

# NSLV & NSLH

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



The DESMI NSLV pump is designed for vertical mount (with suction flange downwards) and the NSLH pump for horizontal mount.

The pumps are particularly suitable for the pumping of water in connection with cooling systems, cooling of diesel engines, as bilge pumps, ballast pumps, fire pumps, brine pumps, pumps for irrigation, fish farms, water works, army and navy etc.

The DESMI NSLV and NSLH pumps meet the special marine and industrial market requirements for:

- High efficiency
- Low NPSH values
- Easy installation/service
- Specific materials
- Compact design
- Standardized to modular design
- Outstanding hydraulic design performance
- Spacer-coupling options for easy maintenance
- Robust shaft design
- High efficiency impeller with low NPSH values
- Self-priming ability with a separate built-on priming pump

### Design Features:

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

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

A shaft in stainless steel with mechanical shaft seal of an approved brand is standard.

### Alternative Materials

Cast iron, ductile iron, bronze, NiAl-bronze, stainless steel, super duplex stainless steel

Norminal Diameter (DN)	65 to 600
Flow rate - 50 Hz	Up to 6200 m <sup>3</sup> /h (27300 US gpm)
Flow rate - 60 Hz	Up to 5900 m <sup>3</sup> /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 Bulhead/Wall-mounted
Some pump sizes are available with inducer for obtaining lower NPSHr. An inducer might give up to 50% NPSHr reduction near best efficiency flow.	

ATEX Approved

Standard Material Specifications	
Pump casing	Cast iron
Impeller	NiAl-bronze
Sealing ring	NiAl-bronze
Rear cover	Cast iron
Shaft	Stainless steel
Shaft seal	Mechanical

Alternative material combinations are available

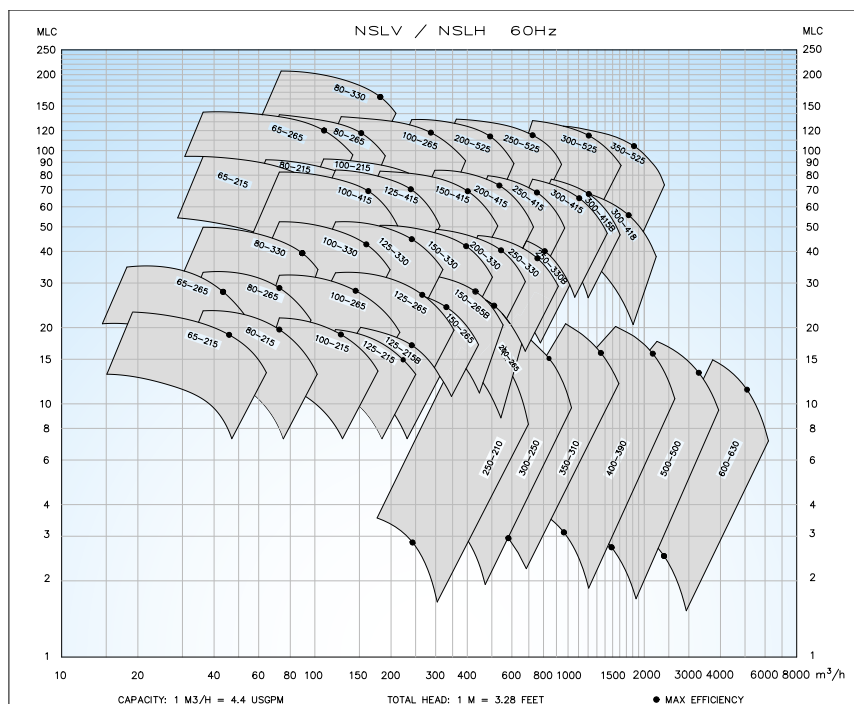
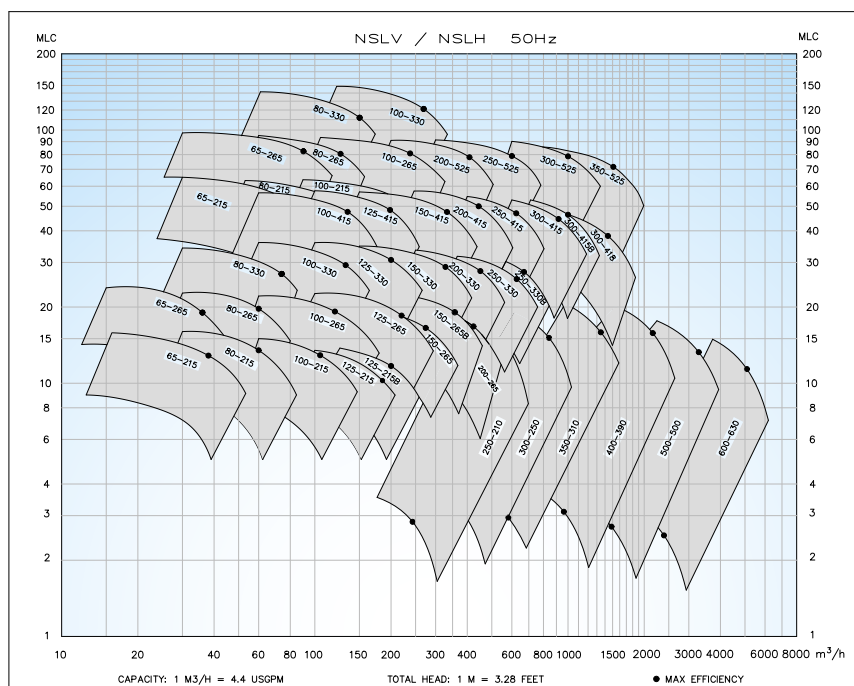
## Applications:

