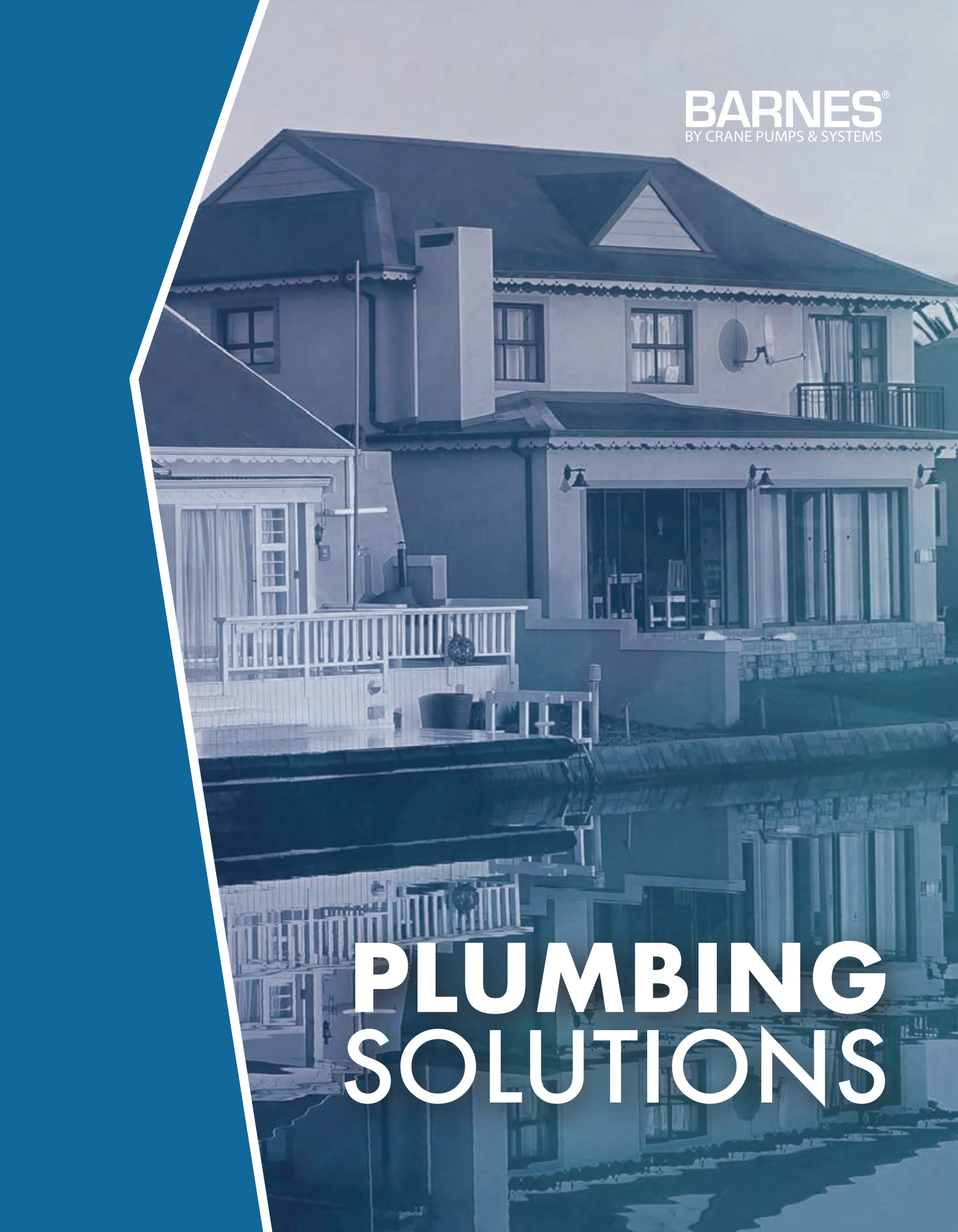




BARNES®
BY CRANE PUMPS & SYSTEMS

PLUMBING SOLUTIONS

Professional Plumbing Applications

Crane Pumps & Systems, headquartered in Piqua, Ohio, USA, is a recognized leader in meeting the ever changing needs of today's worldwide marketplace. Our technical specialists can provide the expertise that's needed to accurately evaluate service conditions and specify the most efficient and cost-effective pumping solution for virtually any application. Our commitment to excellence is carried through to the manufacturing, sales, distribution and service components of our business as well. For industry leading innovation - as well as quality, reliability and value – we have your solution.

Crane Pumps & Systems uses its decades of experience to be able to offer industrial grade quality products for the highest performance in the residential plumbing market.

Our Barnes residential products mirror the quality and reliability found in the industrial market, because they are made with the same high grade components including cast iron, ball bearing construction and permanent split capacitor motors.

Use our efficient, economical plumbing products and packages in homes to remove or transport water and/or wastewater. Our wide variety of products provide a level of value and superior, long-lasting performance unmatched by our competition.

SUMP PUMPS

Submersible pumps for general purpose residential, commercial and light industrial sump applications



PACKAGE SYSTEMS

Complete line of pre-assembled sewage ejector packages



EFFLUENT PUMPS

Submersible effluent pumps designed to efficiently handle septic tank effluent applications for the long term



SEWAGE & GRINDER PUMPS

Submersible sewage ejector and grinder pumps for a wide variety of relatively light through heavy duty wastewater services



SPECIALTY PUMPS

Vertical and unique horizontal submersible pumps designed for use in various specialty applications



ACCESSORIES

Complete line of level controls, control panels, break away fittings (BAF's) and other accessories



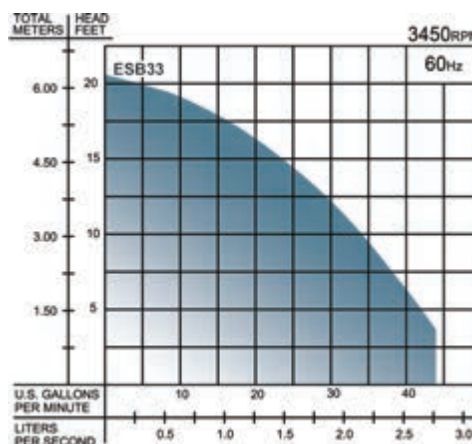


FEATURES AND BENEFITS

- **Top Suction:** advanced air-lock and debris buildup prevention
- **Type II Mechanical Seals:** superior motor protection
- **PSC Motor:** high torque, low amps (3.4 FLA)
- **Oil lubricated ball bearings:** longer life, quieter operation

Model	ESB33
Motor	1/3hp PSC
RPM	3450
Cord Length	9' SJTW 18 gauge
Construction	Cast Iron/ Thermoplastic
Impeller	Thermoplastic
Discharge	1.50" NPT, Female, Vertical
Automatic Operation	Vertical Float Integral to Pump
Seal Design	Single Mechanical, Type 11A
Min. Sump Dia.	14" (355mm)
Weight	10 lbs.
Liquid Temperature	104°F (40°C) Continuous

Model	PN	F.L.A.	Phase	Volt
ESB33	130234A	3.4	1	120



APPLICATIONS



RESIDENTIAL SUMP

SP33 • SP50 • SP75 Series

FEATURES AND BENEFITS

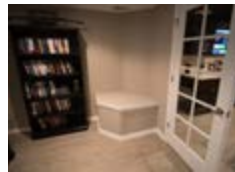
- **One piece motor/volute/housing** avoids potential gasket failure
- **Cast iron vortex impeller** handles typical sump debris
- **Ball bearing construction** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operating range
- **GFCI Compatible** for safety and NEC 210.8 (A) Compliance



Model	PN	HP	F.L.A.	PH	Volt
SP33	112547	0.33	5.8	1	120
SP33X	112548	0.33	5.8	1	120
SP33A	112549	0.33	5.8	1	120
SP33AX	112550	0.33	5.8	1	120
SP33D	118371	0.33	5.8	1	120
SP33VF	112551	0.33	5.8	1	120
SP33VFX	112552	0.33	5.8	1	120
SP50X	112875	0.50	6.8	1	120
SP50AX	112877	0.50	6.8	1	120
SP50VFX	112879	0.50	6.8	1	120
SP75X	115368	0.75	9.8	1	120
SP75AX	115369	0.75	9.8	1	120
SP75VFX	115370	0.75	9.8	1	120

'A' Designates piggy back mechanical float switch.
 'D' Designates diaphragm switch.
 'VF' Designates piggy back vertical float switch.
 'X' Designates 20' cord.

APPLICATIONS



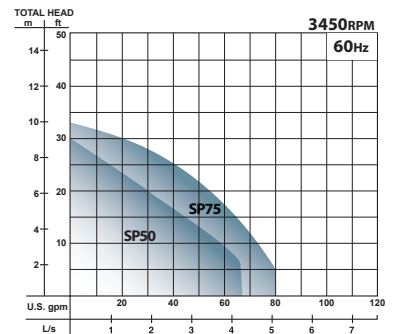
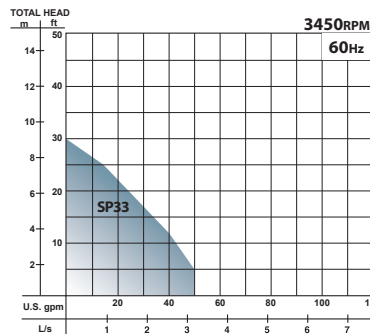
RESIDENTIAL SUMP



LIGHT INDUSTRIAL



SEPTIC



Model	SP33	SP50	SP75
Motor	1/3hp PSC	1/2hp PSC	3/4hp PSC
RPM	3450	3450	3450
Cord Length	10' or 20' SJTOW/SJTW 18/3 gauge	20' SJTOW/SJTW 18/3 gauge	20' SJTOW/SJTW 18/3 gauge
Construction	Cast Iron & Thermoplastic	Cast Iron & Thermoplastic	Cast Iron & Thermoplastic
Impeller	Cast Iron Vortex	Cast Iron Vortex	Cast Iron Vortex
Discharge	1.50" NPT, Female, Vertical	1.50" NPT, Female, Vertical	1.50" NPT, Female, Vertical
Solids	0.5"	0.5"	0.5"
Automatic Operation	Mechanical Float, Vertical Float, Diaphragm Switch	Mechanical Float, Vertical Float	Mechanical Float, Vertical Float
Seal Design	Single Mechanical	Single Mechanical	Single Mechanical
Min. Sump Dia.	11" - 18" (Depending on switch type)	Vertical Float 12", Mechanical Float 18"	Vertical Float 12", Mechanical Float 18"
Weight	30 lbs.	34 lbs.	34 lbs.
Liquid Temp.	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous



41 Gallon Pre Assembled Sewage Systems

Model	Part No.	Pump Type	Size	HP	F.L.A.	PH	Volt
PITPRO25V-115	126920	SEV412	25" Dia. x 24" Deep	.50	10.5	1	115
PITPRO20V-115	126914	SEV412	20" Dia. x 30" Deep	.50	10.5	1	115
PITPRO25-115	126921	SE411	25" Dia. x 24" Deep	.40	12.0	1	115
PITPRO20-115	126915	SE411	20" Dia. x 30" Deep	.40	12.0	1	115
PITPRO25-230	126922	SE421	25" Dia. x 24" Deep	.40	6.2	1	230
PITPRO25-230	126916	SE421	20" Dia. x 30" Deep	.40	6.2	1	230
PITPRORV25-115	147372	RV101	25" Dia. x 24" Deep	1.0	12.0	1	115
PITPRORV25-230	147373	RV102	25" Dia. x 24" Deep	1.0	6.0	1	230
PITPRO25-BASIN	126891-2	N/A	25" Dia. x 24" Deep	Basin and Lid only			
PITPRO20-BASIN	126890-2	N/A	20" Dia. x 30" Deep				

41 Gallon sewage ejector basin - poly basin and split cover with float tree, automatic, piggy-back float, 4" pipe fitting inlet, check valve, box assembled.



