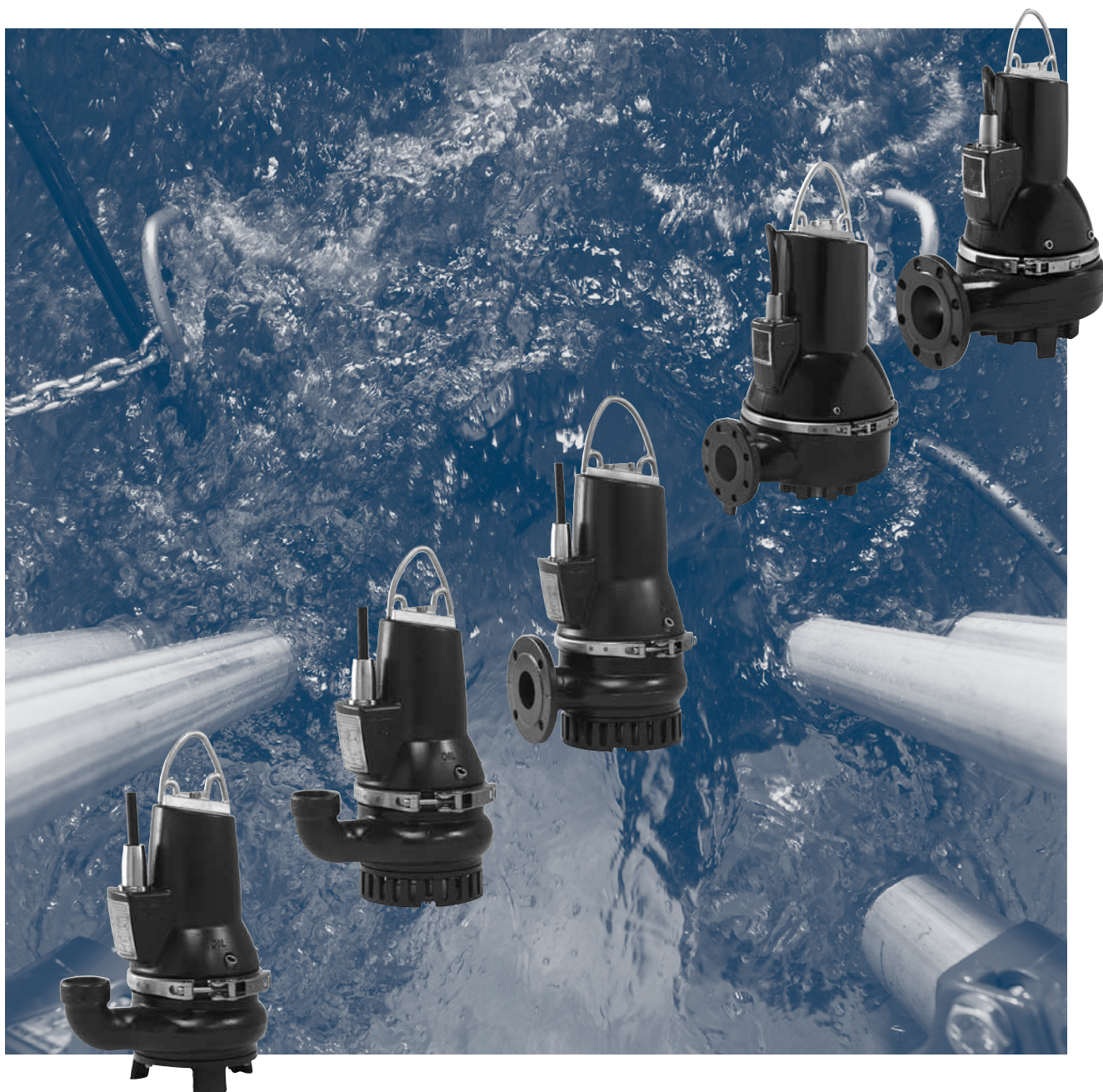


# SL1, SLV, DP, EF pumps

0.6 to 11 kW  
50 Hz



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## Introduction

This data booklet deals with Grundfos sewage pumps, types SL1, SLV, DP and EF.



**Fig. 1** DP, EF and SL pumps

The pumps are free-flow (SuperVortex) and single-channel impeller pumps specifically designed for pumping sewage and wastewater in a wide range of municipal, private and industrial applications.

The pumps are made of resistant materials, such as cast iron and stainless steel. These materials ensure a proper operation.

The pumps are fitted with motors from 0.6 kW up to 11.0 kW. The motors are either 2- or 4-pole motors, depending on the motor size.

The free passage in the pumps is 10 to 100 mm.

The pumps are available for:

- submerged installation on auto-coupling system
- submerged installation, free-standing.

## Applications

Typical applications are transfer of liquids, such as:

- municipal wastewater
- wastewater with high content of fibres (SuperVortex impeller)
- drainage and groundwater
- domestic wastewater
- industrial wastewater
- process and cooling water.

The pumps are ideal for the pumping of the above liquids from for instance:

- municipal network pumping stations
- inlet pumping stations in wastewater treatment plants
- primary clarification in wastewater treatment plants
- secondary clarification in wastewater treatment plants
- stormwater pumping stations
- public buildings
- blocks of flats
- factories/industry.

## Overall construction features

- Watertight cable entry of corrosion-resistant polyamide
- Power cable incorporating wires for thermal sensors in the motor windings
- No extra cable required for sensors in pumps with sensors
- Monitoring of operating conditions for pumps with sensors
- Moisture detector for continuous monitoring of motor enclosure and automatic cut-out in case of leakage
- Heavy-duty bearings greased for life
- Built for frequency-converter operation
- Smooth pump surface prevents dirt and impurities from sticking to the pump
- Self-cleaning channel impeller with long vanes, thus reducing risk of jamming or clogging, or Super-Vortex impeller with high pumping efficiency and less downtime
- Explosion-proof motors for potentially explosive environments
- Motor in insulation class F (155 °C), enclosure class IP68 with thermal sensor in each phase
- Service-friendly design:
  - clamp connection between motor and pump
  - cartridge shaft seal
  - cable connection to motor via plug.

### SL1 and SLV pumps except

**SL1.50.65.09/11/15 and SLV.65.65.09/11/15**

- Motor built of EFF1 components, offering lower motor temperature and longer life.

## Type key

### SL1-SLV

| Code Example                                                                                                                          | SL | 1 | .80 | .80 | .40 | .A | .Ex | .4 | .5 | .OD |
|---------------------------------------------------------------------------------------------------------------------------------------|----|---|-----|-----|-----|----|-----|----|----|-----|
| <b>Pump type:</b><br>SL Sewage and wastewater pump                                                                                    |    |   |     |     |     |    |     |    |    |     |
| <b>Impeller type:</b><br>1 Single-channel impeller<br>V SuperVortex (free-flow) impeller                                              |    |   |     |     |     |    |     |    |    |     |
| <b>Pump passage:</b><br>Maximum solids size [mm]                                                                                      |    |   |     |     |     |    |     |    |    |     |
| <b>Pump discharge:</b><br>Nominal diameter of discharge port [mm]                                                                     |    |   |     |     |     |    |     |    |    |     |
| <b>Power:</b><br>Motor output power P2/100 [W]                                                                                        |    |   |     |     |     |    |     |    |    |     |
| <b>Sensor version:</b><br>[-] Standard<br>A With sensor version or CU 100                                                             |    |   |     |     |     |    |     |    |    |     |
| <b>Pump version:</b><br>[-] Non-explosion-proof pump (standard)<br>Ex Explosion-proof pump                                            |    |   |     |     |     |    |     |    |    |     |
| <b>Number of poles:</b><br>2 2-pole<br>4 4-pole                                                                                       |    |   |     |     |     |    |     |    |    |     |
| <b>Number of phases</b><br>1 Single-phase motor<br>[-] Three-phase motor                                                              |    |   |     |     |     |    |     |    |    |     |
| <b>Frequency:</b><br>50 50 Hz                                                                                                         |    |   |     |     |     |    |     |    |    |     |
| <b>Voltage and starting method:</b><br>02 230V, DOL<br>0D 380-415V, DOL<br>1D 380-415V, Y/D<br>0B 400-415 V, DOL<br>0C 230-240 V, DOL |    |   |     |     |     |    |     |    |    |     |

**Note:** The pump types are not available in all variants.

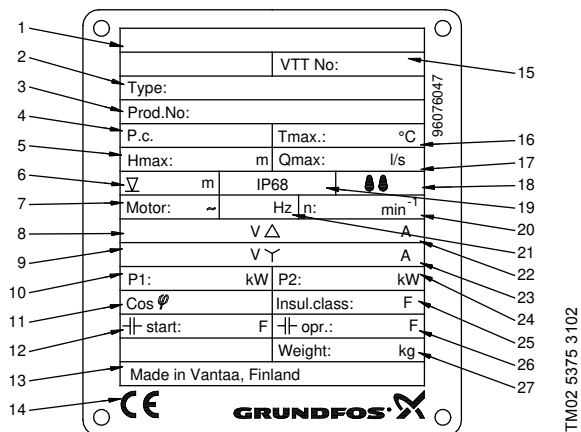
### DP and EF

| Code Example                                                                                                        | DP | 1 | 10 | .65 | .11 | .A | .Ex | .2 | .5 | .O2 |
|---------------------------------------------------------------------------------------------------------------------|----|---|----|-----|-----|----|-----|----|----|-----|
| <b>Pump type:</b><br>DP Grundfos drainage pump<br>EF Grundfos effluent pump                                         |    |   |    |     |     |    |     |    |    |     |
| <b>Material</b><br>(Standard, cast iron)                                                                            |    |   |    |     |     |    |     |    |    |     |
| <b>Impeller type:</b><br>1 Single-channel impeller<br>V SuperVortex (free-flow) impeller                            |    |   |    |     |     |    |     |    |    |     |
| <b>Pump passage:</b><br>10 Maximum solids size [mm]                                                                 |    |   |    |     |     |    |     |    |    |     |
| <b>Pump discharge:</b><br>65 Nominal diameter of discharge port [mm]                                                |    |   |    |     |     |    |     |    |    |     |
| <b>Power:</b><br>11 Motor output power P2/100 [W]                                                                   |    |   |    |     |     |    |     |    |    |     |
| <b>Sensor version:</b><br>[-] Standard<br>A Equipped with a CU 100 control box                                      |    |   |    |     |     |    |     |    |    |     |
| <b>Pump version:</b><br>[-] Non-explosion-proof pump (standard)<br>Ex Explosion-proof pump                          |    |   |    |     |     |    |     |    |    |     |
| <b>Number of poles:</b><br>2 2-pole<br>4 4-pole                                                                     |    |   |    |     |     |    |     |    |    |     |
| <b>Frequency:</b><br>5 50 Hz                                                                                        |    |   |    |     |     |    |     |    |    |     |
| <b>Voltage and starting method:</b><br>02 230V, DOL (50 Hz)<br>1B 400-415V, DOL (50 Hz)<br>1C 230-240V, DOL (50 Hz) |    |   |    |     |     |    |     |    |    |     |
| [ ] Standard pump material                                                                                          |    |   |    |     |     |    |     |    |    |     |

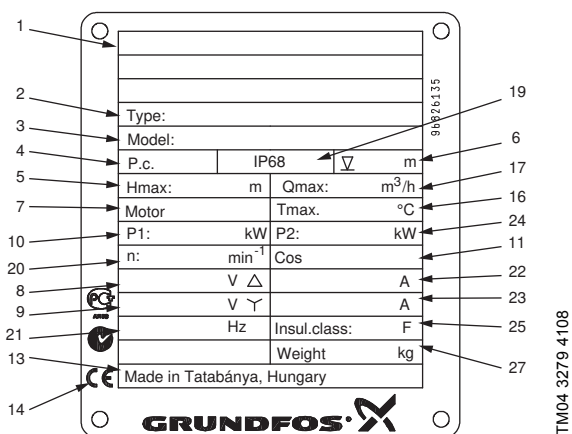


## Nameplate

### Pump nameplate



**Fig. 2** DP, EF, SL1.50.65.09/11/15 and  
SLV.65.65.09/11/15



**Fig. 3** SL1 and SLV pumps except  
SL1.50.65.09/11/15 and SLV.65.65.09/11/15

- 1 Ex mark
- 2 Type designation
- 3 Product/Model number
- 4 Production code
- 5 Maximum head
- 6 Maximum installation depth
- 7 Number of phases
- 8 Rated voltage, D
- 9 Rated voltage, Y
- 10 Rated input power
- 11 Power factor
- 12 Starting capacitor
- 13 Country of production
- 14 CE mark
- 15 EN approval
- 16 Maximum liquid temperature
- 17 Maximum flow rate
- 18 Explosion protection
- 19 Enclosure class to IEC
- 20 Rated speed
- 21 Frequency
- 22 Rated current, D
- 23 Rated current, Y
- 24 Shaft power
- 25 Insulation class
- 26 Operating capacitor
- 27 Weight without cable

## Ordering a pump

When ordering a pump, you need to take the following five aspects into consideration:

1. pump type
2. custom-built variation (option)
3. accessories
4. controller
5. explosion-proof version.

## Pump

Use the following table to identify which type of pump that best meets your needs. The table is for guidance only.

| Application                                                          | DP | EF | SL1 | SLV |
|----------------------------------------------------------------------|----|----|-----|-----|
| Storm water                                                          |    |    | x   | x   |
| Groundwater                                                          | x  | x  | x   | x   |
| Drainage and surface water                                           | x  | x  | x   | x   |
| Drainage and surface water with smaller impurities                   | x  | x  | x   | x   |
| Abrasive surface water                                               | x  | x  | x   | x   |
| Wastewater with long fibres, e.g. from laundries                     |    | x  | x   | x   |
| Wastewater without discharge from toilets (Grey water)               |    | x  |     |     |
| Wastewater from commercial buildings without discharge from toilets. |    | x  |     |     |
| Domestic wastewater with discharge from toilets                      |    |    | x   | x   |
| Municipal sewage                                                     |    |    | x   | x   |
| Sewage from commercial buildings                                     |    |    | x   | x   |
| Industrial process water with fibres/solids                          |    |    |     | x   |
| Industrial process water with solids                                 |    | x  | x   | x   |
| Industrial process water without solids and fibres                   | x  |    | x   |     |

When you have selected the pump type, you can identify the specific pump that best meets your needs in section Product range on page 8 and Type key on page 4. The list below is a detailed description of the product you get if you order the following pump:

| Pump               | Product no |
|--------------------|------------|
| SLV.65.65.22.2.51D | 96871966   |

- Pump as specified in the type key
- 10 m cable
- Paint: NSC 8005-R80B (dark grey), gloss code 35, thickness 100 µ
- Three thermal switches, one in each phase or
- Three thermal sensors (PTC)
- One moisture switch in the motor. (SL1 and SLV pumps, except SL1.50.65.09/11/15 and SLV.65.65.09/11/15)
- Tested according to DIN 9906, Annex A.

See section Performance curves Technical data for selection of a standard pump.

**Note:** Product-specific data for the pump can also be found in WebCAPS using the product number 96871966.

## Custom-built variants

The pumps can be customised to meet individual requirements. Many pump features and options are available for customisation, such as explosion-proof versions, various cable lengths or special materials.

Variants can be seen in the table in section List of variants on page 24. For requirements or designs outside the mentioned table, contact Grundfos.

## Accessories

Depending on the installation type, accessories may be required. See section Accessories on page 206 for selection of the correct accessories.

**Note:** Ordered accessories are not fitted from factory.

## Controller

The following controllers are available:

- CU 100
- LC/LCD 107 with level pickups
- LC/LCD 108 with float switches
- LC/LCD 110 with level electrodes.

## Explosion-proof version

The entire range is available in explosion-proof versions.

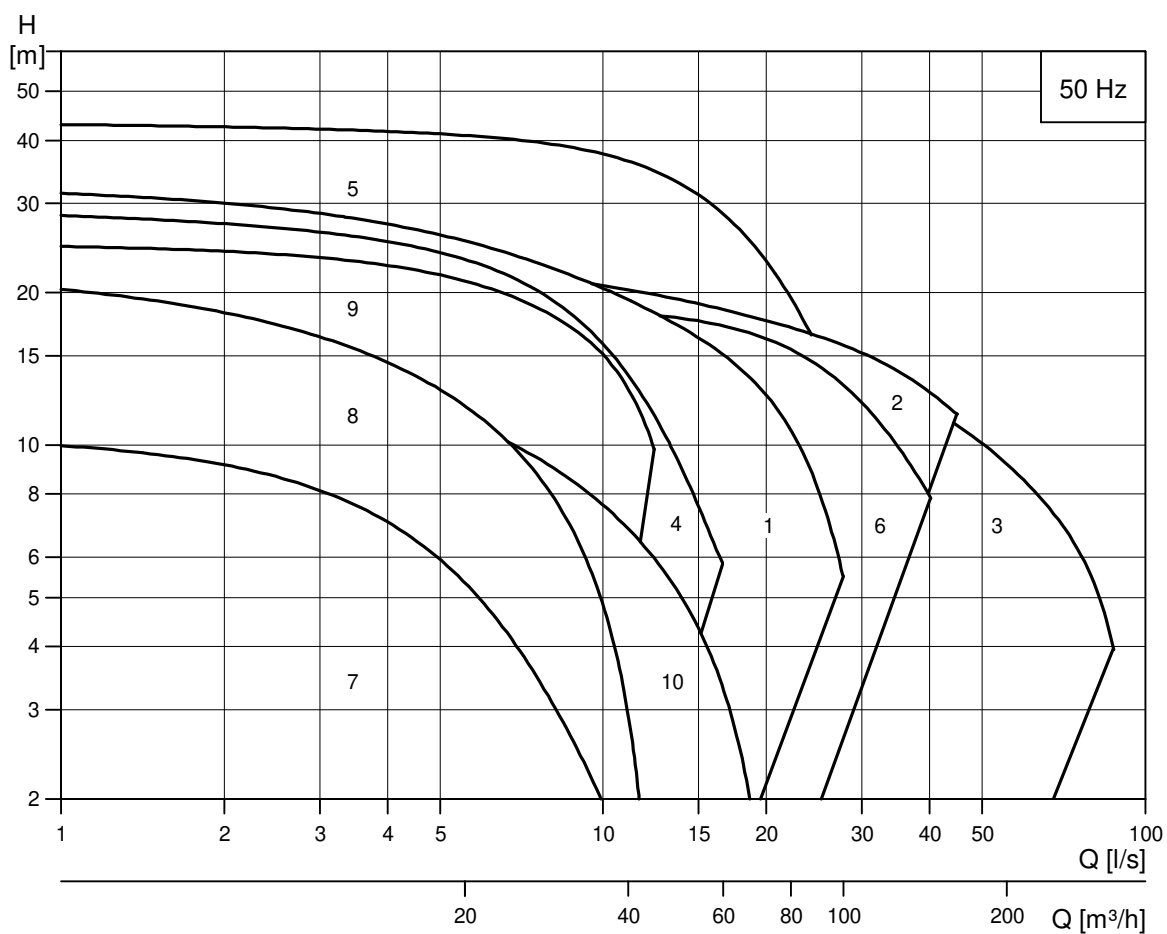
**DP, EF, SL1.50.65.09, SL1.50.65.11, SL1.50.65.15, SLV.65.65.09, SLV.65.65.11 and SLV.65.65.15**

Pumps are provided with a II 2 G Ex c d IIB T4 explosion protection classification according to EN60079-0:2006 and EN60079-1:2007.

The pumps are also available for Australia with an Ex nC T3 classification according to IEC 60079-15:1987.

**All other SL1 and SLV pumps** are provided with a II 2 G Ex c d IIB T4, T3 classification and for the sensor version a II 2G c d mb IIB T4, T3 classification according to EN 60079-1: 2007, EN 13463-5: 2003 and EN 60079-18: 2004.

## Performance range, SL, DP and EF pumps



TM04 2624 2808

| Pump type    | Curve No |
|--------------|----------|
| SL1.50.65.09 | 10       |
| SL1.50.65.11 |          |
| SL1.50.65.15 |          |
| SL1.50.65.22 |          |
| SL1.50.65.30 | 1        |
| SL1.50.65.40 |          |
| SL1.50.80.22 |          |
| SL1.50.80.30 |          |
| SL1.50.80.40 | 2        |
| SL1.80       |          |
| SL1.100      |          |
|              | 3        |

| Pump type    | Curve No |
|--------------|----------|
| SLV.65.65.09 | 7        |
| SLV.65.65.11 |          |
| SLV.65.65.15 |          |
| SLV.65.65.22 |          |
| SLV.65.65.30 | 4        |
| SLV.65.65.40 |          |
| SLV.65.80.22 |          |
| SLV.65.80.30 |          |
| SLV.65.80.40 | 5        |
| SLV.80       |          |
| SLV.100      |          |
| EF30         | 6        |
|              | 8        |
| DP10         | 9        |

## Standard pumps

### DP10 Standard

| Pump type            | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|----------------------|----------------|----------------|---------------------|--------------------|
| DP10.50.09.2.1.502   | 96104200       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| DP10.50.09.A.2.1.502 | 96104202       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| DP10.50.09.2.50B     | 96104204       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.09.A.2.50B   | 96104206       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.2.50B     | 96104208       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.A.2.50B   | 96104210       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.26.2.50B     | 96106542       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.26.A.2.50B   | 96106544       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### DP10 Standard Australia

| Pump type          | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|--------------------|----------------|----------------|---------------------|--------------------|
| DP10.50.09.2.50B   | 96104204       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.09.A.2.50B | 96104206       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.2.50B   | 96104208       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.A.2.50B | 96104210       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.26.2.50B   | 96106542       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.26.A.2.50B | 96106544       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### EF30 Standard

| Pump type            | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|----------------------|----------------|----------------|---------------------|--------------------|
| EF30.50.06.2.1.502   | 96106546       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.06.A.2.1.502 | 96106548       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.06.2.50B     | 96106550       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.06.A.2.50B   | 96106552       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.09.2.1.502   | 96115111       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.09.A.2.1.502 | 96115113       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.09.2.50B     | 96115115       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.09.A.2.50B   | 96115117       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.11.2.1.502   | 96106554       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.11.A.2.1.502 | 96106556       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.11.2.50B     | 96106558       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.11.A.2.50B   | 96106560       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.15.2.50B     | 96104196       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.15.A.2.50B   | 96104198       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### EF30 Standard Australia

| Pump type          | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|--------------------|----------------|----------------|---------------------|--------------------|
| EF30.50.06.2.50B   | 96106550       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.06.A.2.50B | 96106552       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.09.2.50B   | 96115115       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.09.A.2.50B | 96115117       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.11.2.50B   | 96106558       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.11.A.2.50B | 96106560       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.15.2.50B   | 96104196       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.15.A.2.50B | 96104198       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

## SL1 Standard

| Pump type              | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.09.2.1.502   | 96106562       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.2.50C     | 96106567       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.2.50B     | 96106566       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.A.2.1.502 | 96106564       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.A.2.50C   | 96106571       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.A.2.50B   | 96106570       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.2.1.502   | 96104125       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.2.50C     | 96104130       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.2.50B     | 96104129       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.A.2.1.502 | 96104127       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.A.2.50C   | 96104134       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.A.2.50B   | 96104133       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.2.50C     | 96104119       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.2.50B     | 96104118       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.A.2.50C   | 96104123       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.A.2.50B   | 96104122       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.22.2.50D     | 96836307       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.30.2.50D     | 96836311       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.40.2.51D     | 96872032       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.50.80.22.2.50D     | 96836286       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.30.2.50D     | 96836289       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.40.2.51D     | 96872071       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.15.4.50D     | 96872130       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.22.4.50D     | 96836605       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.30.4.50D     | 96872177       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.40.4.51D     | 96872217       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.55.4.51D     | 96873771       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.75.4.51D     | 96873359       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.15.4.50D    | 96836267       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.22.4.50D    | 96836271       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.30.4.50D    | 96836283       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.40.4.51D    | 96873358       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.55.4.51D    | 96873360       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.75.4.51D    | 96873361       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.40.4.51D   | 96873364       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.55.4.51D   | 96873365       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.75.4.51D   | 96873366       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.40.4.51D   | 96873367       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.55.4.51D   | 96873368       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.75.4.51D   | 96873369       | 3x380-415V D   | 10                  | THERMAL SWITCH     |



## SL1 Standard Australia

| Pump type            | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|----------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.09.2.50B   | 96106566       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.A.2.50B | 96106570       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.2.50B   | 96104129       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.A.2.50B | 96104133       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.2.50B   | 96104118       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.A.2.50B | 96104122       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.22.2.50B   | 96891639       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.30.2.50B   | 96891640       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.40.2.50B   | 96891641       | 3x400-415V D   | 15                  | PTC                |
| SL1.50.80.22.2.50B   | 96891652       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.30.2.50B   | 96891653       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.40.2.50B   | 96895854       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.15.4.50B   | 96872146       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.22.4.50B   | 96891654       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.30.4.50B   | 96891655       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.40.4.50B   | 96891656       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.55.4.50B   | 96891657       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.75.4.50B   | 96891658       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.15.4.50B  | 96873354       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.22.4.50B  | 96891659       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.30.4.50B  | 96891660       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.40.4.50B  | 96836611       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.55.4.50B  | 96836612       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.75.4.50B  | 96891662       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.40.4.50B | 96891661       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.55.4.50B | 96891663       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.75.4.50B | 96891664       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.40.4.50B | 96891665       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.55.4.50B | 96891666       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.75.4.50B | 96891667       | 3x400-415V D   | 15                  | PTC                |

## SLV Standard

| Pump type             | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-----------------------|----------------|----------------|---------------------|--------------------|
| SLV65.65.09.2.1.502   | 96115119       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.09.2.50B     | 96115123       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.09.A.2.1.502 | 96115121       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.09.A.2.50B   | 96115125       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.11.2.1.502   | 96106573       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.11.2.50B     | 96106577       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.11.A.2.1.502 | 96106575       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.11.A.2.50B   | 96106579       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.15.2.50B     | 96104192       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.15.A.2.50B   | 96104194       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV.65.65.22.2.50D    | 96836323       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.30.2.50D    | 96871968       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.40.2.51D    | 96871971       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.65.80.22.2.50D    | 96836287       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.30.2.50D    | 96836303       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.40.2.51D    | 96842221       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.11.4.50D    | 96836266       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.13.4.50D    | 96857830       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.15.4.50D    | 96836269       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.4.50D    | 96835691       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.4.51D    | 96871980       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.4.51D    | 96871995       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.2.51D    | 96871992       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.60.2.51D    | 96873784       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.75.2.51D    | 96871998       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.92.2.51D    | 96872003       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.110.2.51D   | 96872004       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.11.4.50D   | 96872005       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.13.4.50D   | 96890480       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.15.4.50D   | 96872008       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.4.50D   | 96872244       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.4.51D   | 96872243       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.4.51D   | 96872022       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.2.51D   | 96872010       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.60.2.51D   | 96893379       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.75.2.51D   | 96872011       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.92.2.51D   | 96872023       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.110.2.51D  | 96890789       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.30.4.50D  | 96836305       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.100.100.40.4.51D  | 96872026       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.55.4.51D  | 96872028       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.75.4.51D  | 96872029       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

## SLV Standard Australia

| Pump type            | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|----------------------|----------------|----------------|---------------------|--------------------|
| SLV65.65.09.2.50B    | 96115123       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.09.A.2.50B  | 96115125       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.11.2.50B    | 96106577       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.11.A.2.50B  | 96106579       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.15.2.50B    | 96104192       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.15.A.2.50B  | 96104194       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV.65.65.22.2.50B   | 96891379       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.30.2.50B   | 96891380       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.40.2.50B   | 96891402       | 3x400-415V D   | 15                  | PTC                |
| SLV.65.80.22.2.50B   | 96891403       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.30.2.50B   | 96891404       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.40.2.50B   | 96891406       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.11.4.50B   | 96871977       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.13.4.50B   | 96871978       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.15.4.50B   | 96871979       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.22.4.50B   | 96891407       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.40.4.50B   | 96891410       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.40.2.50B   | 96891408       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.60.2.50B   | 96891411       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.75.2.50B   | 96891412       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.92.2.50B   | 96891413       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.110.2.50B  | 96891414       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.11.4.50B  | 96872007       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.13.4.50B  | 96891415       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.15.4.50B  | 96872009       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.22.4.50B  | 96891416       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.40.2.50B  | 96891420       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.40.2.50B  | 96891418       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.60.2.50B  | 96893973       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.75.2.50B  | 96891419       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.92.2.50B  | 96891421       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.110.2.50B | 96891432       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.30.4.50B | 96891433       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.100.100.40.4.50B | 96891434       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.55.4.50B | 96891435       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.75.4.50B | 96891436       | 3x400-415V D   | 15                  | PTC                |

## Pumps equipped with sensors

### SL1 Sensor

| Pump type              | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.22.A.2.50D   | 96871937       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.30.A.2.50D   | 96871940       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.40.A.2.51D   | 96872034       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.50.80.22.A.2.50D   | 96871952       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.30.A.2.50D   | 96871953       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.40.A.2.51D   | 96872102       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.15.A.4.50D   | 96872143       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.22.A.4.50D   | 96837225       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.30.A.4.50D   | 96872179       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.40.A.4.51D   | 96872218       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.55.A.4.51D   | 96872255       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.75.A.4.51D   | 96873372       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.15.A.4.50D  | 96871954       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.22.A.4.50D  | 96871955       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.30.A.4.50D  | 96871956       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.40.A.4.51D  | 96873375       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.55.A.4.51D  | 96873376       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.75.A.4.51D  | 96873377       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.40.A.4.51D | 96873380       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.55.A.4.51D | 96873381       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.75.A.4.51D | 96873382       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.40.A.4.51D | 96873383       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.55.A.4.51D | 96873384       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.75.A.4.51D | 96873385       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

### SL1 Sensor Australia

| Pump type              | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.22.A.2.50B   | 96891722       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.30.A.2.50B   | 96891723       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.40.A.2.50B   | 96891724       | 3x400-415V D   | 15                  | PTC                |
| SL1.50.80.22.A.2.50B   | 96891725       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.30.A.2.50B   | 96891726       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.40.A.2.50B   | 96891727       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.15.A.4.50B   | 96872148       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.22.A.4.50B   | 96891695       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.30.A.4.50B   | 96891696       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.40.A.4.50B   | 96891697       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.55.A.4.50B   | 96891698       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.75.A.4.50B   | 96891699       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.15.A.4.50B  | 96873371       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.22.A.4.50B  | 96891690       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.30.A.4.50B  | 96891689       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.40.A.4.50B  | 96871958       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.55.A.4.50B  | 96871959       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.75.A.4.50B  | 96891686       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.40.A.4.50B | 96891685       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.55.A.4.50B | 96891684       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.75.A.4.50B | 96891683       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.40.A.4.50B | 96891670       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.55.A.4.50B | 96891669       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.75.A.4.50B | 96891668       | 3x400-415V D   | 15                  | PTC                |

## SLV Sensor

| Pump type              | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|------------------------|----------------|----------------|---------------------|--------------------|
| SLV.65.65.22.A.2.50D   | 96871926       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.30.A.2.50D   | 96872135       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.40.A.2.51D   | 96872137       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.65.80.22.A.2.50D   | 96871930       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.30.A.2.50D   | 96871931       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.40.A.2.51D   | 96872152       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.11.A.4.50D   | 96837216       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.13.A.4.50D   | 96871962       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.15.A.4.50D   | 96871963       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.A.4.50D   | 96835682       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.A.4.51D   | 96872156       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.A.4.51D   | 96872159       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.A.2.51D   | 96872157       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.60.A.2.51D   | 96872160       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.75.A.2.51D   | 96872161       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.92.A.2.51D   | 96872162       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.110.A.2.51D  | 96872163       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.11.A.4.50D  | 96872165       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.13.A.4.50D  | 96890782       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.15.A.4.50D  | 96872168       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.A.4.50D  | 96872248       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.A.4.51D  | 96872249       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.A.4.51D  | 96872184       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.A.2.51D  | 96872171       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.75.A.2.51D  | 96872183       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.92.A.2.51D  | 96872185       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.110.A.2.51D | 96890790       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.30.A.4.50D | 96871965       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.100.100.40.A.4.51D | 96872187       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.55.A.4.51D | 96872188       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.75.A.4.51D | 96872189       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

## SLV Sensor Australia

| Pump type              | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|------------------------|----------------|----------------|---------------------|--------------------|
| SLV.65.65.22.A.2.50B   | 96891440       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.30.A.2.50B   | 96891441       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.40.A.2.50B   | 96891443       | 3x400-415V D   | 15                  | PTC                |
| SLV.65.80.22.A.2.50B   | 96891444       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.30.A.2.50B   | 96891445       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.40.A.2.50B   | 96891446       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.11.A.4.50B   | 96872153       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.13.A.4.50B   | 96872154       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.15.A.4.50B   | 96872155       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.22.A.4.50B   | 96891448       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.40.A.4.50B   | 96891451       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.40.A.2.50B   | 96891449       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.60.A.2.50B   | 96891452       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.75.A.2.50B   | 96891453       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.92.A.2.50B   | 96891454       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.110.A.2.50B  | 96891455       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.11.A.4.50B  | 96872166       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.13.A.4.50B  | 96891457       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.15.A.4.50B  | 96872170       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.22.A.4.50B  | 96891458       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.40.A.4.50B  | 96891461       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.40.A.2.50B  | 96891459       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.60.A.2.50B  | 96893974       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.75.A.2.50B  | 96891460       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.92.A.2.50B  | 96891462       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.110.A.2.50B | 96891464       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.30.A.4.50B | 96891465       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.100.100.40.A.4.50B | 96891466       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.55.A.4.50B | 96891467       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.75.A.4.50B | 96891468       | 3x400-415V D   | 15                  | PTC                |

## Explosion proof pumps

### DP10 Ex

| Pump type             | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-----------------------|----------------|----------------|---------------------|--------------------|
| DP10.50.09.Ex.2.1.502 | 96104201       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| DP10.50.09.Ex.2.50B   | 96104205       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.Ex.2.50B   | 96104209       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.26.Ex.2.50B   | 96106543       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### DP10 Ex Australia

| Pump type             | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-----------------------|----------------|----------------|---------------------|--------------------|
| DP10.50.09.Ex.2.1.502 | 96104203       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| DP10.50.09.Ex.2.50B   | 96104207       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.50.15.Ex.2.50B   | 96104211       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| DP10.65.Ex.26.2.50B   | 96106545       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### EF30 Ex

| Pump type             | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-----------------------|----------------|----------------|---------------------|--------------------|
| EF30.50.06.Ex.2.1.502 | 96106547       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.06.Ex.2.50B   | 96106551       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.09.Ex.2.1.502 | 96115112       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.09.Ex.2.50B   | 96115116       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.11.Ex.2.1.502 | 96106555       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.11.Ex.2.50B   | 96106559       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.15.Ex.2.50B   | 96104197       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

### EF30 Ex Australia

| Pump type             | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-----------------------|----------------|----------------|---------------------|--------------------|
| EF30.50.Ex.06.2.1.502 | 96106549       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.06.2.50B   | 96106553       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.09.2.1.502 | 96115114       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.09.2.50B   | 96115118       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.11.2.1.502 | 96106557       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.11.2.50B   | 96106561       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| EF30.50.Ex.15.2.50B   | 96104199       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |

## SL1 Ex.

| Pump type               | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.09.Ex.2.1.502 | 96106563       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.Ex.2.50C   | 96106569       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.Ex.2.50B   | 96106568       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.Ex.2.1.502 | 96104126       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.Ex.2.50C   | 96104132       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.Ex.2.50B   | 96104131       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.Ex.2.50C   | 96104121       | 3x230-240 V D  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.Ex.2.50B   | 96104120       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.22.Ex.2.50D   | 96871960       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.30.Ex.2.50D   | 96857882       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.40.Ex.2.51D   | 96872035       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.50.80.22.Ex.2.50D   | 96872038       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.30.Ex.2.50D   | 96872064       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.40.Ex.2.51D   | 96872103       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.15.Ex.4.50D   | 96872144       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.22.Ex.4.50D   | 96837227       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.30.Ex.4.50D   | 96872180       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.40.Ex.4.51D   | 96872219       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.55.Ex.4.51D   | 96872252       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.75.Ex.4.51D   | 96873388       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.15.Ex.4.50D  | 96873389       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.22.Ex.4.50D  | 96857919       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.30.Ex.4.50D  | 96837214       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.40.Ex.4.51D  | 96873414       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.55.Ex.4.51D  | 96873416       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.75.Ex.4.51D  | 96873417       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.40.Ex.4.51D | 96873420       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.55.Ex.4.51D | 96873422       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.75.Ex.4.51D | 96873423       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.40.Ex.4.51D | 96873424       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.55.Ex.4.51D | 96873425       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.75.Ex.4.51D | 96873426       | 3x380-415V D   | 10                  | THERMAL SWITCH     |



## SL1 Ex. Australia

| Pump type               | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.09.Ex.2.1.502 | 96106565       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.09.Ex.2.50B   | 96106572       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.Ex.2.1.502 | 96104128       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SL1.50.65.11.Ex.2.50B   | 96104135       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.15.Ex.2.50B   | 96104124       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SL1.50.65.22.Ex.2.50B   | 96891716       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.30.Ex.2.50B   | 96891717       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.40.Ex.2.50B   | 96891718       | 3x400-415V D   | 15                  | PTC                |
| SL1.50.80.22.Ex.2.50B   | 96891719       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.30.Ex.2.50B   | 96891720       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.40.Ex.2.50B   | 96891721       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.15.Ex.4.50B   | 96872149       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.22.Ex.4.50B   | 96891704       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.30.Ex.4.50B   | 96891703       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.40.Ex.4.50B   | 96891702       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.55.Ex.4.50B   | 96891701       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.75.Ex.4.50B   | 96891700       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.15.Ex.4.50B  | 96873390       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.22.Ex.4.50B  | 96891692       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.30.Ex.4.50B  | 96891691       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.40.Ex.4.50B  | 96873413       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.55.Ex.4.50B  | 96873415       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.75.Ex.4.50B  | 96891687       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.40.Ex.4.50B | 96891682       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.55.Ex.4.50B | 96891681       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.75.Ex.4.50B | 96891680       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.40.Ex.4.50B | 96891673       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.55.Ex.4.50B | 96891672       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.75.Ex.4.50B | 96891671       | 3x400-415V D   | 15                  | PTC                |

## SLV Ex.

| Pump type               | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-------------------------|----------------|----------------|---------------------|--------------------|
| SLV65.65.09.Ex.2.1.502  | 96115120       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.09.Ex.2.50B    | 96115124       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.11.Ex.2.1.502  | 96106574       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.11.Ex.2.50B    | 96106578       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV.65.65.15.Ex.2.50B   | 96104193       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV.65.65.22.Ex.2.50D   | 96872031       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.30.Ex.2.50D   | 96872045       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.40.Ex.2.51D   | 96872050       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.65.80.22.Ex.2.50D   | 96872051       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.30.Ex.2.50D   | 96872056       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.40.Ex.2.51D   | 96872059       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.11.Ex.4.50D   | 96857918       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.13.Ex.4.50D   | 96872072       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.15.Ex.4.50D   | 96872074       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.Ex.4.50D   | 96835683       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.Ex.4.51D   | 96872077       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.Ex.4.51D   | 96872080       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.Ex.2.51D   | 96872079       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.60.Ex.2.51D   | 96872081       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.75.Ex.2.51D   | 96872082       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.92.Ex.2.51D   | 96872084       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.110.Ex.2.51D  | 96872085       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.11.Ex.4.50D  | 96872087       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.13.Ex.4.50D  | 96890783       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.15.Ex.4.50D  | 96872089       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.Ex.4.50D  | 96872247       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.Ex.4.51D  | 96872246       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.Ex.4.51D  | 96872093       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.Ex.2.51D  | 96872091       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.60.Ex.2.51D  | 96893448       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.75.Ex.2.51D  | 96872092       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.92.Ex.2.51D  | 96872094       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.110.Ex.2.51D | 96890791       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.30.Ex.4.50D | 96872095       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.100.100.40.Ex.4.51D | 96872097       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.55.Ex.4.51D | 96872098       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.75.Ex.4.51D | 96872099       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

## SLV Ex. Australia

| Pump type               | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|-------------------------|----------------|----------------|---------------------|--------------------|
| SLV65.65.Ex.09.2.1.502  | 96115122       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.Ex.09.2.50B    | 96115126       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.Ex.11.2.1.502  | 96106576       | 1x230 V D      | 10                  | THERMAL SWITCH     |
| SLV65.65.Ex.11.2.50B    | 96106580       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV65.65.Ex.15.2.50B    | 96104195       | 3x400-415 V Y  | 10                  | THERMAL SWITCH     |
| SLV.65.65.22.Ex.2.50B   | 96891469       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.30.Ex.2.50B   | 96891470       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.40.Ex.2.50B   | 96891471       | 3x400-415V D   | 15                  | PTC                |
| SLV.65.80.22.Ex.2.50B   | 96891472       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.30.Ex.2.50B   | 96891473       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.40.Ex.2.50B   | 96891474       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.11.Ex.4.50B   | 96872061       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.13.Ex.4.50B   | 96872073       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.15.Ex.4.50B   | 96872075       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.22.Ex.4.50B   | 96891475       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.40.Ex.4.50B   | 96891479       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.40.Ex.2.50B   | 96891478       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.60.Ex.2.50B   | 96891480       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.75.Ex.2.50B   | 96891481       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.92.Ex.2.50B   | 96891492       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.110.Ex.2.50B  | 96891493       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.11.Ex.4.50B  | 96872088       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.13.Ex.4.50   | 96891494       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.15.Ex.4.50B  | 96872090       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.22.Ex.4.50B  | 96891495       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.40.Ex.4.50B  | 96891498       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.40.Ex.2.50B  | 96891496       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.60.Ex.2.50B  | 96893975       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.75.Ex.2.50B  | 96891497       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.92.Ex.2.50B  | 96891499       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.110.Ex.2.50B | 96891500       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.30.Ex.4.50B | 96891501       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.100.100.40.Ex.4.50B | 96891502       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.55.Ex.4.50B | 96891503       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.75.Ex.4.50B | 96891504       | 3x400-415V D   | 15                  | PTC                |

## Explosion-proof pumps with sensors

### SL1 Ex. Sensor

| Pump type                 | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|---------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.22.A.Ex.2.50D   | 96871985       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.30.A.Ex.2.50D   | 96872014       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.65.40.A.Ex.2.51D   | 96872036       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.50.80.22.A.Ex.2.50D   | 96872039       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.30.A.Ex.2.50D   | 96872065       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.50.80.40.A.Ex.2.51D   | 96872105       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.15.A.Ex.4.50D   | 96872145       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.22.A.Ex.4.50D   | 96837223       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.30.A.Ex.4.50D   | 96872212       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.80.40.A.Ex.4.51D   | 96872220       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.55.A.Ex.4.51D   | 96872253       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.80.75.A.Ex.4.51D   | 96873427       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.15.A.Ex.4.50D  | 96873428       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.22.A.Ex.4.50D  | 96873430       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.30.A.Ex.4.50D  | 96873432       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SL1.80.100.40.A.Ex.4.51D  | 96873435       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.55.A.Ex.4.51D  | 96873438       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.80.100.75.A.Ex.4.51D  | 96873439       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.40.A.Ex.4.51D | 96873441       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.55.A.Ex.4.51D | 96873452       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.100.75.A.Ex.4.51D | 96873453       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.40.A.Ex.4.51D | 96873454       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.55.A.Ex.4.51D | 96873455       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SL1.100.150.75.A.Ex.4.51D | 96873456       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

### SL1 Ex. Sensor Australia

| Pump type                 | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|---------------------------|----------------|----------------|---------------------|--------------------|
| SL1.50.65.22.A.Ex.2.50B   | 96891710       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.30.A.Ex.2.50B   | 96891711       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.65.40.A.Ex.2.50B   | 96891712       | 3x400-415V D   | 15                  | PTC                |
| SL1.50.80.22.A.Ex.2.50B   | 96891713       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.30.A.Ex.2.50B   | 96891714       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.50.80.40.A.Ex.2.50B   | 96891715       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.15.A.Ex.4.50B   | 96872150       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.22.A.Ex.4.50B   | 96891705       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.30.A.Ex.4.50B   | 96891706       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.80.40.A.Ex.4.50B   | 96891707       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.55.A.Ex.4.50B   | 96891708       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.80.75.A.Ex.4.50B   | 96891709       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.15.A.Ex.4.50B  | 96873429       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.22.A.Ex.4.50B  | 96891694       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.30.A.Ex.4.50B  | 96891693       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SL1.80.100.40.A.Ex.4.50B  | 96873434       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.55.A.Ex.4.50B  | 96873437       | 3x400-415V D   | 15                  | PTC                |
| SL1.80.100.75.A.Ex.4.50B  | 96891688       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.40.A.Ex.4.50B | 96891679       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.55.A.Ex.4.50B | 96891678       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.100.75.A.Ex.4.50B | 96891677       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.40.A.Ex.4.50B | 96891676       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.55.A.Ex.4.50B | 96891675       | 3x400-415V D   | 15                  | PTC                |
| SL1.100.150.75.A.Ex.4.50B | 96891674       | 3x400-415V D   | 15                  | PTC                |

## SLV Ex. Sensor

| Pump type                 | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|---------------------------|----------------|----------------|---------------------|--------------------|
| SLV.65.65.22.A.Ex.2.50D   | 96872190       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.30.A.Ex.2.50D   | 96872192       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.65.40.A.Ex.2.51D   | 96872194       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.65.80.22.A.Ex.2.50D   | 96872195       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.30.A.Ex.2.50D   | 96872199       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.65.80.40.A.Ex.2.51D   | 96872202       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.11.A.Ex.4.50D   | 96837199       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.13.A.Ex.4.50D   | 96872204       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.15.A.Ex.4.50D   | 96872206       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.22.A.Ex.4.50D   | 96826096       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.A.Ex.4.51D   | 96872211       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.40.A.Ex.2.51D   | 96872209       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.60.A.Ex.2.51D   | 96872222       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.75.A.Ex.2.51D   | 96872223       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.92.A.Ex.2.51D   | 96872224       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.80.110.A.Ex.2.51D  | 96872225       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.11.A.Ex.4.50D  | 96872226       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.15.A.Ex.4.50D  | 96872228       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.A.Ex.4.50D  | 96872250       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.80.100.22.A.Ex.4.51D  | 96872251       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.A.Ex.4.51D  | 96872232       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.40.A.Ex.2.51D  | 96872230       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.75.A.Ex.2.51D  | 96872231       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.92.A.Ex.2.51D  | 96872235       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.80.100.110.A.Ex.2.51D | 96890792       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.30.A.Ex.4.50D | 96872237       | 3x380-415V Y   | 10                  | THERMAL SWITCH     |
| SLV.100.100.40.A.Ex.4.51D | 96872240       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.55.A.Ex.4.51D | 96872241       | 3x380-415V D   | 10                  | THERMAL SWITCH     |
| SLV.100.100.75.A.Ex.4.51D | 96872242       | 3x380-415V D   | 10                  | THERMAL SWITCH     |

## SLV Ex. Sensor Australia

| Pump type                 | Product number | Voltage<br>[V] | Cable length<br>[m] | Thermal protection |
|---------------------------|----------------|----------------|---------------------|--------------------|
| SLV.65.65.22.A.Ex.2.50B   | 96891505       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.30.A.Ex.2.50B   | 96891506       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.65.40.A.Ex.2.50B   | 96891507       | 3x400-415V D   | 15                  | PTC                |
| SLV.65.80.22.A.Ex.2.50B   | 96891508       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.30.A.Ex.2.50B   | 96891509       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.65.80.40.A.Ex.2.50B   | 96891511       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.11.A.Ex.4.50B   | 96872203       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.13.A..Ex.4.50B  | 96872205       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.15.A.Ex.4.50B   | 96872207       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.22.A.Ex.4.50B   | 96891512       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.80.40.A.Ex.4.50B   | 96891514       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.40.A.Ex.2.50B   | 96891513       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.60.A.Ex.2.50B   | 96891515       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.75.A.Ex.2.50B   | 96891516       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.92.A.Ex.2.50B   | 96891517       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.80.110.A.Ex.2.50B  | 96891519       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.11.A.Ex.4.50B  | 96872227       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.13.A.Ex.4.50B  | 96891520       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.15.A.Ex.4.50B  | 96872229       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.22.A.Ex.4.50B  | 96891521       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.80.100.40.A.Ex.4.50B  | 96891524       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.40.A.Ex.2.50B  | 96891522       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.75.A.Ex.2.50B  | 96891523       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.92.A.Ex.2.50B  | 96891598       | 3x400-415V D   | 15                  | PTC                |
| SLV.80.100.110.Ex.A.2.50B | 96891599       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.30.A.Ex.4.50B | 96891600       | 3x400-415V Y   | 15                  | THERMAL SWITCH     |
| SLV.100.100.40.A.Ex.4.50B | 96891601       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.55.A.Ex.4.50B | 96891642       | 3x400-415V D   | 15                  | PTC                |
| SLV.100.100.75.A.Ex.4.50B | 96891643       | 3x400-415V D   | 15                  | PTC                |

## List of variants

### Motor

|                       |                                                 |                    |
|-----------------------|-------------------------------------------------|--------------------|
| Various cable lengths |                                                 | 15 m               |
|                       |                                                 | 25 m               |
|                       |                                                 | 50 m               |
|                       |                                                 | 10 m               |
| EMC power cables      | Screened power cables for variable-speed drives | 15 m               |
|                       |                                                 | 25 m               |
|                       |                                                 | 50 m               |
| Special motor         |                                                 | Insulation class H |
|                       |                                                 | Special voltage    |
| Special oil           | Non-toxic Shell Ondina 917                      |                    |

### Tests

|                                                       |                                                |                             |
|-------------------------------------------------------|------------------------------------------------|-----------------------------|
| Test at specified duty on standard impeller curve     |                                                |                             |
| Trimmed impeller for specified duty test              |                                                |                             |
| Additional test of entire QH curve (including report) | 5-10 flows from pump performance curve         |                             |
| Different test standard                               | Efficiency guaranteed by Grundfos              | ISO 9906 grade 1 tolerances |
|                                                       |                                                | ISO 9906 grade 2 tolerances |
| Vibration test (including report)                     | According to Grundfos factory quality standard |                             |
| NPSHr test                                            | Not yet available                              |                             |
| String test                                           | Contact Grundfos                               |                             |
| Witness test                                          | Contact Grundfos                               |                             |

### Miscellaneous

|                   |                  |
|-------------------|------------------|
| Special packaging | Contact Grundfos |
| Special nameplate | Contact Grundfos |
| Other variants    | Contact Grundfos |





## Drawings, DP10

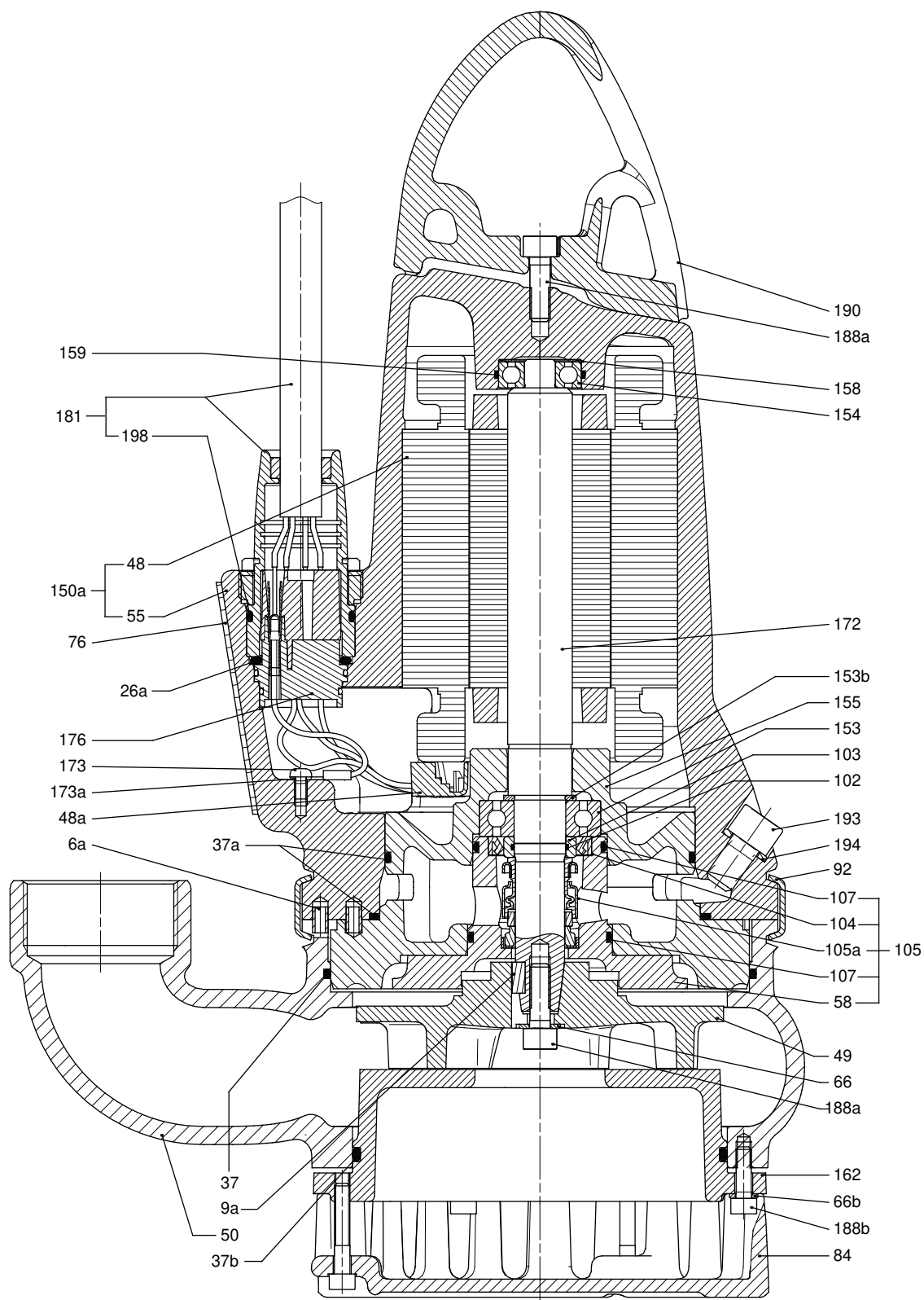


Fig. 4 Sectional drawing, DP10.50.09/15

TM02 7230 0904

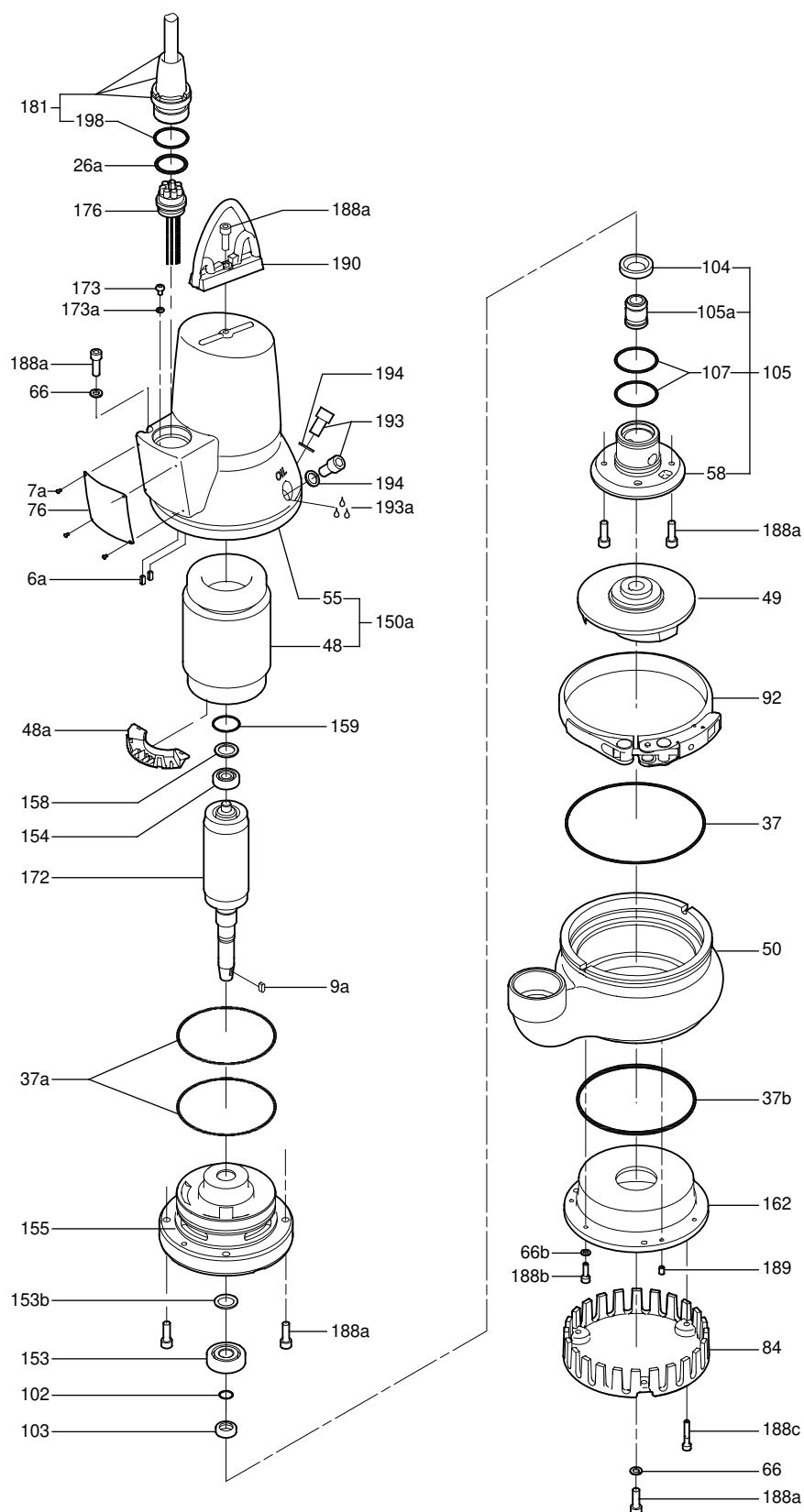


Fig. 5 Exploded drawing, DP10.50.09/15

TM02 7229 0904

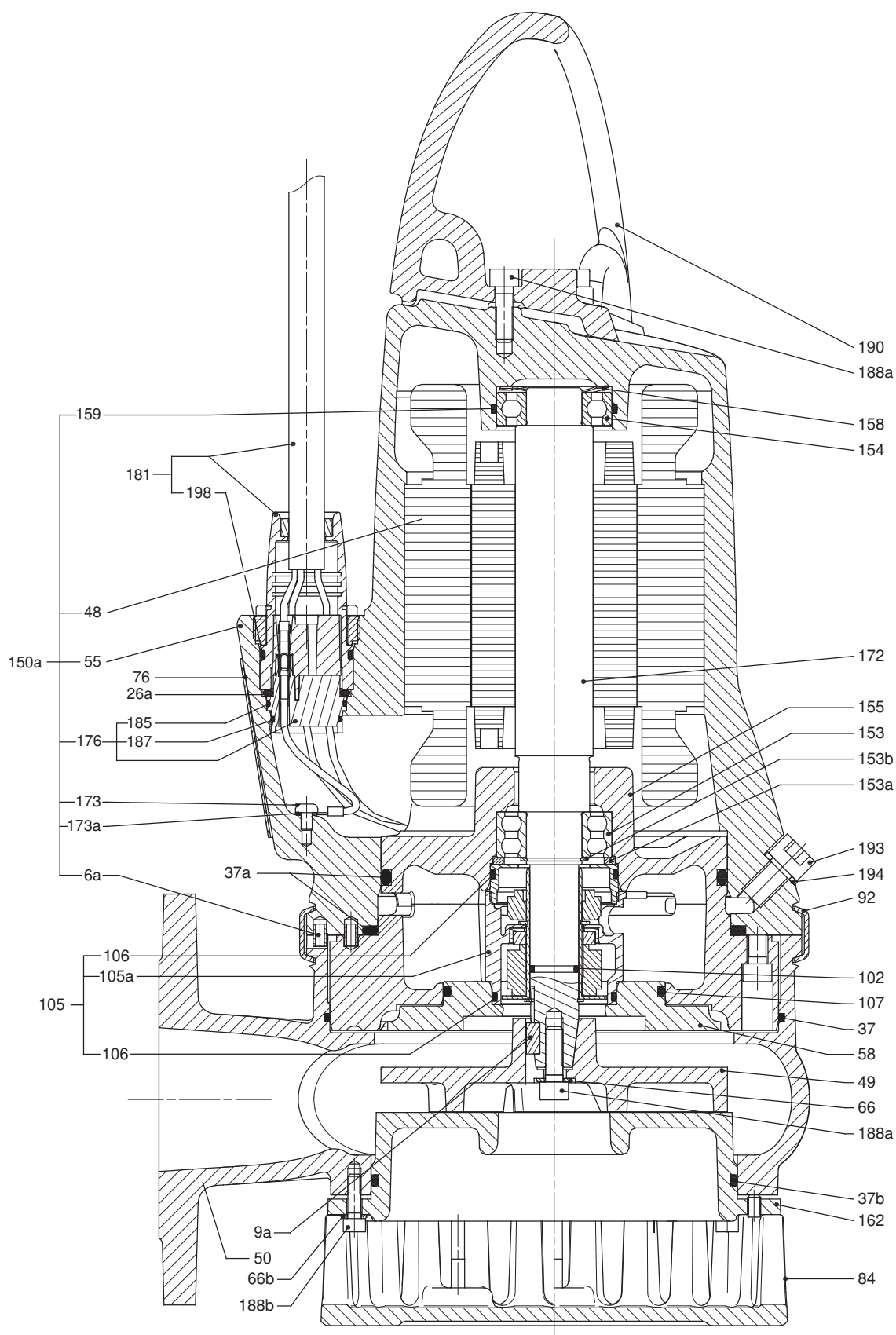
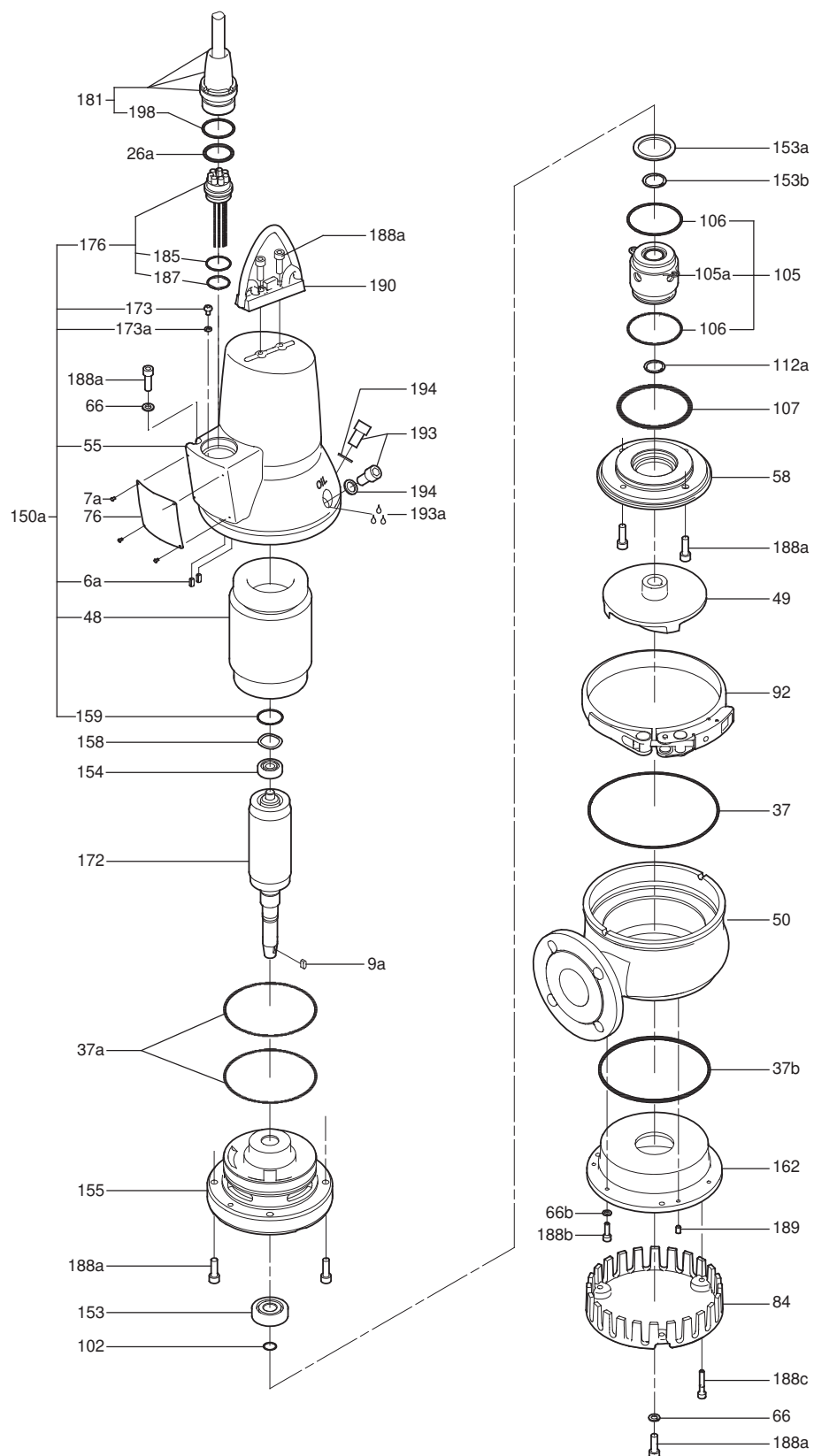


