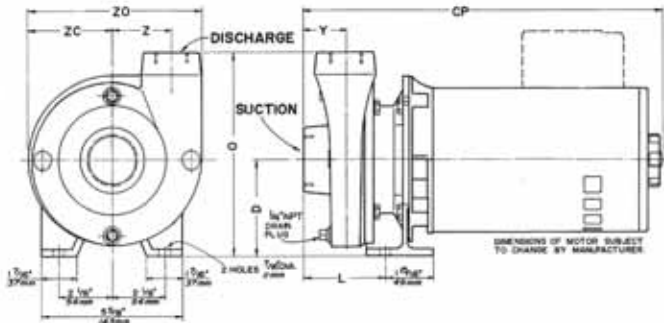
### Applications

Ideal for hot water circulation transfer as well as irrigation and industrial applications.

### Features

- **POWER** - 3600 RPM, single phase; C-face industry standard motors.
- **PORTS** - For air bleeding when priming; for draining to prevent frost damage.
- **SHAFT FLINGER** – Combined with large drain hole in adapter bracket prevents moisture from damaging bearings.
- **SEAL** – High temperature (200°F) mechanical seals are standard on the ACE series.
- **CASING** – Cast gray iron, thick wall.
- **IMPELLER** – The ACE series use cast gray iron impellers.

## Dimensional Outline



Model	Suction NPT	Discharge NPT	CP	D	L	O	Y	Z	ZC	Z0
ACE-50	1/4"	1"	12.56	3.81	3.25	8.06	1.69	2.41	3.38	7.06
ACE-75	1/2"	1 1/4"	13.94							
ACE-100			14.25							
ACE-150	2"	1 1/2"	15.13	4.81	3.56	8.81	1.88	2.66	3.75	7.75
ACE-200			15.63							

\*Dimensions measured in inches

## Specifications

Model No.	Item No.	HP	Volts	Suct. NPT	Discharge	Total Head in Feet										Ship Wt. (lbs.)
						20	30	40	50	60	70	80	100	120		
						Capacities in U.S. GPM										
ACE-50	615030	1/2	1/60/115/230V	1 1/4"	1"	-	51	43	35	24	8	-	-	-	32	
ACE-75	615040	3/4	1/60/115/230V	1 1/2"	1 1/4"	-	-	54	47	39	30	19	-	-	36	
ACE-100	615050	1	1/60/115/230V	1 1/2"	1 1/4"	-	-	60	56	51	44	34	1	-	39	
ACE-150	615060	1 1/2	1/60/115/230V	2"	1 1/2"	-	-	-	-	60	55	48	27	-	47	
ACE-200	615070	2	1/60/115/230V	2"	1 1/2"	-	-	-	-	-	-	61	46	23	53	

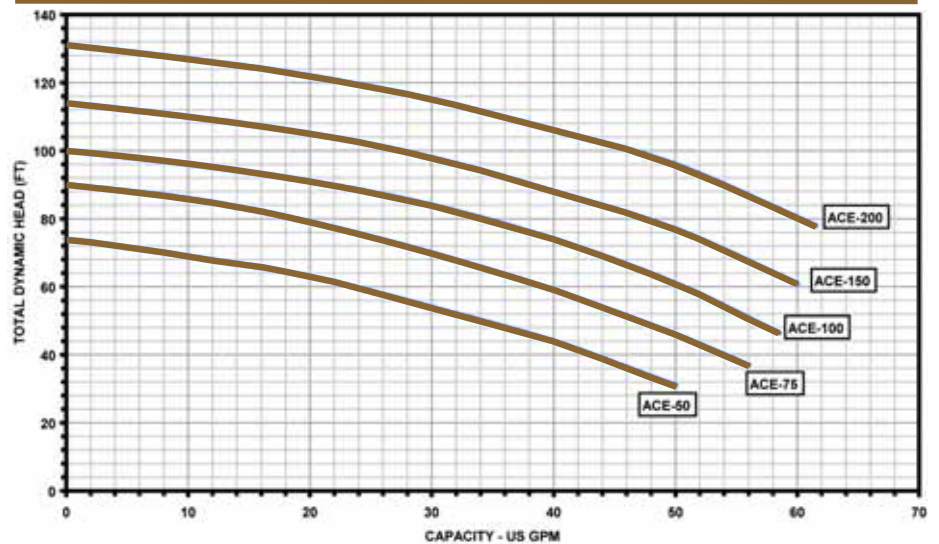
## Performance Chart

### Less Power Kits

Model	Order No.	HP	Suct. NPT	Disch. NPT	Frame Size	Ship Wt. (lbs.)
ACE-50LP	615037	1/2	1 1/4"	1"	*56J	10
ACE-75LP	615047	3/4	1 1/2"	1 1/4"	*56J	10
ACE-100LP	615057	1	1 1/2"	1 1/4"	*56J	10
ACE-150LP	615068	1 1/2	2"	1 1/2"	*56J	12
ACE-200LP	615076	2	2"	1 1/2"	*56J	12

\*Pumps use 56J C face motors.

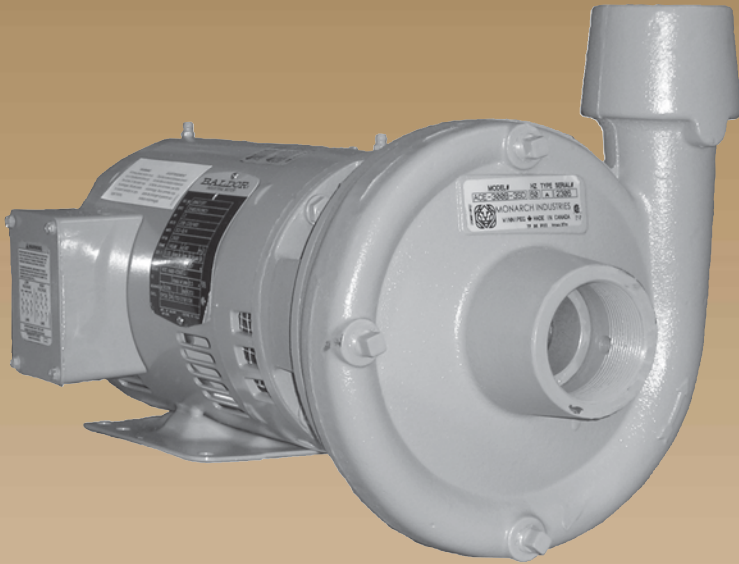
## Performance Data



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# Industrial

## ACE-300 & 500 Series



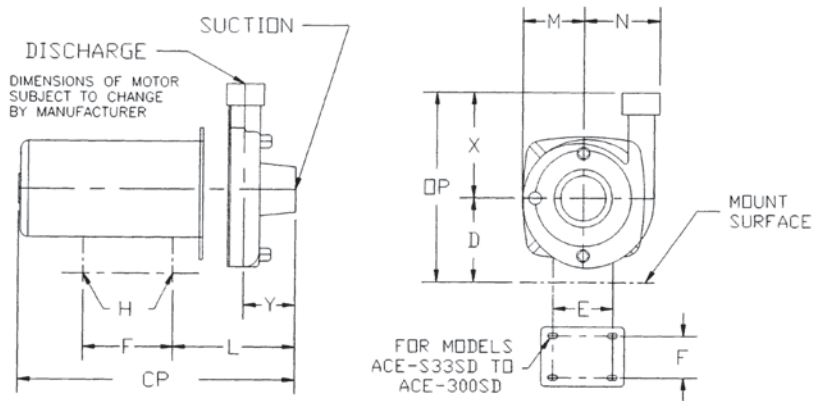
### Applications

Ideal for water transfer, booster and lift applications for irrigation.

### Features

- **POWER** - 3600 RPM, single phase; C-face industry standard motors.
- **PORTS** - For air bleeding when priming; for draining to prevent frost damage.
- **SHAFT FLINGER** – Combined with large drain hole in adapter bracket prevents moisture from damaging bearings.
- **SEAL** – High temperature (200°F) mechanical seals are standard on the ACE series.
- **CASING** – Cast gray iron, thick wall.
- **IMPELLER** – The ACE series use cast gray iron impellers.

## Dimensional Outline



Model	Suct. NPT	Disch. NPT	CP	D	E	F	L	M	N	OP	X	Y
ACE-300	2"	2"	17.25	4.99	5.75	-	8.79	4.12	5.69	10.37	6.31	3.25
ACE-500	2"	2"	19.00	4.05	7.50	5.50	8.79	4.12	5.69	10.37	6.31	3.25

\*Dimensions measured in inches

## Specifications

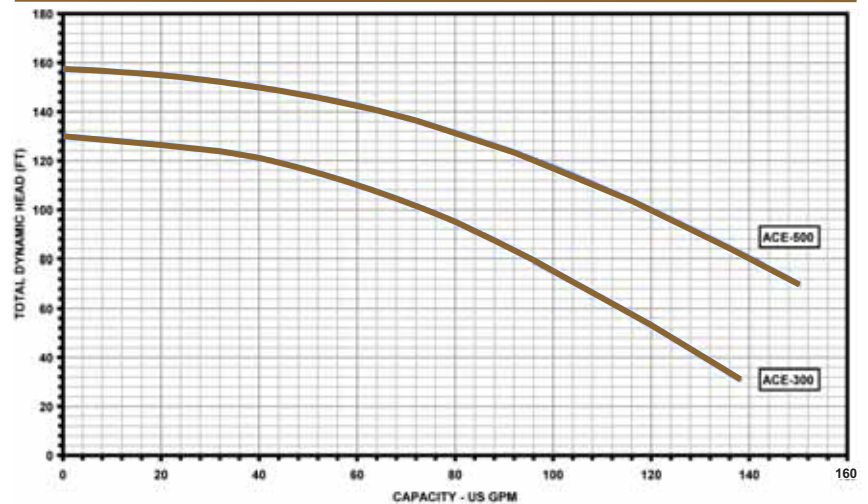
### Less Power Kits

Model No.	Item No.	HP	Discharge	Suct. NPT	Frame Size	Ship Wt. (lbs.)
ACE-300LP	614995	3	2"	2"	140	33
ACE-500LP	614996	5	2"	2"	172	55

### ACE Series - Electric Motor Driven

Model No.	Item No.	HP	Volts	Discharge	Suct. NPT	Ship Wt. (lbs.)
ACE-300SD	614571	3	1/60/230V	2"	2"	83
ACE-300-3SD	614567	3	3/60/208-230/460V	2"	2"	83
ACE-500SD	614569	5	1/60/230V	2"	2"	134
ACE-500-3SD	614570	5	3/60/208-230/460V	2"	2"	129

## Performance Data



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## ACT Series



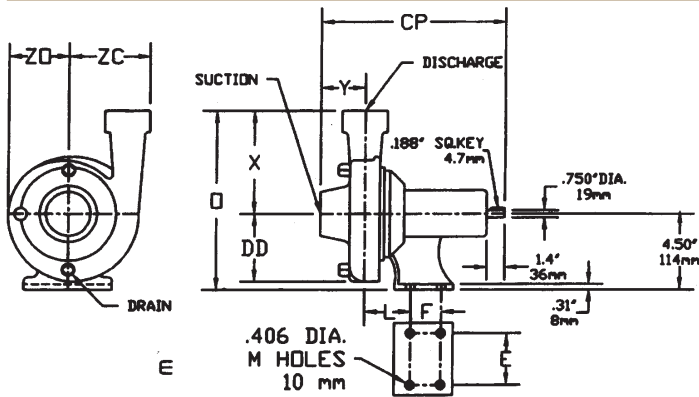
### Applications

Monarch ACT series end suction centrifugal pumps are of frame mount design for either belt or direct drive through a flexible coupling. This allows the option of connecting these pumps to the motor or engine of your choice.

### Features

- **CASING** – Cast gray iron, thick wall, ideal for pressure boosting applications.
- **DISCHARGE OPENING** – Sizes are 1", 1 1/4" and 2" (NPT).
- **SEAL** – Buna and carbon ceramic mechanical seal.
- **IMPELLER** – ACT-5SD and ACT-6SD have glass filled noryl impellers. ACT 8SD series has cast gray iron impellers. Enclosed design.

## Dimensional Outline



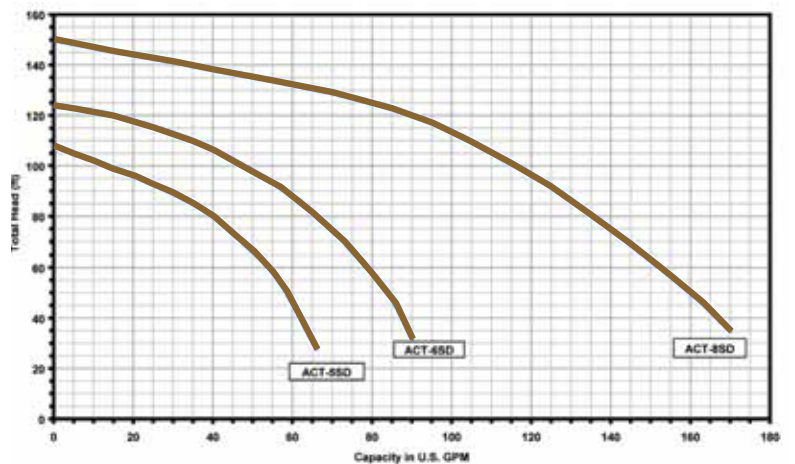
Model No.	Suction (NPT)	Discharge (NPT)	CP	DD	E	F	L	M	O	X	Y	ZC	ZO
ACT-5SD	1 1/4"	1"	8.90	3.60	4.25	-	2.34	2	9.33	4.79	2.62	4.00	3.69
ACT-6SD	1 1/2"	1 1/4"	9.28	4.06	4.25	-	2.46	2	10.81	6.31	2.88	4.72	8.84
ACT-8SD	2"	1 1/2"	11.38	4.59	4.00	2	2.88	4	10.96	6.31	3.25	5.69	4.69

\*Dimensions measured in inches

## Performance Chart

Model No.	RPM	HP	Total Head in Feet										
			20	30	40	50	60	70	80	90	100	120	140
ACT-5SD	3450	2	-	65	62	58	53	47	39	30	15	-	-
			Capacities in U.S. GPM										
ACT-6SD	3450	2 1/2	-	92	87	84	79	73	66	58	48	15	-
			1750	1/2	37	16	-	-	-	-	-	-	-
ACT-8SD	3450	5	-	170	166	160	152	144	136	126	116	90	38
			1750	1	78	56	-	-	-	-	-	-	-

## Performance Data



## ACT-SD Series - Transmission Drive - Standard Fitted Construction

Model No.	Item No.	Suct. NPT	Disch. NPT	Transmission Data	Ship Wt. (lbs.)
ACT-5SD	614992	1 1/4"	1"	3/4" shaft size, 3/16" keyway, includes shaft assembly with sealed ball bearings	18
ACT-6SD	614993	1 1/2"	1 1/4"		18
ACT-8SD	614994	2"	2"		21



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# Industrial

## AOT Series



### Applications

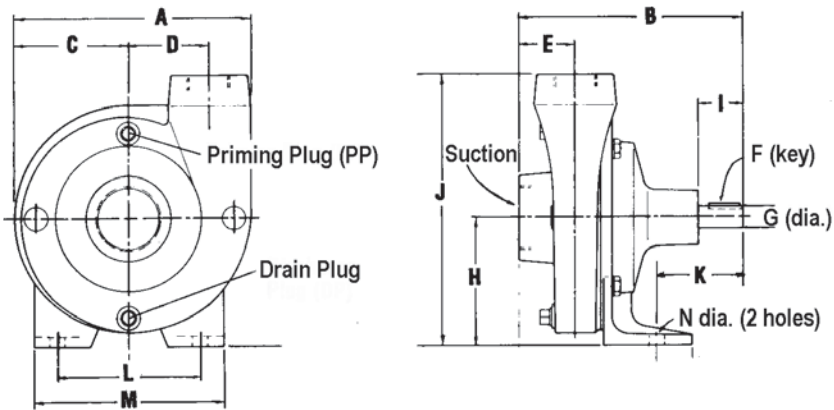
The Monarch AOT series end suction centrifugal pumps are of frame mount design for either belt drive or direct drive through a flexible coupling. This allows the option of connecting the AOT to an electric motor or gas engine.

