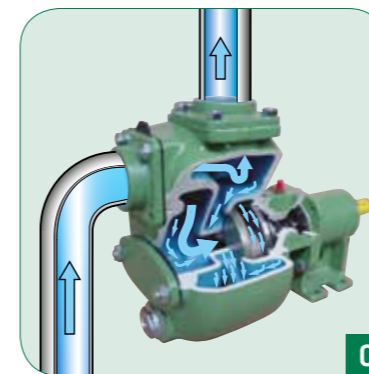
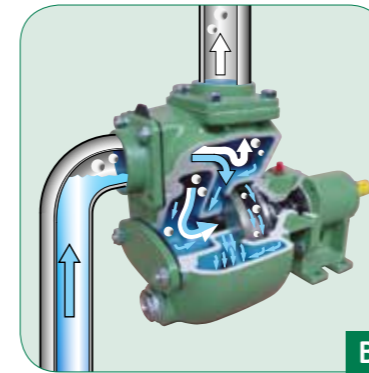
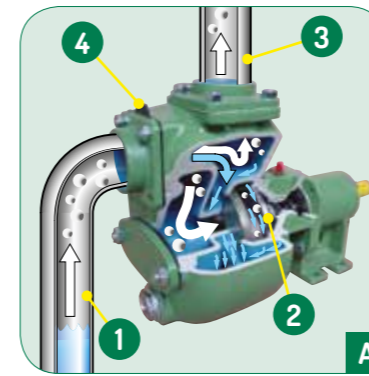




## Operating principle and limits of use



The S series pumps are centrifugal and self-priming. The impeller with open blades allows a wide passage of solids. With this kind of pump you can handle wastewater also with corrosive and viscous liquids containing solids in suspension, abrasive powders, even if there are air bubbles.

One of the advantages of this type of pump is indeed that it doesn't need to be immersed in the liquid. The maximum suction height is given by the physical conditions of the pumped liquid and can reach up to 8 m.

Since the pump is normally placed dry above or aside the liquid, the suction line contains air.

The self-priming pump will evacuate all the air. The vacuum, that is produced when the impeller rotates ②, draws the air ① into the pump where it is mixed with the liquid already contained in the pump casing. The air/liquid mixture is driven to the discharge side where the air is separated and expelled through the discharge port ③. The liquid falls back due to the higher gravity and is reused in the suction side through a small passage. When all the air has been evacuated from the suction line, the liquid is pumped, despite the air-charged. The high suction port keeps enough liquid inside the casing to allow re-priming any time. The non-return valve in the suction port ④ avoids a backflow of the liquid and reduces priming times.



The pumps are available with ATEX certifications to fulfill the EU regulation "Directive 2014/34/EU" that regulates the security of use for the equipment in potentially explosive atmospheres. We can supply ATEX certifications for the areas of Group II, categories 2GD (Zone 1) and 3GD (Zone 2) for the temperature classes T1/T2/T3 and T4.

By filling out a simple questionnaire, you can check the availability of the certificate for the specific request.

Further information is available on request.