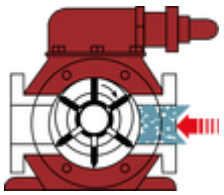
Prodek
Serving the Industry

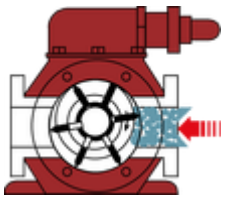
Positive Displacement Rotary Pumps: How They Work

The Magmaflo is a self priming positive displacement pump of simple rotary sliding vane design. As the rotor revolves, a fixed volume of fluid is discharged. This is moved from the suction port to the discharge port by the vanes which slide within the rotor against the pumping chamber wall.

- Three forces ensure close contact between the vanes and the pumping chamber wall.
    1. Pump rotation produces centrifugal force.
    2. Idler rings located within the rotor.
    3. Hydraulic pressure from behind the vanes.



- As the pump rotor revolves, mechanical, centrifugal & hydraulic forces move the sliding vanes outward from their slot in the rotor towards the suction port.



- A vacuum is created by the expanded chamber & the fluid is drawn in & positioned between the vanes where it is transferred to the outlet port for discharge.

- As the vanes reach the summit of the cycle, they are pressed into their slots by the roof of the pumping chamber.

Self-Adjusting Vanes Sustain Efficiency: The pump maintains high volumetric efficiency throughout service. Because the rotor vanes are self-adjusting, internal pump slip is reduced to a minimum. Suction and discharge capacity is unimpaired even after arduous service. Compensation for wear on the vanes is affected as the vanes are able to slide outward within their slots thereby maintaining the same fine clearance against the pumping chamber.

Sliding Vanes Cost Less To Maintain: The Magmaflo pump is designed to allow for easy maintenance without special tools and in most cases without even having to disconnect the pump from the piping system. To change vanes, simply remove the outer head and replace critically worn vanes as and when necessary. Routine servicing is just as easy, keeping downtime and maintenance costs to a minimum.

MAGMAFLO
POSITIVE DISPLACEMENT ROTARY PUMPS

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