



# ITT

Lowara

## DLC, DLS, DLV, DLG Series Submersible pumps for sewage application



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## SPECIFICATIONS

- ✓ **Delivery: up to 1.500,00 m<sup>3</sup>/h**
- ✓ **Head: up to 82,0 m**
- ✓ **Power supply: three and single-phase / 50 Hz**
- ✓ **Power: from 0,90 kW up to 70,00 kW**
- ✓ **Maximum temperature of pumped liquid: 40,0 °C**
- ✓ **Maximum immersion depth: 20,0 m**
- ✓ **Free passage: up to 125,0 mm**



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### VERSIONS AVAILABLE

**The full range includes single and multi channel (DLC), self cleaning for managing solids with fibers (DLS), Vortex impeller (DLV), Grinder version (DLG).**



#### **DLC-Channel Impeller Pumps**

The hydraulics of ITT Lowara submersible DLC pumps are designed with open or closed, single or multi-vane impellers suitable for handling of clear sewage, gray water and wastewater with entrained solids. The bottom cover can be adjusted to maintain performance in a long period.



#### **DLS-Self Cleaning Pumps**

The ITT Lowara submersible DLS pumps are designed with a self cleaning blade leading edge which effectively deals with fibrous materials and other matter that are found in wastewater.

The closed design of the impeller guarantees constant high performance with a minimum of maintenance and maximum reliability.



#### **DLV - Vortex Pumps**

By design, ITT Lowara vortex pumps are very reliable. The impeller runs freely in the volute and does not require any adjustments. This completely eliminates the risk for jamming and low performance resulting from faulty impeller adjustments and wear. Long time constant high performance and trouble free operation is thus guaranteed and maintenance reduced to an absolute minimum.



#### **DLG - Grinder Pumps**

The ITT Lowara submersible grinder pumps are designed for sewage and other wastewater applications where the quality of water doesn't allow the use of large solids passing through discharge pipes. The high heads generated by Lowara's grinder pumps enables the use of longer discharge pipes without the need for bigger motors. This feature makes the grinder pumps also ideal for applications where a limited quantity of water is needed with high pressure.

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## CONSTRUCTION CHARACTERISTICS

### Motor

- ✓ Closed Motor housing designed and manufactured for submersible use.
- ✓ Class H (180°C)

### Shaft Sealing

- ✓ Double independent mechanical seals running in oil
- ✓ Silicon carbide runs on ceramic at pump side, carbon on ceramic at motor side
- ✓ Oil housing with flexible rubber bellows

### Monitoring

- ✓ Motor thermal protection device and moisture sensor oil chamber are available in selected models

### Bearings

- ✓ Heavy duty, greased for life

### Back vanes

- ✓ Prevent solids entering the seal area and reduce the pressure on the seals, for longer seal life

### Cable and Cable glands

- ✓ 10-metre power supply cable with neoprene sheath (H07RN-F)
- ✓ Stainless steel cable glands

