

# ABS Piranha submersible grinder pump 09 - 125

ABS submersible pumps for problem-free pumping of raw sewage in pipe lines from 1¼" (DN 32) and in pressure sewer systems.

## Applications

Piranha submersible pumps have been designed for effective and economic dewatering using discharge lines of small diameter, in private, municipal and industrial areas.

- Sewage removal from houses in scattered settlements where the laying of a conventional sewer would be too expensive, where large ground undulations are present or where it is only possible to lay pipe lines of small diameter.
- Sewage removal from highway and motorway resting sites, community buildings and for renovation projects.
- For use in slaughter houses, food processing plants, paper factories, agriculture and similar areas.
- Piranha 09 is specially designed for private and domestic applications.
- Maximum allowable temperature of the medium is 104 °F, or short term to 140 °F (max. 5 minutes).

## Construction

The water pressure-tight, encapsulated fully flood-proof motor and the pump section form a compact, robust, unit construction.

## Bearings

The stainless steel motor shaft is supported in lubricated-for-life ball bearings.

## Shaft sealing

Piranha 09 - S30; between motor and hydraulic section by means of a high quality sealing unit using a silicon carbide mechanical seal. Seal at motor side is by oil-lubricated lip seal. Piranha PE25/2C - PE125/2E: SiC-SiC double mechanical seals. All seals are independent of direction of rotation and resistant to temperature shock.

## Discharge

Piranha 09: 1¼" internal thread

Piranha S10 - PE45: DN 32 flange (1¼" threaded adaptor available as accessory).

Piranha PE80/2E - PE125/2E: DN 50 (2") with DIN-flange

## Shredding system

Spiral bottom plate and stationary cutter ring combined with a shredding rotor located before the impeller, for optimum blockage-free running.

## Temperature monitoring

Thermal sensors in the stator to switch off the pump in the case of overheating and switch on automatically after cooling down.

## Seal monitoring

DI system consisting of a sensor in the motor and oil chambers which activates an alarm if there is leakage at the shaft seals. Not available for Piranha 09.



## Features

- Unique ABS Piranha shredding system capable of shredding all materials found in sewage such as cloths and plastic bags.
- For the pumping of wastewater containing sewage, offal, organic and industrial effluent.
- Piranha 09 fitted with MF modular motor; Piranha- S with AS; Piranha-PE with XFP Premium Efficiency IE3.
- Small discharge lines from 1¼" (DN 32).
- Installations are possible where large ground undulations are present.
- Standard and Ex versions.
- Piranha 09 has a capacitor in the upper lid and does not require a control box.
- Low installation costs due to small diameter discharge pipe-work.

## Motor

Three-phase 208, 230, 380, 460 and 600 V, or single-phase 208 and 230 V; 60 Hz; 2-pole (3400 rpm) or 4-pole (1750 rpm). Cooled by amply dimensioned cooling areas.

Piranha 09: insulation class F, protection type IP 68, non-Ex only. Piranha S10 - S30: insulation class F, protection type IP 68, Ex and non-Ex.

Piranha PE25/2C - PE125/2E: Premium Efficiency IE3 with NEMA Class A temperature rise, insulation class H, protection type IP 68, Ex only.

Explosive-proof versions are in accordance with FM/CSA standards.

## Materials

Description	Material
Upper Lid *	Stainless steel AISI 304
Motor Housing	Cast iron ASTM A48 Class 40B
Rotor Shaft	Stainless steel AISI 420
Volute	Cast iron ASTM A48 Class 40B
Impeller	Cast iron ASTM A48 Class 40B
Fasteners	Stainless steel AISI 316

