



Svanehøj Deepwell Cargo Pumps

Type DL for Chemical and Product Tankers



Single-stage

Oil lubricated Type DL



Deck arrangement



Single-stage pump head

This brochure describes Deepwell Cargo Pumps Type DL for Chemical and Product Tankers.

The pumps have been developed by Svanehøj through extensive research.

They have been marketed for more than 30 years and gradually improved to almost perfection in close cooperation with our many customers all over the world.

The DL cargo pump consists of four major sections:

Electric motor,

in approved explosion-proof and weatherproof execution for open deck installation.

Suitable for speed regulation with frequency converters.

Deck arrangement,

with motor stool, integrated lubricating oil header tank, upper drive shaft bearing, purging and stripping connections.

As standard the discharge flange is made according to EN 1092, PN16. At request other standards, such as ANSI and JIS are available.

Pipestack,

consisting of a cargo pipe and an oil-filled drive shaft column with slide bearings. The oil lubricated bearings are held in position by flexible O-rings. The transmission shaft is made of carbon steel alloy. For lengths above 8 meters an intermediate support to bulkhead is required.

Pump head,

with double mechanical shaft seal, stainless steel shaft and ball bearing arrangement.

The shaft seal arrangement consists of a primary seal against the cargo and a secondary seal against the lubricating oil in the drive shaft column.

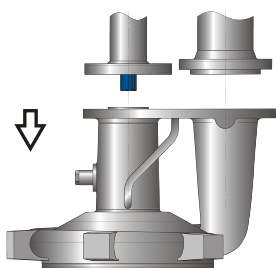
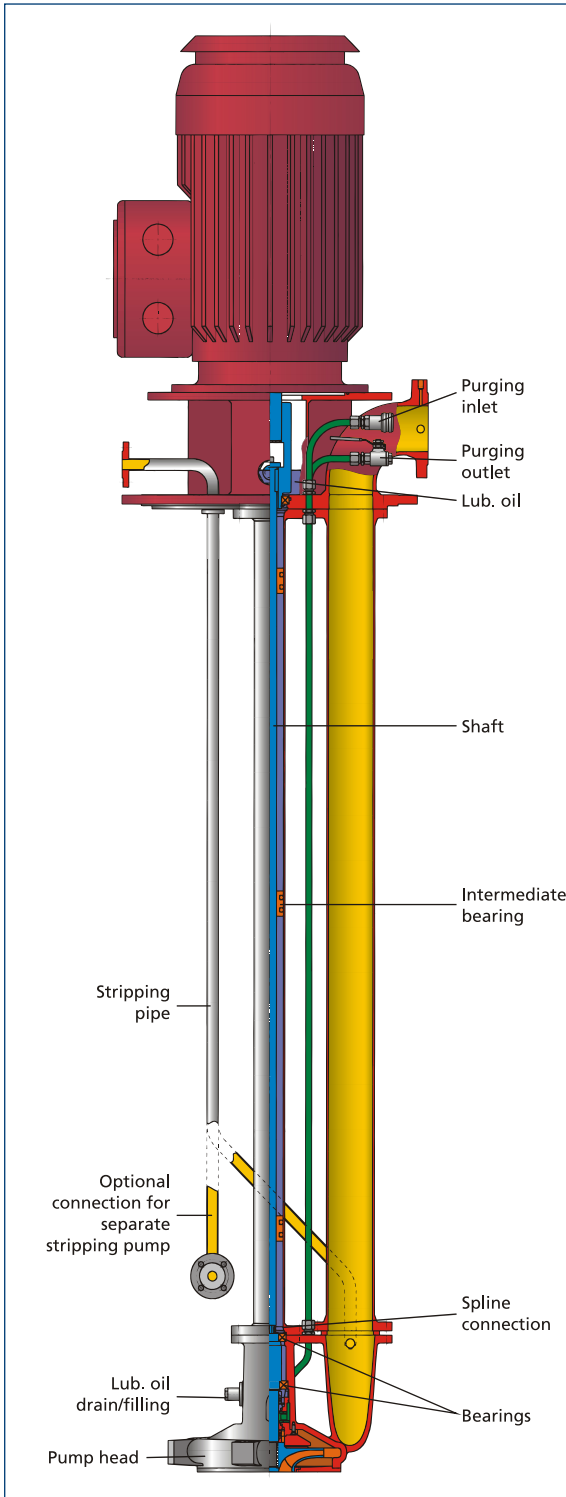
The cofferdam between the two mechanical shaft seals has pipe connections to deck for purging. The casing wear ring is easily accessible without dismounting the pump head.