### Shaft

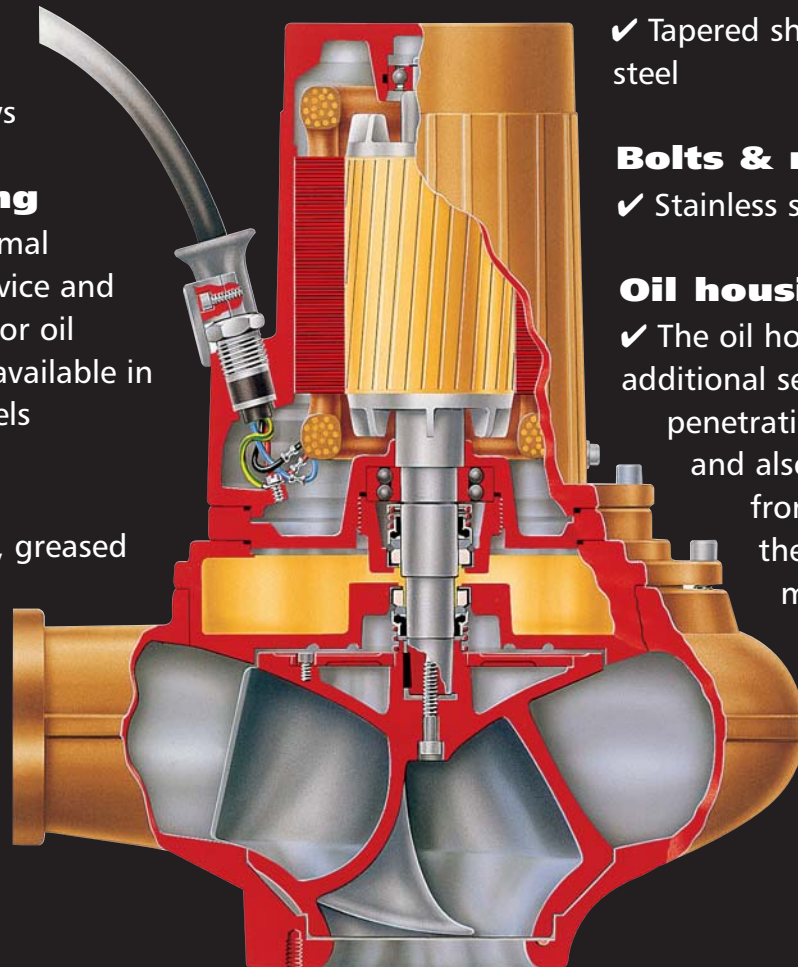
- ✓ Tapered shaft, stainless steel

### Bolts & nuts

- ✓ Stainless steel

### Oil housing

- ✓ The oil housing provides additional security against penetration by liquids and also diffuses heat from the motor and the bearings to make better the lubrication of the seals.



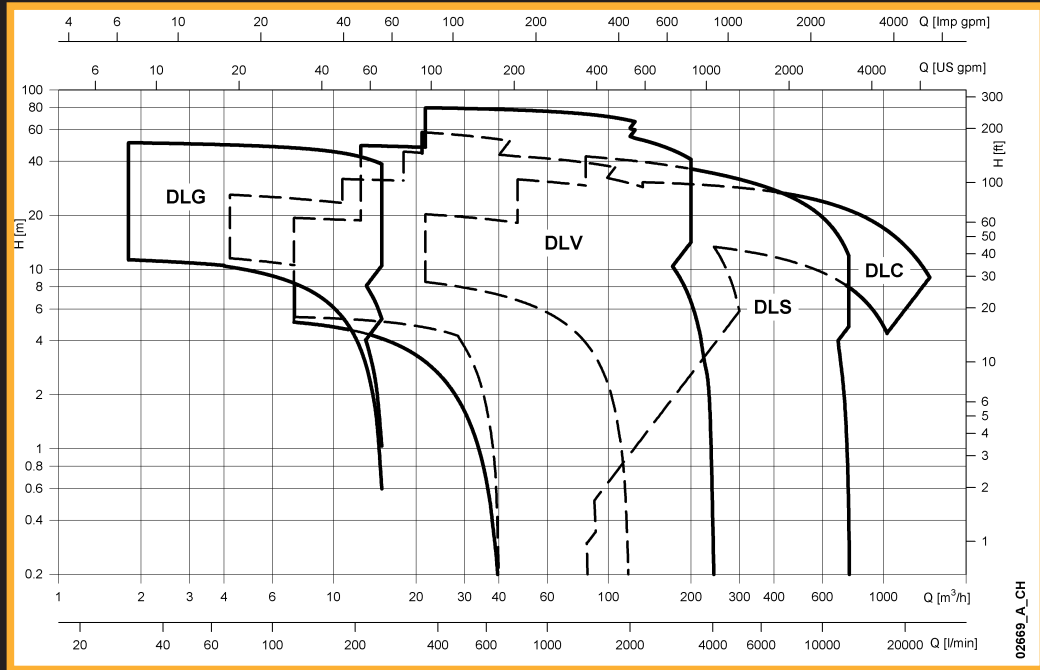


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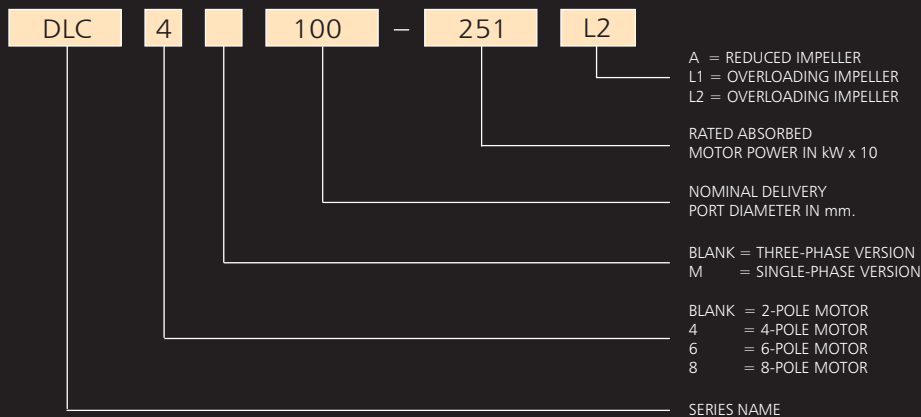
## DLC, DLS, DLV, DLG SERIES