### Features

- **CASING** – Cast gray iron, thick wall, ideal for pressure boosting applications.
- **DISCHARGE OPENING** – Sizes are 1", 1 1/4" and 1 1/2" (NPT).
- **SEAL** – Buna and carbon ceramic mechanical seal.
- **IMPELLER** – AOT series has cast gray iron impellers. Open face design.



## Dimensional Outline



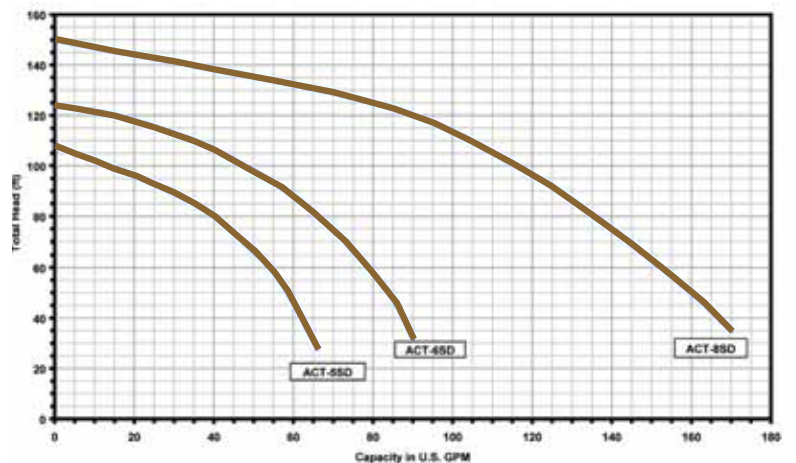
Model No.	Suction (NPT)	Discharge (NPT)	DP NPT	PP NPT	A	B	C	D	E	F	G	H	I	J	K	L	M	N
AOT-4	1 1/4"	1"	1/4	1/4	7.06	8.38	3.38	2.40	1.69	3/16	.75	3.81	1.30	8.56	3.75	4.25	5.63	7/16
AOT-5	1 1/4"	1 1/4"	1/4	1/4	7.06	8.38	2.40	2.19	1.69	3/16	.75	3.71	1.30	8.56	3.75	4.25	4.63	7/16
AOT-6	2"	1 1/2"	1/4	1/4	7.06	8.70	3.75	2.38	1.88	3/16	.75	4.19	1.30	9.31	3.75	4.25	5.63	7/16

\*Dimensions measured in inches

## Performance Chart

Model No.	RPM	HP	Total Head in Feet										
			15	20	25	30	35	40	45	55	60	65	85
AOT-4	3450	1	-	-	-	74	68	64	55	36	18	-	-
	1750	1/4	14	-	-	-	-	-	-	-	-	-	-
AOT-5	3450	2	-	-	93	91	87	82	75	56	42	23	-
	1750	1/4	24	-	-	-	-	-	-	-	-	-	-
AOT-6	3450	3	-	-	-	135	132	128	124	112	104	95	45
	1750	1/3	33	-	-	-	-	-	-	-	-	-	-

## Performance Data



## AOT Series - Transmission Drive - Standard Fitted Construction

Model No.	Item No.	Suct. NPT	Disch. NPT	Transmission Data	Ship Wt. (lbs.)
AOT-4	615111	1 1/4"	1"	Shaft Size 3/4" Keyway 3/16" Shaft assembly with sealed ball bearings	18
AOT-5	615121	1 1/2"	1 1/4"		18
AOT-6	615131	2"	1 1/2"		21



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# Water Systems

## B50S Series



### Applications

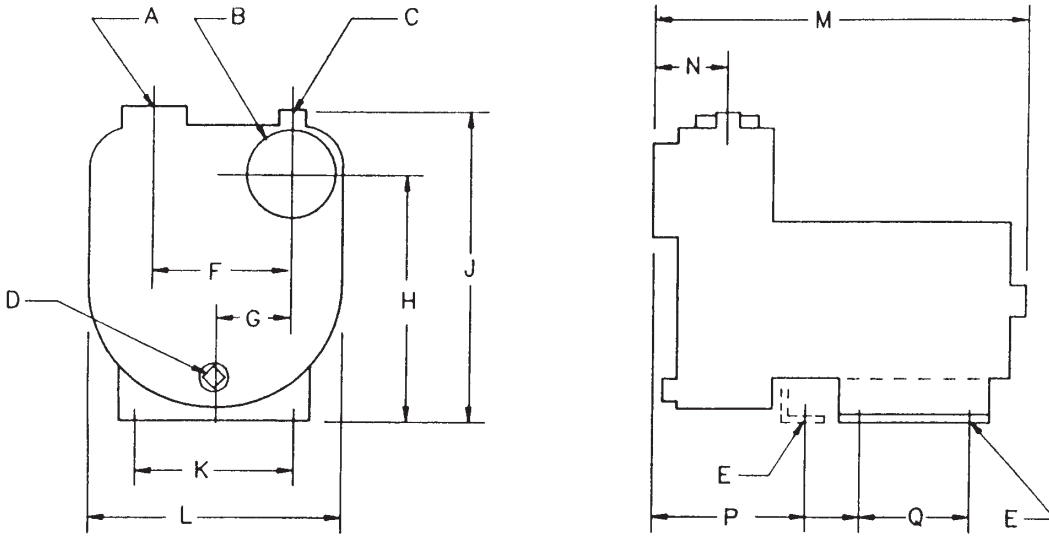
The B50S pump is a self priming utility pump. It is constructed of durable cast iron which makes it last long in a variety of applications.

This pump is designed to be very simple to operate. This is made possible by the self priming casing and built-in suction check valve which is engineered to prime itself quickly once it has been filled with water.

### Features

- **CASING** – Made of rugged cast iron with a large chamber for rapid self priming.
- **MOTOR** – The B50S pump comes with a higher than NEMA standard service factor, dual compartment reliable industry standard 1/2 HP motor, and is configured with an 8 ft power cord.
- **IMPELLER** – Semi-open, cast iron impeller.
- **SEAL** – Carbon/ceramic mechanical seal.

## Dimensional Outline

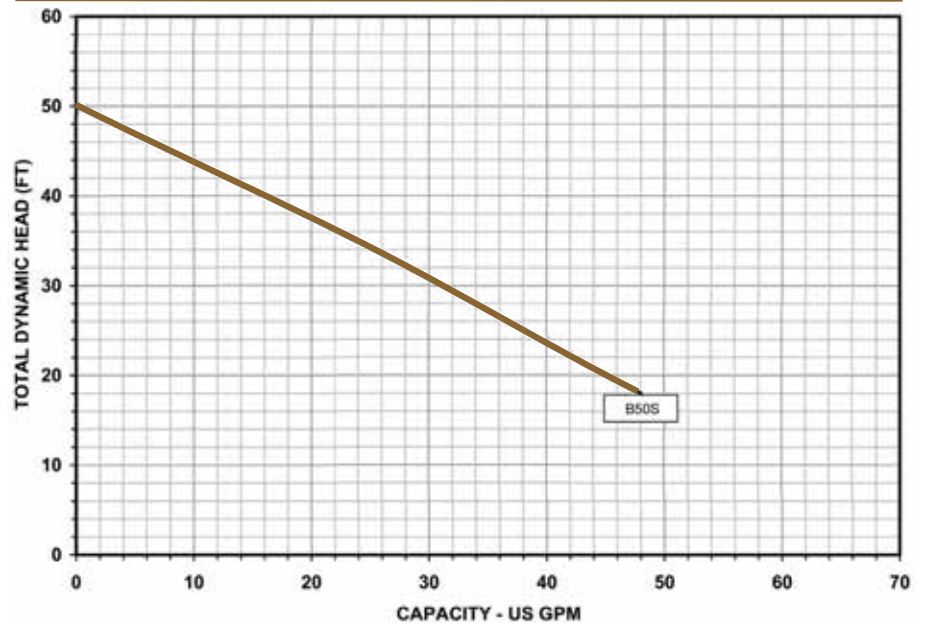


## Specifications

Model No.	Item No.	HP	Volts	Discharge	RPM	Total Head in Feet				Suct. NPT	Length	Width	Height	HS	Ship Wt. (lbs.)
						20	30	40	50						
						Capacities in U.S. GPM									
*B50S	621814	1/2	1/60/115/230 Capacitor Start	1 1/4"	3450	45	31	16	0	1 1/4"	7.5	9.87	7.62	4.3	43

\* Includes: Handle, cord and garden hose adapter.

## Performance Data



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# Industrial

## BSE-S Series



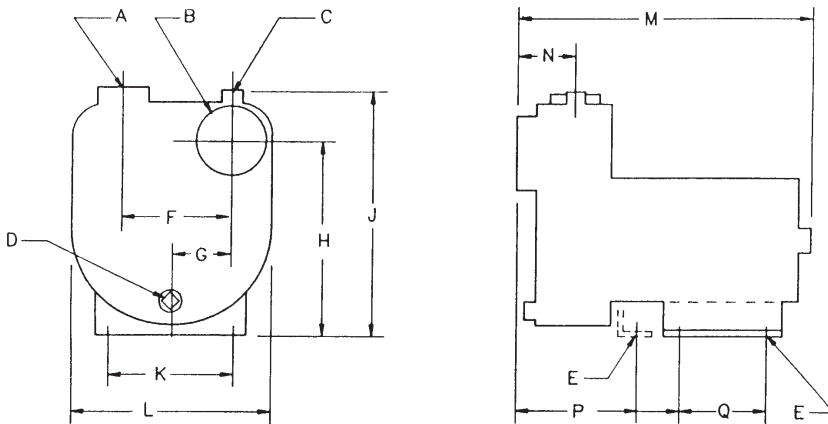
### Applications

Ideal for water transfer, dewatering and filling tanks and cisterns.

### Features

- **CASING** – Made of rugged cast iron with a large chamber for rapid self priming.
- **PRIMING PLUG** – Fits the standard garden hose for easy priming.
- **MOTOR** – The BSE pump comes with a reliable industry standard motor. Motors range from 1/2 to 2 HP and use **higher than NEMA service factor** dual compartment motors.
- **IMPELLER** – Semi-open, cast iron impeller, ideal for handling fertilizer, salt water, dirty water or other liquids. The impeller is blind hole tapped so liquid will not corrode the shaft.

## Dimensional Outline



Model	Discharge A (NPT)	Suction B (NPT)	Priming Plug C (NPT)	Drain Holes D (NPT)	Mounting E	F	G	H	J	K	L	M	N	P	Q
BSE-S50	1 1/4	1 1/4	3/4	3/4	.44x.94	4.00	2.00	7.75	10.00	4.88	7.50	14.60	3.18	8.06	3.00
BSE-S75	1 1/4	1 1/4	3/4	3/4	.44x.94	4.00	2.00	7.75	10.00	4.88	7.50	15.40	3.18	8.06	3.00
BSE-S100	1 1/4	1 1/4	3/4	3/4	.44x.94	4.00	2.00	7.75	10.00	4.88	7.50	15.80	3.18	8.06	3.00
BSE-S150	2	2	3/4	3/4	.44x.94	4.25	2.12	8.50	11.12	4.88	8.50	16.80	3.18	7.37	3.00
BSE-S200	2	2	3/4	3/4	.44x.94	4.25	2.12	8.50	11.12	4.88	8.50	17.20	3.18	7.37	3.00

\*Dimensions measured in inches

## Specifications

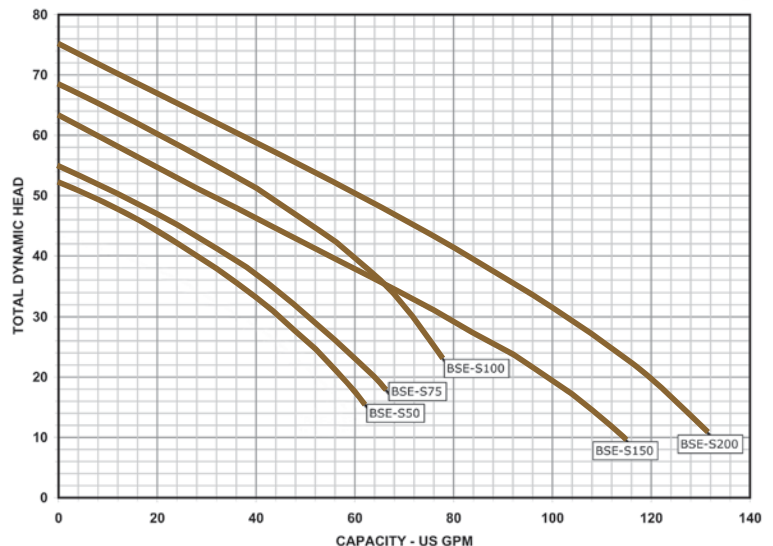
Model No.	Item No.	HP	Volts	Suction NPT	Discharge NPT	RPM	Total Head in Feet								Ship Wt. (lbs.)
							20	30	40	50	60	70	80	90	
BSE-S50	615631	1/2	1/60/115/230 Capacitor Start	1 1/4"	1 1/4"	3450	Capacities in U.S. GPM								41
BSE-S75	615632	3/4	1/60/115/230 Capacitor Start	1 1/4"	1 1/4"		55	46	32	10	0	-	-	-	42
BSE-S100	615633	1	1/60/115/230 Capacitor Start	1 1/4"	1 1/4"		65	50	35	10	0	-	-	-	46
BSE-S150	615634	1 1/2	1/60/115/230 Capacitor Start	2"	2"		80	70	60	42	20	-	-	-	52
BSE-S200	615635	2	230 Capacitor Start	2"	2"		102	78	55	35	8	0	-	-	60

## BSE Series - Less Power Kit

Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Ship Wt. (lbs.)
BSE-50LP	615306	1/2	1 1/4"	1 1/4"	18
BSE-75LP	615316	3/4	1 1/4"	1 1/4"	18
BSE-100LP	615326	1	1 1/4"	1 1/4"	18
BSE-150LP	615336	1 1/2	2"	2"	18
BSE-200LP	615346	2	2"	2"	22

\*BSE Pump end kits (Less Power) use 56J C face motors.

## Performance Data



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# Industrial

## BSEF-TE Series



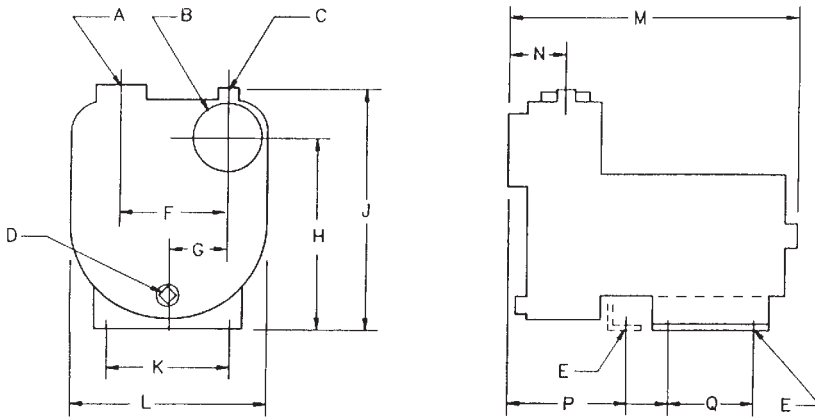
### Applications

These self priming cast iron pumps are designed to handle liquid fertilizer, such as concentrated nitrogen phosphorous solutions. The viton and stainless steel seal will handle most agriculture and weed control chemicals. The BSEF pumps are also excellent for general dewatering purposes.

### Features

- **CASING** – Made of rugged cast iron with a large chamber for rapid self priming.
- **PRIMING PLUG** – Fits the standard garden hose for easy priming.
- **MOTOR** – The BSEF pump comes with a reliable industry standard Totally Enclosed Fan Cooled (TEFC) motor.
- **IMPELLER** – Semi-open, cast iron impeller, ideal for handling fertilizer, dirty water or other liquids. The impeller is blind hole tapped so liquid will not corrode the motor shaft.
- **MECHANICAL SEAL** – Made of stainless steel with viton bellows. The BSEF-500 and BSEF-750 have a replaceable stainless steel sleeve for easy seal maintenance and protection of motor shaft.