Residential Laundry Tray Sump Pump System

Model	Part No.	Pump Model
ESB33LT	147362	ESB33

Pump Part No.	F.L.A.	Phase	Voltage
130234A	3.4	1	120

Includes ESB33 pump, 15" x 15" x 14" basin, 1.5" vent & discharge grommets, and check valve. Comes assembled complete and boxed.



Commercial Laundry Tray Sump Pump System

Model	Part No.	Pump Model
SP33LT	112900	SP33VF

Part No.	F.L.A.	Phase	Voltage
112551	5.8	1	120

Includes SP33VF pump, 12" x 16" x 14" basin, 1.5" vent & discharge grommets, and check valve. Comes assembled complete and boxed.



FEATURES AND BENEFITS

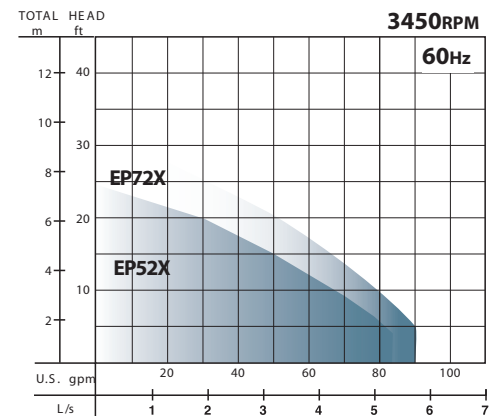
- **Basin components** are durable, corrosion-resistant polyethylene
- **Box and cover** have a matching textured finish
- **1-1/2" threaded inlet and vent**
- **Grommet cord seal**
- **Accommodates 1-1/2" discharge piping**
- **Stainless steel bolts**
- **Large gallon capacities**

EP52X • EP72X Series

FEATURES AND BENEFITS

- **One piece motor/volute/housing** avoids potential gasket failure
- **Cast iron vortex impeller** permits handling of typical sump debris
- **416 stainless steel shaft**
- **Ball bearing construction** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operating range

Model	EP52X	EP72X
Motor	1/2hp PSC	3/4hp PSC
RPM	3450	3450
Cord Length	20' SJTOW 16/3 gauge	20' SJTOW 16/3 gauge
Construction	Cast Iron	Cast Iron
Impeller	Cast Iron Vortex	Cast Iron Vortex
Discharge	1.50" NPT, Female, Vertical	1.50" NPT, Female, Vertical
Solids	0.75"	0.75"
Automatic Operation	Mechanical Float Vertical Float	Mechanical Float Vertical Float
Seal Design	Single Mechanical,	Single Mechanical,
Min. Sump Dia.	12"	12"
Weight	35 lbs.	36 lbs.
Liquid Temperature	104°F (40°C) Continuous	104°F (40°C) Continuous



Model	Part No.	HP	F.L.A.	Phase	Voltage	Simplex Panel	Duplex Panel
EP52X	119330	0.50	3.4	1	240	106480	106483
EP72X	119331	0.75	4.3	1	240	106480	106483
EP52AX	119411	0.5	3.4	1	240	N/A	N/A
EP52VFX	119412	0.5	3.4	1	240	N/A	N/A
EP72AX	119413	0.75	4.3	1	240	N/A	N/A
EP72VFX	119414	0.75	4.3	1	240	N/A	N/A

APPLICATIONS



SUMP



SEPTIC TANK

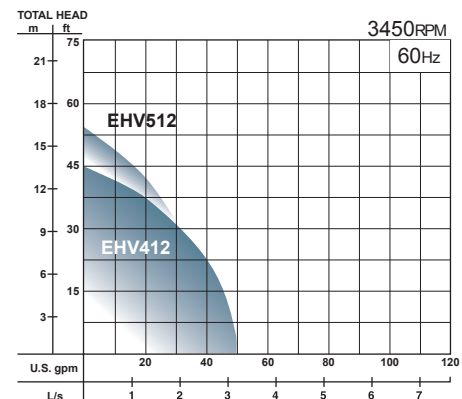
EHV Series

FEATURES AND BENEFITS

- **Cast iron housing and volute**
- **420 stainless steel shaft** to handle aggressive effluent
- **Upper and lower ball bearing** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operation
- **2" discharge** with high temperature overload on the motor
- **Quick connect custom molded cord** for sealing and strain relief



Model	EHV412
Motor	1/2hp PSC
RPM	3450
Cord Length	20' SJTOW 14/3 gauge
Construction	Cast Iron
Impeller	Cast Iron Vortex
Discharge	2.00" NPT, Female, Vertical
Solids	0.75"
Automatic Operation	Mechanical Float Vertical Float
Seal Design	Single Mechanical, Oil Filled Reservoir
Weight	45 lbs.
Liquid Temperature	77°F (25°C)



Model	Part No.	F.L.A.	Phase	Voltage	Simplex Panel	Duplex Panel
EHV412	101298	6.4	1	115	106480	106483
EHV512	144668	10	1	115	106481	106484
EHV412A	103542	6.4	1	115	N/A	N/A
EHV512A	144669	10	1	115	N/A	N/A
EHV412AT	103543	6.4	1	115	N/A	N/A
EHV412VF	101300	6.4	1	115	N/A	N/A

'A' Designates piggy back mechanical float switch.

'AT' Designates piggy back mechanical float switch attached to pump.

'VF' Designates piggy back vertical float switch.

*Longer cord length options available.

APPLICATIONS



SUMP



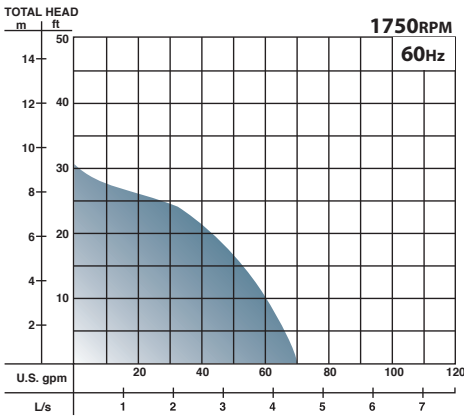
SEPTIC TANK

BP314 • BP324 Series

FEATURES AND BENEFITS

- **Standard cast iron housing**
- **Optional bronze construction**
- **416 stainless steel shaft** to handle aggressive effluent
- **Ball bearing construction** for longer life and quieter operation
- **Permanent split capacitor (PSC) oil filled motor**

Model	BP314	BP324
Motor	1/3hp PSC	1/3hp PSC
RPM	1750	1750
Cord Length	15' SJTOW 14/3 gauge	15' SJTOW 14/3 gauge
Construction	Cast Iron Bronze optional	Cast Iron Bronze optional
Impeller	Polypropylene Bronze optional	Polypropylene Bronze optional
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical
Solids	0.75"	0.75"
Automatic Operation	Mechanical Float Vertical Float	Mechanical Float Vertical Float
Seal Design	Single Mechanical Carbon/Ceramic/Buna-N	Single Mechanical Carbon/Ceramic/Buna-N
Weight	53 lbs.	53 lbs.
Liquid Temp	77°F (25°C) Continuous	104°F (40°C) Continuous



Model	Part No.	F.L.A.	Phase	Voltage	Simplex Panel	Duplex Panel
BP314	096727	8.0	1	115	106481	106484
BP314A	096728	8.0	1	115	N/A	N/A
BP314AU	096729	8.0	1	115	N/A	N/A
BP314BR	096732	8.0	1	115	106481	106484
BP314ABR	096733	8.0	1	115	N/A	N/A
BP314AUBR	093734	8.0	1	115	N/A	N/A
BP314VF	100834	8.0	1	115	N/A	N/A
BP314VFBR	100835	8.0	1	115	N/A	N/A
BP324	096730	5.4	1	230	106480	106483
BP324AU	096731	5.4	1	230	N/A	N/A
BP324BR	096735	5.4	1	230	106480	106483
BP324AUBR	096736	5.4	1	230	N/A	N/A

* Consult factory for additional models.
 'A' Designates piggy back mechanical float switch.
 'AU' Designates integral mechanical float switch.
 'BR' Designates bronze pump.

APPLICATIONS



SUMP



LIGHT INDUSTRIAL

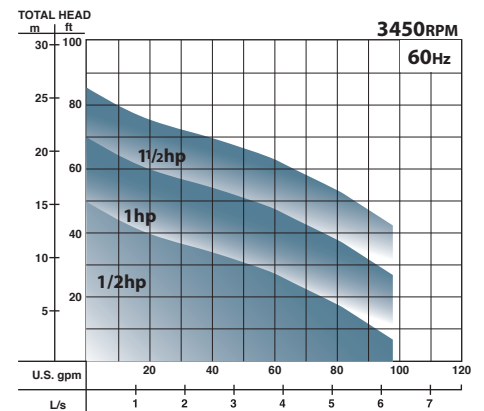
EH-L • EH-DS Series

FEATURES AND BENEFITS

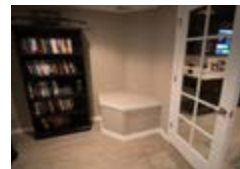
- **Cast iron motor housing and volute**
- **416 stainless steel shaft** to handle aggressive effluent
- **Upper and lower ball bearing** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operation
- **2" discharge with high temperature overload** on the motor for single phase operation
- **Quick connect custom molded cord** for sealing and strain relief



Model	EH-L	EH-DS
Motor	1/2hp, 1hp, 1-1/2hp PSC	1/2hp, 1hp, 1-1/2hp PSC
RPM	3450	3450
Cord Length	20' 14/3 (1PH) 20' 14/4 (3PH)	20' 14/3 (1PH) 20' 14/4 (3PH)
Construction	Cast Iron	Cast Iron
Impeller	Polypropylene with stainless steel insert	Polypropylene with stainless steel insert
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical
Solids	0.75"	0.75"
Automatic Operation	No	No
Seal Design	Single Mechanical	Tandem Mechanical
Weight	81 lbs. (1/2hp) 86 lbs. (1hp) 97 lbs. (1-1/2hp)	105 lbs. (1/2hp) 110 lbs. (1hp) 121 lbs. (1-1/2hp)
Liquid Temp	104°F (40°C) Continuous	104°F (40°C) Continuous