\* Piranha 09

## Technical Data

Piranha W = 1-phase D = 3-phase	Discharge		Motor power **		Rated current (A)				Speed (rpm)	Cable type ***			Weight **** (lbs)
	Flange DN/ins	Internal thread *	(kW) P <sub>1</sub>	(hp) P <sub>2</sub>	230 V	208 V	460 V	600 V		230 V 208 V	460 V 600 V		
09/2W	-	1¼"	2.83	3.02	13.5	n.a.	n.a.	n.a.	3400	(a)	n.a.	n.a.	51
09/2D	-	1¼"	2.54	2.68	8.0	n.a.	4.0	n.a.	3400	(b)	n.a.	(b)	51
S10/4W <sup>(1)</sup>	32/1¼"	1¼"	1.48	1.34	6.5	7.2	n.a.	n.a.	1750	(c)	(c)	n.a.	71
S10/4D	32/1¼"	1¼"	1.33	1.34	5.2	5.8	2.6	2.1	1750	(c)	(c)	(c)	71
S20/2W <sup>(1)</sup>	32/1¼"	1¼"	2.45	2.41	11.5	12.7	n.a.	n.a.	3400	(c)	(c)	n.a.	71
S20/2D	32/1¼"	1¼"	2.42	2.41	7.2	8.0	3.6	2.9	3400	(c)	(c)	(c)	71
S26/2W <sup>(1)</sup>	32/1¼"	1¼"	3.13	3.49	13.7	15.1	n.a.	n.a.	3400	(c)	(c)	n.a.	88
S30/2D	32/1¼"	1¼"	3.90	4.02	11.0	12.2	5.5	4.4	3400	(c)	(c)	(c)	117
PE25/2W-C	32/1¼"	1¼"	2.90	3.35	13.3	14.7	n.a.	n.a.	3400	(e)	(e)	n.a.	188
PE28/2D-C	32/1¼"	1¼"	3.20	3.75	9.4	10.4	4.7	3.6	3400	(d)	(d)	(d)	188
PE35/2W-C	32/1¼"	1¼"	4.00	4.69	17.8	19.1	n.a.	n.a.	3400	(f)	(f)	n.a.	188
PE35/2D-C	32/1¼"	1¼"	3.94	4.69	11.6	12.9	5.8	4.5	3400	(d)	(e)	(d)	188
PE45/2W-C	32/1¼"	1¼"	5.10	6.03	22.4	24.8	n.a.	n.a.	3400	(g)	(g)	n.a.	188
PE45/2D-C	32/1¼"	1¼"	5.10	6.03	14.8	16.4	7.4	5.7	3400	(e)	(f)	(e)	188
PE80/2D-E	50/2"	-	8.87	10.70	26.6	29.4	13.3	10.2	3400	(g)	(g)	(e)	287
PE100/2D-E	50/2"	-	10.80	13.40	34.7	38.3	17.3	13.3	3400	(g)	(g)	(f)	320
PE110/2D-E	50/2"	-	12.00	14.80	37.1	41.1	18.6	14.2	3400	(g)	(g)	(f)	320
PE125/2D-E	50/2"	-	13.70	16.80	42.6	47.1	21.3	16.3	3400	(g)	(g)	(g)	320