Fig. 6 Sectional drawing, DP10.65.26

TM02 7233 0904



**Fig. 7** Exploded view, DP10.65.26

## Drawings, EF

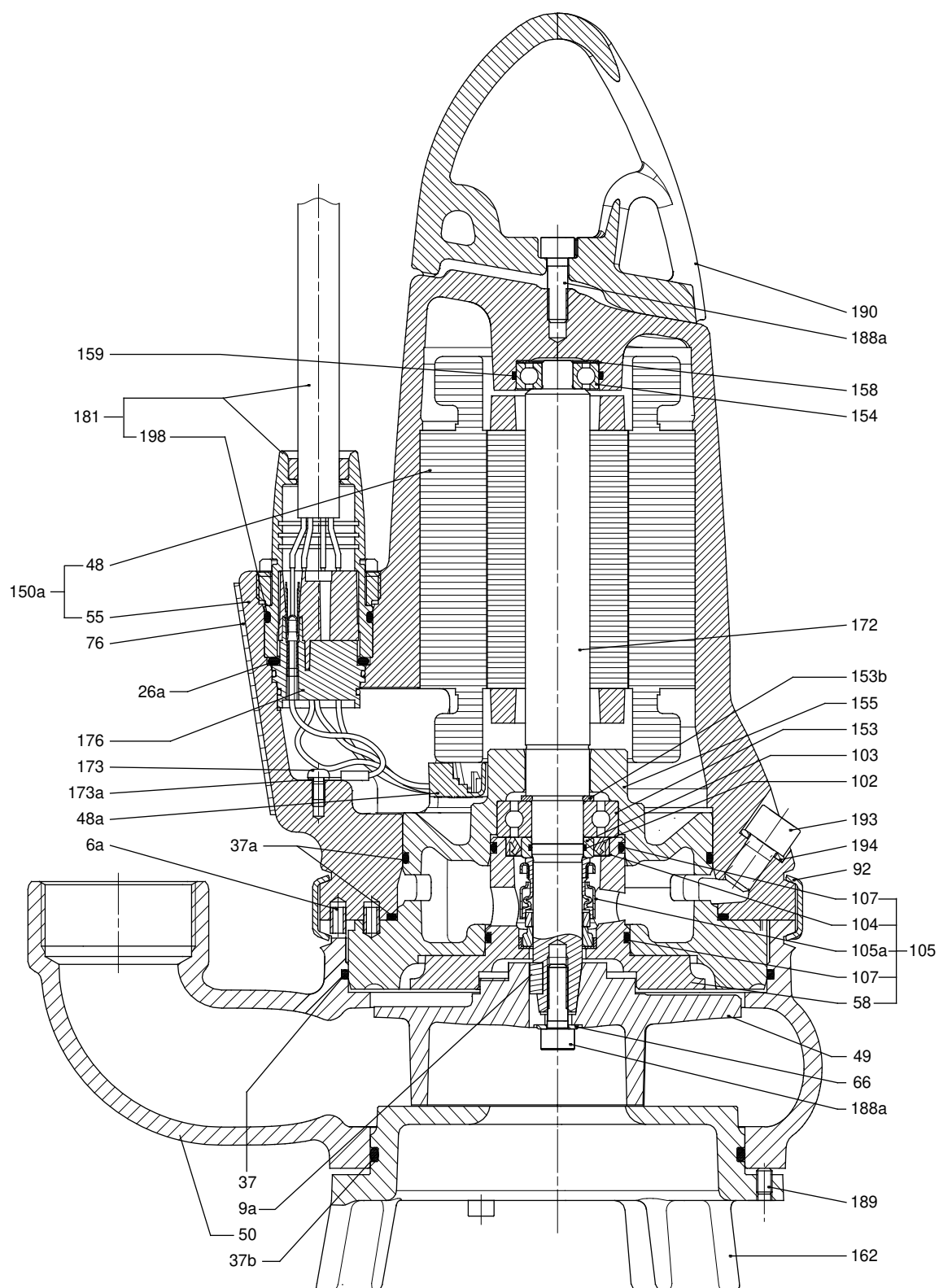


Fig. 8 Sectional drawing, EF

TM02 7359 0904

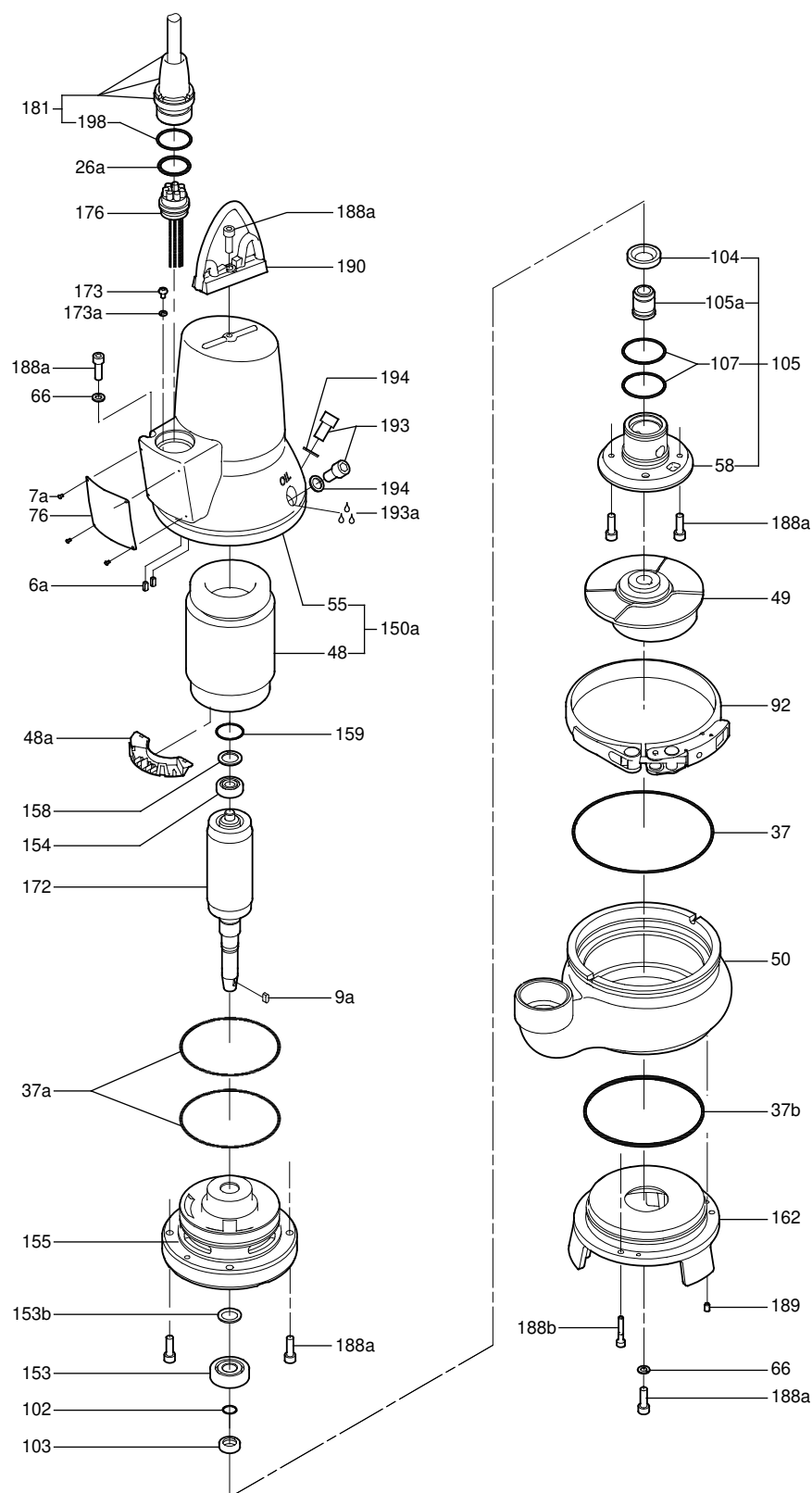


Fig. 9 Exploded drawing, EF

TM02 7362 0904

## SL1

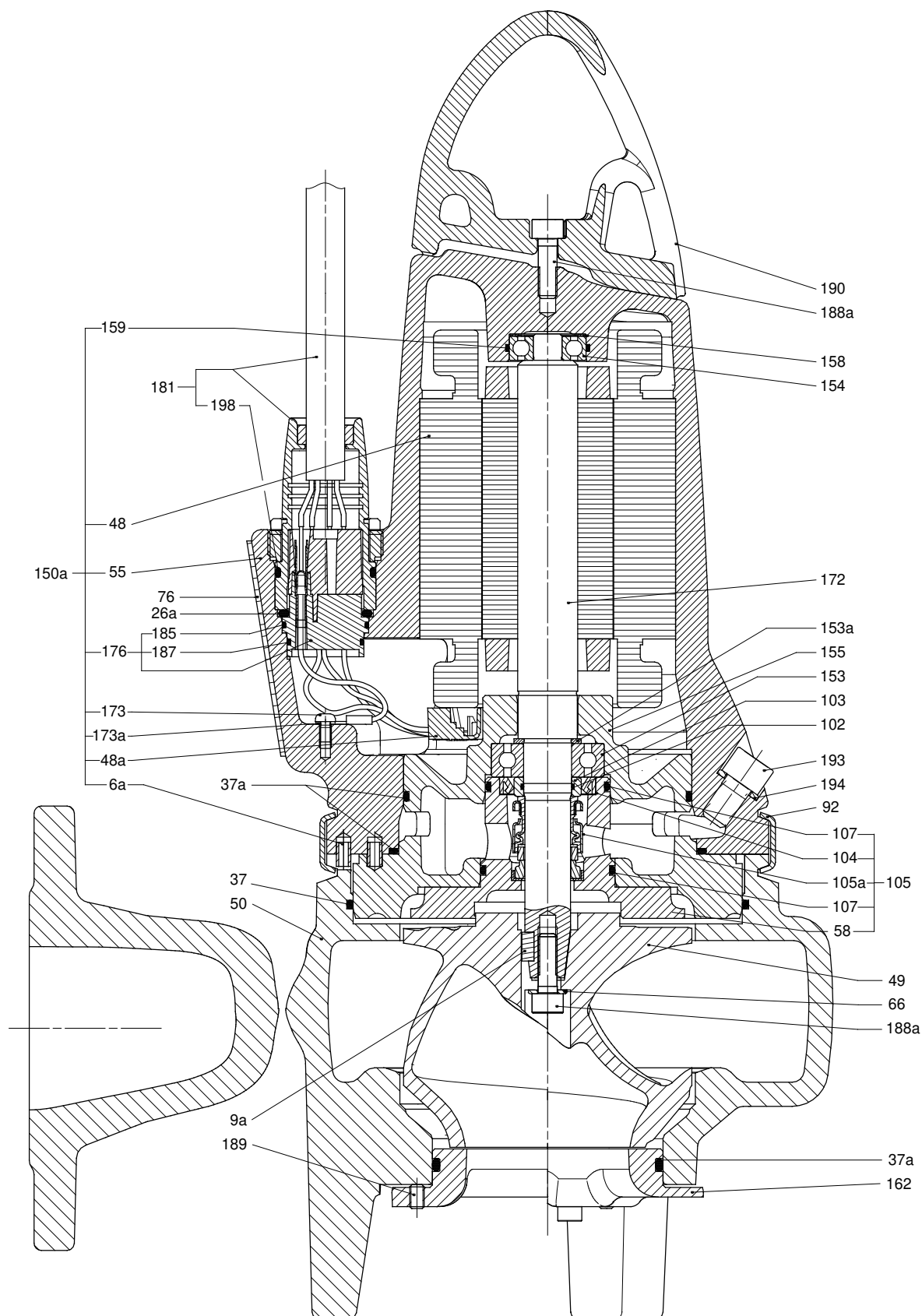


Fig. 10 Sectional drawing, SL1.50.65.09/11/15

TM02 7360 0904

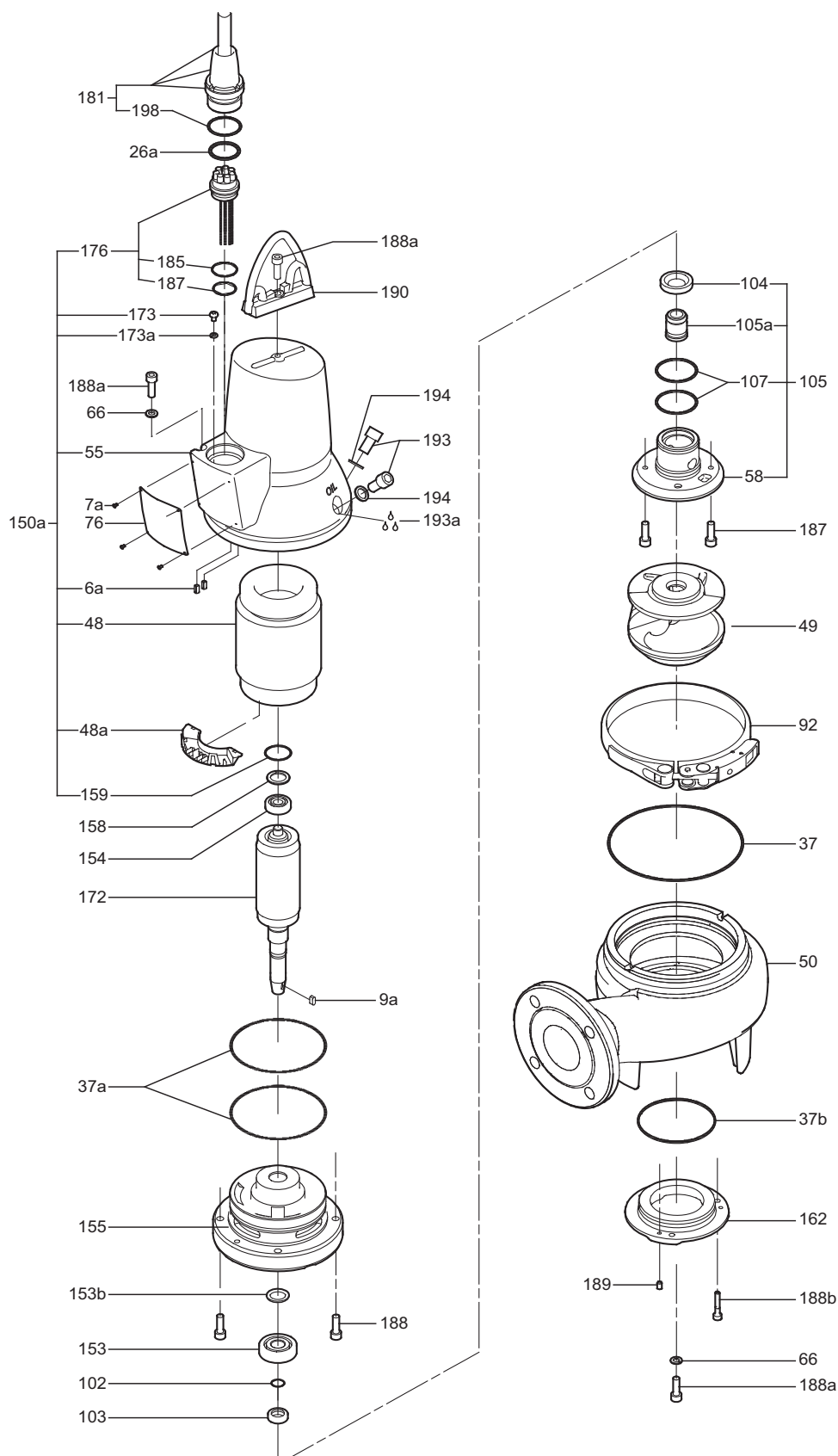
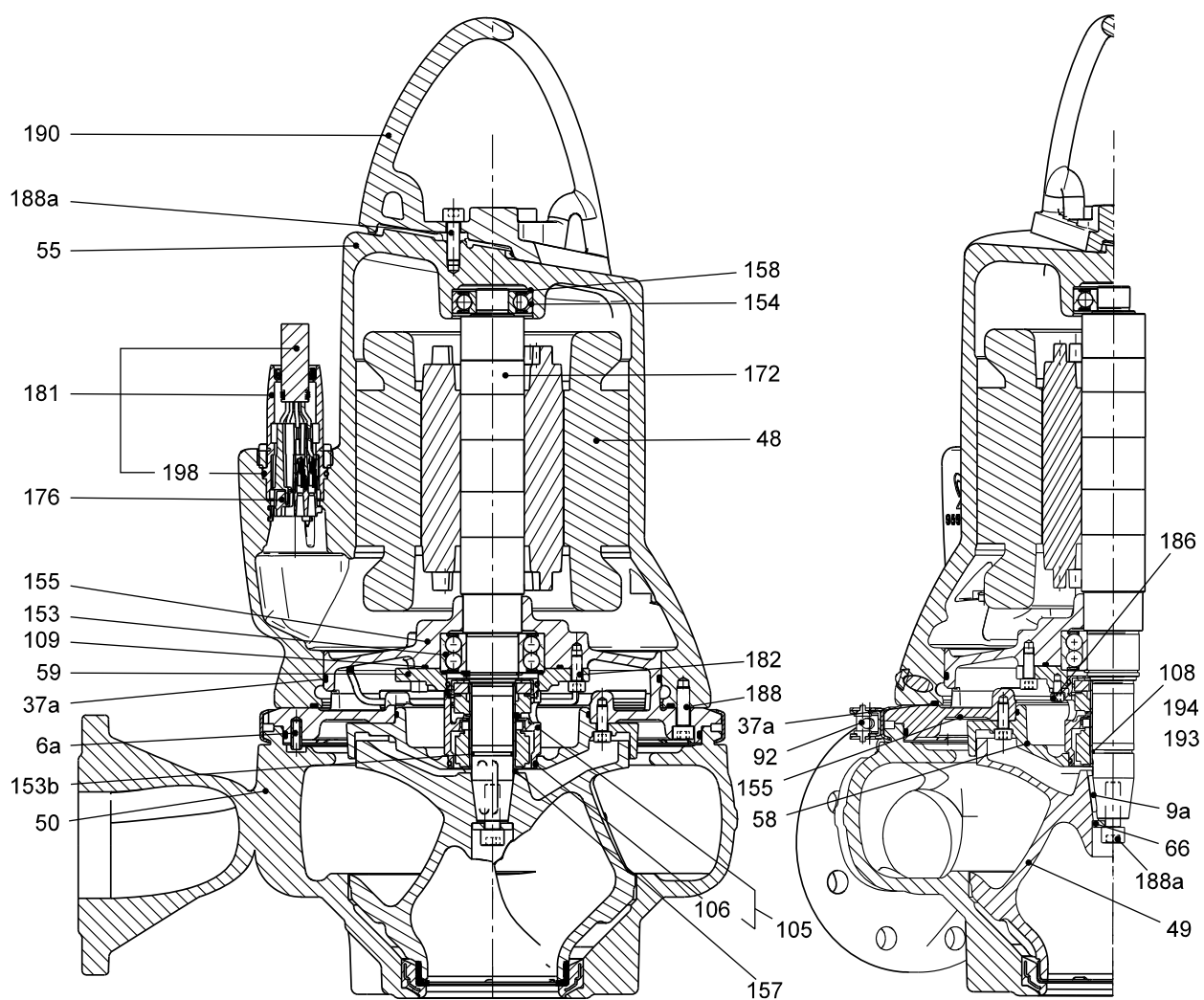


Fig. 11 Exploded view, SL1.50.65.09/11/15

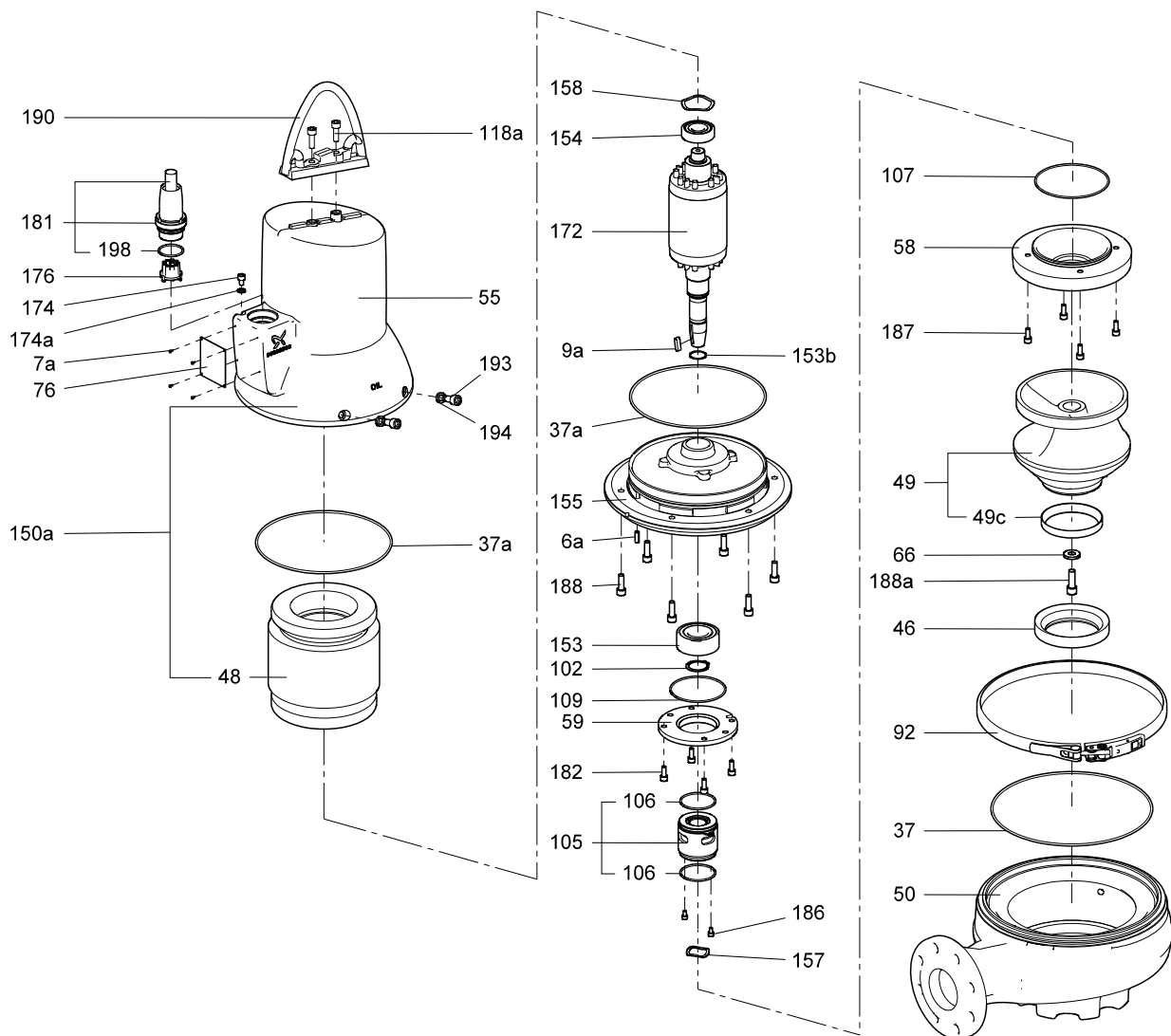
TM02 7363 0904





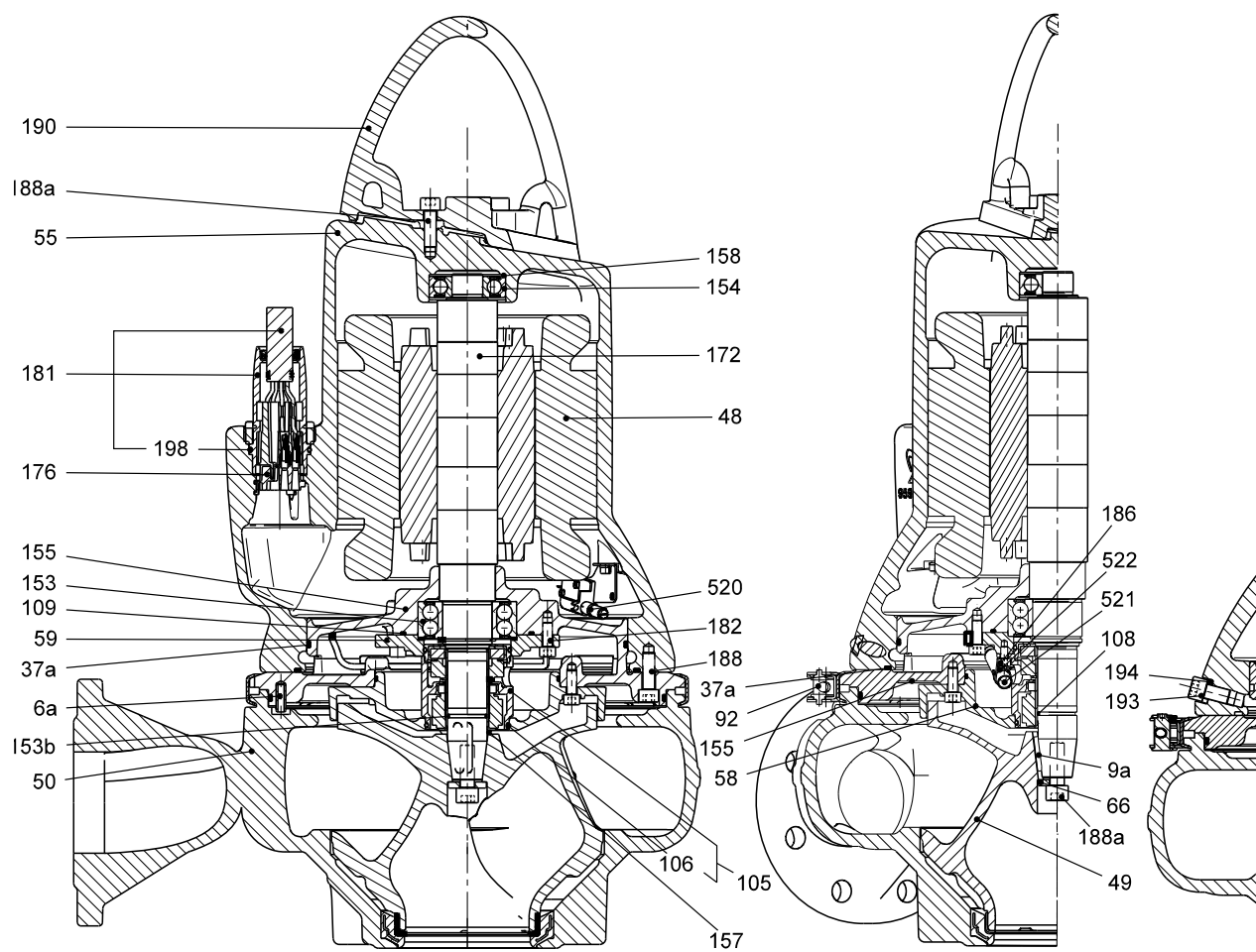
TM04 2787 2908

Fig. 12 Sectional drawing, SL1.50.65.22/30/40, SL1.50.80.xx, SL1.80.80.xx, SL1.80.100.xx, SL1.100.100.xx without sensor



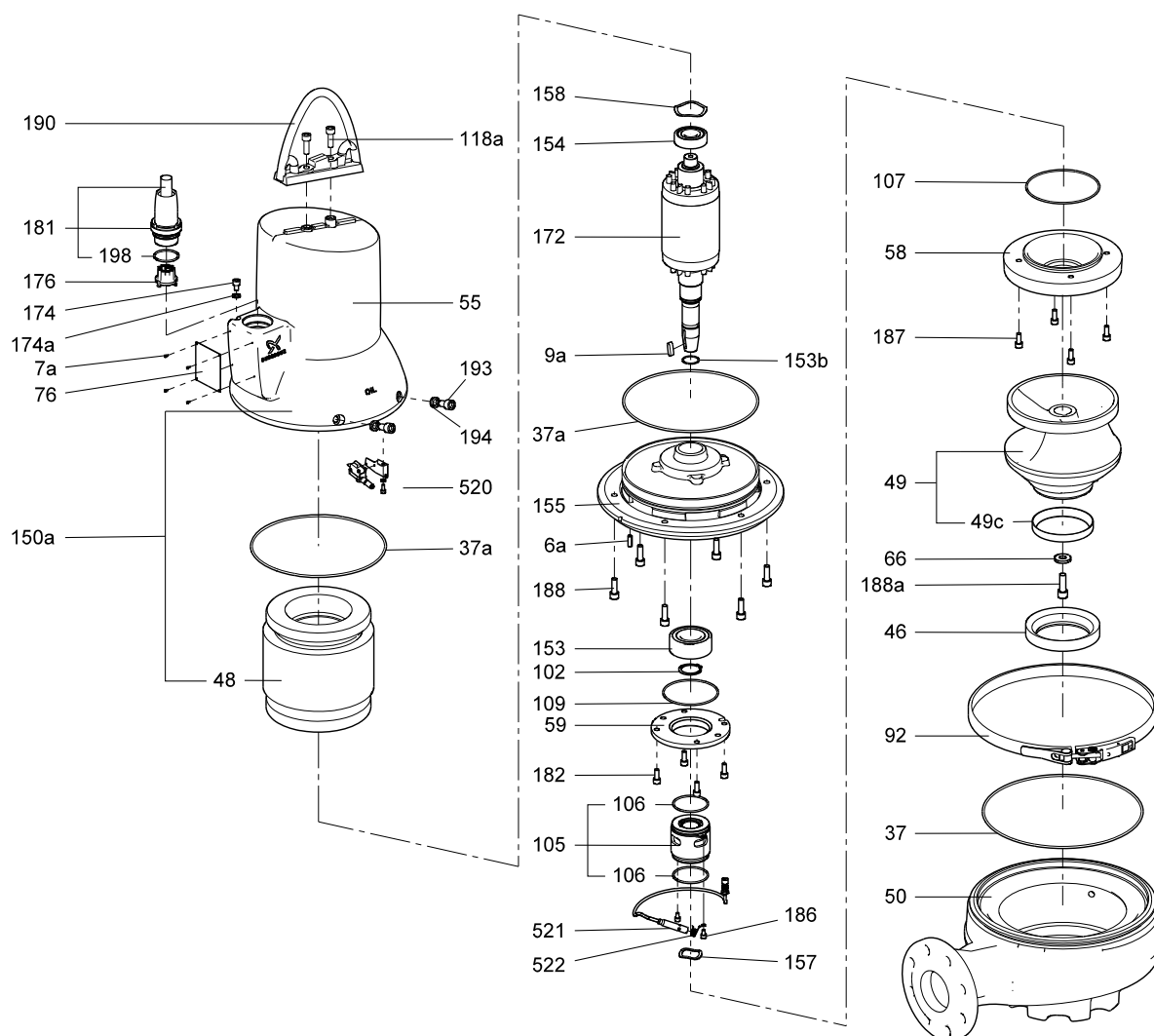
TM04 2777 2908

**Fig. 13** Exploded view, SL1.50.65.22/30/40, SL1.50.80.xx, SL1.80.80.xx, SL1.80.100.xx, SL1.100.100.xx without sensor



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**Fig. 14** Sectional drawing, SL1.50.65.22/30/40, SL1.50.80.xx, SL1.80.80.xx, SL1.80.100.xx, SL1.100.100.xx with sensor



TM02 7363 0904

**Fig. 15** Exploded view, SL1.50.65.22/30/40, SL1.50.80.xx, SL1.80.80.xx, SL1.80.100.xx, SL1.100.100.xx with sensor

## SLV

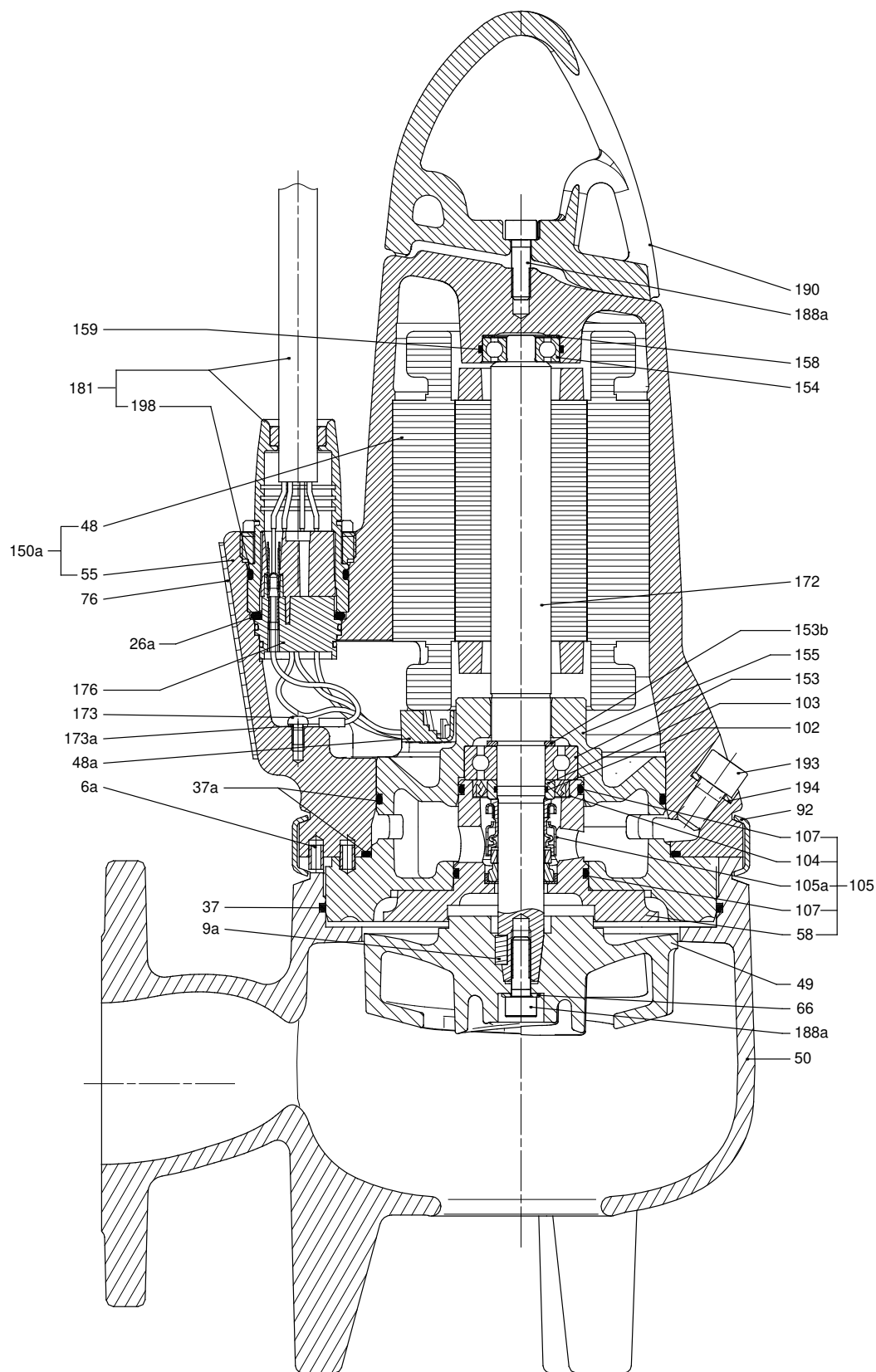


Fig. 16 Sectional drawing, SLV.65.65.09/11/15

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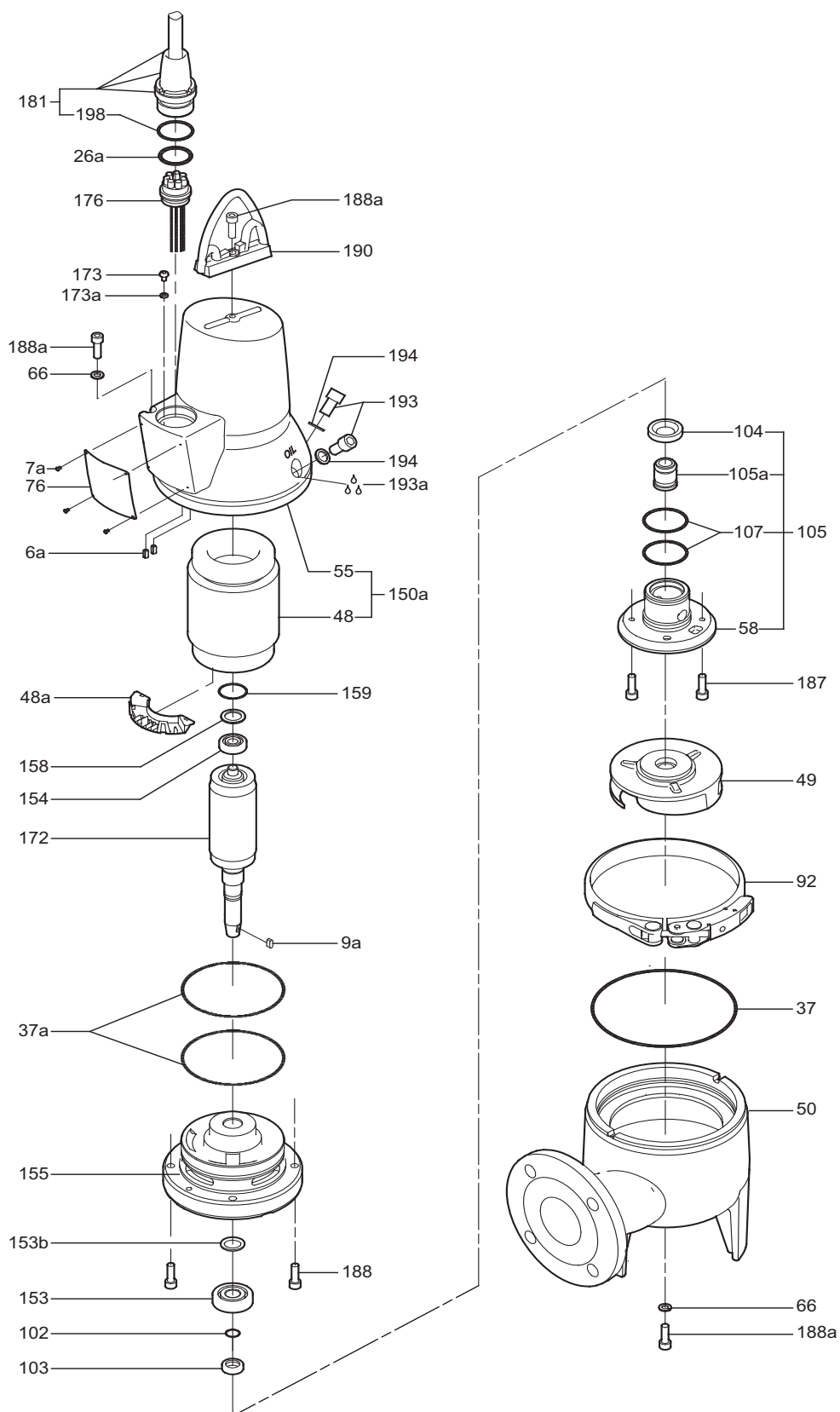
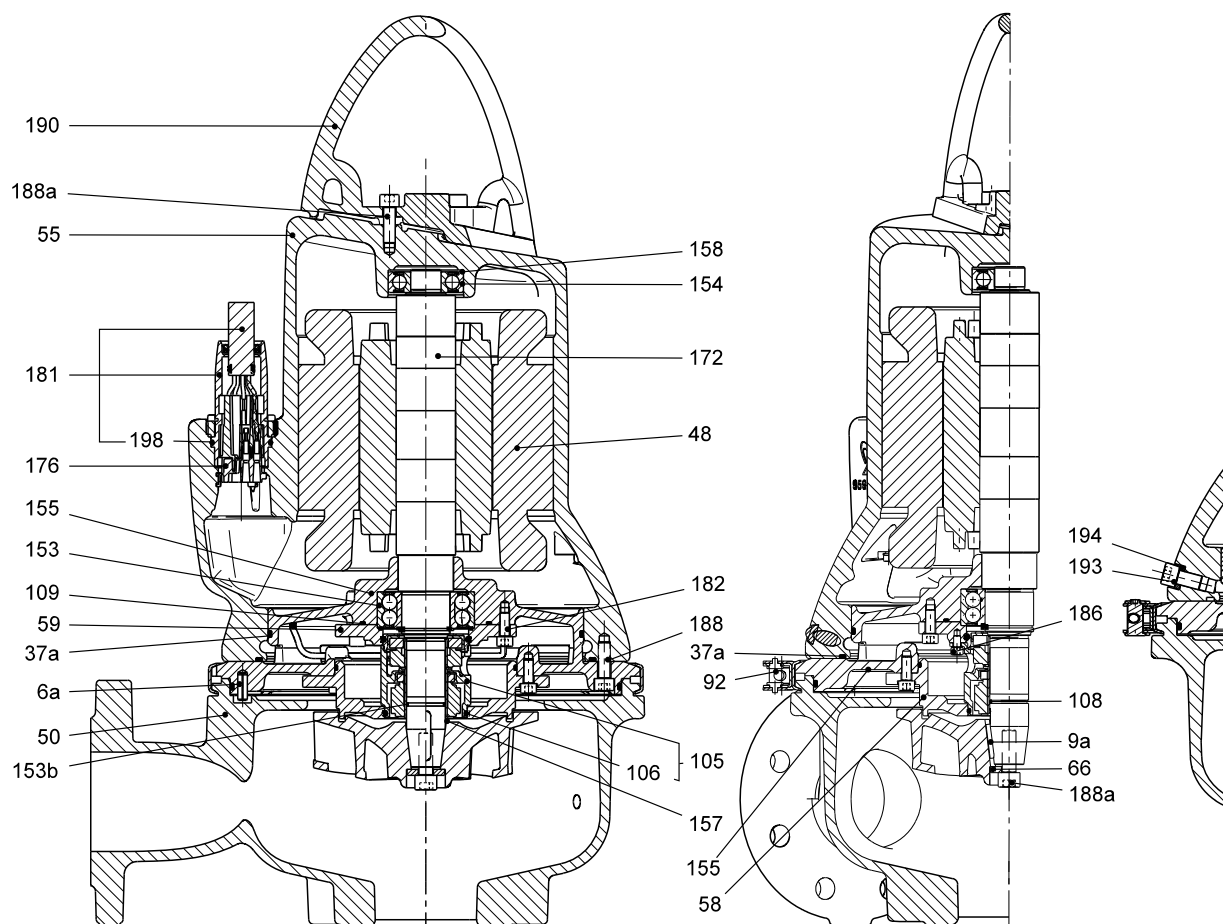


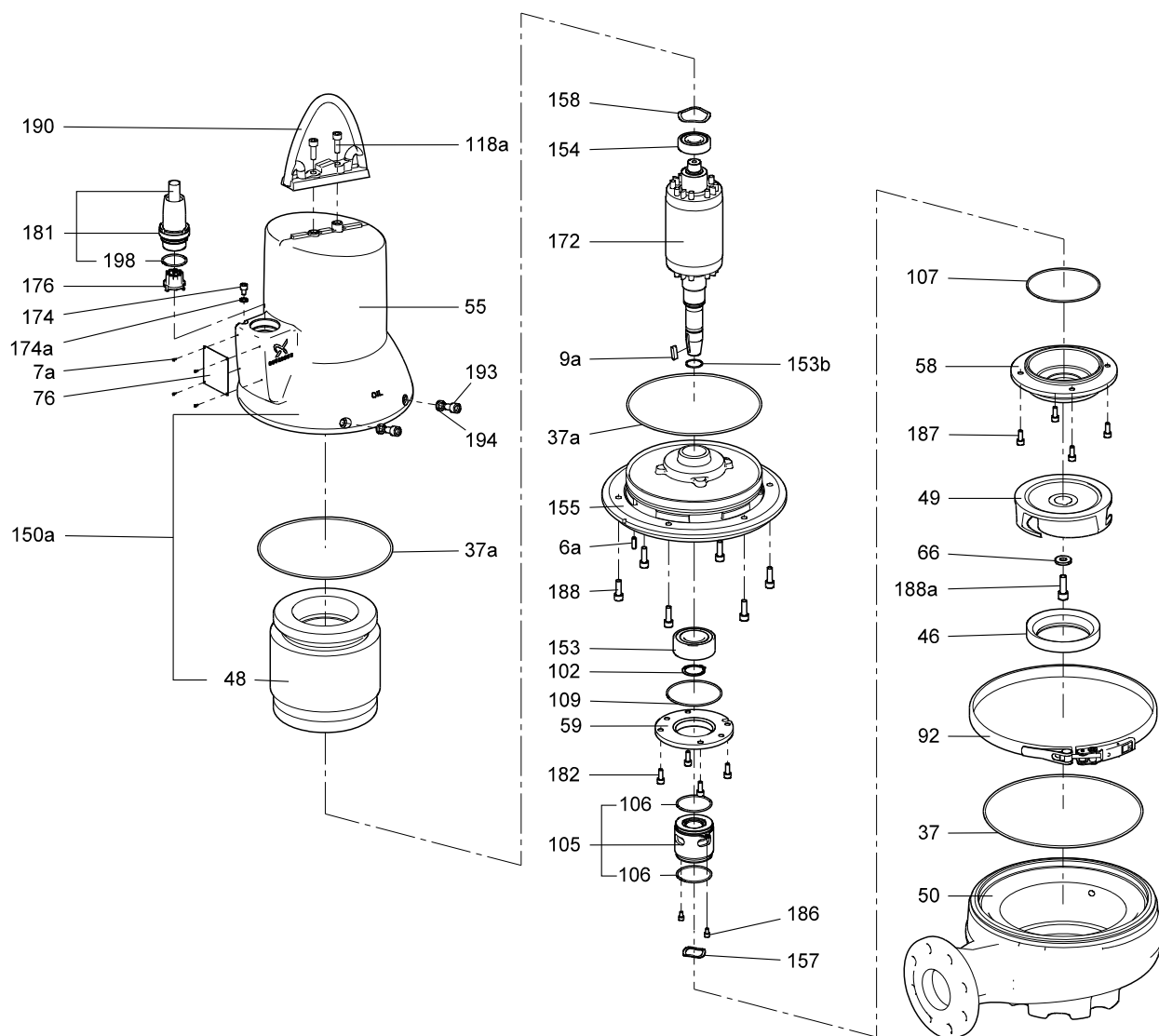
Fig. 17 Exploded view, SLV.65.65.09/11/15

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TM04 2785 2908

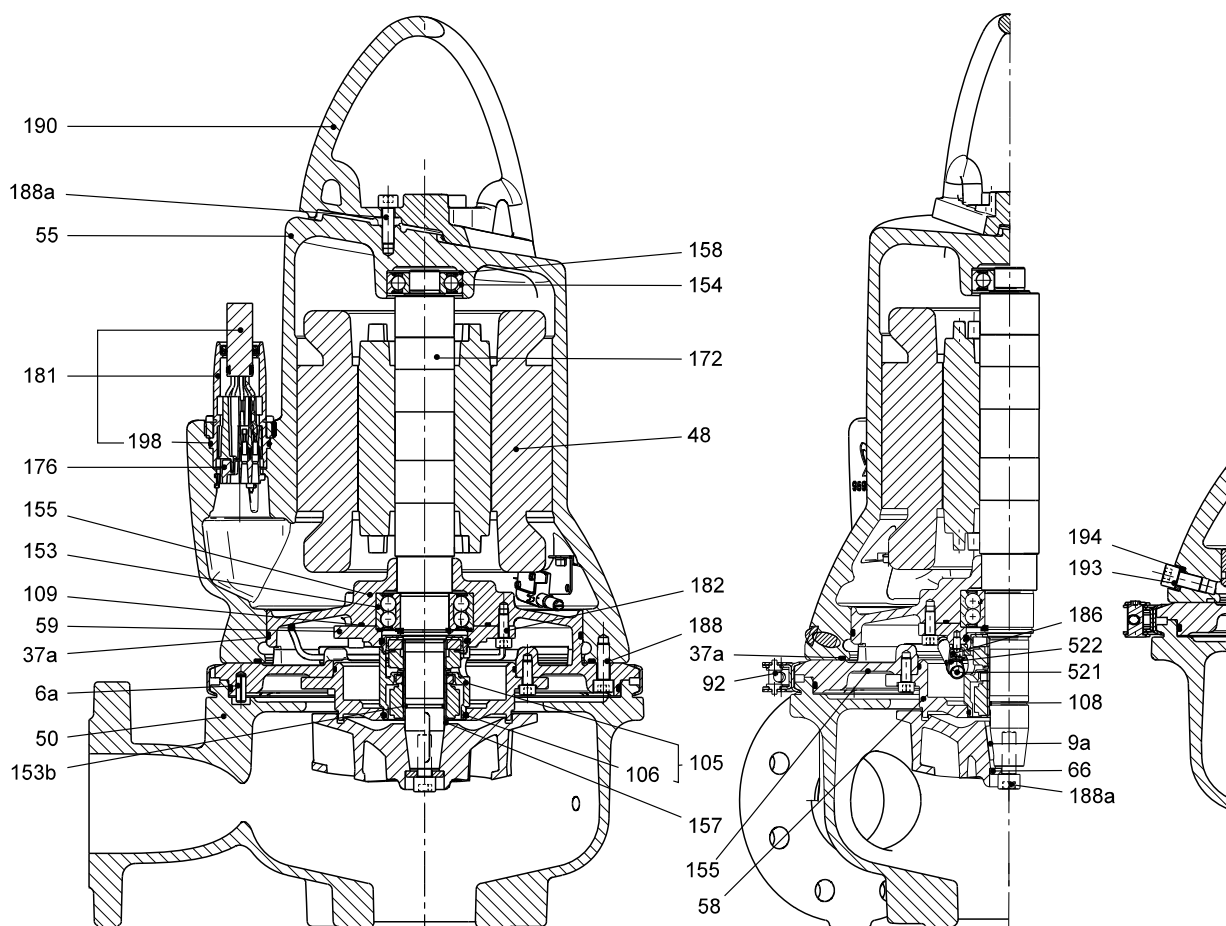
**Fig. 18** Exploded view, SLV.65.65.22/30/40, SLV.65.80.xx, SLV.80.80.xx, SLV.80.100.xx, SLV.100.100.xx without sensor



TM04 2779 2908

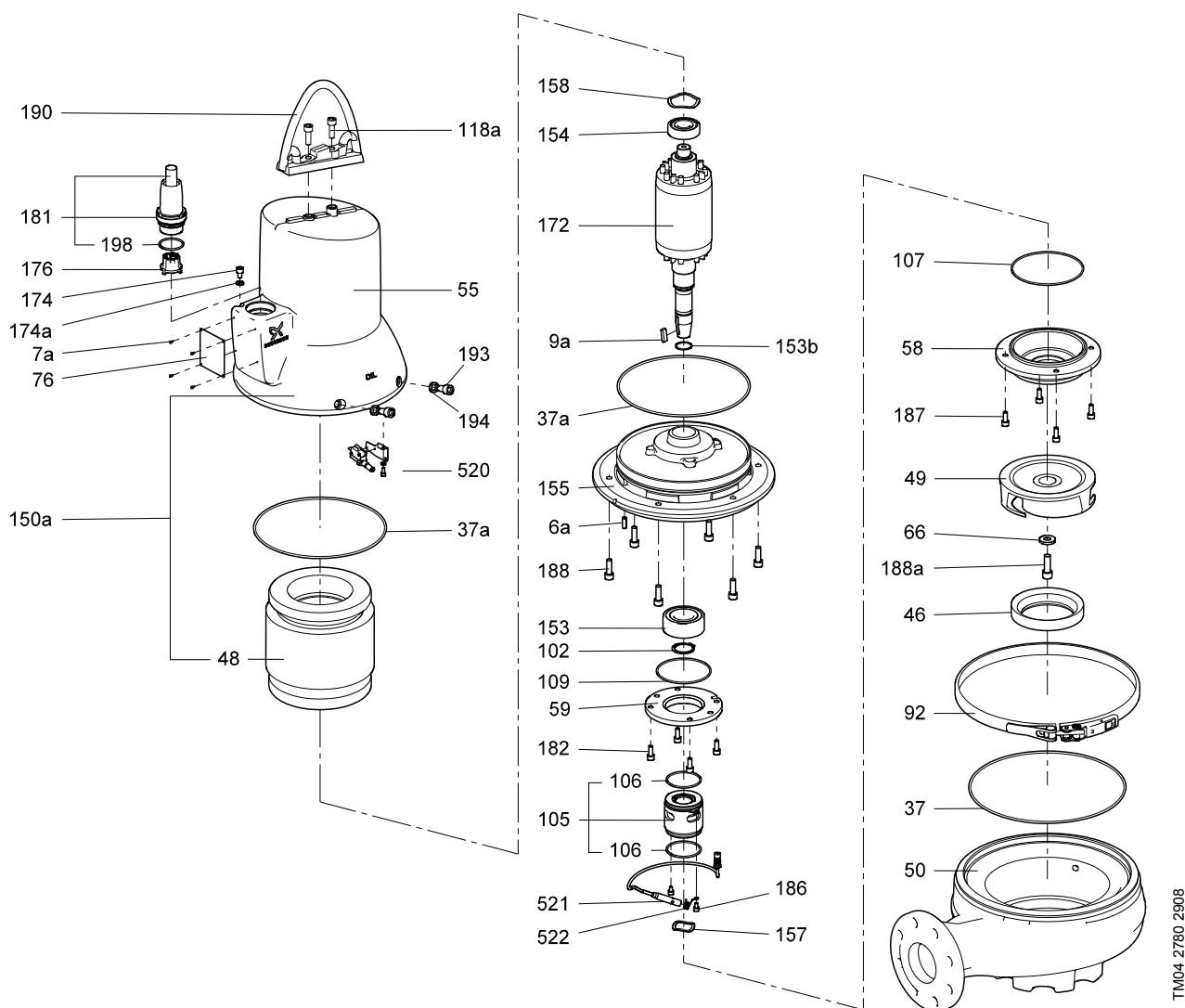
**Fig. 19** Sectional drawing, SLV.65.65.22/30/40, SLV.65.80.xx, SLV.80.80.xx, SLV.80.100.xx, SLV.100.100.xx without sensor





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**Fig. 20** Sectional drawing, SLV.65.65.22/30/40, SLV.65.80.xx, SLV.80.80.xx, SLV.80.100.xx, SLV.100.100.xx with sensor



**Fig. 21** Exploded view, SLV.65.65.22/30/40, SLV.65.80.xx, SLV.80.80.xx, SLV.80.100.xx, SLV.100.100.xx with sensor

## Components and material specification

### DP pumps

| Pos. | Description                | Material                 | DIN W. –Nr. /<br>EN standard | AISI / ASTM |
|------|----------------------------|--------------------------|------------------------------|-------------|
| 6a   | Pin                        | Stainless steel          |                              |             |
| 9a   | Key                        | Stainless steel          |                              |             |
| 26a  | O-ring                     | NBR                      |                              |             |
| 37   | O-ring                     | NBR                      |                              |             |
| 37a  | O-rings                    | NBR                      |                              |             |
| 37b  | O-rings                    | NBR                      |                              |             |
| 48   | Stator                     |                          |                              |             |
| 48a  | Cover                      |                          |                              |             |
| 49   | Impeller                   | Cast iron                | EN-GJS-500-7                 |             |
| 50   | Pump housing               | Cast iron                | EN-GJL-250                   |             |
| 55   | Stator housing             | Cast iron                | EN-JL-1030                   |             |
| 58   | Shaft seal carrier         | Cast iron                | EN-JL-1030                   |             |
| 66   | Locking ring               | Stainless steel          |                              |             |
| 76   | Nameplate                  | Stainless steel          | 1.4301                       | 304         |
| 84   | Strainer                   | Cast iron                |                              |             |
| 92   | Clamp                      | Stainless steel          | 1.4301                       | 304         |
| 102  | O-ring                     | NBR                      |                              |             |
| 103  | Bush                       | Stainless steel          | 1.4057                       | 431         |
| 104  | Seal ring                  | NBR                      |                              |             |
| 105  | Shaft seal                 |                          |                              |             |
| 105a | Shaft seal                 |                          |                              |             |
| 107  | O-rings                    | NBR                      |                              |             |
| 150a | Stator in housing complete |                          |                              |             |
| 153  | Bearing                    | 6204                     |                              |             |
| 153a | Washer                     |                          |                              |             |
| 153b | Washer                     |                          |                              |             |
| 154  | Bearing                    | 6303                     |                              |             |
| 155  | Oil chamber                | Cast iron                |                              |             |
| 157  | Washer                     |                          |                              |             |
| 158  | Corrugated spring          | Steel                    |                              |             |
| 159  | O-ring                     | NBR                      |                              |             |
| 162  | Wear plate                 | Cast iron                |                              |             |
| 172  | Rotor<br>Shaft             |                          | 1.0533<br>1.4301             | 304         |
| 173  | Screw                      | Steel                    |                              |             |
| 173a | Washer                     | Steel                    |                              |             |
| 176  | Inner plug part            | PET                      |                              |             |
| 181  | Outer plug part            | CR rubber, cable H07RN-F | 1.4308                       | CF-8        |
| 188a | Screw                      | Stainless steel          |                              |             |
| 188b | Locking screw              |                          |                              |             |
| 188c | Locking screw              |                          |                              |             |
| 189  | Adjusting screw            |                          |                              |             |
| 190  | Lifting bracket            | Stainless steel          | 1.4308                       | CF-8        |
| 193  | Oil screw                  | Stainless steel          |                              |             |
| 193a | Oil                        | Shell Ondina 917         |                              |             |
| 194  | Gasket                     | Nylon                    |                              |             |
| 198  | O-ring                     | NBR                      |                              |             |
|      | Paint                      | Two-component epoxy      |                              |             |

## EF pumps

| Pos. | Description                | Material                 | DIN W. -Nr. /<br>EN standard | AISI / ASTM |
|------|----------------------------|--------------------------|------------------------------|-------------|
| 6a   | Pin                        | Stainless steel          |                              |             |
| 9a   | Key                        | Stainless steel          |                              |             |
| 26a  | O-ring                     | NBR                      |                              |             |
| 37   | O-ring                     | NBR                      |                              |             |
| 37a  | O-rings                    | NBR                      |                              |             |
| 48   | Stator                     |                          |                              |             |
| 48a  | Cover                      |                          |                              |             |
| 49   | Impeller                   | Cast iron                | EN-GJS-500-7                 |             |
| 50   | Pump housing               | Cast iron                | EN-GJL-250                   |             |
| 55   | Stator housing             | Cast iron                | EN-JL-1030                   |             |
| 58   | Shaft seal carrier         | Cast iron                | EN-JL-1030                   |             |
| 66   | Locking ring               | Stainless steel          |                              |             |
| 76   | Nameplate                  | Stainless steel          | 1.4301                       | 304         |
| 92   | Clamp                      | Stainless steel          | 1.4301                       | 304         |
| 102  | O-ring                     | NBR                      |                              |             |
| 103  | Bush                       | Stainless steel          | 1.4057                       | 431         |
| 104  | Seal ring                  | NBR                      |                              |             |
| 105  | Shaft seal                 |                          |                              |             |
| 105a | Shaft seal                 |                          |                              |             |
| 107  | O-rings                    | NBR                      |                              |             |
| 150a | Stator in housing complete |                          |                              |             |
| 153  | Bearing                    | 6204                     |                              |             |
| 153b | Washer                     |                          |                              |             |
| 154  | Bearing                    | 6303                     |                              |             |
| 155  | Oil chamber                | Cast iron                |                              |             |
| 158  | Corrugated spring          | Steel                    |                              |             |
| 159  | O-ring                     | NBR                      |                              |             |
| 162  | Wear plate                 | Cast iron                |                              |             |
| 172  | Rotor<br>Shaft             |                          | 1.0533<br>1.4301             | 304         |
| 173  | Screw                      | Steel                    |                              |             |
| 173a | Washer                     | Steel                    |                              |             |
| 176  | Inner plug part            | PET                      |                              |             |
| 181  | Outer plug part            | CR rubber, cable H07RN-F | 1.4308                       | CF-8        |
| 188a | Screw                      | Stainless steel          |                              |             |
| 188b | Locking screw              |                          |                              |             |
| 189  | Adjusting screw            |                          |                              |             |
| 190  | Lifting bracket            | Stainless steel          | 1.4308                       | CF-8        |
| 193  | Oil screw                  | Stainless steel          |                              |             |
| 193a | Oil                        | Shell Ondina 917         |                              |             |
| 194  | Gasket                     | Nylon                    |                              |             |
| 198  | O-ring                     | NBR                      |                              |             |

## SL1.50.65.09/11/15

| Pos. | Description                | Material                 | DIN W. -Nr. /<br>EN standard | AISI / ASTM |
|------|----------------------------|--------------------------|------------------------------|-------------|
| 6a   |                            | Stainless steel          |                              |             |
| 9a   | Key                        | Stainless steel          |                              |             |
| 26a  | O-ring                     | NBR                      |                              |             |
| 37   | O-ring                     | NBR                      |                              |             |
| 37a  | O-rings                    | NBR                      |                              |             |
| 37b  | O-rings                    | NBR                      |                              |             |
| 48   | Stator                     |                          |                              |             |
| 48a  | Cover                      |                          |                              |             |
| 49   | Impeller                   | Cast iron                | EN-GJS-500-7                 |             |
| 50   | Pump housing               | Cast iron                | EN-GJL-250                   |             |
| 55   | Stator housing             | Cast iron                | EN-JL-1030                   |             |
| 58   | Shaft seal carrier         | Cast iron                | EN-JL-1030                   |             |
| 66   | Locking ring               | Stainless steel          |                              |             |
| 76   | Nameplate                  | Stainless steel          | 1.4301                       | 304         |
| 92   | Clamp                      | Stainless steel          | 1.4301                       | 304         |
| 102  | O-ring                     | NBR                      |                              |             |
| 103  | Bush                       | Stainless steel          | 1.4057                       | 431         |
| 104  | Seal ring                  | NBR                      |                              |             |
| 105  | Shaft seal                 |                          |                              |             |
| 105a | Shaft seal                 |                          |                              |             |
| 107  | O-rings                    | NBR                      |                              |             |
| 150a | Stator in housing complete |                          |                              |             |
| 153  | Bearing                    | 6204                     |                              |             |
| 153a | Washer                     |                          |                              |             |
| 154  | Bearing                    | 6303                     |                              |             |
| 155  | Oil chamber                | Cast iron                |                              |             |
| 158  | Corrugated spring          | Steel                    |                              |             |
| 159  | O-ring                     | NBR                      |                              |             |
| 162  | Wear plate                 | Cast iron                |                              |             |
| 172  | Rotor<br>Shaft             |                          | 1.0533<br>1.4301             | 304         |
| 173  | Screw                      | Steel                    |                              |             |
| 173a | Washer                     | Steel                    |                              |             |
| 176  | Inner plug part            | PET                      |                              |             |
| 181  | Outer plug part            | CR rubber, cable H07RN-F | 1.4308                       |             |
| 188a | Screw                      | Stainless steel          |                              | CF-8        |
| 188b | Locking screw              |                          |                              |             |
| 189  | Adjusting screw            |                          |                              |             |
| 190  | Lifting bracket            | Stainless steel          | 1.4308                       |             |
| 193  | Oil screw                  | Stainless steel          |                              | CF-8        |
| 193a | Oil                        | Shell Ondina 917         |                              |             |
| 194  | Gasket                     | Nylon                    |                              |             |
| 198  | O-ring                     | NBR                      |                              |             |

## SLV.65.65.09/11/15

| Pos. | Description                | Material                 | DIN W. –Nr. /<br>EN standard | AISI / ASTM |
|------|----------------------------|--------------------------|------------------------------|-------------|
| 9a   | Key                        | Stainless steel          |                              |             |
| 26a  | O-ring                     | NBR                      |                              |             |
| 37   | O-ring                     | NBR                      |                              |             |
| 37a  | O-rings                    | NBR                      |                              |             |
| 48   | Stator                     |                          |                              |             |
| 48a  | Cover                      |                          |                              |             |
| 49   | Impeller                   | Cast iron                | EN-GJS-500-7                 |             |
| 50   | Pump housing               | Cast iron                | EN-GJL-250                   |             |
| 55   | Stator housing             | Cast iron                | EN-JL-1030                   |             |
| 58   | Shaft seal carrier         | Cast iron                | EN-JL-1030                   |             |
| 66   | Locking ring               | Stainless steel          |                              |             |
| 76   | Nameplate                  | Stainless steel          | 1.4301                       | 304         |
| 92   | Clamp                      | Stainless steel          | 1.4301                       | 304         |
| 102  | O-ring                     | NBR                      |                              |             |
| 103  | Bush                       | Stainless steel          | 1.4057                       | 431         |
| 104  | Seal ring                  | NBR                      |                              |             |
| 105  | Shaft seal                 |                          |                              |             |
| 105a | Shaft seal                 |                          |                              |             |
| 107  | O-rings                    | NBR                      |                              |             |
| 150a | Stator in housing complete |                          |                              |             |
| 153  | Bearing                    | 6204                     |                              |             |
| 153b | Washer                     |                          |                              |             |
| 154  | Bearing                    | 6303                     |                              |             |
| 155  | Oil chamber                | Cast iron                |                              |             |
| 158  | Corrugated spring          | Steel                    |                              |             |
| 159  | O-ring                     | NBR                      |                              |             |
| 172  | Rotor<br>Shaft             |                          | 1.0533<br>1.4301             | 304         |
| 173  | Screw                      | Steel                    |                              |             |
| 173a | Washer                     | Steel                    |                              |             |
| 176  | Inner plug part            | PET                      |                              |             |
| 181  | Outer plug part            | CR rubber, cable H07RN-F | 1.4308                       | CF-8        |
| 188a | Screw                      | Stainless steel          |                              |             |
| 190  | Lifting bracket            | Stainless steel          | 1.4308                       | CF-8        |
| 193  | Oil screw                  | Stainless steel          |                              |             |
| 193a | Oil                        | Shell Ondina 917         |                              |             |
| 194  | Gasket                     | Nylon                    |                              |             |
| 198  | O-ring                     | NBR                      |                              |             |

## SL1-SLV except SL1.50.65.09/11/15 and SLV.65.65.09/11/15

| Pos. | Component                                                                                                                                                                   | Material                                       | DIN W. -Nr. /<br>EN standard | AISI / ASTM |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------|-------------|
| 6a   | Tubular pin D8 x 22 A2                                                                                                                                                      | Stainless steel                                | 1.4301                       | 304         |
| 7a   | Blank rivet 2.4 x 6 A2                                                                                                                                                      | Stainless steel                                | 1.4301                       | 304         |
| 37   | O-Ring                                                                                                                                                                      | NBR rubber                                     |                              |             |
| 37a  | O-Ring                                                                                                                                                                      | NBR rubber                                     |                              |             |
| 48   | Stator package                                                                                                                                                              |                                                |                              |             |
| 55   | Stator housing                                                                                                                                                              | Cast iron GG20                                 | EN-JL 1030                   |             |
| 58   | Cover for oil chamber                                                                                                                                                       | Cast iron GG20                                 | EN-JL 1030                   |             |
| 59   | Bearing cover                                                                                                                                                               | Cast iron GG25                                 | EN-JL 1040                   |             |
| 76   | Nameplate                                                                                                                                                                   | Stainless steel                                | 1.4401                       | 316         |
| 92   | Clamp                                                                                                                                                                       | Stainless steel                                | 1.4401                       | 316         |
| 102  | Circlip                                                                                                                                                                     |                                                |                              |             |
| 105  | Shaft seal cpl.<br>(rotating part of MG1/25-G60 Q1Q1PGG;<br>stationary part of MG1/25-G60 Q1Q1PGG;<br>rotating part of BT-AR/25 BXPFF<br>stationary part of BT-AR/25 BXPFF) | Stainless steel, SiC/SiC<br><br>Carbon/ceramic |                              |             |
| 106  | O-ring for shaft seal                                                                                                                                                       | NBR rubber                                     |                              |             |
| 107  | O-ring (cover for oil chamber/cover for oil chamber)                                                                                                                        | NBR rubber                                     |                              |             |
| 109  | O-ring for bearing cover D-end                                                                                                                                              | NBR rubber                                     |                              |             |
| 150a | Stator house complete with stator                                                                                                                                           |                                                |                              |             |
| 153  | Bearing, D-end                                                                                                                                                              | Stainless steel                                |                              |             |
| 153b | O-ring                                                                                                                                                                      | NBR rubber                                     |                              |             |
| 154  | Bearing, N-end                                                                                                                                                              | Stainless steel                                |                              |             |
| 155  | Oil chamber                                                                                                                                                                 | Cast iron GG25                                 | EN-JL1040                    |             |
| 157  | Corrugated spring (bearing D-end)                                                                                                                                           | Stainless steel                                |                              |             |
| 158  | Corrugated spring (bearing N-end)                                                                                                                                           | Stainless steel                                |                              |             |
| 172  | Shaft with rotor                                                                                                                                                            | Regular iron/stainless steel                   | 1.0570 1.4401                | 316         |
| 174  | Earth screw, external                                                                                                                                                       | Stainless steel                                |                              |             |
| 174a | Washer for external earth screw                                                                                                                                             | Stainless steel                                |                              |             |
| 176  | Connector set (internal part)                                                                                                                                               |                                                |                              |             |
| 181  | Cable with outer plug part                                                                                                                                                  | 7G2.5 + 3x1                                    |                              |             |
| 182  | Screw                                                                                                                                                                       | Stainless steel                                | 1.4436                       | 316         |
| 186  | Screw                                                                                                                                                                       | Stainless steel                                | 1.4436                       | 316         |
| 188  | Screw                                                                                                                                                                       | Stainless steel                                | 1.4436                       | 316         |
| 190  | Lifting handle                                                                                                                                                              | Stainless steel                                | 1.4308                       |             |
| 193  | Plug                                                                                                                                                                        | Stainless steel                                | 1.4436                       | 316         |
| 194  | Gasket                                                                                                                                                                      |                                                |                              |             |
| 198  | O-ring                                                                                                                                                                      | NBR rubber                                     |                              |             |
| 520  | Moisture switch (only sensor versions)                                                                                                                                      |                                                |                              |             |
| 521  | WIO sensor (only sensor versions)                                                                                                                                           |                                                |                              |             |
| 522  | Bracket for WIO sensor (only sensor versions)                                                                                                                               | Stainless steel                                |                              |             |

## Features

### Ball bearings

The bearings are greased for life.

**Main bearings:** Double-row angular contact ball bearing.

**Support bearings:** Single-row deep-groove ball bearing.

### Shaft seal

The shaft seal consists of two mechanical seals and separates the motor from the pumped liquid.

The shaft seal is a cartridge seal for easy service. The combination of the primary and secondary seals in a cartridge results in shorter assembly length compared to traditional shaft seals. Furthermore, this design minimises the risk of incorrect fitting.

The primary seal is SiC/SiC and the secondary is carbon/ceramic.

### Motor

The motor is a watertight, totally encapsulated motor.

Insulation class: F (155 °C).

Temperature rise class: F (105 °C).

Enclosure class IP68.

For motor protection and sensors, see section Sensors below.

### Power cables

#### Standard cable

| Cable type<br>[mm <sup>2</sup> ]                         | Outer cable<br>diameter<br>[mm] | Bending radius |      |
|----------------------------------------------------------|---------------------------------|----------------|------|
|                                                          |                                 | Fixed          | Free |
| Lyniflex 4 G 1.5 mm <sup>2</sup> + 3 x 1 mm <sup>2</sup> | 15.5 +/-0.5                     | 60             | 90   |
| Lyniflex 4 G 2.5 mm <sup>2</sup> + 3 x 1 mm <sup>2</sup> | 17.0 +/-0.5                     | 66             | 99   |
| Lyniflex 7 G 2.5 mm <sup>2</sup> + 3 x 1 mm <sup>2</sup> | 18.5 +/-0.5                     | 74             | 111  |

#### EMC cable

| Cable type<br>[mm <sup>2</sup> ]        | Outer cable<br>diameter<br>[mm] | Bending radius |      |
|-----------------------------------------|---------------------------------|----------------|------|
|                                         |                                 | Fixed          | Free |
| 3G3GC3G-F3x1AiC+4 G 2.5 mm <sup>2</sup> | 17.5 +/-0.5                     | 85             | 170  |

The cables are 10 m long as standard. Other cable lengths are available on request. See section List of variants on page 24.

