

Horizontal self-priming centrifugal pumps SA



DESMI

SA



Material specification

Materials	A	D
Pump casing	Cast Iron	Bronze
Impeller	Bronze	NiAl-Bronze
Sealing ring	Bronze	NiAl-Bronze
Rear cover	Cast iron	Bronze
Shaft	St. steel	St. steel
Shaft seal	Mechanical	Mechanical

Temperature range:

With standard mech. shaft seal max. 80°C, with special mech. shaft seal max. 120°C.

Capacity range:

0-800 m³/h

Pressure range:

0-120 mLC



Your choice of any pump should be a well considered act, not to be left to pure chance.

Your choice of a DESMI self-priming centrifugal pump holds out the advantages of versatility and sturdiness. Once the pump casing has been filled with water, the pump will be self-priming, i.e. it will automatically remove the air in the suction pipe using the diffuser principle. Another feature is the ability of the pump to carry impurities and solids along with the actual fluid. This is due to the open impeller design including a replaceable wear plate, as distinct from closed impeller design of other centrifugal pumps.

Thousands of DESMI pumps are being used throughout most parts of the world in greatly varied fields of operation such as those of ships, contractors, agriculture, and industry at large. Within these sectors one might mention the functions of:

- Bilge pumps
- Ballast pumps
- Fire pumps
- Cooling water pumps
- Wash-deck pumps
- Fuel pumps
- Wellpoint pumps
- Irrigation pumps
- Circulation pumps
- Etc.

DESMI provide pumps for virtually any demand and any job, and our technical know-how and comprehensive pump range stand behind you in securing the right pump for the right purpose.

Our engineers are experts, and their knowledge and experience, remain at your disposal. If you are up against any pump problems which cannot be solved in applying the information from this leaflet, please contact us... we can help you!



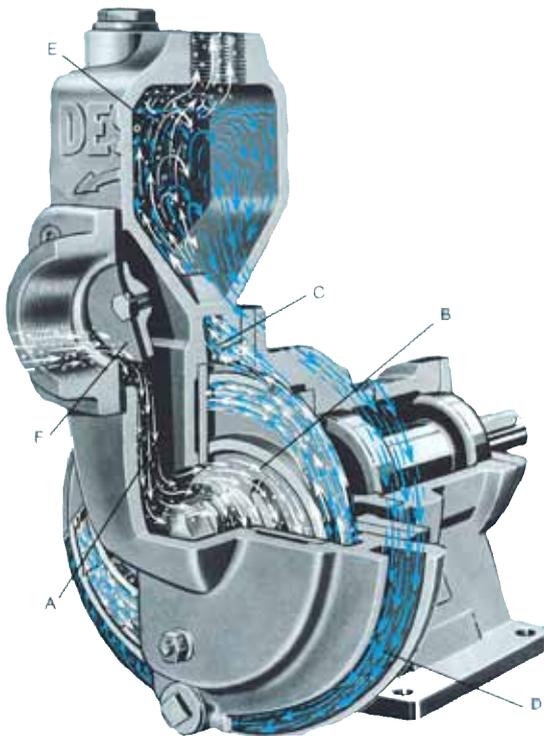
Operation Principle - Rapid and Safe Priming

The priming principle of the DESMI self-priming centrifugal pumps is based on the diffuser principle. This means that the priming capacity is not dependent on valves or other mechanical elements since it is the liquid flow which carries the air.

For priming, the pump casing is filled with liquid prior to starting. Due to the rotation of the impeller the liquid is immediately pumped from suction chamber A through impeller B into air separating chamber.

Due to the negative pressure thus created in the impeller eye liquid is drawn through return passage D, into the impeller. Due to the negative pressure in the pump, check valve F opens so as to draw air from the suction line into the pump where liquid and air are mixed and proceed through passage C into air separating chamber E.

The water velocity of the air purging space is so low that the air is separated from the liquid, and the vented water carries on the circuit through the return passage and the impeller until the total air content of the suction pipe has been separated in space E.



Advantages

1. Open impeller design

Semi-open, non clogging high efficiency impeller allowing the pump to operate on dirty water.

2. Replaceable wear plate

To keep the pump at max. capacity even after working with abrasive fluids for a long time, the tolerance between impeller and wear plate may be adjusted by way of shims behind the replaceable wear plate.

3. Mechanical shaft seal

A reliable, spring-loaded, mechanical shaft seal ensures rapid suction, and shaft wear and stuffing box tightening are avoided.

4. Check valve mounted at a high level

The pump check valve is mounted well above the impeller inlet. Consequently, the pump will not - in case of a check valve leakage - lose the priming water which would result in a loss of priming ability.

5. Heavy bearing design

Heavy shaft and bearing design provide long life even in case of belt drive.



Assembly Combinations

Flangemounted with electric motor.	Mounted on base frame with petrol or diesel engine or with hydraulic or electric motor.	With bare shaft end.
