

NSL

In-Line Centrifugal Pump Vertically & Horizontally installed



The DESMI NSL pumps are suitable for water applications (raw, treated, hot or cool) and meets the special 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

Norminal Diameter (DN)	80 to 350
Flow rate - 50 Hz	Up to 2000 m ³ /h (8800 US gpm)
Flow rate - 60 Hz	Up to 2400 m ³ /h (10600 US gpm)
Head	Up to 195 m (640 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
ATEX approved	

Applications:
District heating/cooling, sea water, water circulation, cooling towers distribution, chiller distribution & diesel transfer up to 500 cSt. scrubber (flue gas cleaning).

Design Features

The pump is an in-line, 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.

Material specification

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 and includes:
Cast Iron, Ductile Iron, Bronze, NiAl-Bronze, Stainless Steel and Super Duplex Stainless Steel

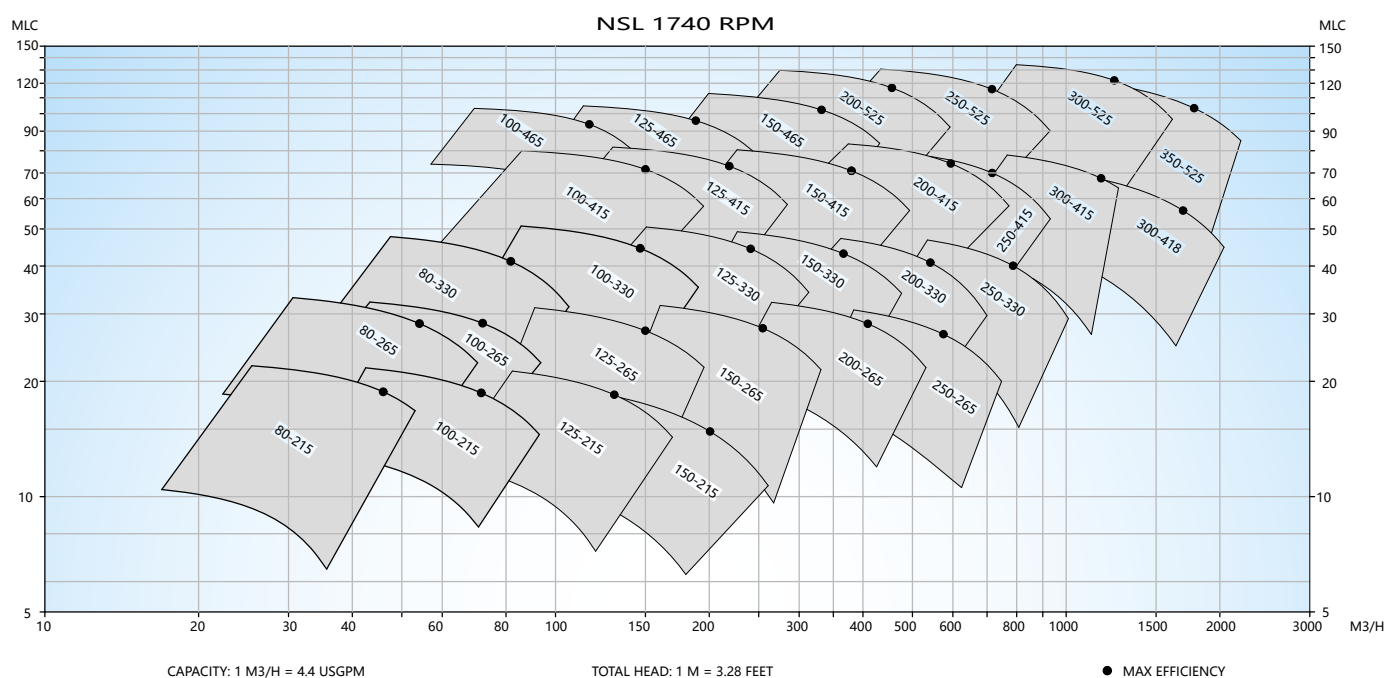
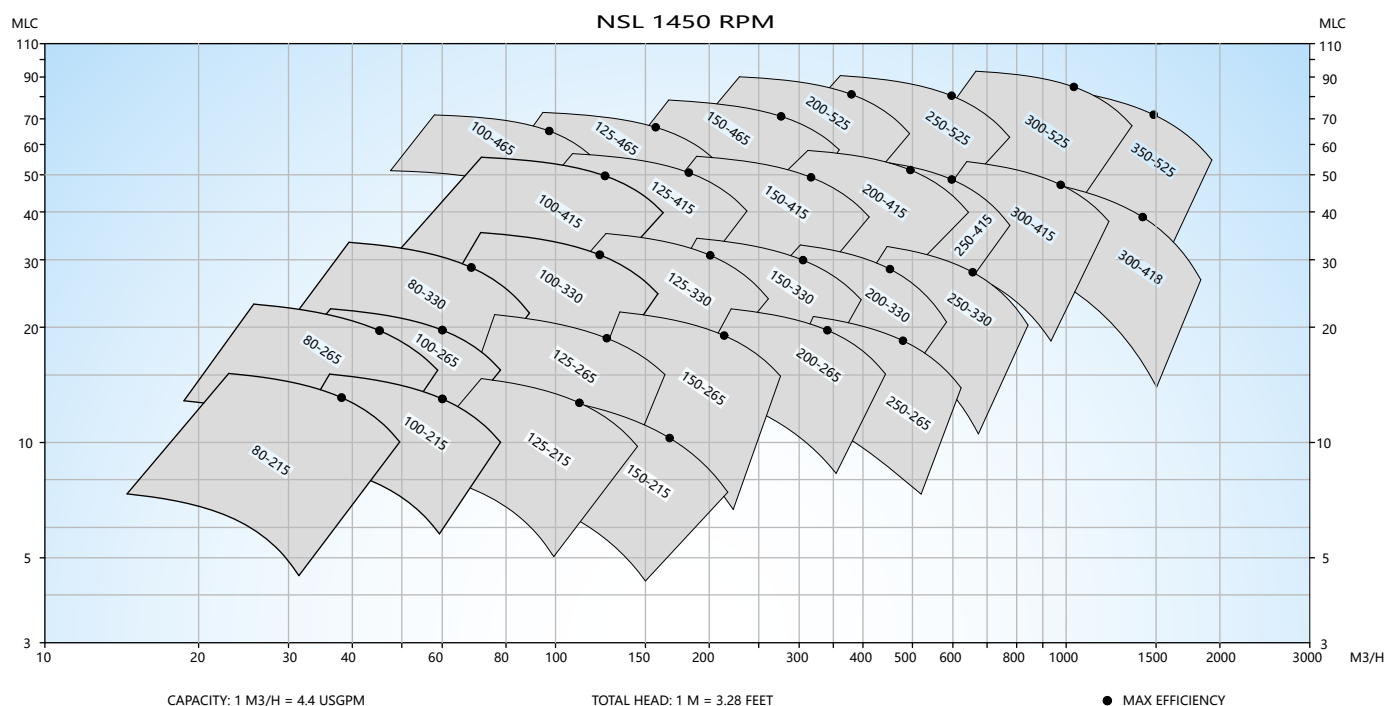
Applications