The number and dimension of cables depend on the motor size.

### Cable entry

The stainless steel plug is fastened with a union nut. The nut and O-rings provide sealing against ingress of the liquid.

The plug is filled with a special material that is cast into the plug around the leads of the cable to prevent ingress of water into the motor through the cable in case of cable breakage or in case water enters the loose cable end on account of adverse handling in connection with installation or service.

### Sensors

As standard the pump is equipped with three thermal switches, one in each phase.

#### Customised sensor options

1. PT1000 sensors in motor phases for stator temperature measurements.
2. WIO (water-in-oil) sensor  
The WIO sensor measures the water content in the oil and converts the value into an analog current signal. The two sensor conductors are for power supply as well as for carrying the signal to the measuring device or controller. The sensor measures the water content from 0 to 20 %. It also sends a signal if the water content is outside the normal range (warning), or if there is air in the oil chamber (alarm). The sensor is fitted in a stainless steel tube for mechanical protection. The WIO sensor is connected to a Grundfos IO 111 module.
3. One moisture switch.

#### IO 111 sensor module

The module collects the following signals from sensors in the pump:

- Stator temperature
- Stator insulation resistance
- Water in oil chamber
- Moisture in motor.

**Note:** All pump versions with sensor come with an IO 111 sensor module. It is therefore not necessary to order an IO 111 separately.

### Testing

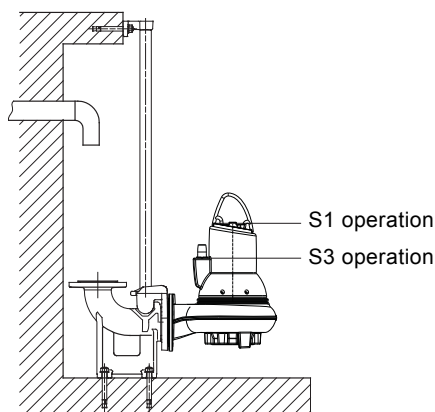
All pumps are tested before leaving the factory. The factory test report is based on ISO 9906, Annex A. Test reports can be ordered directly with the pump or separately based on the pump serial number.

Other tests or third-party inspection certificates are available on request. See section List of variants on page 24.



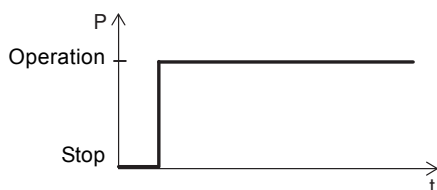
## Operating conditions

Pumps without cooling jacket are only for submerged installation.



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- Continuous operation S1 when the pump is fully submerged to the top of the motor.

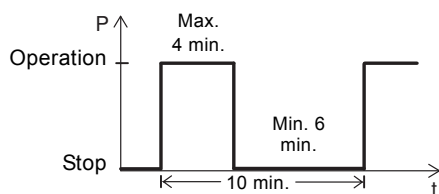


TM02 7776 4003

**Fig. 22** Continuous operation

- Intermittent operation S3 with max. 20 starts per hour when pump is submerged to the bottom of the cable plug. The pump must run for max. 4 minutes and stop for min. 6 minutes. See fig. 23.

**Note:** Explosion-proof pumps must always be fully submerged.



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**Fig. 23** Intermittent operation

## Pumped liquids

**pH value:** 4-10.

**Liquid temperature:** 0 °C to + 40 °C.

When pumping liquids with a density and/or a kinematic viscosity higher than that of water, use motors with correspondingly higher outputs.

For short periods (max. 3 minutes), temperatures up to 60 °C are permissible (non-Ex versions only).

## Sound pressure

The sound pressure level of the pump is lower than the limiting values stated in the EC Council directive 98/37/EC relating to machinery (Machinery Directive).

## Motor range

| Shaft power [kW] | No of poles |
|------------------|-------------|
| 0.9              | 2           |
| 1.1              | 2/4         |
| 1.3              | 2/4         |
| 1.5              | 2/4         |
| 2.2              | 2/4         |
| 3.0              | 2/4         |
| 4.0              | 2/4         |
| 6.0              | 2           |
| 7.5              | 2/4         |
| 9.2              | 2           |
| 11               | 2           |

## Pump controllers

The pumps must be connected to a control box with a motor protection relay with an IEC trip class 10 or 15.

**Note:** Pumps for hazardous locations must be connected to a control box with a motor protection relay with an IEC trip class 10.

The pumps can be controlled by the following LC and LCD pump controllers:

- LC 107, LCD 107 with level pickups
- LC 108, LCD 108 with float switches
- LC 110, LCD 110 with level electrodes.

LC controllers are for single-pump installations; LCD controllers are for two-pump installations.

In the following description, “level switch” means level pickup, float switch or level electrode, depending on the pump controller selected.

The LC controller is fitted with two or three level switches: One for start and one for stop of pump. The third - optional - level switch, is for high-level alarm.

The LCD controller is fitted with three or four level switches: Two for start of the pumps and one for common stop. The fourth - optional - level switch, is for high-level alarm.

For further settings, see the installation and operating instructions for the pump controller selected.

## Frequency converter operation

In principle, all three-phase motors can be connected to a frequency converter.

However, frequency converter operation will often expose the motor insulation system to a heavier load and cause the motor to be more noisy than usual due to eddy currents caused by voltage peaks.

In addition, large motors driven via a frequency converter will be loaded by bearing currents.

For more information, please see the Installation and operation manual 96771279 at [www.grundfos.com](http://www.grundfos.com)

## Explosion-proof pumps

In relation to Ex-approvals, the explosion-proof pumps, types DP, EF, SL1 and SLV, are divided into two groups with two different Ex approvals. The groups and approvals are explained below.

### Explanation to Ex approval

The explosion-protection classification of the pump is CE 0344  II 2 G Ex c d IIB T4.

| Directive/standard                      | Code                                                                                | Description                                                                                                                                                                                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATEX                                    | CE 0344                                                                             | = CE marking of conformity according to the ATEX directive 94/9/EC, Annex X. 0344 is the number of the notified body which has certified the quality system for ATEX.                                                 |
|                                         |  | = Marking of explosion protection                                                                                                                                                                                     |
|                                         | II                                                                                  | = Equipment group according to the ATEX directive, Annex II, point 2.2, defining the requirements applicable to the equipment in this group                                                                           |
|                                         | 2                                                                                   | = Equipment category according to the ATEX directive, Annex II, point 2.2, defining the requirements applicable to the equipment in this category                                                                     |
|                                         | G                                                                                   | = Explosive atmospheres caused by gases, vapours or mists                                                                                                                                                             |
| Harmonized European standard EN 60079-0 | Ex                                                                                  | = The equipment conforms to harmonized European standard                                                                                                                                                              |
|                                         | c                                                                                   | = Constructional safety according to EN 13463-5: 2003                                                                                                                                                                 |
|                                         | d                                                                                   | = Flame-proof enclosure according to EN 60079-1:2007                                                                                                                                                                  |
|                                         | IIB                                                                                 | = Suitable for use in explosive atmospheres (not mines)                                                                                                                                                               |
|                                         | B                                                                                   | = Classification of gases, see EN 60079-0:2006, Annex A. Gas group B includes gas group A.                                                                                                                            |
|                                         | T4                                                                                  | = Maximum surface temperature is 135 °C                                                                                                                                                                               |
|                                         | X                                                                                   | = The letter X in the certificate number indicates that the equipment is subject to special conditions for safe use. The conditions are mentioned in the certificate and the installation and operating instructions. |

### Australia

Ex nC II T3.

Ex variants for Australia are approved as Ex nC II T3 according to IEC 79-15 (corresponding to AS 2380.9).

| Standard        | Code | Description                                                                                                                                                                                                         |
|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC 79-15: 1987 | Ex   | = Area classification according to AS 2430.1                                                                                                                                                                        |
|                 | n    | = Non-sparking according to AS 2380.9: 1991, section 3 (IEC 79-15: 1987)                                                                                                                                            |
|                 | C    | = The environment is adequately protected against sparking components                                                                                                                                               |
|                 | IIB  | = Suitable for use in explosive atmospheres (not mines)                                                                                                                                                             |
|                 | T3   | = Maximum surface temperature is 200 °C                                                                                                                                                                             |
|                 | X    | The letter X in the certificate number indicates that the equipment is subject to special conditions for safe use. The conditions are mentioned in the certificate and the installation and operating instructions. |

## Group A

The pumps in the table below have been tested by VDE, and the explosion-proof version approved by KEMA according to the ATEX directive.

| Pump types, group A |             |              |              |
|---------------------|-------------|--------------|--------------|
| DP10.50.09          | EF.30.50.06 | SL1.50.65.09 | SLV.65.65.09 |
| DP10.50.15          | EF.30.50.09 | SL1.50.65.11 | SLV.65.65.11 |
| DP10.65.26          | EF.30.50.11 | SL1.50.65.15 | SLV.65.65.15 |
|                     | EF.30.50.15 |              |              |

### Approval standards

The standard variants are approved by LGA (notified body under the construction products directive) according to EN 12050-1/2.

## Group B

The SL1 and SLV pumps in the table below have been tested by KEMA, and the explosion-proof versions hold an EC type examination certificate issued by KEMA according to the ATEX directive.

| Pump types, group B |                |                |                |
|---------------------|----------------|----------------|----------------|
| SL1.50.65.22        | SL1.80.80.40   | SL1.100.150.55 | SLV.80.80.92   |
| SL1.50.65.22        | SL1.80.80.55   | SL1.100.150.75 | SLV.80.80.110  |
| SL1.50.65.30        | SL1.80.80.75   | SLV.65.65.22   | SLV.80.100.11  |
| SL1.50.65.30        | SL1.80.100.15  | SLV.65.65.30   | SLV.80.100.13  |
| SL1.50.65.40        | SL1.80.100.22  | SLV.65.65.40   | SLV.80.100.15  |
| SL1.50.80.22        | SL1.80.100.22  | SLV.65.80.22   | SLV.80.100.22  |
| SL1.50.80.22        | SL1.80.100.30  | SLV.65.80.30   | SLV.80.100.40  |
| SL1.50.80.30        | SL1.80.100.30  | SLV.65.80.40   | SLV.80.100.60  |
| SL1.50.80.30        | SL1.80.100.40  | SLV.80.80.11   | SLV.80.100.75  |
| SL1.50.80.40        | SL1.80.100.55  | SLV.80.80.13   | SLV.80.100.92  |
| SL1.80.80.15        | SL1.80.100.75  | SLV.80.80.15   | SLV.80.100.110 |
| SL1.80.80.22        | SL1.100.100.40 | SLV.80.80.22   | SLV.100.100.30 |
| SL1.80.80.22        | SL1.100.100.55 | SLV.80.80.40   | SLV.100.100.40 |
| SL1.80.80.30        | SL1.100.100.75 | SLV.80.80.60   | SLV.100.100.55 |
| SL1.80.80.30        | SL1.100.150.40 | SLV.80.80.75   | SLV.100.100.75 |

## Approval standards

The pumps are approved by LGA (notified body under the construction products directive) according to EN 12050-1/2.

## Explanation to Ex approval

The SL1 and SLV pumps have the following explosion protection classification:

|                                                     |                                                                                                                     |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Direct-drive pump, without sensor:                  | CE 0344  II 2 G Ex c d IIB T4    |
| Direct-drive pump, with sensor:                     | CE 0344  II 2 G Ex c d mb IIB T4 |
| Pump driven by frequency converter, without sensor: | CE 0344  II 2 G Ex c d IIB T3    |
| Pump driven by frequency converter, with sensor:    | CE 0344  II 2 G Ex c d mb IIB T3 |

## Europe

| Directive/standard            | Code                                                                                | Description                                                                                                                                                                                                         |
|-------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATEX                          | CE 0344                                                                             | = CE marking of conformity according to the ATEX directive 94/9/EC, Annex X. 0344 is the number of the notified body which has certified the quality system for ATEX.                                               |
|                               |  | = Marking of explosion protection                                                                                                                                                                                   |
|                               | II                                                                                  | = Equipment group according to the ATEX directive, Annex II, point 2.2, defining the requirements applicable to the equipment in this group.                                                                        |
|                               | 2                                                                                   | = Equipment category according to the ATEX directive, Annex II, point 2.2, defining the requirements applicable to the equipment in this category.                                                                  |
|                               | G                                                                                   | = Explosive atmosphere caused by gases or vapours                                                                                                                                                                   |
| Harmonized European standards | Ex                                                                                  | = The equipment conforms to harmonized European standard                                                                                                                                                            |
|                               | c                                                                                   | = Constructional safety according to EN 13463-5: 2003                                                                                                                                                               |
|                               | d                                                                                   | = Flame-proof enclosure according to EN 60079-1: 2007                                                                                                                                                               |
|                               | mb                                                                                  | = Encapsulation according to EN 60079-18:2004                                                                                                                                                                       |
|                               | II                                                                                  | = Suitable for use in explosive atmospheres (not mines)                                                                                                                                                             |
|                               | B                                                                                   | = Classification of gases, see EN 60079-0: 2006, Annex A. Gas group B includes gas group A.                                                                                                                         |
|                               | T4/T3                                                                               | = Maximum surface temperature is 135 °C/200 °C according to EN 60079-0: 2006                                                                                                                                        |
|                               | IP68                                                                                | = Enclosure class according to IEC 60529                                                                                                                                                                            |
|                               | X                                                                                   | The letter X in the certificate number indicates that the equipment is subject to special conditions for safe use. The conditions are mentioned in the certificate and the installation and operating instructions. |

## Australia

Explosion proof variants for Australia are approved as Ex d IIB T4/T3 & Ex d mb II B T4/T3 Gb.

| Standard                    | Code  | Description                                                                                                                                                                                                         |
|-----------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC 60079-0 and IEC 60079-1 | Ex    | = The equipment conforms to harmonized European standard.                                                                                                                                                           |
|                             | d     | = Flame-proof enclosure according to IEC 60079-1: 2007                                                                                                                                                              |
|                             | mb    | = Encapsulation according to IEC 60079-18                                                                                                                                                                           |
|                             | II    | = Suitable for use in explosive atmospheres (not mines).                                                                                                                                                            |
|                             | B     | = Classification of gases, see IEC 60079-0: 2004, Annex A. Gas group B includes gas group A.                                                                                                                        |
|                             | T4/T3 | = Maximum surface temperature is 135 °C/200 °C according to IEC 60079-0: 2004.                                                                                                                                      |
|                             | IP68  | = Enclosure class according to IEC 60529.                                                                                                                                                                           |
|                             | X     | The letter X in the certificate number indicates that the equipment is subject to special conditions for safe use. The conditions are mentioned in the certificate and the installation and operating instructions. |
|                             | Gb    | Equipment protection level                                                                                                                                                                                          |

## Wiring diagrams

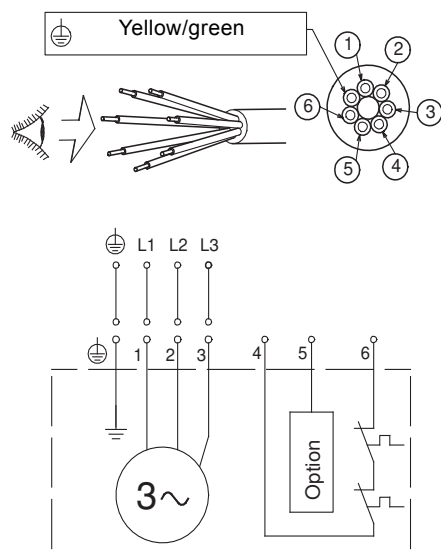


Fig. 24 Wiring diagram, 7-wire cable

TM028396

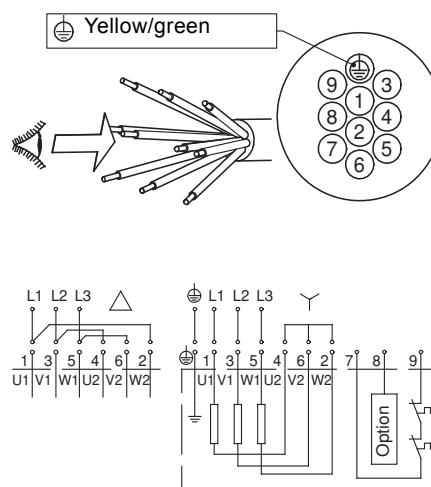


Fig. 26 Wiring diagram, 10-wire cable

TM02 8397 5103

### Pumps with thermal switch and PT1000

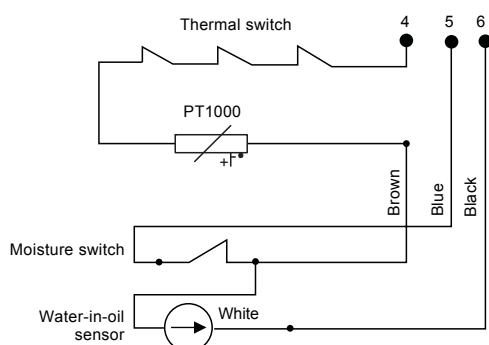


Fig. 25 Wiring diagram, 7-wire cable, sensor and moisture switch

TM02 8396 5103

### Pumps with thermal switch and PT1000

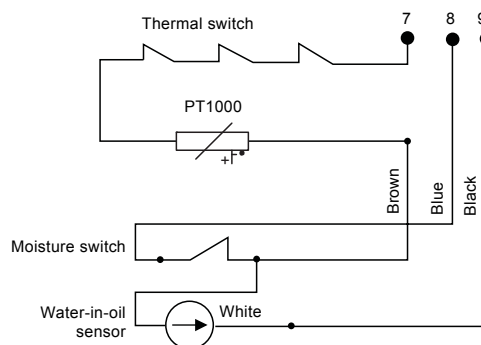
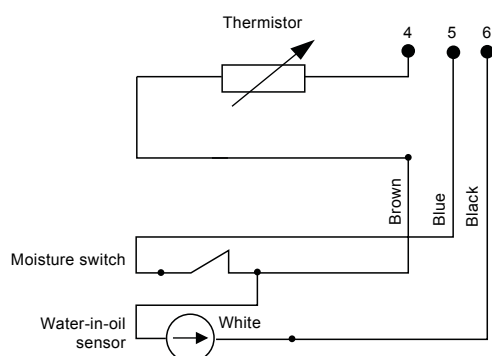
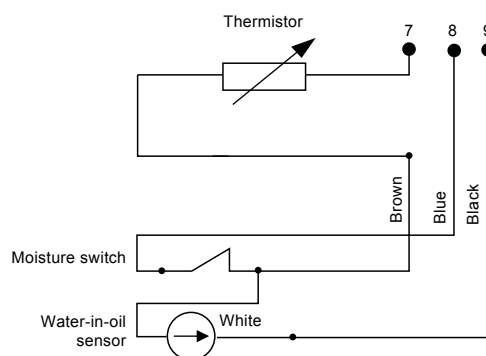


Fig. 27 Wiring diagram, 10-wire cable, sensor and moisture switch

### Pumps with thermistor (PTC)



### Pumps with thermistor (PTC)



## Curve charts and technical data

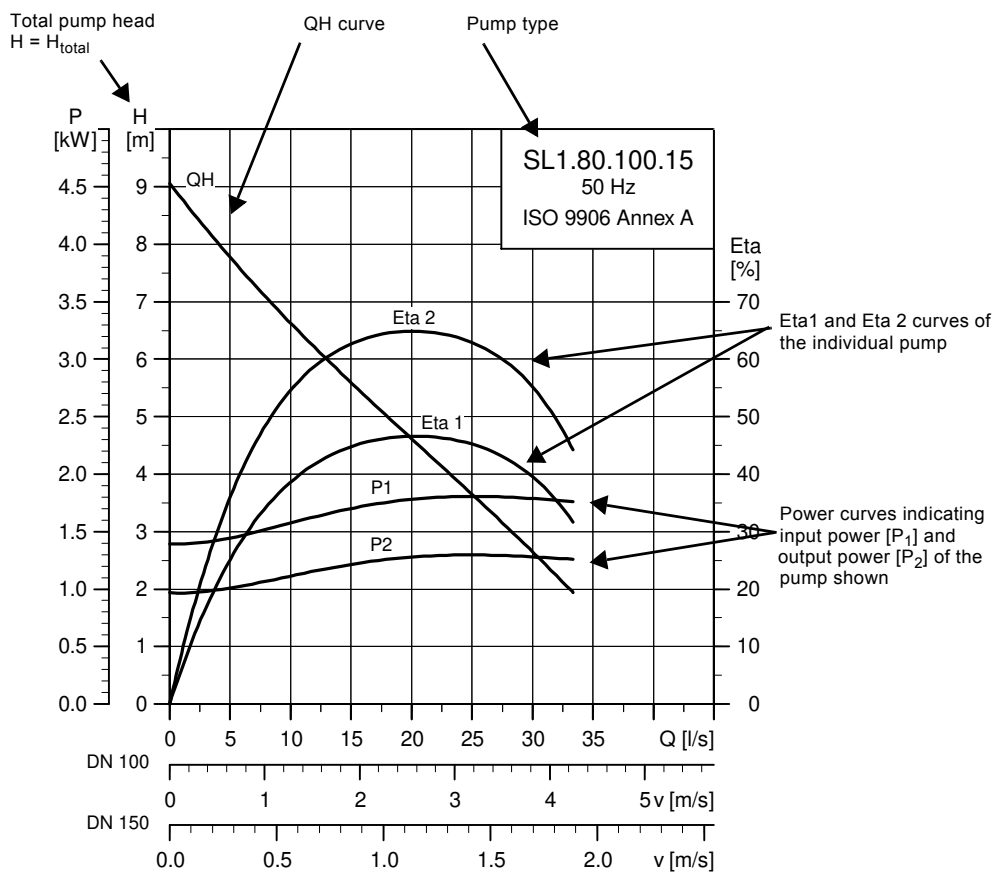
The following many pages are divided into sections:

Pages 55 and 56 A give brief explanation of how to read the curve charts, the curve conditions, etc.

### Performance curves and technical data:

| Page | Pump curves                          | Page | Pump curves                          | Page | Pump curves                                 | Page | Pump curves                                  |
|------|--------------------------------------|------|--------------------------------------|------|---------------------------------------------|------|----------------------------------------------|
| 58   | Performance curves<br>DP10.50.09.1   | 96   | Performance curves<br>SL1.50.80.30   | 134  | Performance curves<br>SL1.100.150.75        | 172  | Performance curves<br>SLV.80.80.75           |
| 60   | Performance curves<br>DP10.50.09.3   | 98   | Performance curves<br>SL1.50.80.40   | 136  | Performance curves<br>SLV.65.65.09.1        | 174  | Performance curves<br>SLV.80.80.92           |
| 62   | Performance curves<br>DP10.50.15.3   | 100  | Performance curves<br>SL1.80.80.15   | 138  | Performance curves<br>SLV.65.65.09.3        | 176  | Performance curves<br>SLV.80.80.110          |
| 64   | DP10.65                              | 102  | Performance curves<br>SL1.80.80.22   | 140  | Performance curves<br>SLV.65.65.11.1        | 178  | Performance curves<br>SLV.80.100.11          |
| 66   | Performance curves<br>EF30.50.06.1   | 104  | Performance curves<br>SL1.80.80.30   | 142  | Performance curves<br>SLV.65.65.11.3        | 180  | Performance curves<br>SLV.80.100.13          |
| 68   | Performance curves<br>EF30.50.06.3   | 106  | Performance curves<br>SL1.80.80.40   | 144  | Performance curves<br>SLV.65.65.15.3        | 182  | Performance curves<br>SLV.80.100.15          |
| 70   | Performance curves<br>EF30.50.09.1   | 108  | Performance curves<br>SL1.80.80.55   | 146  | Performance curves<br>SLV.65.65.22          | 184  | Performance curves<br>SLV.80.100.22          |
| 72   | Performance curves<br>EF30.50.09.3   | 110  | Performance curves<br>SL1.80.80.75   | 148  | Performance curves<br>SLV.65.65.30          | 186  | Performance curves<br>SLV.80.100.40 - 4 pole |
| 74   | Performance curves<br>EF30.50.11.1   | 112  | Performance curves<br>SL1.80.100.15  | 150  | Performance curves<br>SLV.65.65.40          | 188  | Performance curves<br>SLV.80.100.40 - 2 pole |
| 76   | Performance curves<br>EF30.50.11.3   | 114  | Performance curves<br>SL1.80.100.22  | 152  | SLV.65.80                                   | 190  | Performance curves<br>SLV.80.100.60          |
| 78   | Performance curves<br>EF30.50.15.3   | 116  | Performance curves<br>SL1.80.100.30  | 154  | Performance curves<br>SLV.65.80.30          | 192  | Performance curves<br>SLV.80.100.75          |
| 80   | Performance curves<br>SL1.50.65.09.1 | 118  | Performance curves<br>SL1.80.100.40  | 156  | Performance curves<br>SLV.65.80.40          | 194  | Performance curves<br>SLV.80.100.92          |
| 82   | Performance curves<br>SL1.50.65.09.3 | 120  | Performance curves<br>SL1.80.100.55  | 158  | Performance curves<br>SLV.80.80.11          | 196  | Performance curves<br>SLV.80.100.110         |
| 84   | Performance curves<br>SL1.50.65.11.1 | 122  | Performance curves<br>SL1.80.100.75  | 160  | Performance curves<br>SLV.80.80.13          | 198  | Performance curves<br>SLV.100.100.30         |
| 86   | Performance curves<br>SL1.50.65.15.3 | 124  | SL1.100.100                          | 162  | Performance curves<br>SLV.80.80.15          | 200  | Performance curves<br>SLV.100.100.40         |
| 88   | Performance curves<br>SL1.50.65.22   | 126  | Performance curves<br>SL1.100.100.55 | 164  | Performance curves<br>SLV.80.80.22          | 202  | Performance curves<br>SLV.100.100.55         |
| 90   | Performance curves<br>SL1.50.65.30   | 128  | Performance curves<br>SL1.100.100.75 | 166  | Performance curves<br>SLV.80.80.40 - 4 Pole | 204  | Performance curves<br>SLV.100.100.75         |
| 92   | Performance curves<br>SL1.50.65.40   | 130  | Performance curves<br>SL1.100.150.40 | 168  | Performance curves<br>SLV.80.80.40 - 2 Pole |      |                                              |
| 94   | Performance curves<br>SL1.50.80.22   | 132  | Performance curves<br>SL1.100.150.55 | 170  | Performance curves<br>SLV.80.80.60          |      |                                              |

## How to read the curve charts



TM04 3460 4608

## Curve conditions

The guidelines below apply to the curves shown in the performance charts on page 58 to page 198.

- Tolerances according to: ISO 9906, Annex A.
- The curves show pump performance with different impeller diameters at the nominal speed.
- The **bold** part of the curves show the **recommended** operating range.
- The curves apply to the pumping of airless water at a temperature of +20 °C and a kinematic viscosity of 1 mm<sup>2</sup>/s (1 cSt).
- **ETA**: The lines show values of the hydraulic efficiency of the pump for the different impeller diameters.
- **NPSH**: The curves show average values measured under the same conditions as the performance curves.  
When dimensioning the pump, add a safety margin of at least 0.5 m.
- In case of other densities than 1000 kg/m<sup>3</sup>, the discharge pressure is proportional to the density.
- When pumping liquids with a density higher than 1000 kg/m<sup>3</sup>, motors with correspondingly higher outputs must be used.

### Calculation of total head

The total pump head consists of the height difference between the measuring points + the differential head + the dynamic head.

$$H_{\text{total}} = H_{\text{geo}} + H_{\text{stat}} + H_{\text{dyn}}$$

$H_{\text{geo}}$ : Height difference between measuring points.

$H_{\text{stat}}$ : Differential head between suction and the discharge side of the pump.

$H_{\text{dyn}}$ : Calculated values based on the velocity of the pumped liquid on the suction and the discharge side of the pump.

## Performance tests

The requested duty point for every pump is tested according to ISO 9906, Annex A, and without certification.

In case of pumps ordered on the basis of impeller diameter only (no requested duty point), the pump will be tested at a duty point which is 2/3 of the maximum flow of the published performance curve which is related to the ordered impeller diameter (according to ISO 9906, Annex A).

If the customer requires either more points on the curve to be checked or certain minimum performances or certificates, individual measurements must be made, and a certificate can be ordered.

## Certificates

Certificates have to be confirmed for every order and are available on request as follows:

- Certificate of compliance with the order (EN 10204-2.1)
- Pump test sheet.

## Witness test

It is possible for the customer to witness the testing procedure according to ISO 9906.

The witness test is not a certificate and will not result in a written statement from Grundfos. The witness itself is the only guarantee that everything is carried out as prescribed in the testing procedure.

If the customer wants to witness the test of pump performance, this request must be stated on the order.





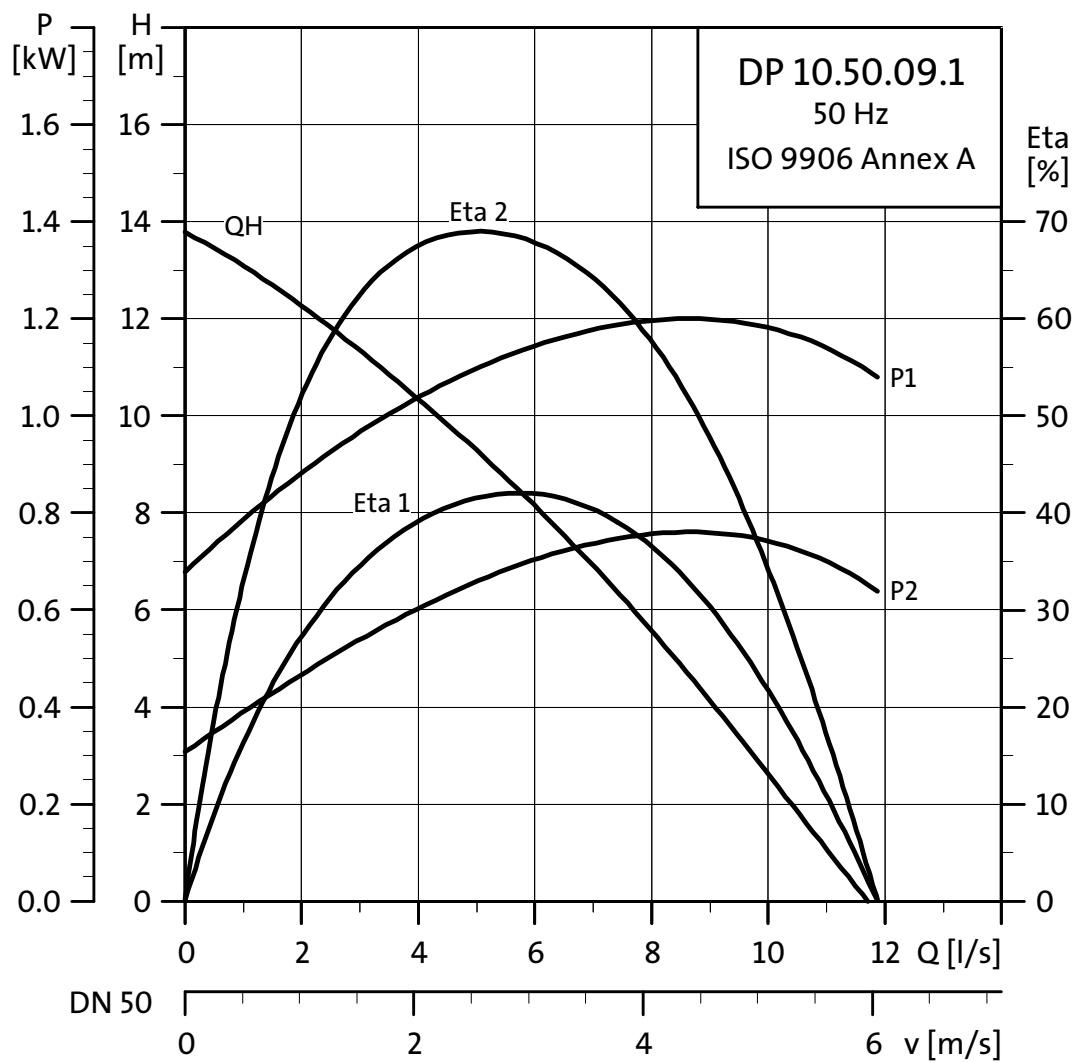
# Performance curves

## Technical data

SL1, SLV, DP, EF pumps

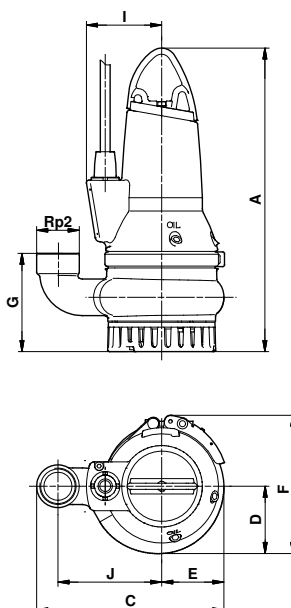
### DP10.50

#### Performance curves DP10.50.09.1



TM02 7463 3603

## Dimensional sketches DP10.50.09.1



TM02 7231 2803

## Product dimensions

| A [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J [mm] | Weight [kg] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 497    | 307    | 110    | 102    | 227    | 161    | -      | 123    | 170    | 39          |

With 10 m cable

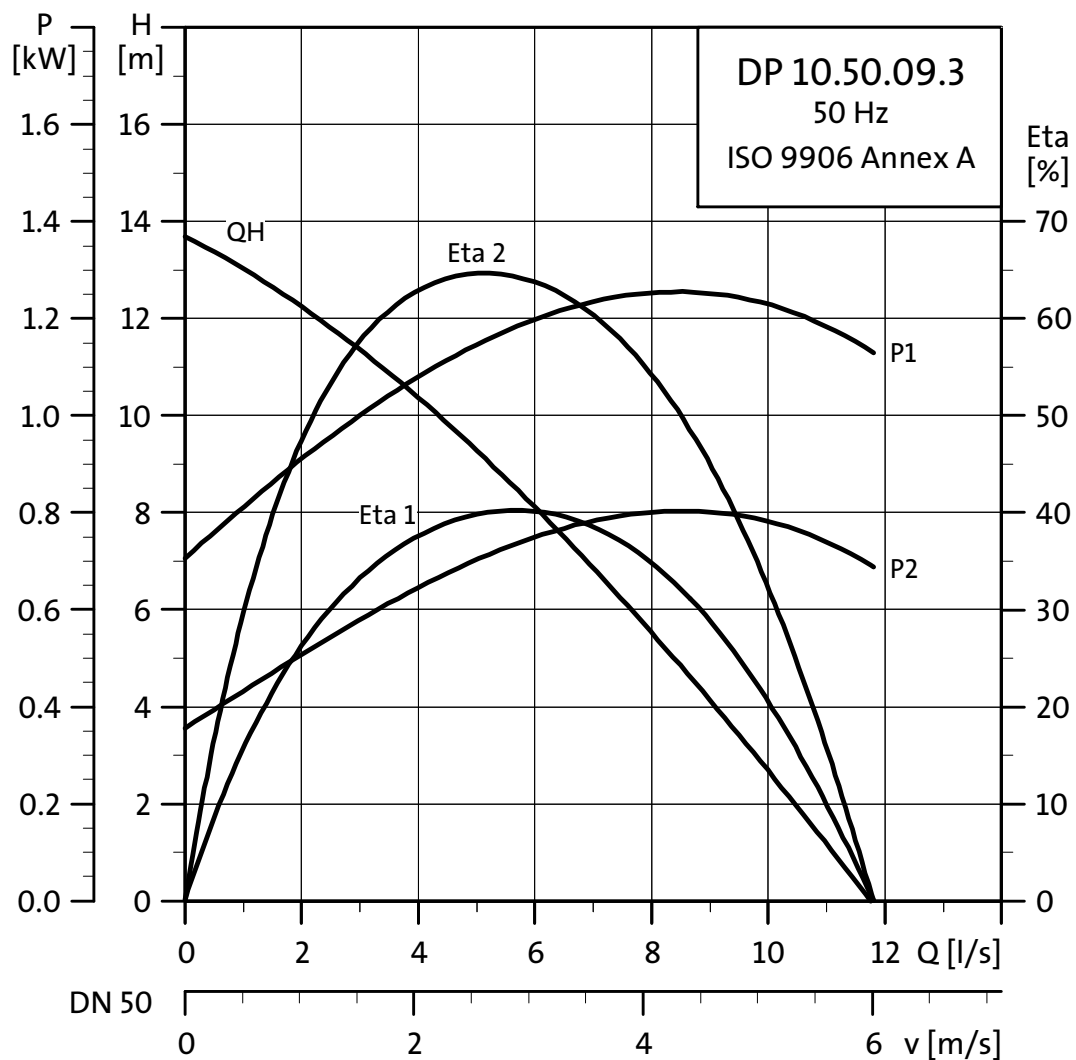
## Electrical data

| Voltage | P1   | P2   | No of | RPM  | Starting | Run  | I <sub>N</sub> |           | I <sub>start</sub> |      |      | η <sub>motor</sub> [%] |      |      | Cos φ  |     |                     | Moment | Breakdown |
|---------|------|------|-------|------|----------|------|----------------|-----------|--------------------|------|------|------------------------|------|------|--------|-----|---------------------|--------|-----------|
| [V]     | [kW] | [kW] | poles |      |          |      | method         | capacitor | [A]                | [A]  | 1/2  | 3/4                    | 1/1  | 1/2  | 3/4    | 1/1 | [kgm <sup>2</sup> ] |        |           |
|         |      |      |       |      |          | [μF] |                |           |                    |      |      |                        |      |      |        |     |                     | [Nm]   |           |
| 1 x 230 | 1.3  | 0.9  | 2     | 2870 | DOL      | 30   | 6.1            | 38        | 0.55               | 0.63 | 0.67 | 0.86                   | 0.92 | 0.96 | 0.0033 |     | 7                   |        |           |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH     | Ex-class                    |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|--------|-----------------------------|
| Semi-open        | 10                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4 - 10 | Ex d IIB T4/<br>Ex n IIB T4 |

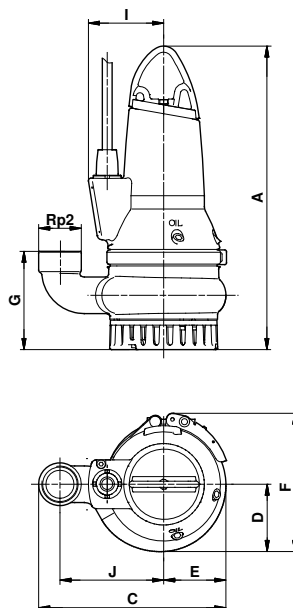
## Performance curves DP10.50.09.3



TM02 7462 3603

# Technical data

## Dimensional sketches DP10.50.09.3



TM02 7231 2803

## Product dimensions

| A [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J [mm] | Weight [kg] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 497    | 307    | 110    | 102    | 227    | 161    | -      | 123    | 170    | 39          |

With 10 m cable

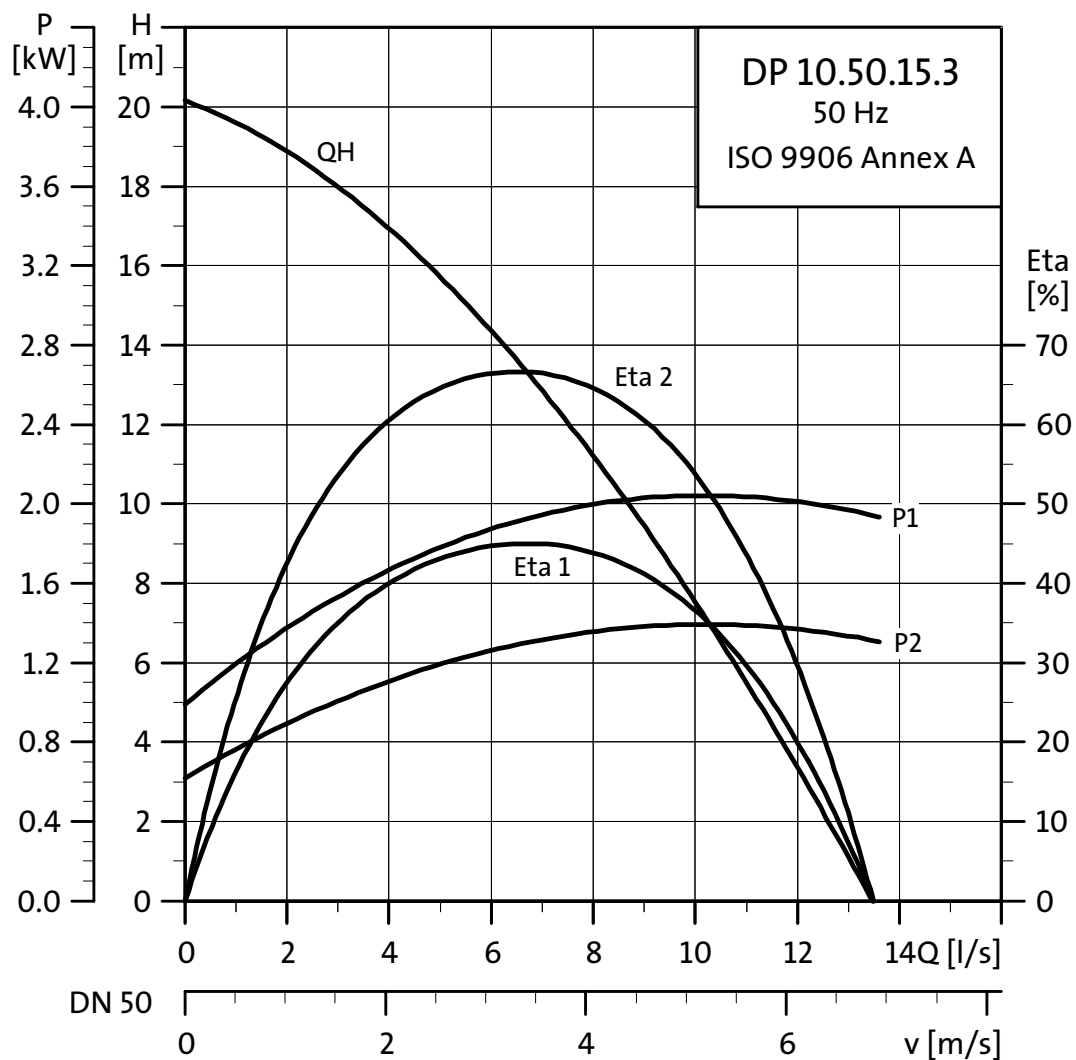
## Electrical data

| Voltage     | P1   | P2   | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |     |     |      | Cos φ |      |        |  | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|-------------|------|------|-------------|------|-----------------|----------------|--------------------|------------------------|-----|-----|------|-------|------|--------|--|---------------------|-----------------------------------|
| [V]         | [kW] | [kW] |             |      |                 | [A]            | [A]                | 1/2                    | 3/4 | 1/1 | 1/2  | 3/4   | 1/1  |        |  | [kgm <sup>2</sup> ] | [Nm]                              |
| 3 x 400-415 | 1.38 | 0.9  | 2           | 2870 | DOL             | 2.8            | 21                 | 58                     | 61  | 65  | 0.58 | 0.68  | 0.76 | 0.0033 |  |                     | 12                                |

## Pump data

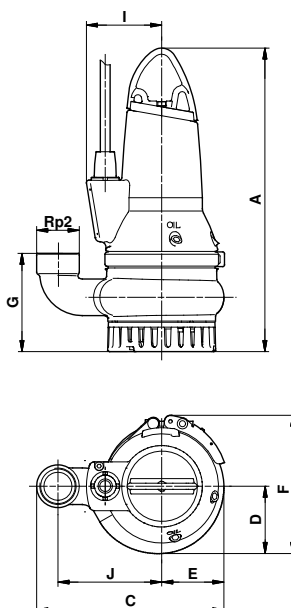
| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH     | Ex-class                    |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|--------|-----------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |        |                             |
| Semi-open     | 10               | 30                              | 10                      | IP 68           | F                | 40                      | 4 - 10 | Ex d IIB T4/<br>Ex n IIB T4 |

## Performance curves DP10.50.15.3



TN02 7461 3603

## Dimensional sketches DP10.50.15.3



TM02 7231 2803

## Product dimensions

| A [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J [mm] | Weight [kg] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 497    | 307    | 110    | 102    | 227    | 161    | -      | 123    | 170    | 39          |

With 10 m cable

## Electrical data

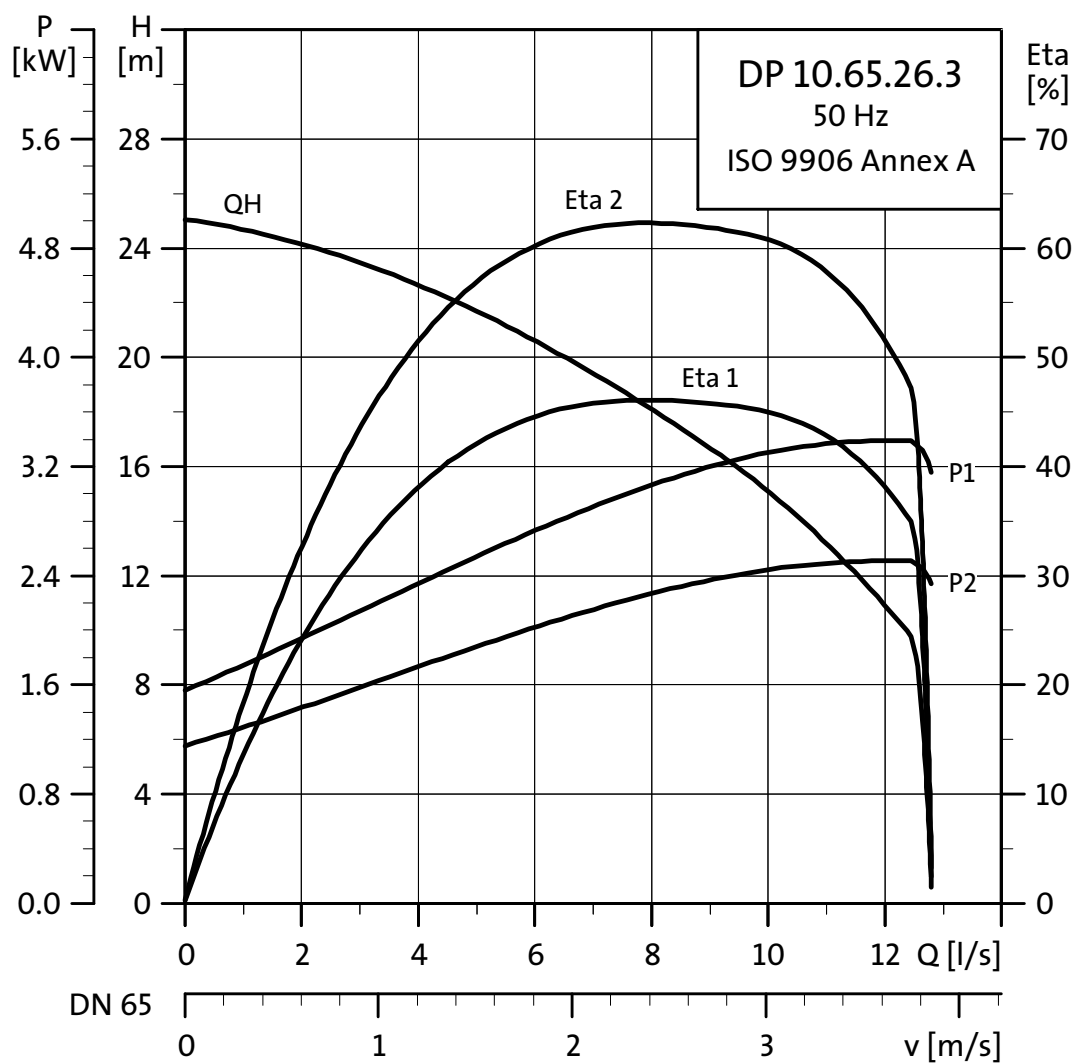
| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     |      | Cos φ |      |  |        | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|------|-------|------|--|--------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2  | 3/4   | 1/1  |  |        |                                             |                                              |
| 3 x 400-415    | 2.2        | 1.5        | 2              | 2720 | DOL                | 3.8                   | 21                        | 63                     | 68  | 67  | 0.71 | 0.81  | 0.88 |  | 0.0036 |                                             | 12                                           |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH     | Ex-class                    |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|--------|-----------------------------|
| Semi-open        | 10                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4 - 10 | Ex d IIB T4/<br>Ex n IIB T4 |

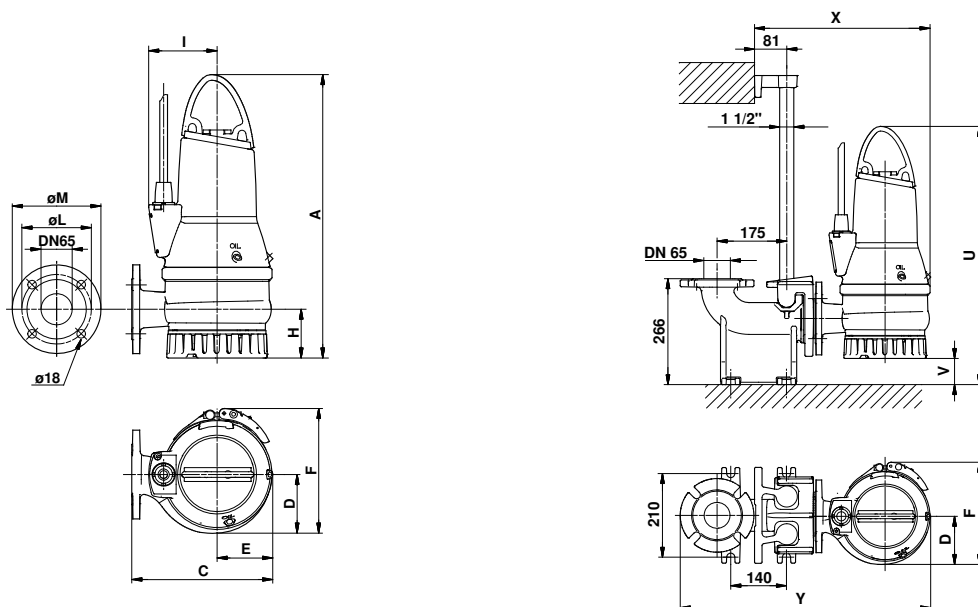
## DP10.65

### Performance curves DP10.65.26.3



TM02 7464 3603

## Dimensional sketches DP10.65.26.3



TM02 7234 3303/TM02 7346 3303

## Product dimensions

| A [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J [mm] | U [mm] | V [mm] | X [mm] | Y [mm] | Weight [kg] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 497    | 307    | 110    | 102    | 227    | 161    | -      | 143    | 170    | 655    | 64     | 443    | 630    | 39          |

With 10 m cable

## Electrical data

| Voltage     | P1   | P2   | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|-------------|------|------|-------------|------|-----------------|----------------|--------------------|------------------------|----------------|---------------------|-----------------------------------|
| [V]         | [kW] | [kW] |             |      |                 | [A]            | [A]                | 1/2 3/4 1/1            | 1/2 3/4 1/1    | [kgm <sup>2</sup> ] | [Nm]                              |
| 3 x 400-415 | 3.5  | 2.6  | 2           | 2870 | DOL             | 5.8            | 33                 | 74 75 74               | 0.68 0.81 0.87 | 0.007               | 24                                |

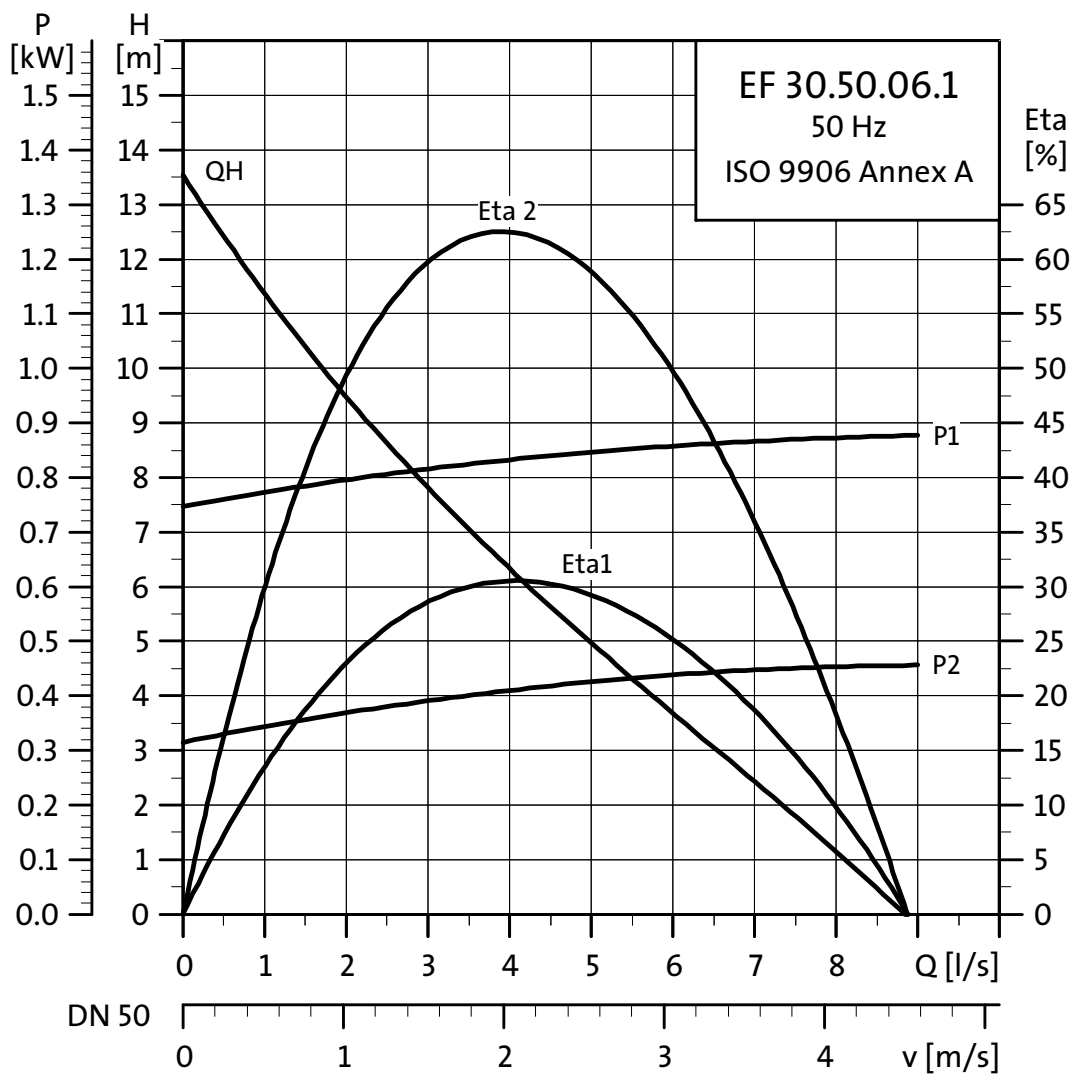
## Pump data

| Impeller type | Max. solids size | Max. number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH     | Ex-class                    |
|---------------|------------------|--------------------------------|-------------------------|-----------------|------------------|-------------------------|--------|-----------------------------|
|               | [mm]             |                                | [m]                     |                 |                  | [°C]                    |        |                             |
| Semi-open     | 10               | 30                             | 10                      | IP 68           | F                | 40                      | 4 - 10 | Ex d IIB T4/<br>Ex n IIB T4 |



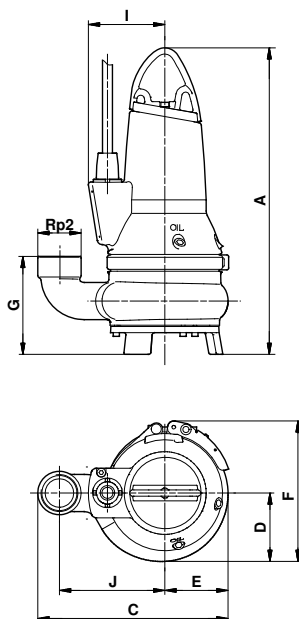
## EF30.50

### Performance curves EF30.50.06.1



TM02 7469 3603

## Dimensional sketches EF30.50.06.1



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

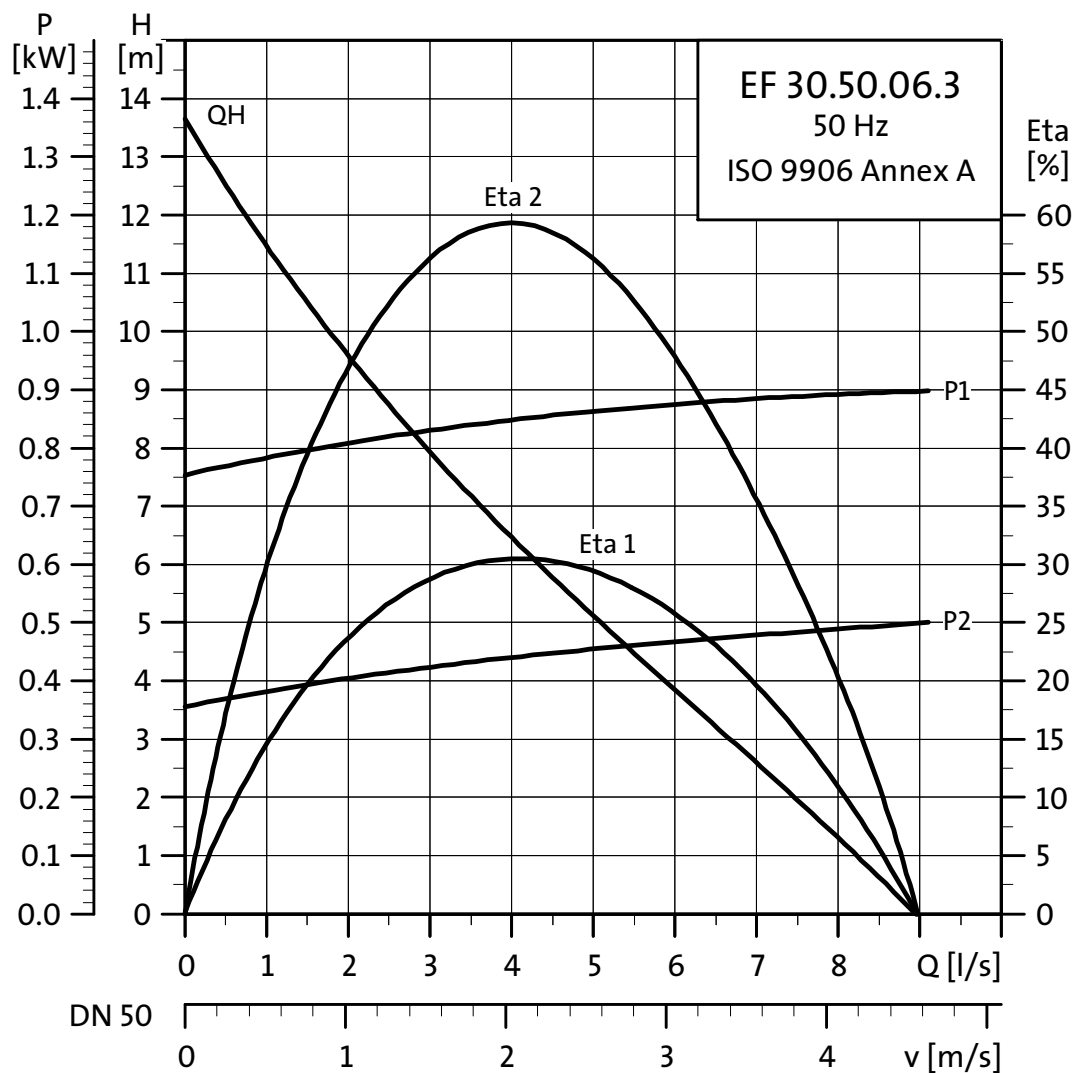
## Electrical data

| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | $I_N$ | $I_{start}$ | $\eta_{motor}$ [%] | $\cos \varphi$ | Moment of inertia   | Breakdown torque $M_{max}$ |
|---------|------|------|-------------|------|-----------------|---------------|-------|-------------|--------------------|----------------|---------------------|----------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [ $\mu F$ ]   | [A]   | [A]         | 1/2 3/4 1/1        | 1/2 3/4 1/1    | [kgm <sup>2</sup> ] | [Nm]                       |
| 1 x 230 | 0.98 | 0.6  | 2           | 2920 | DOL             | 30            | 4.8   | 21          | 42 55 61           | 0.81 0.81 0.86 | 0.0035              | 7                          |

## Pump data

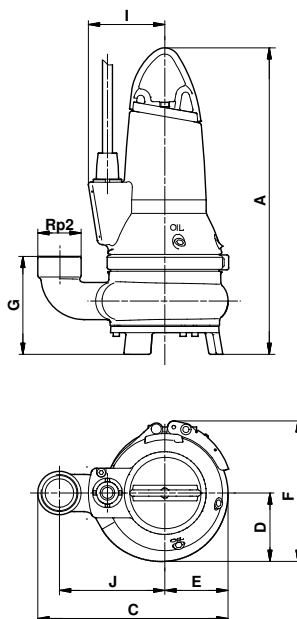
| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                   |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|----------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                            |
| Semi-open     | 30               | 30                              | 10                      | IP 68           | F                | 40                      | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

## Performance curves EF30.50.06.3



TM02 7468 3603

## Dimensional sketches EF30.50.06.3



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

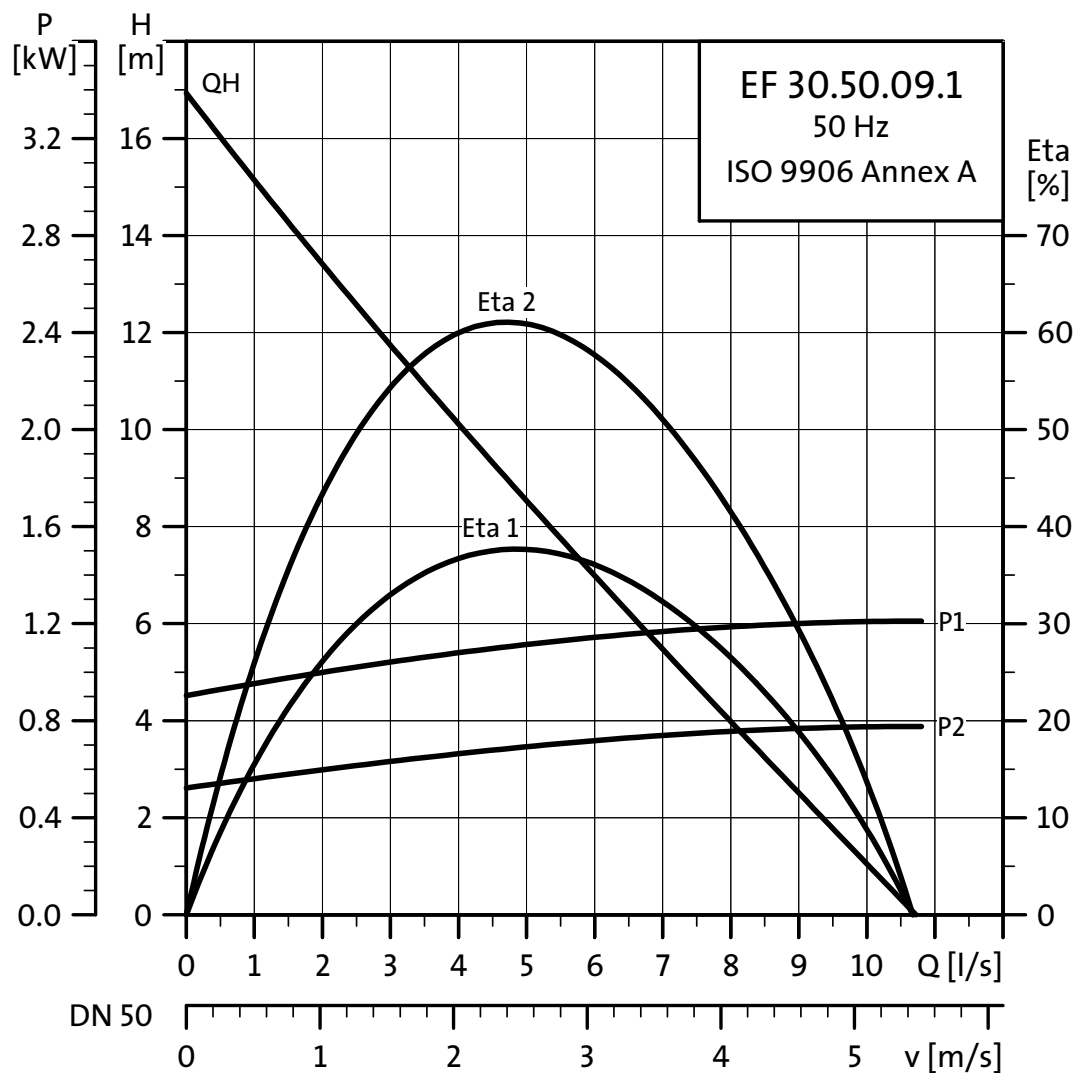
## Electrical data

| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub> |     | I <sub>start</sub> |     |     | η <sub>motor</sub> [%] |      |      | Cos φ  |    |  | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|----------------|-----|--------------------|-----|-----|------------------------|------|------|--------|----|--|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    | [A]            | [A] | 1/2                | 3/4 | 1/1 | 1/2                    | 3/4  | 1/1  |        |    |  |                                             |                                              |
| 3 x 400-415    | 1.0        | 0.6        | 2              | 2890 | DOL                | 2.3            | 21  | 43                 | 53  | 59  | 0.5                    | 0.58 | 0.65 | 0.0035 | 12 |  |                                             |                                              |

## Pump data

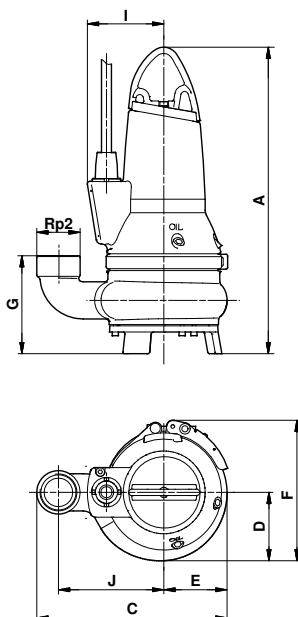
| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                   |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|----------------------------|
| Semi-open        | 30                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

