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## HOW IT WORKS:

- Liquid enters the inlet port of the pump through gravity or priming and is directed towards the center of the impeller.
- The rotating impeller uses centrifugal force to add velocity to the liquid as it is slung off the edges of the blades into the volute casing.
- The volute configuration converts the velocity energy into static pressure or available pump head as the liquid leaves the discharge port.

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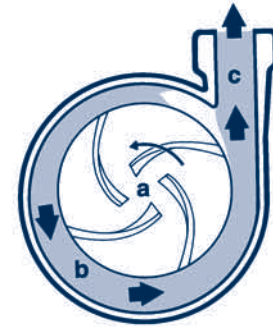
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## FEATURES:

- High Volume Flow:** centrifugal pumps deliver a high volume of flow with smooth, non-pulsating delivery
- Low Maintenance:** wear due to operation is minimal, are easily disassembled and have few moving parts
- Low Power Consumption:** most efficient pump for moving large volumes of liquid

## CENTRIFUGAL



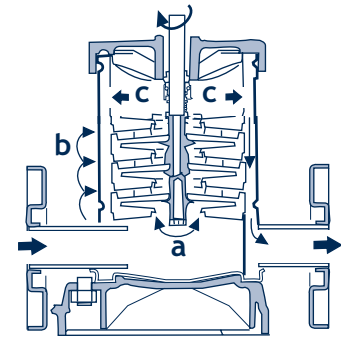
## HOW IT WORKS:

- Liquid flows by gravity into the suction port and enters the center of the first impeller/stage (a).
- Each successive centrifugal impeller/stage (b) directs its flow into the suction of the next impeller/stage, which adds to the accumulated discharge head/pressure of the liquid.
- As the liquid leaves the last impeller/stage (c) it is directed toward the discharge port through the area between the inner and outer casings.

## FEATURES:

- High Head/Pressure:** Produces significantly higher head/pressure than single stage centrifugals
- Continuous Duty:** Designed to run 24 hours a day, 7 days a week

## MULTI-STAGE CENTRIFUGAL



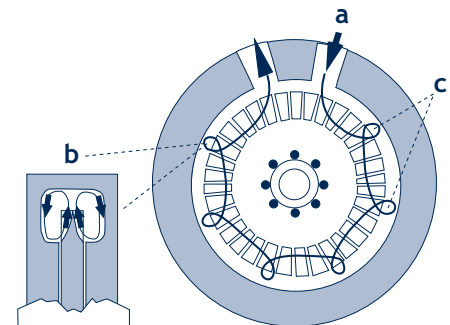
## HOW IT WORKS:

- Liquid enters the suction port (a) and is pushed forward by the blades of the impeller (b) in an orderly circular flow around the periphery of the housing.
- The circular liquid flow in the side channels (c) occur many times during one revolution resulting in 10 times or more discharge pressure than from a similar diameter impeller turning the same speed in a centrifugal pump.

## FEATURES:

- High Head/Low Flow:** Produces high head at low flow without damaging pump components
- Continuous Duty:** Designed to run 24 hours a day, 7 days a week
- Compact:** More compact than multistage centrifugals that deliver the same flow and head
- Entrained Air Handling:** up to 20%

## REGENERATIVE TURBINE



## HOW IT WORKS:

- Liquid remains trapped in the pump housing between uses.
- When impeller rotates the trapped liquid forms a ring around the interior diameter of the pump housing.
- The expanding cavities formed between the rotating impeller vanes and the liquid ring draws in liquid through the inlet port area (1).
- The compressing cavities formed between the rotating impeller vanes and the liquid ring forces the liquid out through the discharge port area (2).

## FEATURES:

- Won't Airlock:** fastest, surest priming there is!
- Low Wear:** non-contacting internal parts using the "liquid ring" to maintain efficiency
- Reversible (some models):** great as a transfer pump

## LIQUID RING

