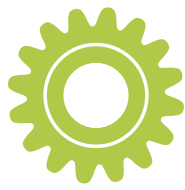


5 BASIC DIFFERENCES BETWEEN CENTRIFUGAL PUMPS AND POSITIVE DISPLACEMENT PUMPS

CENTRIFUGAL

WORKING

POSITIVE DISPLACEMENT



An impeller rotates in the housing, reducing pressure at the inlet. This brings fluid to the outside of the pump's housing, increasing the pressure enough to push it out of the discharge.

They pull fluid into a compartment at the inlet and move it to an outlet for discharge using a rotary, reciprocating, or diaphragm method to move the fluid.

FLOW RATE



Variable - they will move fluid at different speeds depending on pressure.

Fixed - they will move fluid at the same speed regardless of pressure on the inlet.

VISCOSITY



Lower viscosity fluids of up to 850 cSt do well in centrifugal pumps.

High viscosity fluids run more efficiently, with lower energy costs in PD pumps.

APPLICATIONS



Simple applications like water pumped at 1000 gpm, with no back pressure do great in centrifugal pumps. They are cheap and efficient. Some selfpriming pumps can lift liquid to 13" hg vacuum.

PD pumps do well in complex applications - like those involving suction lift. They create a vacuum on the inlet side and can reach vacuums of 25 to 28" hg - a great choice for lift.

PRESSURE



Best for low pressure applications but can be run in series to boost pressure.

Operates from 250 PSI to 3,000 PSI and gets more efficient in higher pressure.