## Performance curves EF30.50.09.1



TM02 7481 3603

## Dimensional sketches EF30.50.09.1



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

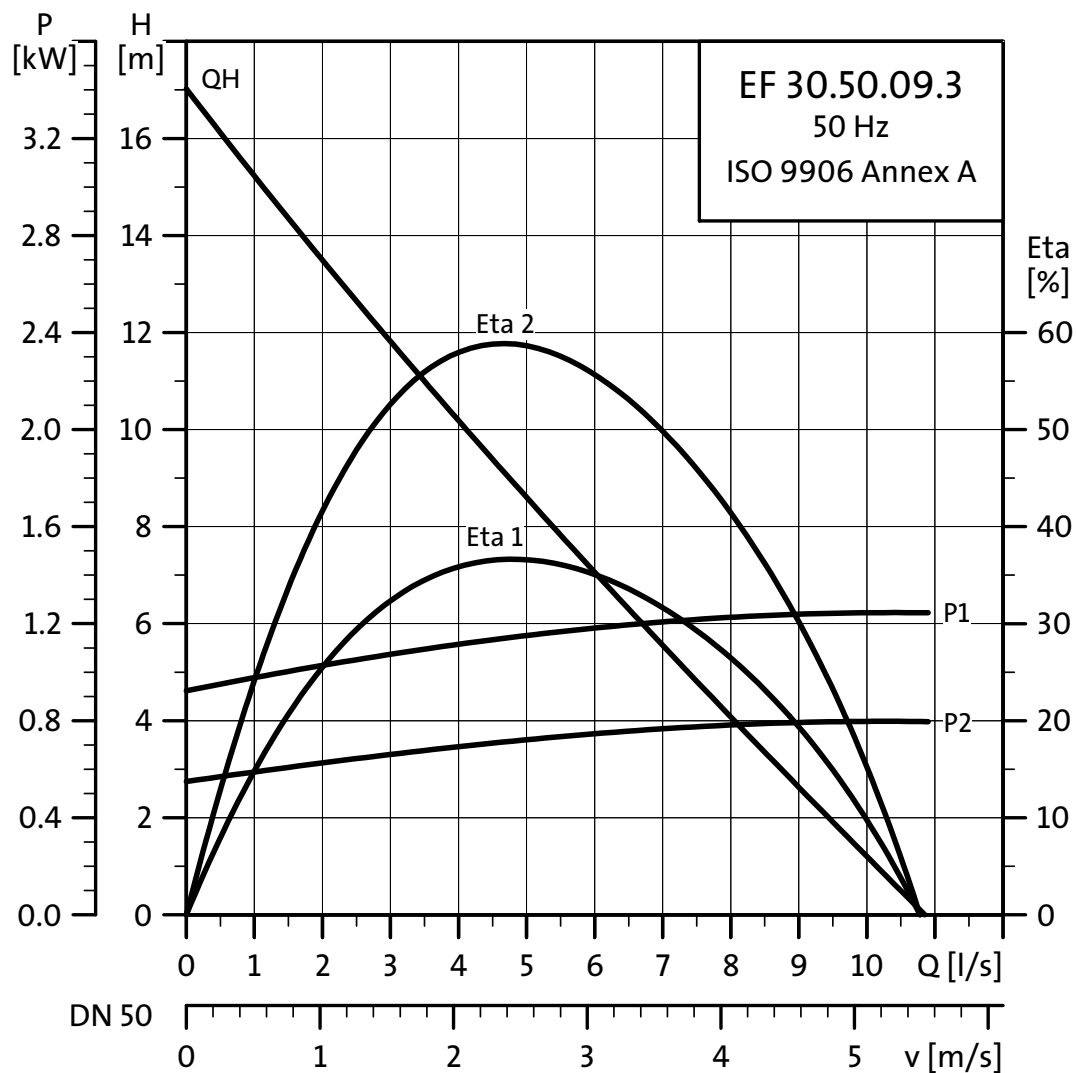
## Electrical data

| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|---------|------|------|-------------|------|-----------------|---------------|----------------|--------------------|------------------------|-----|-----|-------|------|------|---------------------|-----------------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [μF]          | [A]            | [A]                | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  | [kgm <sup>2</sup> ] | [Nm]                              |
| 1 x 230 | 0.98 | 0.6  | 2           | 2920 | DOL             | 30            | 4.8            | 21                 | 42                     | 55  | 61  | 0.81  | 0.81 | 0.86 | 0.0035              | 7                                 |

## Pump data

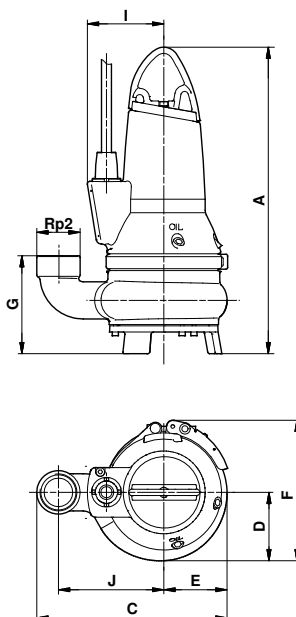
| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                   |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|----------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                            |
| Semi-open     | 30               | 30                              | 10                      | IP 68           | F                | 40                      | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

## Performance curves EF30.50.09.3



TM02 7480 3603

## Dimensional sketches EF30.50.09.3



/TMD2 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

## Electrical data

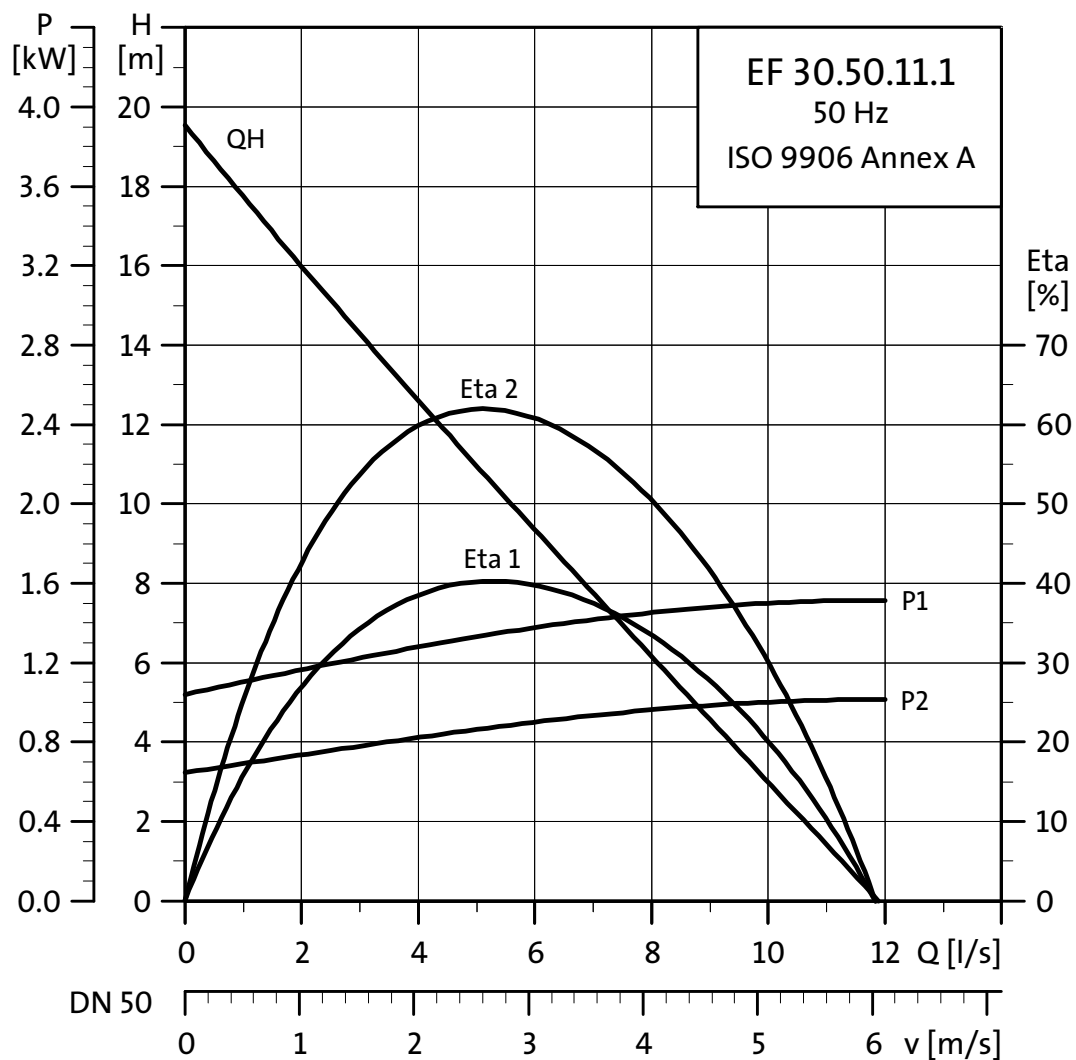
| Voltage     | P1   | P2   | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |     |     | η <sub>motor</sub> [%] |      |      | Cos φ  |    |  | Moment of inertia<br>[kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub><br>[Nm] |
|-------------|------|------|-------------|------|-----------------|----------------|-----|--------------------|-----|-----|------------------------|------|------|--------|----|--|------------------------------------------|-------------------------------------------|
| [V]         | [kW] | [kW] |             |      |                 | [A]            | [A] | 1/2                | 3/4 | 1/1 | 1/2                    | 3/4  | 1/1  |        |    |  |                                          |                                           |
| 3 x 400-415 | 1.4  | 0.9  | 2           | 2870 | DOL             | 2.8            | 21  | 58                 | 61  | 65  | 0.58                   | 0.68 | 0.76 | 0.0037 | 12 |  |                                          |                                           |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                   |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|----------------------------|
| Semi-open        | 30                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

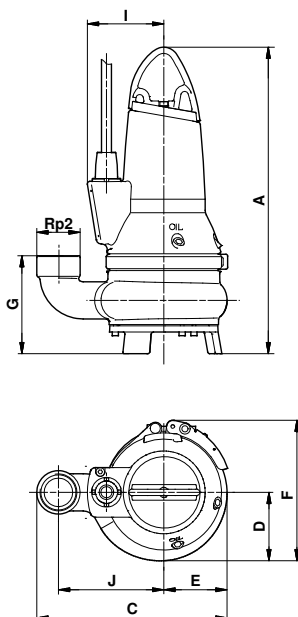


## Performance curves EF30.50.11.1



TM02 7467 3603

## Dimensional sketches EF30.50.11.1



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

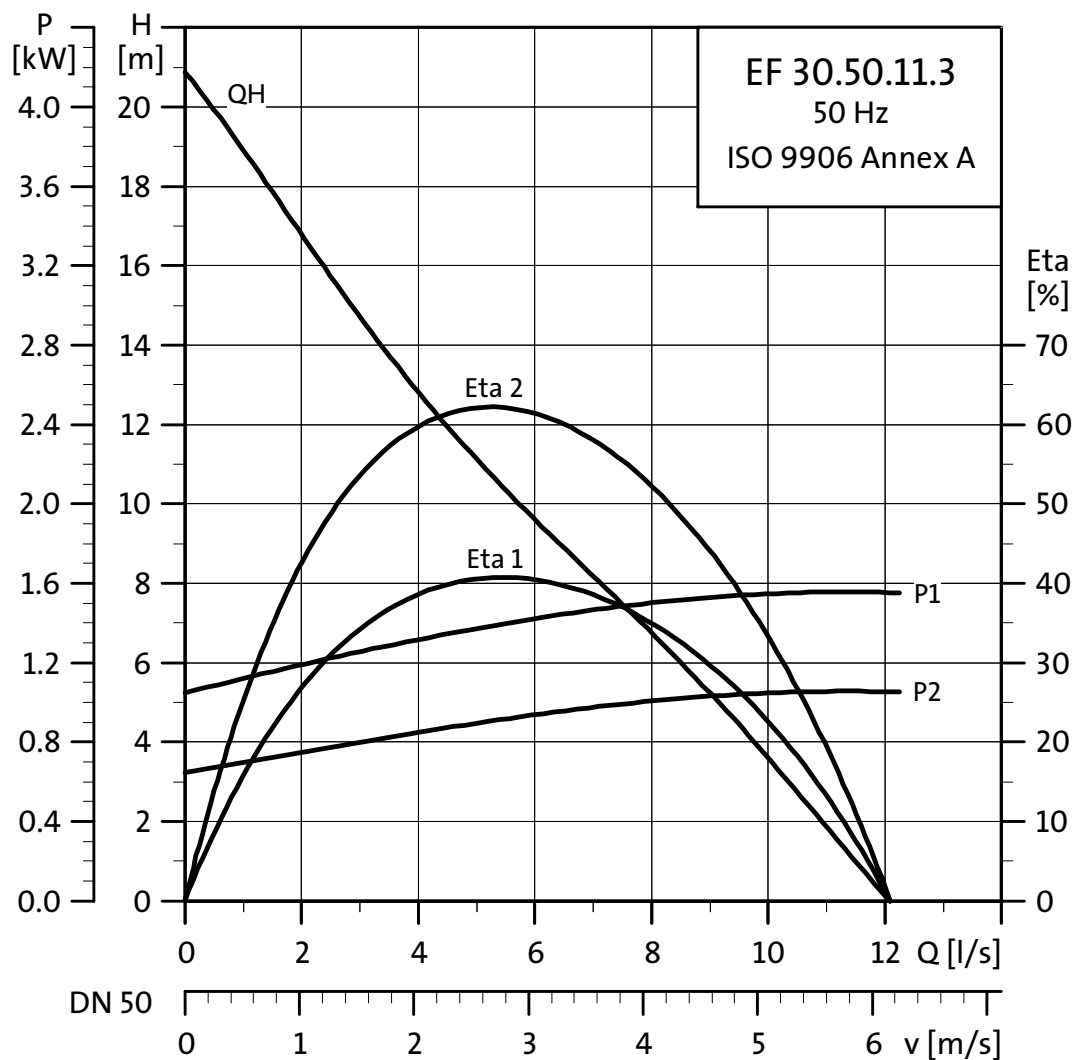
## Electrical data

| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | Run<br>capacitor<br>[μF] | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment<br>of inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|--------------------------|----------------|--------------------|------------------------|-----|-----|-------|------|------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                          | [A]            | [A]                | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |                                             |                                              |
| 1 x 230        | 1.6        | 1.1        | 2              | 2830 | DOL                | 30                       | 7.4            | 38                 | 60                     | 66  | 67  | 0.89  | 0.96 | 0.97 | 0.0037                                      | 7                                            |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                   |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|----------------------------|
| Semi-open        | 30                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

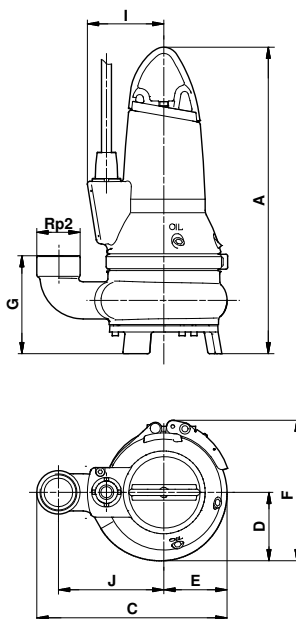
## Performance curves EF30.50.11.3



TM02 7466 3603

# Technical data

## Dimensional sketches EF30.50.11.3



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

## Electrical data

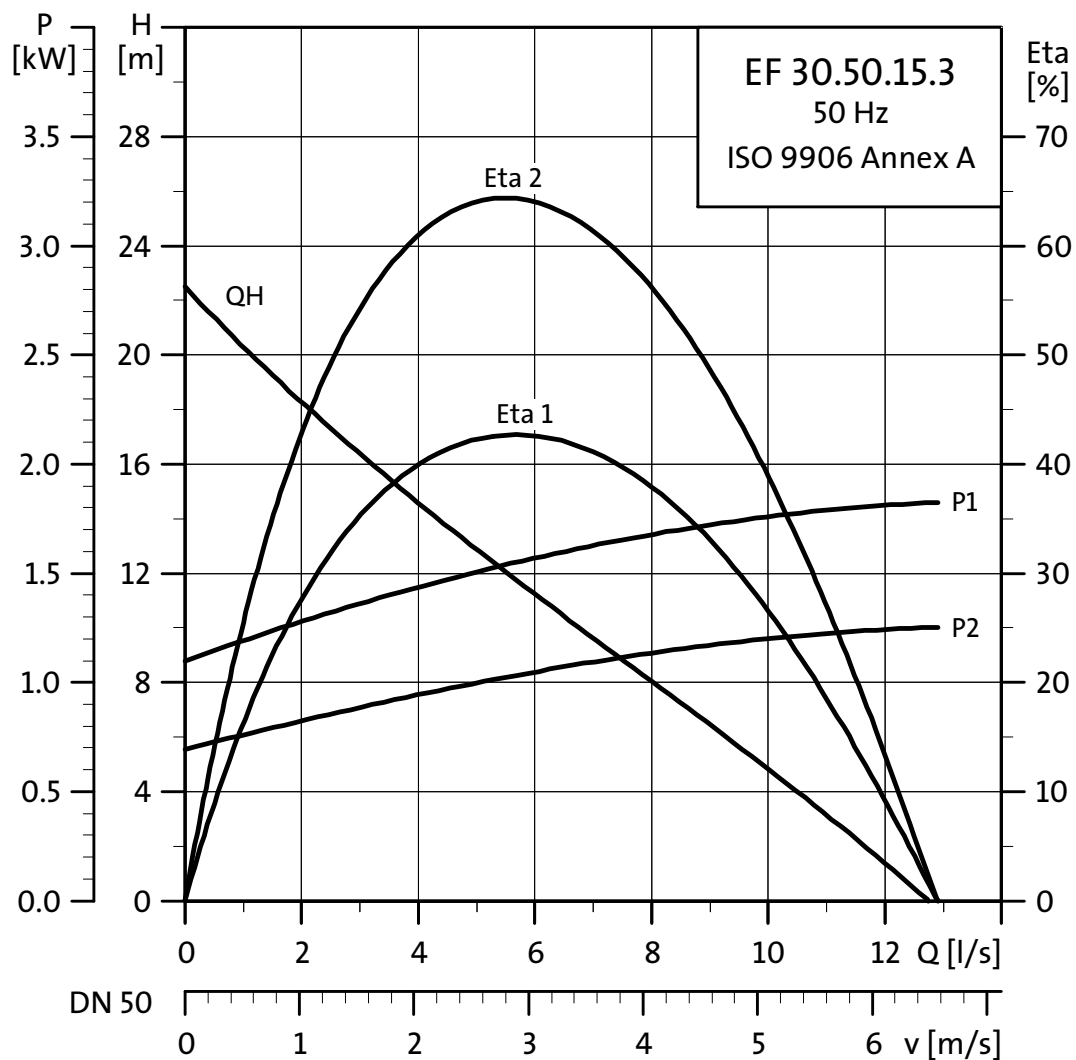
| Voltage     | P1   | P2   | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment of inertia<br>[kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub><br>[Nm] |
|-------------|------|------|-------------|------|-----------------|----------------|--------------------|------------------------|-----|-----|-------|------|------|------------------------------------------|-------------------------------------------|
| [V]         | [kW] | [kW] |             |      |                 | [A]            | [A]                | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |                                          |                                           |
| 3 x 400-415 | 1.6  | 1.1  | 2           | 2830 | DOL             | 3.1            | 21                 | 57                     | 64  | 67  | 0.63  | 0.74 | 0.81 | 0.0037                                   | 12                                        |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                   |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|----------------------------|
| Semi-open        | 30                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

# Performance curves

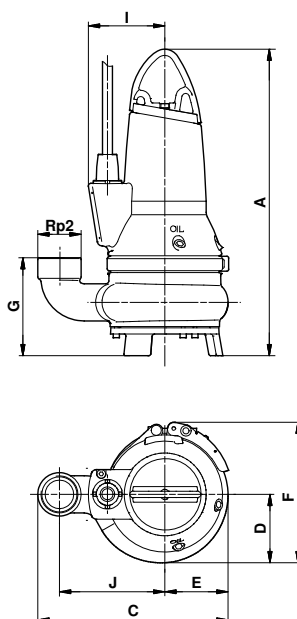
Performance curves EF30.50.15.3



TN02 7465 3603

# Technical data

## Dimensional sketches EF30.50.15.3



TM02 7348 3303

## Product dimensions

| A   | C   | D   | E   | F   | G   | J   | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-------------|
| 494 | 307 | 110 | 102 | 227 | 159 | 170 | 39          |

With 10 m cable

## Electrical data

| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|-------|------|------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |                                             |                                              |
| 3 x 400-415    | 2.2        | 1.5        | 2              | 2720 | DOL                | 3.8                   | 21                        | 63                     | 68  | 67  | 0.71  | 0.81 | 0.88 | 0.0039                                      | 12                                           |

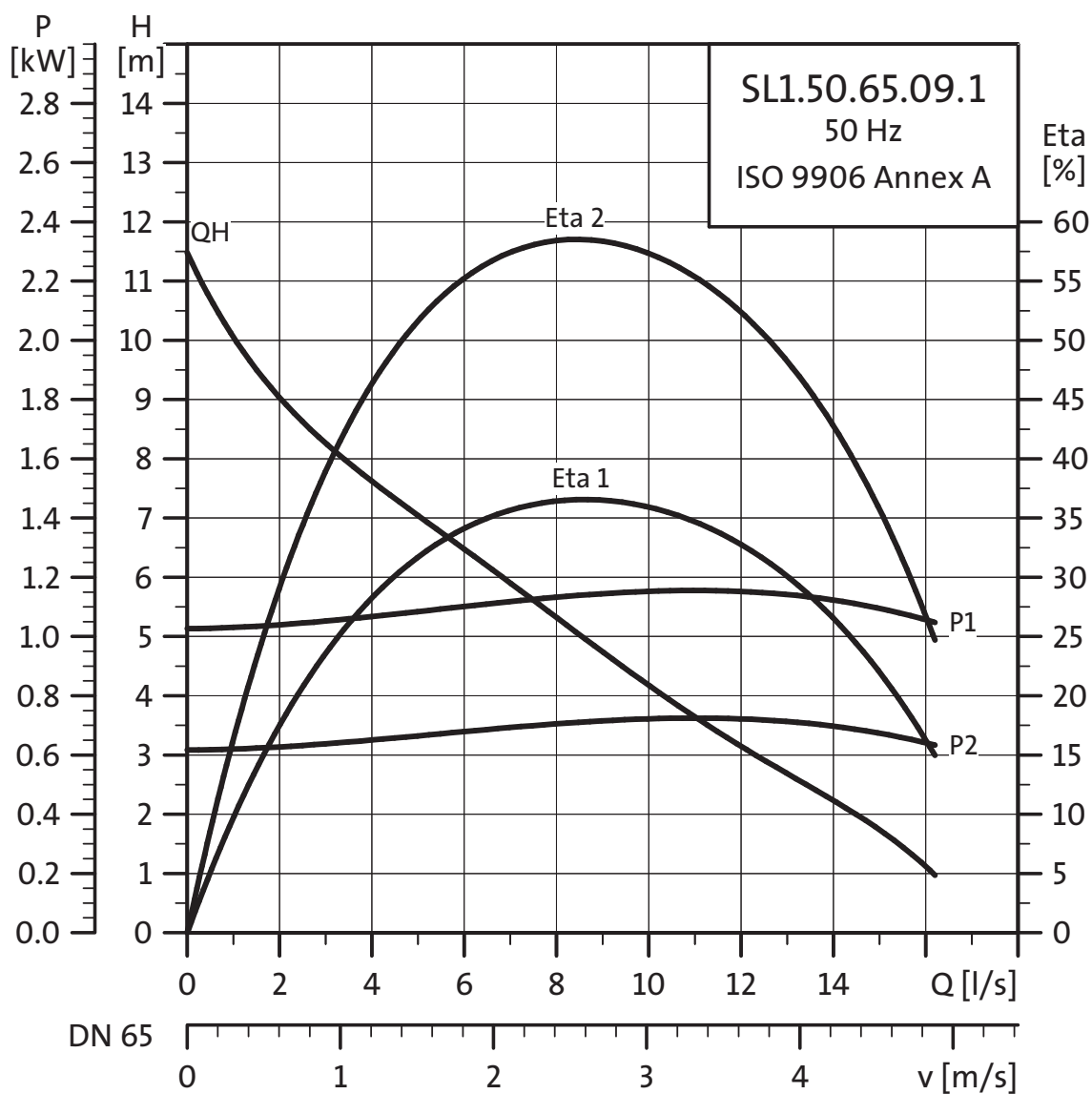
## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                   |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|----------------------------|
| Semi-open        | 30                       | 30                                 | 10                                | IP 68              | F                   | 40                                 | 4-10 | Ex d IIB T4<br>Ex n IIB T4 |

# Performance curves

## SL1.50.65

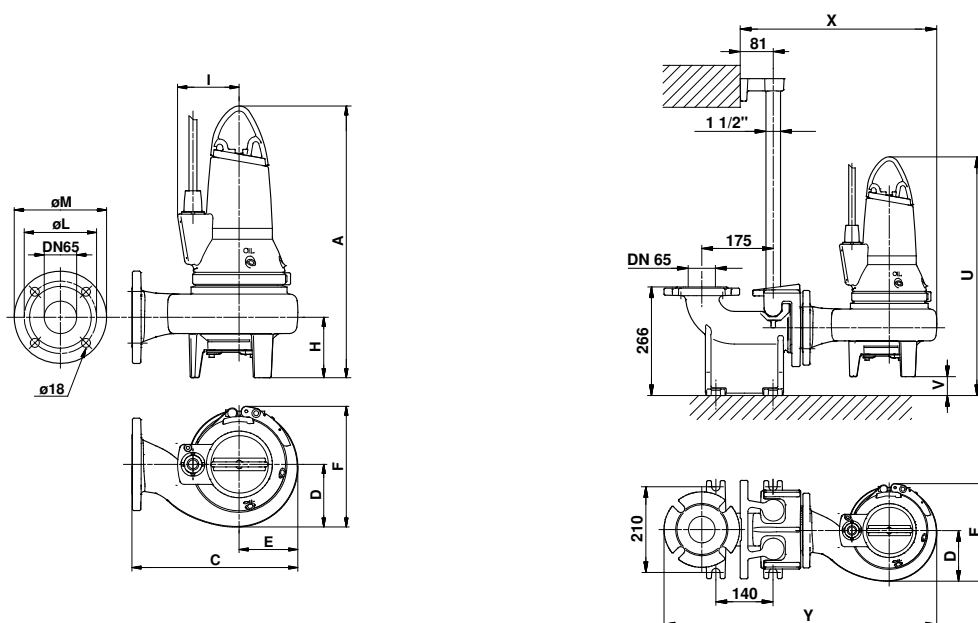
### Performance curves SL1.50.65.09.1



TM02 7574 3603

# Technical data

## Dimensional sketches SL1.50.65.09.1



TM02 7349 3403/TM02 7420 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | øL  | øM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%]  | Cos φ | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|---------|------|------|-------------|------|-----------------|---------------|----------------|--------------------|-------------------------|-------|---------------------|-----------------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [μF]          | [A]            | [A]                | 1/2 3/4 1/1 1/2 3/4 1/1 |       | [kgm <sup>2</sup> ] | [Nm]                              |
| 1 x 230 | 1.3  | 0.9  | 2           | 2920 | DOL             | 30            | 6.1            | 38                 | 55 63 67 0.86 0.92 0.96 |       | 0.004               | 7                                 |

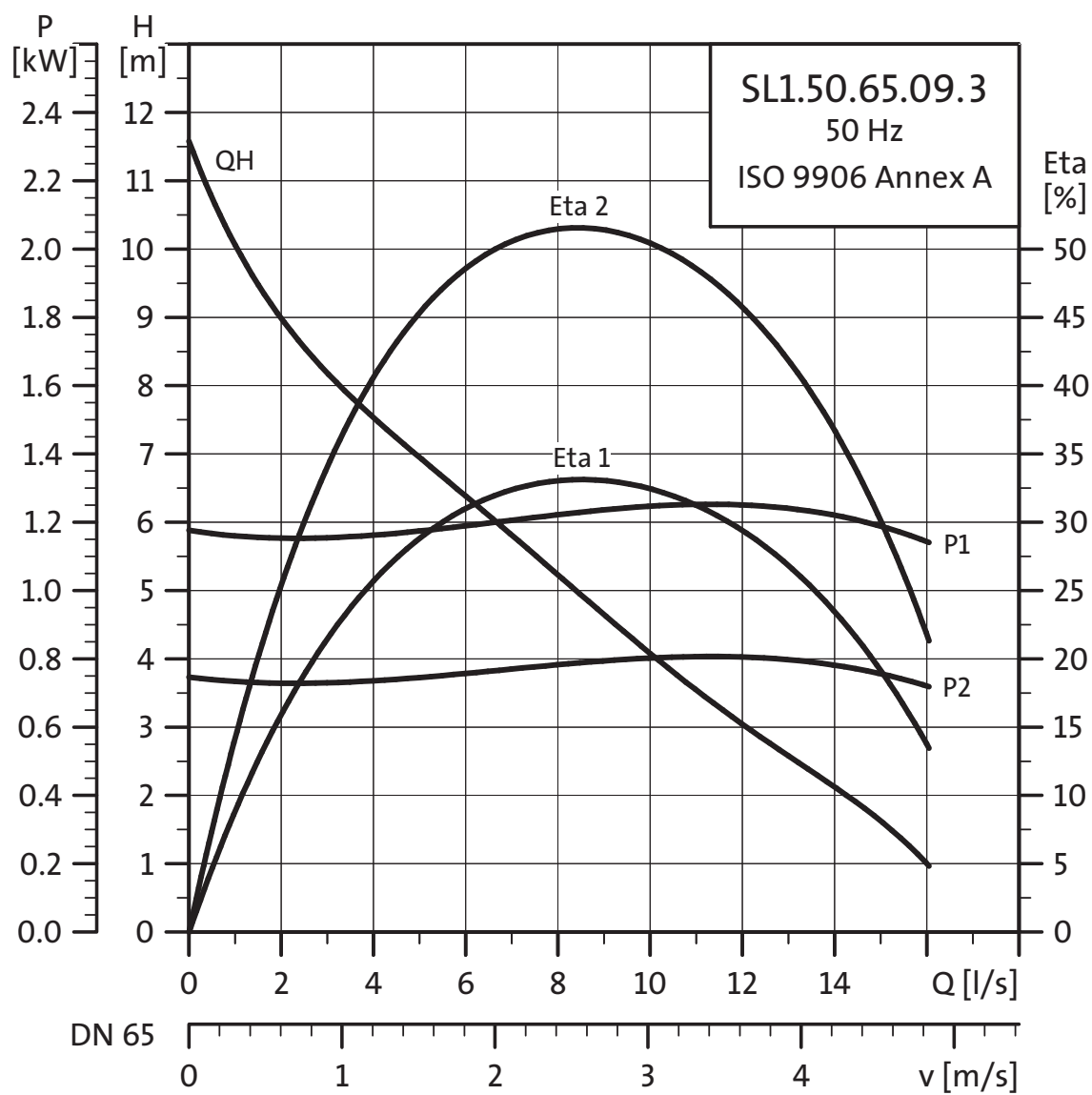
## Pump data

| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                  |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|---------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                           |
| Channel       | 65               | 30                              | 10                      | IP68            | F                | 40                      | 4-10 | Ex d IIB T4 / Ex n IIB T4 |



# Performance curves

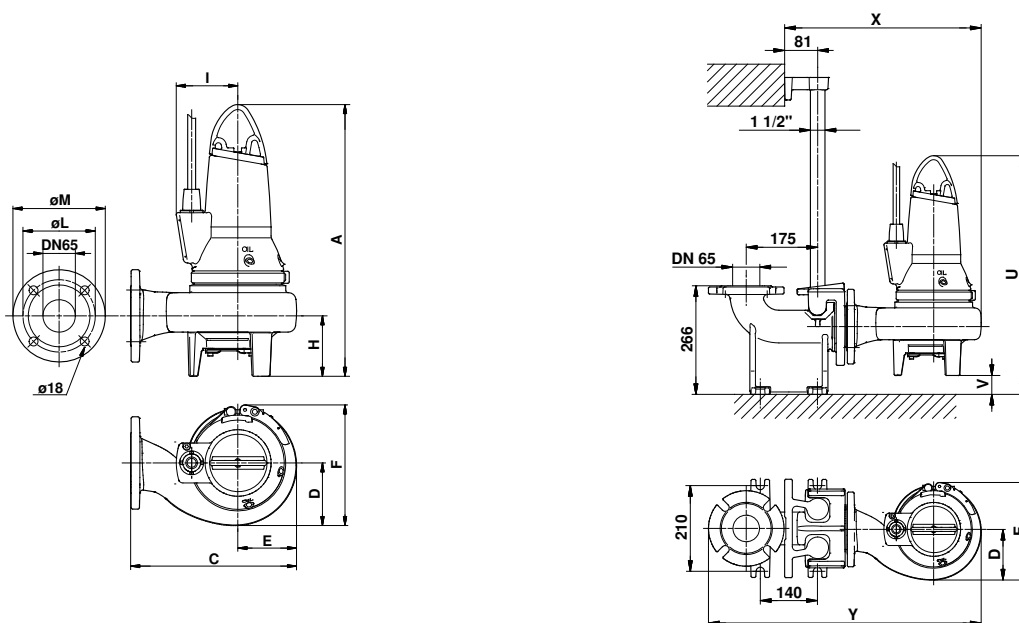
Performance curves SL1.50.65.09.3



TM02 7484 3603

# Technical data

## Dimensional sketches SL1.50.65.09.3



TM02 7349 3403/TM02 7420 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | øL  | øM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

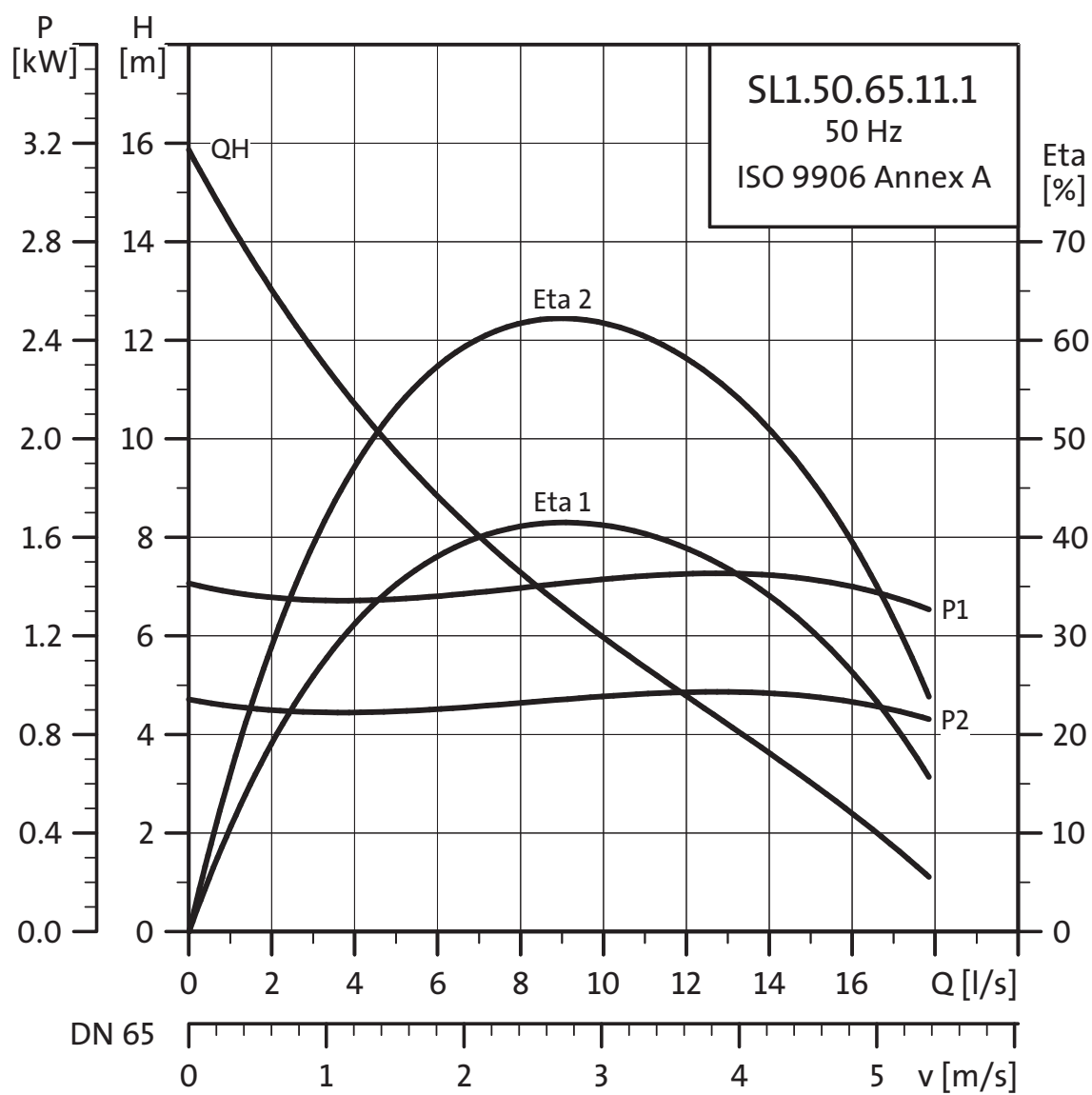
| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     | Cos φ |      |      |       | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|-------|------|------|-------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |       |                                             |                                              |
| 3 x 230-240    | 1.4        | 0.9        | 2              | 2920 | DOL                | 4.9                   | 36                        | 58                     | 61  | 65  | 0.50  | 0.58 | 0.65 | 0.004 | 12                                          |                                              |
| 3 x 400-415    | 1.4        | 0.9        | 2              | 2920 | DOL                | 2.8                   | 21                        | 58                     | 61  | 65  | 0.58  | 0.68 | 0.76 | 0.004 | 12                                          |                                              |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max. number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                     |
|------------------|--------------------------|-----------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|------------------------------|
| Channel          | 65                       | 30                                | 10                                | IP68               | F                   | 40                                 | 4-10 | Ex d IIB T4 / Ex<br>n IIB T4 |

# Performance curves

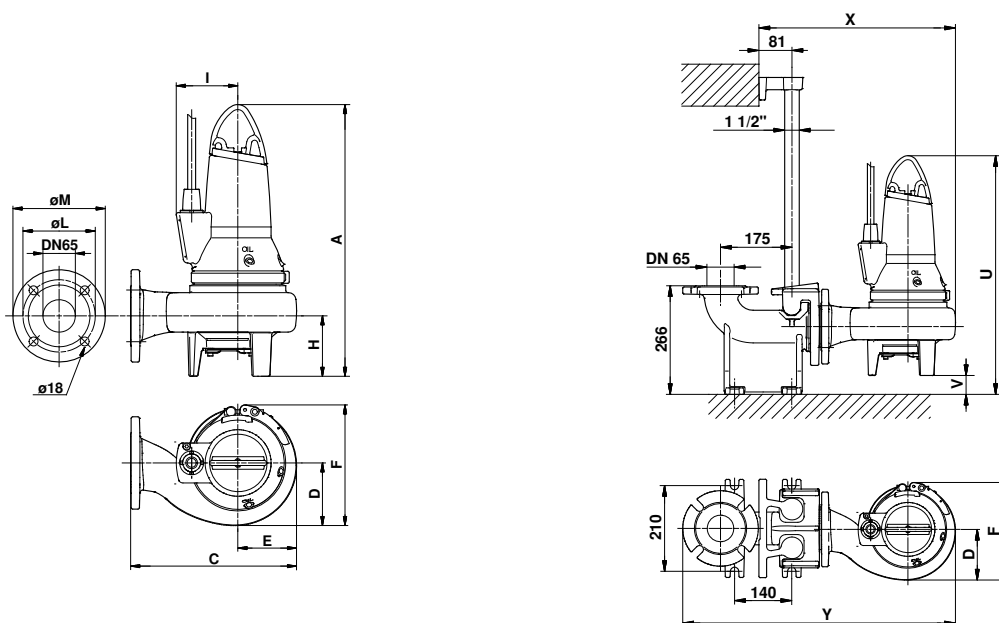
Performance curves SL1.50.65.11.1



TM02 7774 3603

# Technical data

## Dimensional sketches SL1.50.65.11.1



TM02 7349 3403/TM02 7420 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | ØL  | ØM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

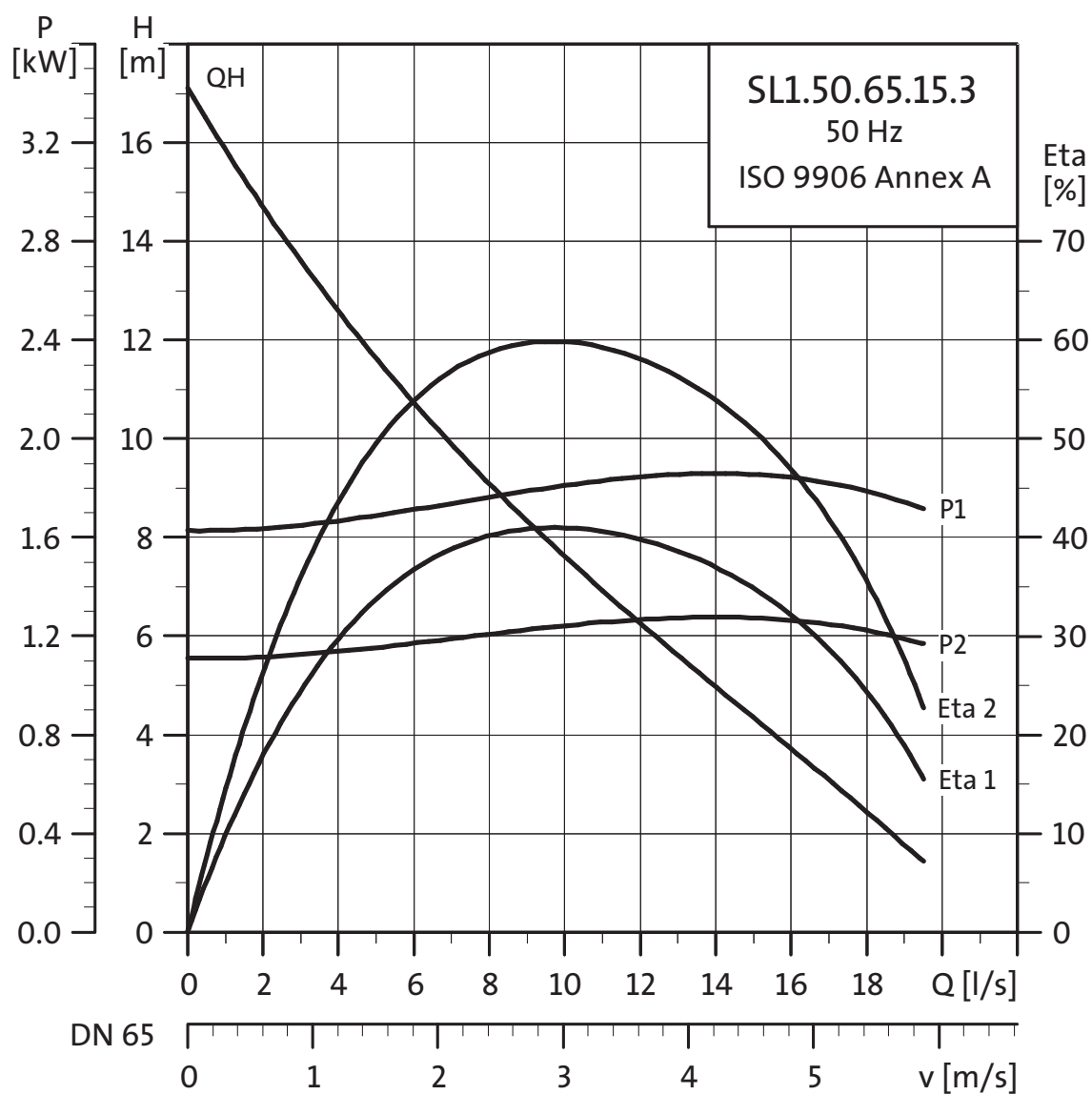
| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|---------|------|------|-------------|------|-----------------|---------------|----------------|--------------------|------------------------|----------------|---------------------|-----------------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [μF]          | [A]            | [A]                | 1/2 3/4 1/1            | 1/2 3/4 1/1    | [kgm <sup>2</sup> ] | [Nm]                              |
| 1 x 230 | 1.3  | 0.9  | 2           | 2920 | DOL             | 30            | 6.1            | 38                 | 55 63 67               | 0.86 0.92 0.96 | 0.004               | 7                                 |

## Pump data

| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                  |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|---------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                           |
| Channel       | 65               | 30                              | 10                      | IP68            | F                | 40                      | 4-10 | Ex d IIB T4 / Ex n IIB T4 |

# Performance curves

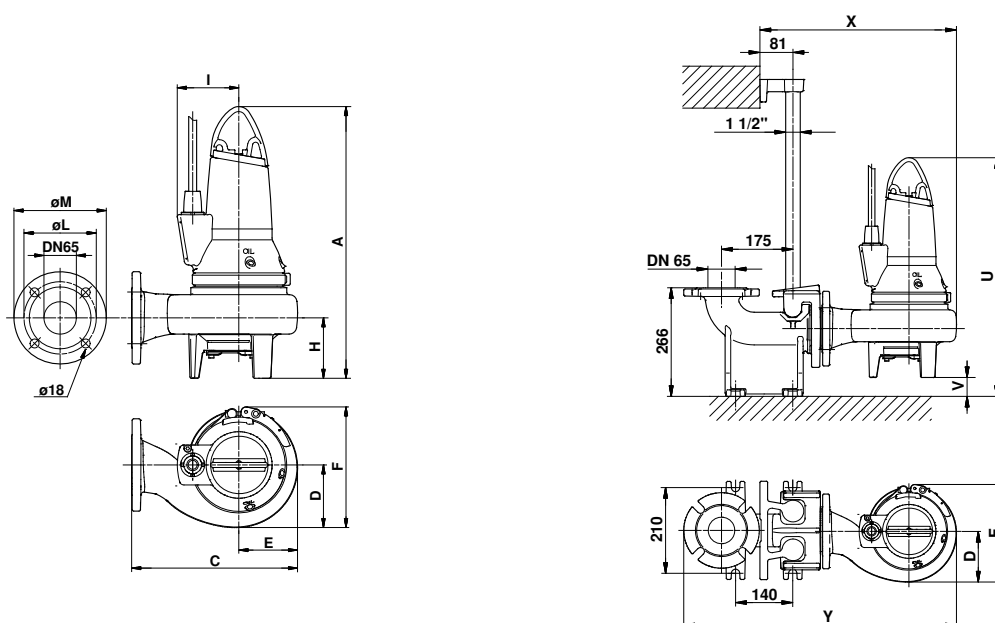
Performance curves SL1.50.65.15.3



TM02 7473 3603

# Technical data

## Dimensional sketches SL1.50.65.15.3



TM02 7349 3403/TM02 7420 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | ØL  | ØM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

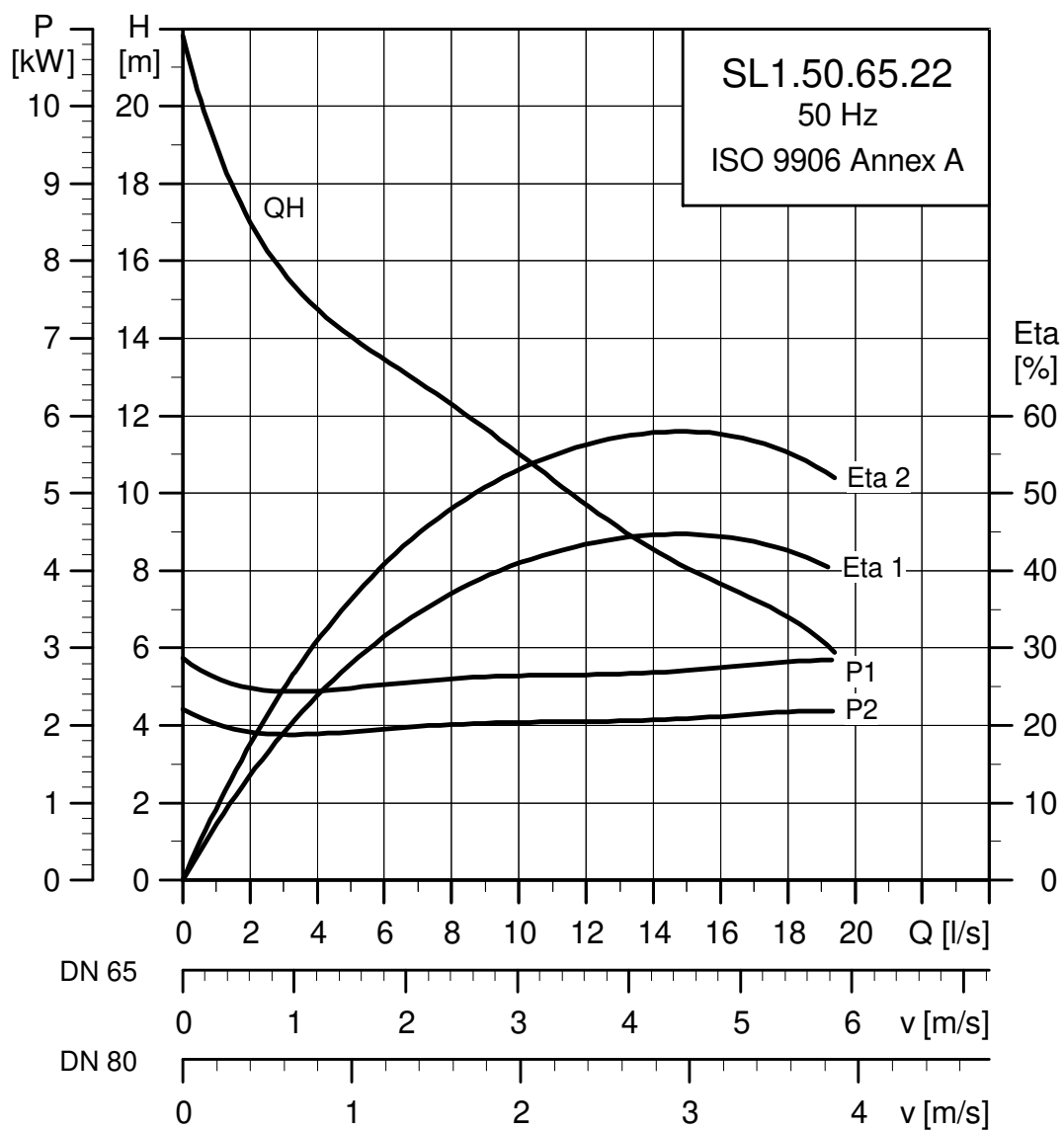
| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     |      |      | Cos φ |       |  | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|------|------|-------|-------|--|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2  | 3/4  | 1/1   |       |  |                                             |                                              |
| 3 x 230-240    | 2.2        | 1.5        | 2              | 2720 | DOL                | 6.6                   | 36                        | 67                     | 68  | 63  | 0.88 | 0.81 | 0.71  | 0.004 |  | 12                                          |                                              |
| 3 x 400-415    | 2.2        | 1.5        | 2              | 2720 | DOL                | 3.8                   | 21                        | 67                     | 68  | 63  | 0.88 | 0.81 | 0.71  | 0.004 |  | 12                                          |                                              |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                     |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|------------------------------|
| Channel          | 65                       | 30                                 | 10                                | IP68               | F                   | 40                                 | 4-10 | Ex d IIB T4 / Ex<br>n IIB T4 |

# Performance curves

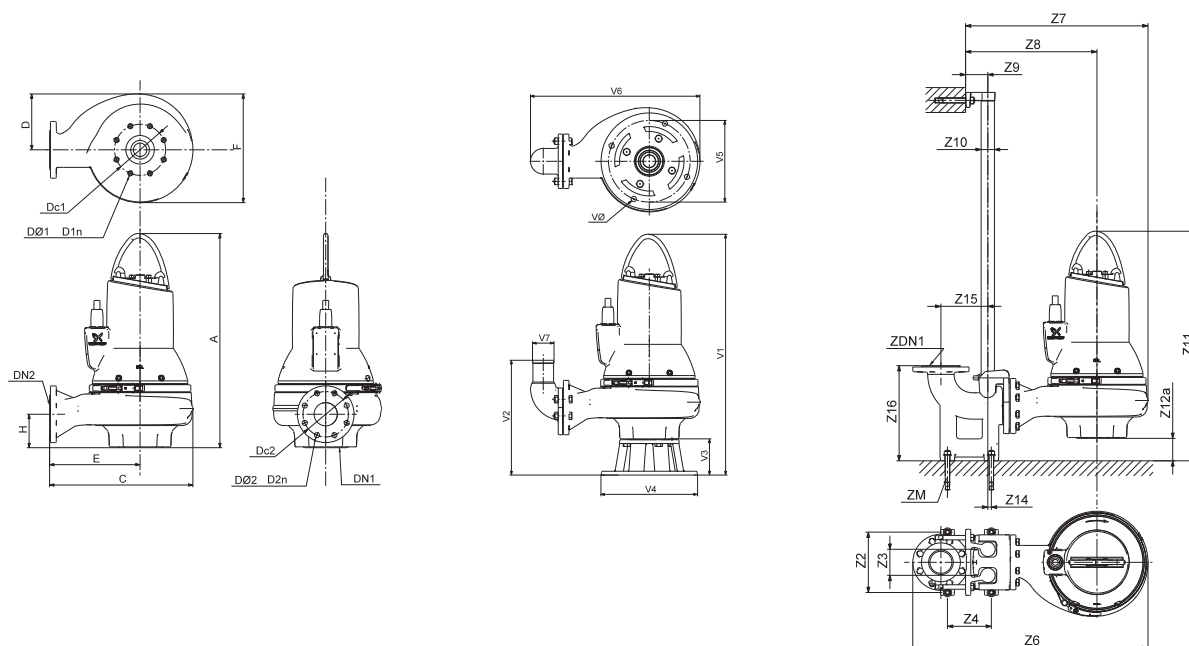
Performance curves SL1.50.65.22



TM04 2793 3008

# Technical data

## Dimensional sketches SL1.50.65.22



TM04 2794 3008/TM04 2795 3008/TM04 3473 4608

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 641 | 366 | 171 | 216 | 321 | 93  | 65  | 145 | 4 x 18  | 65   | 145 | 4 x 18  | 86          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 210 | 95  | 140 | 700 | 513 | 363 | 81  | 1½" | 740     | 99   | 1   | 175     | 266         | 145 | 65  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 771 | 339 | 130 | 325 | 270 | 491 | 65  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SL1.50.65.22.2.50E | 3x220-240V D | 2.8     | 2.2     | 2           | 2990 | DOL             | 8.5            | 74  | 70.3               | 75.2 | 76.7                   | 0.79 | 0.86 | 0.89  | 0.0102 | 25 |                                       |                                        |
| SL1.50.65.22.2.51D | 3x380-415V D | 2.8     | 2.2     | 2           | 2990 | SD              | 4.9            | 43  | 70.3               | 75.2 | 76.7                   | 0.79 | 0.86 | 0.89  | 0.0102 | 25 |                                       |                                        |
| SL1.50.65.22.2.50D | 3x380-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9            | 43  | 70.3               | 75.2 | 76.7                   | 0.79 | 0.86 | 0.89  | 0.0102 | 25 |                                       |                                        |
| SL1.50.65.22.2.50B | 3x400-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9            | 43  | 70.3               | 75.2 | 76.7                   | 0.79 | 0.86 | 0.89  | 0.0102 | 25 |                                       |                                        |

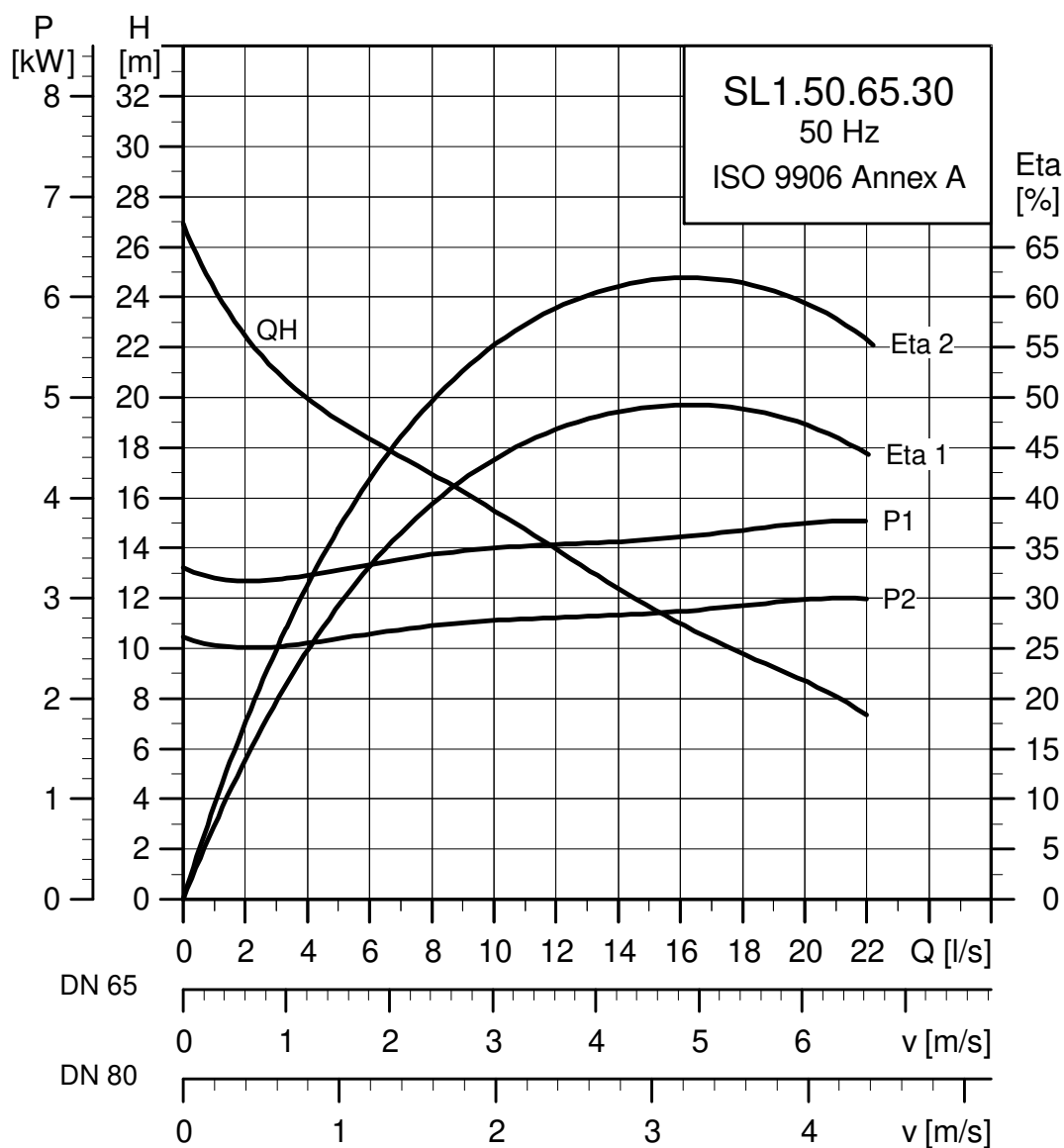
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 50                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

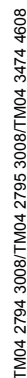
Performance curves SL1.50.65.30



TM04 2793 3008

## Technical data

## Dimensional sketches SL1.50.65.30



| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 641 | 366 | 171 | 216 | 321 | 93  | 65  | 145 | 4 x 18  | 65   | 145 | 4 x 18  | 89          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 210 | 95  | 140 | 700 | 513 | 363 | 81  | 1½" | 740     | 99   | 1   | 175     | 266         | 145 | 65  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 771 |     |     | 339 |     | 130 |     | 325 |         | 270  |     | 491     |             | 65  |     | 18      |

## Electrical data

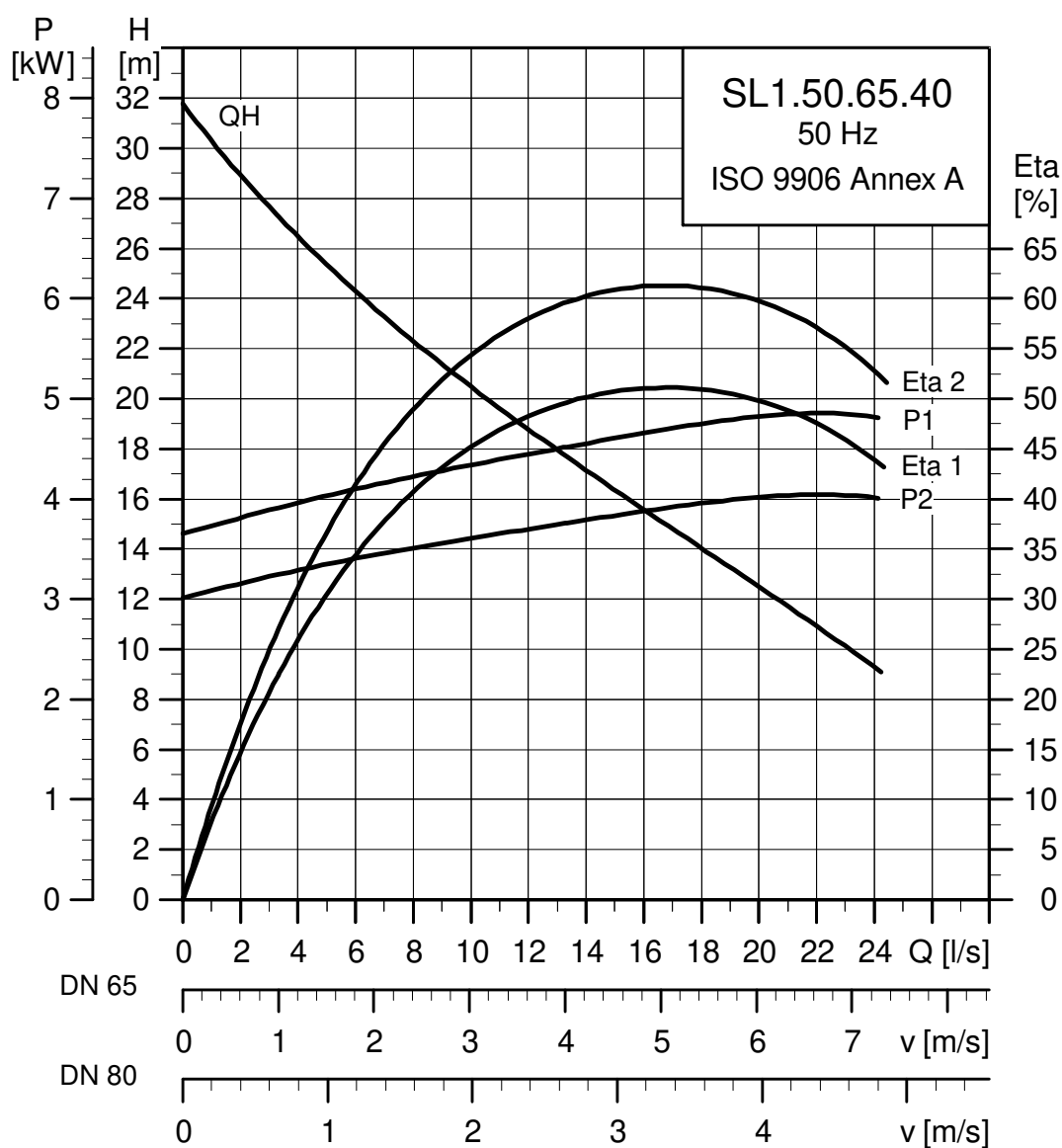
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |      | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      |  | Cos φ  |    |  |  | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|------|--------------------|------|------------------------|------|------|------|--|--------|----|--|--|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]  | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1  |  |        |    |  |  |                                       |                                        |
| SL1.50.65.30.2.50E | 3x220-240V D | 3.8     | 3.0     | 2           | 2910 | DOL             | 11.8           | 104  | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 |  | 0.0123 | 42 |  |  |                                       |                                        |
| SL1.50.65.30.2.51D | 3x380-415V D | 3.8     | 3.0     | 2           | 2910 | SD              | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 |  | 0.0123 | 42 |  |  |                                       |                                        |
| SL1.50.65.30.2.50D | 3x380-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 |  | 0.0123 | 42 |  |  |                                       |                                        |
| SL1.50.65.30.2.50B | 3x400-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 |  | 0.0123 | 42 |  |  |                                       |                                        |

## Pump data

| Impeller type | Max. solids size<br>[mm] | Pump housing pressure<br>PN | Max . number of starts per hour | Max. installation depth<br>[m] | Enclosure class | Insulation class | Max. liquid temperature<br>[°C] | pH   |
|---------------|--------------------------|-----------------------------|---------------------------------|--------------------------------|-----------------|------------------|---------------------------------|------|
| Channel       | 50                       | 10                          | 20                              | 20                             | 68              | F                | 40                              | 4-10 |

# Performance curves

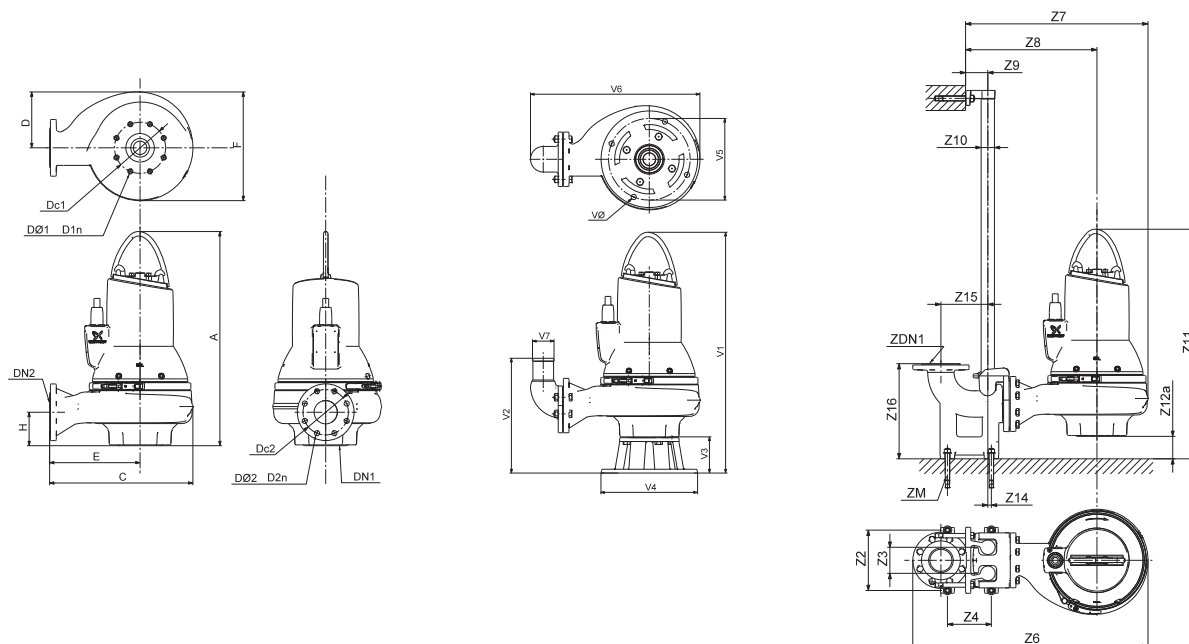
Performance curves SL1.50.65.40



TM04 3475 4608

# Technical data

## Dimension sketches SL1.50.65.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| Pump type    | A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| SL1.50.65.40 | 677 | 407 | 200 | 227 | 379 | 93  | 65  | 145 | 4 x 18  | 65   | 145 | 4 x 18  | 115         |     |     |         |
| Pump type    | Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| SL1.50.65.40 | 210 | 95  | 140 | 741 | 554 | 375 | 81  | 1½" | 774     | 97   | 1   | 175     | 266         | 145 | 65  | 4 x M16 |
| Pump type    | V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| SL1.50.65.40 | 807 | 341 | 130 | 325 | 270 | 519 | 65  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.50.65.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7               | 161                    | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0194                                | 56                                     |
| SL1.50.65.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0194                                | 56                                     |
| SL1.50.65.40.2.50B | 3x400-415V D | 4.8     | 4.0     | 2           | 2925 | DOL             | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0194                                | 56                                     |

