

# **SIDE CHANNEL SELF - PRIMING PUMPS**

**RAJ PUMPS**  
*Simply the Best*



## SIDE CHANNEL PUMP

A Side channel Pump consists of one or more stages with each stage comprising of a suction plate, Impeller and Delivery plate. The Side channel is a circular groove in the delivery plate. Liquid enters through the suction plate and is pressurised by the action of the rotating blades of the impeller and the constraints of the side channel.

The Side channel Pump generates a higher pressure than any other type of Pumps of a comparable size and power. They are self prime, less vulnerable to cavitation and have the ability to Pump liquids upto 50% entrained gases. Generally side channels Pumps can only be used with clean liquids free from solids. The small clearances within an impeller stage means that the side channel Pumps are susceptible to damage from embasive solids.

The ability of such Pumps is to self prime combined with their low risk of cavitation making them ideal for safe and efficient handling liquids near their vapour pressure. Side channel Pumps are used extensively in applications where a standard centrifugal Pump would fail. These Pumps are self priming and can Pump large amount of entrained gas without any problem, making them an ideal choice for loading and unloading applications.



**Vane Wheel Impeller & Side Channel Plate**

## DESIGN BENEFITS

**High pressure generation-** The working principle of side-channel Pumps generates pressures up to 10 times the pressure generated by other Pump types operating at the same speed. This makes it suitable for high pressure applications including those where the fluid needs to be pumped across long distances or through small pipe work. The casing is also designed to withstand high pressures and often liquids such as LPG which is stored in a pressurised container to keep it in liquid form as at an atmospheric pressure it becomes gas. Water can also be pumped at temperatures above boiling point provided the water is kept pressurised above atmospheric pressure.

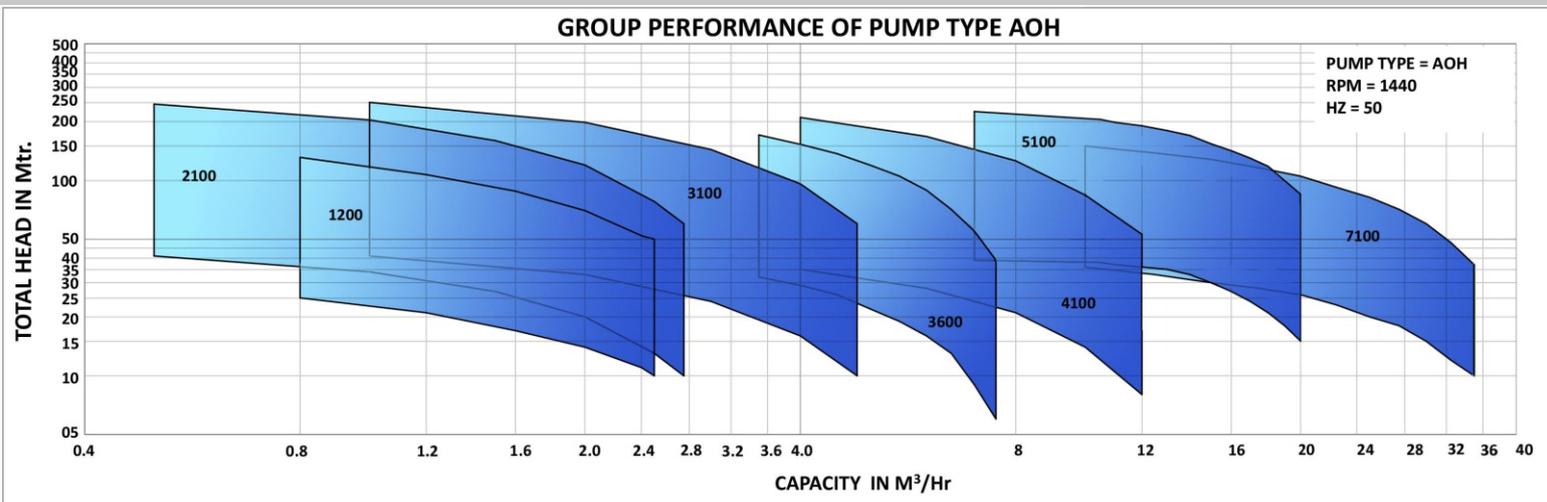


## STANDARD PUMPS IN EXOTIC METALS

Standard Pumps have a proven record of exceptional reliability. All parts in contact with corrosive media are made from exotic metals such as SS 304(CF8e), SS 316(CF8M), Gunmetal, Duplex etc.

This ensures that the Pumps are impervious to liquids and are resistant to highly corrosive and thermal stresses depending on the process conditions and fluids involved.

Besides these standard types, we cater for special requirements & develop Pumps which can also be used safely and reliably for more demanding duties. In such cases we work closely with our customers. Our team of experts analyse the required liquid transfer and on this basis develop solutions which optimally meet their requirements in terms of performance, design and economy.



### Performance Data

**Capacity:** to 35 m<sup>3</sup>/h

**Delivery Head:** to 250 m

**Speed:** to 1450 rpm (50 Hz);

**Temperature:** to 150°C

**Casing Pressure:** PN 40



## APPLICATIONS



**Dissolved Air Flotation**



**Hot Water Circulation**



**Shipping Industry**



**Textile Boiler Industry**



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