## Dimensional Outline



Model	Discharge A (NPT)	Suction B (NPT)	Priming Plug C (NPT)	Drain Holes D (NPT)	Mounting E	F	G	H	J	K	L	M	N	P	Q
BSEF-150TE	1 1/4	1 1/4	3/4	3/4	.44x.94	4.00	2.00	8.50	10.70	4.90	7.50	17.20	4.75	6.70	3.00
BSEF-200TE	2	2	3/4	3/4	.44x.94	4.25	2.13	9.50	11.00	4.90	8.50	17.60	5.13	7.00	3.00
BSEF-300TE	2	2	3/4	3/4	.35x1.22	4.25	2.13	8.60	11.10	4.25	8.50	15.90	3.20	5.93	-
BSEF-500TE	3	3	3/4	3/4	.40 DIA	3.62	2.00	10.30	14.00	7.50	9.30	24.10	4.60	14.00	5.50
BSEF-750TE	3	3	3/4	3/4	.40 DIA	3.62	2.00	10.30	14.00	7.50	9.30	24.10	4.60	14.00	5.50

\*Dimensions measured in inches

## Performance Chart

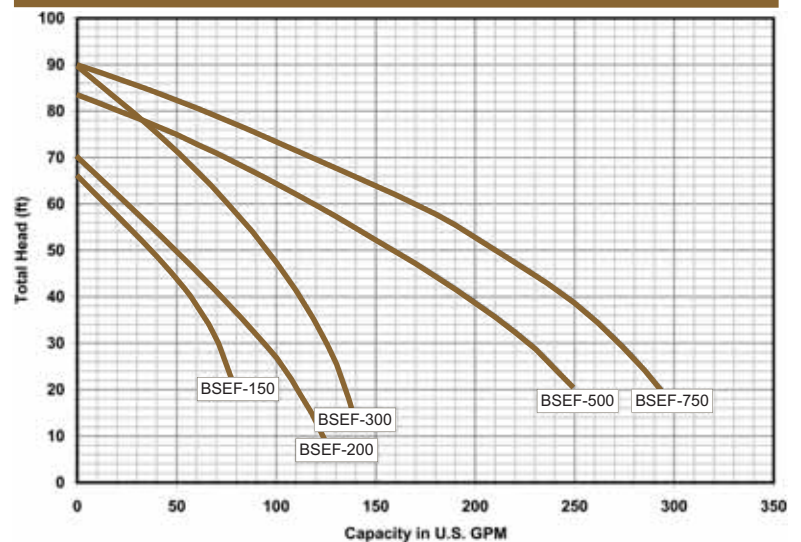
Model No.	RPM	HP	Total Head in Feet							
			20	30	40	50	60	70	80	90
BSEF-150TE	3450	1 1/2	74	70	62	35	10	-	-	-
BSEF-200TE		2	97	86	66	44	21	-	-	-
BSEF-300TE		3	138	130	120	100	79	55	25	-
BSEF-500TE		5	265	235	205	165	120	75	20	-
BSEF-750TE		7 1/2	290	270	245	215	170	120	70	-

## BSEF Series - Less Power Kits

Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Ship Wt. (lbs.)
BSEF-500LP	616888	5	3"	3"	50
BSEF-750LP	616868	7 1/2	3"	3"	60

\*BSEF Pump end kits (Less Power) use 182/184JM motors.

## Performance Data



## BSEF Series - Electric Motor Driven - Liquid Ag-Chemical Transfer

Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Electrical Characteristics	Ship Wt. (lbs.)
BSEF-150TE	616894	1 1/2	1 1/4"	1 1/4"	1/60/230V, TEFC motor	52
BSEF-200TE	616895	2	2"	2"	1/60/230V, TEFC motor	60
BSEF-300TE	616896	3	2"	2"	1/60/230V, TEFC motor	77
BSEF-300TE-3	616897	3	2"	2"	3/60/230/460V, TEFC motor	77
BSEF-500TE	616889	5	3"	3"	1/60/230, TEFC motor	148
BSEF-500TE-3	616899	5	3"	3"	3/60/230/460V, TEFC motor	148
BSEF-750TE-3	616898	7 1/2	3"	3"	3/60/230/460V, TEFC motor	165



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# Industrial

## BSTF Series



### Applications

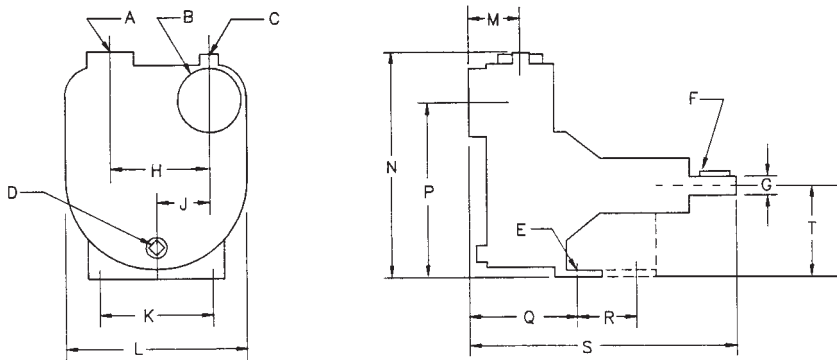
Monarch's BSTF Series of self priming centrifugal pumps are designed to be either belt driven or direct driven through a flexible coupling. This versatile design allows the option of connecting to the motor or engine of your choice.

### Features

- **CASING** – Large rugged cast iron casing provides fast priming and long life.
- **SUCTION & DISCHARGE** – Sizes range from 1¼", 2" and 3" NPT.
- **IMPELLER** – Semi-open, 4 vane, cast gray iron impeller with "Blind Hole" for shaft protection.
- **SEAL** – Self lubricating mechanical seal, carbon ceramic faces. Viton and stainless steel for ag applications.
- **SHAFT** – One piece, high strength stress proof steel for easy mounting to your choice of motor.
- **BEARINGS** – Sealed double row bearings. The -83 and -125 models have two single row, deep groove, double seal ball bearings.



## Dimensional Outline



Model No.	Discharge A (NPT)	Suction B (NPT)	Priming Plug C NPT	Drain Plug D NPT	Mounting Holes E	Keyway F	Shaft Dia. G	H	J	K	L	M	N	P	Q	R	S	T
BSTF-51	1 1/4	1 1/4	3/4	3/4	.40	.19	.75	4.00	2.00	4.25	7.50	3.20	10.50	8.10	6.40	-	10.30	4.50
BSTF-82	2"	2"	3/4	3/4	.40	.19	.75	4.25	2.13	4.00	8.50	3.20	11.50	8.90	6.70	-	10.60	4.50
BSTF-83	2"	2"	3/4	3/4	.40	.25	.75	4.25	2.13	4.00	8.50	3.20	11.40	8.40	6.90	2.00	12.10	4.50
BSTF-125	3"	3"	3/4	3/4	.40	.25	.75	3.62	2.00	4.00	9.30	4.60	13.40	9.80	8.90	2.00	14.10	4.50

\*Dimensions measured in inches

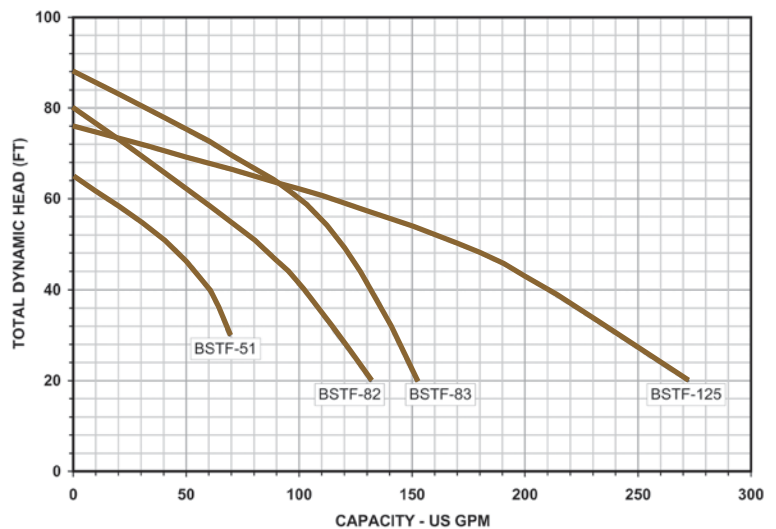
## Performance Chart @ 3450 RPM

Model No.	HP	Total Head in Feet								
		20	25	30	35	40	50	60	70	80
BSTF-51	1	68	68	68	67	62	45	17	-	-
BSTF-82	2	127	124	118	112	100	78	52	23	-
BSTF-83	3	152	152	150	147	142	125	100	43	-
BSTF-125	5	267	254	240	224	205	165	110	70	35

## BSTF Series Frame Mount

Model No.	Item No.	Suction & Discharge NPT	Capacities U.S. GPM	Ship Wt. (lbs.)	Description
BSTF-51	615259	1 1/4"	68	28	3/4" shaft size, 3/16" keyway, includes stainless steel and Viton Seal.
BSTF-82	615258	2"	127	30	
BSTF-83	615256	2"	152	45	
BSTF-125	615257	3"	272	70	

## Performance Data



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# Industrial

## ACGF-SD Series



ACGF-11SDH



ACGF-18SDH



ACGF-5SD

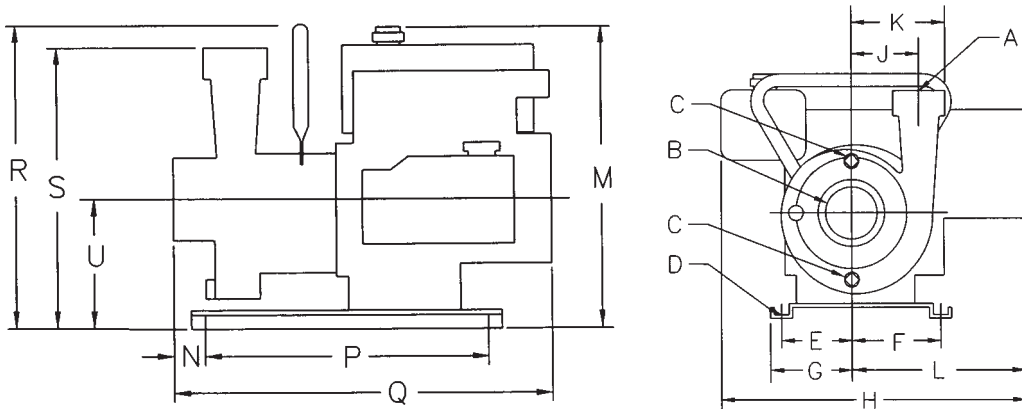
### Applications

The ACGF Series is excellent for a wide variety of booster, sprayer, fire fighting and sprinkler applications. They are constructed with a rugged cast iron casing, cast iron impeller, Viton and stainless steel mechanical seal.

### Features

- **ENGINE** – Internationally known Briggs and Stratton Intek, or Honda engines, With dependable world wide service All engines are equipped with adjustable throttle controls.
- **HANDLE** – Built-in handle for easy portability. 5.5 & 8 HP models.
- **DISCHARGE OPENING** – Sizes are 2" and 2 ½" NPT.
- **CASING** – Thick walled cast iron provides the strength for pressure boosting.
- **BASE** – Stamped steel base protects pump and engine. Facilitates easy and firm mounting.
- **SEAL** – Viton and stainless steel mechanical seal provides excellent corrosion resistance for ag-chemical applications.
- **IMPELLER** – Durable gray iron impeller is enclosed for higher pressure.

## Dimensional Outline



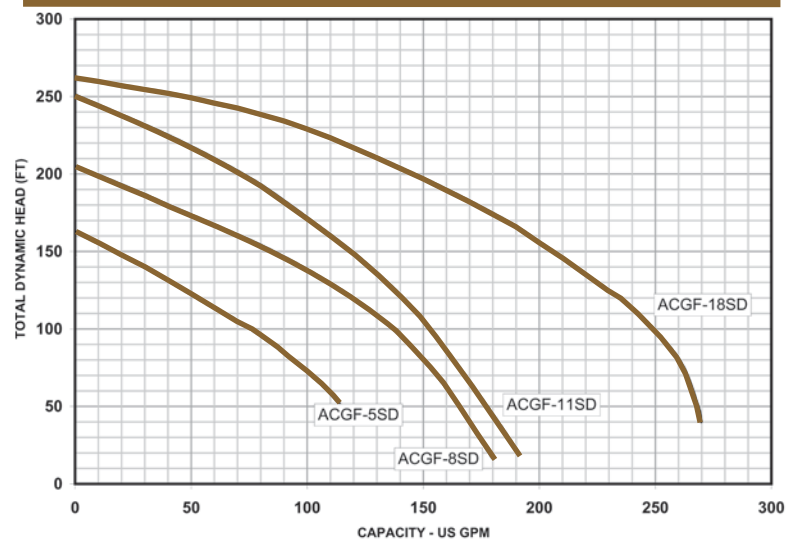
Model No.	Suction A (NPT)	Discharge B (NPT)	Drain C (NPT)	4 Holes Dia. D	E	F	G	H	J	K	L	M	N	P	Q	R	S	U
ACGF-5SD	2	2	1/4	0.41	3.68	4.82	4.28	16.50	4.10	5.70	11.40	15.90	0.28	10.80	16.40	16.30	11.00	4.92
ACGF-8SD	2	2	1/4	0.41	5.75	6.13	6.50	19.50	3.32	5.50	10.90	17.50	0.63	13.50	19.60	16.80	17.60	6.38
ACGF-11SDH	2	2	1/4	0.41	5.52	6.05	6.36	20.35	4.25	6.06	11.61	18.13	.17	13.50	17.00	-	12.38	6.32
ACGF-18SDH	2 1/2	2 1/2	1/4	0.44	-	-	10.50	18.25	4.78	6.59	7.75	28.00	6.88	24.00	46.00	-	16.00	9.38

\*Dimensions measured in inches

## Performance Chart

Model No.	Discharge Pressure in PSI at 5 ft. Lift									
	10	20	30	40	50	60	70	80	90	100
	Capacities in U.S. GPM									
ACGF-5	-	115	98	75	52	24	-	-	-	-
ACGF-8	-	165	155	140	122	95	60	24	-	-
ACGF-11	182	175	165	155	140	125	100	81	55	25
ACGF-18	270	265	260	250	235	210	190	160	125	87

## Performance Data



## ACGF-SD Series - Gas Engine Driven - End Suction - Sprayer/Booster Pump

ACGF-SD SERIES - GAS ENGINE DRIVEN - END SUCTION - SPRAYER/BOOSTER PUMP						
Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Engine Description	Low Oil Shut Off
ACGF-5SD	615103	5 1/2	2"	2"	Briggs & Stratton INTEK, with 3 qt. fuel tank.	NO
ACGF-5SDH	615115	5 1/2	2"	2"	Honda, with 4 qt. fuel tank.	YES
ACGF-8SD	615109	8	2"	2"	Briggs & Stratton INTEK, with 4 qt. fuel tank.	NO
ACGF-8SDH	615117	9	2"	2"	Honda, with 6 qt. fuel tank.	YES
ACGF-11SDH	614170	11	2"	2"	Honda GX340	YES
ACGF-18SDH	614172	18	2 1/2"	2 1/2"	Honda GX610, electric start.	YES



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# Industrial

## BSGF Series



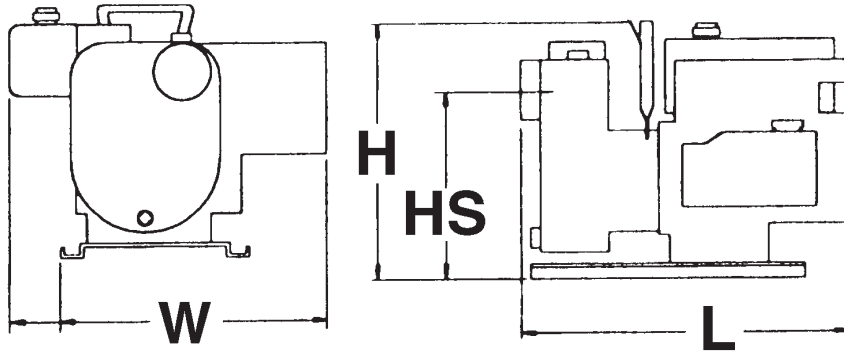
### Applications

The Monarch BSGF Series of self priming engine driven pumps are general purpose pumps designed for liquid transfer and contractor dewatering using a semi open impeller.