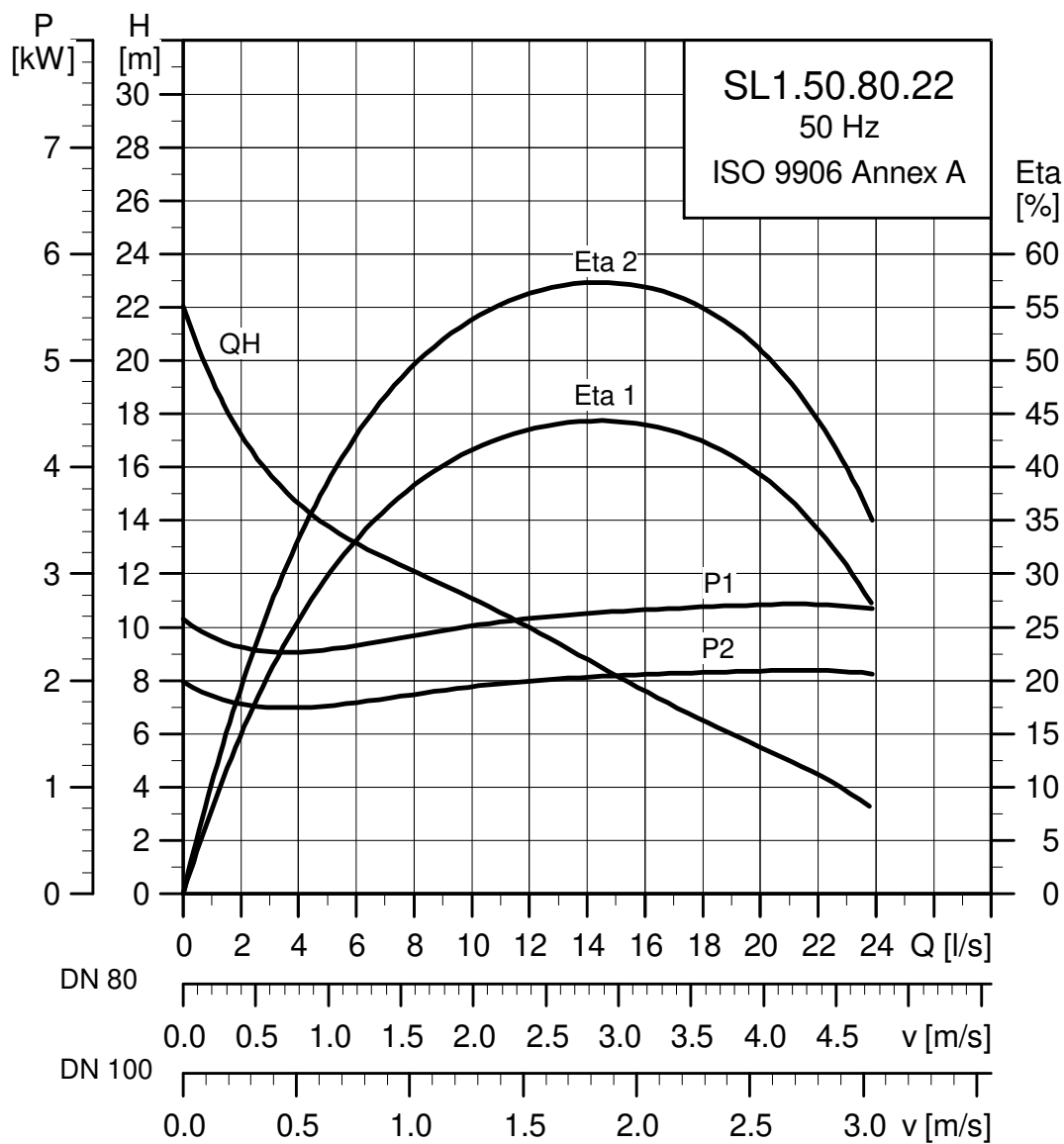
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 50                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SL1.50.80

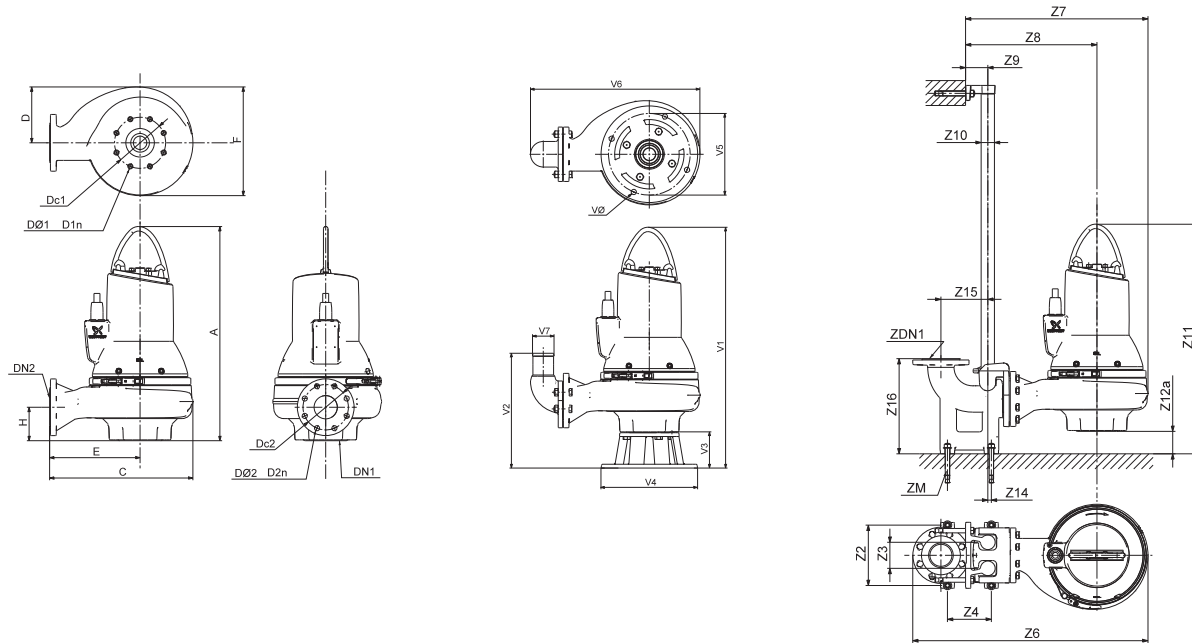
### Performance curves SL1.50.80.22



TM04 3476 4608

# Technical data

## Dimension sketches SL1.50.80.22



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 641 | 366 | 171 | 216 | 321 | 100 | 65  | 145 | 4 x 18  | 80   | 160 | 8x18    | 87          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 719 | 526 | 376 | 81  | 1½" | 774     | 133  | 13  | 171     | 345         | 145 | 65  | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 771 |     | 339 |     | 130 |     | 325 |     | 270     |      | 496 |         | 80          |     | 18  |         |

## Electrical data

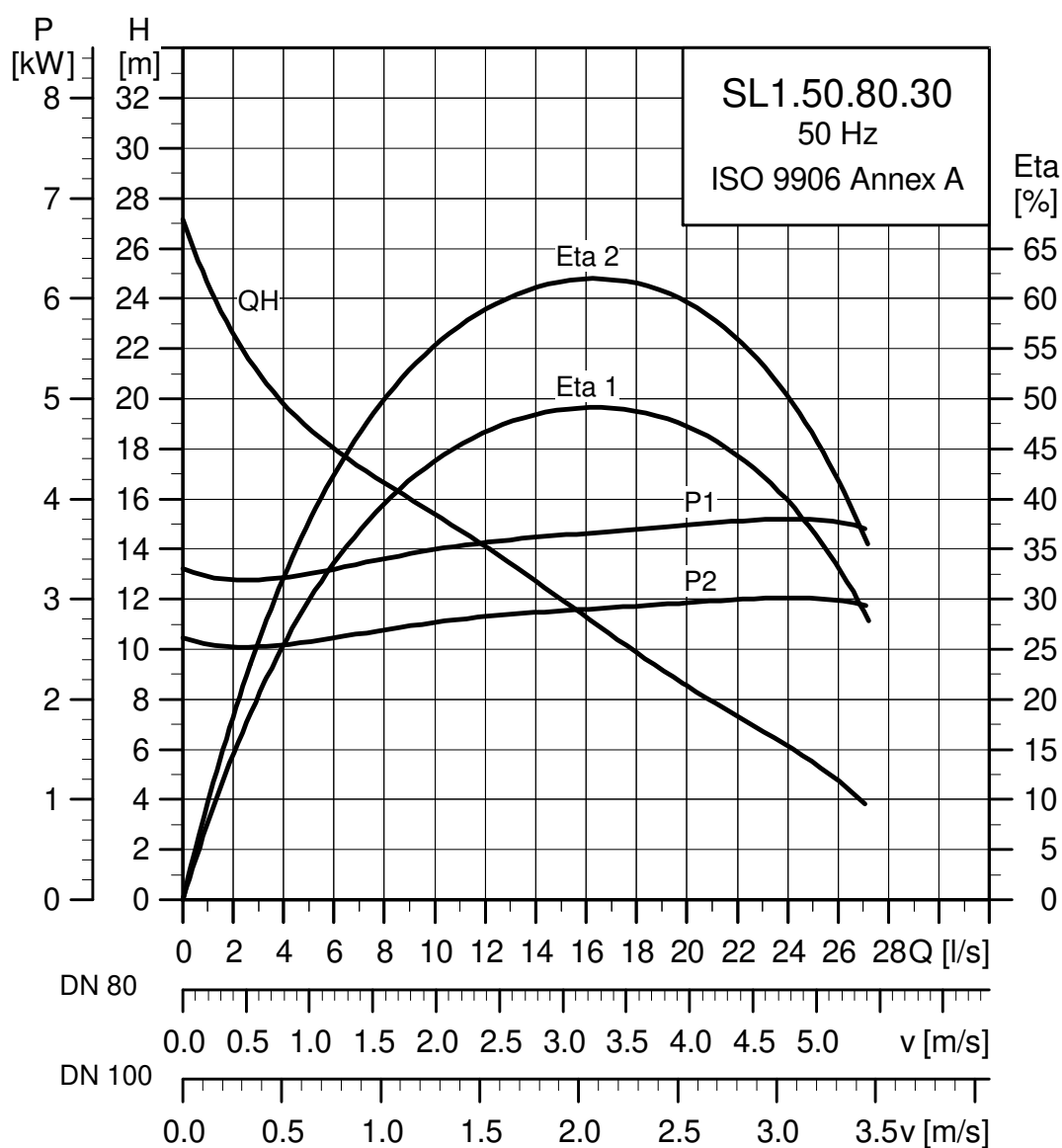
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.50.80.22.2.50E | 3x220-240V D | 2.8     | 2.2     | 2           | 2990 | DOL             | 8.5                | 74                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0102                                | 25                                     |
| SL1.50.80.22.2.51D | 3x380-415V D | 2.8     | 2.2     | 2           | 2990 | SD              | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0102                                | 25                                     |
| SL1.50.80.22.2.50D | 3x380-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0102                                | 25                                     |
| SL1.50.80.22.2.50B | 3x400-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0102                                | 25                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 50                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

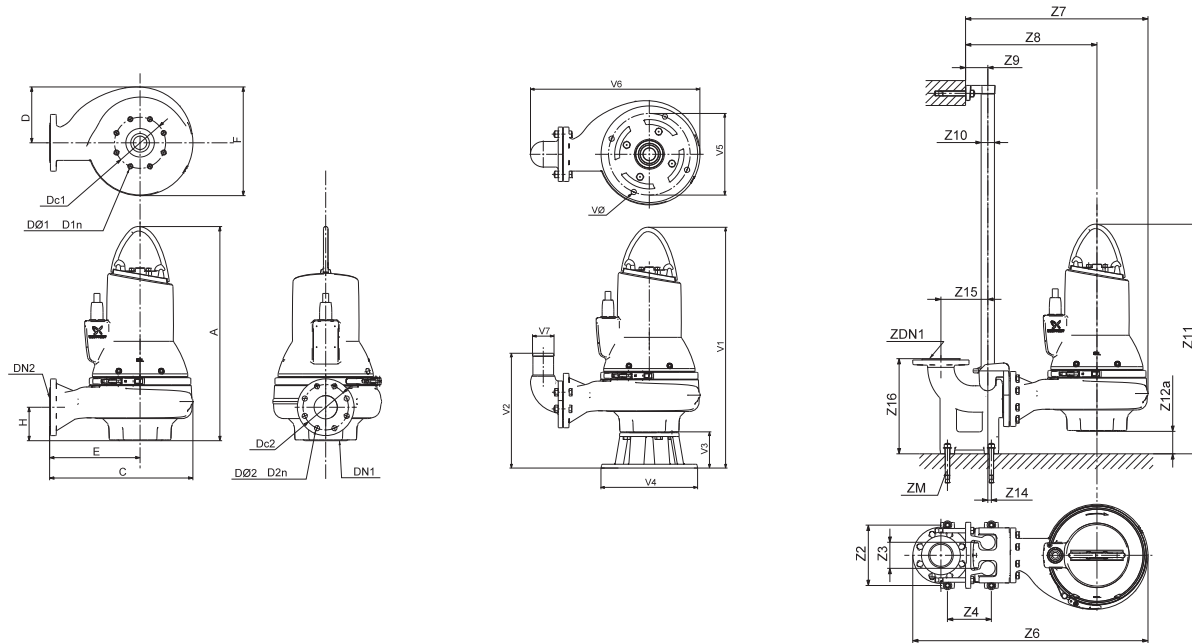
Performance curves SL1.50.80.30



TM04 3516 4608

# Technical data

## Dimension sketches SL1.50.80.30



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 641 | 366 | 171 | 216 | 321 | 100 | 65  | 145 | 4 x 18  | 80   | 160 | 8x18    | 90          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 719 | 526 | 376 | 81  | 1½" | 774     | 133  | 13  | 171     | 345         | 145 | 65  | 4 x M16 |
| 220 | 95  | 160 | 760 | 567 | 387 | 81  | 1½" | 808     | 132  | 13  | 171     | 345         | 145 | 65  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 771 | 339 | 130 | 325 | 270 | 496 | 80  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |      | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      | Cos φ  |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|------|--------------------|------|------------------------|------|------|------|--------|----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]  | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1  |        |    |                                       |                                        |
| SL1.50.80.30.2.50E | 3x220-240V D | 3.8     | 3.0     | 2           | 2910 | DOL             | 11.8           | 104  | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 | 0.0123 | 42 |                                       |                                        |
| SL1.50.80.30.2.51D | 3x380-415V D | 3.8     | 3.0     | 2           | 2910 | SD              | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 | 0.0123 | 42 |                                       |                                        |
| SL1.50.80.30.2.50D | 3x380-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 | 0.0123 | 42 |                                       |                                        |
| SL1.50.80.30.2.50B | 3x400-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8            | 59.8 | 73.8               | 78.3 | 79.6                   | 0.67 | 0.78 | 0.84 | 0.0123 | 42 |                                       |                                        |

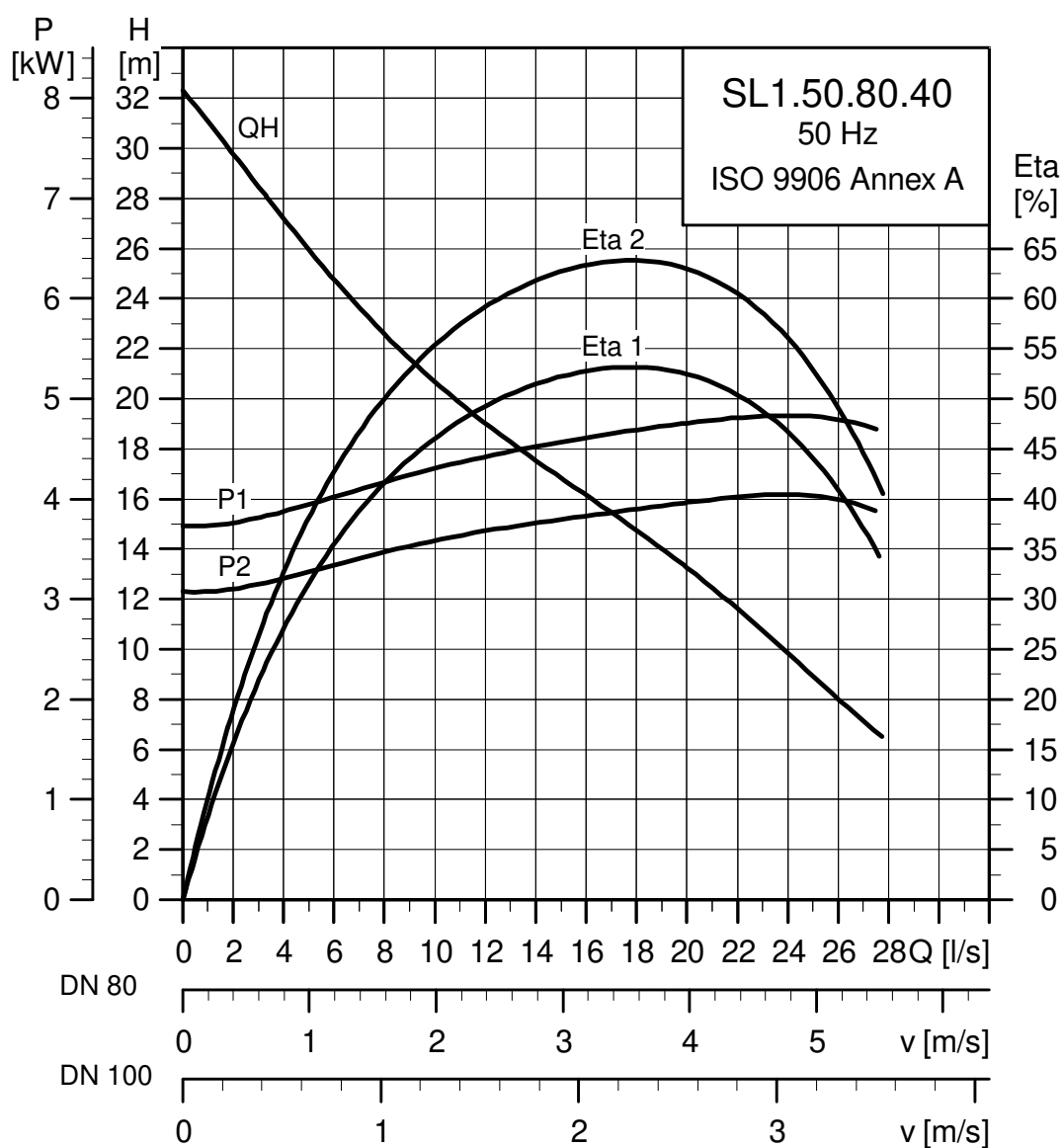
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 50                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

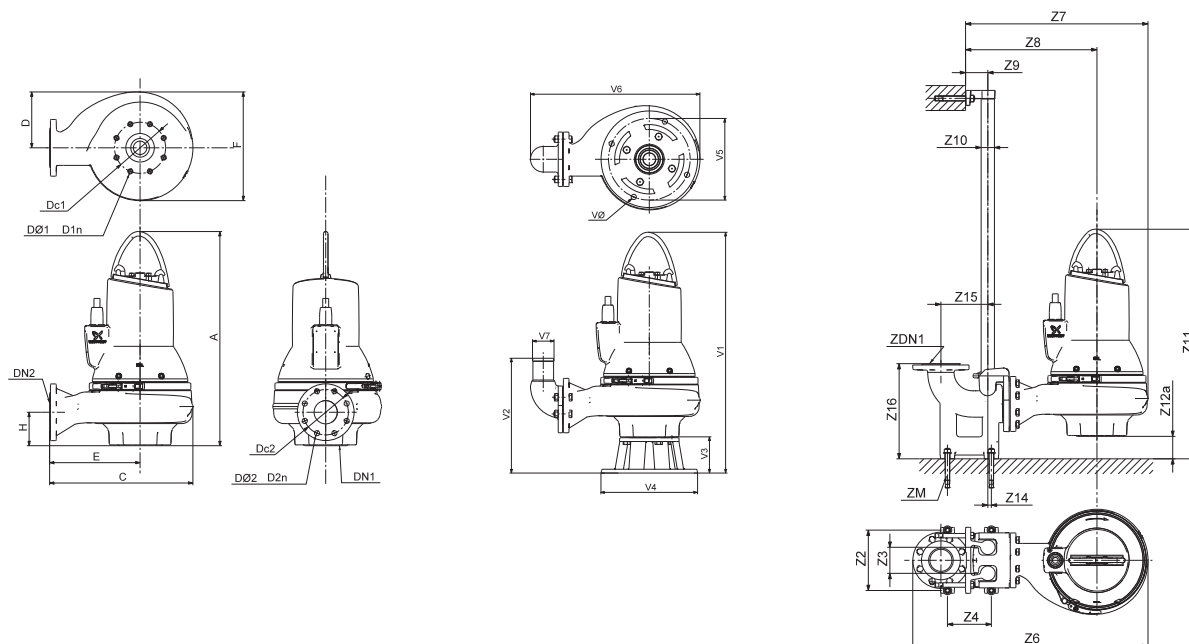
Performance curves SL1.50.80.40



TM04 3517 4608

# Technical data

## Dimension sketches SL1.50.80.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 677 | 407 | 200 | 227 | 379 | 100 | 65  | 145 | 4 x 18  | 80   | 160 | 8x18    | 94          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 760 | 567 | 387 | 81  | 1½" | 808     | 132  | 13  | 171     | 345         | 145 | 65  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 807 |     |     | 341 |     | 130 |     | 325 |         | 270  |     | 525     |             | 80  |     | 18      |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.50.80.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7               | 161                    | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0194                                | 56                                     |
| SL1.50.80.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0194                                | 56                                     |

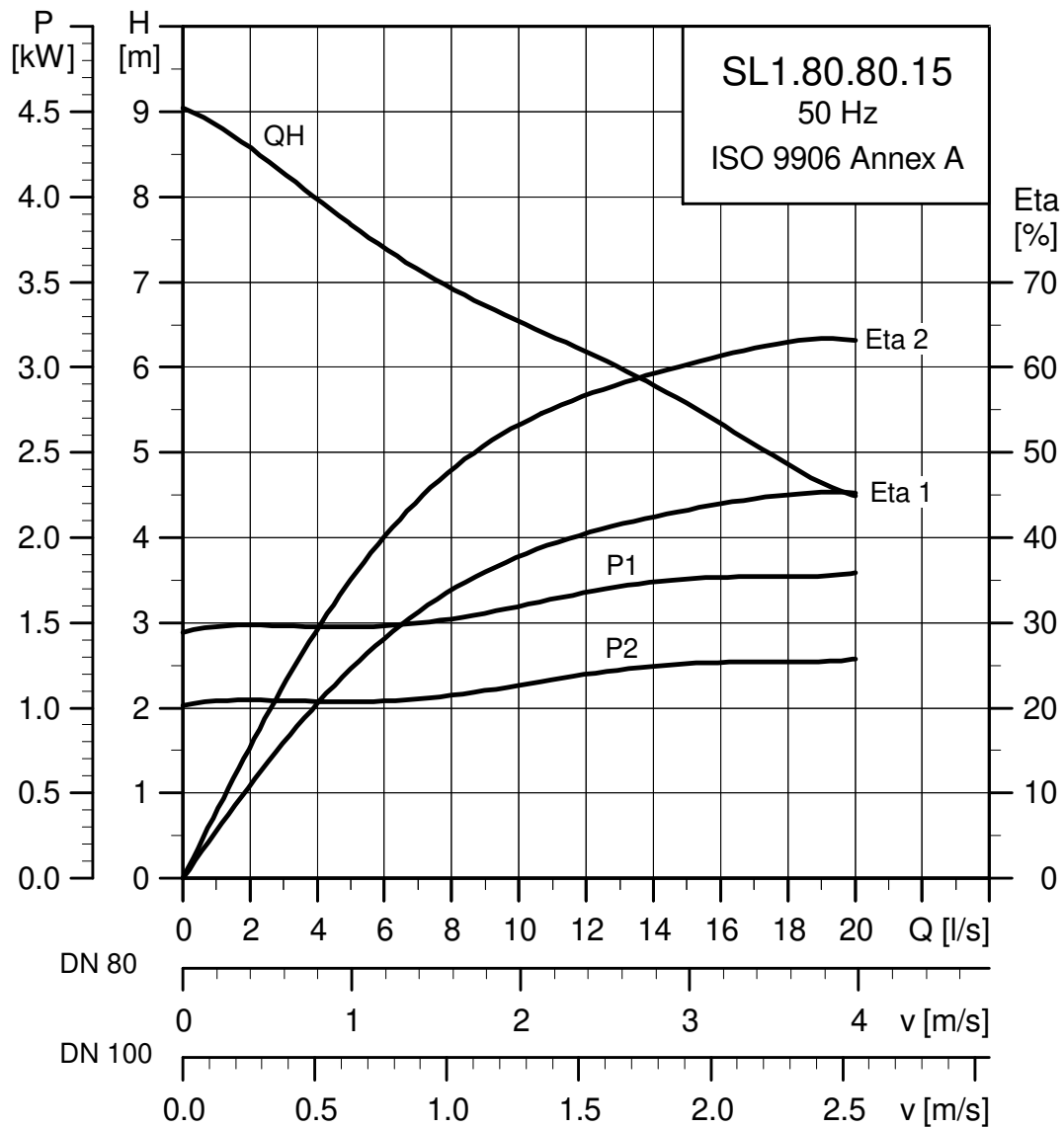
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 50                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SL1.80.80

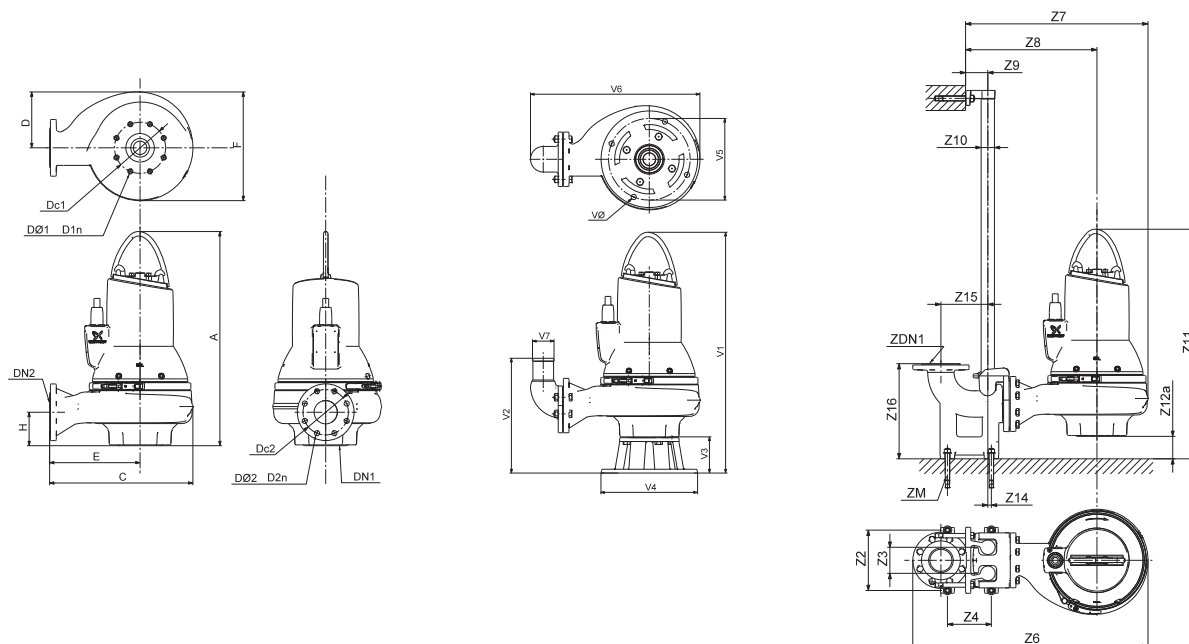
### Performance curves SL1.80.80.15



TM04 3518 4608

# Technical data

## Dimension sketches SL1.80.80.15



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 682 | 435 | 171 | 272 | 347 | 100 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 95          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 788 | 595 | 432 | 81  | 1½" | 790     | 108  | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 812 |     | 364 |     | 130 |     | 355 |     | 300     |      | 567 |         | 80          |     | 19  |         |

## Electrical data

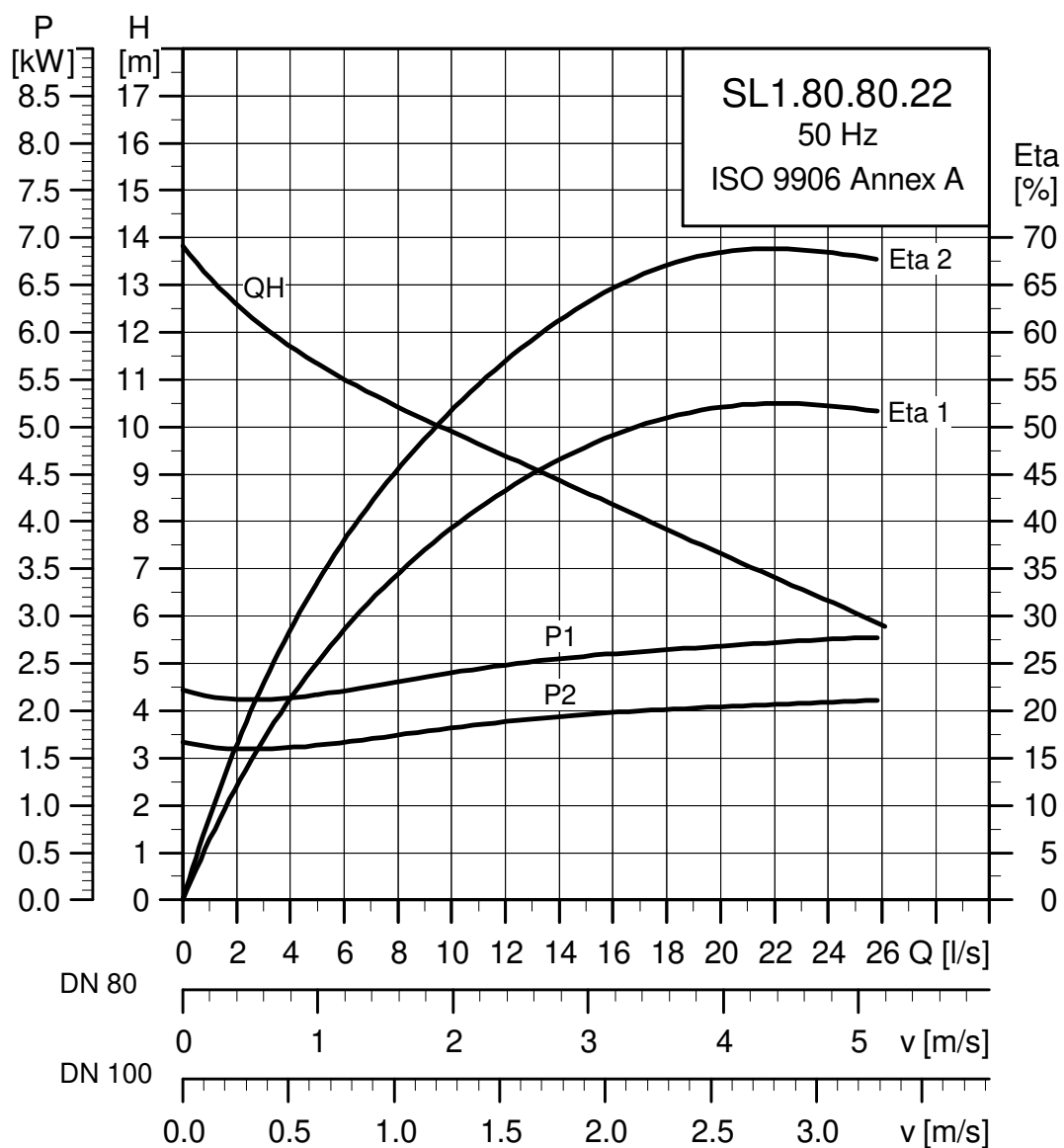
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.80.80.15.4.50E | 3x220-240V D | 2.1     | 1.5     | 4           | 1450 | DOL             | 6.8                | 45                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0492                                | 34                                     |
| SL1.80.80.15.4.50D | 3x380-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9                | 26                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0492                                | 34                                     |
| SL1.80.80.15.4.50B | 3x400-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9                | 26                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0492                                | 34                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

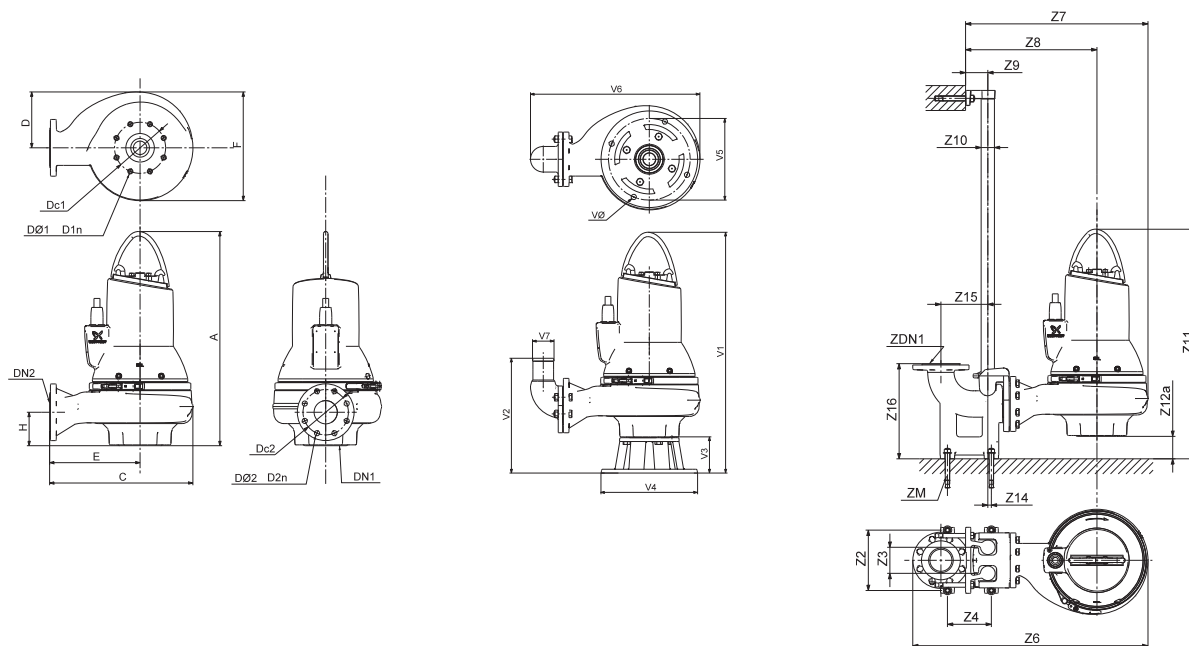
Performance curves SL1.80.80.22



TM04 3519 4608

# Technical data

## Dimension sketches SL1.80.80.22



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 682 | 435 | 171 | 272 | 347 | 100 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 107         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 788 | 595 | 432 | 81  | 1½" | 790     | 108  | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 812 |     |     | 364 |     | 130 |     | 355 |         | 300  |     | 567     |             | 80  |     | 19      |

## Electrical data

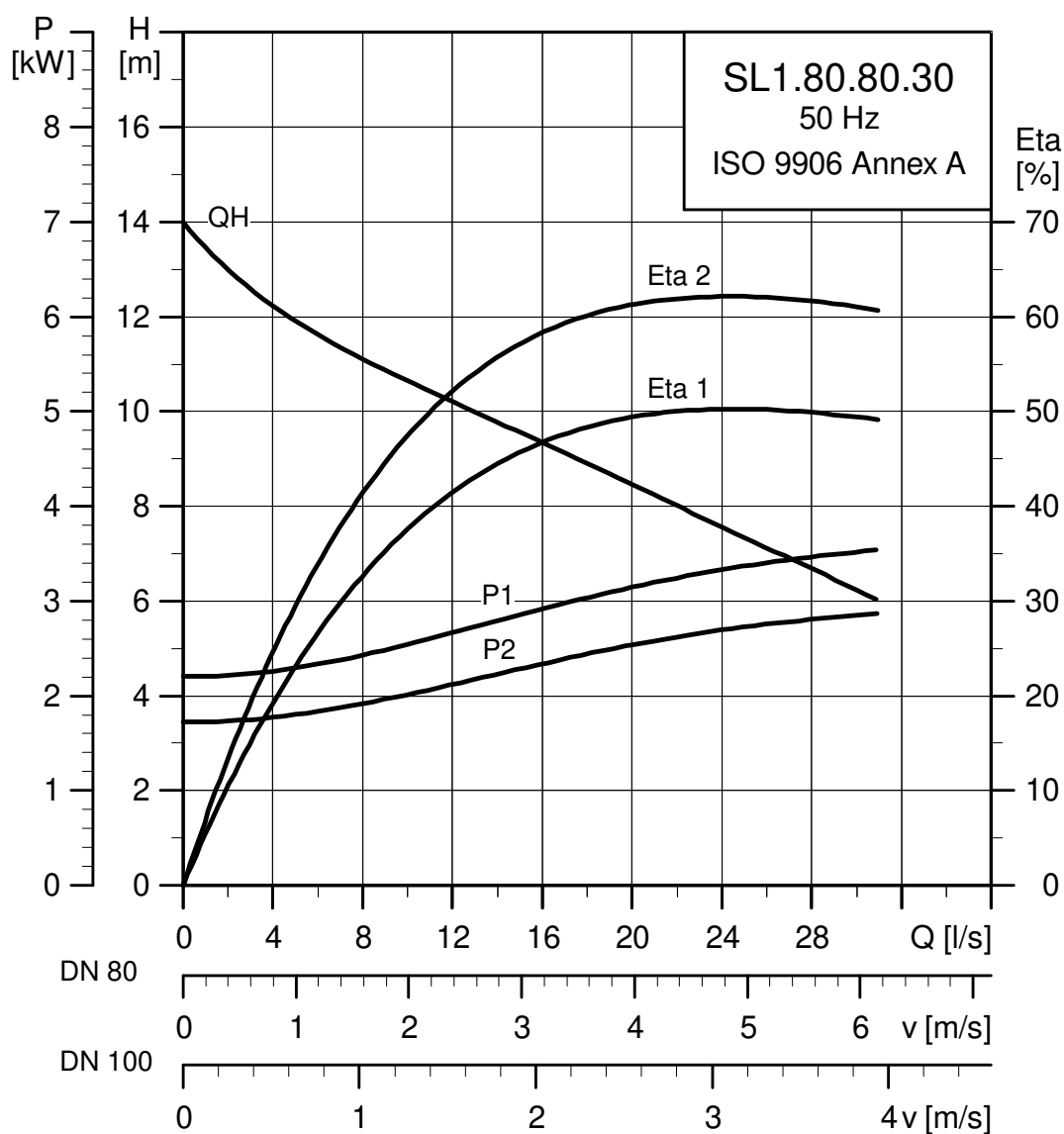
| Pump type          | Voltage [V]  | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub> |      | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        | Moment<br>of inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|--------------------|--------------|------------|------------|----------------|------|--------------------|----------------|------|--------------------|------|------------------------|------|------|-------|--------|---------------------------------------------|----------------------------------------------|
|                    |              |            |            |                |      |                    | [A]            | [A]  | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |                                             |                                              |
| SL1.80.80.22.4.50E | 3x220-240V D | 2.9        | 2.2        | 4              | 1460 | DOL                | 9.1            | 66   | 78.4               | 81.7 | 82.7                   | 0.58 | 0.70 | 0.77  | 0.0570 | 50                                          |                                              |
| SL1.80.80.22.4.51D | 3x380-415V D | 2.9        | 2.2        | 4              | 1460 | SD                 | 5.3            | 38.3 | 78.4               | 81.7 | 82.7                   | 0.58 | 0.70 | 0.77  | 0.0570 | 50                                          |                                              |
| SL1.80.80.22.4.50D | 3x380-415V Y | 2.9        | 2.2        | 4              | 1460 | DOL                | 5.3            | 38.3 | 78.4               | 81.7 | 82.7                   | 0.58 | 0.70 | 0.77  | 0.0570 | 50                                          |                                              |
| SL1.80.80.22.4.50B | 3x400-415V Y | 2.9        | 2.2        | 4              | 1460 | DOL                | 5.3            | 38.3 | 78.4               | 81.7 | 82.7                   | 0.58 | 0.70 | 0.77  | 0.0570 | 50                                          |                                              |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

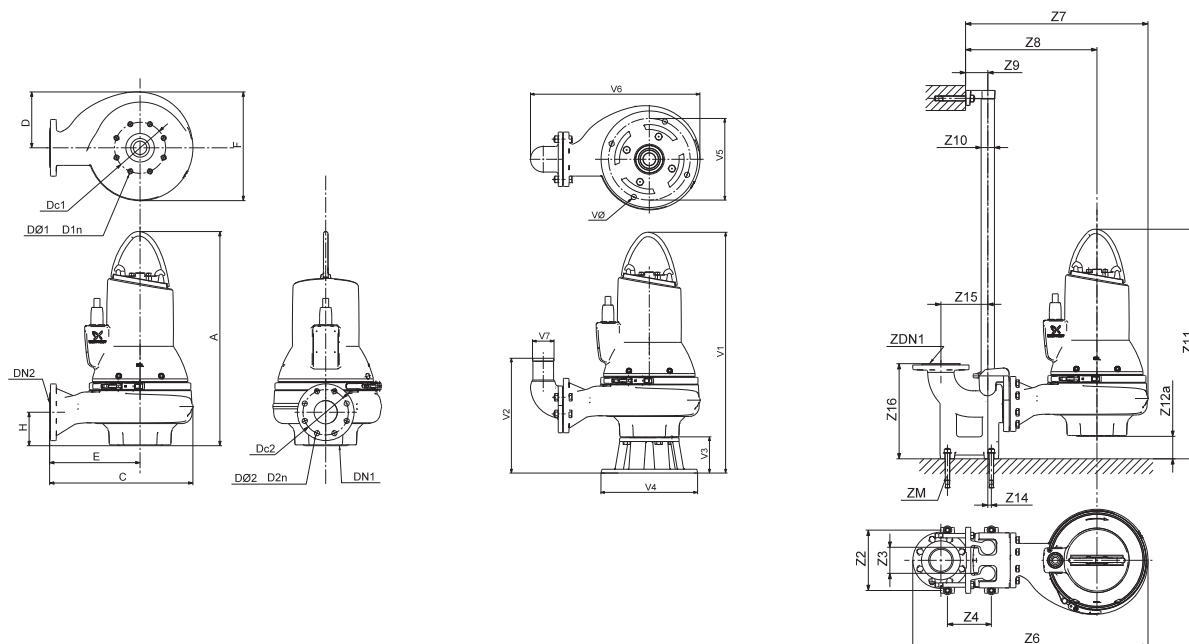
Performance curves SL1.80.80.30



TM04 3520 4608

# Technical data

## Dimension sketches SL1.80.80.30



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 137         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 858 | 666 | 480 | 81  | 1½" | 793     | 82   | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 841 |     | 390 |     | 130 |     | 355 |     | 300     |      | 623 |         | 80          |     | 19  |         |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm²] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|--------------------------|----------------------------------------|
| SL1.80.80.30.4.50E | 3x220-240V D | 3.7     | 3.0     | 4           | 1450 | DOL             | 12.5               | 87                     | 75.4 79.7 80.7         | 0.58 0.72 0.78 | 0.0966                   | 64                                     |
| SL1.80.80.30.4.51D | 3x380-415V D | 3.7     | 3.0     | 4           | 1450 | SD              | 7.2                | 50                     | 75.4 79.7 80.7         | 0.58 0.72 0.78 | 0.0966                   | 64                                     |
| SL1.80.80.30.4.50D | 3x380-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2                | 50                     | 75.4 79.7 80.7         | 0.58 0.72 0.78 | 0.0966                   | 64                                     |
| SL1.80.80.30.4.50B | 3x400-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2                | 50                     | 75.4 79.7 80.7         | 0.58 0.72 0.78 | 0.0966                   | 64                                     |

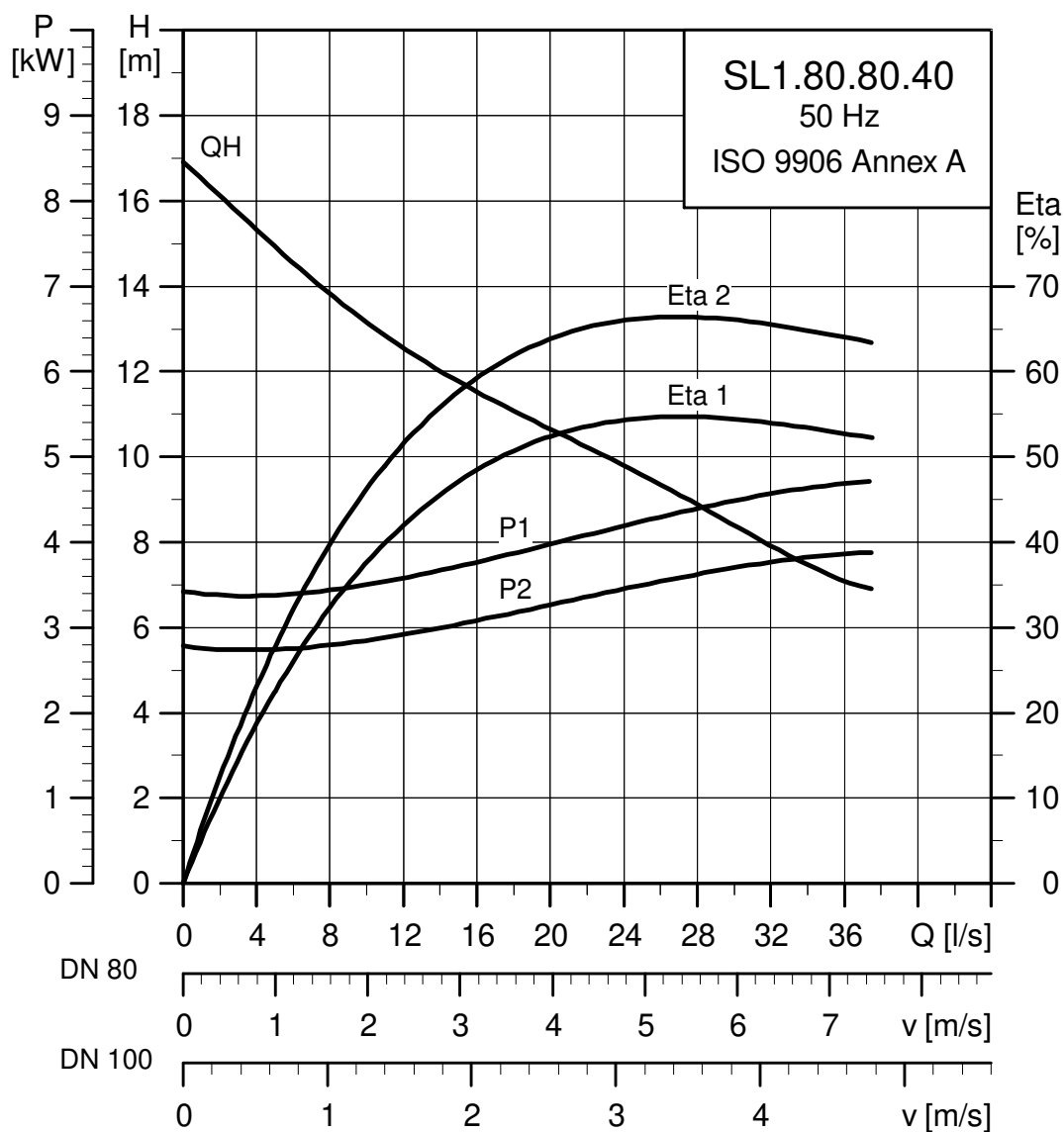
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

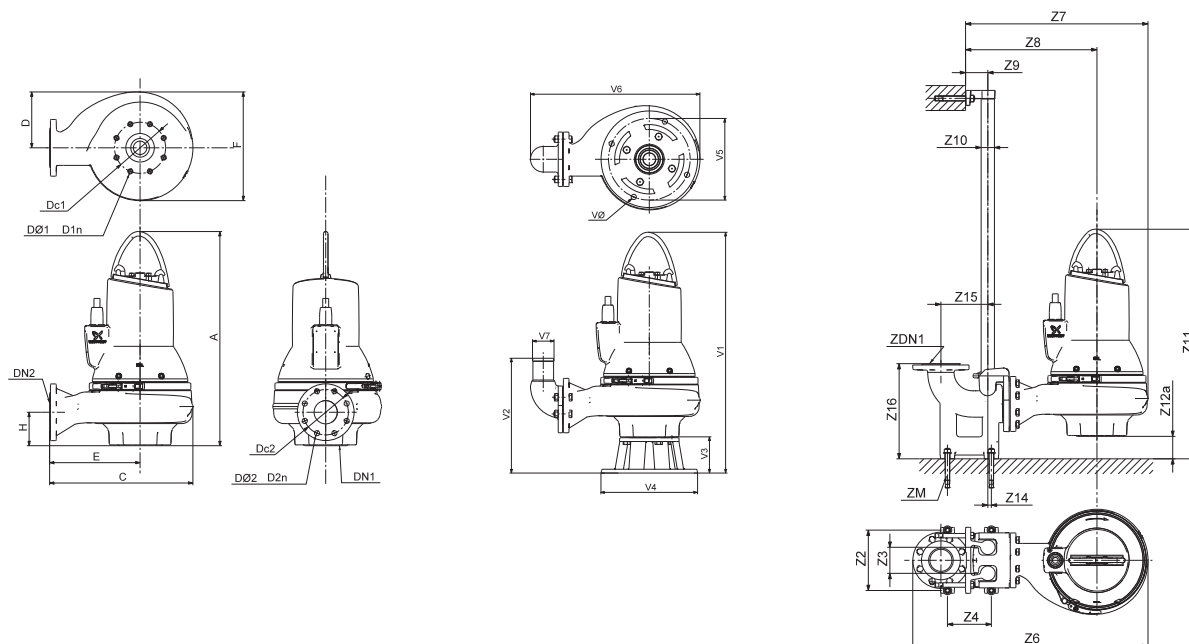
Performance curves SL1.80.80.40



TM04 3521 4608

# Technical data

## Dimension sketches SL1.80.80.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 748 | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 142         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 858 | 666 | 480 | 81  | 1½" | 830     | 82   | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 878 |     | 390 |     | 130 |     | 355 |     | 300     |      | 623 |         | 80          |     | 19  |         |

## Electrical data

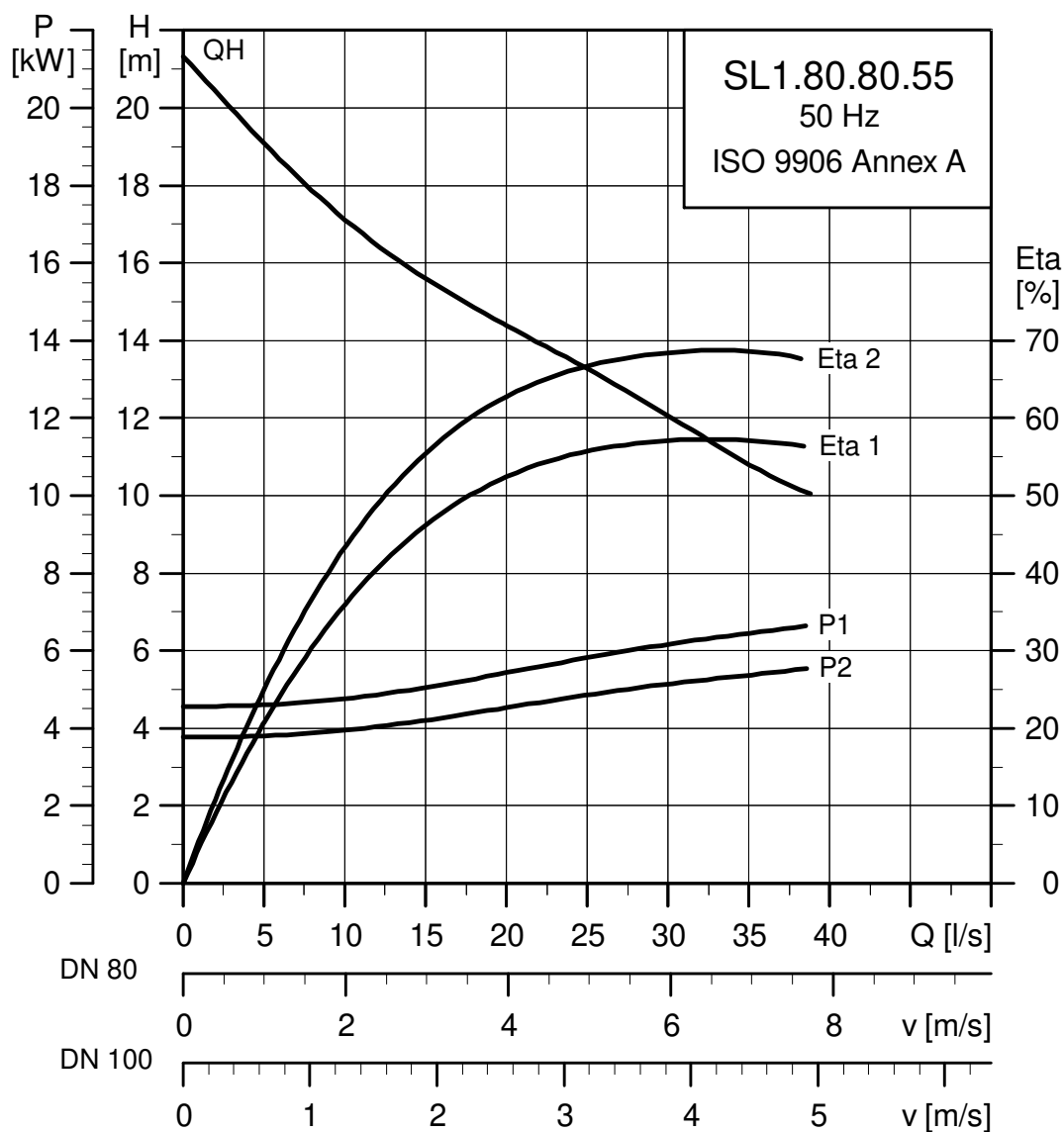
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
| SL1.80.80.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9               | 88                     | 78.6                   | 82.3 | 83.6 | 0.53  | 0.66 | 0.75 | 0.1141                                | 90                                     |
| SL1.80.80.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7                | 51                     | 78.6                   | 82.3 | 83.6 | 0.53  | 0.66 | 0.75 | 0.1141                                | 90                                     |
| SL1.80.80.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7                | 51                     | 78.6                   | 82.3 | 83.6 | 0.53  | 0.66 | 0.75 | 0.1141                                | 90                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

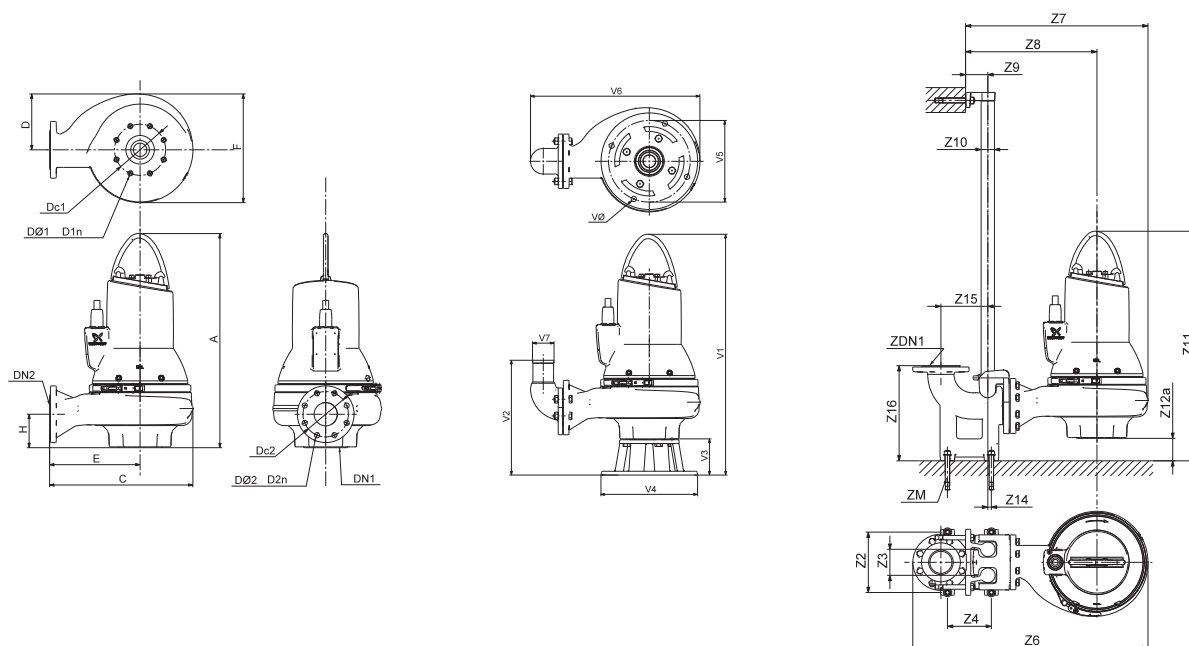
Performance curves SL1.80.80.55



7TM04 3522 4608

# Technical data

## Dimension sketches SL1.80.80.55



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 755 | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 149         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 858 | 666 | 480 | 81  | 1½" | 837     | 82   | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 885 |     |     | 390 |     | 130 |     | 355 |         | 300  |     | 623     |             | 80  |     | 19      |

## Electrical data

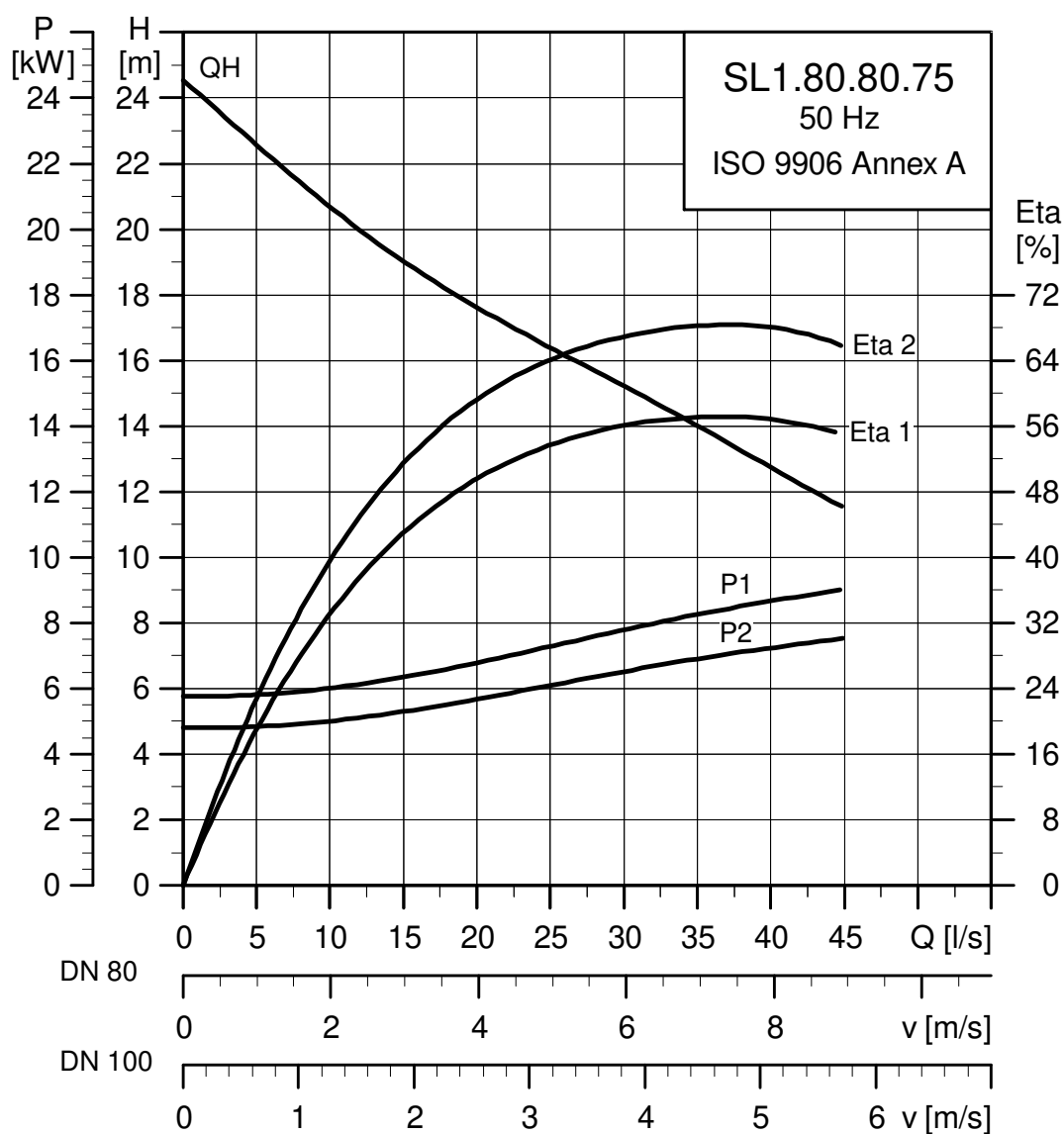
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      | Cos φ  |     | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|------|--------|-----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A] | [A]                | [A]  | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4    | 1/1 |                                       |                                        |
| SL1.80.80.55.4.51E | 3x220-240V D | 6.4     | 5.5     | 4           | 1460 | SD              | 20.4           | 140 | 82.0               | 84.8 | 85.6                   | 0.67 | 0.77 | 0.82 | 0.1295 | 110 |                                       |                                        |
| SL1.80.80.55.4.51D | 3x380-415V D | 6.4     | 5.5     | 4           | 1460 | SD              | 11.8           | 81  | 82.0               | 84.8 | 85.6                   | 0.67 | 0.77 | 0.82 | 0.1295 | 110 |                                       |                                        |
| SL1.80.80.55.4.50B | 3x400-415V D | 6.4     | 5.5     | 4           | 1460 | DOL             | 11.8           | 81  | 82.0               | 84.8 | 85.6                   | 0.67 | 0.77 | 0.82 | 0.1295 | 110 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

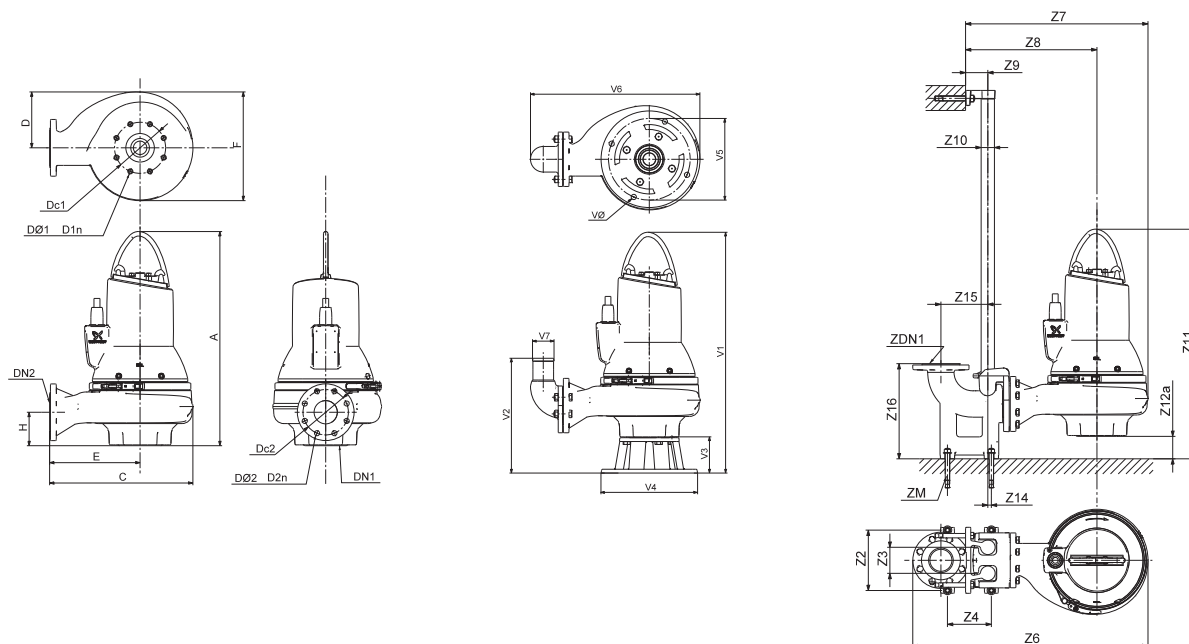
Performance curves SL1.80.80.75



TM04 3523 4608

# Technical data

## Dimension sketches SL1.80.80.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 818 | 530 | 217 | 328 | 423 | 118 | 100 | 180 | 8x18    | 80   | 160 | 8x18    | 193         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 883 | 690 | 489 | 81  | 1½" | 900     | 82   | 13  | 171     | 345         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 948 |     |     | 390 |     | 130 |     | 355 |         | 300  |     | 648     |             | 80  |     | 19      |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      | Cos φ  |     | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|------|--------|-----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1  |        |     |                                       |                                        |
| SL1.80.80.75.4.51E | 3x220-240V D | 8.6     | 7.5     | 4           | 1460 | SD              | 26.3           | 189 | 85.7               | 87.2 | 87.0                   | 0.72 | 0.81 | 0.86 | 0.1618 | 141 |                                       |                                        |
| SL1.80.80.75.4.51D | 3x380-415V D | 8.6     | 7.5     | 4           | 1460 | SD              | 15.2           | 109 | 85.7               | 87.2 | 87.0                   | 0.72 | 0.81 | 0.86 | 0.1618 | 141 |                                       |                                        |
| SL1.80.80.75.4.50B | 3x400-415V D | 8.6     | 7.5     | 4           | 1460 | DOL             | 15.2           | 109 | 85.7               | 87.2 | 87.0                   | 0.72 | 0.81 | 0.86 | 0.1618 | 141 |                                       |                                        |

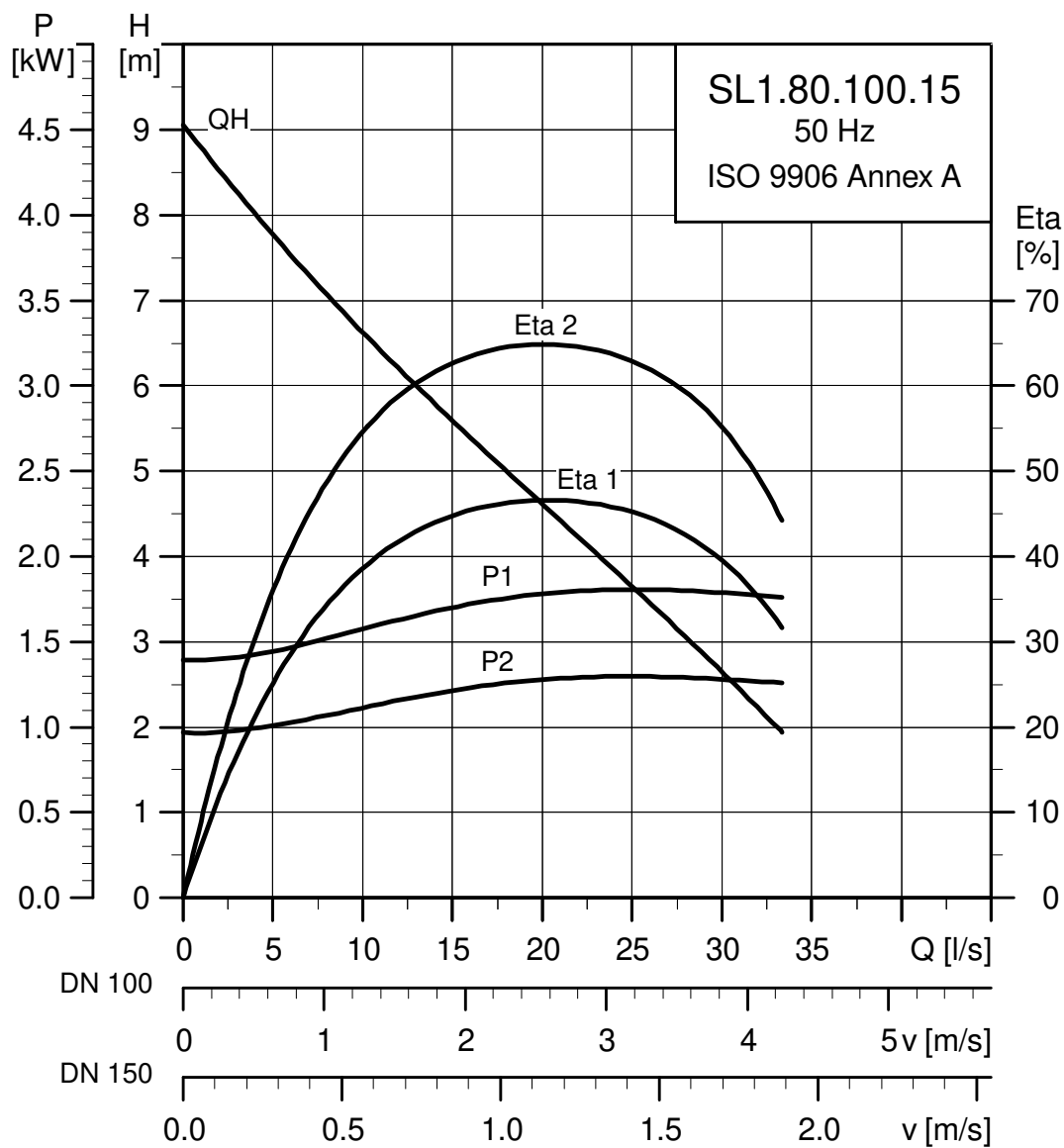
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SL1.80.100

