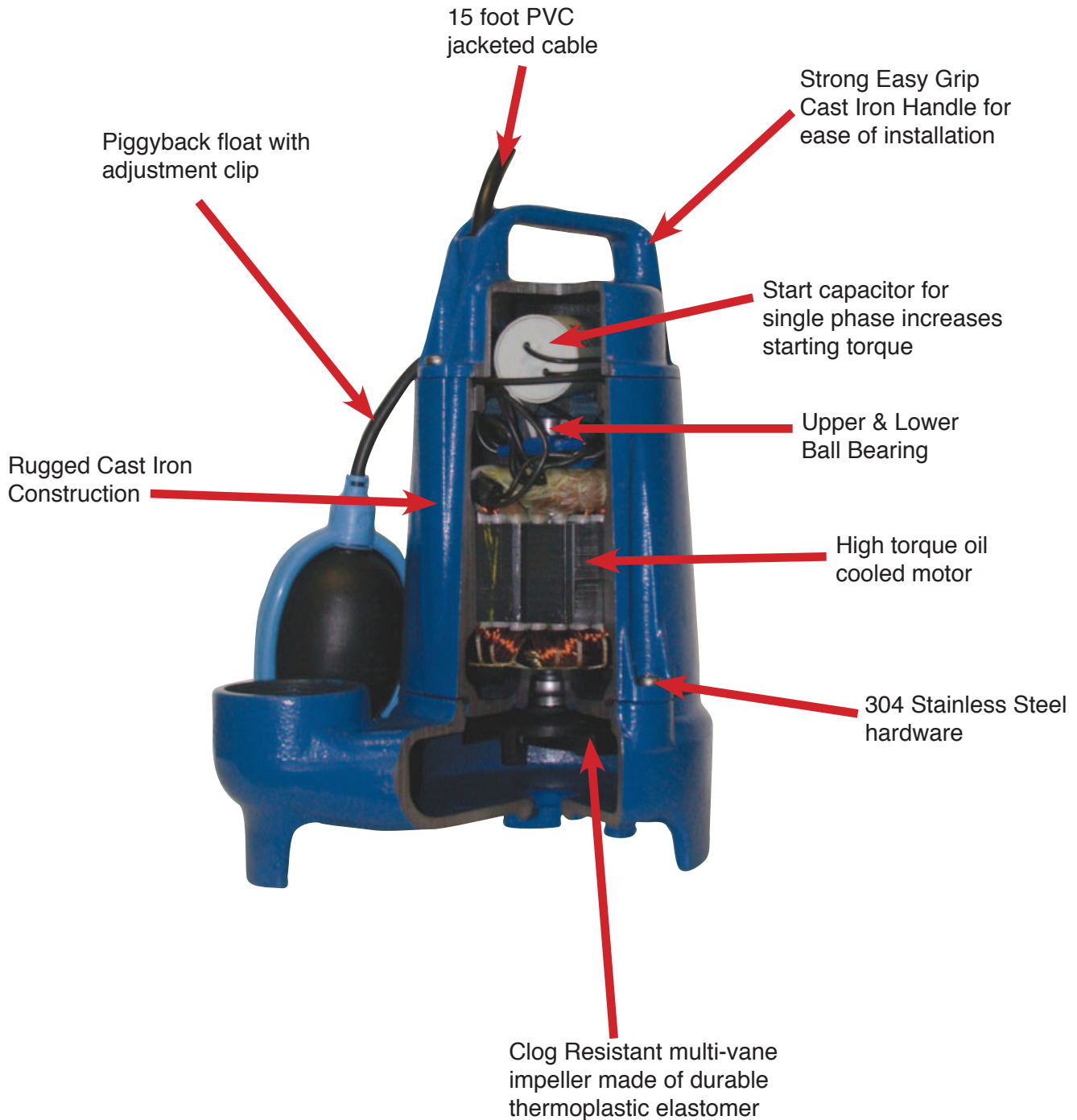


SEWAGE & EFFLUENT PUMP FEATURES



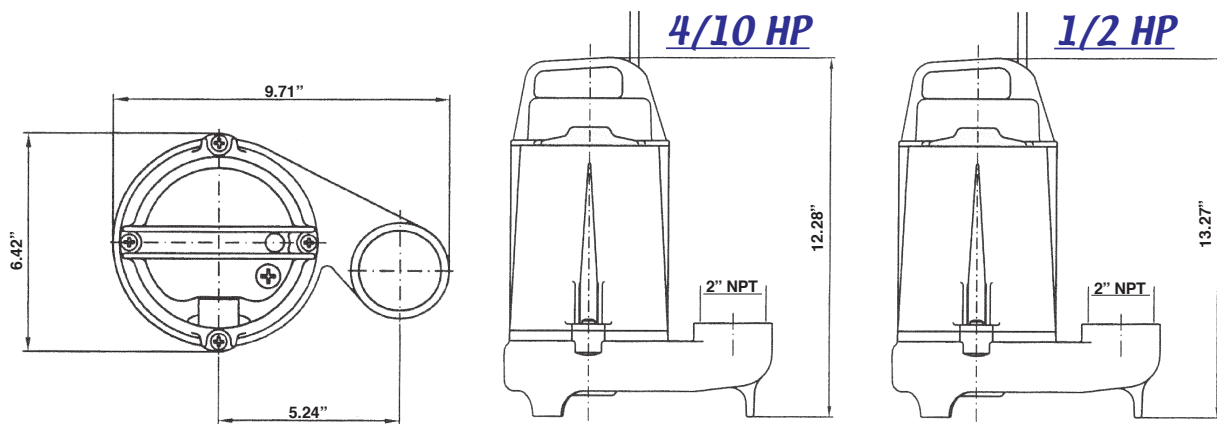
EFFLUENT PUMPS

4/10 & 1/2 HP Pumps



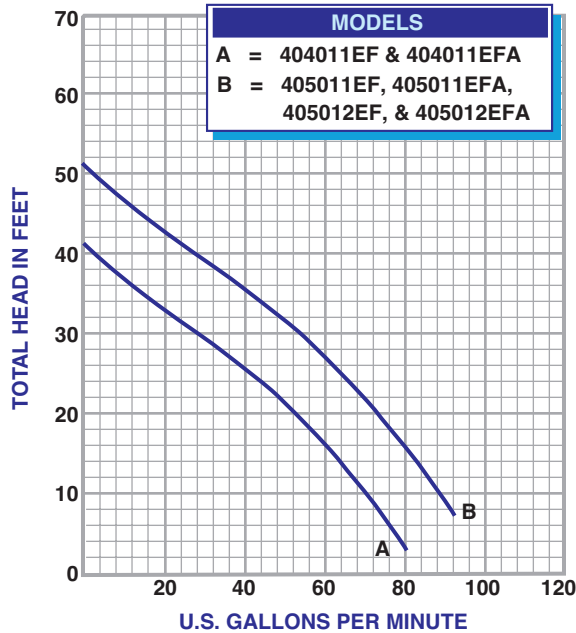
Features

- Rugged, cast iron submersible for residential and light commercial wastewater applications
- High torque capacitor start motors
- Upper & lower ball bearings
- 2" NPT vertical discharge, vortex impellers
- Cast iron housings
- Stainless steel fasteners and motor shaft
- Oil-filled motors (non-toxic oil)
- Integrated clip for float switch cable
- Available with or without piggyback float switch
- UL and CSA listed



EFFLUENT PUMP SPECIFICATIONS

Model Number	Voltage	HP	Phase	Solids Size	Hertz	Speed (RPM)	Discharge	Weight	Cable Length(ft.)	Float Included
404011EF	115	4/10	1	3/4"	60	3450	2" Vert NPT	32	15	N
404011EFA	115	4/10	1	3/4"	60	3450	2" Vert NPT	34	15	Y
405011EF	115	1/2	1	3/4"	60	3450	2" Vert NPT	36	15	N
405011EFA	115	1/2	1	3/4"	60	3450	2" Vert NPT	38	15	Y
405012EF	230	1/2	1	3/4"	60	3450	2" Vert NPT	36	15	N
405012EFA	230	1/2	1	3/4"	60	3450	2" Vert NPT	38	15	Y