### Features

- **ENGINE** – Internationally known Briggs and Stratton or Honda engines, with dependable world wide service. All engines are equipped with adjustable throttle engine controls.
- **CASING** – Cast iron; 2" or 3" suction & discharge.
- **PRIMING & DRAIN PLUGS** – 3/4" garden hose size.
- **IMPELLER** – 4 vane, semi-open gray cast iron, with "Blind Hole" for engine shaft protection.
- **SEAL** – Self lubricating mechanical seal, carbon-ceramic faces, Viton bellows to resist most ag- chemicals and liquid fertilizers.
- **BASE** – Rugged stamped steel base provides firm easy mounting.
- **HANDLE** – Built-in handle for easy portability.

## Dimensional Outline



Model No.	HP	Suction (NPT)	Discharge (NPT)	L	W	H	HS	Ship Wt. (lbs.)
BSGF-8	3 1/2	2" NPT	2" NPT	15.25	13.25	14.00	9.25	65
BSGF-10	5 1/2	2" NPT	2" NPT	16.69	15.75	16.00	9.25	74
8BSGF-12	8	3" NPT	3" NPT	21.00	18.75	16.50	12.00	110

\*Dimensions measured in inches

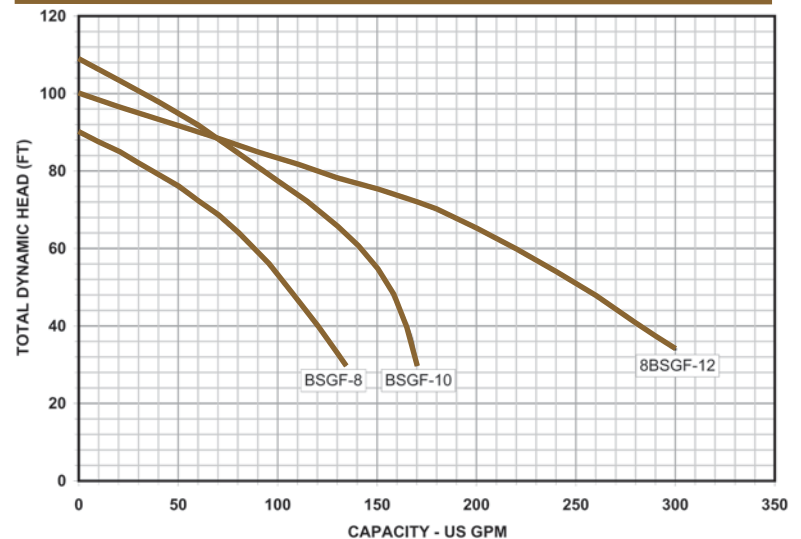
## ROLL FRAMES

Model No.	Item No.
BSGF-8, BSGF-10	616920
8BSGF-12	465086

## Performance Chart

Model No.	Discharge Pressure in PSI at 5 ft. Lift							
	30	40	50	60	70	80	90	100
	Capacities in U.S. GPM							
BSGF-8	135	210	105	85	65	37	-	-
BSGF-10	170	165	155	140	118	95	65	30
BSGF-12	310	285	255	220	175	120	60	-

## Performance Data



## BSGF Series - Gas Engine Driven - General Purpose Liquid Transfer

Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Engine Description	Low Oil Shut Off	Ship Wt. (lbs.)
BSGF-8	616810	3 1/2	2"	2"	Briggs & Stratton, with 3 qt. fuel tank.	NO	64
BSGF-8H	616833	4	2"	2"	Honda, with 3 qt. fuel tank., 6X120	YES	64
BSGF-10	616835	5 1/2	2"	2"	B&S INTEK, with 3 qt. fuel tank.	NO	70
BSGF-10H	616886	5 1/2	2"	2"	Honda, with 4 qt. fuel tank., 6X160	YES	70
8BSGF-12	616850	8	3"	3"	B&S INTEK, with 4 qt. fuel tank.	NO	126
8BSGF-12H	616843	9	3"	3"	Honda, with 6 qt. fuel tank., 6X270	YES	106

\* Roll frame available separately.



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# Industrial

## NSGF Series



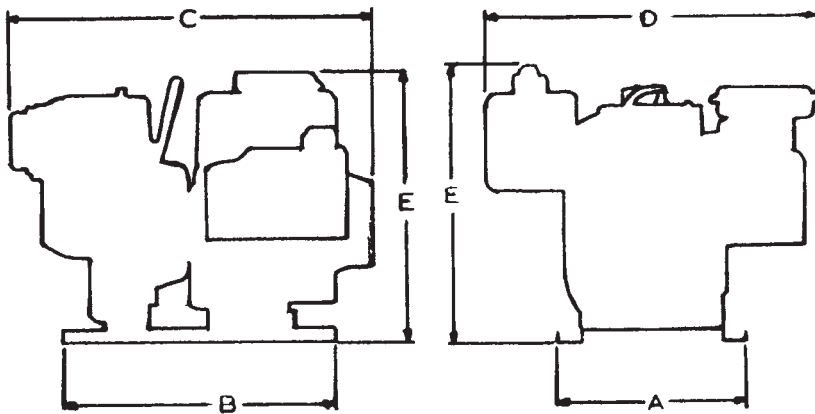
### Applications

The Monarch NSGF Series of self priming engine driven pumps are primarily designed for irrigation and sprayer applications, including ag-chemicals and liquid fertilizers. It is constructed with a rugged self priming cast iron casing, cast iron impeller, Viton and stainless steel mechanical seal and is available with either Briggs & Stratton or Honda engines.

### Features

- **ENGINE** – Internationally known Briggs and Stratton or Honda engines, with dependable world wide service. All engines are equipped with adjustable throttle engine controls.
- **HANDLE** – Built-in handle for easy portability.
- **DISCHARGE OPENING** – 2" NPT.
- **CASING** – Large cast iron casing provides rugged and quick self priming.
- **BASE** – Stamped steel base protects pump and engine. Facilitates easy and firm mounting.
- **SEAL** – Viton and stainless steel mechanical seal provides excellent corrosion resistance for ag fertilizer applications.
- **IMPELLER** – Durable gray iron impeller is enclosed for higher pressure.

## Dimensional Outline



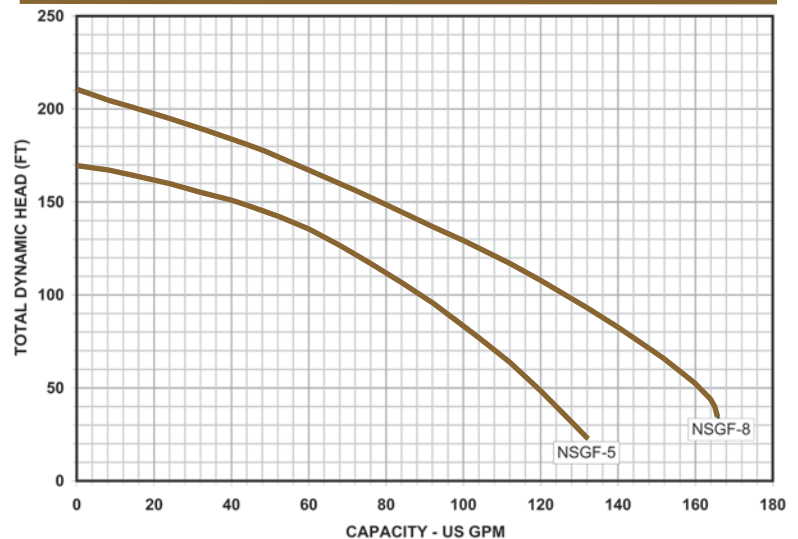
Model No.	HP	Suction (NPT)	Discharge (NPT)	A	B	D	E	C	Fuel Tank Capacity	Ship Wt. (lbs.)
NSGF-5	5.5	2" NPT	2" NPT	9.75	13.5	20.25	14.38	16.20	3 qt.	94
NSGF-8	8	2 1/2" NPT	2" NPT	13	17	23.66	17.75	17.31	4 qt.	118

\*Dimensions measured in inches

## Performance Chart

Model No.	Discharge Pressure in PSI at 5 ft. Lift							
	10	20	30	40	50	60	70	80
	Capacities in U.S. GPM							
NSGF-5	132	118	106	85	70	52	-	-
NSGF-8	165	162	145	125	110	85	50	35

## Performance Data



## NSGF Series - Gas Engine Driven - Self Priming - Pressure/Sprayer Pump

Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Engine Description	Low Oil Shut Off	Ship Wt. (lbs.)
NSGF-5	614355	5 1/2	2"	2"	Briggs & Stratton INTEK, with 3 qt. fuel tank.	NO	94
NSGF-5H	614353	5 1/2	2"	2"	Honda, with 4 qt. fuel tank.	YES	94
NSGF-8	614356	8	2 1/2"	2"	Briggs & Stratton INTEK, with 3 qt. fuel tank.	NO	118
NSGF-8H	614361	9	2 1/2"	2"	Honda, with 6 qt. fuel tank.	YES	118

\* Roll frame available separately.



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# Industrial

## NG Series



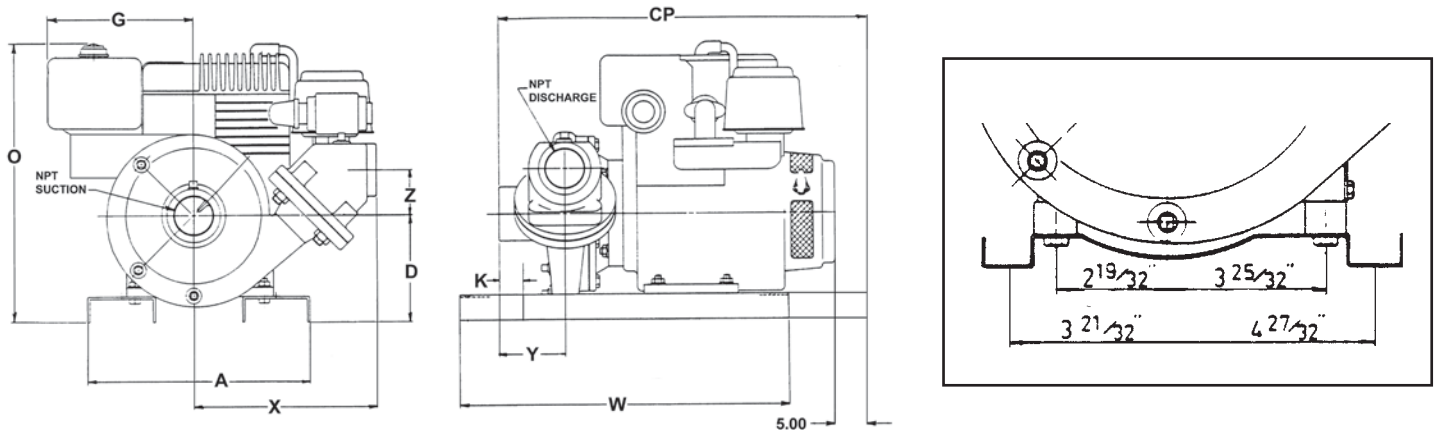
### Applications

Close coupled configuration with the pump impeller threading directly onto the engine shaft. This design allows for a very compact product. Rugged cast iron construction makes it an excellent choice for turf or ag-irrigation applications.

### Features

- **ENGINE** – Internationally known Briggs and Stratton Vanguard engine equipped with adjustable throttle controls. Equipped with 12 volt electric start and 9 qt. fuel tank. (Does not include battery)
- **SEAL** – Mechanical seals are self lubricating and have Buna-N bellows with brass and stainless steel hardware. Other seal materials such as Viton and stainless steel or tungsten carbide are available on special order.
- **IMPELLER** – Made of cast iron, are dynamically balanced and are of enclosed design for maximum efficiency.
- **CASING** – Thick walled durable cast iron casing is ideal for high pressure applications.
- **WEAR RINGS** – Wear rings are bronze and are easily replaceable.
- **SHAFT SLEEVE** – Zinc plated shaft sleeves are provided to help protect shaft from corrosion.

## Dimensional Outline



\* Drawing for reference only. Pump not exactly as shown.

Model No.	HP	Suction (NPT)	Discharge B (NPT)	CP	D	G	O	W	Z	ZZ
NG2-1/2 M9S	18	3	2 1/2	45.50	10.84	12.62	22.41	35.00	3.00	12.75

\*Dimensions measured in inches

## NG Series - Gas Engine Driven

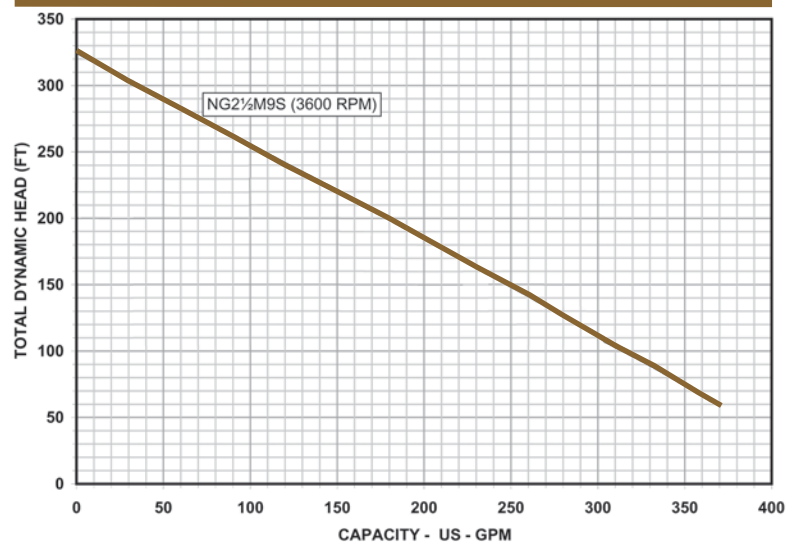
Model No.	Item No.	HP	Suct. NPT	Disch. NPT	Fuel Tank Capacity	Engine Description	Low Oil Shut Off	Ship Wt. (lbs.)
NG2 - 1/2 M9S-18V	614228	18	3"	2 1/2"	9 qt.	B&S Vanguard (12 volt electric start)	YES	299

**Note:** Battery and cables not included.

## Performance Chart

Model No.	Discharge Pressure in PSI at 5 ft. Lift										
	30	40	50	60	70	80	90	100	110	120	130
Capacities in U.S. GPM											
NG2-1/2 M9S-18V	356	337	295	268	234	204	171	130	95	65	30

## Performance Data



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# Industrial

## MIG Series



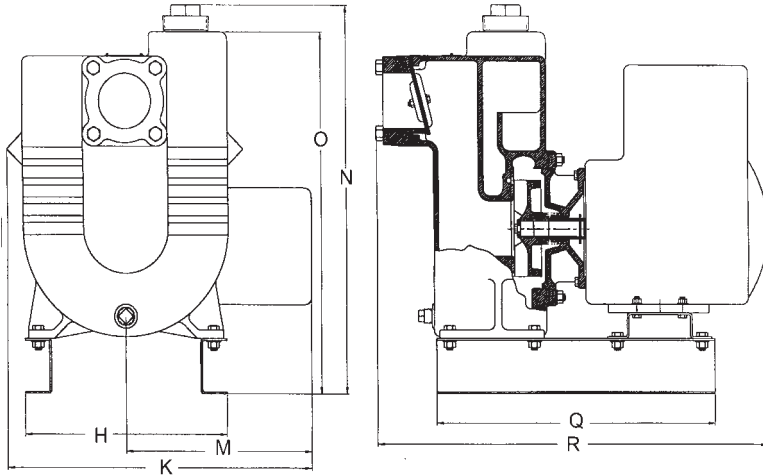
### Applications

The Monarch MIG Series of heavy duty self priming pumps are of all iron construction and can be used in a wide variety of applications, including industrial and marine installations.

