

Scavenger® Effluent & Sewage Ejector Pumps

Rugged, cast iron submersible $\frac{4}{10}$ and $\frac{1}{2}$ horsepower pumps for residential and light commercial wastewater applications.

- ◆ High torque capacitor motors
- ◆ 2" NPT vertical discharge, vortex impellers
- ◆ Rugged 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 listing pending



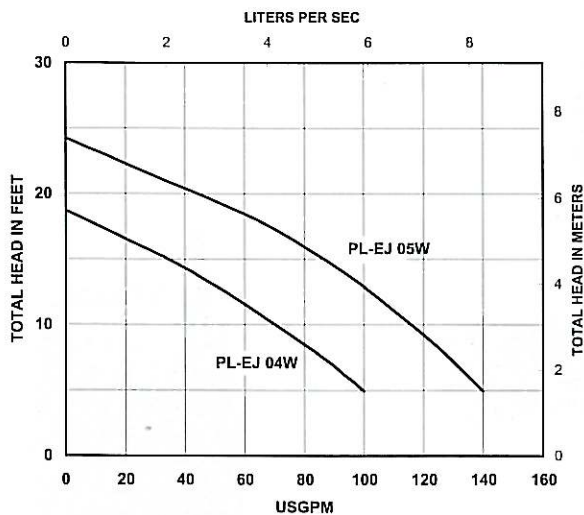
The new PolyLok™ pumps are now available in 4/10 and 1/2 HP sizes, including both effluent and sewage ejector models. These new pumps are designed from the ground up to deliver the dependable service and long life expected from any product bearing the PolyLok™ name. They include features required for residential and light commercial applications, as well as several new features not normally found in pumps of this size. These new features include: all ball bearing construction, non-toxic oil, and an integrated clip to hold the float switch cable. All this, plus a competitive price puts the new PolyLok™ pumps in a class by themselves.

Materials of Construction:

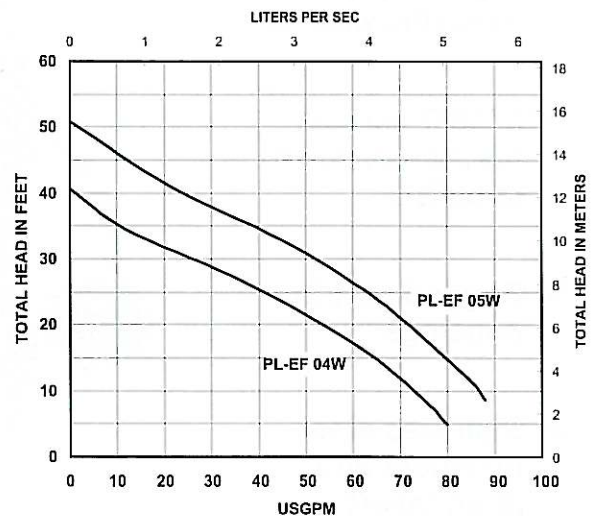
Housings & Volute	Cast Iron
Impeller	Glass Fiber Reinforced PBT
External Hardware	304 Stainless Steel
Motor Shaft	420 Stainless Steel
Mechanical Seal	Carbon/Ceramic
Bearings	Ball Bearings
Motor Windings	Copper, Class B Insulation
Power Cable	Thermoplastic Elastomer, 10 ft
O-Rings	Buna-N

Model	HP	Phase	RPM	Voltage	Discharge	Solids Size	Max Head (ft)	Max Flow (gpm)	Weight (lbs)	Height
PL-EJ 04W	4/10	1	1750	115, 230	2" Vert NPT	2"	19	100	31.9	14 7/8"
PL-EJ 05W	1/2	1	1750	115, 230	2" Vert NPT	2"	24.5	140	35.2	15 7/8"
PL-EF 04W	4/10	1	3450	115, 230	2" Vert NPT	3/4"	41	80	28.6	12 1/4"
PL-EF 05W	1/2	1	3450	115, 230	2" Vert NPT	3/4"	51	88	30.1	13 1/4"