\* Piranha S10/4-PE45/2 with threaded flange adaptor as accessory

\*\*\*\* Weight with 33 ft cable

\*\* P<sub>1</sub> = Power at mains; P<sub>2</sub> = Power at motor shaft

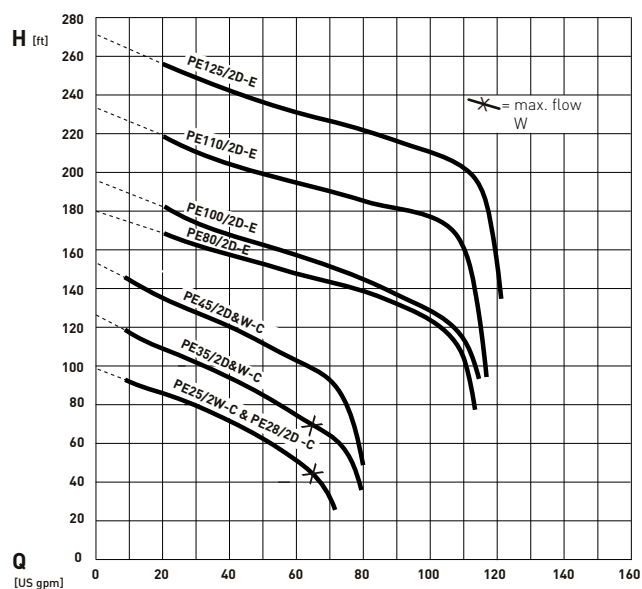
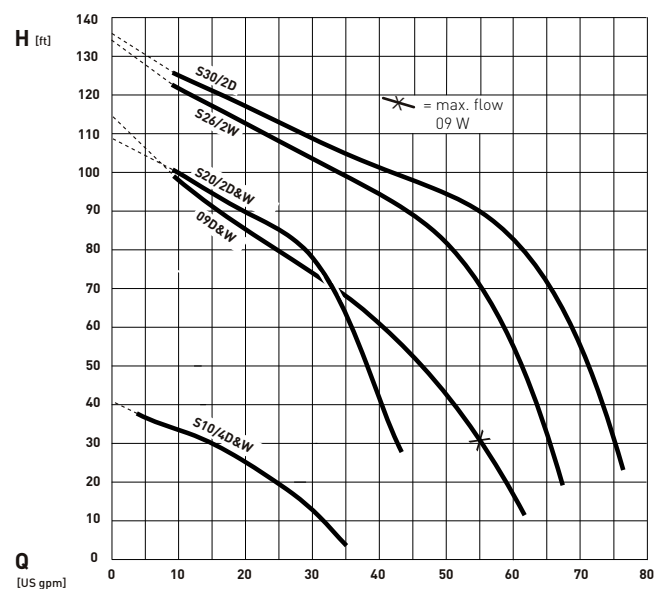
<sup>(1)</sup> Start and Run capacitor to the following specification required in control panel.