APPLICATIONS



SUMP



SEPTIC TANK

Single Seal Model	Single Seal Part Number	Double Seal Model	Double Seal Part Number	HP	FLA	RPM	Ph	Voltage	Simplex Panel	Duplex Panel
EH512L	105058	EH512DS	105063	0.5	11.4	3450	1	120	106481	106484
EH522L	105059	EH522DS	105064	0.5	4.9	3450	1	240	106480	106483
EH592L	105060	EH592DS	105065	0.5	4.2/4.5	3450	3	200/240	106492	106504
EH542L	105061	EH542DS	105066	0.5	2.2	3450	3	480	106488	106500
EH1022L	105068	EH1022DS	105072	1	8.1	3450	1	240	106481	106484
EH1092L	105069	EH1092DS	105073	1	8.1/6.2	3450	3	200/240	106494	106506
EH1042L	105070	EH1042DS	105074	1	3.1	3450	3	480	106490	106502
EH1522L	105076	EH1522DS	105080	1.5	10.9	3450	1	240	106481	106484
EH1592L	105077	EH1592DS	105081	1.5	7.8/7.0	3450	3	200/240	106494	106506
EH1542L	105078	EH1542DS	105082	1.5	3.5	3450	3	480	106490	106502

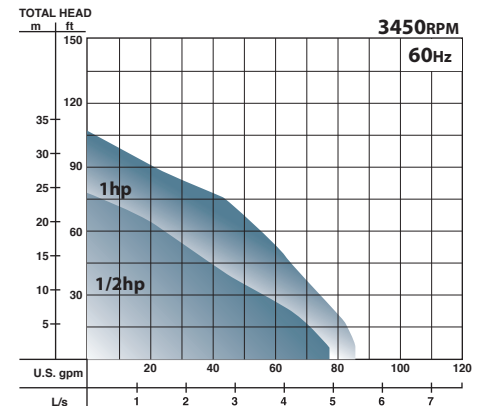
STEP-SS • STEP-DS Series

FEATURES AND BENEFITS

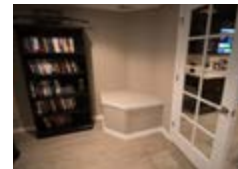
- **Cast iron motor housing and volute**
- **Enclosed Single Vane Impeller**
- **416 SS shaft** to handle aggressive sewage
- **Upper and lower ball bearing** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operation
- **2" discharge** with high temperature overload on the motor
- **Quick connect custom molded cord** for sealing and strain relief



Model	STEP-SS	STEP-DS
Motor	1/2hp, 1hp PSC	1/2hp, 1hp PSC
RPM	3450	3450
Cord Length	20'	20'
Construction	Cast Iron	Cast Iron
Impeller	Polypropylene with stainless steel insert	Polypropylene with stainless steel insert
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical
Solids	0.75"	0.75"
Automatic Operation	with "A" model only	No
Seal Design	Single Mechanical	Tandem Mechanical
Weight	80 lbs. (1/2hp) 91 lbs. (1hp)	90 lbs. (1/2hp) 101 lbs. (1hp)
Liquid Temp	104°F (40°C) Continuous	104°F (40°C) Continuous



APPLICATIONS



SUMP



SEPTIC TANK

Single Seal Model	Single Seal Part Number	Double Seal Model	Double Seal Part Number	HP	FLA	RPM	Ph	Voltage	Simplex Panel	Duplex Panel
STEP512SS	105045	STEP512DS	105040	0.5	11.9	3450	1	120	106481	106484
STEP512SSA	105045A	N/A	N/A	0.5	11.9	3450	1	120	N/A	N/A
STEP522SS	105046	STEP522DS	105041	0.5	5.1	3450	1	240	106480	106483
STEP592SS	105047	STEP592DS	105042	0.5	4.5	3450	3	200/240	106492	106504
STEP542SS	105048	STEP542DS	105043	0.5	2.2	3450	3	460	106488	106500
STEP1022SS	105054	STEP1022DS	105050	1	8.3	3450	1	240	106481	106484
STEP1092SS	105055	STEP1092DS	105051	1	5.9/5.6	3450	3	200/240	106492	106504
STEP1042SS	105056	STEP1042DS	105052	1	2.8	3450	3	480	106490	106502

'A' Designates piggy back mechanical float switch.

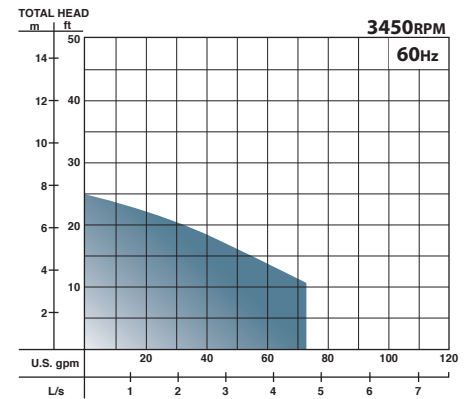
SEV412 Series

FEATURES AND BENEFITS

- **Cast iron motor housing and volute**
- **Multi-vane vortex impeller**
- **416 stainless steel shaft** to handle aggressive sewage
- **Upper and lower ball bearing** for quieter operation and longer life
- **Permanent split capacitor (PSC) motor** for more efficient operation
- **2" discharge with high temperature overload** on the motor
- **Quick connect custom cord molded** for sealing and strain relief



Model	SEV412
Motor	1/2hp PSC
RPM	3450
Cord Length	20' SJTOW 14/3 gauge
Construction	Cast Iron
Impeller	Cast Iron Vortex
Discharge	2.00" NPT, Female, Vertical
Solids	2.00"
Automatic Operation	Mechanical Float Vertical Float
Seal Design	Single Mechanical, Oil Filled Reservoir
Weight	45 lbs
Liquid Temperature	77°F (25°C) Continuous



Model	Part No.	F.L.A.	Phase	Volt	Simplex Panel	Duplex Panel
SEV412	101292	10.5	1	115	106481	106484
SEV412A	101293	10.5	1	115	N/A	N/A
SEV412VF	101294	10.5	1	115	N/A	N/A
SEV412AT	103544	10.5	1	115	N/A	N/A
SEV412VFT	110404	10.5	1	115	N/A	N/A

'A' Designates piggy back mechanical float switch.

'T' Designates switch attached to pump.

'VF' Designates piggy back vertical float switch.

APPLICATIONS



RAW SEWAGE



RESIDENTIAL



STORM WATER



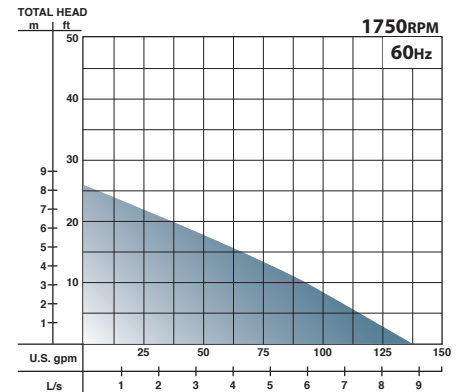
DECORATIVE WATER

SE411 • SE421 Series

FEATURES AND BENEFITS

- **Oil filled motors** for better heat dissipation
- **Oil-lubricated bearings** for quieter operation and longer life
- **Cast iron construction, stainless steel hardware, Buna-N O-rings**
- **Plug-in power cords** simplify maintenance as the pumps are merely unplugged before service
- **Standard seals are Carbon/Ceramic/ Buna-N**

Model	SE411	SE421
Motor	4/10hp PSC	4/10hp PSC
RPM	1750	1750
Cord Length	15' SJTOW 14/3 gauge	15' SJTOW 14/3 gauge
Construction	Cast Iron	Cast Iron
Impeller	Cast Iron, 2 vane, open	Cast Iron, 2 vane, open
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical
Solids	2.00"	2.00"
Automatic Operation	Mechanical Float Vertical Float	Mechanical Float Vertical Float
Seal Design	Single Mechanical, Oil Filled Reservoir	Single Mechanical, Oil Filled Reservoir
Weight	55 lbs.	57 lbs.
Liquid Temp	77°F (25°C) Continuous	104°F (40°C) Continuous



Model	Part No.	F.L.A.	Phase	Voltage	Simplex Panel	Duplex Panel
SE411	096747	12.0	1	115	106481	106484
SE411	096747B *	12.0	1	115	106481	106484
SE411	096747A *	12.0	1	115	106481	106484
SE411	096747K *	12.0	1	115	106481	106484
SE411A	096748	12.0	1	115	N/A	N/A
SE411AU	096749	12.0	1	115	N/A	N/A
SE411VF	100836	12.0	1	115	N/A	N/A
SE421	096750	6.2	1	230	106480	106483
SE421AU	096751	6.2	1	230	N/A	N/A

If a control panel is used, use a pilot-duty control float with contact normally open.

'A' Designates piggy back mechanical float switch.

'AU' Designates integral mechanical float switch.

'VF' Designates piggy back vertical float switch.

* 'B' Designates 20' cord; 'A' Designates 30' cord; 'K' Designates 40' cord.

APPLICATIONS



RAW SEWAGE



RESIDENTIAL



STORM WATER



DECORATIVE WATER

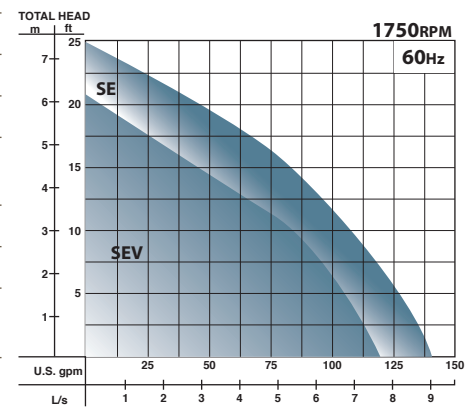
SE511 • SE521 Series

FEATURES AND BENEFITS

- **Oil filled motors** for better heat dissipation
- **Oil-lubricated bearings** for quieter operation and longer life
- **Cast iron construction, stainless steel hardware, Buna-N O-rings**
- **Plug-in power cords** simplify maintenance as the pumps are merely unplugged before service
- **Standard seals are Carbon/Ceramic/ Buna-N**



Model	SE511 • SEV511	SE521 • SEV521
Motor	1/2hp PSC	1/2hp PSC
RPM	1750	1750
Cord Length	15' SJTOW 14/3 gauge	15' SJTOW 14/3 gauge
Construction	Cast Iron	Cast Iron
Impeller	Cast Iron 2 vane (SE) Cast Iron Vortex (SEV)	Cast Iron 2 vane (SE) Cast Iron Vortex (SEV)
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical
Solids	2.00"	2.00"
Automatic Operation	Mechanical Float Vertical Float	Mechanical Float Vertical Float
Seal Design	Single Mechanical, Oil Filled Reservoir	Single Mechanical, Oil Filled Reservoir
Weight	60 lbs.	62 lbs.
Liquid Temp	104°F (40°C) Continuous	104°F (40°C) Continuous



Model	Part No.	F.L.A.	PH	Volt	Simplex Panel	Duplex Panel
SE511	096752	12.0	1	115	106481	106484
SE511A	096753	12.0	1	115	N/A	N/A
SE511AU	096754	12.0	1	115	N/A	N/A
SE511VF	100837	12.0	1	115	N/A	N/A
SE521	096755	6.2	1	230	106480	106481
SE521AU	096756	6.2	1	230	N/A	N/A
SEV511	096757	12.0	1	115	106481	106484
SEV511A	096758	12.0	1	115	N/A	N/A
SEV511AU	096759	12.0	1	115	N/A	N/A
SEV511VF	100838	12.0	1	120	N/A	N/A
SEV521	096760	6.2	1	230	106480	106483
SEV521AU	096761	6.2	1	230	N/A	N/A

* If a control panel is used, use a pilot-duty control float with contact normally open.
 'A' Designates piggy back mechanical float switch. 'AU' Designates integral mechanical float switch. 'VF' Designates piggy back vertical float switch.

