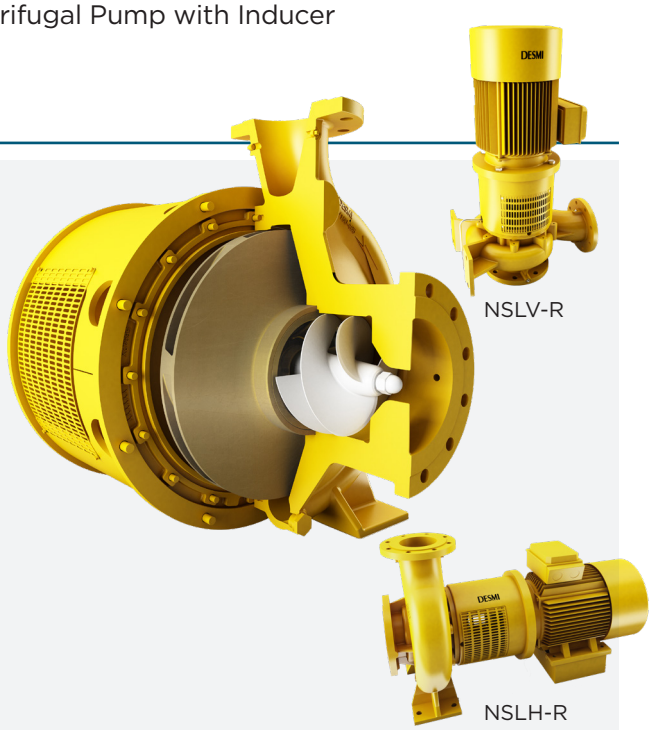
NSLV-R & NSLH-R WITH INDUCER

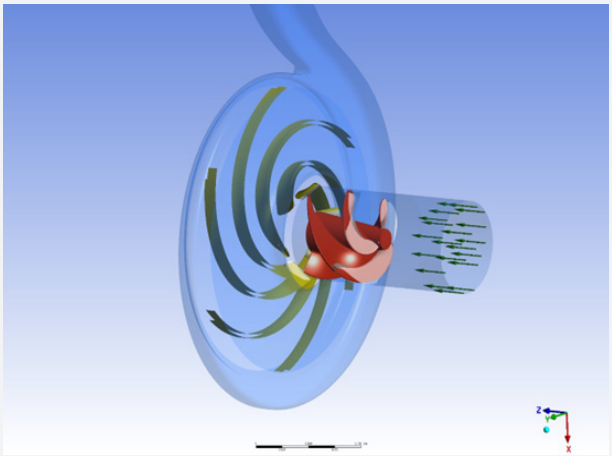
Vertical (NSLV) & Horizontal (NSLH) End-suction Centrifugal Pump with Inducer

The DESMI NSLV-R & NSLH-R pump is designed for vertical and horizontal mounting and accommodates an inducer on the pump shaft end at suction nozzle.

Pumps with inducers may reduce the value of NPSHr to approximately half near best efficiency flow comparing with a pump without inducer. An inducer increases the static pressure upstream of the impeller, which may reduce or suppress the cavitation bubble development on the impeller blades accordingly. The pump can be operated well at a higher rotation speed and/or in lower NPSHa work conditions than a pump without an inducer.



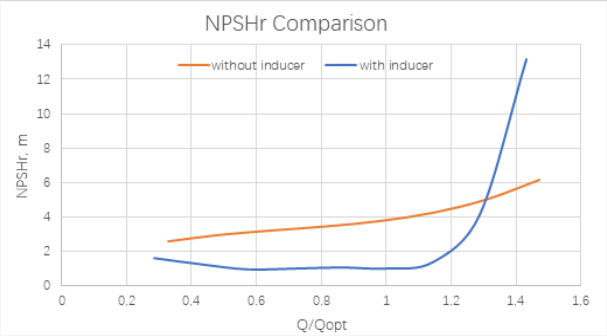
DESMI inducers are applied with variable pitch to realize a higher specific suction speed in a limited axial space. After CFD simulation and optimization, cavitation on impeller is supressed significantly with much less bubbles developed after DESMI inducers are mounted.



The pumps are particulary suitable for the pumping of water in connection with various firefighting systems, mainly when extremely low NPSHr is required like main firefighting pump, emergency firefighting pump, water sprinkle and spray pump, firefighting foam pump, etc.

Norminal Diameter (DN)	65 to 600
Flow rate - 50 Hz	Up to 6200m³/h (27300 US gpm)
Flow rate - 60 Hz	Up to 5900m³/h (26000 US gpm)
Head	Up to 200 m (660 ft)
Pressure	Up to 25 bar (360 psi)
Temperature	Up to 140°C (284 °F)
Motor	Standard and Ex motor
VFD	Direct or Bulkead/Wall-mounted
ATEX approved	

The typical NPSHr curves with and without mounted DESMI inducer:



Design Features

The pump is an end-suction, radially split, single-stage centrifugal pump with connecting flanges according to international standards.

The optimized suction nozzle geometry matches the inducer installation perfectly to ensure the pump performance and reliability. The pump is designed for mounting with electric motors having different international flange dimensions.

The pump casing is equipped with a replaceable sealing ring.

The impeller is made with double-curved blades to ensure low NPSHr values and high efficiency.

The bearing unit is equipped with sturdy ball bearings, and the small bearing types are fitted with lifetime-lubricated bearings. In the larger bearing types the lower bearing is a double bearing for which a lubrication point is provided.

A shaft in stainless steel with shorter cantilever is to secure operational reliability and maintenance conveniences.

Inducers are made of stainless steel to achieve good anti-cavitation performance and reasonable inducer lifetime.
Mechanical shaft seal of an approved brand is standard.

Standard Material Specifications	
Pump casing	Cast iron
Impeller	NiAl-bronze
Sealing ring	NiAl-bronze
Rear cover	Cast iron
Shaft	Stainless steel
Shaft seal	Mechanical
Inducer	Stainless steel
Alternative material combinations are available. Cast iron, ductile iron, bronze, NiAl-bronze, stainless steel, super duplex stainless steel.	