\*\*\* Neoprene cable:  
Std & Ex

(a) SJTOW-A 16/3	(e) SOOW 12/7
(b) STOW-A 16/4	(f) SOOW 10/7
(c) SOW-A 14/7	(g) AWM 8/4+16/3
(d) SOOW 14/7	

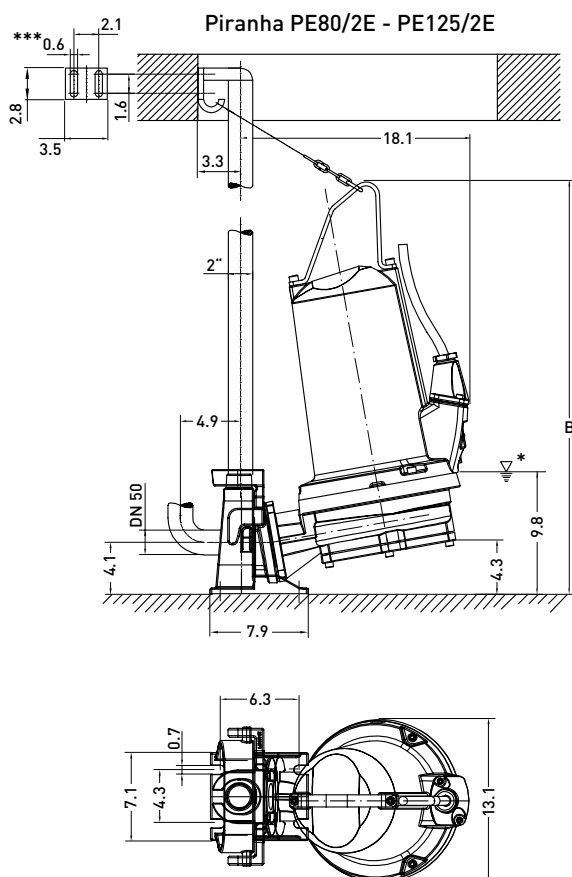
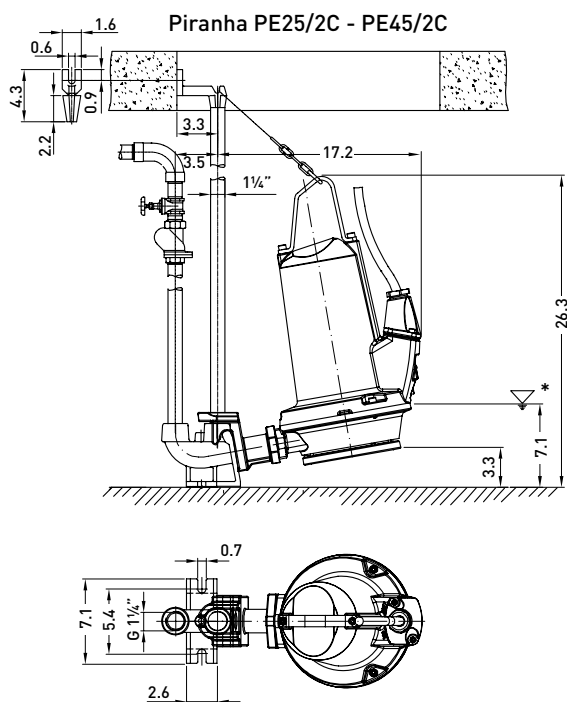
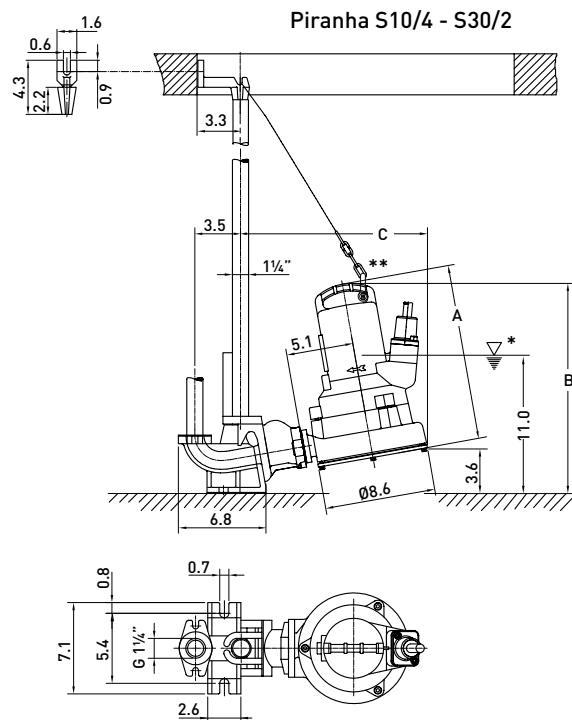
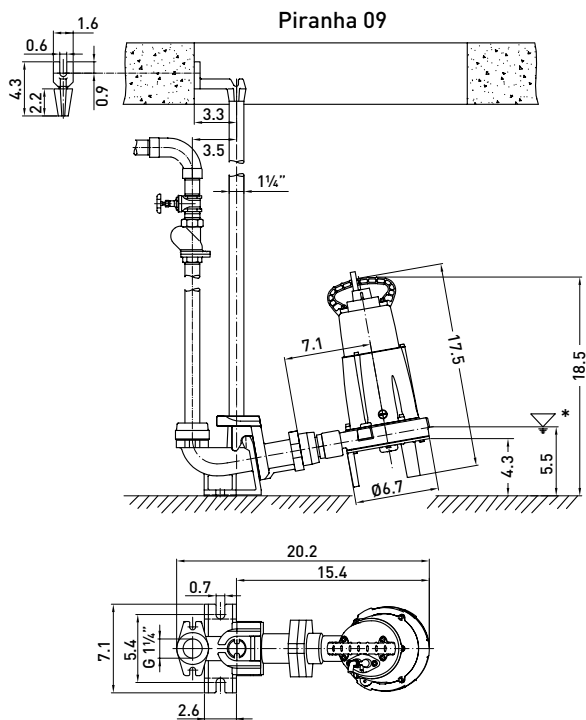
Start: 161-193µF for S10/4W & S20/2W, 200µF for S26/2W  
Run: 30µF for S10/4W, 20µF for S20/2W, 50µF for S26/2W  
The recommended start time for the motors is two seconds.