Materials of Construction

Motor Housing	Cast Iron ASTM A48 Class 30
Volute	Cast Iron ASTM A48 Class 30
External Hardware	304 Stainless Steel
O-Ring	Buna-N
Motor Shaft	420 Stainless
Oil	Non-toxic white mineral oil (Marcol 52)
Upper Bearing	Single row ball bearing
Lower Bearing	Single row ball bearing
Lower Shaft Seal	Spring loaded rotating carbon face w/ stationary ceramic face
Impeller	Polybutylene Terephthalate (PBT) 30% glass fiber, Vortex

Motor Specifications

Motor Design	NEMA design B, squirrel cage induction, oil-filled (non toxic)
Motor Type	Enclosed submersible
Insulation Class	Class B, rated at 248° F(120° C)
Motor Protection	Integral Bi-Metallic current sensing switch providing over temperature shut down
Service Factor	1.10
Voltage Tolerance	± 10% from nominal
Approvals	UL 778 and CSA C22.2-108

Motor Data, 60 Hz

Model Number	Phase	Rated Output Power	Volts	Full Load Amps	Locked Rotor Amps	NEMA Code Letter	Power Factor 100% Load	Motor Efficiency 100% Load	Pole/Speed (RPM)	Float Included
404011EF	1	0.4 HP	115	9.1	40	N	0.6	49	2/3450	N
404011EFA	1	0.4 HP	115	9.1	40	N	0.6	49	2/3450	Y
405011EF	1	0.5 HP	115	13.2	58.5	P	0.85	50	2/3450	N
405011EFA	1	0.5 HP	115	13.2	58.5	P	0.85	50	2/3450	Y
405012EF	1	0.5 HP	230	6.6	35.2	S	0.85	50	2/3450	N
405012EFA	1	0.5 HP	230	6.6	35.2	S	0.85	50	2/3450	Y

Cable Specifications

Model Number	Volts	Power Cable	Length (Feet)	Outer Jacket
404011EF	115 Volt	16/3 SJTOW-A or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer
404011EFA	115 Volt	16/3 SJTOW-A or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer
405011EF	115 Volt	16/3 SJEOOW or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer
405011EFA	115 Volt	16/3 SJEOOW or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer
405012EF	230 Volt	16/3 SJEOOW or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer
405012EFA	230 Volt	16/3 SJEOOW or equiv. w/ 3 prong plug	15	Thermoplastic Elastomer

- Maximum submergence (feet) = 30
- Maximum temp. of pumped fluid = 104° F(40°C) continuous, =122°F (50°C) intermittent