### HYDRAULIC PERFORMANCE RANGE AT 50 Hz



MODEL	DLC	DLS	DLV	DLG
<b>RATING</b>	1Ph up to 2.1 kW 3Ph up to 70 kW	3Ph up to 54 kW	1Ph up to 2.1 kW 3PH up to 53 kW	1Ph up to 2.1 kW 3Ph up to 5.1 kW
<b>DISCHARGE</b>	DN 65, 80, 100, 250	DN 100, 150, 200	DN 65, 80, 100	DN 50
<b>IMPELLER TYPE</b>	Single and multi channel	Self cleaning single channel	Vortex	Grinder

### IDENTIFICATION CODE



EXAMPLE : DLC4 100-251 L2  
 DLC series electric pump, 4-pole version, three-phase, 100 mm nominal delivery port, 25,1 kW rated absorbed motor power, L2 overloading impeller

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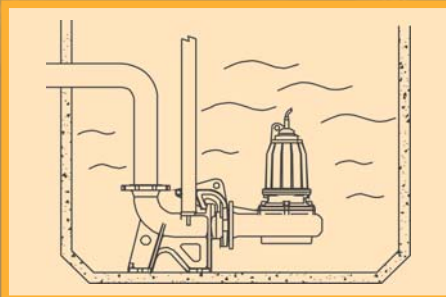
## INSTALLATION

**In order to optimize the pump performances and reduce energy consumption, it is very important to select the “correct” electric pump for intended application.**

## TYPICAL APPLICATIONS

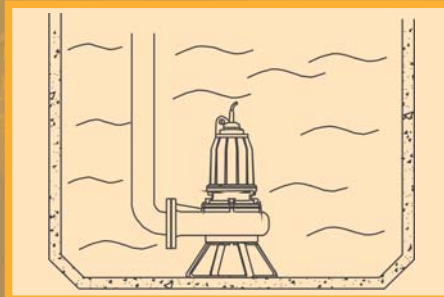
APPLICATIONS	PUMP TYPE			
	DLC	DLS	DLV	DLG
Purification systems	✓	✓	✓	
Sewers - single-family dwellings, small condominiums, multi-family dwellings	✓	✓	✓	✓
Sewers - campsites	✓	✓	✓	✓
Sewers - restaurants, hotels	✓	✓	✓	
Land reclamation, irrigation, agriculture	✓	✓	✓	
Building yards	✓		✓	
Stock farming			✓	

## INSTALLATION



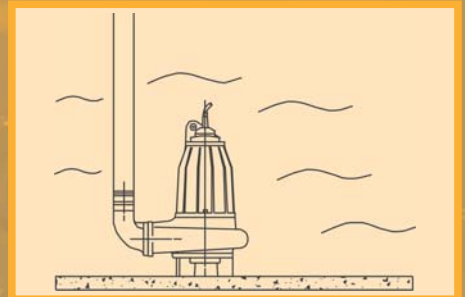
### LOWERING SYSTEM

Fixed submerged installation, with coupling foot and guide rails. Access to the electric pump for inspection or maintenance is quick and easy: to extract the pump, just lift it with a chain. The pump's stability and sealing are ensured by its weight. The pump's motor is cooled by the surrounding liquid. A minimum liquid level (at least 2/3 motor submerged), must be guaranteed.



### TRIPOD STAND

Portable submerged installation, with tripod stand. The motor is cooled by the surrounding liquid. A minimum liquid level (at least 2/3 motor submerged), must be guaranteed.



### 90° DELIVERY UNION

Free submerged installation with support feet and threaded bend. The pump's motor is cooled by the surrounding liquid. A minimum liquid level (at least 2/3 motor submerged), must be guaranteed.

## ACCESSORIES

- ✓ Lowering system
- ✓ 90° delivery elbow with hose connector
- ✓ 90° threaded delivery elbow
- ✓ Threaded flange for delivery port
- ✓ 90° flanged elbow
- ✓ Stand (if not integrated)
- ✓ No return ball valve
- ✓ Float for solids-laden waters
- ✓ Starting and control panels



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## TYPICAL APPLICATIONS

### SUBMERSIBLE PUMPS FOR SEWAGE APPLICATION

The DLC, DLS, DLV and DLG ITT Lowara series of submersible electric pumps are designed to operate by handling many liquids under even extreme conditions, utilizing a wide selection variety of materials, impeller and motor types.

ITT Lowara submersible pumps are very dependable in harsh environments and are used in the collection of sewage, effluent, drainage and sewage water in locations such as homes, farms and light commercial buildings.

### DESCRIPTION OF LOWARA SUBMERSIBLE WASTEWATER PUMPS

#### **Solids Handling Submersible Pumps (DLC, DLS, DLV series):**

Submersible pumps that are capable of transporting solid material through the pump without obstruction or interference of any kind from the entry to discharge.

#### **Grinder Submersible Pumps (DLG series):**

Submersible pumps that incorporate a device to grind and reduce the dimension of the entrained solids. The ground solids are then pumped to a collection system.



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