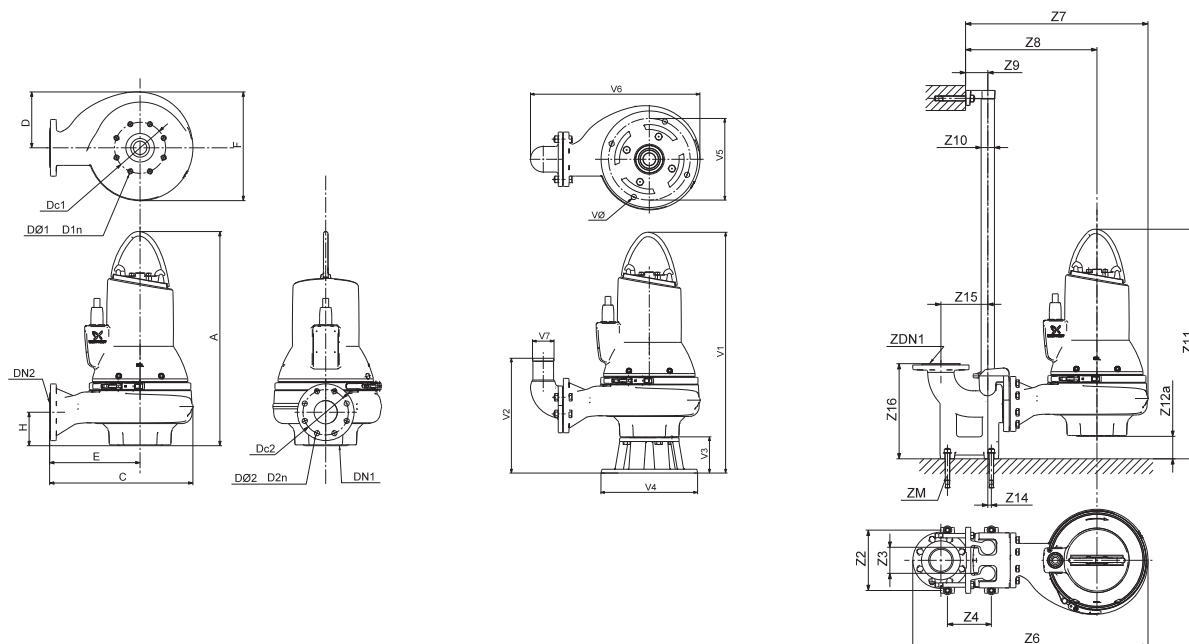
### Performance curves SL1.80.100.15



TM04 3460 4608

# Technical data

## Dimension sketches SL1.80.100.15



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 682 | 435 | 171 | 272 | 347 | 112 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 96          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 878 | 652 | 489 | 110 | 2"  | 830     | 148  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 812 |     |     | 369 |     | 130 |     | 355 |         | 300  |     | 591     |             | 100 |     | 19      |

## Electrical data

| Pump type           | Voltage [V]  | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub> |     | I <sub>start</sub> |      |      | η <sub>motor</sub> [%] |      |      | Cos φ  |    |  | Moment<br>of inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|---------------------|--------------|------------|------------|----------------|------|--------------------|----------------|-----|--------------------|------|------|------------------------|------|------|--------|----|--|---------------------------------------------|----------------------------------------------|
|                     |              |            |            |                |      |                    | [A]            | [A] | 1/2                | 3/4  | 1/1  | 1/2                    | 3/4  | 1/1  |        |    |  |                                             |                                              |
| SL1.80.100.15.4.50E | 3x220-240V D | 2.1        | 1.5        | 4              | 1450 | DOL                | 6.8            | 45  | 70.6               | 75.4 | 77.1 | 0.57                   | 0.68 | 0.76 | 0.0492 | 34 |  |                                             |                                              |
| SL1.80.100.15.4.50D | 3x380-415V Y | 2.1        | 1.5        | 4              | 1450 | DOL                | 3.9            | 26  | 70.6               | 75.4 | 77.1 | 0.57                   | 0.68 | 0.76 | 0.0492 | 34 |  |                                             |                                              |
| SL1.80.100.15.4.50B | 3x400-415V Y | 2.1        | 1.5        | 4              | 1450 | DOL                | 3.9            | 26  | 70.6               | 75.4 | 77.1 | 0.57                   | 0.68 | 0.76 | 0.0492 | 34 |  |                                             |                                              |

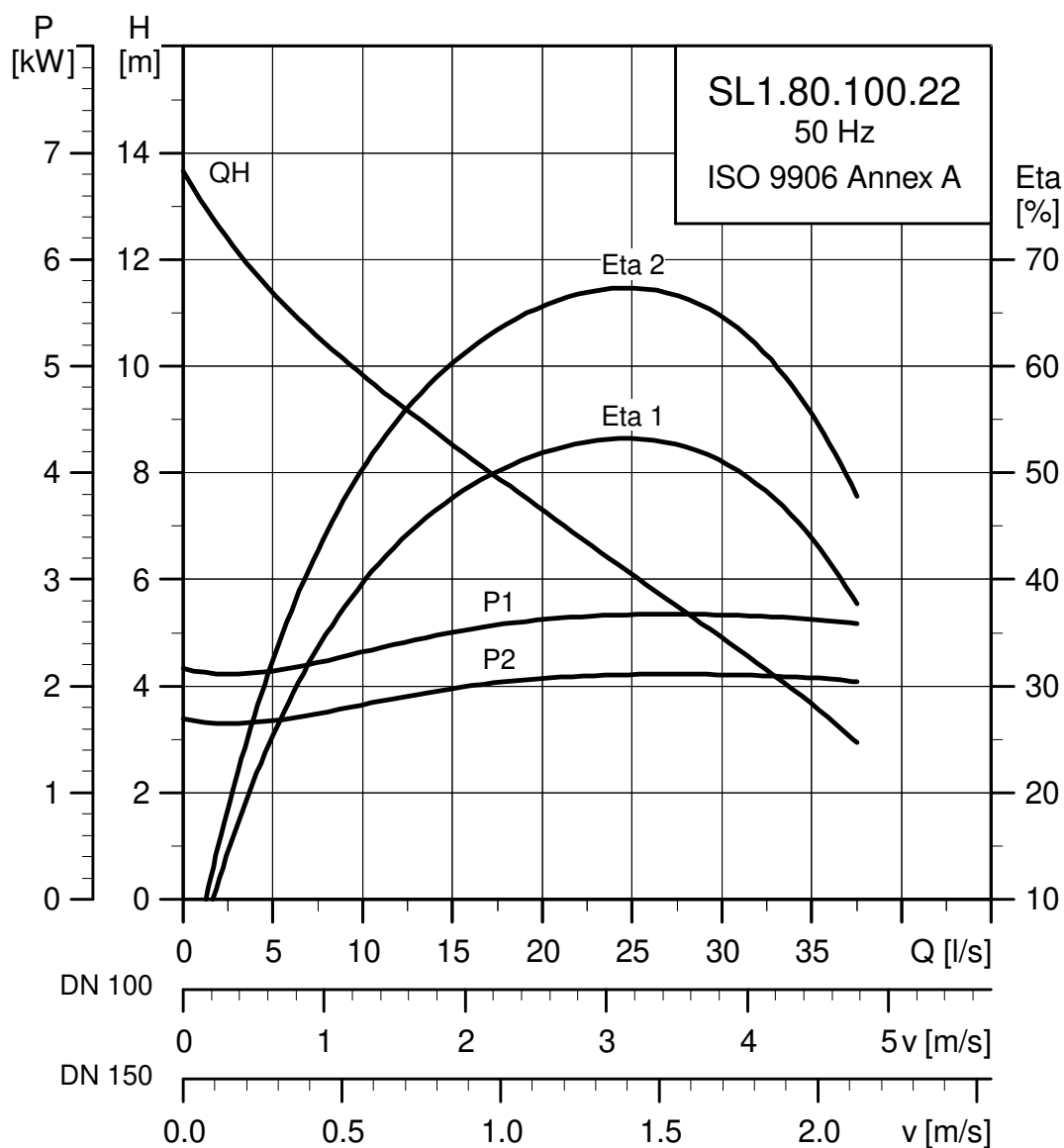
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

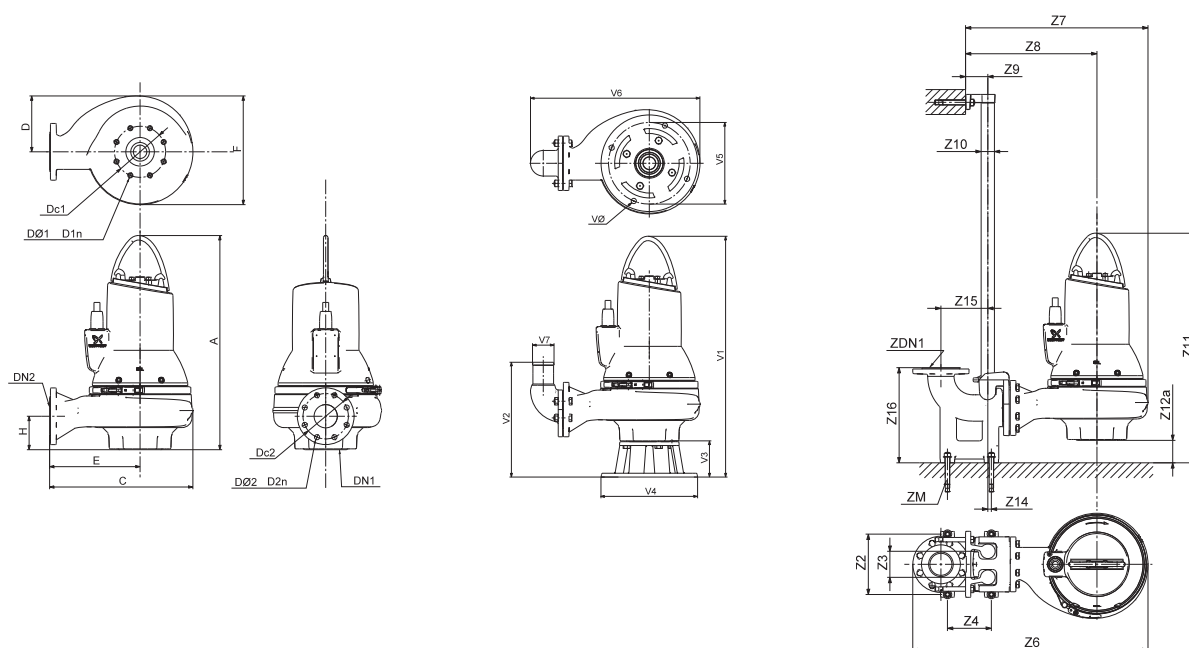
Performance curves SL1.80.100.22



TM04 3461 4608

# Technical data

## Dimension sketches SL1.80.100.22



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 682 | 435 | 171 | 272 | 347 | 112 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 108         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 878 | 652 | 489 | 110 | 2"  | 830     | 148  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 812 |     |     | 369 |     | 130 |     | 355 |         | 300  |     | 591     |             | 100 |     | 19      |

## Electrical data

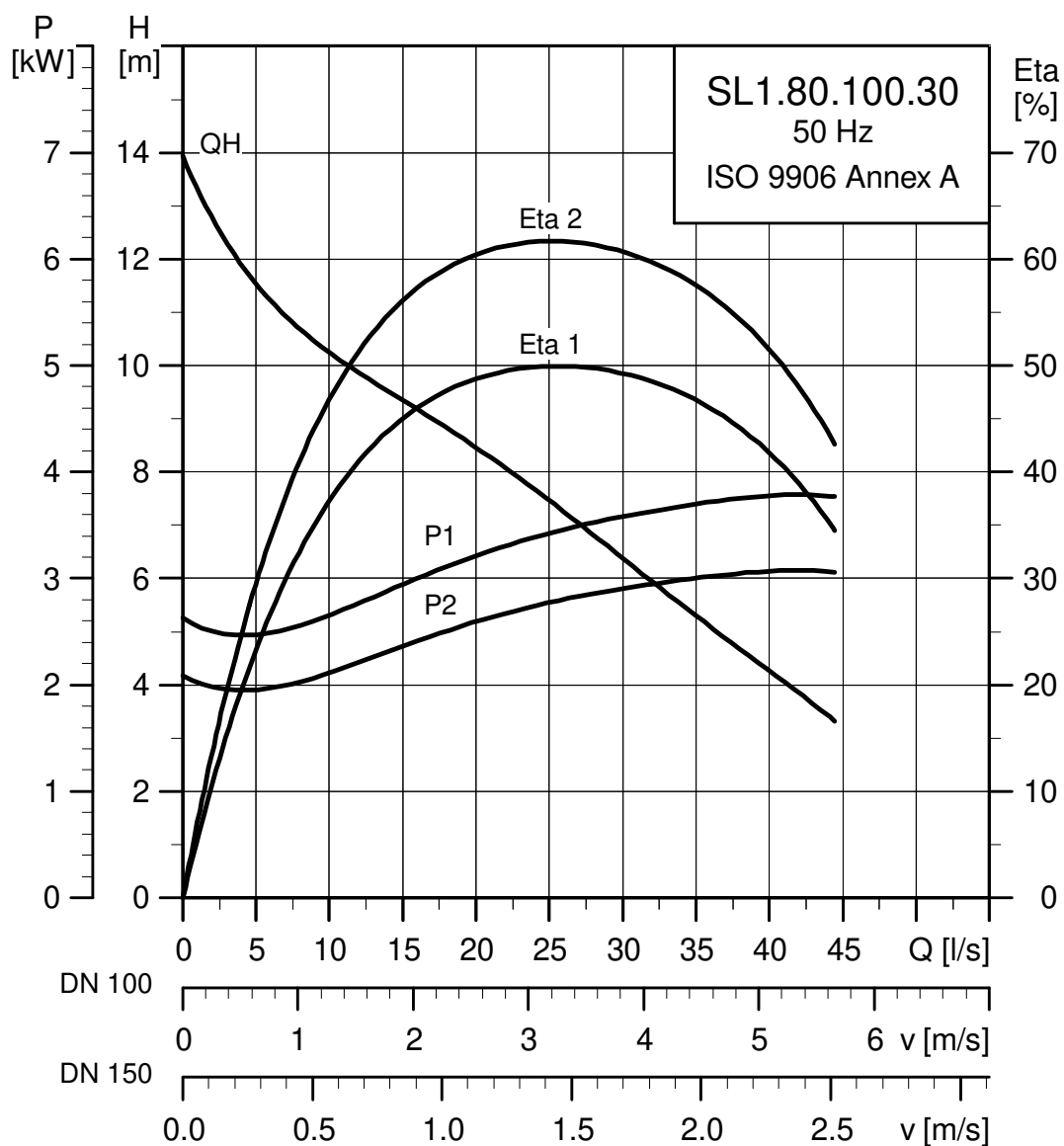
| Pump type           | Voltage [V]  | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub> |      | I <sub>start</sub> |      |      | η <sub>motor</sub> [%] |      |      | Cos φ  |    |  | Moment<br>of inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|---------------------|--------------|------------|------------|----------------|------|--------------------|----------------|------|--------------------|------|------|------------------------|------|------|--------|----|--|---------------------------------------------|----------------------------------------------|
|                     |              |            |            |                |      |                    | [A]            | [A]  | 1/2                | 3/4  | 1/1  | 1/2                    | 3/4  | 1/1  |        |    |  |                                             |                                              |
| SL1.80.100.22.4.50E | 3x220-240V D | 2.9        | 2.2        | 4              | 1460 | DOL                | 9.1            | 66   | 78.4               | 81.7 | 82.7 | 0.58                   | 0.70 | 0.77 | 0.0570 | 50 |  |                                             |                                              |
| SL1.80.100.22.4.51D | 3x380-415V D | 2.9        | 2.2        | 4              | 1460 | SD                 | 5.3            | 38.3 | 78.4               | 81.7 | 82.7 | 0.58                   | 0.70 | 0.77 | 0.0570 | 50 |  |                                             |                                              |
| SL1.80.100.22.4.50D | 3x380-415V Y | 2.9        | 2.2        | 4              | 1460 | DOL                | 5.3            | 38.3 | 78.4               | 81.7 | 82.7 | 0.58                   | 0.70 | 0.77 | 0.0570 | 50 |  |                                             |                                              |
| SL1.80.100.22.4.50B | 3x400-415V Y | 2.9        | 2.2        | 4              | 1460 | DOL                | 5.3            | 38.3 | 78.4               | 81.7 | 82.7 | 0.58                   | 0.70 | 0.77 | 0.0570 | 50 |  |                                             |                                              |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

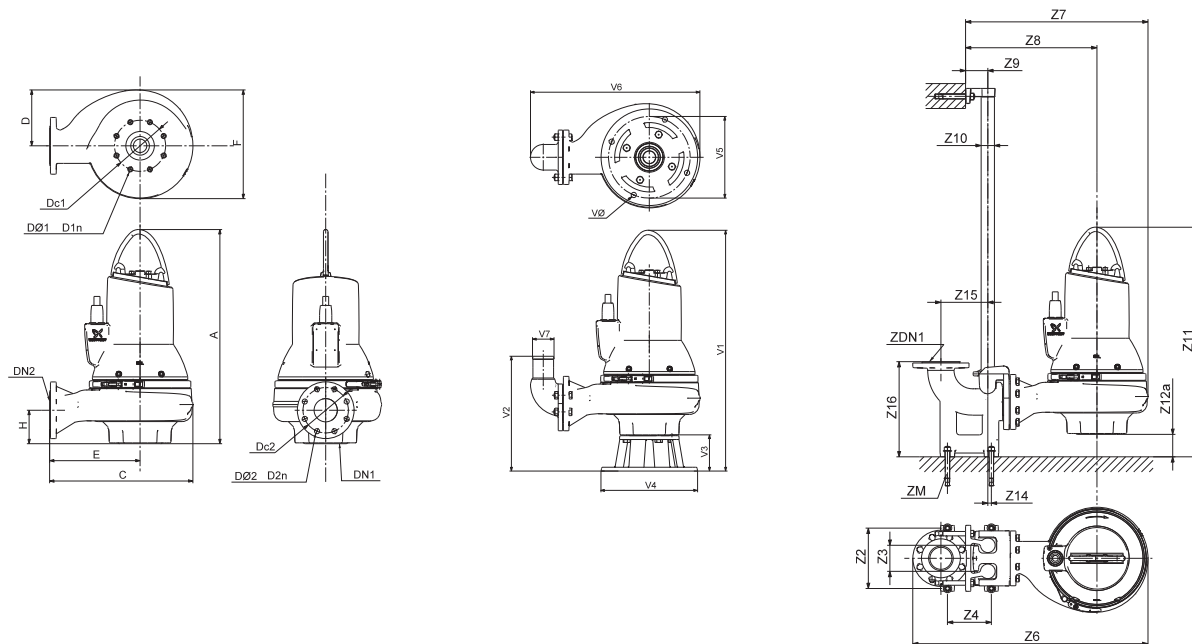
Performance curves SL1.80.100.30



TM04 3462 4608

# Technical data

## Dimension sketches SL1.80.100.30



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 726 | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 139         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 948 | 722 | 536 | 110 | 2"  | 830     | 122  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 856 |     |     | 395 |     | 130 |     | 355 |         | 300  |     | 647     |             | 100 |     | 19      |

## Electrical data

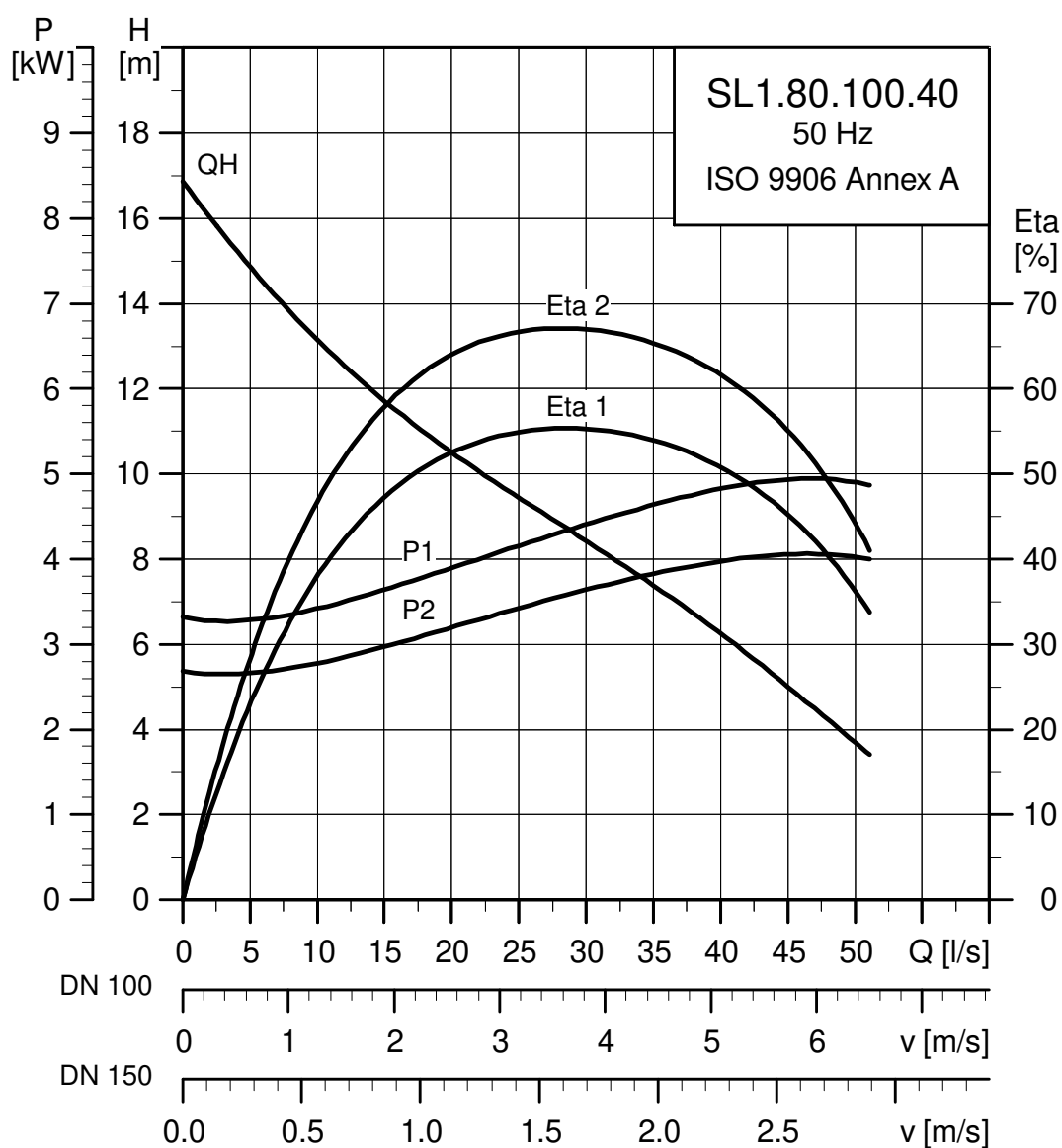
| Pump type           | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | $I_N$ |     | $I_{start}$ |      | $\eta_{motor}$ [%] |      |      | $\cos \varphi$ |        |     | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque $M_{max}$ [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|-------|-----|-------------|------|--------------------|------|------|----------------|--------|-----|---------------------------------------|---------------------------------|
|                     |              |         |         |             |      |                 | [A]   | [A] | [A]         | [A]  | 1/2                | 3/4  | 1/1  | 1/2            | 3/4    | 1/1 |                                       |                                 |
| SL1.80.100.30.4.50E | 3x220-240V D | 3.7     | 3.0     | 4           | 1450 | DOL             | 12.5  | 87  | 75.4        | 79.7 | 80.7               | 0.58 | 0.72 | 0.78           | 0.0966 | 64  |                                       |                                 |
| SL1.80.100.30.4.51D | 3x380-415V D | 3.7     | 3.0     | 4           | 1450 | SD              | 7.2   | 50  | 75.4        | 79.7 | 80.7               | 0.58 | 0.72 | 0.78           | 0.0966 | 64  |                                       |                                 |
| SL1.80.100.30.4.50D | 3x380-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2   | 50  | 75.4        | 79.7 | 80.7               | 0.58 | 0.72 | 0.78           | 0.0966 | 64  |                                       |                                 |
| SL1.80.100.30.4.50B | 3x400-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2   | 50  | 75.4        | 79.7 | 80.7               | 0.58 | 0.72 | 0.78           | 0.0966 | 64  |                                       |                                 |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

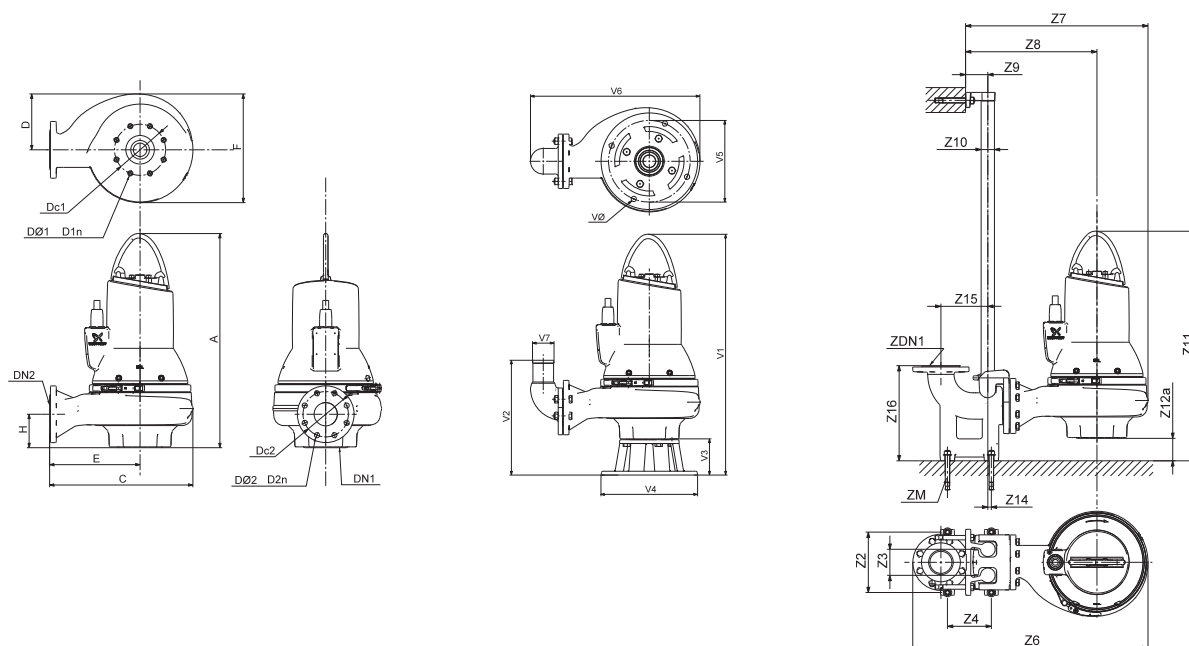
Performance curves SL1.80.100.40



TM04 3457 4608

# Technical data

## Dimension sketches SL1.80.100.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 748 | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 139         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 948 | 722 | 536 | 110 | 2"  | 870     | 122  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 878 | 395 | 130 | 355 | 300 | 647 | 100 | 19  |         |      |     |         |             |     |     |         |

## Electrical data

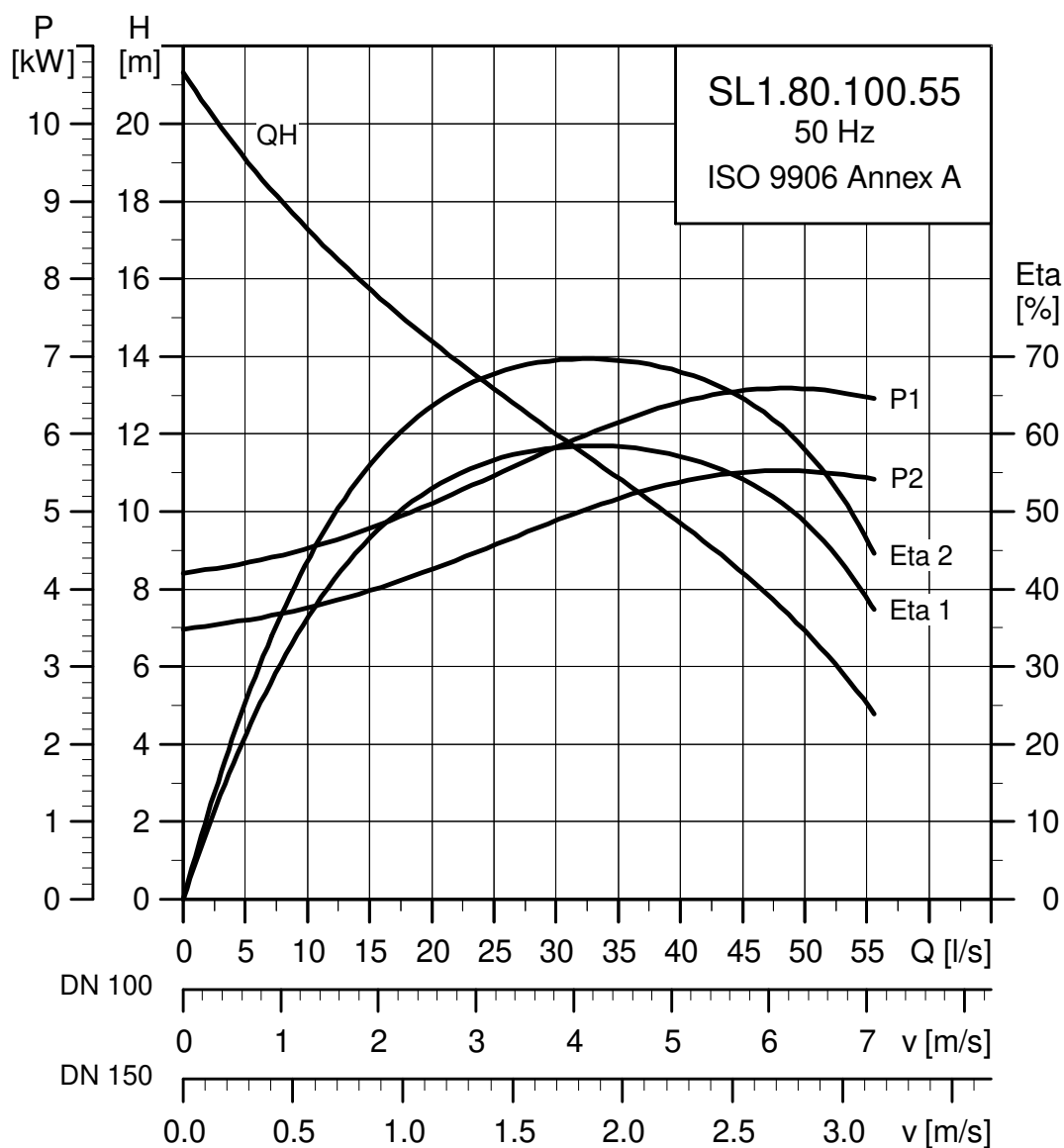
| Pump type           | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SL1.80.100.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9           | 88  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1141 | 90 |                                       |                                        |
| SL1.80.100.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7            | 51  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1141 | 90 |                                       |                                        |
| SL1.80.100.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7            | 51  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1141 | 90 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

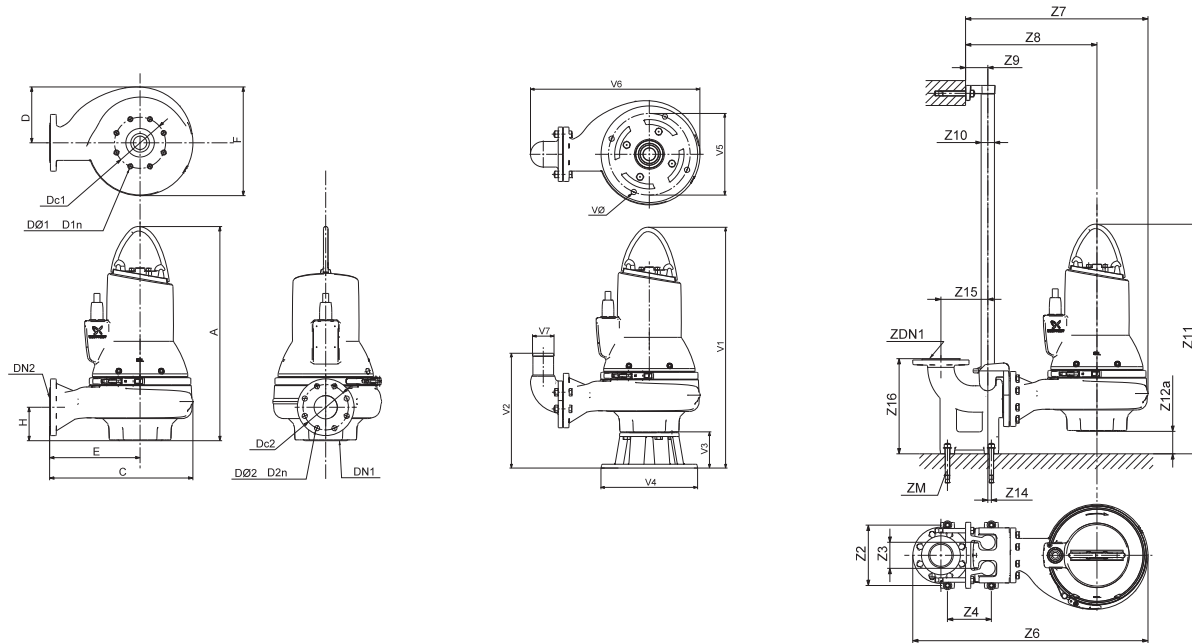
Performance curves SL1.80.100.55



TM04 3458 4608

# Technical data

## Dimension sketches SL1.80.100.55



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A    | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|------|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 755  | 505 | 200 | 319 | 397 | 118 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 150         |     |     |         |
| Z2   | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260  | 110 | 270 | 948 | 722 | 536 | 110 | 2"  | 870     | 122  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1   |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 8858 |     |     | 395 |     | 130 |     | 355 |         | 300  |     | 647     |             | 100 |     | 19      |

## Electrical data

| Pump type           | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2   | 3/4  | 1/1  |                                       |                                        |
| SL1.80.100.55.4.51E | 3x220-240V D | 6.4     | 5.5     | 4           | 1460 | SD              | 20.4           | 140                | 82.0                   | 84.8 | 85.6 | 0.67  | 0.77 | 0.82 | 0.1295                                | 110                                    |
| SL1.80.100.55.4.51D | 3x380-415V D | 6.4     | 5.5     | 4           | 1460 | SD              | 11.8           | 81                 | 82.0                   | 84.8 | 85.6 | 0.67  | 0.77 | 0.82 | 0.1295                                | 110                                    |
| SL1.80.100.55.4.50B | 3x400-415V D | 6.4     | 5.5     | 4           | 1460 | DOL             | 11.8           | 81                 | 82.0                   | 84.8 | 85.6 | 0.67  | 0.77 | 0.82 | 0.1295                                | 110                                    |

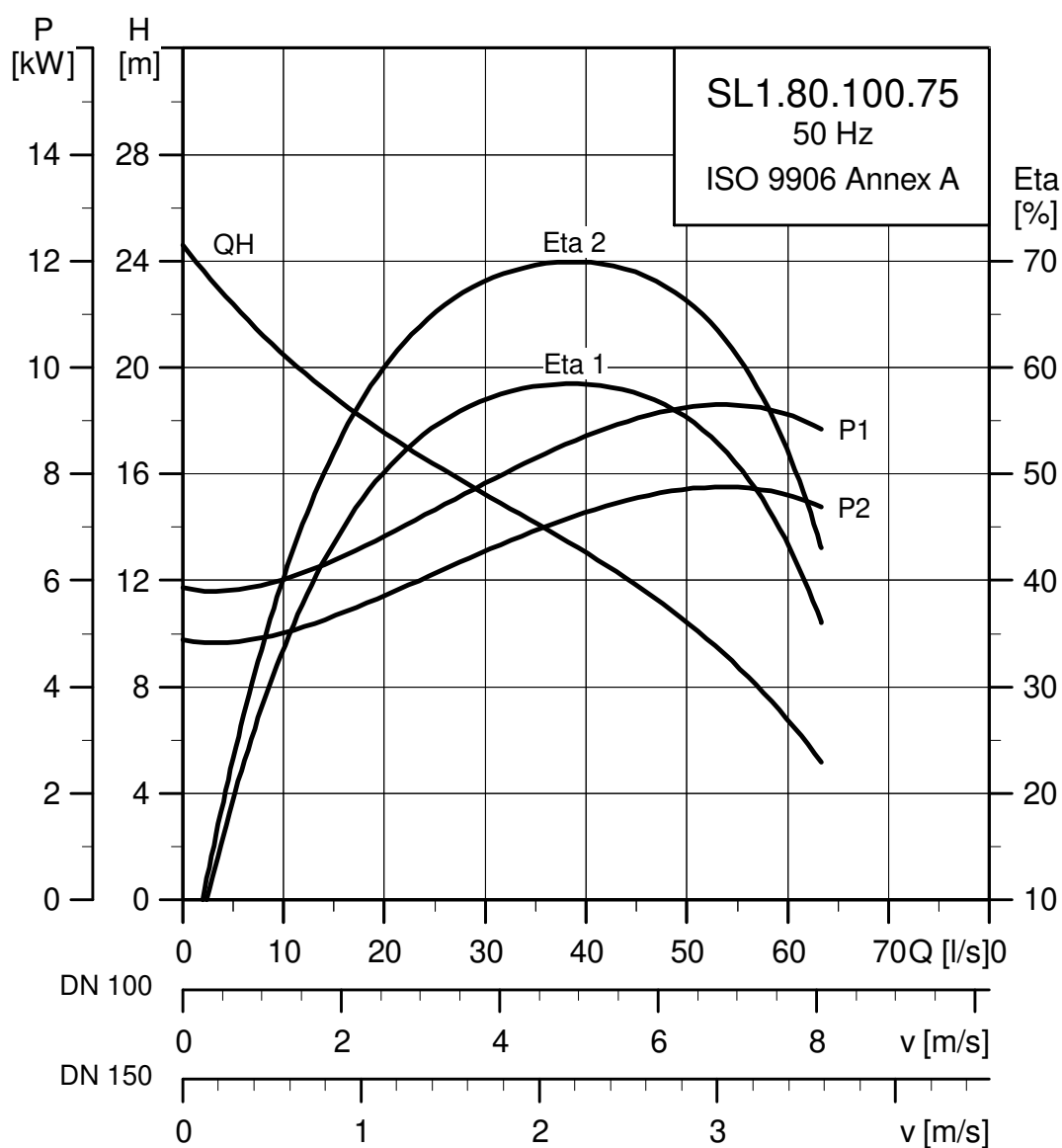
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

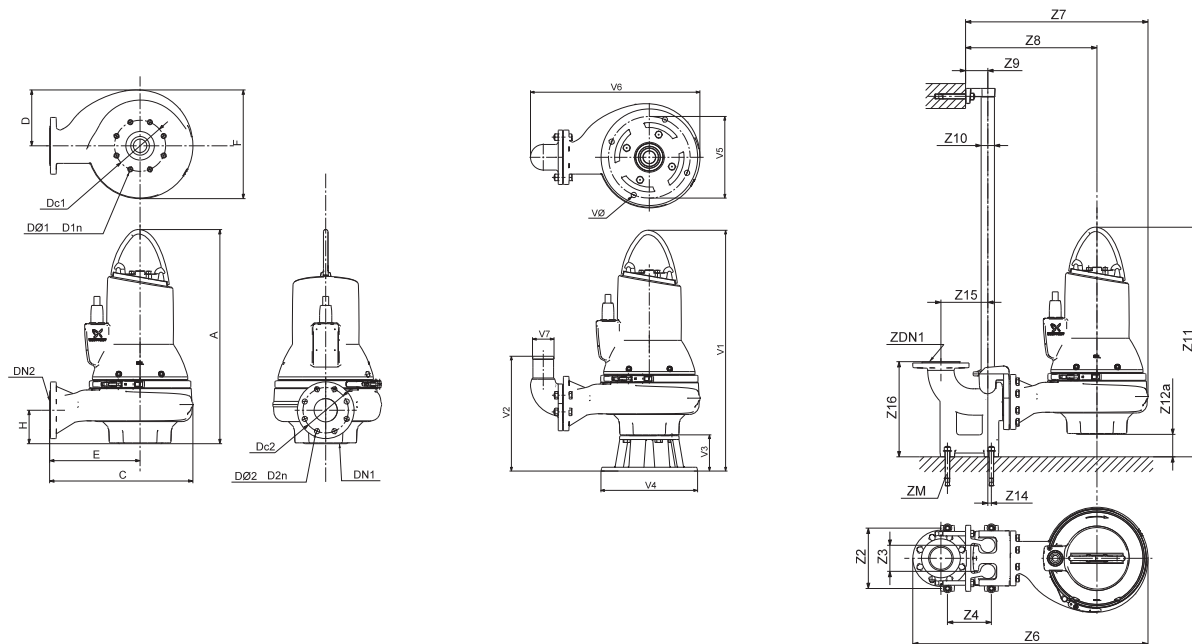
Performance curves SL1.80.100.75



TMD4 3458 4608

# Technical data

## Dimension sketches SL1.80.100.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 818 | 530 | 217 | 328 | 423 | 118 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 194         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 972 | 747 | 545 | 110 | 2"  | 940     | 122  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 948 |     |     | 395 |     | 130 |     | 355 |         | 300  |     | 672     |             | 100 |     | 19      |

## Electrical data

| Pump type           | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2   | 3/4  | 1/1  |                                       |                                        |
| SL1.80.100.75.4.51E | 3x220-240V D | 8.6     | 7.5     | 4           | 1460 | SD              | 26.3           | 189                | 85.7                   | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.1618                                | 141                                    |
| SL1.80.100.75.4.51D | 3x380-415V D | 8.6     | 7.5     | 4           | 1460 | SD              | 15.2           | 109                | 85.7                   | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.1618                                | 141                                    |
| SL1.80.100.75.4.50B | 3x400-415V D | 8.6     | 7.5     | 4           | 1460 | DOL             | 15.2           | 109                | 85.7                   | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.1618                                | 141                                    |

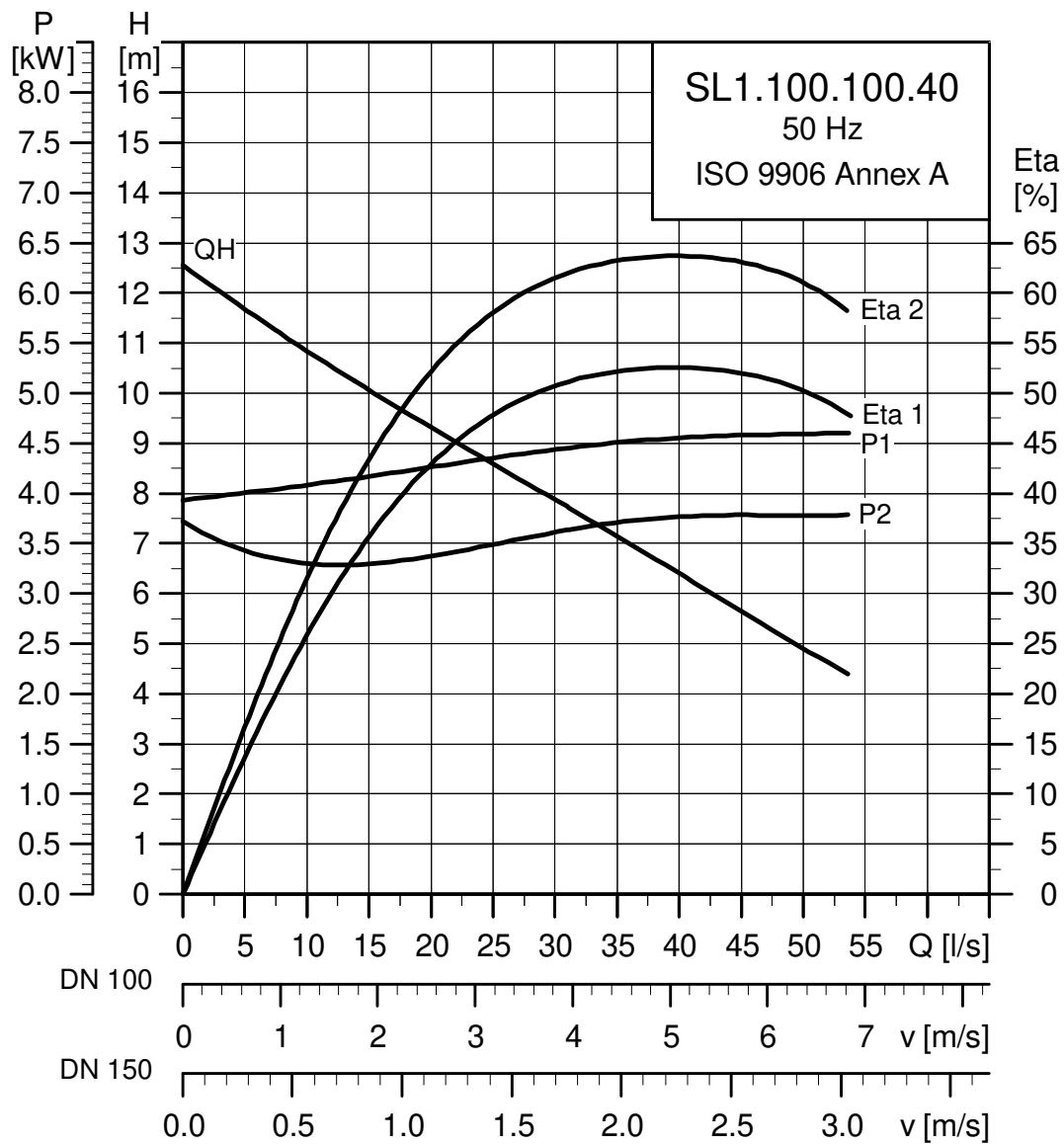
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SL1.100.100

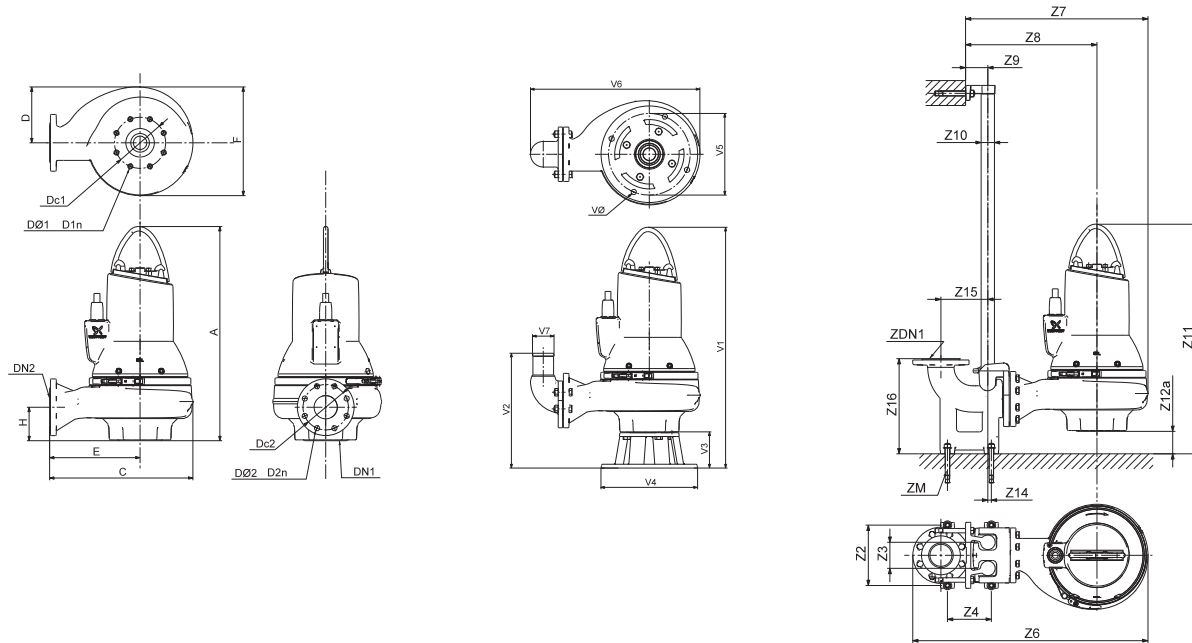
### Performance curves SL1.100.100.40



TM04 3524 4608

# Technical data

## Dimension sketches SL1.100.100.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 755 | 541 | 200 | 320 | 438 | 115 | 150 | 240 | 8x22    | 100  | 180 | 8x18    | 155         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 983 | 758 | 537 | 110 | 2"  | 879     | 125  | 0   | 220     | 413         | 240 | 150 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 941 | 445 | 186 | 450 | 400 | 711 | 100 | 22  |         |      |     |         |             |     |     |         |

## Electrical data

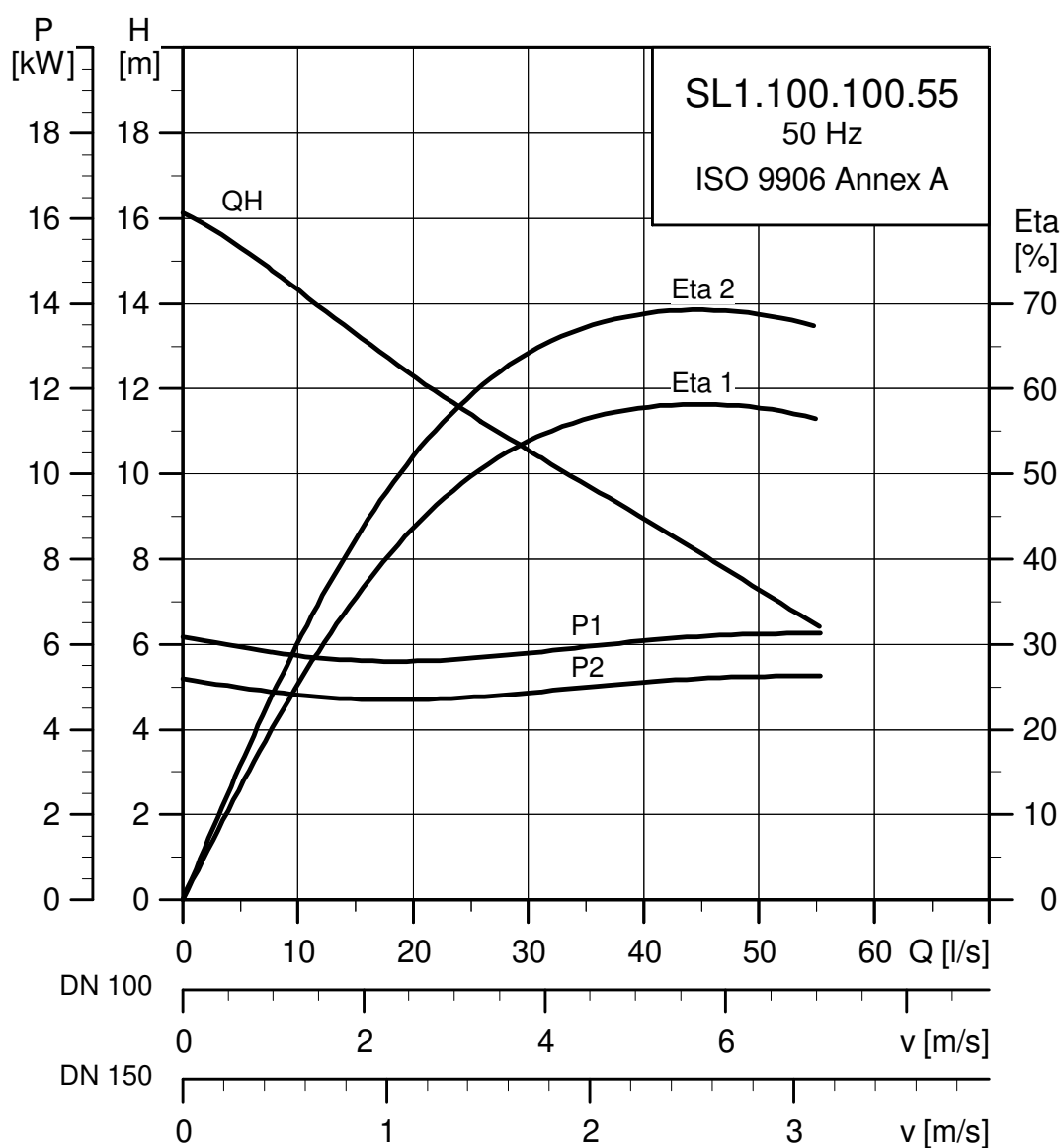
| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SL1.100.100.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9           | 88  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1222 | 90 |                                       |                                        |
| SL1.100.100.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7            | 51  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1222 | 90 |                                       |                                        |
| SL1.100.100.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7            | 51  | 78.6               | 82.3 | 83.6                   | 0.53 | 0.66 | 0.75  | 0.1222 | 90 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

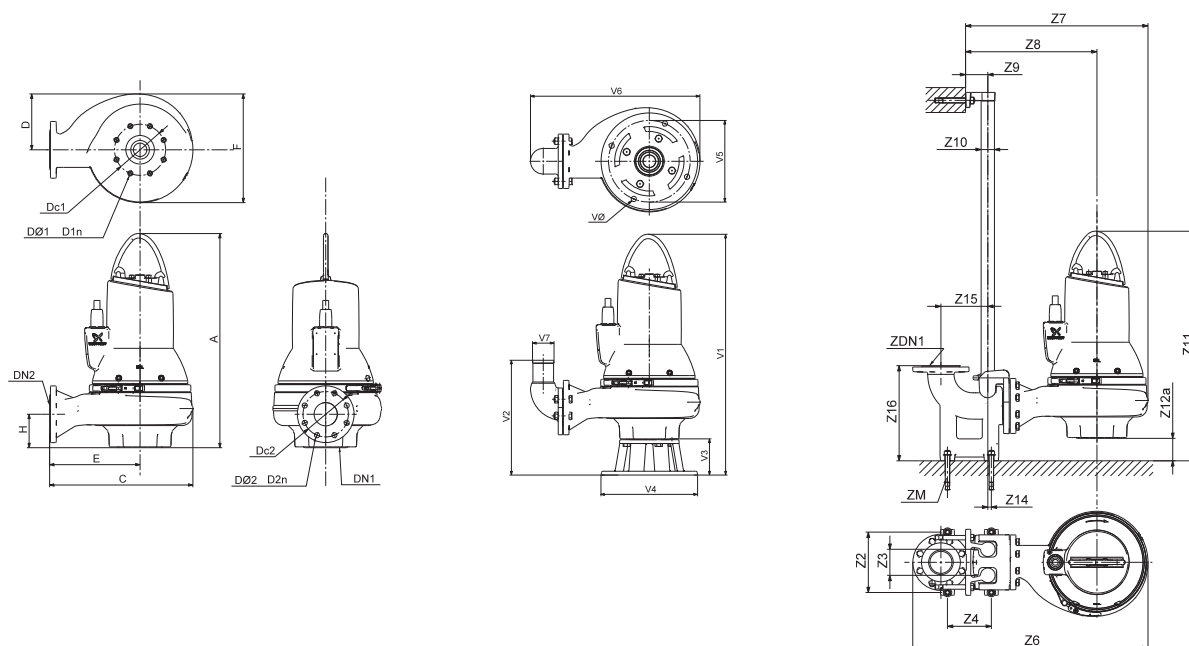
Performance curves SL1.100.100.55



TM04 3525 4608

# Technical data

## Dimension sketches SL1.100.100.55



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 762 | 541 | 200 | 320 | 438 | 115 | 150 | 240 | 8x22    | 100  | 180 | 8x18    | 161         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 983 | 758 | 537 | 110 | 2"  | 886.    | 125  | 0   | 220     | 413         | 240 | 150 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 948 | 445 | 186 | 450 | 400 | 711 | 100 | 22  |         |      |     |         |             |     |     |         |

## Electrical data

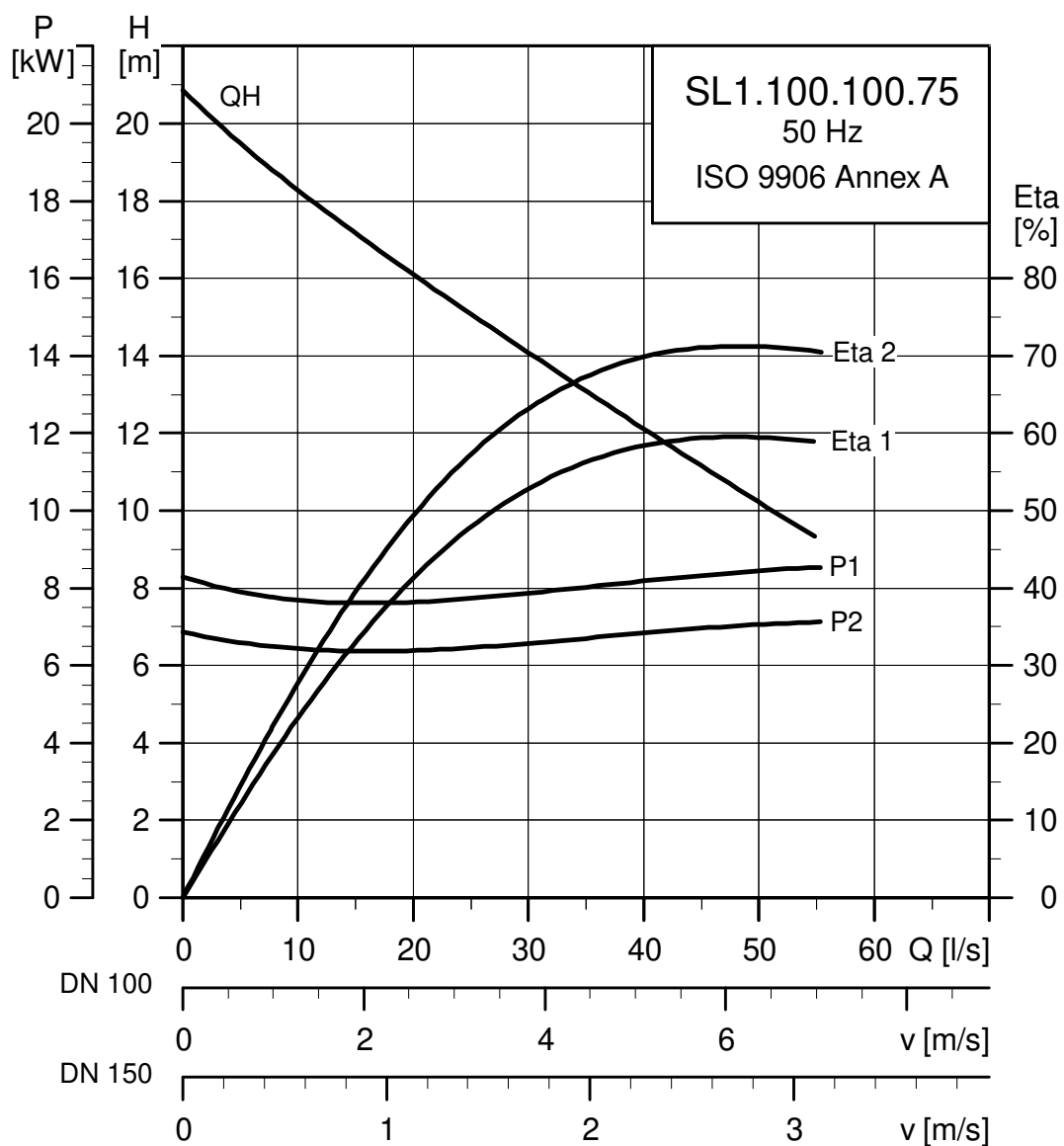
| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.100.100.55.4.51E | 3x220-240V D | 6.4     | 5.5     | 4           | 1460 | SD              | 20.4               | 140                    | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |
| SL1.100.100.55.4.51D | 3x380-415V D | 6.4     | 5.5     | 4           | 1460 | SD              | 11.8               | 81                     | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |
| SL1.100.100.55.4.50B | 3x400-415V D | 6.4     | 5.5     | 4           | 1460 | DOL             | 11.8               | 81                     | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

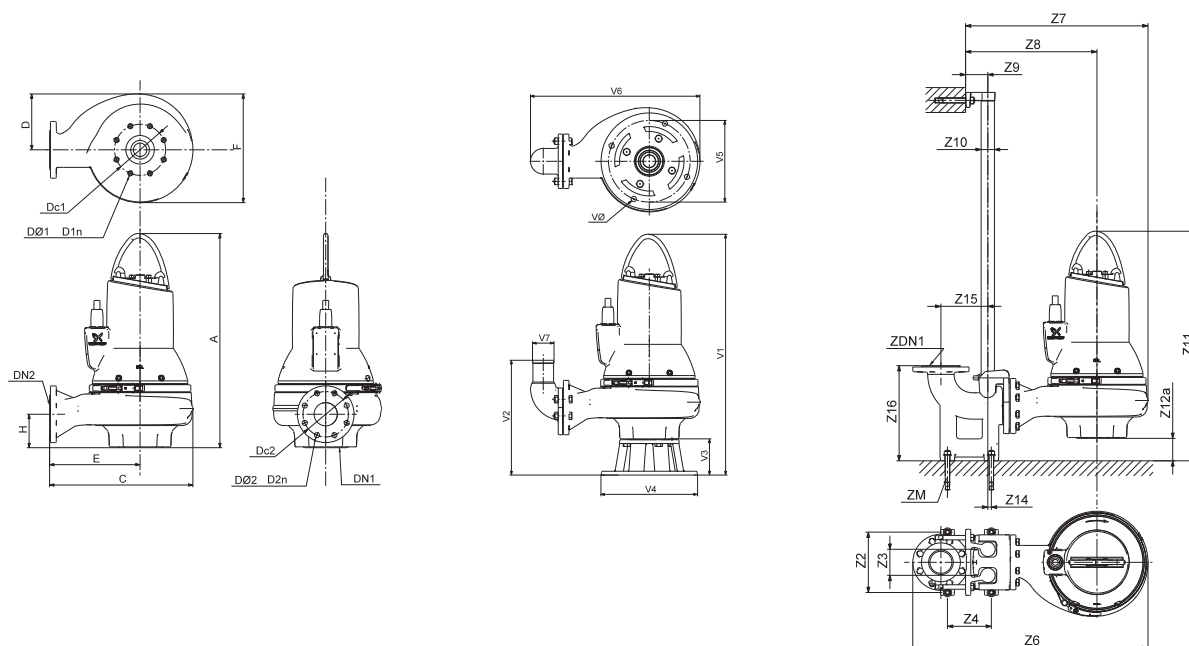
Performance curves SL1.100.100.75



TM04 3526 4608

# Technical data

## Dimension sketches SL1.100.100.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A    | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|------|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 827  | 541 | 217 | 312 | 462 | 115 | 150 | 240 | 8x22    | 100  | 180 | 8x18    | 202         |     |     |         |
| Z2   | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260  | 110 | 270 | 983 | 758 | 529 | 110 | 2"  | 951     | 125  | 0   | 220     | 413         | 240 | 150 | 4 x M16 |
| V1   | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 1013 | 445 | 186 | 450 | 400 | 706 | 100 | 22  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.100.100.75.4.51E | 3x220-240V D | 8.6     | 7.5     | 4           | 1460 | SD              | 26.3               | 189                    | 85.7 87.2 87.0         | 0.72 0.81 0.86 | 0.1860                                | 141                                    |
| SL1.100.100.75.4.51D | 3x380-415V D | 8.6     | 7.5     | 4           | 1460 | SD              | 15.2               | 109                    | 85.7 87.2 87.0         | 0.72 0.81 0.86 | 0.1860                                | 141                                    |
| SL1.100.100.75.4.50B | 3x400-415V D | 8.6     | 7.5     | 4           | 1460 | DOL             | 15.2               | 109                    | 85.7 87.2 87.0         | 0.72 0.81 0.86 | 0.1860                                | 141                                    |

## Pump data

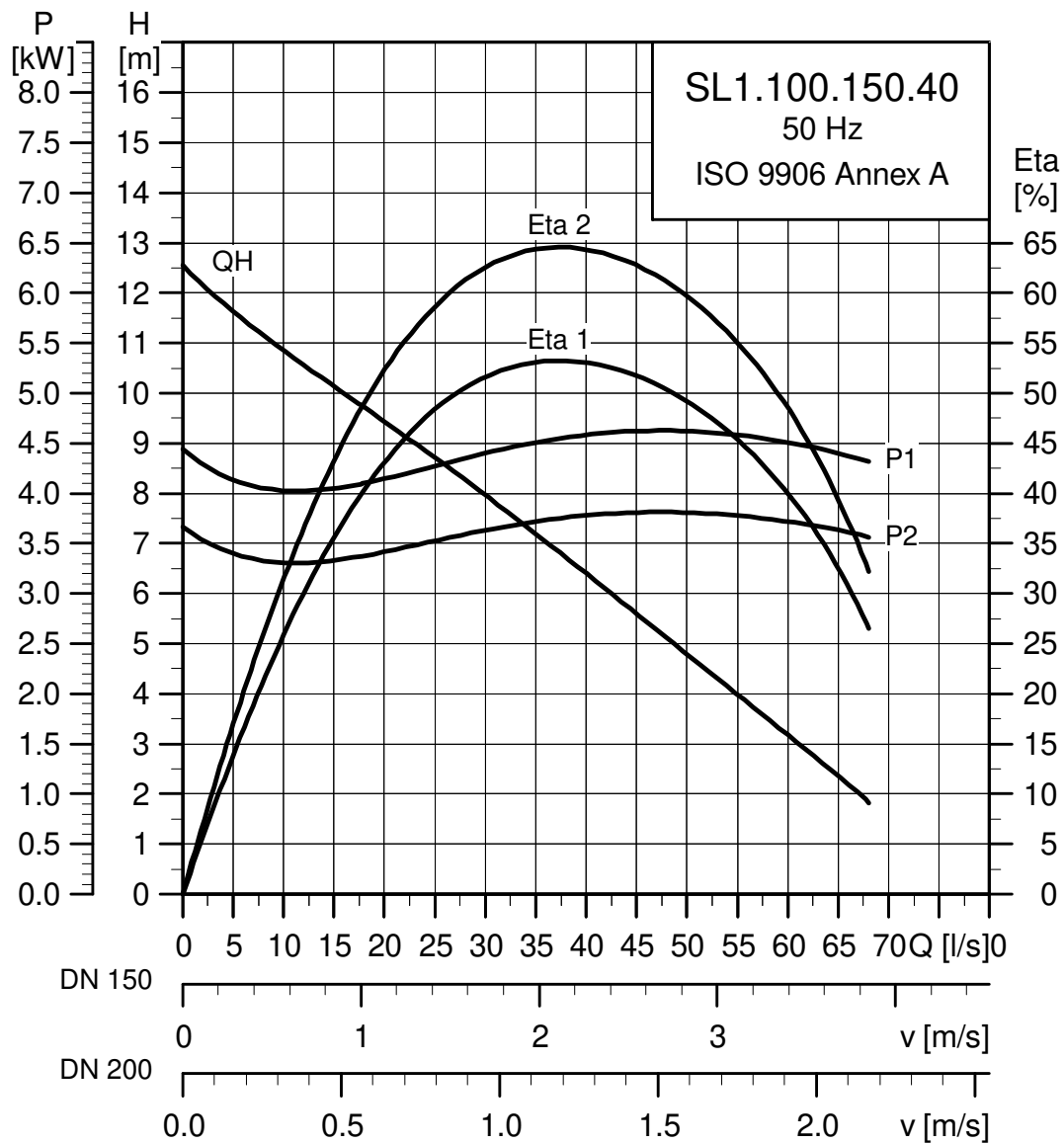
| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