The pumps are suitable for seawater, fresh- and seawater cooling, district heating, district cooling, water circulation, cooling tower distribution, diesel transfer, ballast, fire-fighting etc.

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 be equipped with an air-operated ejector priming unit.



DESMI performance curves and tests of centrifugal pumps are according to EN/ISO 9906 grade 2B as standard - other grades on request.

Design Details

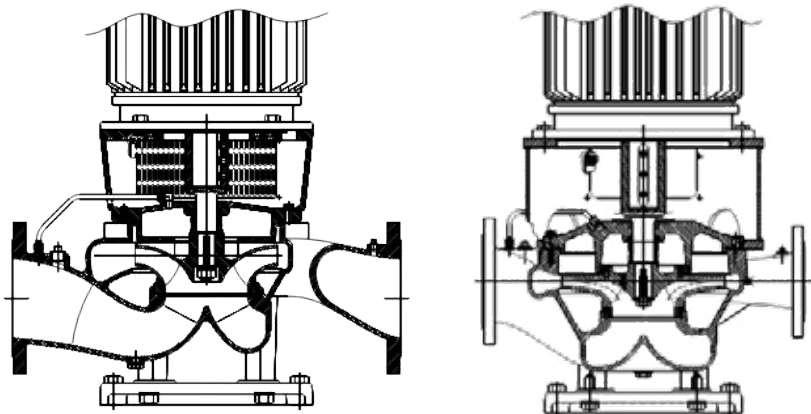
Pumps With Ø 215 And Ø 265 Impeller

Suction and discharge flange dimensions are identical. 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 Ø525 Impeller Dimension of the suction flange is one size larger than that of the discharge flange. The line through inlet and outlet is tangential offset in relation to the centre line of the shaft. The pumps have two impeller wear rings.

Monobloc Without Bearing

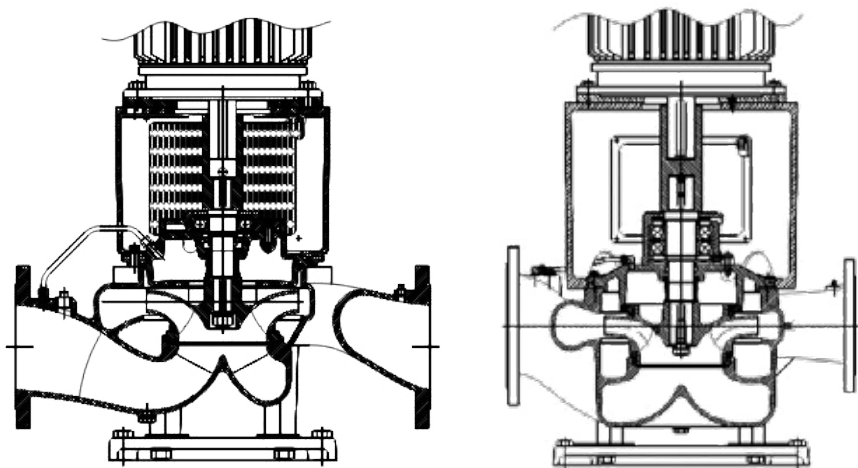
The pump is for small capacities and limited space. This version has no pump bearings, only the ball bearings in the standard electric motor. The power transmission is by rigid coupling. Dismantling of the pump parts is possible without removing the pump casing from the piping.