The pumps are suitable to district heating & cooling, water circulation, cooling towers distribution, fresh and seawater cooling, bilge and ballast, fire-fighting and general service pumping and further for transport of slightly aggressive liquids with low viscosity such as diesel and lubricating oils. Further, the pumps can be supplied in a special version for pumping brine and similar media.

All pump sizes are available as self-priming pumps with a separate built-on priming pump of the water ring type, complete with suction strainer and water feed tank.

The priming pump is equipped with its own electric motor and is suitable for manual or automatic start/stop.

The pump can also be equipped with an air-operated ejector priming unit.

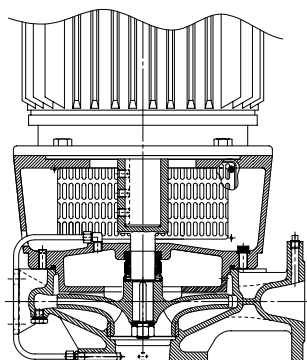


DESMI NSLV

## Pump Details

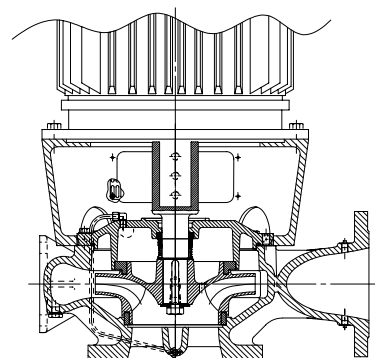
### Pumps with Ø 215 and Ø 265 Impeller

Dimension of the suction flange is one size larger than that of the discharge flange. The line through inlet and outlet is flush with the centre line of the shaft. The pumps are mounted with one impeller wear ring.



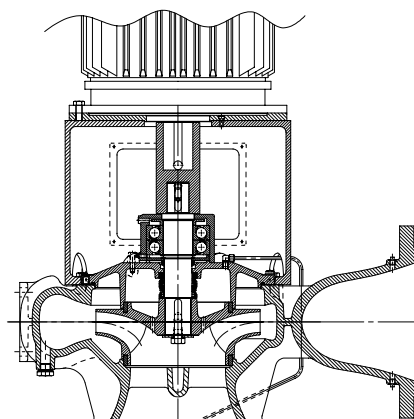
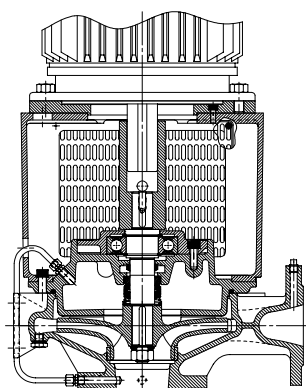
### Pumps with Ø 330, Ø 415 and Ø 525 Impeller

Dimension of the suction flange is one size larger than that of the discharge flange. The line through inlet and outlet is flush with the centre line of the shaft. The pumps are mounted with two impeller wear rings.



### Monobloc Without Bearing

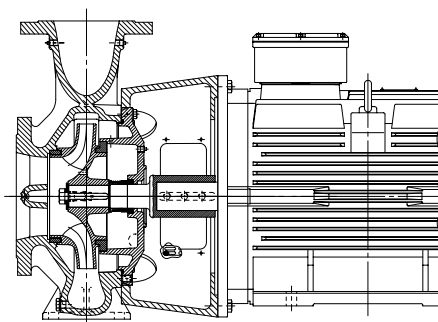
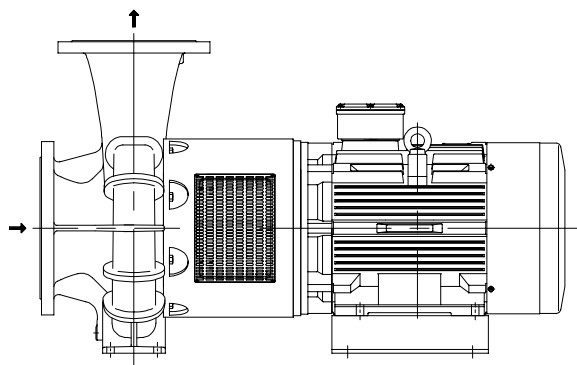
The pump is for small capacities and limited space. This version has no pump bearings, only the ball bearings in the standard electric motor. The power transmission is by rigid coupling. Dismantling of the pump parts is possible without removing the pump casing from the piping.