APPLICATIONS



RAW SEWAGE



RESIDENTIAL



STORM WATER



DECORATIVE WATER

SEWAGE & GRINDER PUMPS

SE Series

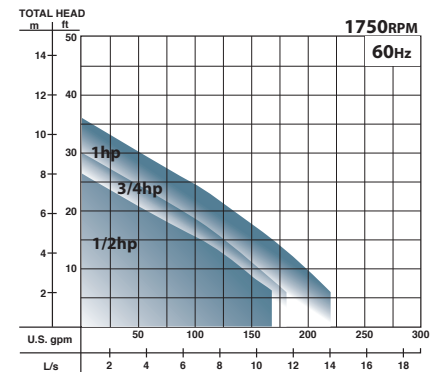
FEATURES AND BENEFITS

- **Oil filled motors** for better heat dissipation
- **Oil-lubricated bearings** for quieter operation and longer life
- **Cast iron construction, stainless steel hardware, Buna-N O-rings**
- **Plug-in power cords** simplify maintenance as the pumps are merely unplugged before service
- **Standard seals are Carbon/Ceramic/ Buna-N**

Model	SE
Motor	1/2hp, 3/4hp, 1hp PSC
RPM	1750
Cord Length	20'
Construction	Cast Iron
Impeller	Cast Iron
Discharge	2.00" NPT, Female, Vertical, Bolt-on Flange
Solids	2.00"
Automatic Operation	Mechanical Float (1/2hp Only)
Seal Design	Single Mechanical
Weight	85 lbs. (1/2 hp) (3/4 hp) 90 lbs. (1 hp)
Liquid Temp	104°F (40°C) Continuous

Model	Part No.	HP	F.L.A.	RPM	PH	Volt	Simplex Panel	Duplex Panel
SE51	104871	0.5	11.6	1750	1	120	106481	106484
SE51A	104872	0.5	11.6	1750	1	120	N/A	N/A
SE51AU	104873	0.5	11.6	1750	1	120	N/A	N/A
SE52	104874	0.5	5.9	1750	1	240	106480	106483
SE52AU	104875	0.5	5.9	1750	1	240	N/A	N/A
SE594L	104881	0.5	3.2/3.0	1750	3	200-240	106490	106502
SE544L	104882	0.5	1.5	1750	3	480	106486	106498
SE774L	104884	0.75	7.4/7.0	1750	1	200-240	106481	106484
SE794L	104885	0.75	4.8/4.5	1750	3	200-240	106492	106504
SE744L	104886	0.75	2.2	1750	3	480	106488	106500
SE1074L	104888	1	8.8/8.3	1750	1	200-240	106481	106484
SE1094L	104889	1	5.1/4.9	1750	3	200-240	106492	106504
SE1044L	104890	1	2.4	1750	3	480	106488	106500

If a control panel is used, use a pilot-duty control float with contacts normally open.
 'A' Designates piggy back mechanical float switch.
 'AU' Designates integral mechanical float switch.
 'L' Designates single seal.



APPLICATIONS



RAW SEWAGE



RESIDENTIAL



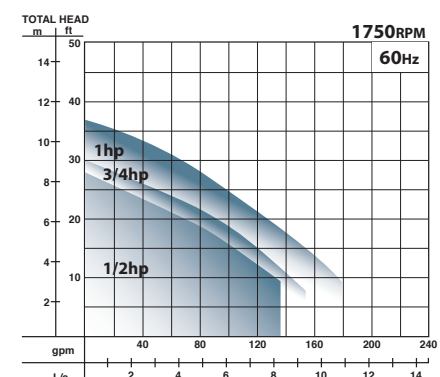
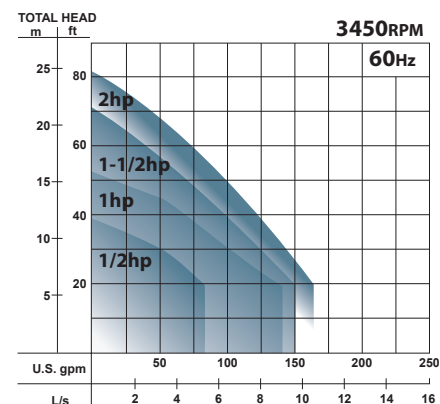
STORM WATER



DECORATIVE WATER

2SEV Series

Model	Single Seal	Single Seal	Double Seal	Double Seal
Motor	0.5HP, 1HP - 2HP	0.5HP - 1.0 HP	0.5HP, 1HP - 2HP	0.5HP - 1.0 HP
RPM	3450	1750	3450	1750
Cord Length	20'	20'	20'	20'
Construction	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller	Vortex Cast Iron	Vortex Cast Iron	Vortex Cast Iron	Vortex Cast Iron
Discharge	2" Vertical FNPT with Bolt on Flange	2" Vertical FNPT with Bolt on Flange	2" Vertical FNPT with Bolt on Flange	2" Vertical FNPT with Bolt on Flange
Solids	2.0"	2.0"	2.0"	2.0"
Automatic Operation	No	No	No	No
Seal Design	Single Mechanical Seal	Single Mechanical Seal	Tandem Mechanical Seal	Tandem Mechanical Seal
Weight	"80 lbs (0.5HP) 90 lbs (1.0 HP) 95 lbs (1.5HP) 100lbs (2.0HP)"	"75 lbs (0.5HP & 0.75HP) 85 lbs (1.0HP)"	"80 lbs (0.5HP) 90 lbs (1.0 HP) 95 lbs (1.5HP) 100lbs (2.0HP)"	"95 lbs (0.5HP & 0.75HP) 105 lbs (1.0HP)"
Liquid Temp	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous



Single Seal Model	Single Seal PN	Double Seal Model	Double Seal PN	HP	FLA	RPM	Ph	Volt	Simplex Panel	Duplex Panel
2SEV512L	104970	2SEV512DS	104976	0.5	12.6	3450	1	120	106481	106484
2SEV522L	104971	2SEV522DS	104977	0.5	6		1	240	106480	106483
2SEV592L	104972	2SEV592DS	104978	0.5	5.8/5.3		3	200-240	106492	106504
2SEV542L	104974	2SEV542DS	104980	0.5	2.6		3	480	106490	106502
2SEV1022L	104982	2SEV1022DS	104987	1	10.7		1	240	106481	106484
2SEV1092L	104983	2SEV1092DS	104988	1	7.9/7.5		3	200-240	106494	106506
2SEV1042L	104985	2SEV1042DS	104990	1	3.7		3	480	106490	106502
2SEV1522L	104187	2SEV1522DS	107914	1.5	13.5		1	240	106481	106484
2SEV1592L	104188	2SEV1592DS	107915	1.5	10.8/9.8		3	200-240	106495	106507
2SEV1542L	104189	2SEV1542DS	107916	1.5	4.9		3	480	106492	106504
2SEV2022L	104190	2SEV2022DS	107918	2	16		1	240	106482	106485
2SEV2092L	104191	2SEV2092DS	107919	2	13.2/12.0		3	200-240	106495	106507
2SEV2042L	104192	2SEV2042DS	107920	2	6	1750	3	480	106492	106504
2SEV514L	104918	2SEV514DS	104923	0.5	12		1	120	106481	106484
2SEV524L	104919			0.5	6.3		1	240	106480	106483
2SEV594L	104920	2SEV594DS	104925	0.5	3.7/3.8		3	200-240	106490	106502
2SEV544L	104921	2SEV544DS	104926	0.5	1.9		3	480	106488	106500
2SEV724L	104928	2SEV724DS	104932	0.75	7.1		1	240	106481	106484
2SEV794L	104929	2SEV794DS	104933	0.75	4.8/4.6		3	200-240	106492	106504
2SEV744L	104930	2SEV744DS	104934	0.75	2.3		3	480	106488	106500
2SEV1024L	104936	2SEV1024DS	104940	1	8.5		1	240	106481	106484
2SEV1094L	104937	2SEV1094DS	104941	1	5.3/5.1		3	200-240	106492	106504
2SEV1044L	104938	2SEV1044DS	104943	1	2.5		3	480	106490	106502

* Consult factory for additional models (including Double Seal (DS) models).

** Pump is CSA listed only.

'L' Designates single seal.



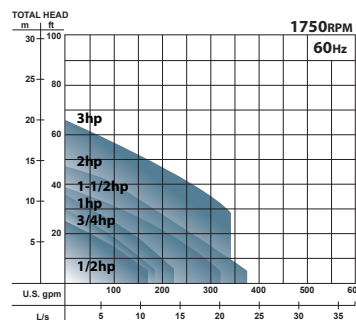
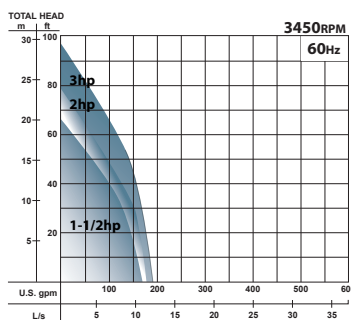
SEWAGE & GRINDER PUMPS

3SE • 3SEV Series

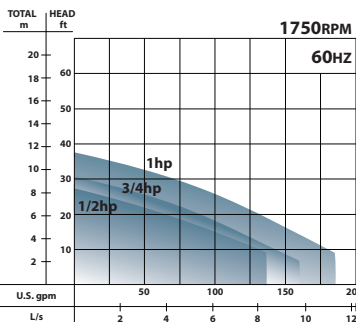
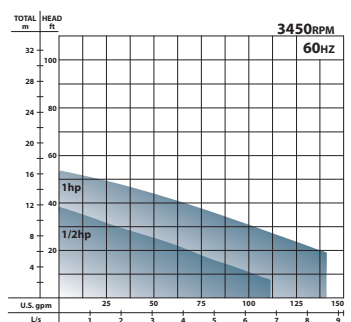
FEATURES AND BENEFITS

- **Oil filled motors** for heat dissipation
- **Oil-lubricated bearings** for quieter run and longer life
- **Cast iron construction, stainless steel hardware, Buna-N O-rings**
- **2 vane semi-open impeller** with pump out vanes on back side dynamically balanced ISO G6.3 (3SE + 3SEH)
- **Vortex impellers with pump out vanes** on backside dynamically balanced (3SEV)
- **Plug-in power cords** simplify maintenance as the pumps are merely unplugged before service
- **Standard seals are carbon/ceramic/Buna-N**
- **Double seal Models available**