Ejector Pumps, 1750 RPM



Effluent Pumps, 3450 RPM



PL-EJ 05W



PL-EJ 04W



PL-EF 05W



PL-EF 04W



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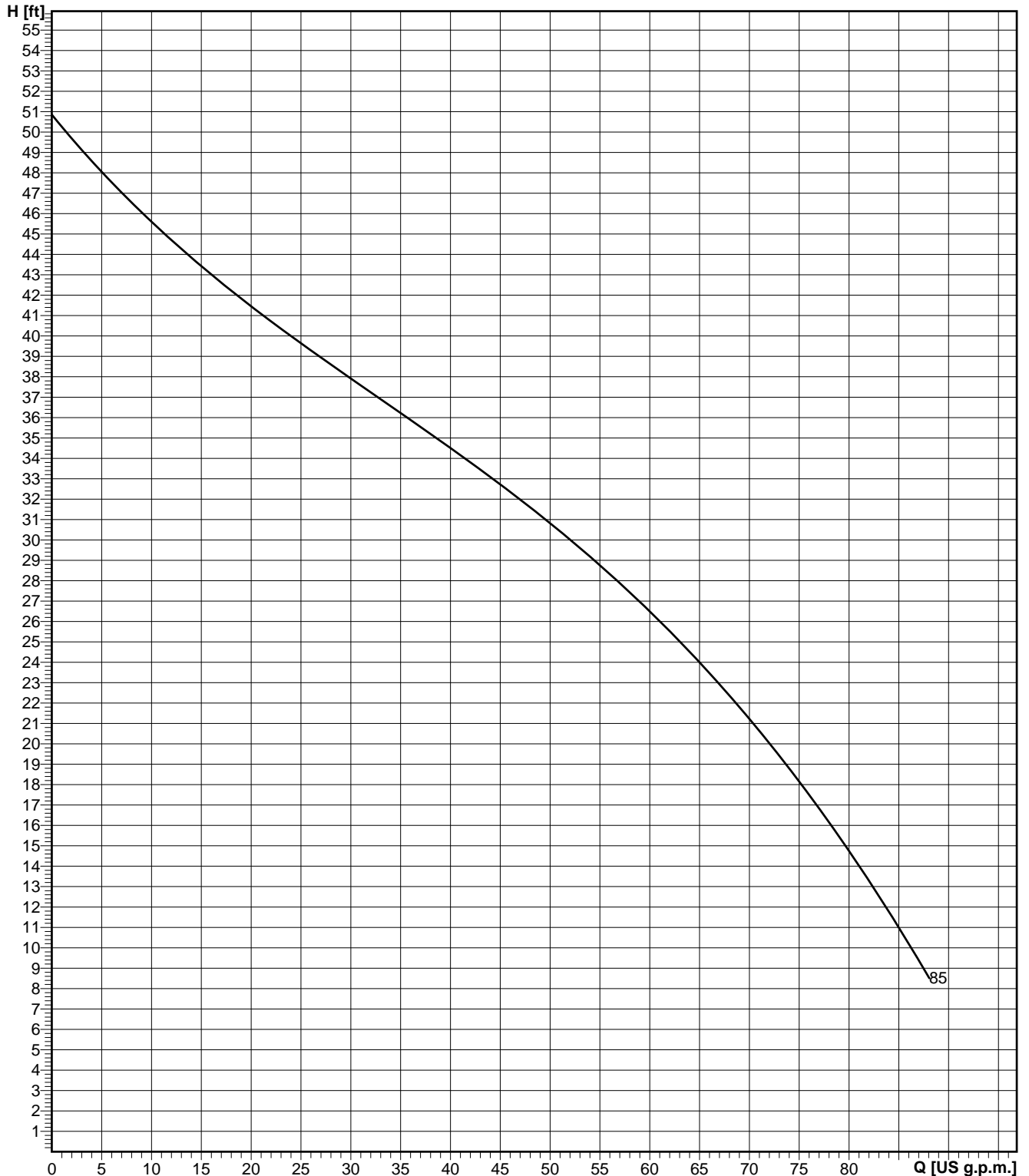


Pump performance curves

EF 05W-2 60HZ

Curve number
Reference curve
EF 05W-2

			Discharge 2"	Frequency
Density 62.428 lb/ft ³	Viscosity 0.000016813 ft ² /s	Testnorm Hydraulic Institute	Rated speed 3480 rpm	Date 2007-01-15
Flow	Head	Rated power	Hydraulic efficiency	NPSH



Impeller size	N° of vanes 6	Impeller Vortex impeller	Solid size 7/8"	Revision 2006-05-23
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SPECIFICATIONS

SCAVENGER

EF 05W

Dwg: DS-S08-064 Rev: A Date: 06/04

Section Scavenger Tab Effluent Page

GENERAL

Furnish and install _____ ABS Model EF 05W Scavenger submersible pump(s) to deliver _____ USGPM against a total head of _____ feet. The motor shall be 0.5 HP and 3450 RPM connected for operation on a _____ volt 60 Hz single phase service. The pump discharge shall be 2 inch female NPT.

