

SELF PRIMING TYPE PUMP

Dpumps series combine the best design features of its standard pumps with efficient self-priming casings. These specific-purpose wet end parts fit the basic building block philosophy in that they utilize the standard pump components from the impeller on back to the bearing housing. The self-priming casings were designed to pump from liquid sources which do not flow naturally to the pump's suction, such as from sumps or from the tops of tank cars.

Costs less to buy, install and service than submersible pumps. Utilizes the same power end, shaft, seal chamber and impeller as the standard ANSI pump. Only the casing is special.

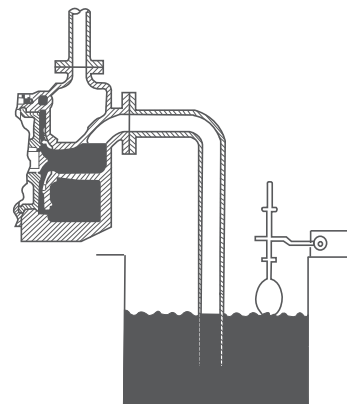
Applications

- Sump service
- Tank car unloading
- Duplex pumping lift stations
- Flyash pond transfer
- Waste acid transfer
- Waste Treatment lagoon service

PRIMING CYCLE

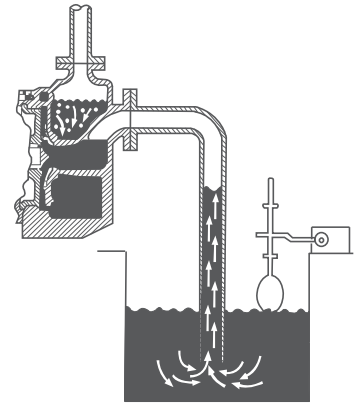
1.- SUMP FILLING, PUMP STOPPED

The casing is shown with the initial prime liquid, which permanently stays in the casing. This serves as the priming liquid necessary to entrain the air contained in the suction line.



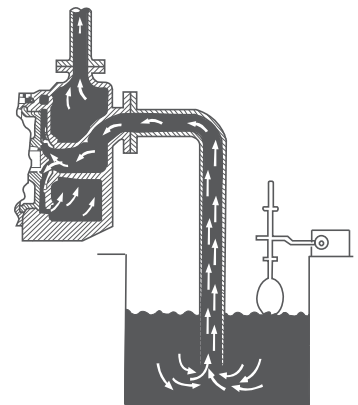
2.- PUMP START-UP

As the impeller spins the priming liquid entrains air from the suction pipe and is pumped into the air separator/priming tank portion of the casing. In this chamber the air separates from the priming liquid and vents out the discharge while the priming liquid flows through the bypass slot in the bottom of the casing and back into the impeller eye. As the priming liquid circulates, it reentrains more air, creating a partial vacuum in the suction line. The sump liquid is then pushed upward by atmospheric pressure



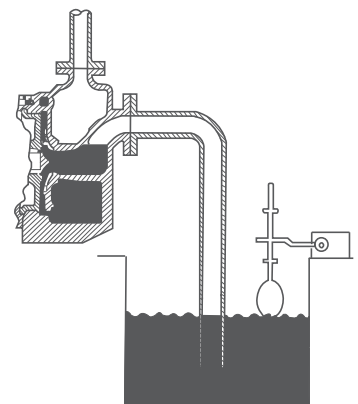
3.- PRIMING ACHIEVEMENT

After the priming cycle has evacuated all of the air from the suction pipe, the sump liquid floods the volute, air separator and priming chamber, and pipe begins. The Unitized self-priming is fully primed and now operates exactly as a standard flooded-suction pump.