3SE



3SEV



Model	3SE-L	3SE-L	3SEV-L	3SEV-L	3SEH-L
Motor	1.5HP - 3HP	0.5HP - 3HP	0.5HP - 1HP	0.5HP, 1.0HP	1.5HP - 3HP
RPM	3450	1750	1750	3450	3450, 1750
Cord Length	30'	30'	30'	30'	30'
Construction	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller	Cast Iron, 2 Vane, Semi-Open	Cast Iron, 2 Vane, Semi-Open	Cast Iron, Vortex, Open	Cast Iron, Vortex, Open	Cast Iron, 2 Vane, Semi-Open
Discharge	3.0" Vertical FNPT	3.0" Vertical FNPT	3.0" Vertical FNPT	3.0" Vertical FNPT	3" ANSI Flange, Horizontal
Solids	1.5" Spherical Solids	2.0" (0.5HP - 1.0HP) 2.5" (1.5HP - 3HP)	2.0"	2.0"	1.5" (3450 RPM) 2.5" (1750 RPM)
Automatic Operation	No	No	No	No	No
Seal Design	Single Mechanical in Oil Filled Reservoir	Single Mechanical in Oil Filled Reservoir	Single Mechanical in Oil Filled Reservoir	Single Mechanical in Oil Filled Reservoir	Single Mechanical in Oil Filled Reservoir
Weight	145 lbs (1.5HP) 150 lbs (2HP) 170 lbs (3HP)	85 lbs (0.5HP, 0.75HP) 95 lbs (1HP) 145 lbs (1.5HP) 150 lbs (2HP) 170 lbs (3HP)	85 lbs (0.5HP) 90 lbs (0.75HP) 95 lbs (1HP)	85 lbs (0.5HP) 95 lbs (1HP)	145 lbs (1.5HP) 150 lbs (2HP) 170 lbs (3HP)
Liquid Temp	104°F Continuous	104°F Continuous	104°F Continuous	104°F Continuous	104°F Continuous

Vertical Discharge Model	Vertical Discharge Part Number	Horizontal Discharge Model	Horizontal Discharge Part Number	HP	FLA	RPM	Ph	Volt	Simplex Control Panel	Duplex Control Panel
3SE1522L	132775	3SEH1522L	132775H	1.5	12	3450	1	230	106481	106484
3SE1592L	132842	3SEH1592L	132842H	1.5	9.8/8.6		3	200-230	106494	106506
3SE1542L	132844	3SEH1542L	132844H	1.5	4.3		3	460	106492	106504
3SE2022L	132848	3SEH2022L	132848H	2	13.5		1	230	106481	106484
3SE2092L	132850	3SEH2092L	132850H	2	11.5/10		3	200-230	106495	106507
3SE2042L	132852	3SEH2042L	132852H	2	5		3	460	106492	106504
3SE3032L	133153	3SEH3032L	133153H	3	16.4		3	230	106497	106509
3SE3042L	133154	3SEH3042L	133154H	3	8.2		3	460	106494	106506
3SE514L	104892	N/A	N/A	0.5	11.6	1750	1	120	106481	106484
3SE524L	104893	N/A	N/A	0.5	5.9		1	240	106480	106483
3SE594L	104894	N/A	N/A	0.5	3.2/3.0		3	200-240	106490	106502
3SE544L	104895	N/A	N/A	0.5	1.5		3	480	106486	106498
3SE774L	104902	N/A	N/A	0.75	7.4/7.0		1	200-240	106481	106484
3SE794L	104903	N/A	N/A	0.75	4.8/4.5		3	200-240	106492	106504
3SE744L	104904	N/A	N/A	0.75	2.2		3	480	106488	106500
3SE1074L	104910	N/A	N/A	1	8.8/8.3		1	200-240	106481	106484
3SE1094L	104911	N/A	N/A	1	5.3/5.1		3	200-240	106492	106504
3SE1044L	104912	N/A	N/A	1	2.4		3	480	106488	106500
3SE1524L	132725	3SEH1524L	132725H	1.5	16		1	230	106482	106485
3SE1594L	132730	3SEH1594L	132730H	1.5	13.3/11.6		3	200-230	106497	106509
3SE1544L	132735	3SEH1544L	132735H	1.5	5.8		3	460	106492	106504
3SE2024L	132750	3SEH2024L	132750H	2	19		1	230	106482	106485
3SE2094L	132752	3SEH2094L	132752H	2	15.2/13.2		3	200-230	106497	106509
3SE2044L	132754	3SEH2044L	132754H	2	3.3		3	460	106490	106502
3SE3024L	133115	3SEH3024L	133115H	3	28		1	230	Consult Factory	Consult Factory
3SE3034L	133116	3SEH3034L	133116H	3	19		3	230	Consult Factory	Consult Factory
3SE3044L	133117	3SEH3044L	133117H	3	9		3	460	106494	106506

Vertical Discharge Model	Vertical Discharge Part Number	HP	FLA	RPM	Ph	Volt	Simplex Panel	Duplex Panel
3SEV512L*	104992	0.5	12.6	3450	1	120	106481	106484
3SEV522L	104993	0.5	6		1	240	106480	106483
3SEV592L	104994	0.5	5.8/5.3		3	200-240	106492	106504
3SEV542L	104996	0.5	2.6		3	480	106490	106502
3SEV1022L	105004	1	10.7		1	240	106481	106484
3SEV1092L	105005	1	7.9/7.5		3	200-240	106494	106506
3SEV1042L	105007	1	3.7		3	480	106490	106502
3SEV514L	104944	0.5	12	1750	1	120	106481	106484
3SEV524L	104945	0.5	6.3		1	240	106480	106483
3SEV594L	104946	0.5	3.7/3.8		3	200-240	106490	106502
3SEV544L	104947	0.5	1.9		3	460	106488	106500
3SEV724L	104954	0.75	7.1		1	240	106481	106484
3SEV794L	104955	0.75	4.8/4.6		3	200-240	106492	106504
3SEV744L	104956	0.75	2.3		3	480	106488	106500
3SEV1024L	104962	1	8.5		1	240	106481	106484
3SEV1094L	104963	1	5.3/5.1		3	200-240	106492	106504
3SEV1044L	104964	1	2.5		3	480	106490	106502

* Consult factory for additional models

* Pump is CSA Listed only.

4SE Series

FEATURES AND BENEFITS

- **Oil filled motors** for better heat dissipation
- **Oil lubricated bearings** for quieter operation and longer life
- **Cast iron construction, stainless steel hardware, Buna-N O-rings**
- **Plug-in power cords** simplify maintenance as the pumps are merely unplugged before service
- **2 vane semi-open impeller with pump out vanes** on back side, dynamically balanced ISO G6.3



Model	4SE-L	4SE-DS	4SE-L	4SE-L	4SE-L
Motor	0.9HP -1.9HP	0.9HP -1.9HP	2.8HP - 15HP	1.9HP - 11.3HP	5HP
RPM	1750	1750	1750	1150	3450
Cord Length	30'	30'	30' (2.8-5.0 HP) 40' (4.5-15HP)	30' (1.9-2.8 HP) 40' (4.5-11.3HP)	30'
Construction	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller	2 Vane, Open, Cast Iron	2 Vane, Open, Cast Iron	2 Vane, Semi-Open, Cast Iron	2 Vane, Semi-Open, Cast Iron	2 Vane, Semi-Open, Cast Iron
Discharge	3"/4" ANSI Flange	3"/4" ANSI Flange	4" ANSI Flange	4" ANSI Flange	4" ANSI Flange
Solids	2.0"	2.0"	3.0"	3.0"	1.5"
Seal Design	No	No	No	No	No
Weight	Single Mechanical	Tandem Mechanical	Tandem Mechanical	Tandem Mechanical	Double Mechanical
Liquid Temperature	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous

APPLICATIONS



RAW SEWAGE



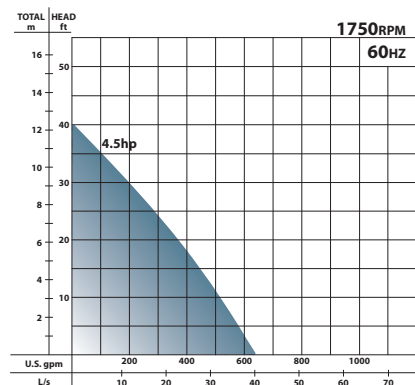
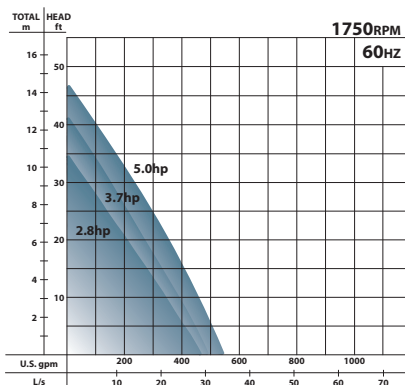
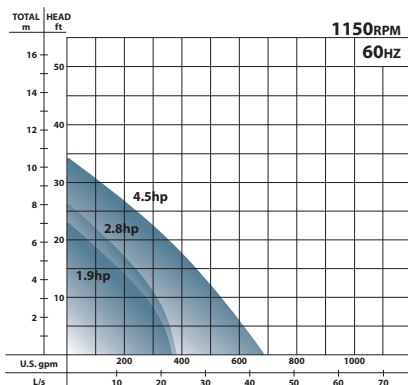
RESIDENTIAL



STORM WATER



DECORATIVE WATER



* Consult factory for additional models (including models 4SE-L 4.5hp and 4SE-DS .9hp-1.9hp).

Model	Part No.	HP	F.L.A.	RPM	Phase	Voltage	Pump Weight	Simplex Panel	Duplex Panel
4SE5032L	133156	5	16.4	3450	3	240	175	106497	106509
4SE5042L	133157	5	8.2		3	460	175	106494	106506