PUMP DESIGN

The pump(s) shall be of the submersible type with an integral motor and pumping unit. The pump(s) shall have a recessed vortex impeller capable of handling solids laden fluids without clogging. The pump shall have an integrated, open loop handle suitable for lifting the pump by hand, and for attaching a chain shackle.

PUMP CONSTRUCTION

Impeller: The impeller shall be PTB Vortex impeller capable of passing $\frac{3}{4}$ inch spherical solids.

Pump Volute: The pump volute shall be constructed of gray cast iron with smooth internal surfaces free of rough spots or flashing. The volute shall have a vertical discharge.

Mechanical Seal: Each pump shall be equipped with a lower mechanical seal having a ceramic stationary face with a spring loaded rotating carbon face with BUNA-N elastomers and stainless steel metal parts.

Shaft and Bearings: The pump shaft shall be AISI 420 stainless steel supported by two heavy duty single row ball bearings.

Motor and Cable: The pump motor shall be enclosed in a water tight housing of gray cast iron and filled with non toxic di-electric oil. The motor shall be a NEMA design B with moisture resistant class B insulation rated for 120° C. The motor upper lid shall be constructed of gray cast iron and house the start capacitor and stator connections. Power cable shall be 15 feet long with PVC or thermoplastic elastomer insulated jacket suitable for submersible service. Pump cable shall be terminated with a molded three prong plug.

O-Rings and Fasteners: All mating surfaces of the pump and motor shall be machined and fitted with BUNA-N O-Rings where water sealing is required. Sealing shall be accomplished by the proper fitting of the parts not by compression or special torque requirements. All external screws and fasteners shall be AISI stainless steel.

Integrated Float Clamp: Pump shall be equipped with an integrated clamping mechanism to secure a piggyback float switch to the pump housing. Clamp mechanism shall allow easy adjustment of the float switch tether length so that the pump down level can be adjusted. The clamp shall not damage the float cable when tightened securely.



MOTOR SPECIFICATIONS

Motor Design	NEMA design B, squirrel cage induction, oil filled (non toxic)
Motor Type	Enclosed submersible
Insulation Class	Class B, rated at 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, 60Hz

Model	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)
EF 05W	1	0.5 Hp	115	13.2	58.5	P	0.85	50	2/3450
	1	0.5 Hp	208/230*	7.3/6.6	38.9/35.2	S	0.85	50	2/3450

* 230 volt motor can be operated on 208 volts without modification.

MATERIALS of CONSTRUCTION

Motor Housing	Cast Iron ASTM A48 Class 30
Volute	Cast Iron ASTM A48 Class 30
External Hardware	304 Stainless Steel
O-Rings	Buna-N
Motor Shaft	420 Stainless Steel
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

DIMENSIONS, WEIGHT, AND MISC.

Pump weight, single phase (lb.)	36
Maximum submergence (feet)	30
Discharge size, standard	2 Inch, Vertical
Discharge thread type	Female NPT
Discharge size, optional	none
Maximum temp. of pumped fluid	40°C continuous, 50°C intermittent

CABLE SPECIFICATIONS

MODEL	POWER CABLE Quantity, Type	LENGTH, Feet	OUTER JACKET
EF 05W	115 volt - 16/3 SJEOOW or equiv. w/ 3 prong plug 208/230 volt - 16/3 SJEOOW or equiv. w/3 prong plug	15	Thermoplastic elastomer



Maßblatt EF 05W

Dimension sheet

Plan d'encombrement

No.: F40-054

2004.03.03/ROR

Cad Code:F40-054

Anderungen vorbehalten
Technical changes reserved
Con riserva di modifiche
Con reserva de modificaciones
Sous réserve de modification

Typ Type Tipo	Gewicht Weight Poids w.cable	A
EF 04W	28.6 lb	12.3 inch
	13 kg	312 mm
EF 05W	35.8 lb	13.3 inch
	16.3 kg	337 mm

60 Hz