The DL pump is designed for operation with frequency converter or other means of variable speed regulation. This makes the DL pump particularly suitable for handling different types of cargoes within a wide range of specific gravity and viscosity.

The DL pump is available with certificate from any classification society, e.g. LRS - DNV - GL - ABS - BV - KR - MROS - NK - CCS and RINA.

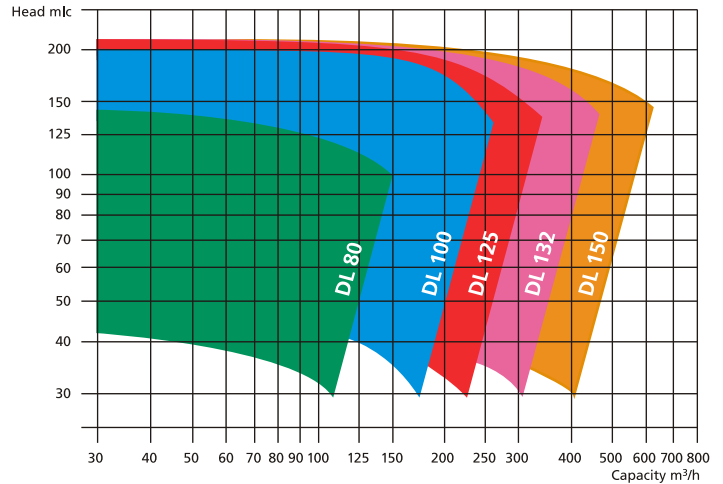
The motor will be delivered with PTB certificate and class certificate where required.

Deepwell Cargo Pump Type DL



Dismounting of pump head

Capacity Range



Cargo Pump Stripping

To meet the IMO requirements with regard to liquid cargo remaining in the cargo tank, the DL pump has a built-in stripping facility, only requiring supply of compressed air/nitrogen.

Stripping can be either into the discharge line on deck or through a separate stripping line directly to the manifold. When the cargo tank is empty, the stripping line valve is opened, and the main discharge valve is closed.

The pump will then empty itself to a certain extent, as the small diameter stripping pipe will act as if the pump was throttled. To stimulate this function and to strip the entire pumpstack, compressed air/nitrogen is supplied at the pump side of the main discharge valve.

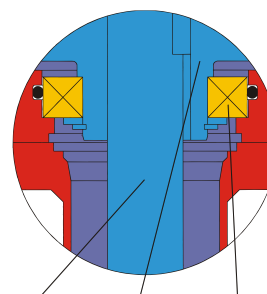
During this whole stripping sequence the pump is kept running, and the liquid in the rotating impeller will then act as a liquid barrier preventing a back flow to the tank.

When the stripping has been completed, the remaining volume of liquid cargo in the suction well will be far below the IMO requirements.

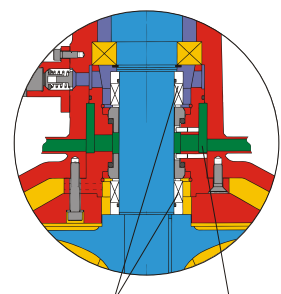
Where additional requirements on tank stripping are in force, a separate piston pump is installed. Ask for further information.

Upper bearing arrangement

Shaft sealing arrangement



Shaft Motor sleeve coupling Bearing



Double mechanical seal Cofferdam



Hamworthy Svanehøj A/S
P.O. Box 30, 6 Fabriksparken
DK-9230 Svenstrup J.
Denmark

tel: +45 96 37 22 00
fax: +45 98 38 31 56
e-mail: svanehoj@hamworthy.com
web: www.hamworthy.com

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Hamworthy

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