## SL1.100.150

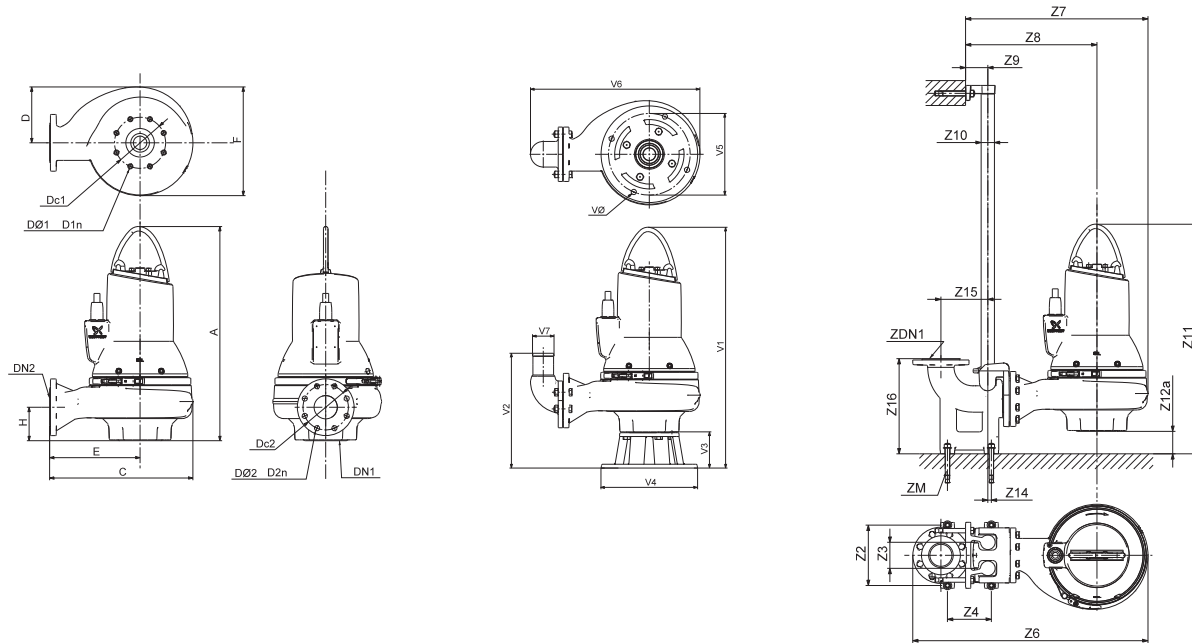
### Performance curves SL1.100.150.40



TN04 3527 4608

# Technical data

## Dimension sketches SL1.100.150.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| Pump type      | A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2 | Dc2 | DØ2 D2n | Weight [kg] |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|---------|-------------|
| SL1.100.150.40 | 755 | 541 | 200 | 320 | 440 | 143 | 150 | 240 | 8x22    | 150 | 240 | 8x22    | 157         |

| Pump type      | Z2  | Z3  | Z4  | Z6   | Z7  | Z8  | Z9  | Z10 | Z11 | Z12a | Z14 | Z15 | Z16 | Dc1 | DN1 | ZM      |
|----------------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|---------|
| SL1.100.150.40 | 300 | 110 | 340 | 1093 | 780 | 559 | 110 | 2"  | 919 | 164  | 0   | 280 | 450 | 240 | 150 | 4 x M16 |

| Pump type      | V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ |
|----------------|-----|-----|-----|-----|-----|-----|-----|----|
| SL1.100.150.40 | 941 | 555 | 186 | 450 | 400 | 807 | 150 | 22 |

## Electrical data

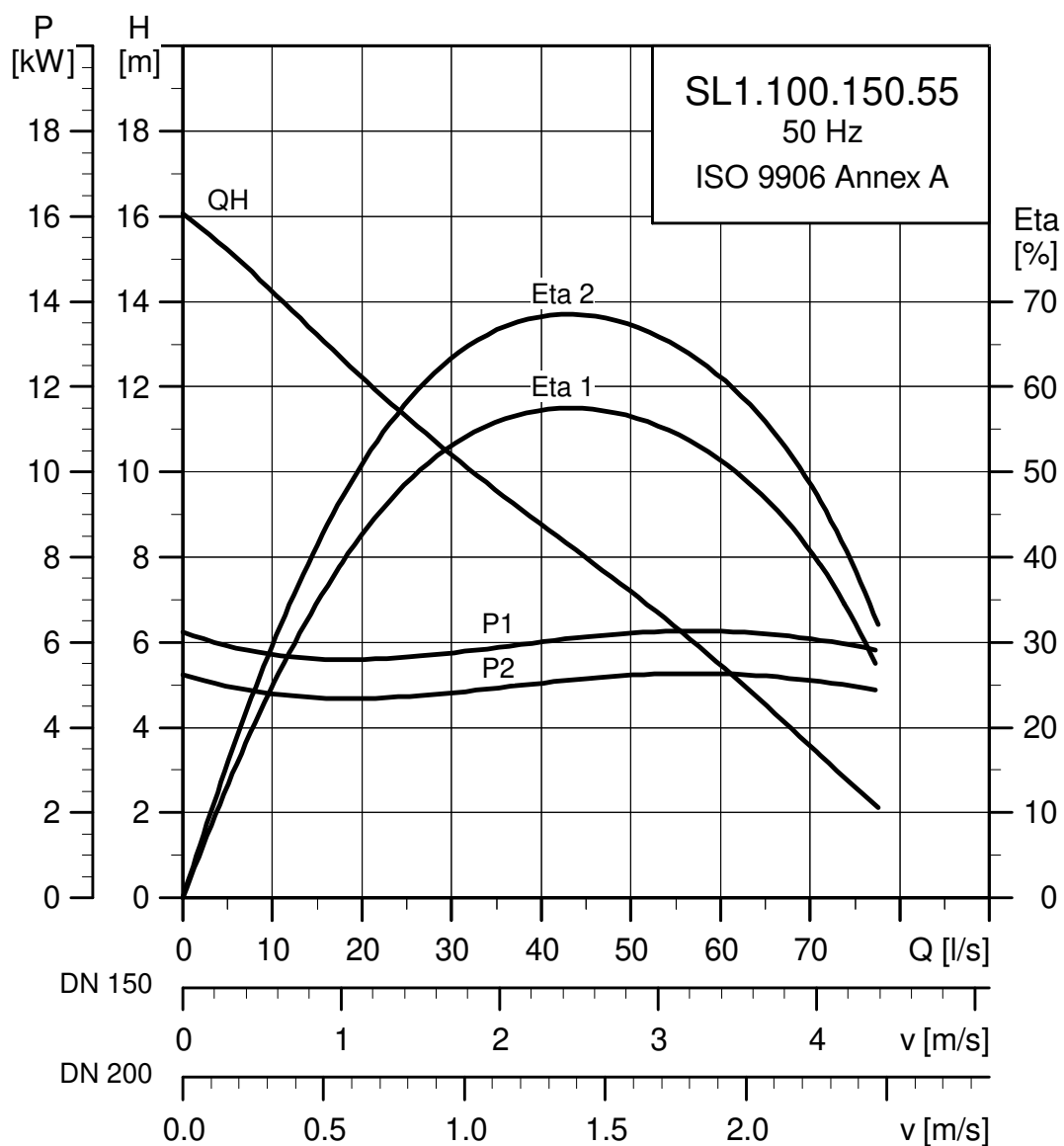
| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.100.150.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9               | 88                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.1222                                | 90                                     |
| SL1.100.150.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7                | 51                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.1222                                | 90                                     |
| SL1.100.150.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7                | 51                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.1222                                | 90                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

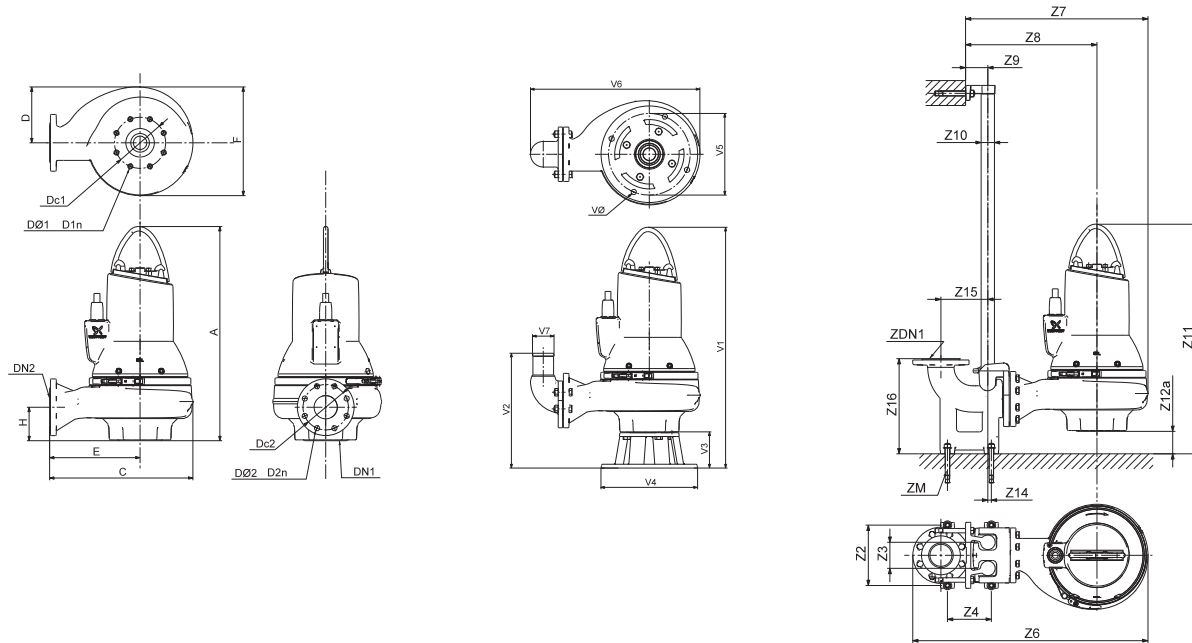
Performance curves SL1.100.150.55



TM04 3528 4608

# Technical data

## Dimension sketches SL1.100.150.55



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E    | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|------|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 762 | 541 | 200 | 320  | 440 | 143 | 150 | 240 | 8x22    | 150  | 240 | 8x22    | 163         |     |     |         |
| Z2  | Z3  | Z4  | Z6   | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 300 | 110 | 340 | 1093 | 780 | 559 | 110 | 2"  | 926     | 164  | 0   | 280     | 450         | 240 | 150 | 4 x M16 |
| V1  |     |     | V2   |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 948 |     |     | 555  |     | 186 |     | 450 |         | 400  |     | 807     |             | 150 |     | 22      |

## Electrical data

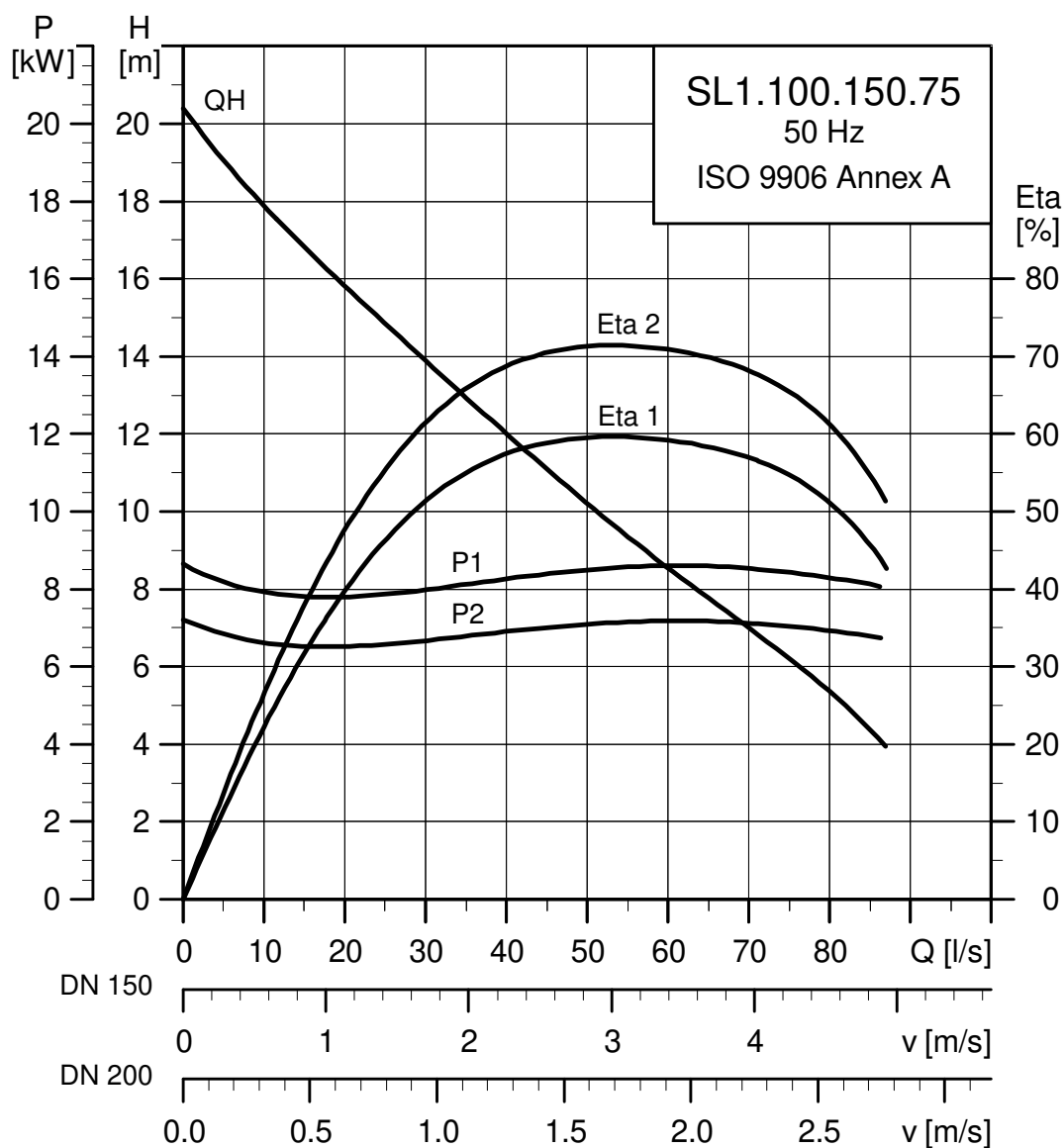
| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SL1.100.150.55.4.51E | 3x220-240V D | 6.4     | 5.5     | 4           | 1460 | SD              | 20.4               | 140                    | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |
| SL1.100.150.55.4.51D | 3x380-415V D | 6.4     | 5.5     | 4           | 1460 | SD              | 11.8               | 81                     | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |
| SL1.100.150.55.4.50B | 3x400-415V D | 6.4     | 5.5     | 4           | 1460 | DOL             | 11.8               | 81                     | 82.0 84.8 85.6         | 0.67 0.77 0.82 | 0.1393                                | 110                                    |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

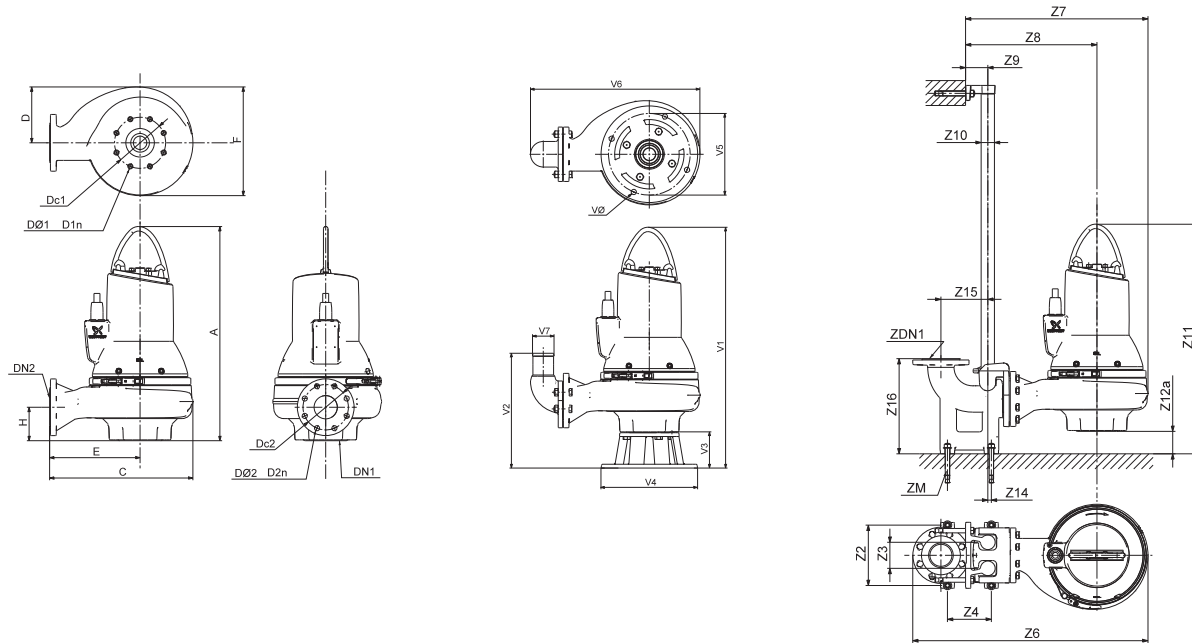
Performance curves SL1.100.150.75



TM04 3529 4608

# Technical data

## Dimension sketches SL1.100.150.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A    | C   | D   | E    | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|------|-----|-----|------|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 827  | 541 | 217 | 306  | 472 | 143 | 150 | 240 | 8x22    | 150  | 240 | 8x22    | 204         |     |     |         |
| Z2   | Z3  | Z4  | Z6   | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 300  | 110 | 340 | 1093 | 780 | 545 | 110 | 2"  | 991     | 164  | 0   | 280     | 450         | 240 | 150 | 4 x M16 |
| V1   |     |     | V2   |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 1013 |     |     | 555  |     | 186 |     | 450 |         | 400  |     | 803     |             | 150 |     | 22      |

## Electrical data

| Pump type            | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      |      | Cos φ |        |     | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|------|-------|--------|-----|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4  | 1/1   |        |     |                                       |                                        |
| SL1.100.150.75.4.51E | 3x220-240V D | 8.6     | 7.5     | 4           | 1460 | SD              | 26.3           | 189                | 85.7                   | 87.2 | 87.0 | 0.72 | 0.81 | 0.86  | 0.1860 | 141 |                                       |                                        |
| SL1.100.150.75.4.51D | 3x380-415V D | 8.6     | 7.5     | 4           | 1460 | SD              | 15.2           | 109                | 85.7                   | 87.2 | 87.0 | 0.72 | 0.81 | 0.86  | 0.1860 | 141 |                                       |                                        |
| SL1.100.150.75.4.50B | 3x400-415V D | 8.6     | 7.5     | 4           | 1460 | DOL             | 15.2           | 109                | 85.7                   | 87.2 | 87.0 | 0.72 | 0.81 | 0.86  | 0.1860 | 141 |                                       |                                        |

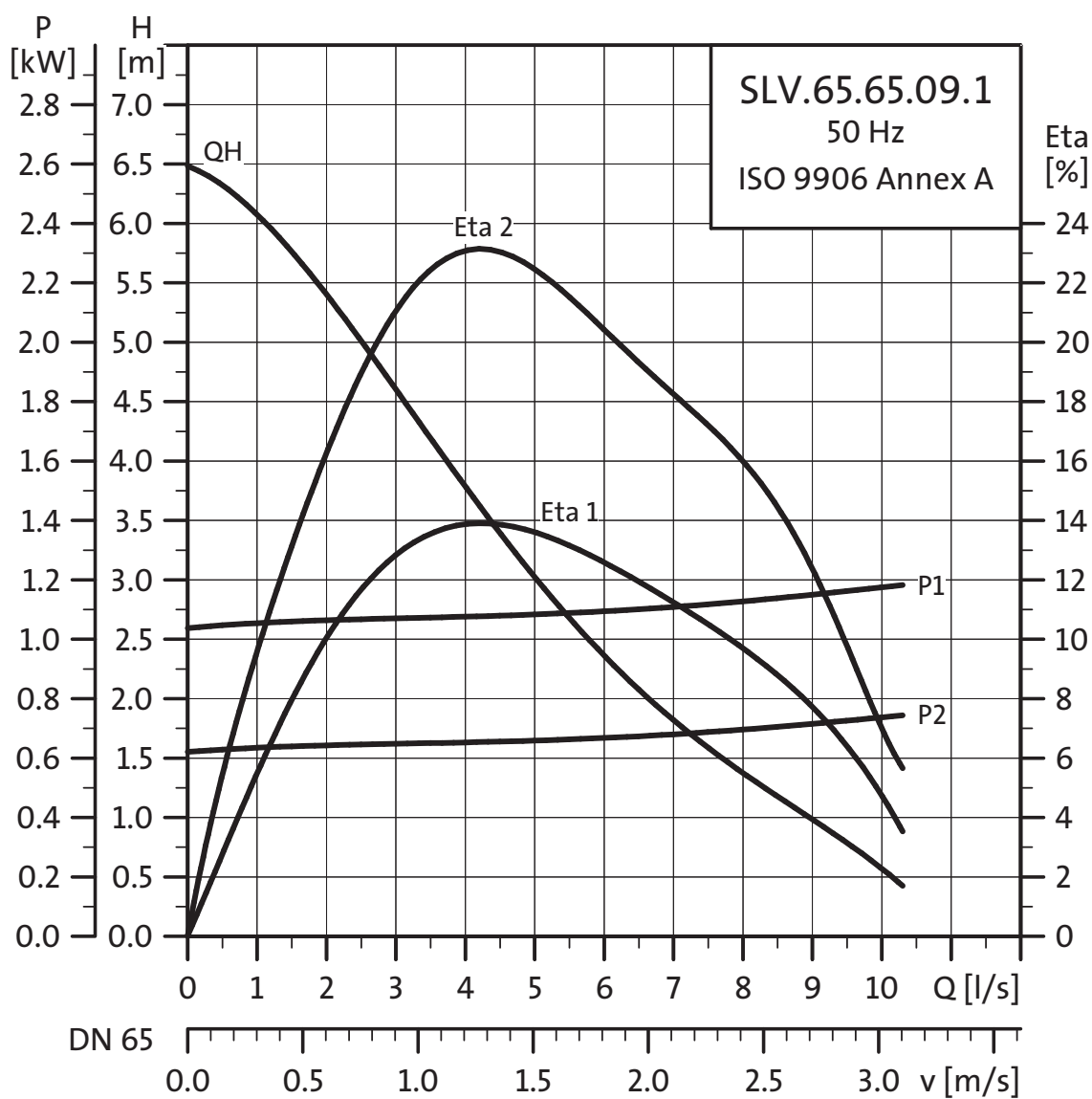
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Channel       | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SLV.65.65

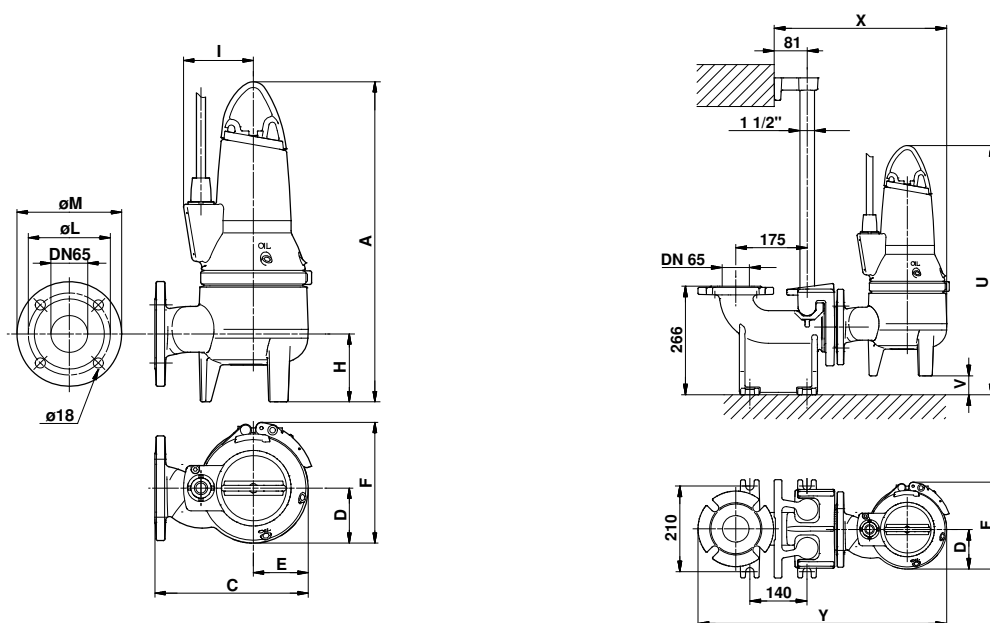
### Performance curves SLV.65.65.09.1



TM02 7483 3403

# Technical data

## Dimensional sketches SLV.65.65.09.1



TM02 7483 3603/TM02 7350 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | ØL  | ØM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|---------|------|------|-------------|------|-----------------|---------------|----------------|--------------------|------------------------|----------------|---------------------|-----------------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [μF]          | [A]            | [A]                | 1/2 3/4 1/1            | 1/2 3/4 1/1    | [kgm <sup>2</sup> ] | [Nm]                              |
| 1 x 230 | 1.3  | 0.9  | 2           | 2920 | DOL             | 30            | 6.1            | 38                 | 55 63 67               | 0.86 0.92 0.96 | 0.004               | 7                                 |

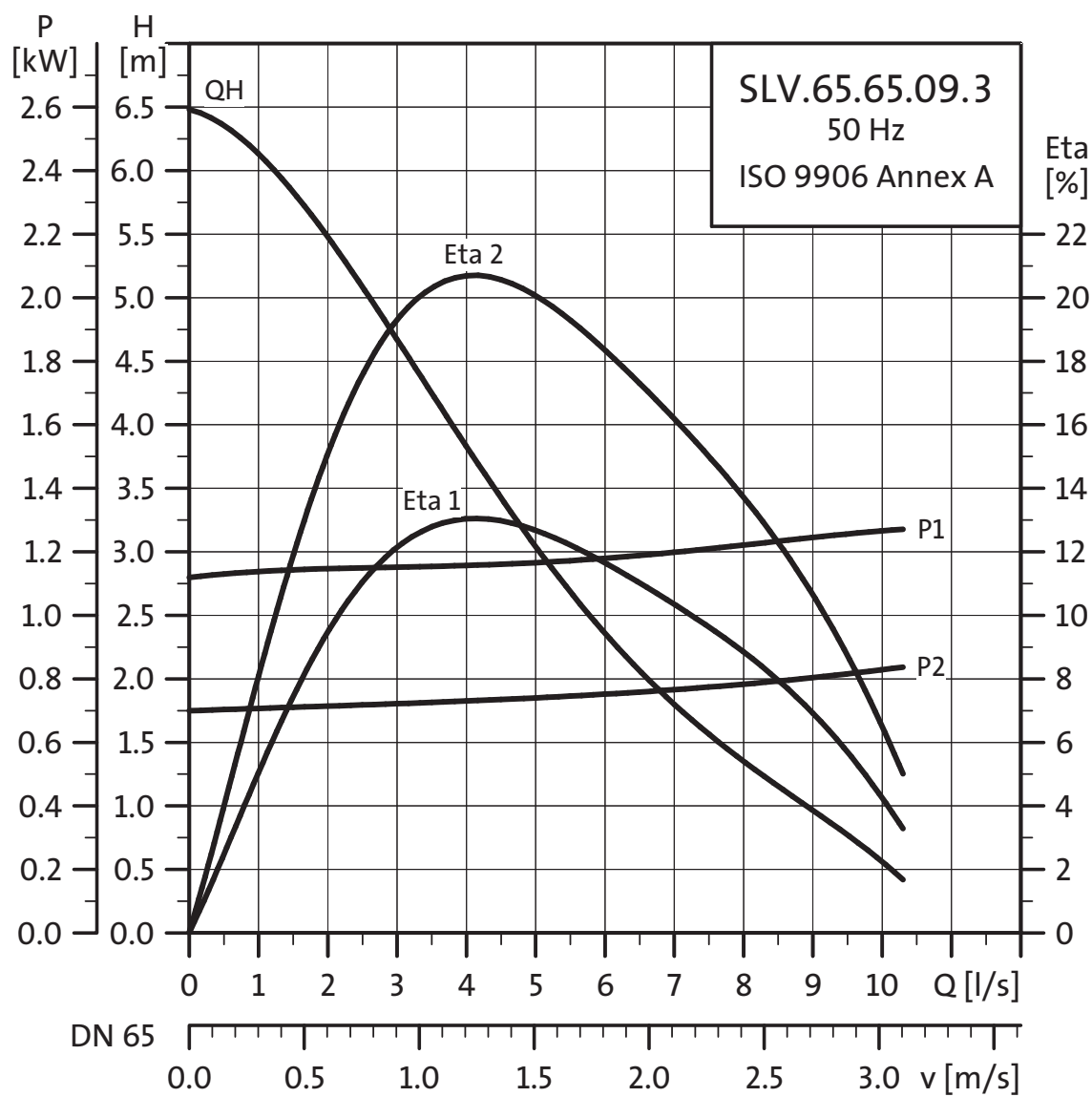
## Pump data

| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                  |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|---------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                           |
| Channel       | 65               | 30                              | 10                      | IP68            | F                | 40                      | 4-10 | Ex d IIB T4 / Ex n IIB T4 |



# Performance curves

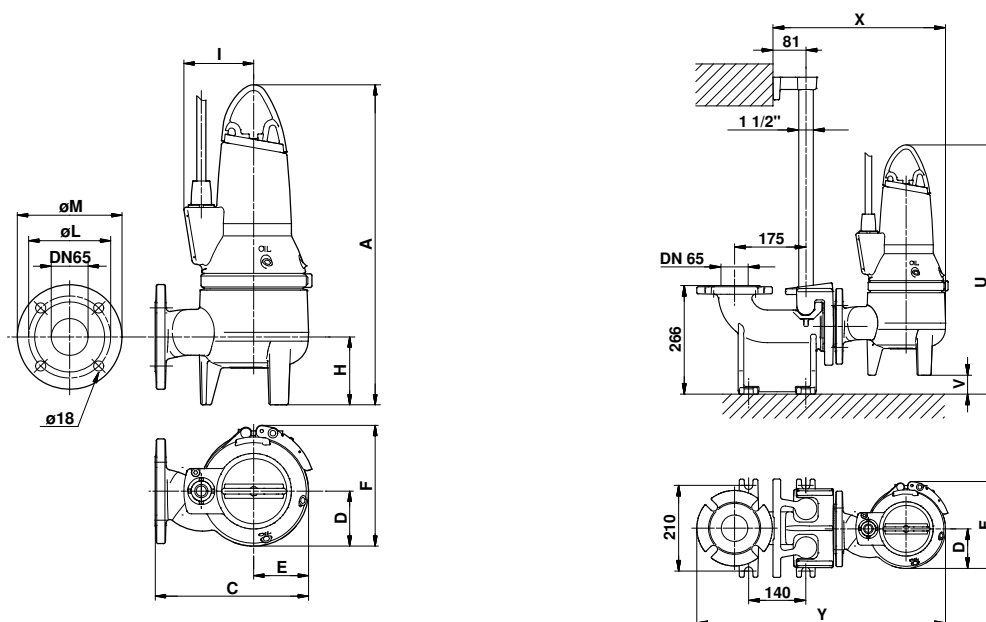
## Performance curves SLV.65.65.09.3



TM02 7482 3403

# Technical data

## Dimensional sketches SLV.65.65.09.3



TM02 7482 3603/TM02 7350 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | øL  | øM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

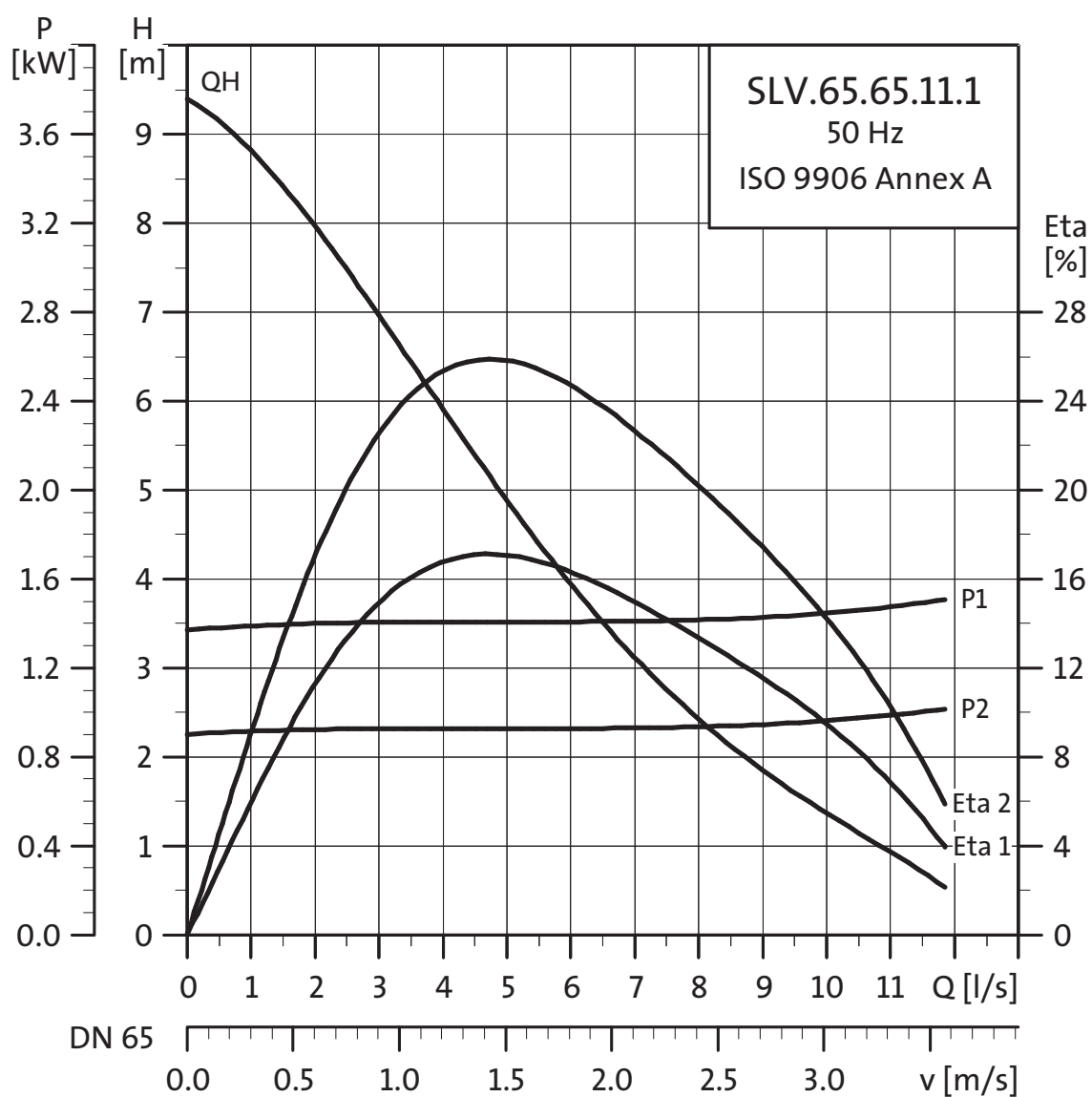
| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of poles | RPM  | Starting method | $I_N$ |     | $I_{start}$ |     |     | $\eta_{motor}$ [%] |      |      | $\cos \varphi$ |    | Moment of inertia<br>[kgm <sup>2</sup> ] | Breakdown torque $M_{max}$<br>[Nm] |
|----------------|------------|------------|-------------|------|-----------------|-------|-----|-------------|-----|-----|--------------------|------|------|----------------|----|------------------------------------------|------------------------------------|
|                |            |            |             |      |                 | [A]   | [A] | 1/2         | 3/4 | 1/1 | 1/2                | 3/4  | 1/1  |                |    |                                          |                                    |
| 3 x 230-240    | 1.4        | 0.9        | 2           | 2920 | DOL             | 4.9   | 36  | 58          | 61  | 65  | 0.50               | 0.58 | 0.65 | 0.004          | 12 |                                          |                                    |
| 3 x 400-415    | 1.4        | 0.9        | 2           | 2920 | DOL             | 2.8   | 21  | 58          | 61  | 65  | 0.58               | 0.68 | 0.76 | 0.004          | 12 |                                          |                                    |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max. number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                     |
|------------------|--------------------------|-----------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|------------------------------|
| Channel          | 65                       | 30                                | 10                                | IP68               | F                   | 40                                 | 4-10 | Ex d IIB T4 / Ex<br>n IIB T4 |

# Performance curves

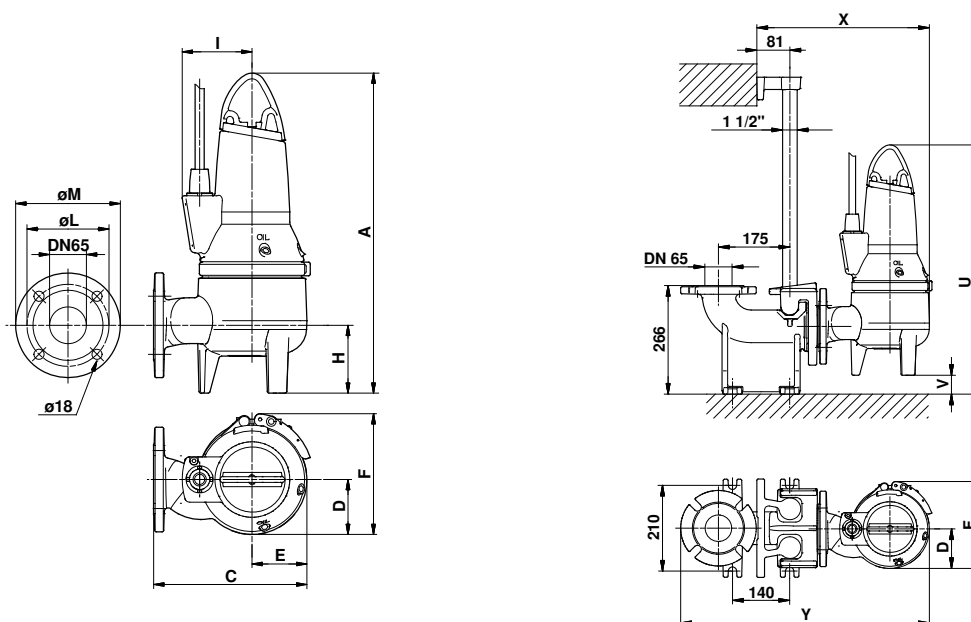
Performance curves SLV.65.65.11.1



TM02 7472 3403

# Technical data

## Dimensional sketches SLV.65.65.11.1



TM02 7472 3603/TM02 7350 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | øL  | øM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

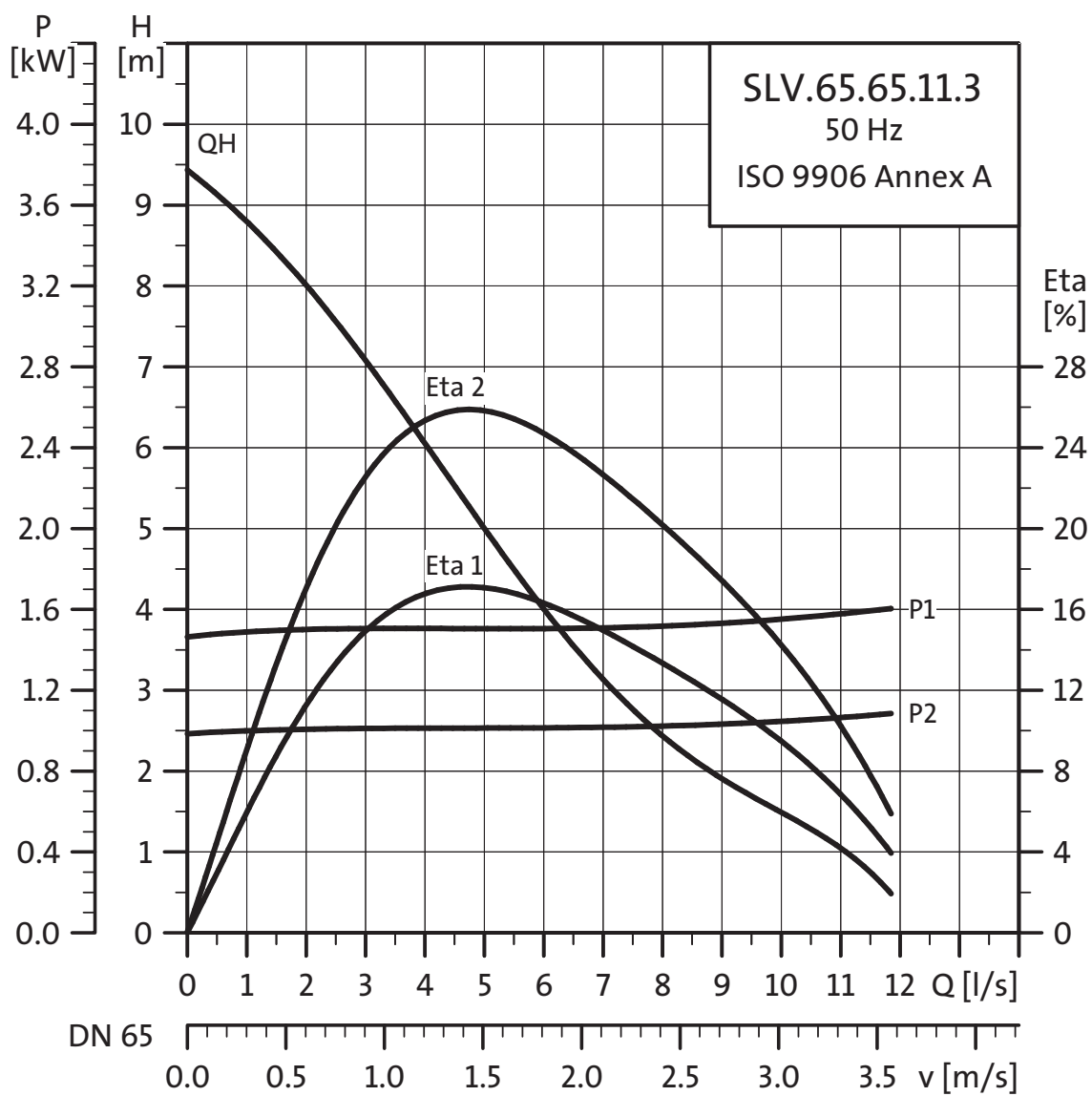
| Voltage | P1   | P2   | No of poles | RPM  | Starting method | Run capacitor | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia   | Breakdown torque M <sub>max</sub> |
|---------|------|------|-------------|------|-----------------|---------------|----------------|--------------------|------------------------|----------------|---------------------|-----------------------------------|
| [V]     | [kW] | [kW] |             |      |                 | [μF]          | [A]            | [A]                | 1/2 3/4 1/1            | 1/2 3/4 1/1    | [kgm <sup>2</sup> ] | [Nm]                              |
| 1 x 230 | 1.3  | 0.9  | 2           | 2920 | DOL             | 30            | 6.1            | 38                 | 55 63 67               | 0.86 0.92 0.96 | 0.004               | 7                                 |

## Pump data

| Impeller type | Max. solids size | Max . number of starts per hour | Max. installation depth | Enclosure class | Insulation class | Max. liquid temperature | pH   | Ex-class                  |
|---------------|------------------|---------------------------------|-------------------------|-----------------|------------------|-------------------------|------|---------------------------|
|               | [mm]             |                                 | [m]                     |                 |                  | [°C]                    |      |                           |
| Channel       | 65               | 30                              | 10                      | IP68            | F                | 40                      | 4-10 | Ex d IIB T4 / Ex n IIB T4 |

# Performance curves

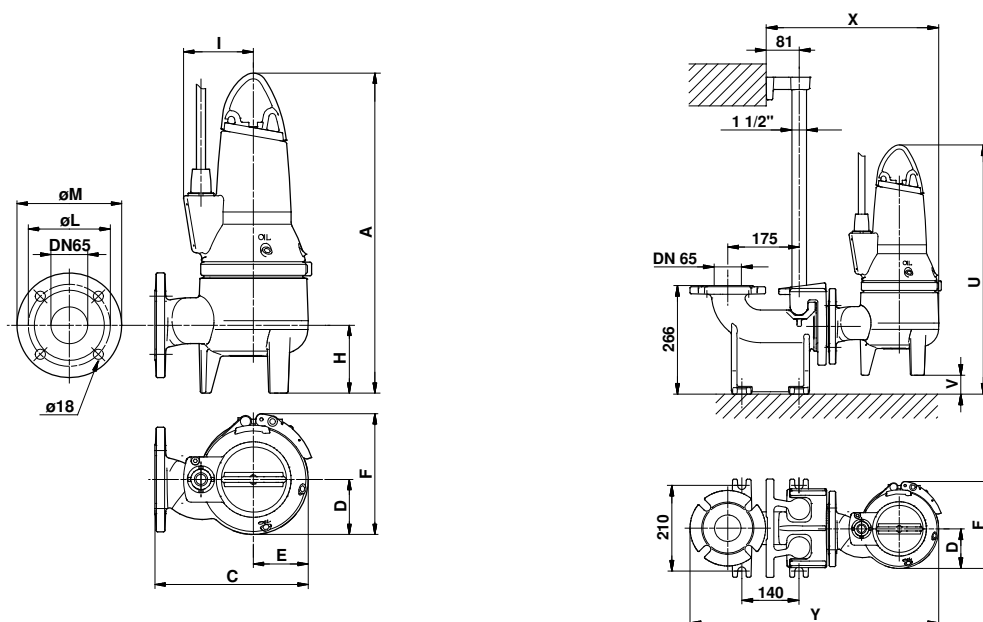
## Performance curves SLV.65.65.11.3



TM02 7471 3403

# Technical data

## Dimensional sketches SLV.65.65.11.3



TM02 7471 3603/TM02 7350 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | ØL  | ØM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

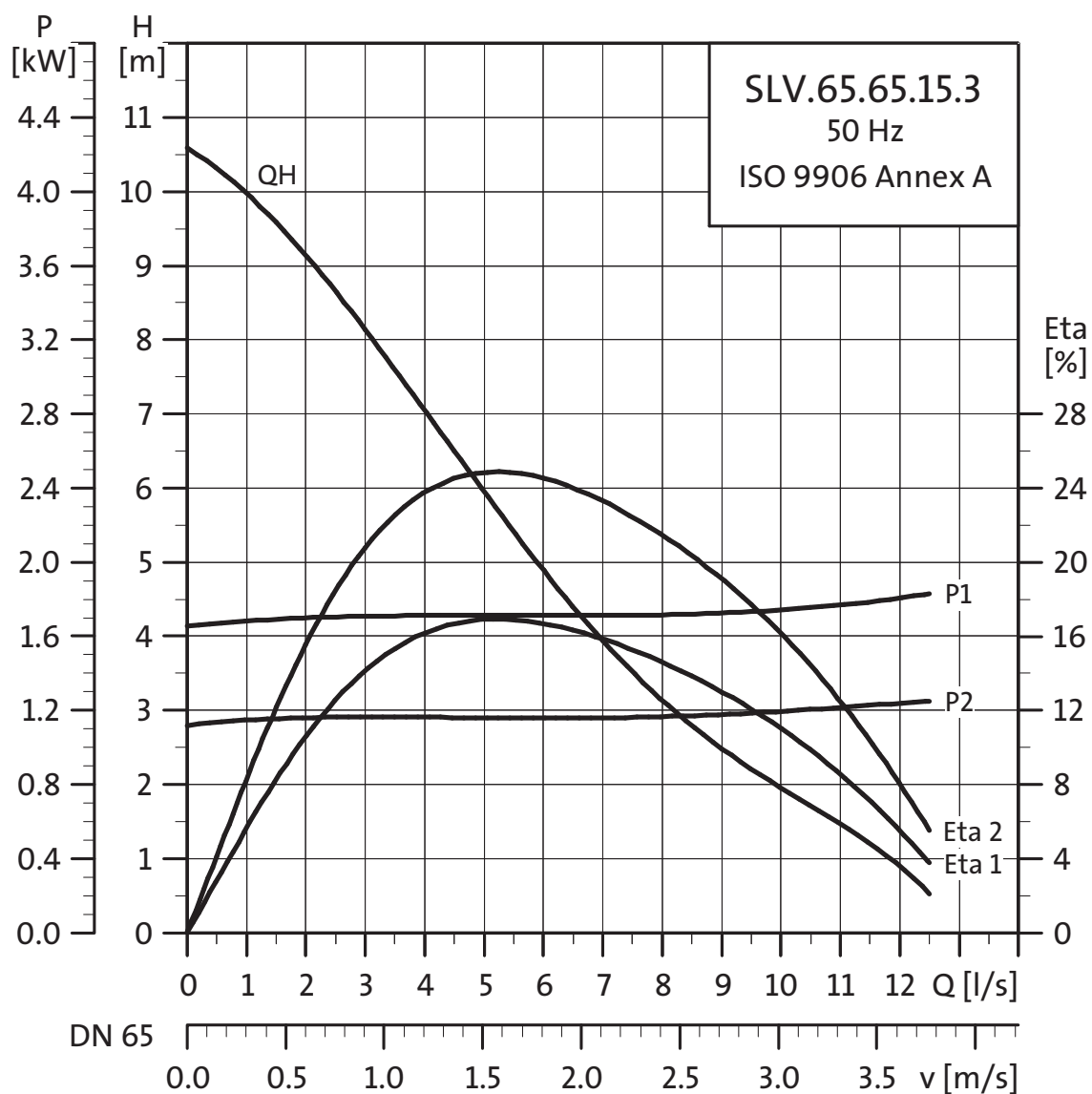
| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|-------|------|------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |                                             |                                              |
| 3 x 230-240    | 1.4        | 0.9        | 2              | 2920 | DOL                | 4.9                   | 36                        | 58                     | 61  | 65  | 0.50  | 0.58 | 0.65 | 0.004                                       | 12                                           |
| 3 x 400-415    | 1.4        | 0.9        | 2              | 2920 | DOL                | 2.8                   | 21                        | 58                     | 61  | 65  | 0.58  | 0.68 | 0.76 | 0.004                                       | 12                                           |

## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max . number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                     |
|------------------|--------------------------|------------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|------------------------------|
| Channel          | 65                       | 30                                 | 10                                | IP68               | F                   | 40                                 | 4-10 | Ex d IIB T4 / Ex<br>n IIB T4 |

# Performance curves

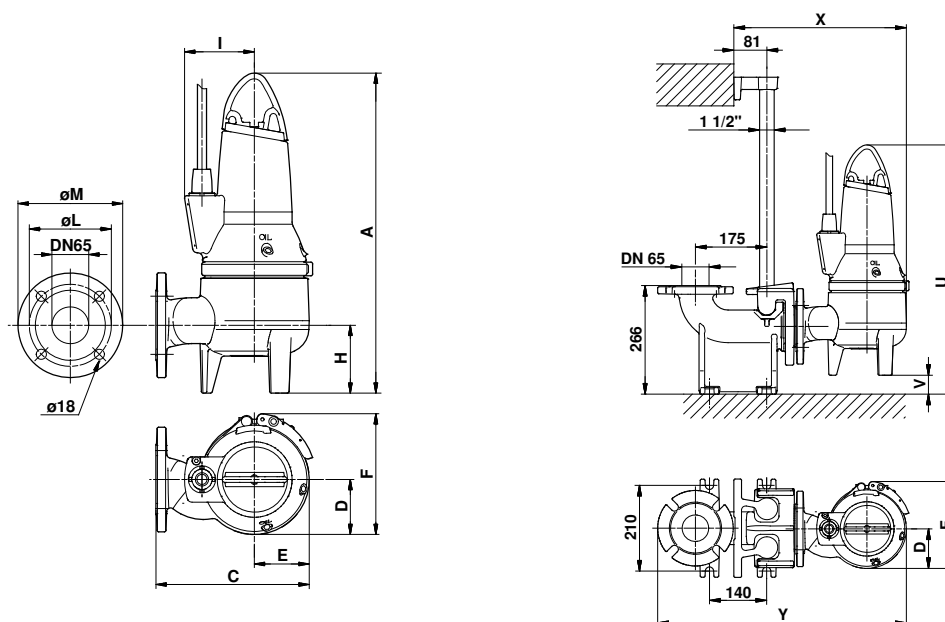
Performance curves SLV.65.65.15.3



TM02 7470 3403

# Technical data

## Dimensional sketches SLV.65.65.15.3



TM02 7470 3603/TM02 7350 3403

## Product dimensions

| A   | C   | D   | E   | F   | H   | I   | U   | V  | X   | Y   | øL  | øM  | Weight [kg] |
|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-------------|
| 544 | 333 | 126 | 118 | 242 | 121 | 123 | 589 | 45 | 485 | 671 | 143 | 185 | 48          |

With 10 m cable

## Electrical data

| Voltage<br>[V] | P1<br>[kW] | P2<br>[kW] | No of<br>poles | RPM  | Starting<br>method | I <sub>N</sub><br>[A] | I <sub>start</sub><br>[A] | η <sub>motor</sub> [%] |     |     | Cos φ |      |      | Moment of<br>inertia<br>[kgm <sup>2</sup> ] | Breakdown<br>torque M <sub>max</sub><br>[Nm] |
|----------------|------------|------------|----------------|------|--------------------|-----------------------|---------------------------|------------------------|-----|-----|-------|------|------|---------------------------------------------|----------------------------------------------|
|                |            |            |                |      |                    |                       |                           | 1/2                    | 3/4 | 1/1 | 1/2   | 3/4  | 1/1  |                                             |                                              |
| 3 x 230-240    | 1.4        | 0.9        | 2              | 2920 | DOL                | 4.9                   | 36                        | 58                     | 61  | 65  | 0.50  | 0.58 | 0.65 | 0.004                                       | 12                                           |
| 3 x 400-415    | 1.4        | 0.9        | 2              | 2920 | DOL                | 2.8                   | 21                        | 58                     | 61  | 65  | 0.58  | 0.68 | 0.76 | 0.004                                       | 12                                           |

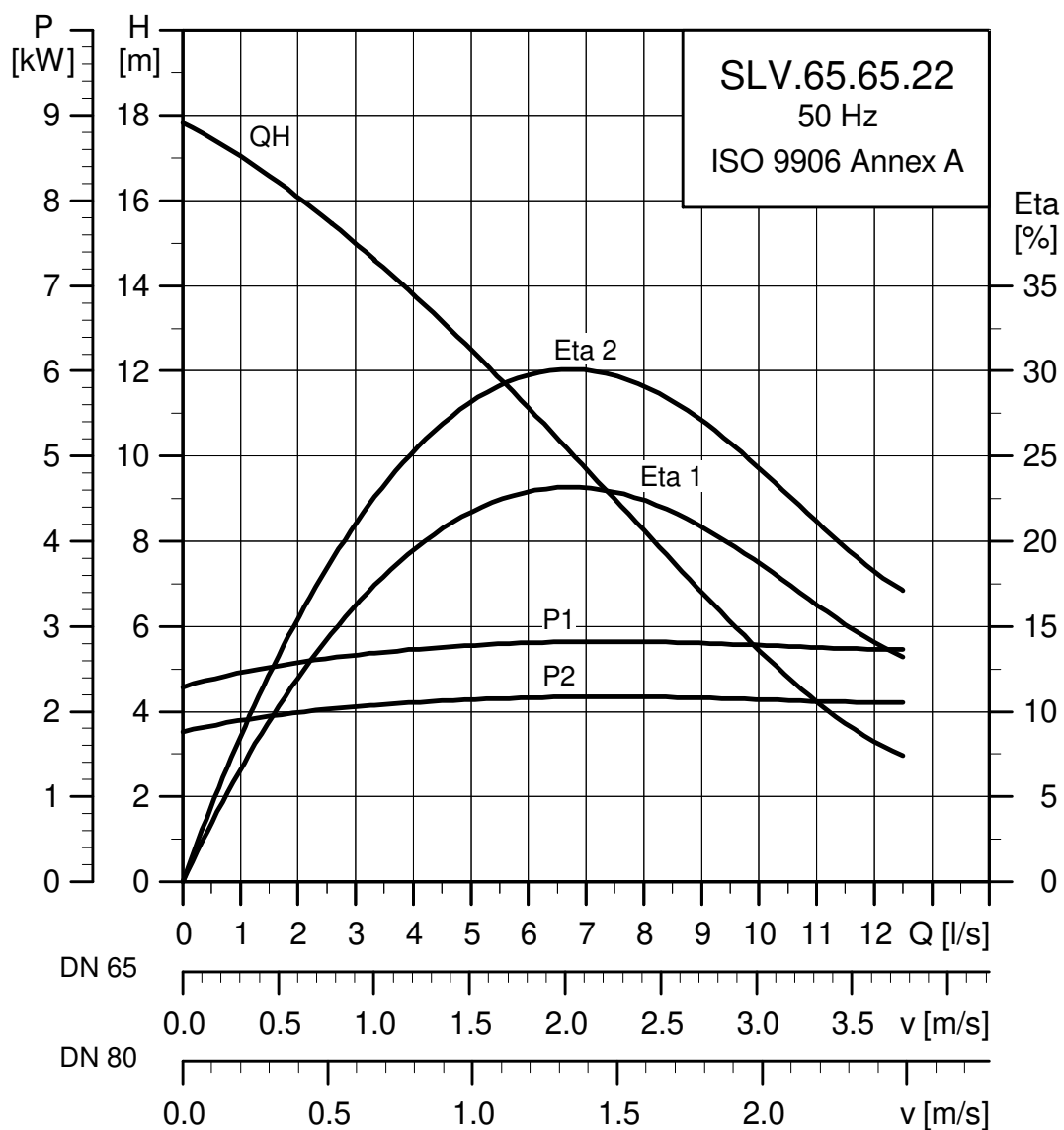
## Pump data

| Impeller<br>type | Max. solids size<br>[mm] | Max. number of<br>starts per hour | Max. installation<br>depth<br>[m] | Enclosure<br>class | Insulation<br>class | Max. liquid<br>temperature<br>[°C] | pH   | Ex-class                     |
|------------------|--------------------------|-----------------------------------|-----------------------------------|--------------------|---------------------|------------------------------------|------|------------------------------|
| Channel          | 65                       | 30                                | 10                                | IP68               | F                   | 40                                 | 4-10 | Ex d IIB T4 / Ex<br>n IIB T4 |



# Performance curves

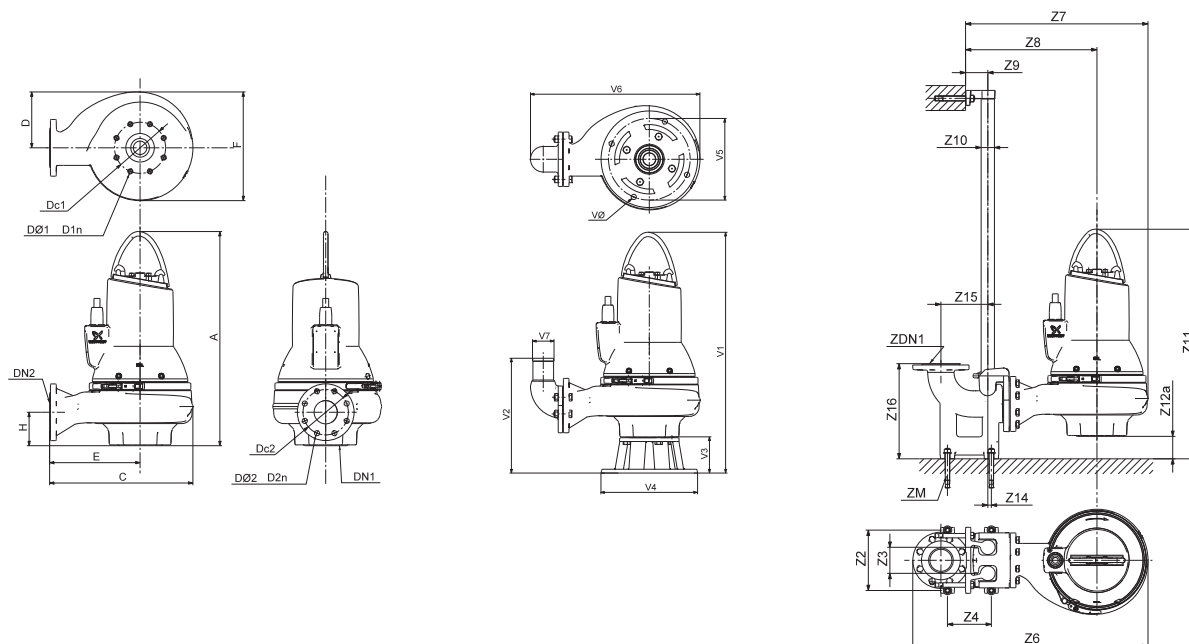
Performance curves SLV.65.65.22



TM04 3530 4608

# Technical data

## Dimension sketches SLV.65.65.22



| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 684 | 396 | 171 | 246 | 321 | 102 | 80  | 160 | 8x18    | 65   | 145 | 4 x 18  | 88          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 210 | 95  | 140 | 730 | 543 | 394 | 81  | 1½" | 747     | 63   | 1   | 175     | 266         | 160 | 80  | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 812 |     | 372 |     | 128 |     | 330 |     | 280     |      | 524 |         | 65          |     | 18  |         |

## Electrical data

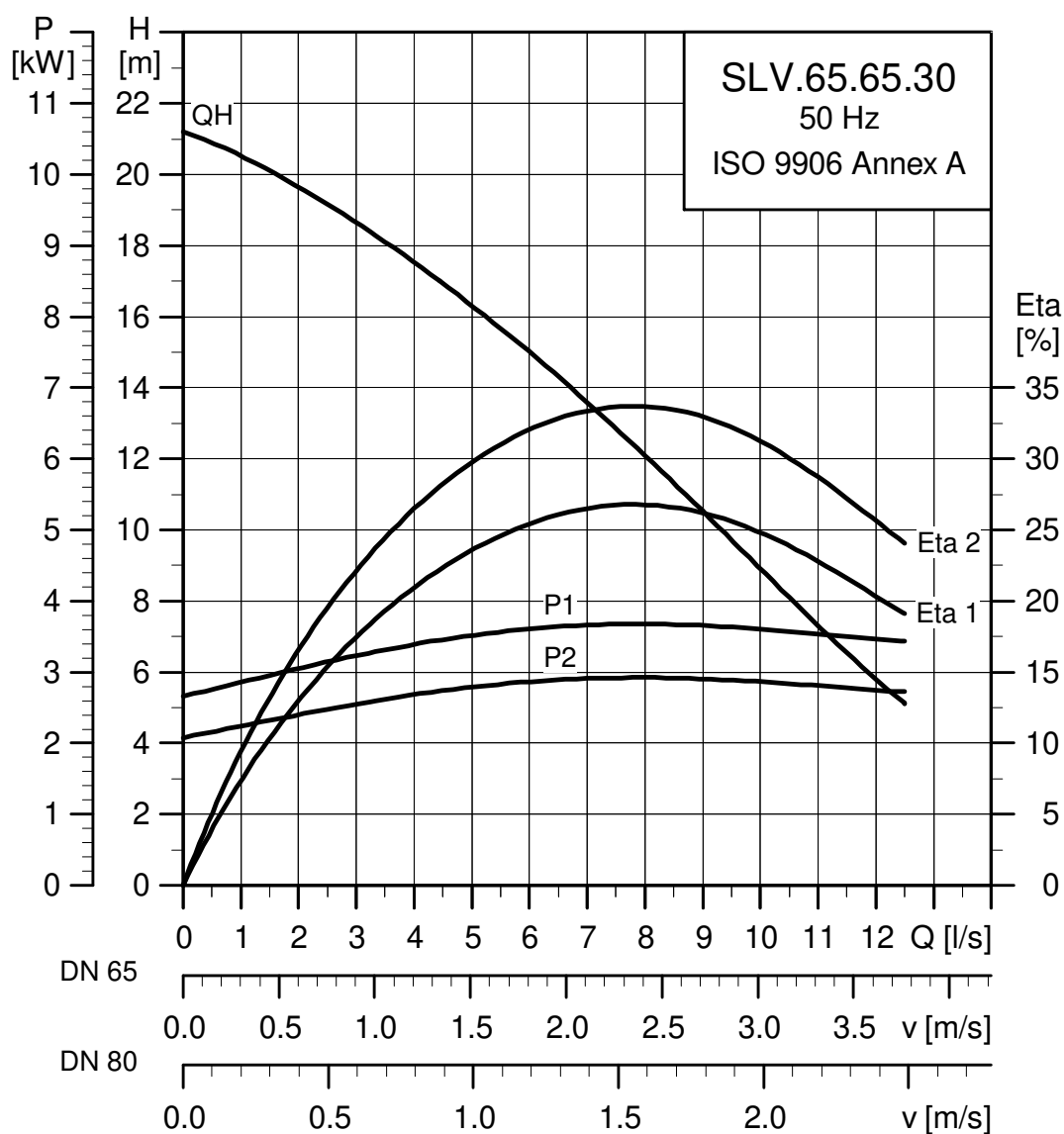
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SLV.65.65.22.2.50E | 3x220-240V D | 2.8     | 2.2     | 2           | 2990 | DOL             | 8.5            | 74                 | 70.3                   | 75.2 | 76.7 | 0.79 | 0.86 | 0.89  | 0.0088 | 25 |                                       |                                        |
| SLV.65.65.22.2.51D | 3x380-415V D | 2.8     | 2.2     | 2           | 2990 | SD              | 4.9            | 43                 | 70.3                   | 75.2 | 76.7 | 0.79 | 0.86 | 0.89  | 0.0088 | 25 |                                       |                                        |
| SLV.65.65.22.2.50D | 3x380-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9            | 43                 | 70.3                   | 75.2 | 76.7 | 0.79 | 0.86 | 0.89  | 0.0088 | 25 |                                       |                                        |
| SLV.65.65.22.2.50B | 3x400-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9            | 43                 | 70.3                   | 75.2 | 76.7 | 0.79 | 0.86 | 0.89  | 0.0088 | 25 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

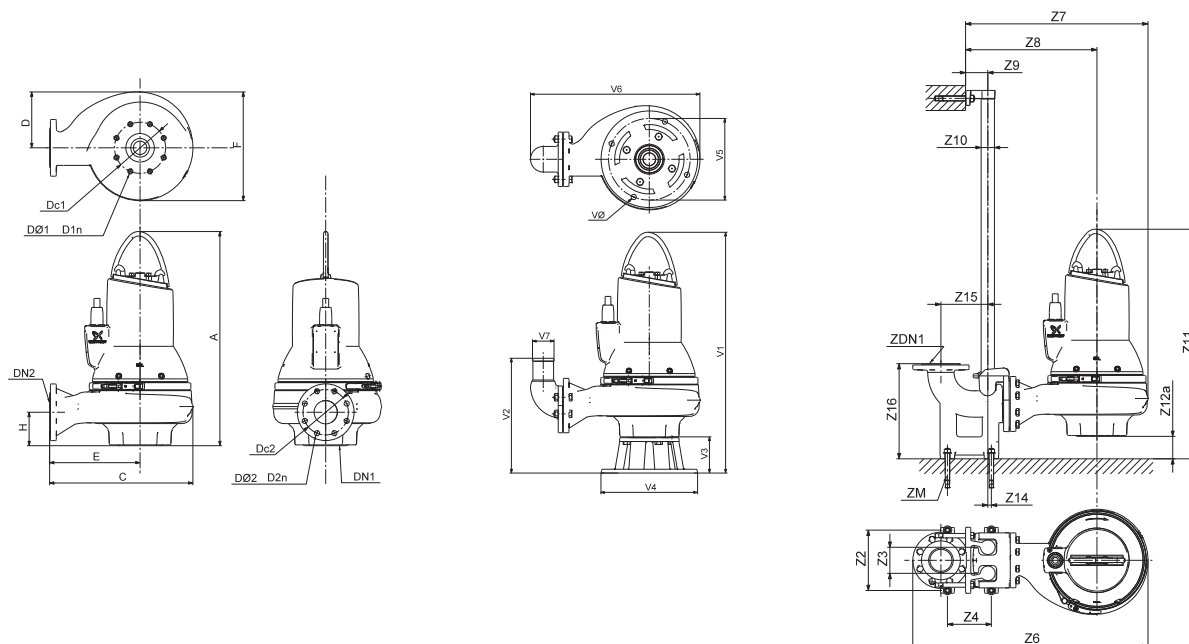
Performance curves SLV.65.65.30



TM04 3531 4608

# Technical data

## Dimension sketches SLV.65.65.30



| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 684 | 396 | 171 | 246 | 321 | 102 | 80  | 160 | 8x18    | 65   | 145 | 4 x 18  | 91          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 210 | 95  | 140 | 730 | 543 | 394 | 81  | 1½" | 747     | 63   | 1   | 175     | 266         | 160 | 80  | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 812 |     | 372 |     | 128 |     | 330 |     | 280     |      | 524 |         | 65          |     | 18  |         |