### Features

- **IMPELLER** – Semi open cast iron, non clogging, designed for water but can also handle small quantities of mud, sand or silt up to 10% by volume.
- **PRIMING PLUG** – Enables priming, without having to disconnect the discharge piping.
- **CHECK VALVE** – Built-in with threaded NPT suction inlet, prevents syphoning, facilitates priming.
- **SEAL** – Viton and stainless steel with carbon-ceramic faces, mechanical self lubricating, no maintenance required.
- **CASING** – Cast gray iron, rugged construction, large capacity for faster priming. Self cleaning interior design prevents silt build up.
- **WEAR PLATE** – Replaceable steel wear plate, for maintaining maximum pump efficiency.

## Dimensional Outline



Model No.	H	K	M	N	O	Q	R
MIG30-13V	12.75	20.35	11.61	18.00	15.85	-	23.07
MIG30-13H	12.75	17.25	11.50	17.50	15.85	-	24.60
MIG40-18K	15.50	17.74	8.87	28.25	26.31	21.37	29.95
MIG40-27K	15.50	17.74	8.87	28.25	26.31	21.37	29.95

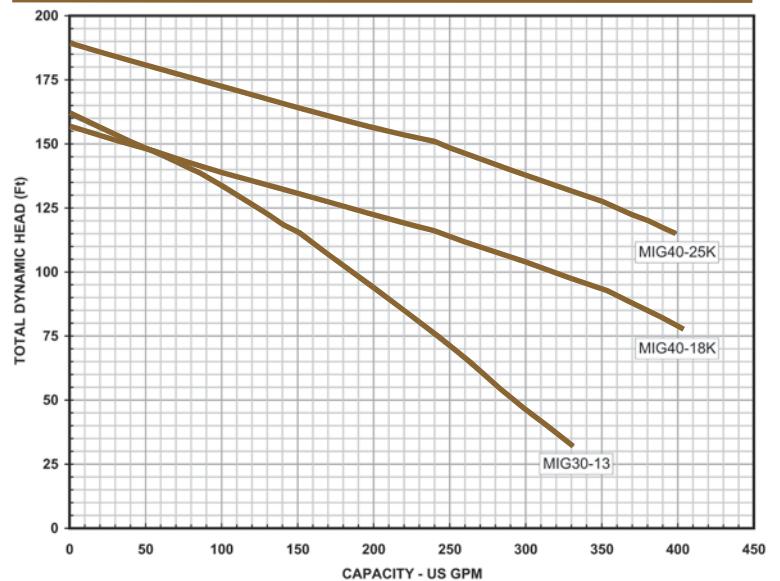
\*Dimensions measured in inches

## MIG Self Priming - Heavy Duty Cast Iron - Engine Driven Pumps

Model No.	Item No.	Engine	Size	Starter	HP	Fuel Tank	Low Oil Shut Off	Ship Wt. (lbs.)
MIG-30-13V	607712	Vanguard	3" x 3"	Recoil	13	7.5 qt.	YES	270
MIG30-13HES	607714	Honda 6X610	3" x 3"	Electric	13	6.9 qt.	YES	270
MIG40-18K	607715	Kohler	4" x 4"	Electric	18	-	YES	320
MIG40-27K	607720	Kohler	4" x 4"	Electric	27	-	YES	320

**Note:** Battery and cables, not included on electric start models. Fuel tank not included on 18 and 27 HP models.

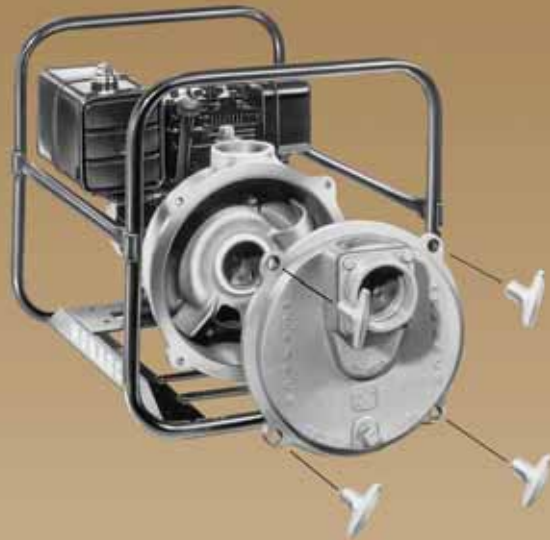
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# Industrial

## TSP Series



TSP-4V



TSP-3HRF

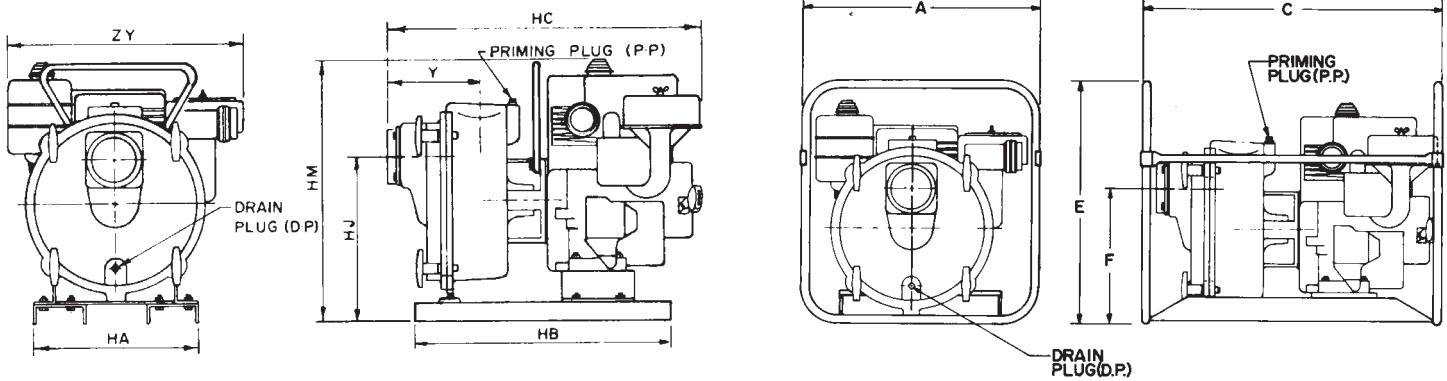
### Applications

Fast self priming trash pump series; comparable in weight to aluminum pumps. Ideal for portable trash pumping and hydro-seeding applications. Handles spherical solids up to half the diameter of the suction hose. The pump casing is built of cast ductile iron for durability. Available in 2", 3" & 4" sizes.

### Features

- **ENGINE** – A variety of gasoline engines available.
- **SEAL** – Siliconized Graphite corrosion and abrasion resistant, water lubricated, no maintenance required on a replaceable sleeve, protecting engine shaft.
- **PRIMING PLUG** – Enables priming without the removal of the discharge hose.
- **DISCHARGE OUTLET** – Threaded female NPT.
- **IMPELLER** – Semi-open cast gray iron, two vane type, for higher efficiency, capable of handling spherical solids.
- **DIFFUSER** – Ductile iron, replaceable, with built-in wear plate.
- **CHECK VALVE** – Built-in with threaded NPT suction inlet, prevents syphoning, facilitates priming.
- **CASING** – Rugged ductile iron construction for high impact resistance and long life.
- **"O" RING SEAL** – No gaskets required.
- **SUCTION STRAINER** – Price of pump includes a suction strainer, designed to pass solids of size that can be handled by pump, giving an unobstructed flow.
- **FRONT COVER** – Ductile iron construction - easy removal by four wing nuts, no wrenches required.
- **DRAIN PLUG** – Enables casing to be drained, for winterizing, prevents frost damage.
- **ROLL FRAME** – Sturdy welded roll frame standard on 2" and 3" models only.

## Dimensional Outline



Model No.	HP	HA	HB	HC	HJ	HM	ZY	Y	A	C	E	F
TSP-2HRF	5 1/2	-	-	-	-	-	-	-	20.40	25.00	21.50	11.50
TSP-3HRF	9	-	-	-	-	-	-	-	20.40	25.00	21.50	11.50
TSP-4V	18	16.18	25.00	32.00	17.81	24.00	20.09	12.00	-	-	-	-

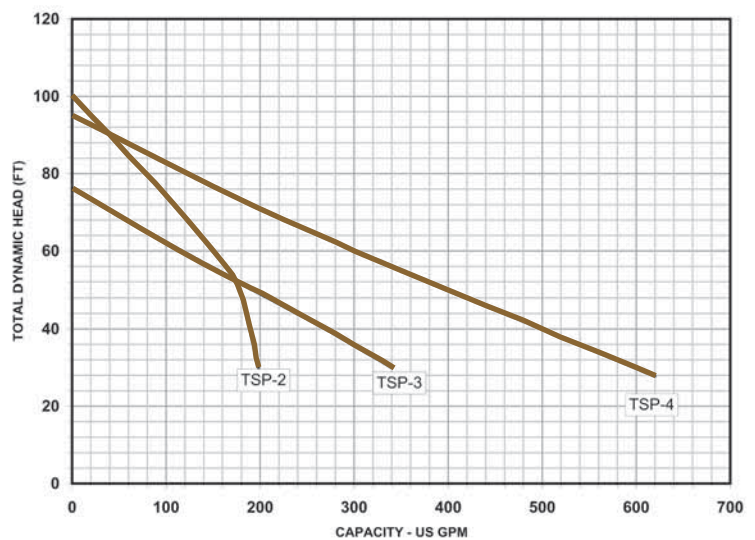
\*Dimensions measured in inches

## TSP Series Trash Pumps

Model No.	Item No.	Suct. NPT	Solids Handling	Flow Capacity U.S. GPH	Total Head (ft.)	Max Suct. Lift (ft.)	Disch. NPT	Engine	HP	Fuel Tank Cap. (gal.)	Run Time (hrs.)	Low Oil Shut Off	Ship Wt. (lbs.)
TSP-2HRF	611107	2"	1 1/8"	11,500	100	25	2"	Honda 6X160	5 1/2	0.80	1.65	YES	107
TSP-3HRF	611108	3"	1 1/2"	20,000	75	25	3"	Honda 6X270	9	1.30	2.2	YES	151
TSP-4V	611123	4"	2"	37,000	90	25	4"	Vanguard	18	2.2	1.5	NO	355

\* Equipped with electric start. Battery and cables not included.

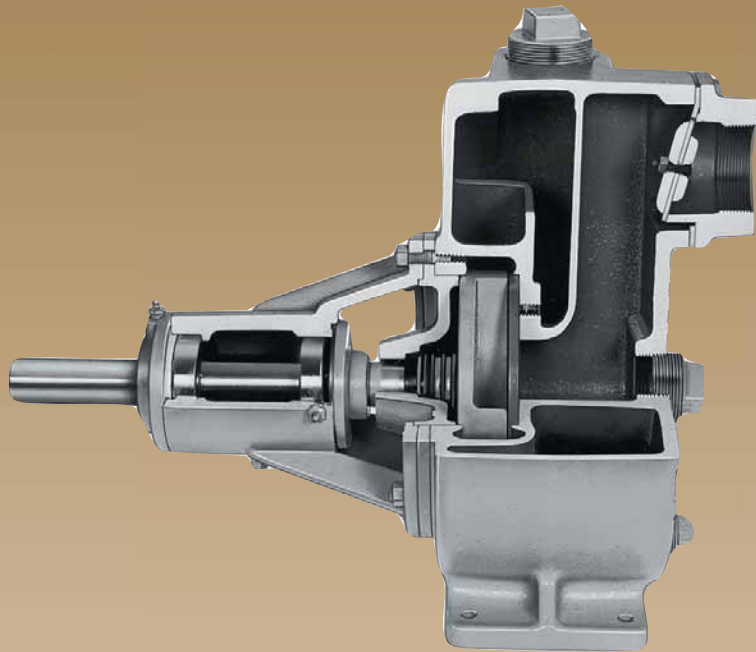
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# Industrial

## MIT Series



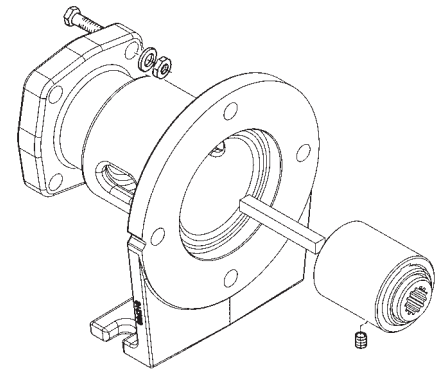
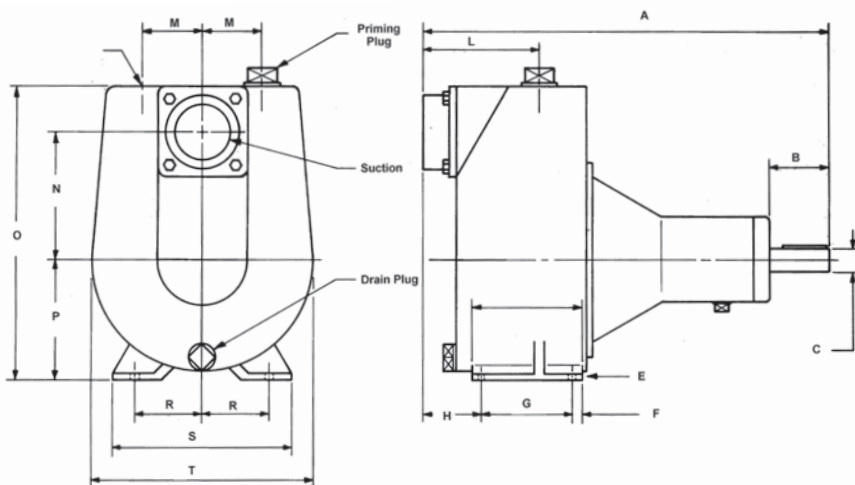
### Applications

The Monarch MIT Series of heavy duty self priming pumps are of all iron construction and can be used in a wide variety of applications, including industrial and marine installations.

### Features

- **SHAFT** – Stainless steel, with keyway.
- **IMPELLER** – Semi open cast iron, non clogging, designed for water but can also handle small quantities of mud, sand or silt up to 10% by volume.
- **PRIMING PLUG** – Enables priming, without having to disconnect the discharge piping.
- **CHECK VALVE** – Built-in with threaded NPT suction inlet, prevents syphoning, facilitates priming.
- **BEARINGS** – Two heavy duty sealed ball bearings.
- **SEAL** – Viton and stainless steel with carbon-ceramic faces, mechanical self lubricating, no maintenance required.
- **CASING** – Cast gray iron rugged construction large capacity for faster priming. Self cleaning interior design prevents silt build up.
- **WEAR PLATE** – Replaceable steel wear plate, for maintaining maximum pump efficiency.