<i>Model</i>	<i>Part No.</i>	<i>HP</i>	<i>F.L.A.</i>	<i>RPM</i>	<i>Phase</i>	<i>Voltage</i>	<i>Pump Weight</i>	<i>Simplex Panel</i>	<i>Duplex Panel</i>
4SE914L	105014	0.9	11.6	1750	1	120	90	106481	106484
4SE924L	105015	0.9	5.9		1	240	90	106480	106483
4SE994L	105016	0.9	3.2/3.0		3	200-240	88	106490	106502
4SE944L	105017	0.9	1.5		3	460	88	106486	106498
4SE1474L	105024	1.4	7.4/7.0		1	240	94	106481	106484
4SE1494L	105025	1.4	4.8/4.5		3	200-240	95	106492	106504
4SE1444L	105026	1.4	2.2		3	460	95	106488	106500
4SE1974L	105032	1.9	8.8/8.3		1	240	96	106481	106484
4SE1994L	105033	1.9	5.3/5.1		3	200-240	96	106492	106504
4SE1944L	105034	1.9	2.5		3	460	96	106490	106502
4SE914DS	105019	0.9	11.6		1	120	110	106481	106484
4SE994DS	105021	0.9	3.2/3.0		3	200-240	108	106490	106502
4SE944DS	105022	0.9	1.5		3	460	108	106486	106498
4SE1474DS	105028	1.4	7.4/7.0		1	240	114	106481	106484
4SE1494DS	105029	1.4	4.8/4.5		3	200-240	115	106492	106504
4SE1444DS	105030	1.4	2.2		3	460	115	106488	106500
4SE1974DS	105036	1.9	8.8/8.3		1	240	116	106481	106484
4SE1994DS	105037	1.9	5.3/5.1		3	200-240	116	106492	106504
4SE1944DS	105038	1.9	2.5		3	460	116	106490	106502
4SE2824L	133125	2.8	12.6		1	240	212	106481	106484
4SE2894L	133141	2.8	9.2/8.0		3	200-240	204	106494	106506
4SE2844L	133142	2.8	4		3	460	204	106492	106504
4SE3724L	133145	3.7	20		1	240	214	106482	106485
4SE3794L	133146	3.7	16.1/14.0		3	200-240	204	106497	106509
4SE3744L	133147	3.7	7		3	460	204	106494	106506
4SE4524L	084623	4.5	26		1	240	350	Consult Factory	Consult Factory
4SE4564L	084624	4.5	20.9		3	200	370	Consult Factory	Consult Factory
4SE4534L	084625	4.5	18.2		3	240	350	Consult Factory	Consult Factory
4SE4544L	084626	4.5	9.1		3	460	350	106494	106506
4SE5024L	133149	5	28		1	240	193	Consult Factory	Consult Factory
4SE5094L	133150	5	20.9/19.0		3	200-240	193	Consult Factory	Consult Factory
4SE5044L	133151	5	9		3	460	193	106494	106506
4SE7524L	084627	7.5	39		1	240	370	Consult Factory	Consult Factory
4SE7564L	084628	7.5	30.8		3	200	376	Consult Factory	Consult Factory
4SE7534L	084629	7.5	26.8		3	240	370	Consult Factory	Consult Factory
4SE7544L	084630	7.5	13.4		3	460	370	106495	106507
4SE11364L	084631	11.3	32.2		3	200	376	Consult Factory	Consult Factory
4SE11334L	084632	11.3	28		3	240	376	Consult Factory	Consult Factory
4SE11344L	084633	11.3	14		3	460	376	106497	106509
4SE15034L	084634	15	38		3	240	370	Consult Factory	Consult Factory
4SE15044L	084635	15	19		3	460	376	Consult Factory	Consult Factory
4SE1926L	133159	1.9	8.3	1150	1	240	212	106481	106484
4SE1996L	133160	1.9	5.8/5.0		3	200-240	204	106492	106504
4SE1946L	133161	1.9	2.5		3	460	204	106490	106502
4SE2826L	133163	2.8	13.5		1	240	180	106481	106484
4SE2896L	133164	2.8	9.2/8.4		3	200-240	180	106494	106506
4SE2846L	133165	2.8	7.2		3	460	180	106494	106506
4SE4596L	084615	4.5	16.6/14.4		3	200-240	357	106497	106509
4SE4546L	084616	4.5	7.2		3	460	357	106494	106506
4SE7596L	084618	7.5	25.3/22.0		3	200-240	370	Consult Factory	Consult Factory
4SE7546L	084619	7.5	11		3	460	362	106495	106507
4SE11396L	084621	11.3	32.2/28.0		3	200-240	394	Consult Factory	Consult Factory
4SE11346L	084622	11.3	14		3	460	394	106497	106509

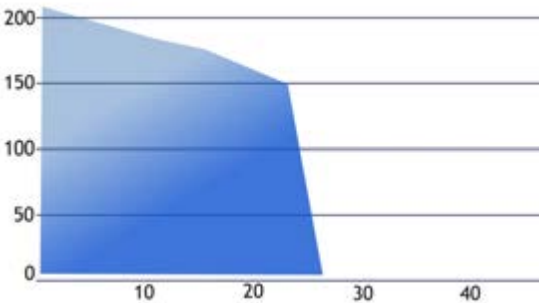
ZOGP Upgrade Core

FEATURES AND BENEFITS

- **Superior hydraulic design** coverage versus many competitor 2hp grinder pumps
- **Multiple assemblies available** for a variety of applications
- **Individual plug-n-play cords** allow for modular component installation and upgrade needs
- **Rigid piped**
- **Multistage Impeller Design** for High Head Performance

RAZOR PERFORMANCE RANGE

Razor ZOGP



Model	ZOGP2072
Motor	2hp
RPM	3450
Construction	Cast Iron
Impellers	Bronze Vortex
Discharge	1.25" NPT, Tubing, Vertical, Bolt-on Flange
Seal Design	Single Mechanical
Liquid Temperature	104°F (40°C) Intermittent

RAZOR



Model	Part No.	F.L.A.	Ph	Volt	Cord Size	Optional EQD
ZOGP2022CO	145475	17.5-15.0	1	240	12/5 - 15'	N/A
ZOGP2022CO	145475XC	17.5-15.0	1	240	12/5 - 30'	N/A
ZOGP2022CO	145475E	17.5-15.0	1	240	12/5 - 15'	2000 Series
ZOGP2022CO	145475EXC	17.5-15.0	1	240	12/5 - 30'	2000 Series
ZOGP2022CO	145475T	17.5-15.0	1	240	12/5 - 15'	Extreme Series
ZOGP2022CO	145475TXC	17.5-15.0	1	240	12/5 - 30'	Extreme Series

Part numbers suffixes with 'E' have a factory installed EGD to mate with the E/One 2000 series stations.
Part numbers suffixes with 'T' have a factory installed EQD to mate with the E/One Extreme series stations.
Kit includes pump, pump bracket(s), ESPS-150 Level Control, and required cords.

PGPT Series

FEATURES AND BENEFITS

- **Low amp, high torque motor**
- **Higher head** than progressing cavity and leading centrifugal pumps
- **Exclusive Slicerator™** cutting system backed by over 40 years of excellence

Model	PGPT (Pump Only)	PGPT Upgrade Core
Motor	1hp	1hp
RPM	3450	3450
Construction	Cast Iron	Cast Iron
Impeller	Stainless Steel	Stainless Steel
Discharge	1.25" NPT SCH 80, 300 Series SS	1.25" NPT, Tubing, Vertical, Bolt-on Flange
Seal Design	Single Mechanical	Single Mechanical
Weight	91 lbs.	150 lbs.
Liquid Temperature	104°F (40°C) Continuous	104°F (40°C) Continuous
Shredding Ring	Hardened 440C Stainless Steel Rockwell® C-55	Hardened 440C Stainless Steel Rockwell® C-55
Cutter	Hardened 440C Stainless Steel Rockwell® C-55	Hardened 440C Stainless Steel Rockwell® C-55

Model	Part No.	F.L.A.	Cord Size	Cord Type	Optional EQD
PGPT1022	140708	12.5	14/3 - 20'	SOW	N/A
PGPT1022A	140709	12.5	14/3 - 20'	SOW	N/A

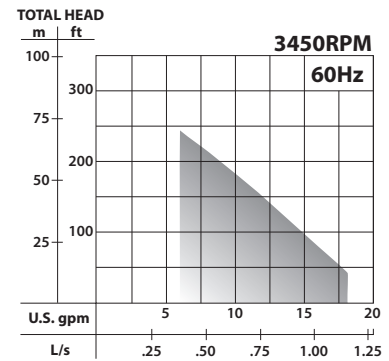
'A' Designates piggy back mechanical float switch.

PGPT Dry Well Series

Barnes Model	Barnes Part No.	HP	Volts	Amps	Hz	Lbs	E/One Model
PGPT1022C0	140843EP	1	230	12.5	60	101	Fits GP200/2000 D-Series
PGPT1022C0	140843TP	1	230	12.5	60	101	Fits Extreme D-Series

PGPT W-Series

Barnes Model	Barnes Part No.	HP	Volts	Amps	Hz	Lbs	E/One Model
PGPT1022AUF	143301E	1	230	12.5	60	101	Fits GP200/2000 D-Series
PGPT1022AUF	143301T	1	230	12.5	60	101	Fits Extreme D-Series



Request Part number for adapter

ZOGV

FEATURES AND BENEFITS

- **Patented Axial Cutter:** Provides Superior grinding versus radial cutter designs
- **Light Weight:** Designed for ease of installation and service
- **Dual Voltage Motor:** Optimal cutting torque performance in low voltage situations 208-240V
- **Retrofit:** Configurations available to retrofit into existing Barnes applications and competitor's grinder installs
- **Float or Pressure Switch options**
- **Convenient Maintenance:** Utilize single tool for service and maintenance
- **Non-Overloading:** Built to handle varying pressures without wear
- **Designed for Pressure Sewer:** Unlike non-clog pumps with large discharge sizes, Razor 1.25" discharge is suitable for preconfigured packaged systems and turnkey solutions
- **Serviceability:** Plug-n-Play cord provides easy service without requiring removal of epoxy or conduit

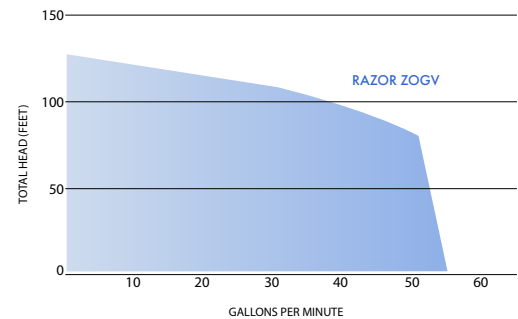
Model	ZOGV-P and ZOGV-PA
Motor	2hp
RPM	3450
Cord Length	SOW Quick Connect 14/3 gauge ZOGV2072L: 30' cord ZOGV2072P(A): 20' cord w/ plug
Construction	Cast Iron
Impeller	Cast Iron Vortex
Discharge	1.25" NPT, Female, Vertical, Bolt-on Flange
Automatic Operation	Mechanical Float or Manual
Seal Design	Single Mechanical
Weight	82 lbs.
Liquid Temperature	160°F (71°C) Intermittent
Shredding Ring	Hardened 440C Stainless Steel, Rockwell® C-55
Cutter	Hardened 440C Stainless Steel, Rockwell® C-55
Legs	Removable and Adjustable

Model	Part No.	F.L.A.	Phase	Voltage	Simplex Panel	Duplex Panel
ZOGV2072L*	145351	17.5-15.0	1	208-240	113442	122284
ZOGV2072P	145354	17.5-15.0	1	208-240	N/A	N/A
ZOGV2072PA	145352	17.5-15.0	1	208-240	N/A	N/A

*Base must be purchased separately

RAZOR

RAZOR PERFORMANCE RANGE
ZOGV





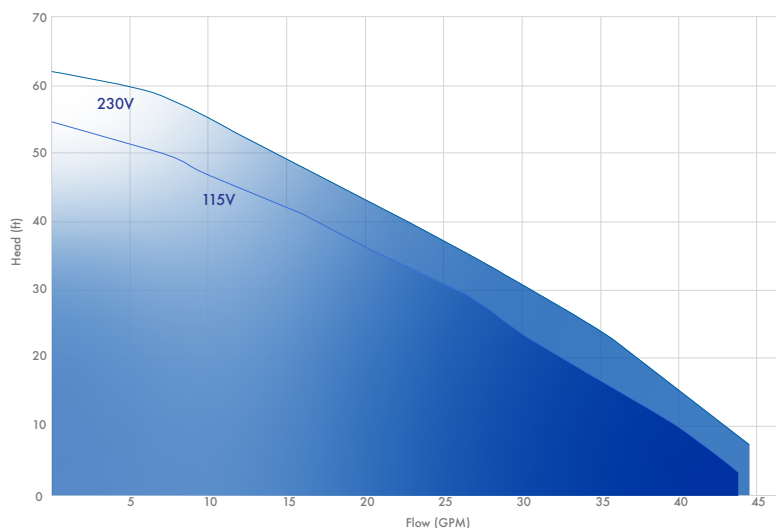
FEATURES AND BENEFITS

- **Axial Cutter:** Provides Superior clog resistance versus standard sewage ejectors
- **Motor Options:** 115V and 230V
- **Retrofit:** Designed for drop in retrofit to replace any existing small horsepower residential sewage pump and other 1HP grinder pumps
- **Float:** Optional float for automatic operation
- **Non-Overloading:** Built to handle varying flows without wear