EFFLUENT PUMPS

1/2, 1 High Head & 1 HP Pumps



**1/2 HP
High Head
1 HP
High Head**

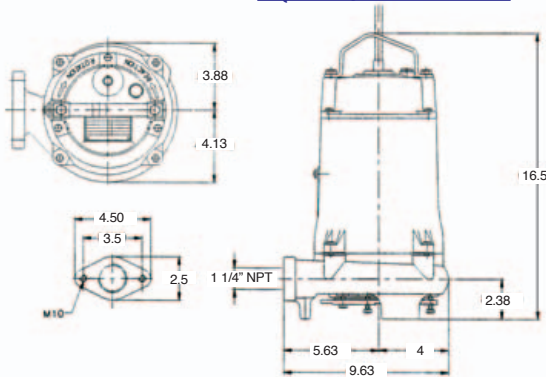


1 HP Std. Head

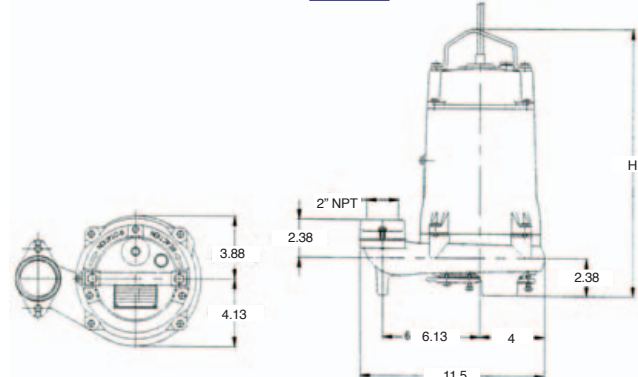
Features

- Rugged, submersible pumps for residential, commercial, municipal, and industrial applications
- Unique triple seal design
- Patented Contra Block® impeller with adjustable wear plate system for clog-free operation
- Single phase models 1/2 & 1 HP. Three phase models 1 HP
- Discharges: 1 1/4" on 1/2 HP and 1 HP High Head, 2" on 1 HP Std. Head
- High torque capacitor start single phase motors
- Cast iron construction with stainless steel fasteners and motor shaft
- Oil-filled motors (non-toxic oil)
- Stainless steel open loop lifting bale for ease of removal
- UL 778 and CSA C22.2-108 approval on all models

1/2 & 1 HP HH

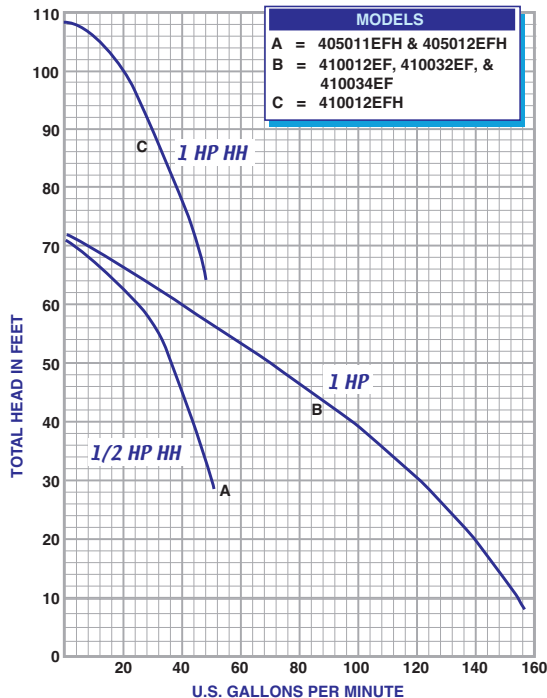


1 HP



EFFLUENT PUMP SPECIFICATIONS

Model Number	Voltage	HP	Phase	Solids Size	Hertz	Speed (RPM)	Discharge	Weight	Cable Length(ft.)	Float Included
405011EFH	115	1/2	1	5/8"	60	3450	Horizontal NPT 1 1/4"	78	15	N
405012EFH	230	1/2	1	5/8"	60	3450	Horizontal NPT 1 1/4"	78	15	N
410012EF	208-230	1	1	3/4"	60	3450	Vertical NPT 2"	71	15	N
410032EF	208-230	1	3	3/4"	60	3450	Vertical NPT 2"	58	15	N
410034EF	460	1	3	3/4"	60	3450	Vertical NPT 2"	58	15	N
410012EFH	230	1	1	5/8"	60	3450	Horizontal NPT 1 1/4"	70	20	N