## Dimensional Outline



Hydraulic Motor Adapter Kit (612881)

Model No.	Discharge (NPT)	Suction (NPT)	Priming Plug NPT	Drain Plug NPT	A	B	C	D	E	F	G	H	L	M	O	P	R	S	T
MIT-20H	2	2	1 1/2	3/4	20	3.06	1.25	0.44	0.53	4	3.5	5.5	3.13	6.19	13.63	5.31	4.25	9.75	10.5
MIT-30H	3	3	3	3/4	23.63	3.5	1.25	0.56	0.63	4.75	5	7.75	3.25	7.31	15.88	6.13	5.38	12.13	12.75
MIT-40	4	4	4	1	27.75	3.5	1.63	0.56	0.75	6.5	4.94	8.69	4.75	9.25	20.5	8	6.75	15	15.75

\*Dimensions measured in inches

## Performance

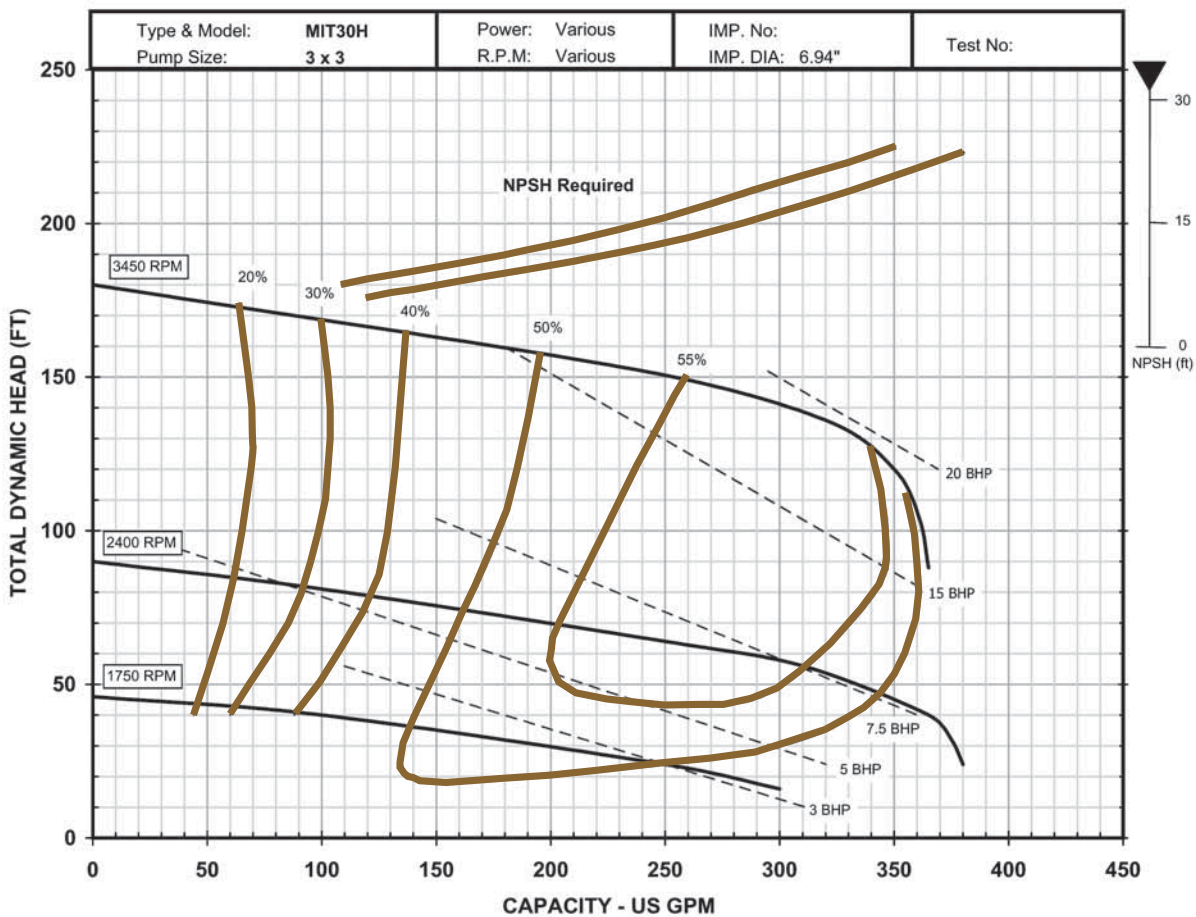
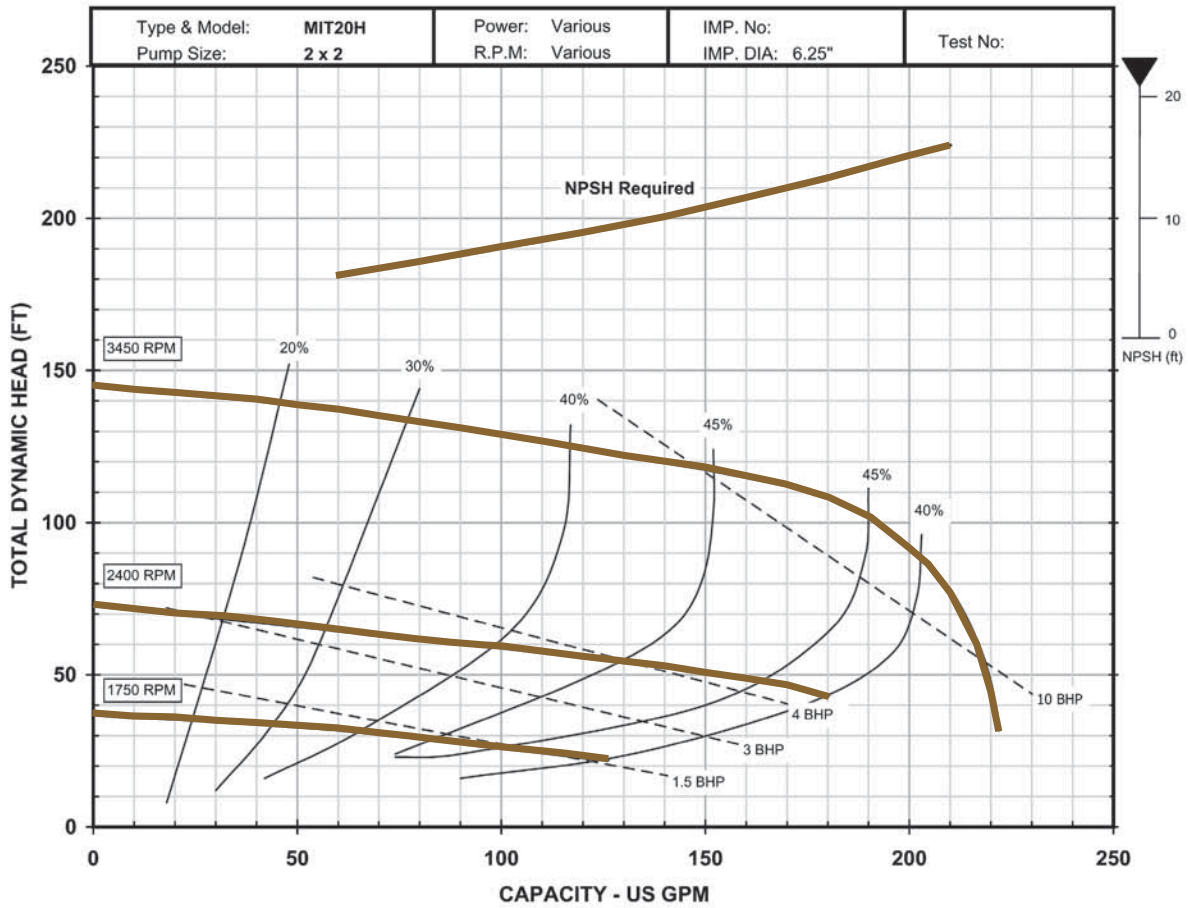
Model No.	Pump RPM	Max. Req'd HP	Total Head in Feet Including Friction Loss.																	
			20	40	60	80	100	120	140	160	180									
MIT-20H	1750	2	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3450	15	-	220	215	205	190	140	45	-	-	-	-	-	-	-	-	-	-	-
MIT-30H	1750	3	280	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3450	20	-	-	-	365	360	350	310	170	5	-	-	-	-	-	-	-	-	-
MIT-40	1750	15	760	640	410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2400	25	-	-	-	690	630	460	70	-	-	-	-	-	-	-	-	-	-	-

## MIT Series Frame Mount

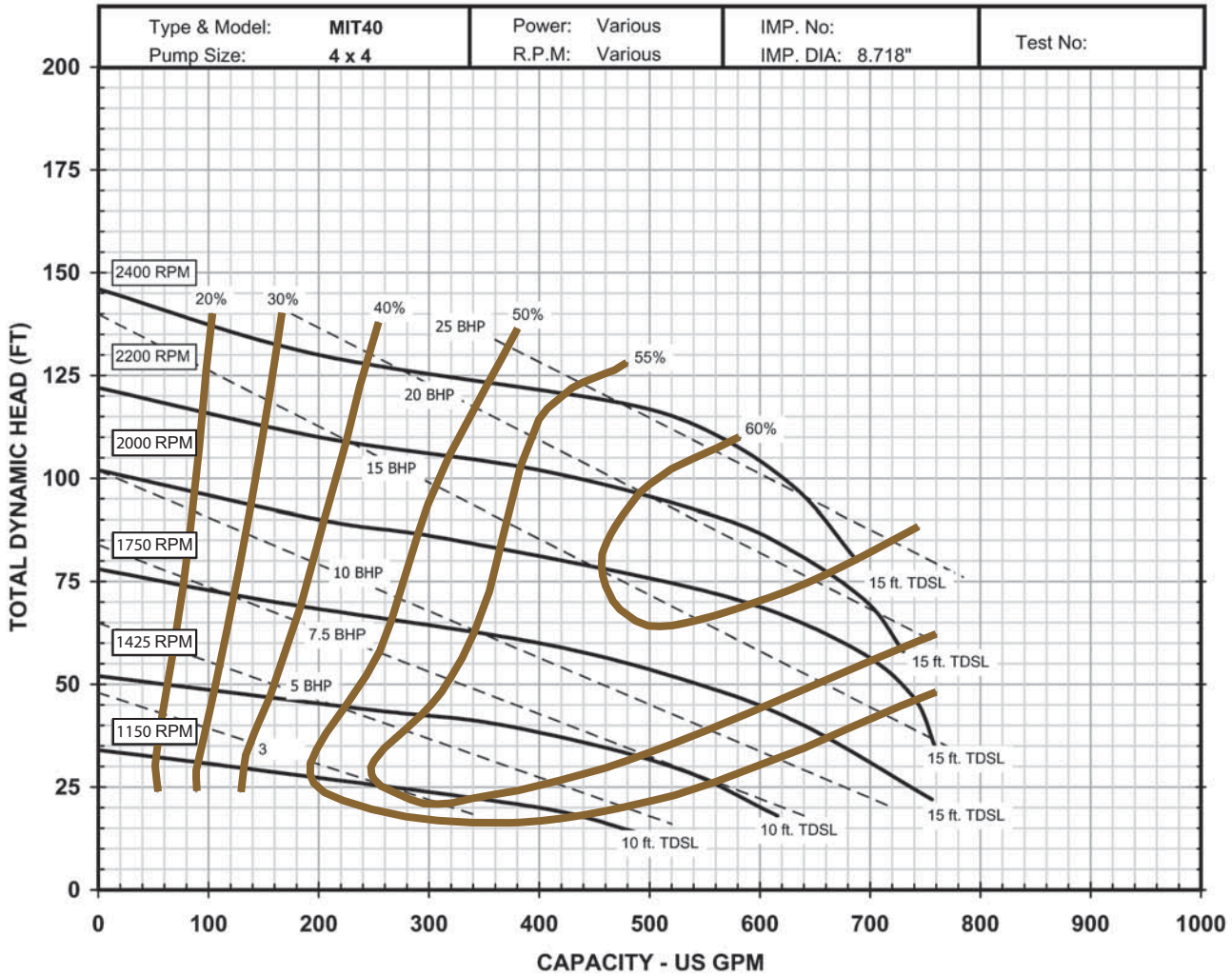
Model No.	Item No.	Suction & Discharge NPT	Solids Handling	Shaft Diameter	Shaft Length	Key Size	Ship Wt. (lbs.)
MIT-20H	611021	2"	3/4"	1 1/4"	3 1/16"	1/4"	108
MIT-30H	611041	3"	1"	1 1/4"	3 1/2"	1/4"	158
MIT-40	611061	4"	1 3/8"	1 5/8"	3 1/2"	3/8"	282
Hydraulic Adapter	612881	Includes bracket and coupling used to couple hydraulic motor with SAE j744C mounting flange to MIT-40.					



# Performance Data



# Performance Data, ctd.

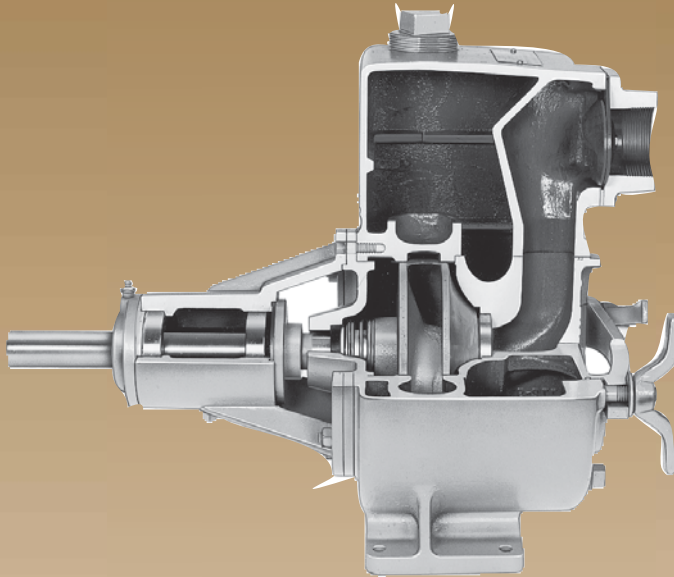


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# Industrial

## TT Series



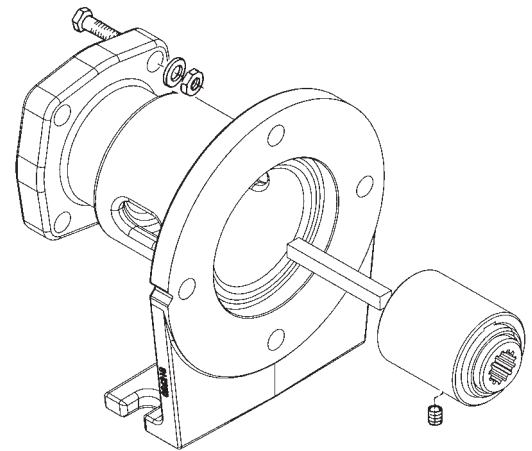
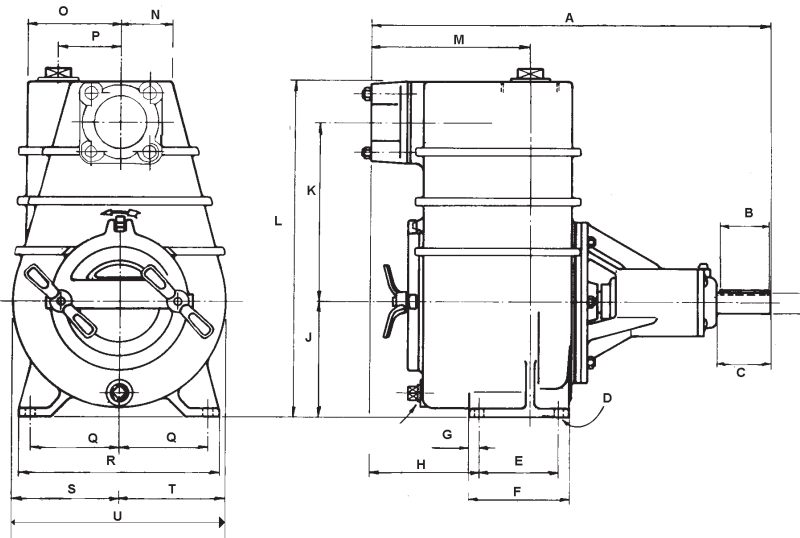
### Applications

The Monarch TT Series of self priming trash pumps are made of heavy duty, all iron construction making them excellent for a wide variety of installations including industrial, commercial and marine applications where solids handling is important.

### Features

- **CASING** – Cast gray iron with extra reinforcing ribs for added strength, large capacity for faster priming.
- **BEARINGS** – Two heavy duty sealed ball bearings.
- **CLEAN OUT COVER** – Wing nuts enable removal, no wrenches required, for quick access, inspection or clean out.
- **PRIMING PLUG** – Enables priming without the removal of the discharge piping.
- **WEAR RING** – Replaceable, maintains pump efficiency.
- **CHECK VALVE** – Built-in with threaded NPT suction inlet, prevents syphoning, facilitates priming.
- **SEAL** – Viton, stainless steel, carbon-ceramic.
- **SHAFT** – Stainless steel, with keyway.
- **IMPELLER** – Enclosed cast gray iron, two vane type capable of handling spherical solids. Unique design eliminates need for wear plate, for higher efficiency.