Model	RV
Motor	1HP
RPM	3450
Cord Length	20'
Construction	Cast Iron
Impeller	Bronze, semi-open, pump out vanes on back side
Discharge	2.00" NPT
Automatic Operation	Integral float on "A" models only
Seal Design	Single Mechanical
Liquid Temp	104°F (40°C) Continuous

Model	Part No.	HP	F.L.A.	RPM	PH	Volt
RV101	145469	1.00	12.0	3450	1	115
RV101A*	145469A	1.00	12.0	3450	1	115
RV102	145470	1.00	6.0	3450	1	230
RV102A*	145470A	1.00	6.0	3450	1	230
PITPRORV25-115	147372	1.00	12.0	3450	1	115
PITPRORV25-230	147373	1.00	6.0	3450	1	230

* Note: Model is automatic and includes a float



APPLICATIONS



LAVATORIES



LAUNDRY TUBS



FLOOR DRAINS



WATER CLOSETS

High Temperature Pumps • BP

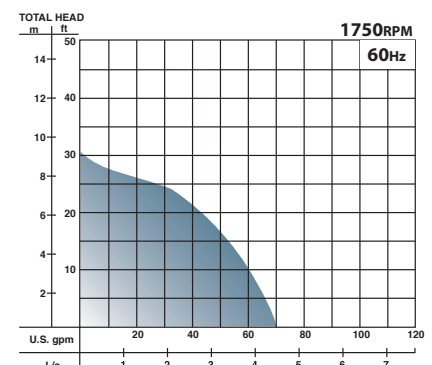
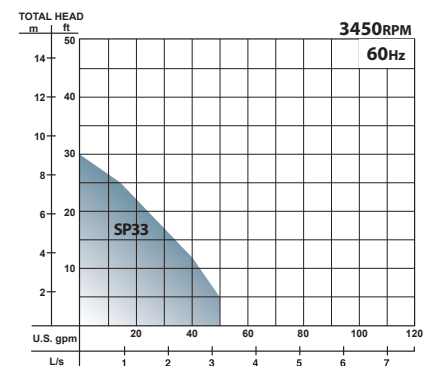
FEATURES AND BENEFITS

- **416 stainless steel shaft** to handle aggressive effluent
- **Ball bearing construction** for longer life and quieter operation
- **Permanent split capacitor (PSC) motor** for more efficient operating range

Model	BP-HT	SP33HT	SP33EHT
Motor	1/3hp PSC	1/3hp PSC	1/3hp PSC
RPM	1750	3450	3450
Cord Length	15' SOOW 14/3 gauge	20' SJTOW/SJTW 18/3 gauge	25' SOOW 14/3 gauge
Construction	Cast Iron (Bronze optional)	Cast Iron, Stainless Steel	Cast Iron, Stainless Steel
Impeller	Bronze	Cast Iron Vortex	Cast Iron Vortex
Discharge	2.00" NPT Female, Vertical	1.50" NPT, Female, Vertical	1.50" NPT, Female, Vertical
Solids	0.75"	0.50"	0.50"
Automatic Operation	Mechanical Float	No	Mechanical Float
Seal Design	Single Mechanical, Oil Filled Reservoir	Single Mechanical, Type 21	Single Mechanical, Type 21
Liquid Temp	200°F (93°C) Continuous	185°F (85°C) Continuous, Fully Submerged	221°F (105°C) Continuous, Fully Submerged
Weight	52 - 53 lbs.	24 lbs	24 lbs

Model	Part No.	F.L.A.	Ph	Volt	Simplex Panel	Duplex Panel
BP314HT	096737	8.0	1	120	106481	106484
BP314HTA	096738	8.0	1	120	N/A	N/A
BP314HTAU	096739	8.0	1	120	N/A	N/A
BP314HTBR	096742	8.0	1	120	106481	106484
BP314HTABR	096743	8.0	1	120	N/A	N/A
BP314HTAUBR	096744	8.0	1	120	N/A	N/A
BP324HT	096740	4.0	1	240	106480	106483
BP324HTAU	096741	4.0	1	240	N/A	N/A
BP324HTBR	096745	4.0	1	240	106480	106483
BP324HTAUBR	096746	4.0	1	240	N/A	N/A
SP33HTX	113667	4.1	1	120	106480	106483
SP33EHT	113667A	4.1	1	120	106480	106483
SP33EHTA	113667B	4.1	1	120	N/A	N/A

* Refer to Accessories section for floats and high-temp floats information.
 'A' Designates piggy back mechanical float switch.
 'AU' Designates integral mechanical float switch.
 'BR' Designates bronze pump.



High Temperature Pumps • SE • EH

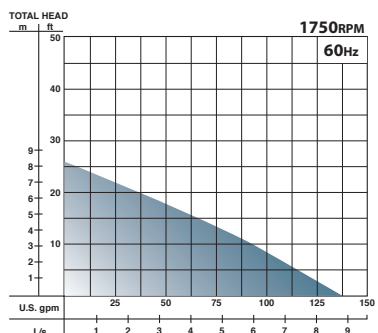
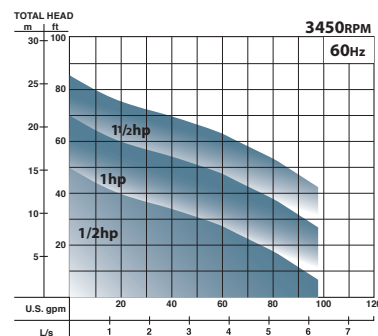
Model	SE411/421HT	SE51/52HT	EH-HT
Motor	4/10hp PSC	1/2hp PSC	1/2 & 1 1/2hp PSC
RPM	1750	1750	3450
Cord Length	15' SOOW 14/3 gauge	15' SOW 14/3 gauge	20' 14/3 (1 Phase) 20' 14/4 (3 Phase)
Construction	Cast Iron	Cast Iron	Cast Iron
Impeller	Cast Iron, 2 vane	Cast Iron, 2 vane	Cast Iron, 3 vane
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical, Bolt-on Flange	2.00" NPT, Female, Vertical
Solids	2.00"	2.00"	0.75"
Automatic Operation	Mechanical Float	Mechanical Float	No
Seal Design	Single Mechanical, Oil Fill Reservoir	Single Mechanical	Single Mechanical
Liquid Temperature	200°F (93°C) Continuous	200°F (93°C) Continuous	200°F (93°C) Continuous
Weight	53 lbs. (manual) 55 lbs. (with float)	85 lbs.	88 lbs. (1/2hp) 98 lbs. (1-1/2hp)

Model	Part No.	HP	F.L.A.	Ph	Volt	Simplex Control Panel	Duplex Control Panel
SE411HT	096764	.40	10.0	1	115	106481	106484
SE411HTA	096765	.40	10.0	1	115	N/A	N/A
SE421HT	096767	.40	4.0	1	230	106480t	106483
SE421HTAU	096768	.40	4.0	1	230	N/A	N/A
SE51HT	104876	.50	17.0	1	120	106482	106485
SE51HTA	104877	.50	17.0	1	120	N/A	N/A
SE51HTAU	104878	.50	17.0	1	120	N/A	N/A
SE52HT	104879	.50	8.5	1	240	106481	106484
SE52HTAU	104880	.50	8.5	1	240	N/A	N/A
EH512HT	105084	.50	10.6	1	120	106481	106484
EH522HT	105085	.50	5.3	1	240	106480	106483
EH1522HT	105093	1.50	9.0	1	240	106481	106484
EH1592HT	105094	1.50	7.8/7.0	3	240	106494	106506
EH1542HT	105095	1.50	3.5	3	460	N/A	N/A

* Refer to Accessories section for floats and high-temp floats information.

'A' Designates piggy back mechanical float switch.

'AU' Designates integral mechanical float switch.

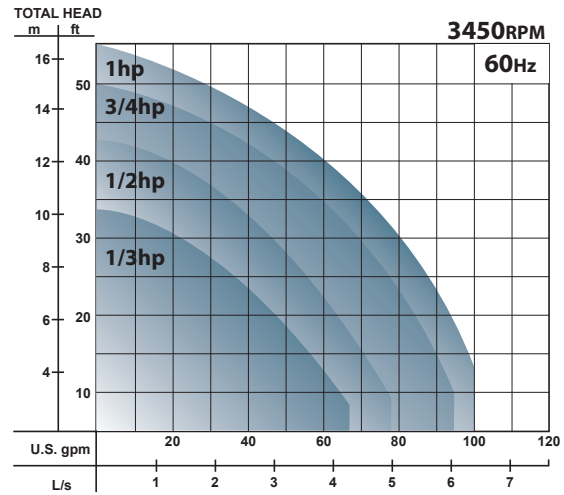
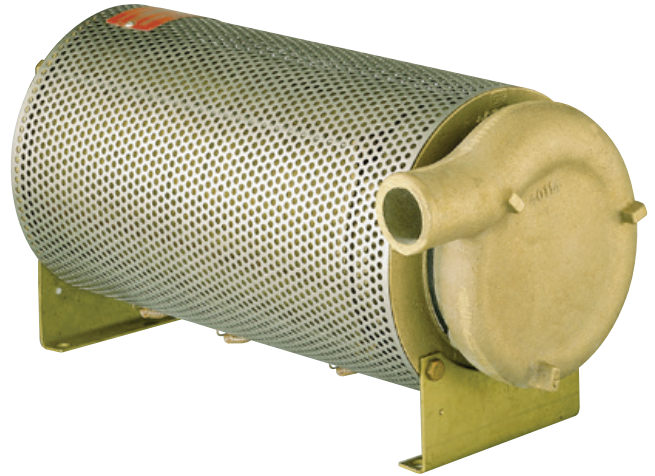


SFU Series

FEATURES AND BENEFITS

- **Thermal overload protection in motor**
- **Oil filled motor** for better heat dissipation
- **Permanent split capacitor (PSC) motor** for more efficient operation

Model	SFU
Motor	1/3hp - 1hp PSC
RPM	3450
Cord Length	12' SOW 16/3 gauge
Construction	Brass
Impeller	Brass
Discharge	1.75" (45mm) Hose Connection, 90° Rotation
Screen	0.5/32" dia. mesh, Stainless Steel
Automatic Operation	No
Seal Design	Single Mechanical, Carbon/Ceramic/Buna-N
Weight	45 - 56 lbs.
Liquid Temperature	145°F (63°C) Continuous



Model	Part No.	HP	F.L.A.	Phase	Voltage
SFU31	087781	.33	8.0	1	115
SFU51	087782	.50	9.5	1	115
SFU71	087783	.75	12.0	1	115
SFU72	087784	.75	6.0	1	230
SFU102	087785	1.00	7.0	1	230