Monobloc With Bearing

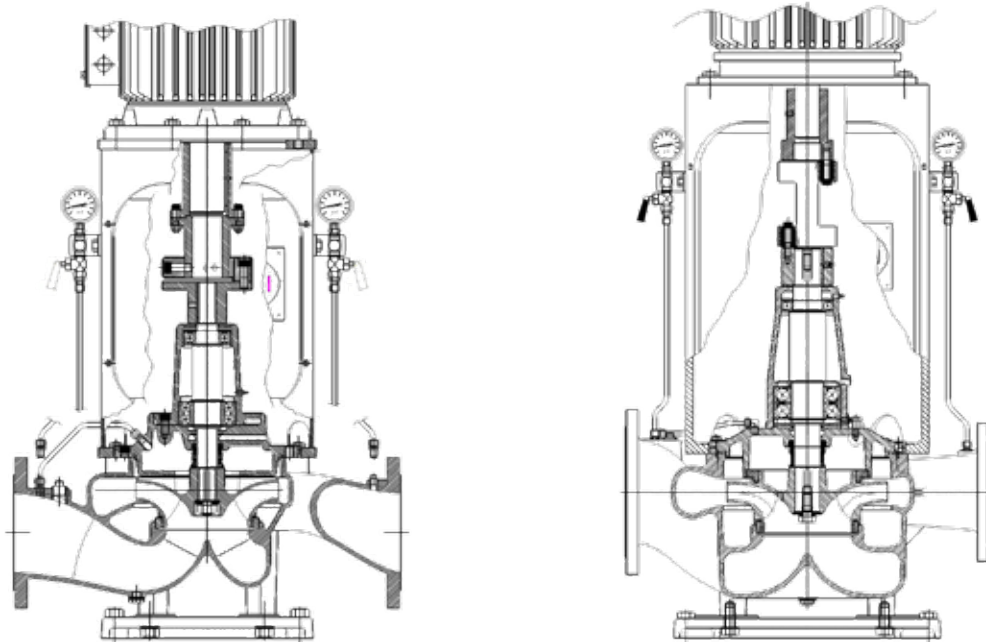
The pump is for major capacities and heavy loads, especially recommended where the advantage of the spacer coupling is of no importance and where a small overall height is required.

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.

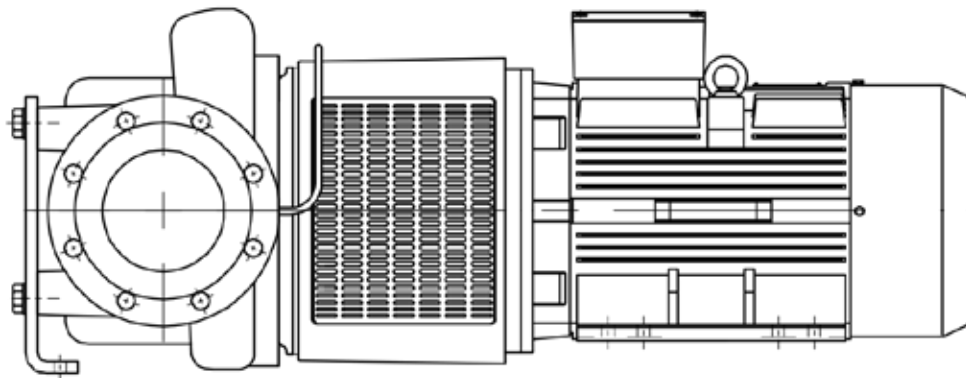


Spacer

The pump is for high capacities, heavy loads, and high pump speeds. As a special feature the pump is equipped with a spacer coupling which is a combined distance and flexible coupling. This makes it possible to remove the complete bearing housing with shaft, bearings, shaft seal, and impeller without dismantling or loosening the motor or piping. For high capacities and the resulting larger and heavier electric motors we recommend this pump version because of the easy dismantling of the rotating pump parts in connection with inspection and repair. This special feature is often a requirement within the marine industry where installations must be easy to service.



Horizontal mounting is possible on request



The modifications includes pump-bracket (as seen on the picture), baseplate if needed and the motor has to be of B3B5 version motor with foot/flange.