## Dimensional Outline



Hydraulic Motor Adapter Kit (612881)

Model No.	Discharge (NPT)	Suction (NPT)	Priming Plug NPT	Drain Plug NPT	Keyway	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U
TT-20	2"	2"	1 1/2"	3/4"	1/4"	21.40	1.25	3.00	0.44	4.00	5.00	-	4.87	5.75	13.00	16.25	9.50	3.00	3.25	4.25	9.50	10.75	0.50	-	-
TT-30	3"	3"	2"	3/4"	1/4"	24.75	3.00	3.50	0.56	4.75	4.75	6.25	6.56	6.90	9.47	20.13	9.56	3.13	5.63	3.75	5.38	12.00	6.63	6.38	-
TT-40	4"	4"	2"	3/4"	3/8"	30.06	3.00	3.50	0.56	7.25	7.25	-	6.69	9.00	14.25	26.5	11.81	5.00	7.25	4.75	7.75	17.5	-	-	17.75

\*Dimensions measured in inches

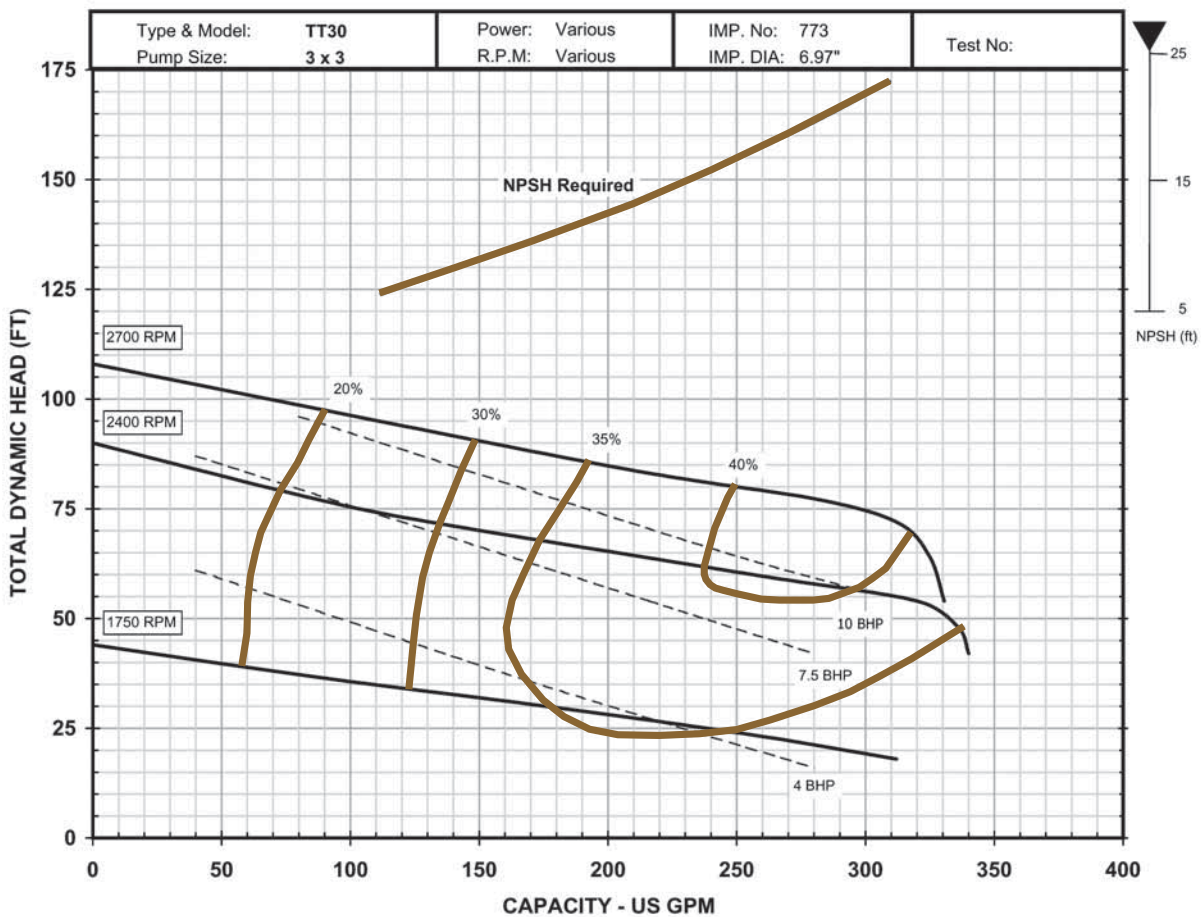
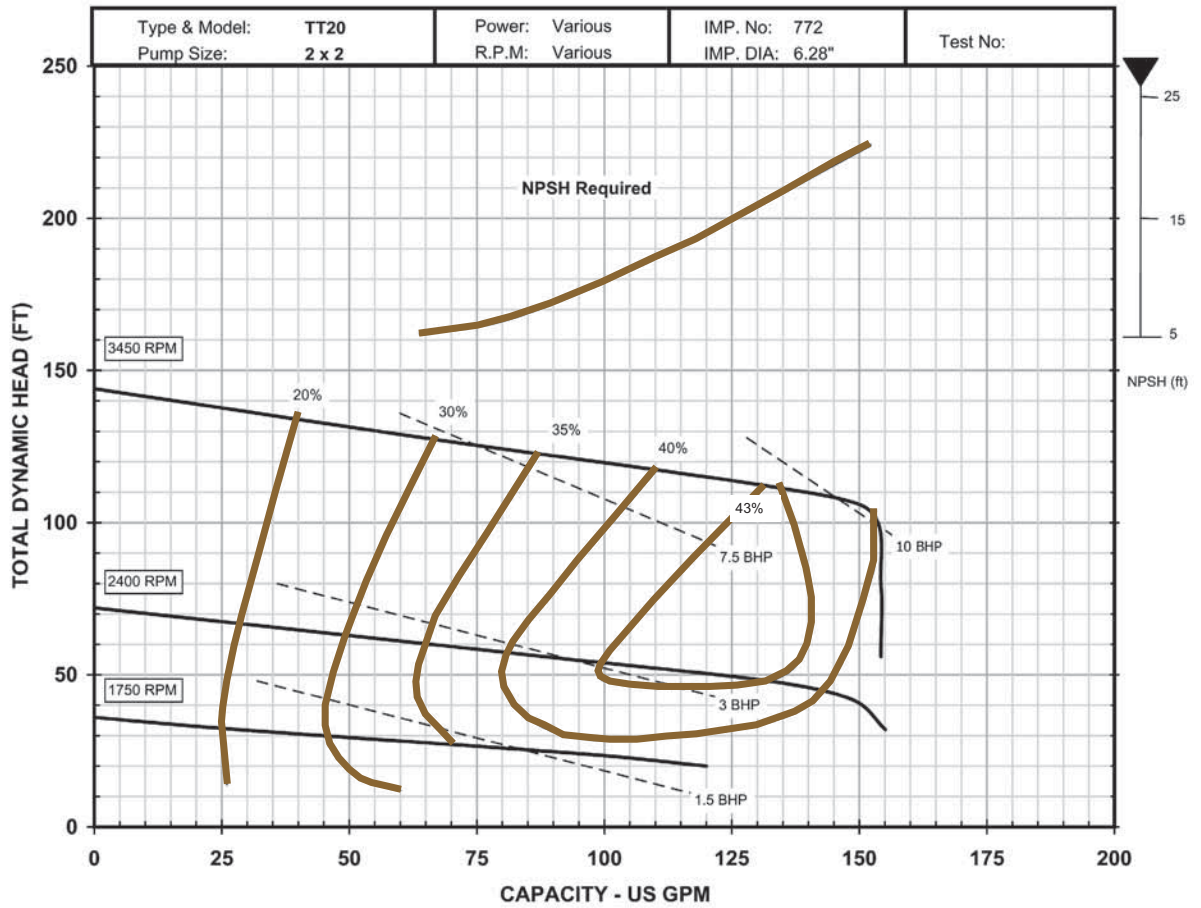
## Performance

Model No.	Pump RPM	Max. Req'd HP	Total Head in Feet Including Friction Loss.																						
			20	40	60	80	100	120	140	160	180														
TT-20	1750	2	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3450	10	-	-	155	155	155	100	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TT-30	1750	5	280	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2700	20	-	-	330	250	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TT-40	1750	15	-	680	400	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2400	40	-	-	-	740	695	455	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

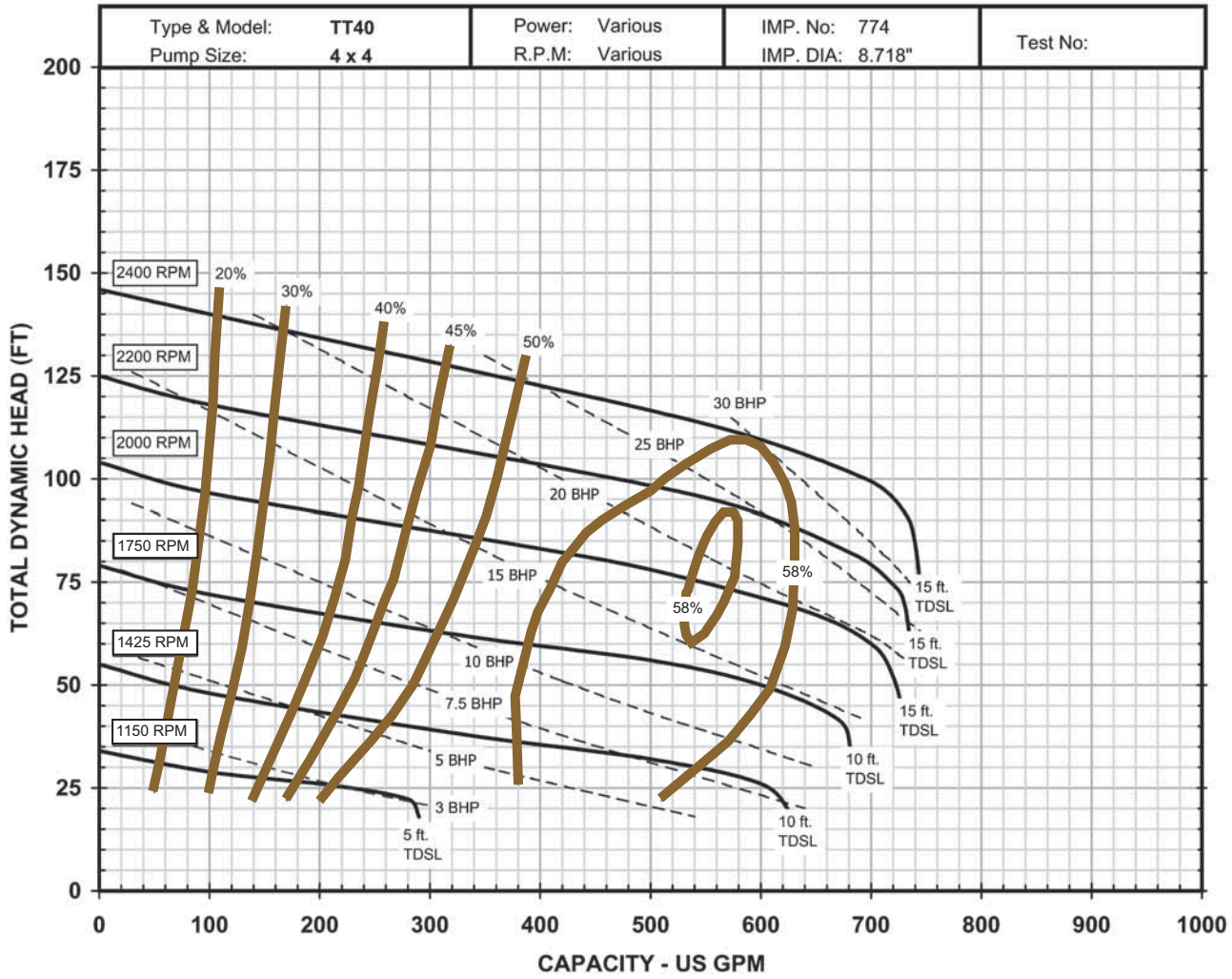
## TT Series - Frame Mount Trash Pumps

Model No.	Item No.	Suction & Discharge NPT	Solids Handling	Shaft Diameter	Shaft Length	Key Size	Ship Wt. (lbs.)
TT-20	608861	2"	1 1/8"	1 1/4"	3"	1/4"	129
TT-30	608931	3"	2"	1 1/4"	3 1/2"	1/4"	190
TT-40	608911	4"	3"	1 5/8"	3 1/2"	3/8"	420
Hydraulic Adapter	612881	Includes bracket and coupling used to couple hydraulic motor with SAE J744C mounting flange to TT-40.					

# Performance Data



# Performance Data, ctd.



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# Industrial

## Hand Pump Series



### V110 Series

#### Applications

Transfer of small volumes of Petroleum products from 45 gallon drum.

#### Features

The V-110 Rotary, and the L-30A Diaphragm pump are hand operated transfer pumps designed for use in 45 gallon drums with a 2" bung adaptor.

The V-110 has non-sparking brass vanes to safely pump a variety of petroleum based fluids.

Pump, bronze fitted, Cap. 1 U.S. gal. per 10 rev., furnished with handle, discharge spout  $\frac{3}{4}$ " NPT male thread, 40" telescopic suction pipe and bung adapter threaded for 2" steel drum openings.

Comes with  $\frac{3}{4}$ " x 8 ft neoprene hose with bent spout, all in one carton.

### L-30A Series

#### Applications

Transfer of small volumes of Petroleum products from 45 gallon drum.

#### Features

The L-30A has a tough nitrile diaphragm to safely handle petroleum fuels, lubricating oils, and water based solutions.

Pump, lightweight die-cast aluminum. Cap. 10-12 GPM, furnished complete with handle and 2" bung adapter on pump, 40" suction pipe and 8 ft. neoprene hose with straight spout, all packaged in one carton. Suction lift up to 20 ft.

## Specifications

### Petroleum Transfer Pumps

Model No.	Item No.	Pipe Size NPT	Ship Wt. (lbs.)	Description
<b>Rotary Pumps - Sliding Brass Vane Type</b>				
V-110	600115	3/4"	20	Hand Pump with 2" steel drum openings
V-110H	600116	3/4"	23	Hand Pump with 2" steel drum openings, and 3/4 x 8' hose
Hose - For Above Hand Pumps				
V-H1P	600172	3/4 x 8"	2	Neoprene Hose

### Diaphragm Pumps - Nitrile Rubber Diaphragm

Model No.	Item No.	Pipe Size NPT	Ship Wt. (lbs.)	Description
L-30A	600135	3/4"	13	Lightweight die-cast aluminum hand pump



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# Industrial

## Trouble Shooting Guide

### Warning - RISK OF ELECTRICAL SHOCK

Working with electrical equipment in or near water can be hazardous. To reduce the risk of electrical shock, Franklin Electric recommends that a certified electrical technician be employed to perform service work on any electrical equipment.