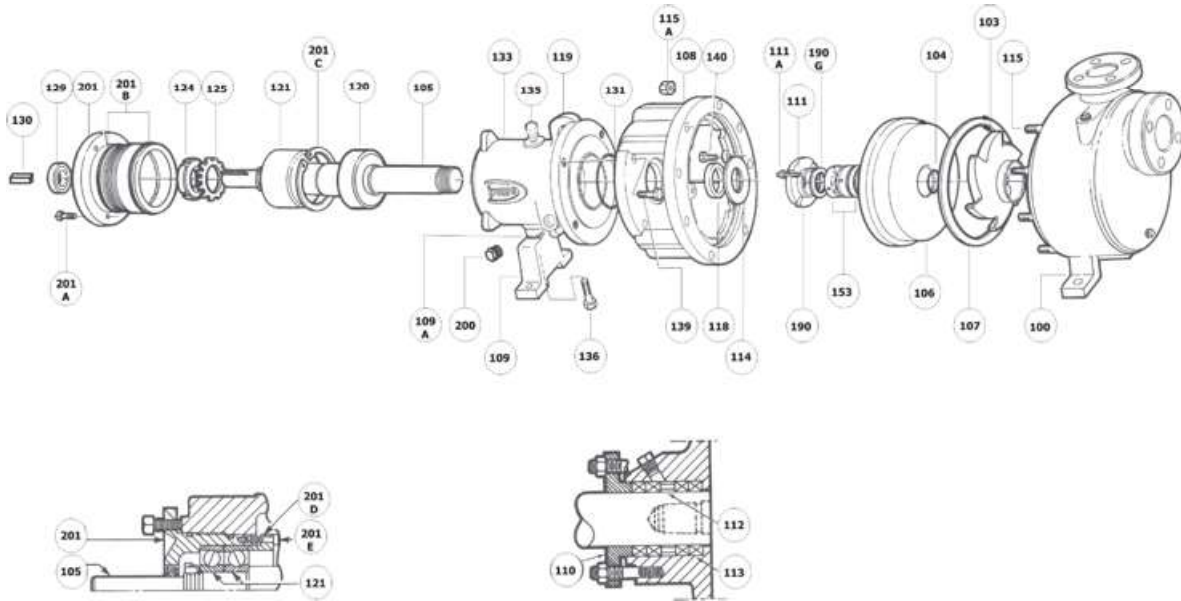


4.- SUMP EMPTY, PUMP STOPPED

When the pump stops, the liquid in the discharge piping flows back through the pump, leaving the priming chamber filled with sufficient liquid for the next priming cycle. Except for the first fillup of the priming chamber and an occasional "topping off" in dry climates, the unitized self-priming from Dpumps series is automatic and trouble-free.



SECTIONAL DRAWINGS



ITEM	DESCRIPTION		ITEM	DESCRIPTION	
100	Casing		124	Bearing Locknut	
103	Impeller		125	Bearing Lockwasher	
104	Impeller Gasket		129	Outboard Oil Lip Seal	
105	Shaft		131	Adapter O-Ring	
106	Cover		134	Bearing Housing Drain Plug	
107	Cover		135	Bearing Housing Vent Plug	
108	Adapter		136	Capscrew – Foot	
109	Bearing Housing Foot		139	Capscrew – Bearing Housing	N/A
110	Gland – Packing	OPT.	140	Capscrew – Cover/Adapter	
111	Stud – Gland		153	Mechanical Seal	
111A	Hex Nut – Gland		177	Hook Sleeve	OPT.
112	Lantern Ring Halves	OPT.	190	Gland – Mechanical Seal	
113	Packing	OPT.	190G	Gland Gasket	
114	Inboard Deflector	OPT.	200	Oil Sight Gage	
115	Stud – Casing		201	Carrier	
115A	Hex Nut – Casing		201A	Set Screw – Carrier	
118	Inboard Oil Lip Seal		201B	O-Ring – Carrier	
119	Bearing Housing		201C	Bearing Carrier Retainer	
120	Inboard Bearing		201D	Clap Ring Bearing Housing	OPT.
121	Outboard Bearing		201E	Socket Head Capscrew Clamp	OPT.
122	Oil Slinger	OPT.			