### Monobloc With Bearing

The pump is for major capacities and heavy loads, especially recommended where the advantage of the spacer coupling is of no importance and where a small overall height is required.

The pump is equipped with a separate rear cover with a ball bearing and a separate motor bracket. Dismantling of the rotating pump parts is possible without removing the pump casing from the piping.

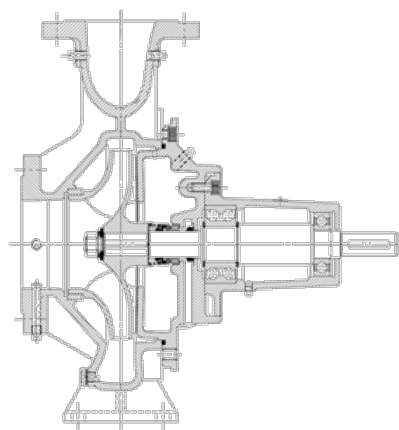
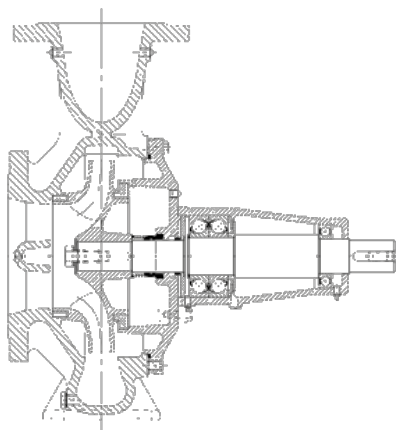


All vertical NSLV pumps are also available in a horizontal version.

## Design Details

### Free Shaft End

The pump is available in a free shaft end version mounted on a baseplate with diesel engine, hydraulic or electric motor



Pumps with Ø210, Ø250, Ø310, Ø390, Ø500 and Ø630 impeller

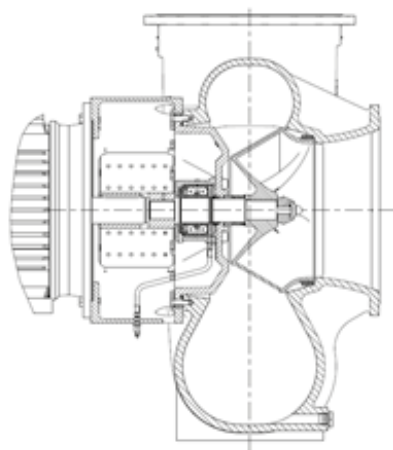
Dimension of the suction flange:

- Pumps with Ø210, Ø250, Ø310: one size larger than that of the discharge flange.
- Pumps with Ø390: two size larger than that of the discharge flange.
- Pumps with Ø500 and Ø630: same as that of the discharge flange.

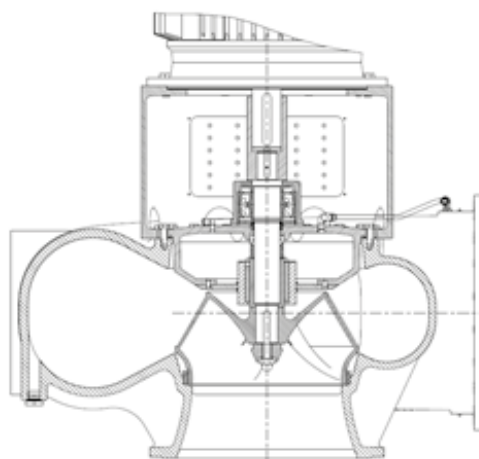
The pump discharge nozzle is arranged tangentially on the volute casing.

The pumps are mounted with one impeller wear ring.

### Horizontal version, NSLH



### Vertical version, NSLV



### Monobloc With Bearing

The pump is for major capacities and heavy loads, especially recommended where the advantage of the spacer coupling is of no importance and where a small overall height is required.

The pump is equipped with a separate rear cover with a ball bearing and a separate motor bracket. Dismantling of the rotating pump parts is possible without removing the pump casing from the piping.