PROBLEM	POSSIBLE CAUSES	REMEDIES
<b>Motor will not run.</b>	<ol style="list-style-type: none"> <li>1. Disconnect switch is off.</li> <li>2. Fuse is blown.</li> <li>3. Overload tripped.</li> <li>4. Defective pressure switch.</li> <li>5. Incorrect or no voltage.</li> <li>6. Motor winding open, shorted or grounded.</li> <li>7. Low voltage.</li> <li>8. Pump stuck or binding.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place on "ON" position.</li> <li>2. Replace with proper size fuse.</li> <li>3. Reset overload.</li> <li>4. Replace with new switch of proper pressure setting.</li> <li>5. Determine why voltage not available - broken wires, blown fuses, or disconnect switch off. If voltage is incorrect (ref. 115V Service and 230V Pump), customer must purchase proper voltage pump, or change power supply voltage to match pump.</li> <li>6. Pull pump and replace motor or complete unit.</li> <li>7. Check with Power Company. Install heavier wiring if wire size is too small. See wiring instructions.</li> <li>8. Pump may be bound from pumping sand. It may be necessary to pull pump and flush out the inside to free it up. Do not reinstall pump in sandy well that cannot be cleaned or suitable sand screen cannot be installed.</li> </ol>
<b>Motor runs hot and overload kicks off.</b>	<ol style="list-style-type: none"> <li>1. Motor is wired incorrectly.</li> <li>2. Voltage is too low.</li> <li>3. Pump cycles too frequently.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to motor I.D. label for instructions on wiring.</li> <li>2. Check with Power Company. Install heavier wiring if wire size is too small. See wiring instructions.</li> <li>3. See section below on too frequent cycling.</li> </ol>
<b>Motor runs but no water is delivered.</b>	<ol style="list-style-type: none"> <li>1. Pump in a new installation did not pick up prime through:               <ol style="list-style-type: none"> <li>a. Improper priming</li> <li>b. Air leaks</li> <li>c. Faulty foot valve</li> </ol> </li> <li>2. Pump has lost its prime through:               <ol style="list-style-type: none"> <li>a. Air leaks</li> <li>b. Water level below suction of pump</li> </ol> </li> <li>3. Jet or impeller is plugged.</li> <li>4. Check valve or foot valve is stuck in closed position.</li> <li>5. Foot valve and/or strainer is buried in sand or mud.</li> <li>6. Overpumping of well.</li> </ol>	<ol style="list-style-type: none"> <li>1. In new installation:               <ol style="list-style-type: none"> <li>a. Re-prime according to instructions.</li> <li>b. Check all connections on suction line.</li> <li>c. Replace or clean foot valve.</li> </ol> </li> <li>2. In installation already in use:               <ol style="list-style-type: none"> <li>a. Check all connections on suction line.</li> <li>b. Lower suction line into water and re-prime.</li> </ol> </li> <li>3. Clean jet or impeller according to instructions.</li> <li>4. Replace check valve or foot valve.</li> <li>5. Raise foot valve and/or strainer above well bottom.</li> <li>6.               <ol style="list-style-type: none"> <li>a. On shallow well operation, lower pipe in water if possible or restrict flow on discharge side of pump.</li> <li>b. On deep well operation, if possible lower injector into well or add tailpipe to jet assembly. Other wise, restrict flow in discharge side of pump.</li> </ol> </li> </ol>
<b>Little or no water delivered.</b>	<ol style="list-style-type: none"> <li>1. Water level drops below pump inlet when operating.</li> <li>2. Check valves installed backwards or stuck.</li> <li>3. Shorted run winding in motor.</li> <li>4. Low voltage.</li> <li>5. Intake screen plugged.</li> <li>6. Pump parts worn.</li> <li>7. Leak in piping.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower pump in well but no closer than 5 feet from bottom. Throttle discharge between well and tank until discharge is equal or less than rate water comes into well.</li> <li>2. Reverse check valves or replace if necessary.</li> <li>3. Replace motor or complete pump.</li> <li>4. Contact Power Company for corrective action.</li> <li>5. Pull pump and clean screen.</li> <li>6. Replace pump end or complete unit.</li> <li>7. Replace defective pipe.</li> </ol>

# Industrial

## Trouble Shooting Guide

### Warning - RISK OF ELECTRICAL SHOCK

Working with electrical equipment in or near water can be hazardous. To reduce the risk of electrical shock, Franklin Electric recommends that a certified electrical technician be employed to perform service work on any electrical equipment.

PROBLEM	POSSIBLE CAUSES	REMEDIES
<b>Pump does not deliver water to full capacity.</b>	<ol style="list-style-type: none"> <li>1. Water level in well is lower than estimated.</li> <li>2. Steel piping (if used) is corroded or limed, causing excess friction.</li> <li>3. Piping is too small in size.</li> <li>4. Plugged impeller.</li> </ol>	<ol style="list-style-type: none"> <li>1. A deep well jet pump may be needed if depth to water is greater than 20 feet.</li> <li>2. Replace with plastic pipe where possible, otherwise with new steel pipe.</li> <li>3. Use larger piping.</li> <li>4. Clean impeller according to instructions.</li> </ol>
<b>Pump pumps water but does not shut off.</b>	<ol style="list-style-type: none"> <li>1. Pressure switch is out of adjustment or contacts are "frozen" closed.</li> <li>2. Faucets have been left open.</li> <li>3. Injector or impeller is clogged.</li> <li>4. Water level in well is lower than estimated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace pressure switch.</li> <li>2. Close faucets.</li> <li>3. Clean injector or impeller.</li> <li>4. Check possibility of using a deep well jet pump, or deep well submersible.</li> </ol>
<b>Pump cycles too frequently.</b>	<ol style="list-style-type: none"> <li>1. Standard pressure tank waterlogged (no air cushion).</li> <li>2. Air charge incorrect in captive air tank.</li> <li>3. Captive air tank waterlogged (no air cushion).</li> <li>4. Pipes leak.</li> <li>5. Faucets or valves are open.</li> <li>6. Check valve leaks.</li> <li>7. Pressure switch is out of adjustment.</li> <li>8. Pressure switch located too far from tank.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for air leaks in tank. Clean bleeder orifices in drop pipe in well (deep well submersible only).</li> <li>2. Disconnect electrical power, open faucets until all pressure relieved. Check air pressure in tank with tire pressure gauge. Should conform to following, if not, correct:               <ul style="list-style-type: none"> <li>- 20/40 PSI pressure switch - 18 PSI air pressure in tank</li> <li>- 30/50 PSI pressure switch - 28 PSI air pressure in tank</li> <li>- 40/60 PSI pressure switch - 38 PSI air pressure in tank</li> </ul> </li> <li>3. Could be caused by ruptured bag, leak in metal tank or leak in air sniffer valve. Replace with new tank or consult a captive air tank owner's manual for repair instructions. <u>Do not</u> attempt to repair leaks in metal part of tank.</li> <li>4. Repair or replace.</li> <li>5. Close faucets or valves.</li> <li>6. Replace check valves.</li> <li>7. Adjust or replace pressure switch.</li> <li>8. Move switch to within 12 inches of tank.</li> </ol>



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# Industrial

## Technical Data Cable Sizing Table

Single - Phase, Two or Three - Wire Cable, 60° C Cable, 60Hz (Service Entrance to Motor - Maximum Length in Feet)														
Motor Rating		Copper Wire Size												
Volts	HP	14	12	10	8	6	4	3	2	1	0	00	000	0000
115	1/3	130	210	340	540	840	1300	1610	1960	2390	2910	3540	4210	5060
	1/2	100	160	250	390	620	960	1190	1460	1780	2160	2630	3140	3770
230	1/3	550	880	1390	2190	3400	5250	6520	7960	9690	11770			
	1/2	400	650	1020	1610	2510	3880	4810	5880	7170	8720			
	3/4	300	480	760	1200	1870	2890	3580	4370	5330	6470	7870		
	1	250	400	630	990	1540	2380	2960	3610	4410	5360	6520		
	1-1/2	190	310	480	770	1200	1870	2320	2850	3500	4280	5240		
	2	150	250	390	620	970	1530	1910	2360	2930	3620	4480		
	3	<b>120</b>	190	300	470	750	1190	1490	1850	2320	2890	3610		
	5	0	0	<b>180</b>	280	450	710	890	1110	1390	1740	2170	2680	
	7-1/2	0	0	0	<b>200</b>	310	490	610	750	930	1140	1410	1720	
	10	0	0	0	0	<b>250</b>	390	490	600	750	930	1160	1430	1760
15	0	0	0	0	0	<b>170</b>	<b>270</b>	340	430	530	660	820	1020	1260

Three - Phase, Three - Wire Cable, 60Hz (Service Entrance to Motor - Maximum Length in Feet)														
Motor Rating		Copper Wire Size												
Volts	HP	14	12	10	8	6	4	3	2	1	0	00	000	0000
200V 60Hz Three - Phase Three Wire	1/2	710	1140	1800	2840	4420								
	3/4	510	810	1280	2030	3160								
	1	430	690	1080	1710	2670	4140	5140						
	1-1/2	310	500	790	1260	1960	3050	3780						
	2	240	390	610	970	1520	2360	2940	3610	4430	5420			
	3	180	290	470	740	1160	1810	2250	2760	3390	4130			
	5	<b>110</b>	170	280	440	690	1080	1350	1660	2040	2490	3050	3670	4440
	7-1/2	0	0	200	310	490	770	960	1180	1450	1770	2170	2600	3150
	10	0	0	0	<b>230</b>	370	570	720	880	1090	1330	1640	1970	2390
	15	0	0	0	<b>160</b>	<b>250</b>	390	490	600	740	910	1110	1340	1630
	20	0	0	0	0	<b>190</b>	300	380	460	570	700	860	1050	1270
	25	0	0	0	0	0	<b>240</b>	<b>300</b>	<b>370</b>	460	570	700	840	1030
30	0	0	0	0	0	0	<b>250</b>	<b>310</b>	<b>380</b>	470	580	700	850	

Volts	HP	14	12	10	8	6	4	3	2	1	0	00	000	0000
200V 60Hz Three - Phase Three Wire	1/2	930	1490	2350	3700	5760	8910							
	3/4	670	1080	1700	2580	4190	6490	8060	9860					
	1	560	910	1430	2260	3520	5460	6780	8290					
	1-1/2	420	670	1060	1670	2610	4050	5030	6160	7530	9170			
	2	320	510	810	1280	2010	3130	3890	4770	5860	7170	8780		
	3	240	390	620	990	1540	2400	2980	3660	4480	5470	6690	8020	9680
	5	<b>140</b>	230	370	590	920	1430	1790	2190	2690	3290	4030	4850	5870
	7-1/2	0	<b>160</b>	260	420	650	1020	1270	1560	1920	2340	2870	3440	4160
	10	0	0	<b>190</b>	310	490	760	950	1170	1440	1760	2160	2610	3160
	15	0	0	0	<b>210</b>	330	520	650	800	980	1200	1470	1780	2150
	20	0	0	0	0	<b>250</b>	400	500	610	760	930	1140	1380	1680
	25	0	0	0	0	0	<b>320</b>	400	500	610	750	920	1120	1360
30	0	0	0	0	0	0	<b>260</b>	<b>330</b>	<b>410</b>	510	620	760	930	1130

Volts	HP	14	12	10	8	6	4	3	2	1	0	00	000	0000
460V 60Hz Three - Phase Three - Wire	1/2	3770	6020	9460										
	3/4	2730	4350	6850										
	1	2300	3670	5770	9070									
	1-1/2	1700	2710	4270	6730									
	2	1300	2070	3270	5150	8050								
	3	1000	1600	2520	3970	6200								
	5	590	950	1500	2360	3700	5750							
	7-1/2	420	680	1070	1690	2640	4100	5100	6260	7680				
	10	310	500	790	1250	1960	3050	3800	4680	5750	7050			
	15	0	<b>340</b>	540	850	1340	2090	2600	3200	3930	4810	5900	7110	
	20	0	0	<b>410</b>	650	1030	1610	2000	2470	3040	3730	4580	5530	
	25	0	0	0	<b>530</b>	830	1300	1620	1990	2450	3010	3700	4470	5430
	30	0	0	0	<b>430</b>	680	1070	1330	1640	2030	2490	3060	3700	4500
	40	0	0	0	0	<b>500</b>	790	980	1210	1490	1830	2250	2710	3290
	50	0	0	0	0	0	<b>640</b>	800	980	1210	1480	1810	2190	2650
	60	0	0	0	0	0	<b>540</b>	<b>670</b>	<b>830</b>	1020	1250	1540	1850	2240
	75	0	0	0	0	0	0	0	<b>680</b>	<b>840</b>	1030	1260	1520	1850
	100	0	0	0	0	0	0	0	0	<b>620</b>	<b>760</b>	<b>940</b>	1130	1380
125	0	0	0	0	0	0	0	0	0	0	<b>740</b>	<b>890</b>	<b>1000</b>	
150	0	0	0	0	0	0	0	0	0	0	0	<b>760</b>	<b>920</b>	
175	0	0	0	0	0	0	0	0	0	0	0	0	<b>810</b>	
200	0	0	0	0	0	0	0	0	0	0	0	0	0	

Volts	HP	14	12	10	8	6	4	3	2	1	0	00	000	0000
575V 60HZ Three Phase Three Wire	1/2	5900	9410											
	3/4	4270	6810											
	1	3630	5800	9120										
	1-1/2	2620	4180	6580										
	2	2030	3250	5110	8060									
	3	1580	2530	3980	6270	5750								
	5	920	1480	2330	3680	4150								
	7-1/2	660	1060	1680	2650	3080								
	10	490	780	1240	1950	2090	4770	5940						
	15	<b>330</b>	530	850	1340	1610	3260	4060						
	20	0	<b>410</b>	650	1030	1300	2520	3140	3860	4760	5830			
	25	0	0	<b>520</b>	830	1070	2030	2530	3110	3840	4710			
	30	0	0	<b>430</b>	680	790	1670	2080	2560	3160	3880	4770	5780	7030
	40	0	0	0	<b>500</b>	<b>640</b>	1240	1540	1900	2330	2860	3510	4230	5140
	50	0	0	0	0	0	1000	1250	1540	1890	2310	2840	3420	4140
	60	0	0	0	0	0	<b>850</b>	1060	1300	1600	1960	2400	2890	3500
	75	0	0	0	0	0	<b>690</b>	<b>860</b>	<b>1060</b>	1310	1600	1970	2380	2890
	100	0	0	0	0	0	0	0	<b>790</b>	<b>970</b>	<b>1190</b>	1460	1770	2150
125	0	0	0	0	0	0	0	0	<b>770</b>	<b>950</b>	<b>1160</b>	1400	1690	

- Lengths in **BOLD** only meet the NEC ampacity requirements for individual conductor 60°C cable in free air or water, not in magnetic enclosures, conduit or direct buried. Lengths not in bold meet NEC ampacity requirements for either individual conductors or jacketed 60°C cable and can be in conduit or direct buried.
- Flat molded and web/ribbon cable are considered jacketed cable.
- If any other cable is used, the NEC and local codes should be observed.
- Maximum lengths shown maintain motor voltage at 95% of service entrance voltage, running at maximum nameplate amperes. If service entrance voltage will be at least motor nameplate voltage under normal load conditions, 50% additional length is permissible for all sizes. This table is based on copper wire; if aluminum wire is to be used, it must be two sizes larger. **Example:** If the table calls for #12 copper wire then #10 aluminum wire would be required.
- The portion of the total cable length which is between the supply and single phase control box with line contactor should not exceed 25% of the total maximum allowable to ensure reliable contactor operation. Single phase control boxes without line contractors may be connected at any point in the total cable length.
- Lengths represent a 5% voltage drop. If 3% is required, multiply by 0.6 to get maximum cable length.



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## About Our Company.

With its Little Giant brand, Franklin Electric – Water Transfer Systems (FEWTS) is a leading global supplier of water pumping systems for residential and commercial markets.

The Company's product lines – sump, sewage, effluent, condensate, and industrial submersible pumps – were further expanded by its acquisition of the pump division of Monarch Industries Limited of Canada in 2007. By adding deep well submersible pumps, as well as jet well, lawn sprinkler and end suction pumps, the acquisition complemented and broadened the Company's overall water systems offerings.

Parent company Franklin Electric is a global leader in the production and marketing of systems and components for the movement of water and automotive fuels. Recognized as a technical leader in its specialties, Franklin serves customers around the world in residential, commercial, agricultural, industrial, municipal, and fueling applications.

Long recognized as the world's largest manufacturer of submersible electric motors, Franklin Electric has been able to leverage its expertise in motor applications to grow and serve several different markets. The principal application for Franklin products is water well pumping systems, where the company offers pumps, motors, drives, and controls. In addition, Franklin Electric produces a vast array of products for fueling systems and the water transfer market.

With 3,200 employees worldwide, Franklin Electric is a global manufacturer with over 20 manufacturing and distribution facilities located in the United States, Germany, Czech Republic, Italy, Mexico, Canada, Australia, South Africa, China, and Japan.

Little Giant products are produced to the following ISO standards:

Quality – 9001:2000

Environmental – 14001: 2004

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