## Performance Curves



H = Total Head; Q = Discharge Volume. Curves to Hydraulic Institute N.B. please use the ABSEL program to validate pump selection.

## Dimensions (ins)



Piranha	A	B	C
S10/4 & S20/2	13.7	16.3	14.5
S26/2 & S30/2	14.2	16.8	14.7
PE80/2E	-	30.5	-
PE100/2E - PE125/2E	-	33.2	-

Piranha 09 - PE125/2E: Minimum sump opening Ø24.6 ins  
 Pedestal base secured using M10 masonry anchor bolts,  
 drill hole size 0.6 ins  
 \* Lowest switch-off point for automatic operation

Piranha S10/4 - S30/2: \*\* To allow the pump to be lowered and fixed correctly to the pedestal,  
 the shackle must be fixed to the handle at the point furthest  
 from the guide rail.

Piranha PE80/2E - PE125/2E: Discharge line connection with threaded flange DN 50/2" PN16  
 Discharge elbow supplied by customer  
 \*\* Hexagon head wood screw 10 x 70 DIN 571 and dowel size 12

## Accessories

	Description	Size	Part no.	Piranha
<b>Fixed installation with pedestal</b>	<b>Pedestal</b> (EN-GJL-250) 90° cast bend	G 1¼"	62325007	09
		G 1¼"	62320674	S10/4-S30/2,
		G 1¼"	62320676	PE25/2C-45/2C
	90° cast bend with built-in non-return valve	G 1¼"	62320536	S10/4-S30/2
		G 1¼"	62320538	PE25/2C-45/2C
	without bend	DN 50/G2"	62320660	PE80/2E-125/2E
	<b>Threaded Adaptor</b> hexagon double nipple	G 1¼"	13770011	09
	<b>Guide Rail</b> (galvanized steel)	1¼" x 3.3 ft	31380007	09-PE125/2E
		1¼" x 6.6 ft	31380008	
		1¼" x 9.8 ft	31380009	
		1¼" x 13.1 ft	31380010	
		1¼" x 16.4 ft	31380011	
	<b>Chain Kit</b> (galvanized steel) including shackle	9.8 ft	61265065	09-PE125/2E
		13.1 ft	61265093	
		19.7 ft	61265069	
		22.0 ft	61265096	
	<b>Chain Kit</b> (stainless steel) including shackle	9.8 ft	61265081	09-PE125/2E
		13.1 ft	61265099	
		19.7 ft	61265085	
		22.0 ft	61265102	
<b>Transportable applications</b>	<b>Threaded Flange Kit</b> (EN-GJL-250) including discharge piece, gasket and bolts	G 1¼"	61180512	S10/4-PE45/2C
	<b>Ground Support Stand</b> (St. 37) with fixing bolts		61900013 61900007	S10/4-S30/2 PE25/2C_125/2E
	<b>Fixed Coupling</b> (brass) GEKA with external thread	G 1¼"	15020003	S10/4-PE45/2C
	<b>Hose Coupling</b> with nozzle, outer dia. 34 mm	G 1¼"	15020018	S10/4-PE45/2C
<b>Horizontal</b> (tank connection)	<b>Pump</b> with built-in flange on suction side	DN 150/PN 16 to DIN 2633	On request	S10/4-PE125/2E
	<b>Head Support</b> (EN-GJL-250) with vibration damping		62665103	S10/4-S30/2
<b>General</b>	<b>Non-return Valve</b> (EN-GJL-250) ball valve with internal thread	G1¼"	61400525	09-PE125/2E
		G1½"	61400526	
		G2"	61400527	
	<b>Shut-off Valve</b> (brass) with internal thread	G1¼"	14040005	09-PE125/2E
		G1½"	14040006	
		G2"	14040007	