APPLICATIONS



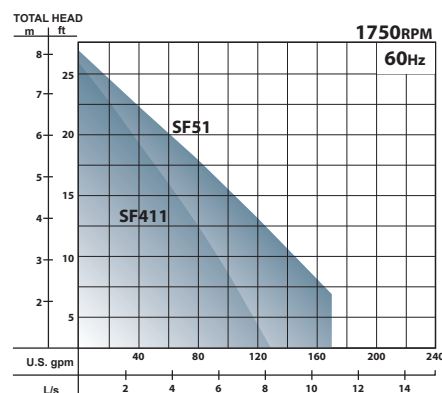
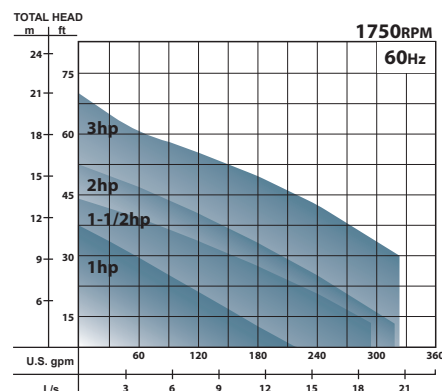
DECORATIVE WATER

SF Series • 3SF Series

Model	SF411	SF51	3SF-HD	3SF-L	3SF-L
Motor	.40hp PSC	1/2hp PSC	1-1/2hp, 2hp PSC	1hp	3hp
RPM	1750	1750	1750	1750	1750
Cord Length	15' SJTOW 14/3 gauge	15' SJTOW 14/3 gauge	25' SO 10/3 gauge	15' SOW 14/3 gauge	25' SO 10/3 gauge
Construction	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller	Cast Iron, 2 vane	Cast Iron, 2 vane	Cast Iron, 2 vane	Cast Iron, 2 vane	Cast Iron, 2 vane
Discharge	2.00" NPT, Female, Vertical	2.00" NPT, Female, Vertical, Bolt-on Flange	3.00" NPT, Female, Vertical	3.00" NPT, Female, Vertical, Bolt-on Flange	3.00" NPT, Female, Vertical
Automatic Operation	No	No	No	No	No
Seal Design	Single Mechanical, Oil Filled Reservoir	Single Mechanical	Inboard Single Mechanical, Oil Filled Reservoir	Single Mechanical	Single Mechanical
Weight	53 lbs.	85 lbs.	185 lbs. (1-1/2hp) 190 lbs. (2hp)	95 lbs.	170 lbs.
Liquid Temperature	77°F (25°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous	104°F (40°C) Continuous

Model	Part No.	HP	F.L.A.	Ph	Volt
SF411	109972	.40	12.0	1	115
SF51	109974	.50	11.6	1	120
3SF1524HD	110952	1.5	12.6	1	230
3SF2024HD	110953	2.0	14.5	1	230
3SF1074L	109975	1.0	8.8/8.3	1	200/230
3SF3024L	109977	3.0	28.0	1	230

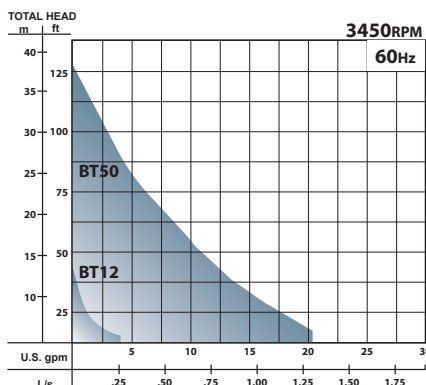
'HD' Designates heavy duty.



Transfer Pump Series

Model	BT12	BT50
Motor	1/12hp	1/2hp
RPM	3450	3450
Cord Length	8.5'	9.5'
Construct.	Plastic	Cast Iron
Impeller	Rubber	Thermoplastic
Discharge	0.75" GHT Male, Vertical	0.75" GHT Male, Vertical
Automatic Operation	No	No
Seal Design	High Speed Mechanical	High Speed Mechanical
Weight	6 lbs.	16 lbs.

Model	Part No.	HP	F.L.A.	Ph	Volt
BT12	134677	1/12	2.0	1	120
BT50	134678	1/5	8.2	1	120



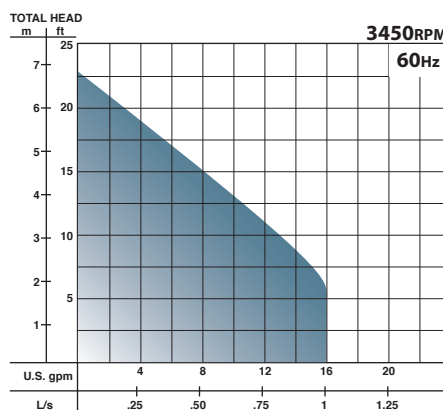
FEATURES AND BENEFITS

- **Molded handles**
- **Suction strainer** included
- **3/4" male outlet** for use with standard garden hose
- **6' of garden hose** included with BT12 model ONLY

Utility Pumps

Model	UT17
Motor	1/6hp
RPM	3450
Cord Length	15' SJTW 18/3 gauge
Construction	Thermoplastic
Impeller	Thermoplastic, 2 vane
Discharge	0.75" G.H.T. Male, Vertical
Solids	1/8"
Automatic Operation	No
Seal Design	Single Mechanical, Type 6
Liquid Temp	77°F (25°C) Continuous
Weight	7 lbs.

Model	Part No.	F.L.A.	Ph	Volt
UT17	113824	2.0	1	120



FEATURES AND BENEFITS

- **Portable** with molded handle
- **Fully submersible design**
- **3/4" male outlet connection** for use with standard garden hose
- **15 foot power cord** with molded 3-prong plug
- **Can pump down to 1/4"** from the floor surface
- **Strainer prevents entry of solids and debris**

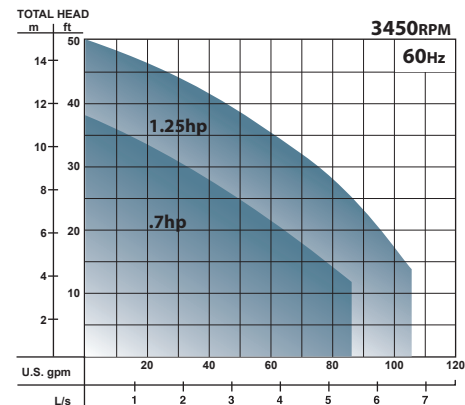
Dewatering Pumps

FEATURES AND BENEFITS

- **Slim-line design** allows Barnes pumps to fit where other pumps can't
- **Light weight** for easy portability
- Require **no priming, suction hose or foot valve**, just submerge and go
- **Operate in any position**
- **Able to run dry for a reasonable period of time** without damage
- **Inline design** ensures cool-running motor
- **Inline suction and discharge** allow pumps to operate doubling head at a given flow, which provides versatility in jobs site variations

Model	70/71	125/126
Motor	7/10hp	1-1/4hp
RPM	3450	3450
Cord Length	50'	50'
Construction	Stainless Steel	Stainless Steel
Impeller	Polyurethane	Polyurethane
Discharge	2.00" NPT, Male, Vertical	2.00" NPT, Male, Vertical
Automatic Operation	No	No
Seal Design	Double Mechanical, Oil Filled Reservoir	Double Mechanical, Oil Filled Reservoir
Liquid Temperature	140°F (40°C) Continuous	140°F (40°C) Continuous
Weight	30 lbs	30 lbs

Model	Part No.	HP	F.L.A.	Ph	Volt
70	115070	0.70	8.0	1	120
71	115071	0.70	4.0	1	240
125	115125	1.25	15.0	1	120
126	115126	1.25	7.6	1	240



*Includes 25ft of 3/8" Polypropylene Rope

APPLICATIONS



DEWATERING



WATERSCAPES



MINING



LANDFILL POLLUTION

Control Panels

FEATURES AND BENEFITS

Includes: NEMA 4X enclosure, water alarm light and horn with automatic reset. Circuit breaker (1 per pump), HOA switch and run lights, UL & C-UL approval, motor contactors, terminal block, alternator on duplex units, and 2 year warranty

*For panels to be used with grinder pumps, consult factory



Single Phase Panels:

Pump FLA	Simplex				Duplex			
	Part No.	Weight	Circuit Breaker	Contactor	Part No.	Weight	Circuit Breaker	Contactor
0 - 7	106480	19 lbs	2 Pole, 15 A	2 Pole, 20 A	106483	20 lbs	2 Pole, 15 A	2 Pole, 25 A
7 - 15	106481	19 lbs	2 Pole, 20 A	2 Pole, 20 A	106484	20 lbs	2 Pole, 20 A	2 Pole, 25 A
15 - 20	106482	19 lbs	2 Pole, 30 A	2 Pole, 30 A	106485	20 lbs	2 Pole, 30 A	2 Pole, 25 A

Three Phase Panels:

Pump Full Load Amps	Circuit Breaker	Contactor	Simplex		Duplex	
			Part No.	Weight	Part No.	Weight
1-1.6	Integral with Protector	17 A	106486	23 lbs	106498	26 lbs
1.6 - 2.5		17 A	106488	23 lbs	106500	26 lbs
2.5 - 4.0		17 A	106490	23 lbs	106502	26 lbs
4.0 - 6.3		17 A	106492	23 lbs	106504	26 lbs
6 - 10		17 A	106494	23 lbs	106506	26 lbs
9 - 14		17 A	106495	23 lbs	106507	26 lbs
13 - 18		25 A	106497	23 lbs	106509	26 lbs

*For additional panel features, contact factory for quote.

Control Floats

FEATURES AND BENEFITS

- Three prong plug that takes the full amp draw of the pump
- Does not experience the full load amps of the pump



<i>Piggy Back Floats</i>				
Part No.	Cord Length (Ft)	Contacts	Voltage	Amperage
125150-XX	10, 20, 30	Normally Open	120	10 Amps Max. 100 Milliamps Min.
125151-XX	15, 30, 50	Normally Open	120	13 Amps Max. 1000 Milliamps Min.
125152-XX	15, 30, 50	Normally Open	230	12 Amps Max. 100 Milliamps Min.
125154-XX	15, 30, 50	Normally Open	230	15 Amps Max. 100 Milliamps Min.

* Weight float cable sold separately - part number 125170
-XX is for cord length

<i>High-Temp Piggy Back Floats</i>			
Part No.	Cord Length (Ft)	Contacts	Voltage
090269	15, 25, 30	Open	115
090270	15	Open	230

* Weight float cable sold separately - part number 125170
** For all the above mechanical level controls state cord length when ordering

<i>Direct Control Floats</i>				
Part No.	Cord Length (Ft)	Contacts	Voltage	Amperage
125153	15, 30, 50, 100	Open	120/240	12 Amps Max. 100 Milliamps Min.

* Weight float cable sold separately - part number 125170

<i>Pilot Duty Control Floats</i>				
Part No.	Cord Length (Ft)	Contacts	Voltage	Amperage
125148-15	15	Normally Open	120/240	5 Amps Max. 100 Milliamps Min.
125148-30	30	Normally Open	120/240	
125148-50	50	Normally Open	120/240	
125148-100	100	Normally Open	120/240	
125149-15	15	Normally Closed	120/240	
125149-30	30	Normally Closed	120/240	
125149-50	50	Normally Closed	120/240	
125149-100	100	Normally Closed	120/240	

* Weight float cable sold separately - part number 125170



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