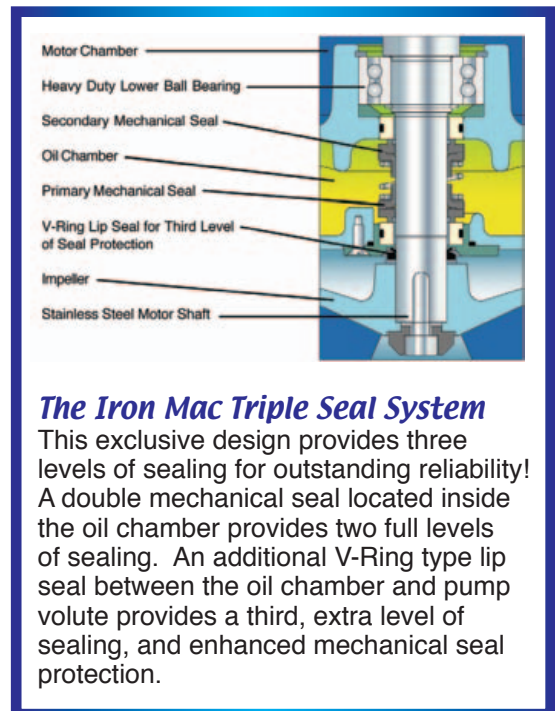


Materials of Construction

Upper Motor Lid	Cast Iron ASTM A48 Class 30
Motor Housing	Cast Iron ASTM A48 Class 30
Oil Chamber	Cast Iron ASTM A48 Class 30
Volute	Cast Iron ASTM A48 Class 30
Bottom Plate	Cast Iron ASTM A48 Class 30
Impeller	Cast Iron ASTM A48 Class 30
Lifting Bail	AISI 304 Stainless Steel
Oil (motor & oil chamber)	Non-toxic white mineral oil (Marcol 52)
External Hardware	AISI 304 Stainless Steel
O-Rings	Buna-N
Motor Shaft	AISI 420 Stainless Steel
Upper Bearing	Single row ball bearing
Lower Bearing(s)	Single row ball bearing
Upper Shaft Seal (secondary)	Rotating carbon face w/ stationary ceramic face
Lower Shaft Seal (primary)	Rotating carbon face w/ stationary ceramic face. Includes V-ring lip seal for lower seal protection.

Motor Specifications

Motor Design	NEMA design B, squirrel cage induction, oil filled, non toxic oil
Motor Type	Enclosed submersible
Insulation Class	Class B, rated at 248° F
Motor Protection	<p>Single Phase: Internal thermal protection with automatic reset. Installer must provide circuit breaker for short circuit protection per N.E.C. standards.</p> <p>Three Phase: Installer must provide external motor overload protection device such as a contactor w/ thermal relay, and circuit breaker for short circuit protection per N.E.C. standards.</p>
Service Factor	1.15
Voltage Tolerance	± 10% from name plate rating



The Iron Mac Triple Seal System

This exclusive design provides three levels of sealing for outstanding reliability! A double mechanical seal located inside the oil chamber provides two full levels of sealing. An additional V-Ring type lip seal between the oil chamber and pump volute provides a third, extra level of sealing, and enhanced mechanical seal protection.

Motor Data, 60 Hz

Model Number	Phase	Rated Output BHP	Volts	Full Load Amps	Locked Rotor Amps	NEMA Code Letter	Pole/Speed (RPM)
405011EFH	1*	0.5	115	15.0	91	U	2/3450
405012EFH	1*	0.5	230	7.5	45.5	U	2/3450
410012EF	1*	1.0	230	13.0	45.5	M	2/3450
410032EF	3**	1.0	208-230	6.4-5.8	24-21.8	K	2/3450
410034EF	3**	1.0	460	2.9	10.9	K	2/3450
410012EFH	1	1.0	230	13.0	45.5	M	2/3450

* Start switch and capacitor integrated into top of pump.

** These three phase motors are tri-voltage, 208/230/460.

Cable Specifications

Model Number	Volts	Power Cable	Diameter	Length (Feet)	Outer Jacket
405011EFH	115 Volt	14/3 SJEOOW	0.36IN (9.2MM)	20ft (6m)	Thermoplastic Elastomer
405012EFH	230 Volt	14/3 SJEOOW	0.36IN (9.2MM)	20ft (6m)	Thermoplastic Elastomer
410012EF	230	14/3 SJEOOW	0.36IN (9.2MM)	20ft (6m)	Thermoplastic Elastomer
410032EF	208-230	16/4 SEOOOW	0.43IN (10.9MM)	20ft (6m)	Thermoplastic Elastomer
410034EF	460	16/4 SEOOOW	0.43IN (10.9MM)	20ft (6m)	Thermoplastic Elastomer
410012EFH	230	14/3 SJEOOW	0.36IN (9.2MM)	20ft (6m)	Thermoplastic Elastomer

- Maximum submergence, ft. - 30
- Maximum temp. of pumped fluid - (40°C) 104°F continuous, (50°C) 122°F intermittent