## Electrical data

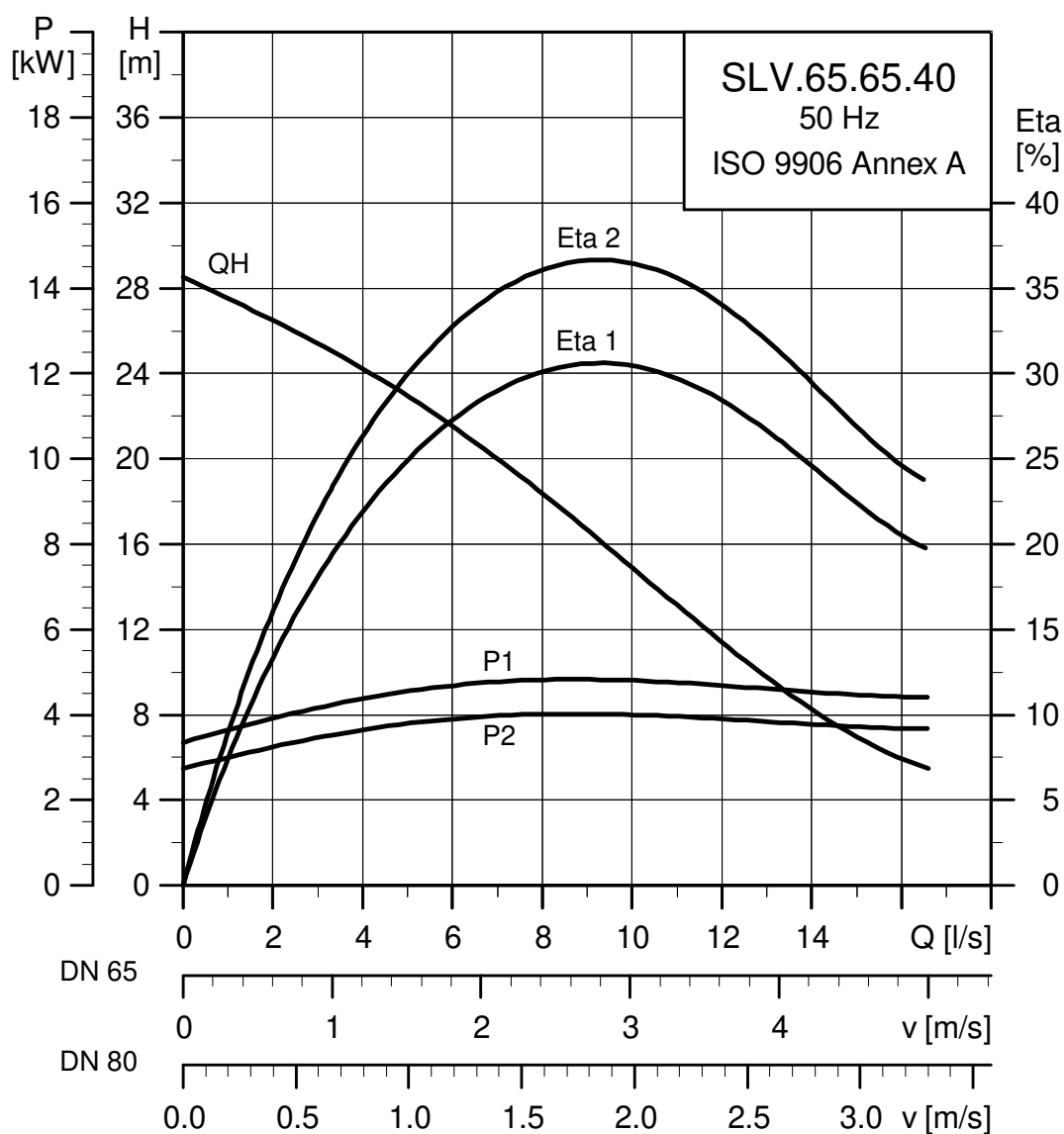
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.65.65.30.2.50E | 3x220-240V D | 3.8     | 3.0     | 2           | 2910 | DOL             | 11.8               | 104                    | 73.8 78.3 79.6         | 0.67 0.78 0.84 | 0.0098                                | 42                                     |
| SLV.65.65.30.2.51D | 3x380-415V D | 3.8     | 3.0     | 2           | 2910 | SD              | 6.8                | 59.8                   | 73.8 78.3 79.6         | 0.67 0.78 0.84 | 0.0098                                | 42                                     |
| SLV.65.65.30.2.50D | 3x380-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8                | 59.8                   | 73.8 78.3 79.6         | 0.67 0.78 0.84 | 0.0098                                | 42                                     |
| SLV.65.65.30.2.50B | 3x400-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8                | 59.8                   | 73.8 78.3 79.6         | 0.67 0.78 0.84 | 0.0098                                | 42                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

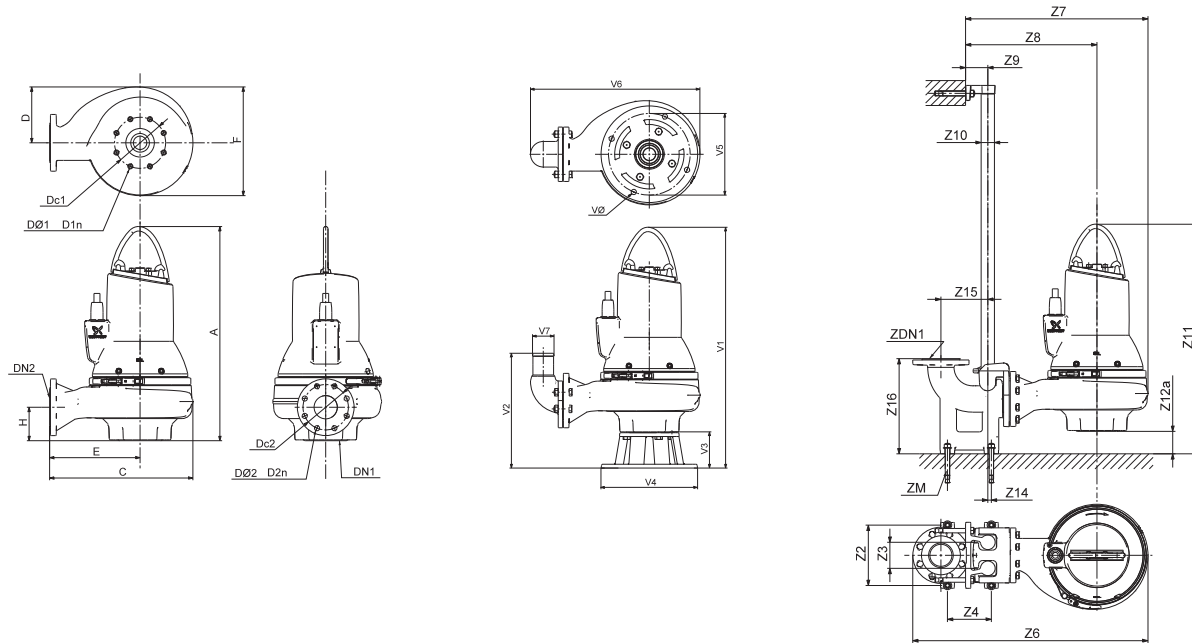
Performance curves SLV.65.65.40



TM04 3532 4608

# Technical data

## Dimension sketches SLV.65.65.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 718 | 456 | 200 | 276 | 380 | 106 | 80  | 160 | 8x18    | 65   | 145 | 4 x 18  | 117         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 210 | 95  | 140 | 790 | 604 | 424 | 81  | 1½" | 778     | 60   | 1   | 175     | 266         | 160 | 80  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 846 | 376 | 128 | 330 | 280 | 568 | 65  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.65.65.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7               | 161                    | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0126                                | 56                                     |
| SLV.65.65.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0126                                | 56                                     |
| SLV.65.65.40.2.50B | 3x400-415V D | 4.8     | 4.0     | 2           | 2925 | DOL             | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0126                                | 56                                     |

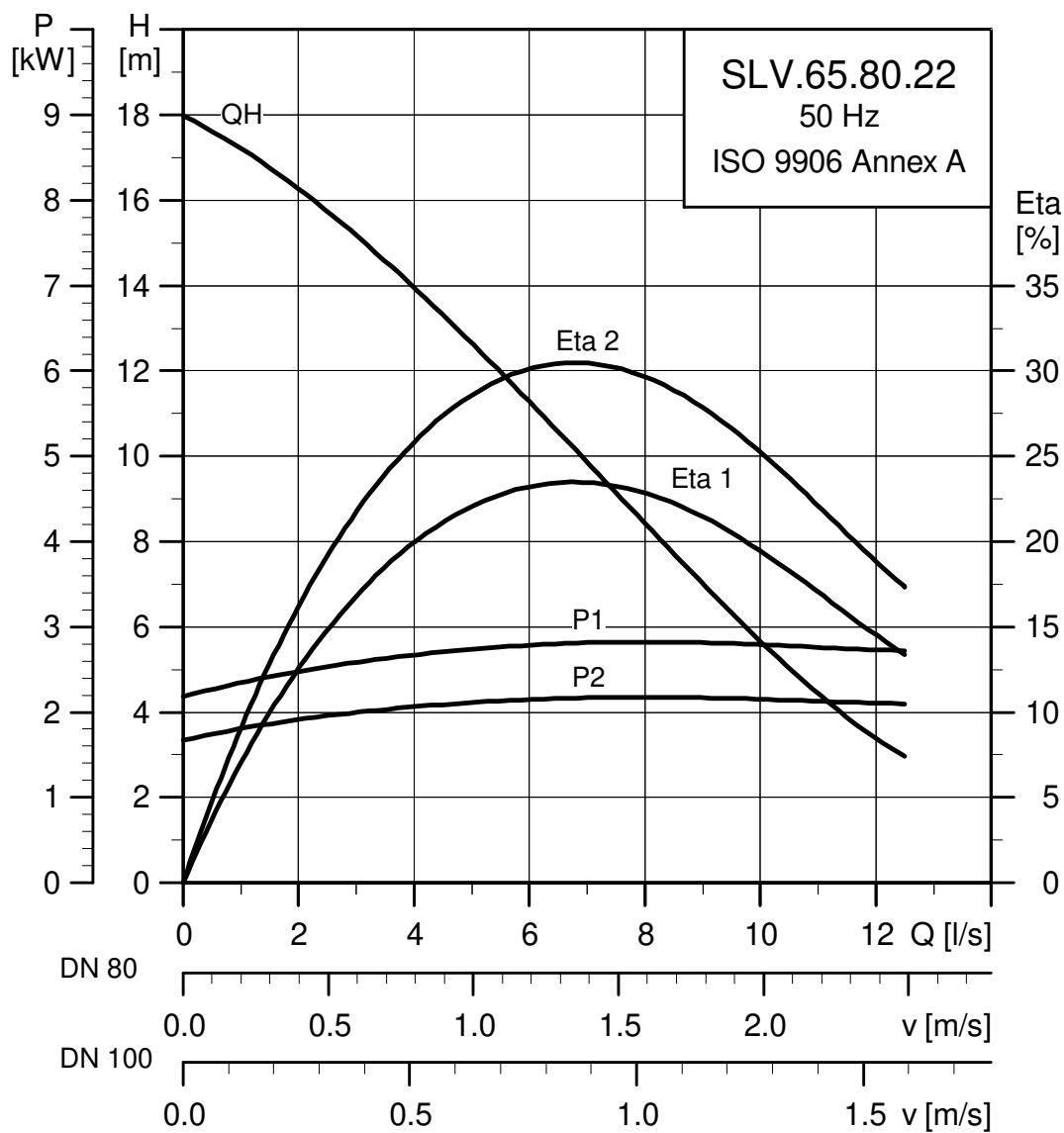
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max . number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                              | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SLV.65.80

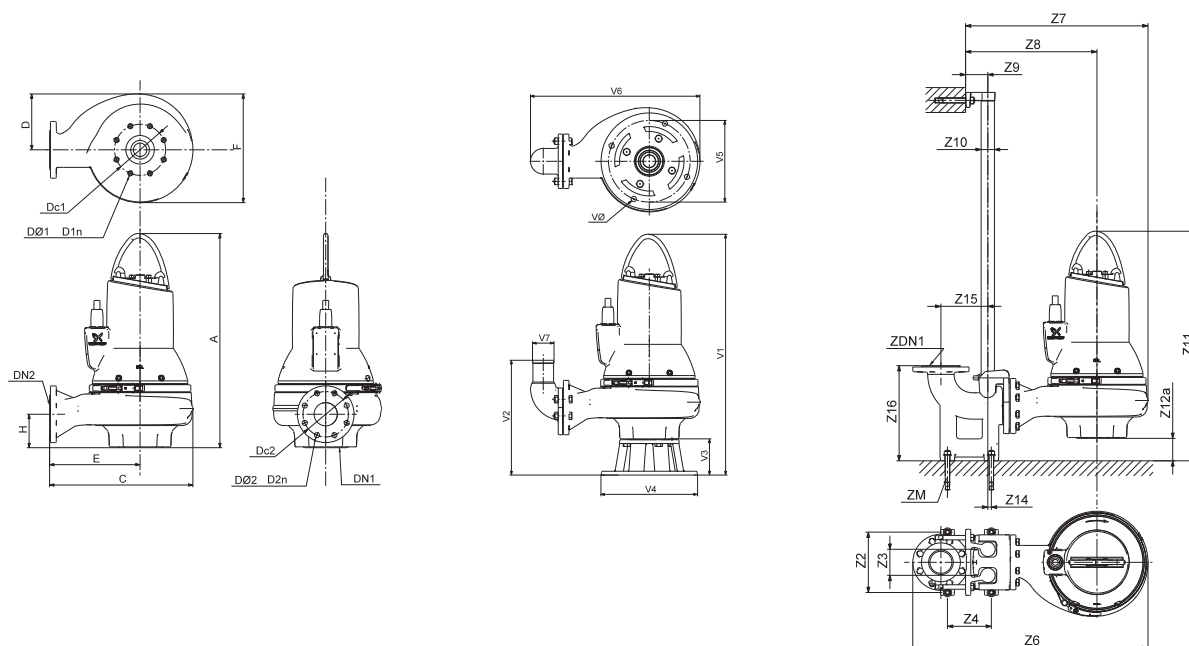
### Performance curves SLV.65.80.22



TN04 3533 4608

# Technical data

## Dimension sketches SLV.65.80.22



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 685 | 397 | 171 | 247 | 321 | 103 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 89          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 750 | 557 | 408 | 81  | 1½" | 782     | 97   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 813 |     |     | 373 |     | 128 |     | 330 |         | 280  |     | 530     |             | 80  |     | 18      |

## Electrical data

| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm²] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|--------------------------|----------------------------------------|
| SLV.65.80.22.2.50E | 3x220-240V D | 2.8     | 2.2     | 2           | 2990 | DOL             | 8.5                | 74                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0088                   | 25                                     |
| SLV.65.80.22.2.51D | 3x380-415V D | 2.8     | 2.2     | 2           | 2990 | SD              | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0088                   | 25                                     |
| SLV.65.80.22.2.50D | 3x380-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0088                   | 25                                     |
| SLV.65.80.22.2.50B | 3x400-415V Y | 2.8     | 2.2     | 2           | 2990 | DOL             | 4.9                | 43                     | 70.3 75.2 76.7         | 0.79 0.86 0.89 | 0.0088                   | 25                                     |

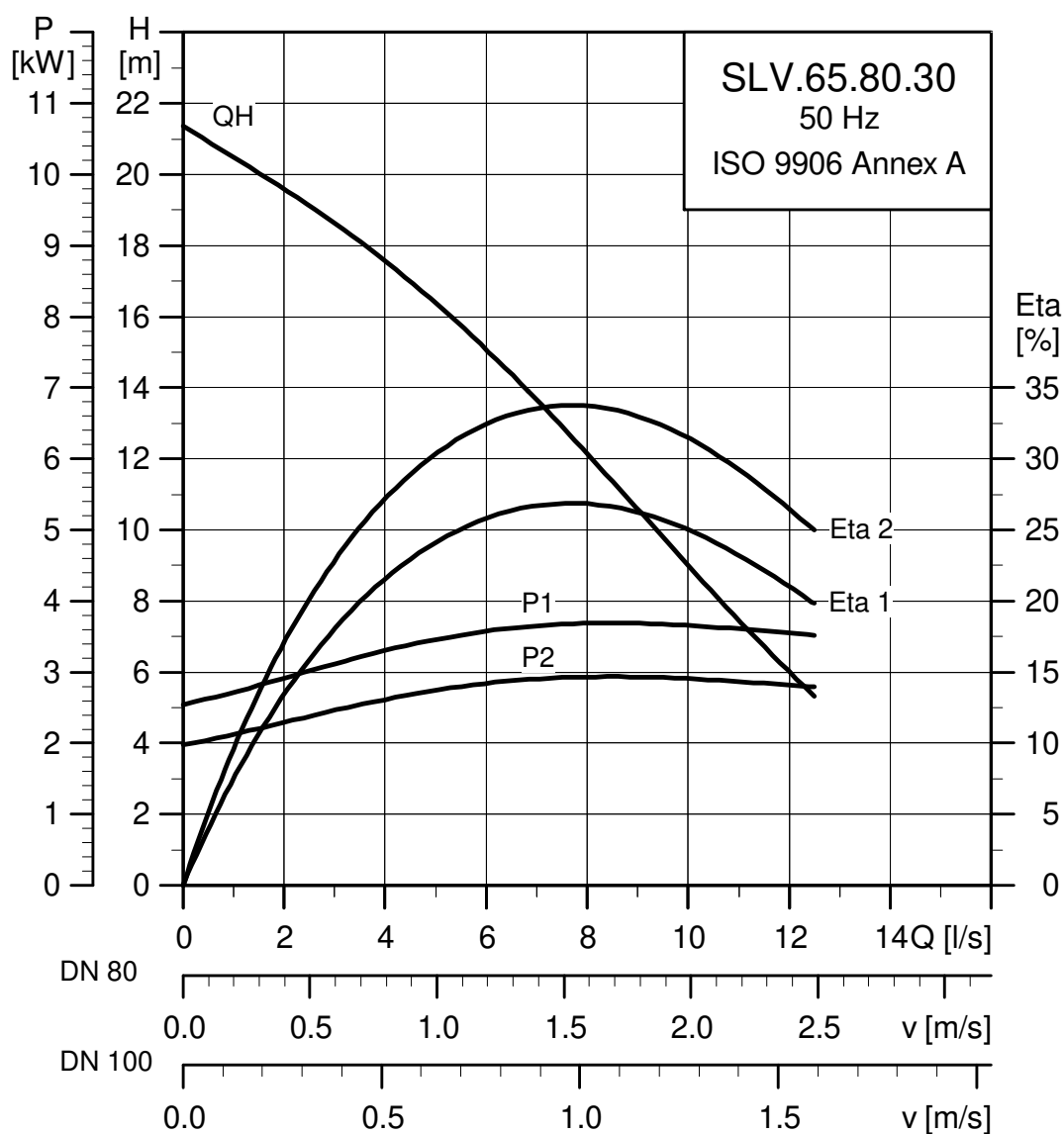
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

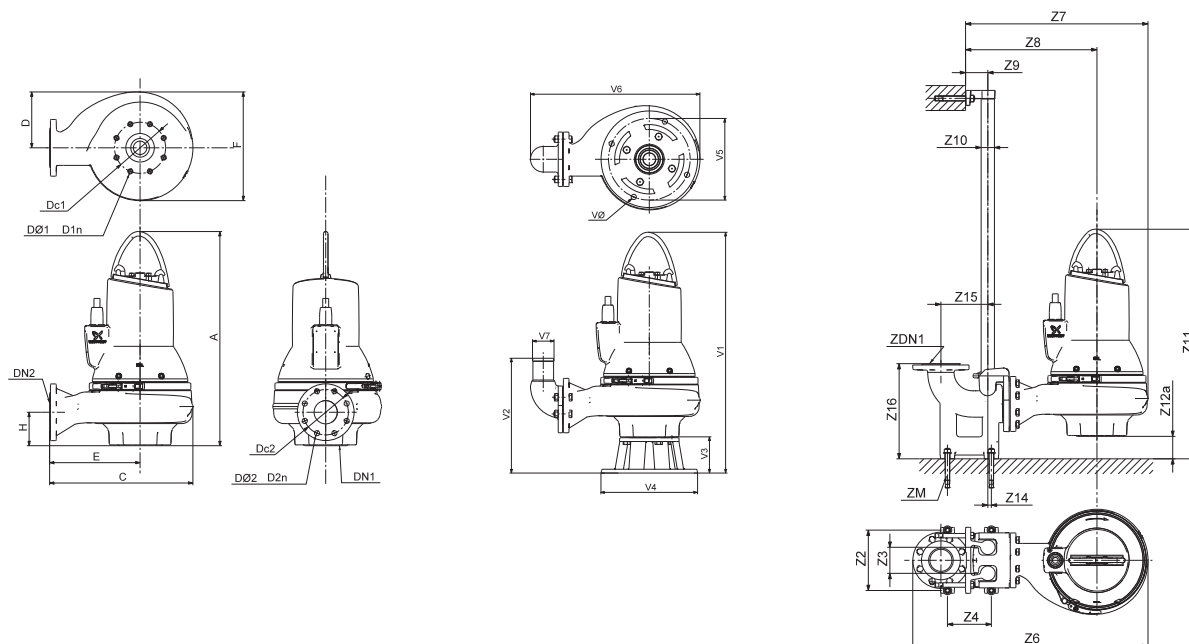
Performance curves SLV.65.80.30



TM04 3534 4608

# Technical data

## Dimension sketches SLV.65.80.30



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 685 | 397 | 171 | 247 | 321 | 103 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 92          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 750 | 557 | 408 | 81  | 1½" | 782     | 97   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 813 |     |     | 373 |     | 128 |     | 330 |         | 280  |     | 530     |             | 80  |     | 18      |

## Electrical data

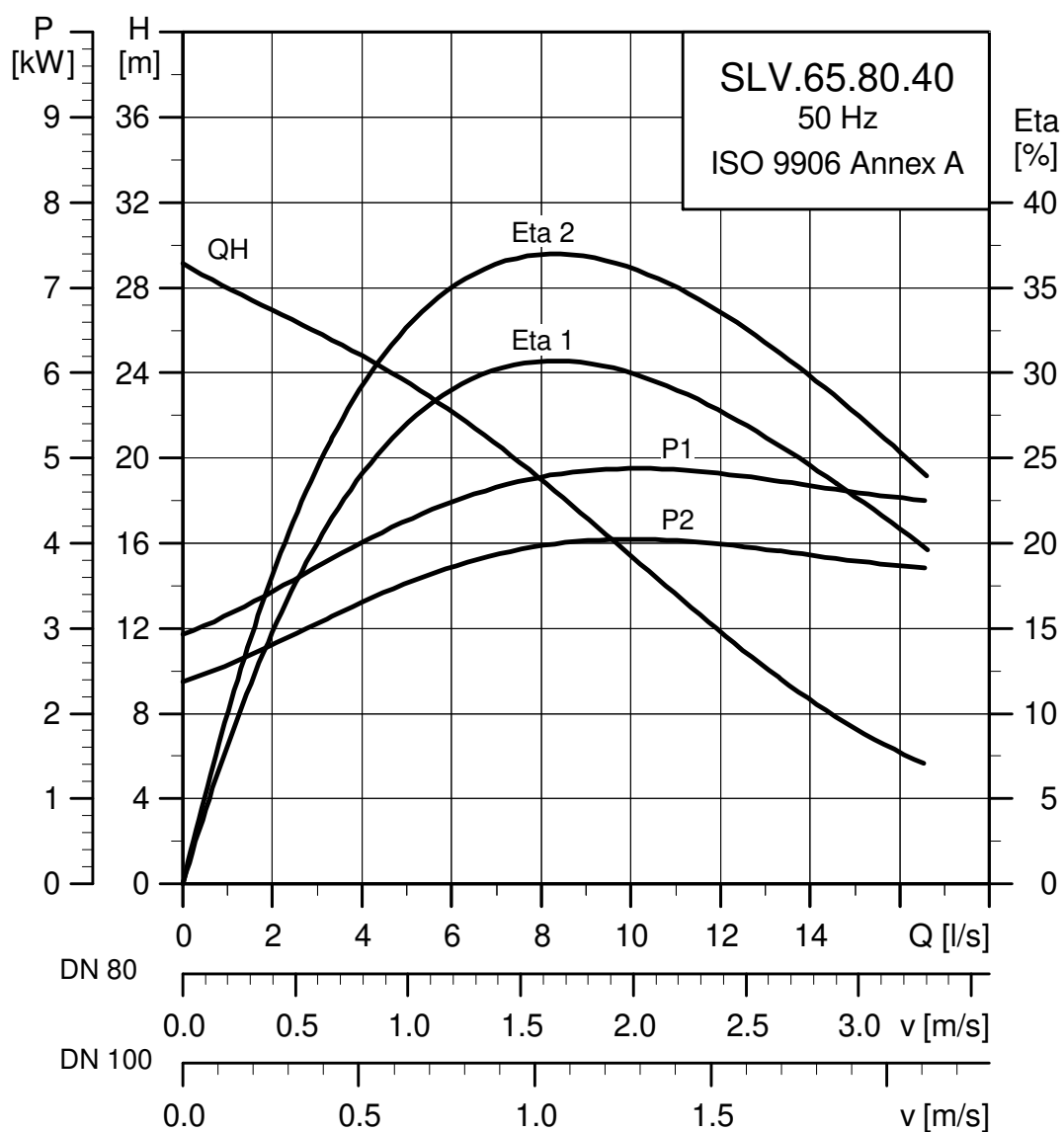
| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
| SLV.65.80.30.2.50E | 3x220-240V D | 3.8     | 3.0     | 2           | 2910 | DOL             | 11.8               | 104                    | 73.8                   | 78.3 | 79.6 | 0.67  | 0.78 | 0.84 | 0.0098                                | 42                                     |
| SLV.65.80.30.2.51D | 3x380-415V D | 3.8     | 3.0     | 2           | 2910 | SD              | 6.8                | 59.8                   | 73.8                   | 78.3 | 79.6 | 0.67  | 0.78 | 0.84 | 0.0098                                | 42                                     |
| SLV.65.80.30.2.50D | 3x380-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8                | 59.8                   | 73.8                   | 78.3 | 79.6 | 0.67  | 0.78 | 0.84 | 0.0098                                | 42                                     |
| SLV.65.80.30.2.50B | 3x400-415V Y | 3.8     | 3.0     | 2           | 2910 | DOL             | 6.8                | 59.8                   | 73.8                   | 78.3 | 79.6 | 0.67  | 0.78 | 0.84 | 0.0098                                | 42                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

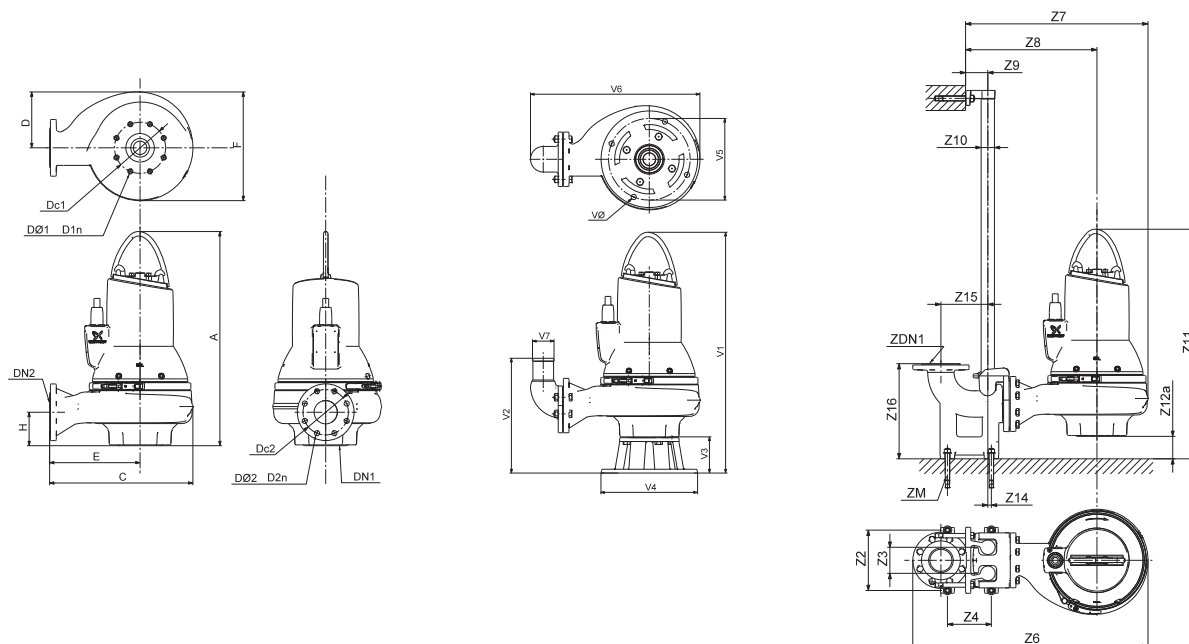
Performance curves SLV.65.80.40



TM04 3535 4608

# Technical data

## Dimension sketches SLV.65.80.40



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 718 | 455 | 200 | 276 | 379 | 106 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 117         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 808 | 616 | 437 | 81  | 1½" | 812     | 94   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 846 |     | 376 |     | 128 |     | 330 |     | 280     |      | 573 |         | 80          |     | 18  |         |

## Electrical data

| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      |      | Cos φ |        |    | Moment of inertia [kgm²] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|------|-------|--------|----|--------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4  | 1/1   |        |    |                          |                                        |
| SLV.65.80.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7           | 161                | 75.8                   | 80.9 | 82.7 | 0.71 | 0.82 | 0.87  | 0.0126 | 56 |                          |                                        |
| SLV.65.80.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5            | 93                 | 75.8                   | 80.9 | 82.7 | 0.71 | 0.82 | 0.87  | 0.0126 | 56 |                          |                                        |
| SLV.65.80.40.2.50B | 3x400-415V D | 4.8     | 4.0     | 2           | 2925 | DOL             | 8.5            | 93                 | 75.8                   | 80.9 | 82.7 | 0.71 | 0.82 | 0.87  | 0.0126 | 56 |                          |                                        |

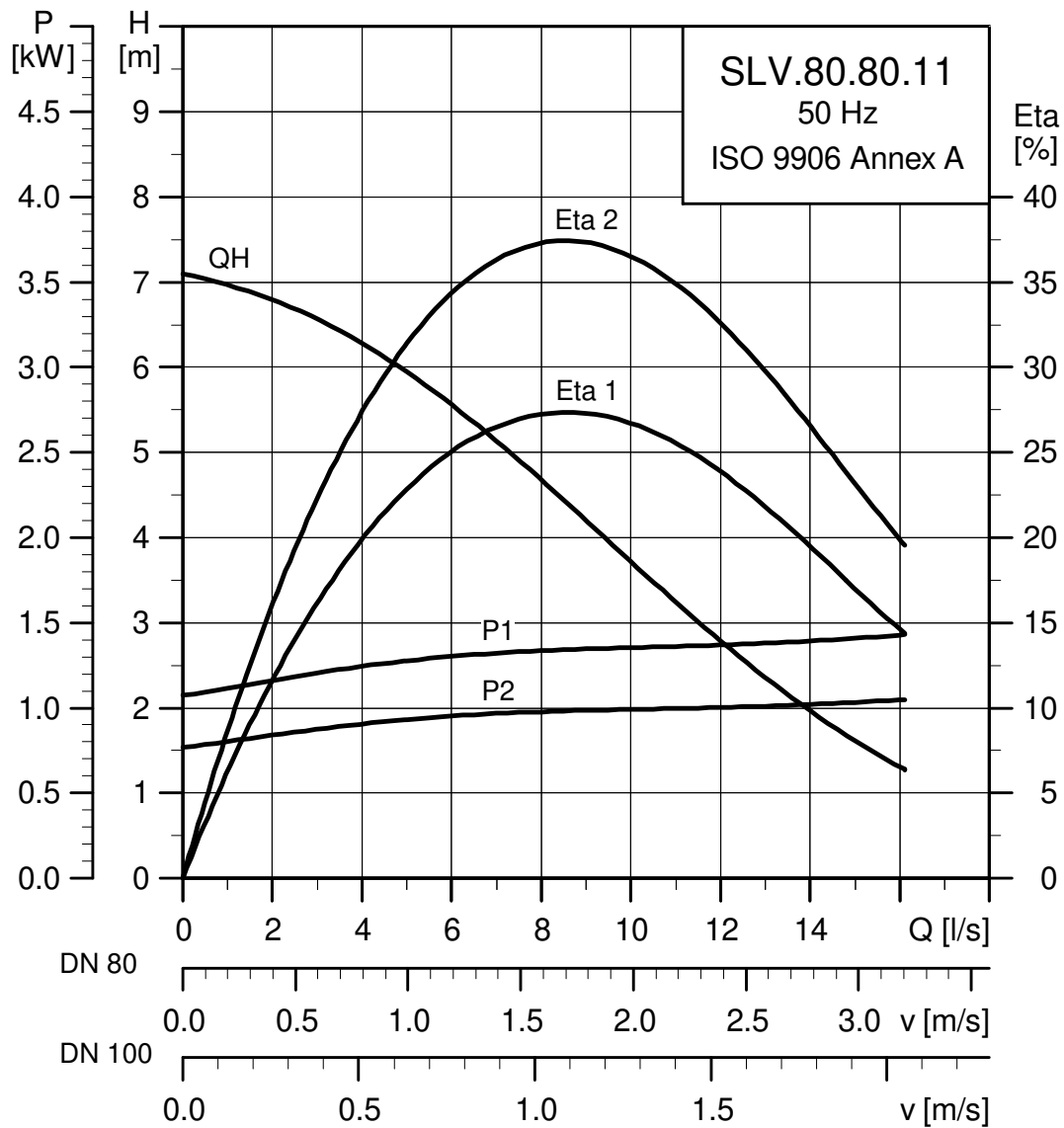
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 65                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SLV.80.80

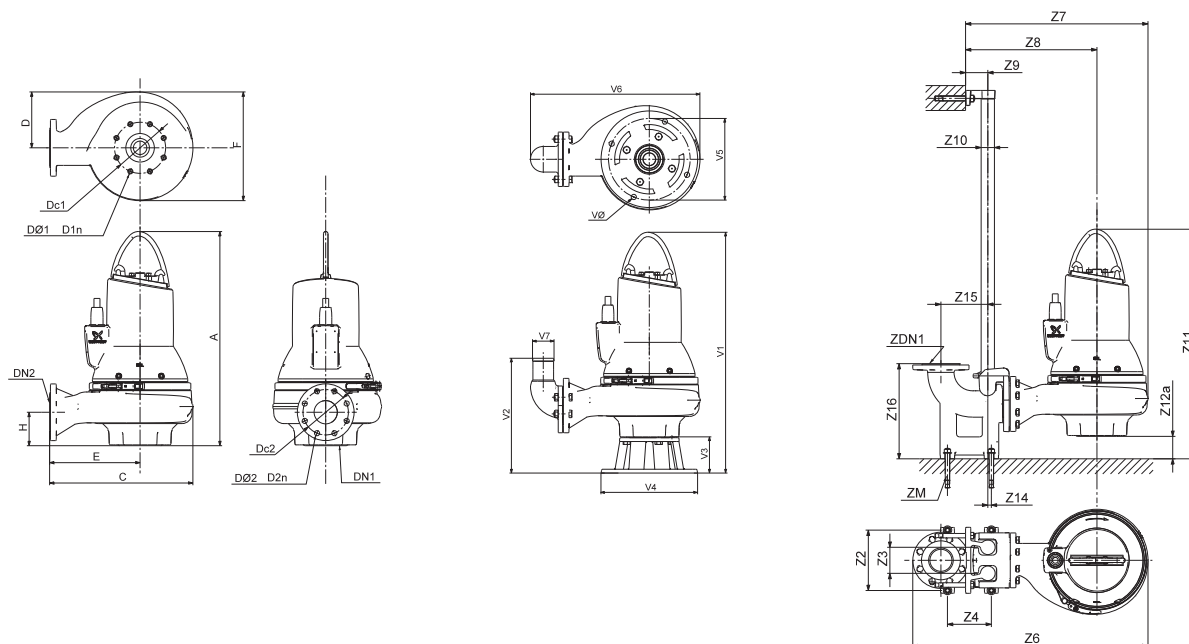
### Performance curves SLV.80.80.11



TM04 3536 4608

# Technical data

## Dimension sketches SLV.80.80.11



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 409 | 171 | 241 | 339 | 109 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 94          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 762 | 569 | 402 | 81  | 1½" | 802     | 91   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | V8  |         |      |     |         |             |     |     |         |
| 839 | 379 | 128 | 330 | 280 | 527 | 80  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

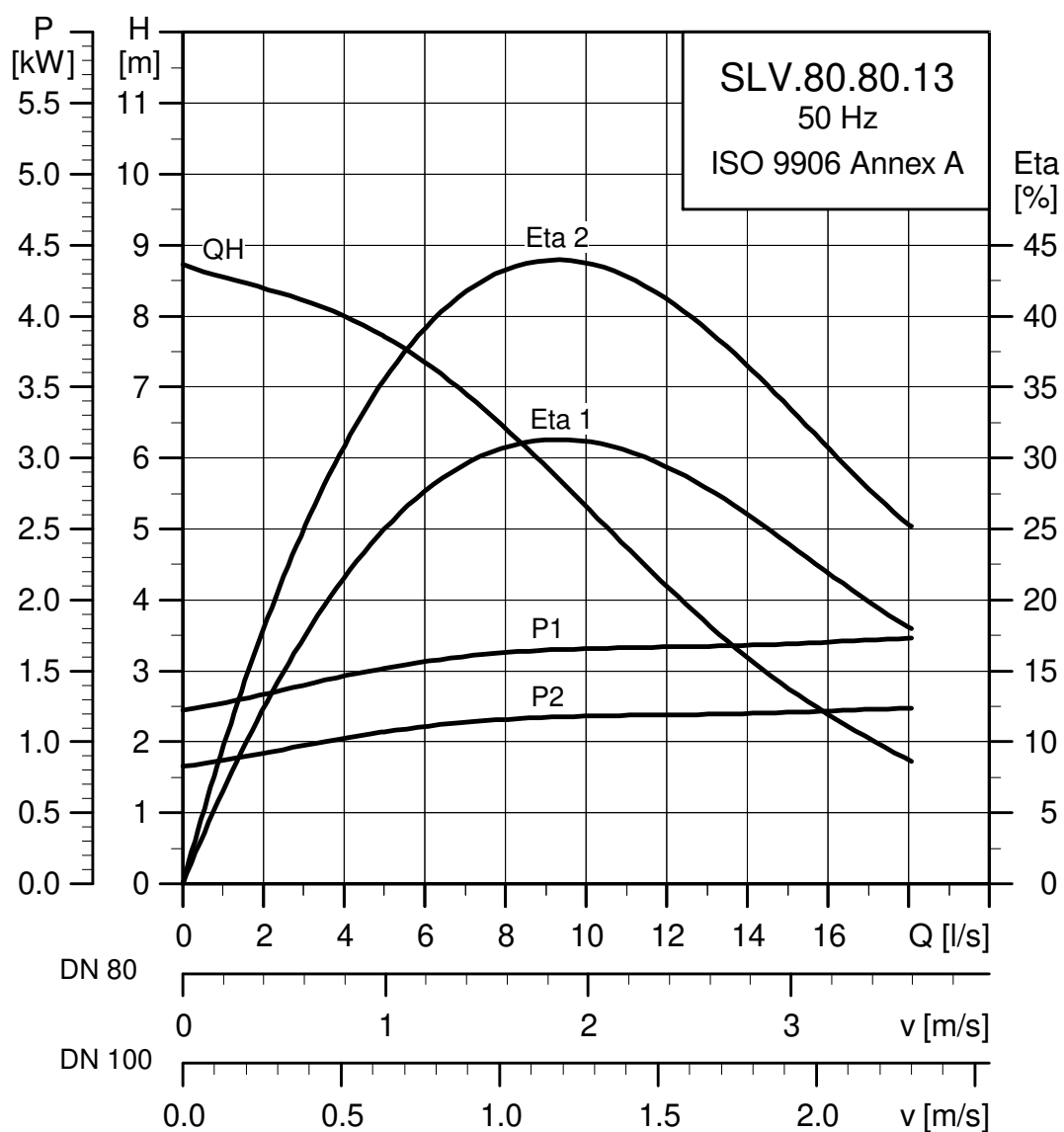
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.80.11.4.50E | 3x220-240V D | 1.5     | 1.1     | 4           | 1450 | DOL             | 5.1                | 34                     | 67.2 72.7 75.2         | 0.58 0.68 0.75 | 0.0142                                | 26                                     |
| SLV.80.80.11.4.50D | 3x380-415V Y | 1.5     | 1.1     | 4           | 1450 | DOL             | 3.0                | 20                     | 67.2 72.7 75.2         | 0.58 0.68 0.75 | 0.0142                                | 26                                     |
| SLV.80.80.11.4.50B | 3x400-415V Y | 1.5     | 1.1     | 4           | 1450 | DOL             | 3.0                | 20                     | 67.2 72.7 75.2         | 0.58 0.68 0.75 | 0.0142                                | 26                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

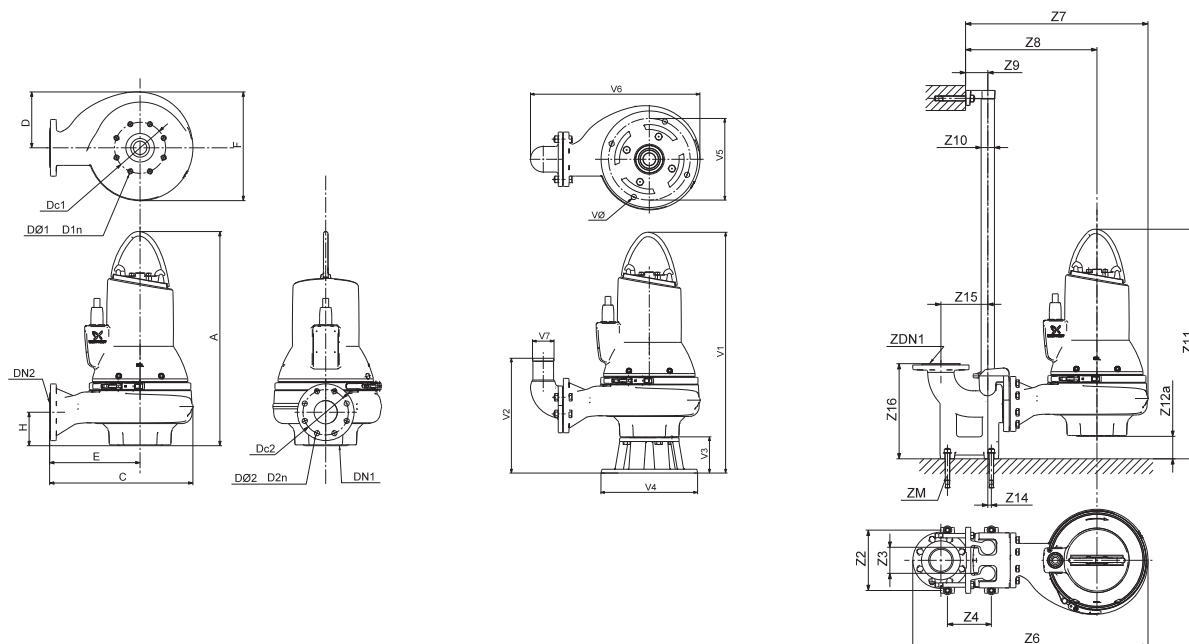
Performance curves SLV.80.80.13



/TM04 3537 4608

# Technical data

## Dimension sketches SLV.80.80.13



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 409 | 171 | 241 | 339 | 109 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 94          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 762 | 569 | 402 | 81  | 1½" | 802     | 91   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 839 |     |     | 379 |     | 128 |     | 330 |         | 280  |     | 527     |             | 80  |     | 18      |

## Electrical data

| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|--------|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |        |                                       |                                        |
| SLV.80.80.13.4.50E | 3x220-240V D | 1.8     | 1.3     | 4           | 1460 | DOL             | 6.2            | 26                 | 68.2                   | 74.2 | 76.4 | 0.53 | 0.65  | 0.73 | 0.0165 | 34                                    |                                        |
| SLV.80.80.13.4.50D | 3x380-415V Y | 1.8     | 1.3     | 4           | 1460 | DOL             | 3.6            | 26                 | 68.2                   | 74.2 | 76.4 | 0.53 | 0.65  | 0.73 | 0.0165 | 34                                    |                                        |
| SLV.80.80.13.4.50B | 3x400-415V Y | 1.8     | 1.3     | 4           | 1460 | DOL             | 3.6            | 22                 | 68.2                   | 74.2 | 76.4 | 0.53 | 0.65  | 0.73 | 0.0165 | 34                                    |                                        |

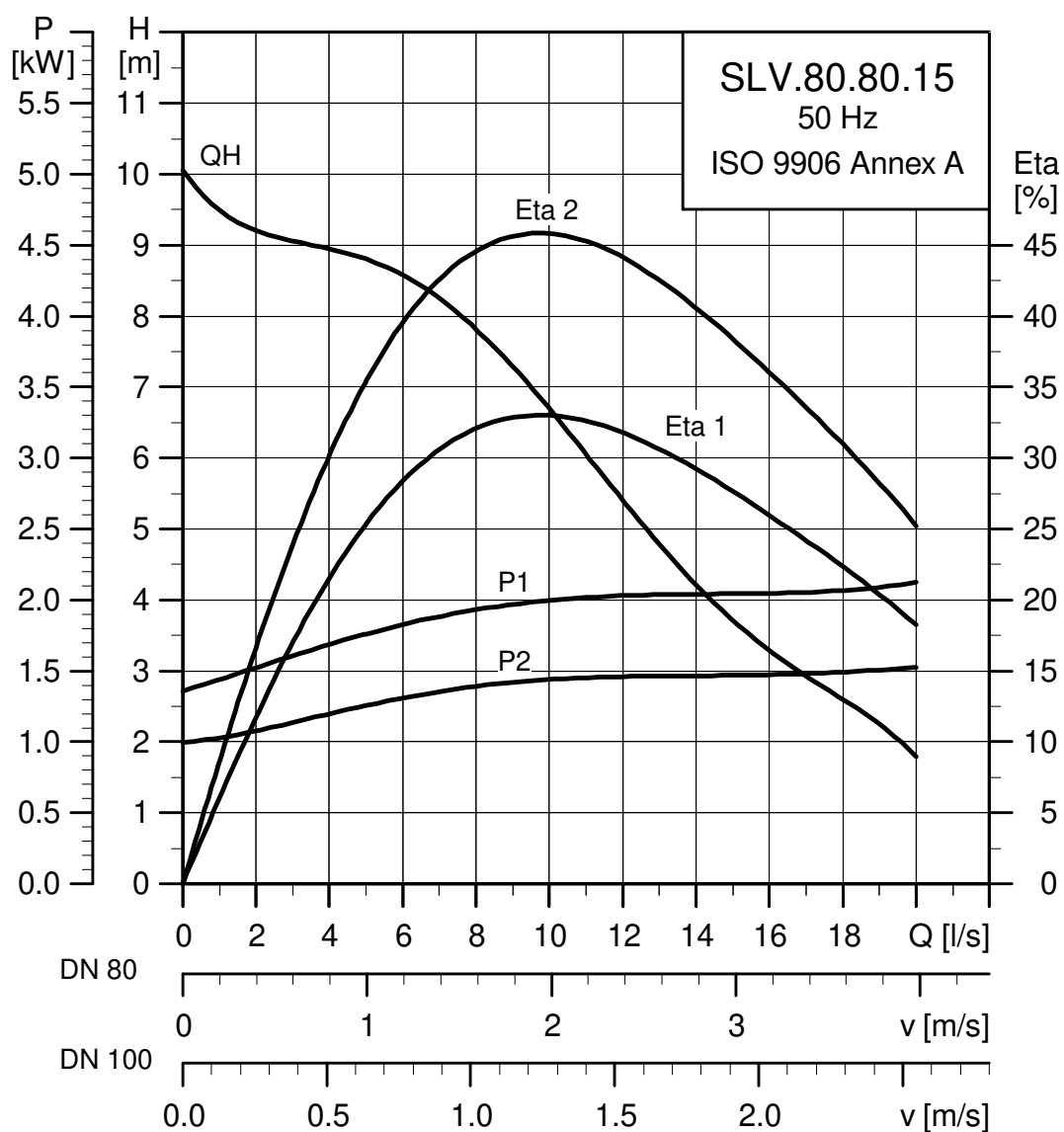
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max . number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                              | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

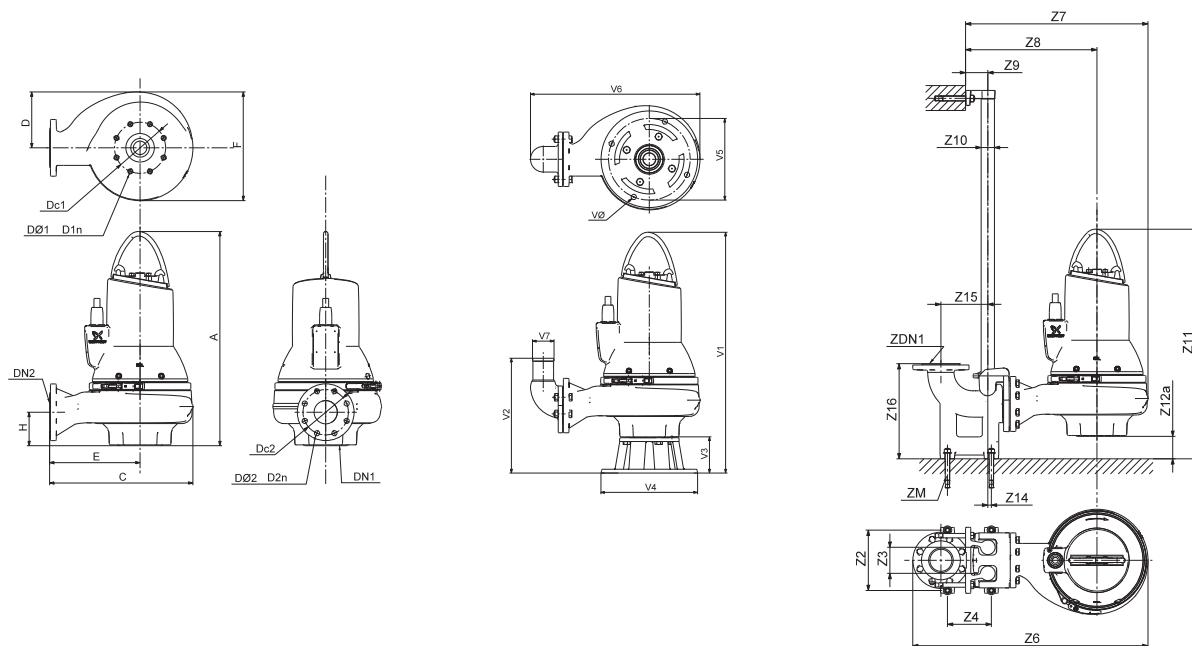
Performance curves SLV.80.80.15



TM04 3538 4608

# Technical data

## Dimension sketches SLV.80.80.15



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 409 | 171 | 241 | 339 | 109 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 94          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 762 | 569 | 402 | 81  | 1½" | 802     | 91   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 839 | 379 | 128 | 330 | 280 | 527 | 80  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

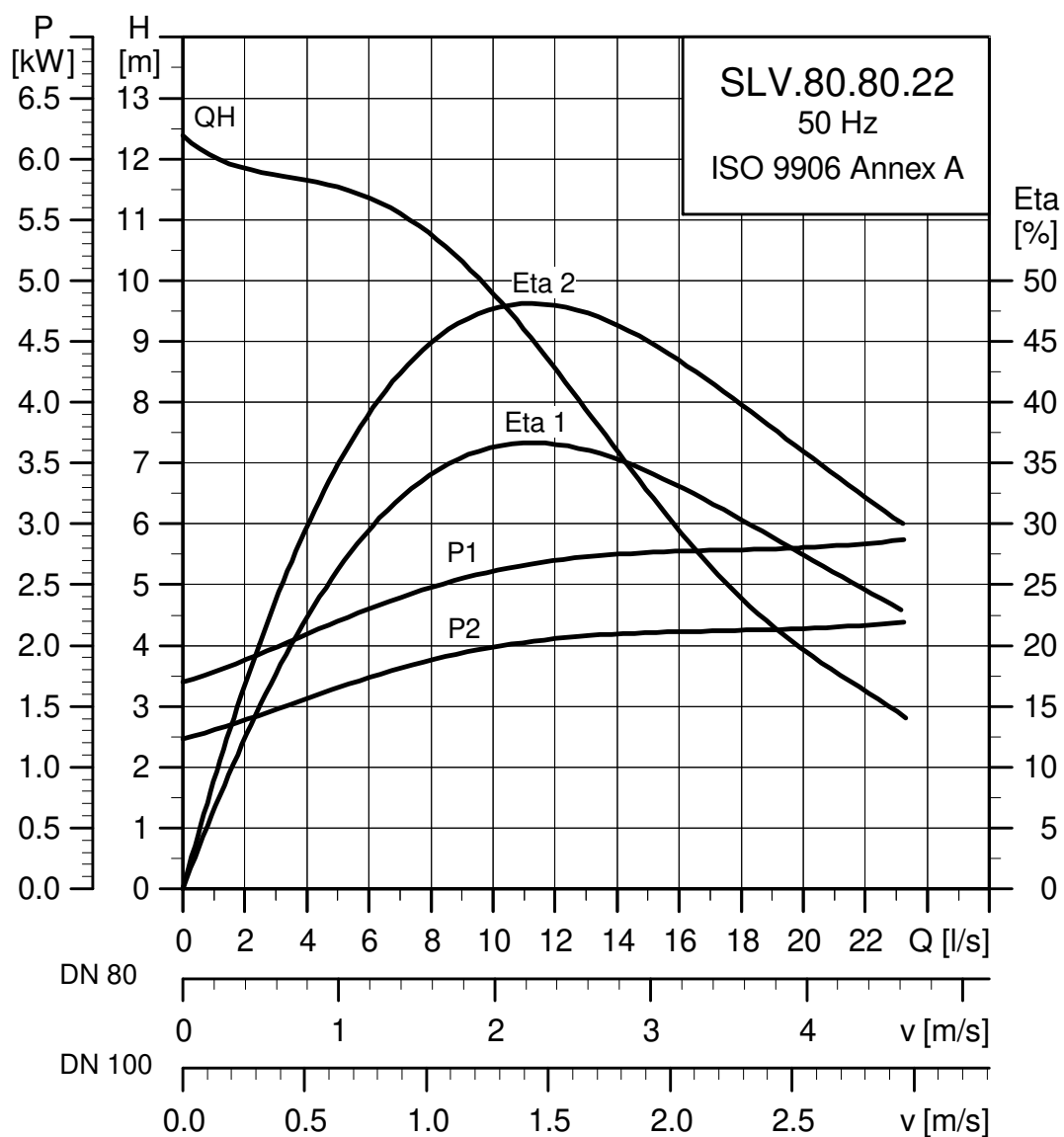
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.80.15.4.50E | 3x220-240V D | 2.1     | 1.5     | 4           | 1450 | DOL             | 6.8                | 45                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0185                                | 34                                     |
| SLV.80.80.15.4.50D | 3x380-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9                | 26                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0185                                | 34                                     |
| SLV.80.80.15.4.50B | 3x400-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9                | 26                     | 70.6 75.4 77.1         | 0.57 0.68 0.76 | 0.0185                                | 34                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

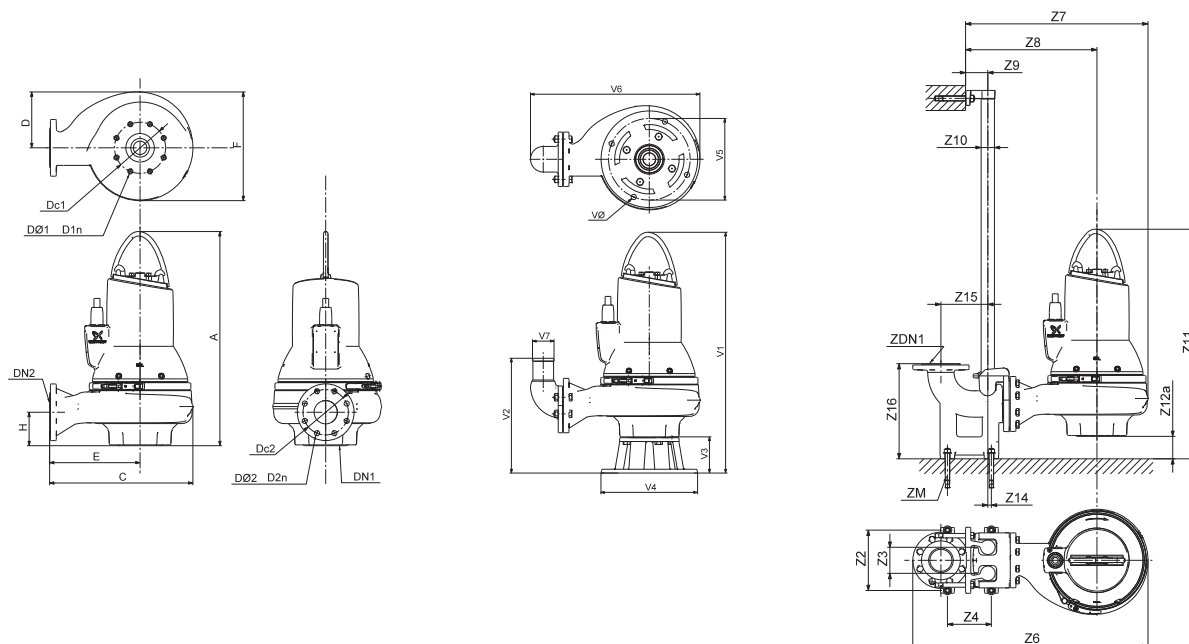
Performance curves SLV.80.80.22



TM04 3539 4608

# Technical data

## Dimension sketches SLV.80.80.22



| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 409 | 171 | 241 | 339 | 109 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 106         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 762 | 569 | 402 | 81  | 1½" | 802     | 91   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 839 |     | 379 |     | 128 |     | 330 |     | 280     |      | 527 |         | 80          |     | 18  |         |

## Electrical data

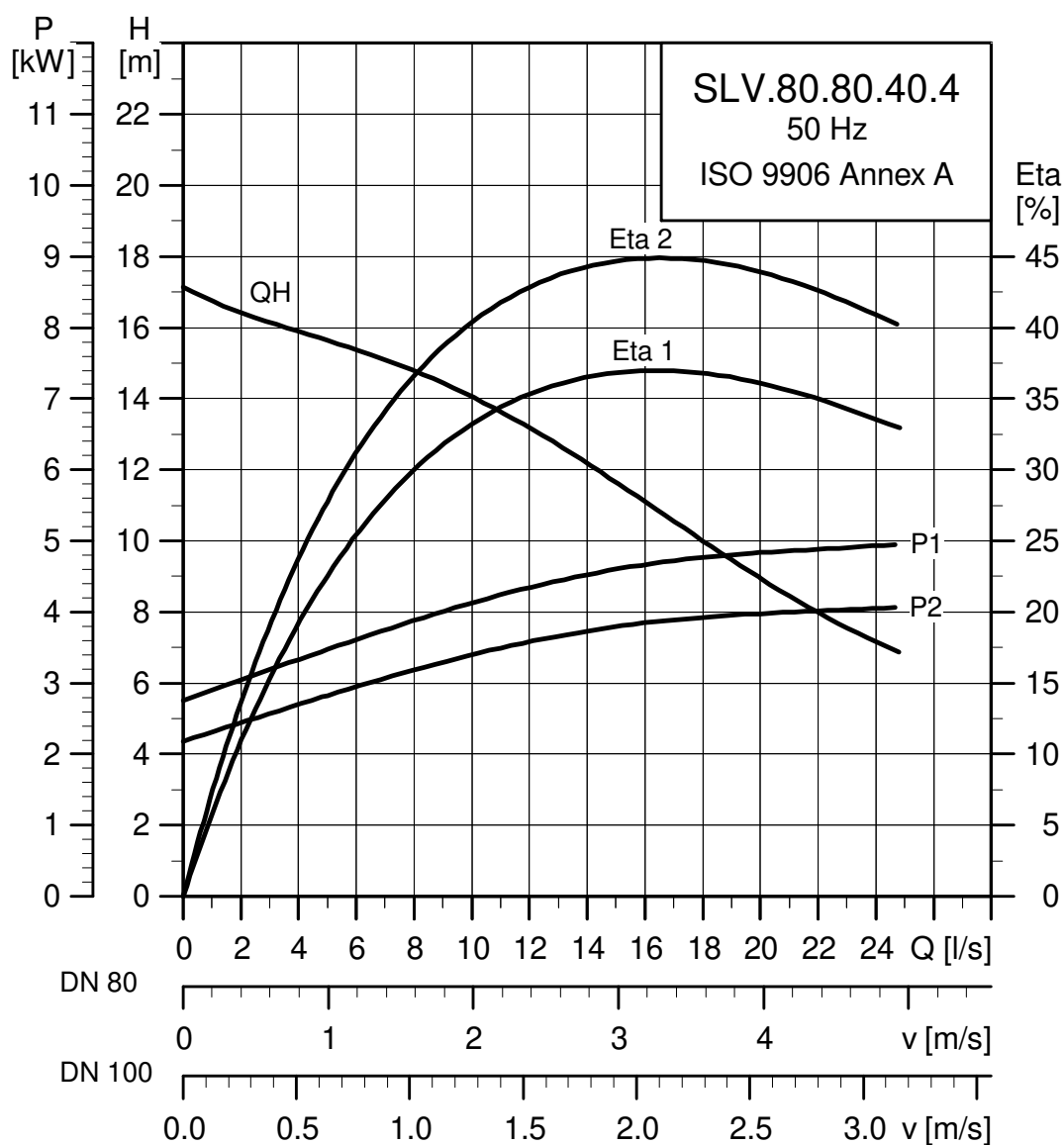
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |                                       |                                        |
| SLV.80.80.22.4.50E | 3x220-240V D | 2.9     | 2.2     | 4           | 1460 | DOL             | 9.1            | 66                 | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.80.22.4.51D | 3x380-415V D | 2.9     | 2.2     | 4           | 1460 | SD              | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.80.22.4.50D | 3x380-415V Y | 2.9     | 2.2     | 4           | 1460 | DOL             | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.80.22.4.50B | 3x400-415V Y | 2.9     | 2.2     | 4           | 1460 | DOL             | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

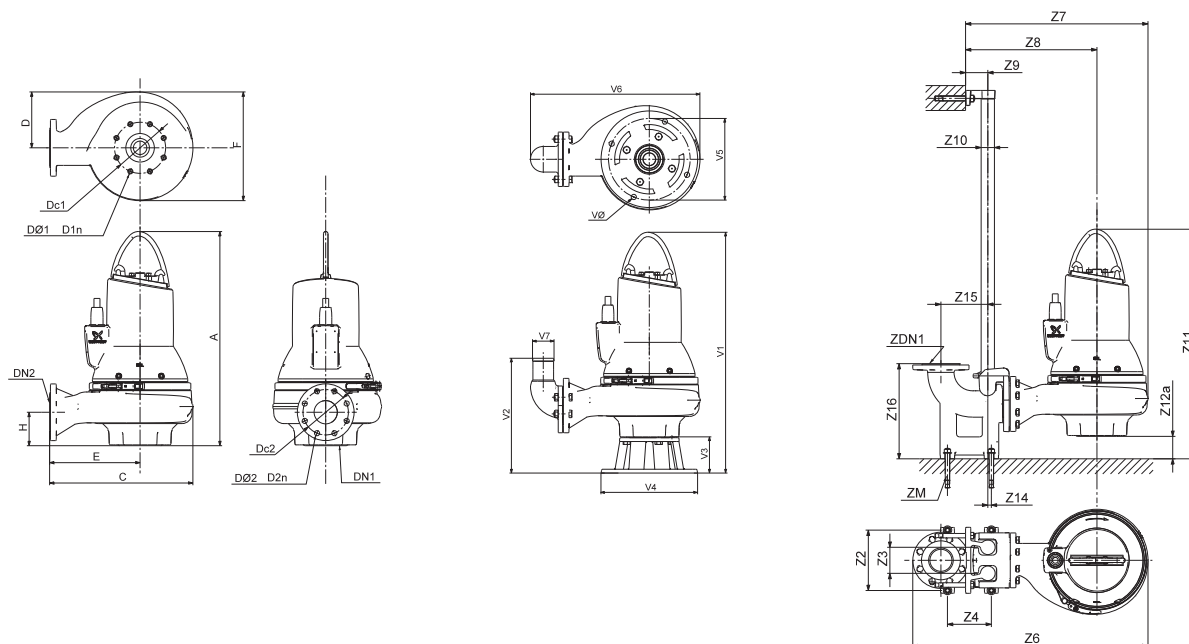
Performance curves SLV.80.80.40 - 4 Pole



TM04 3540 4608

# Technical data

## Dimension sketches SLV.80.80.40 - 4 Pole



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 744 | 456 | 200 | 276 | 380 | 104 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 121         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 809 | 617 | 437 | 81  | 1½" | 840     | 96   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 872 |     |     | 374 |     | 128 |     | 330 |         | 280  |     | 574     |             | 80  |     | 18      |

## Electrical data

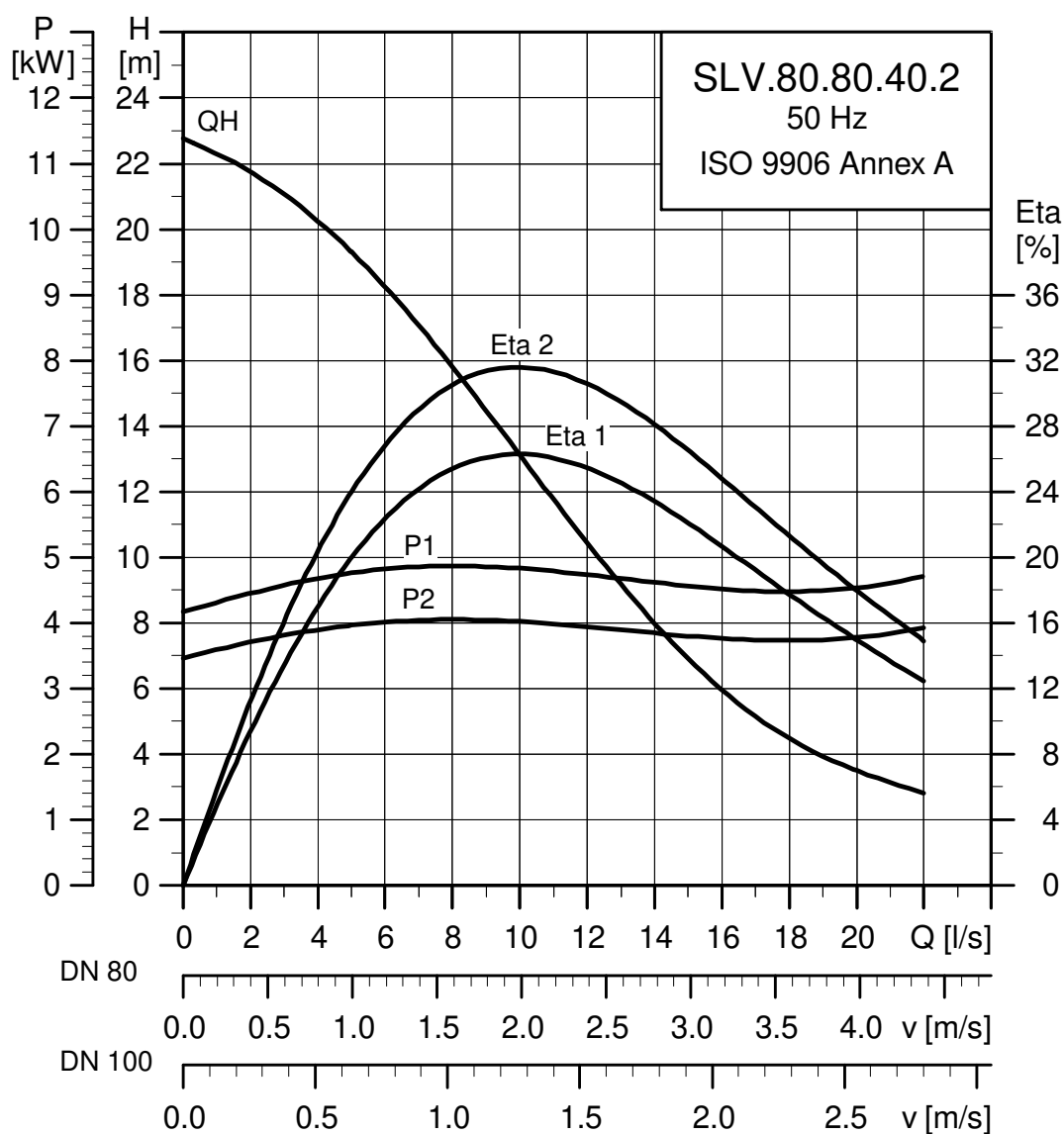
| Pump type          | Voltage [V]  | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.80.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9               | 88                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.0479                                | 90                                     |
| SLV.80.80.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7                | 51                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.0479                                | 90                                     |
| SLV.80.80.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7                | 51                     | 78.6 82.3 83.6         | 0.53 0.66 0.75 | 0.0479                                | 90                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

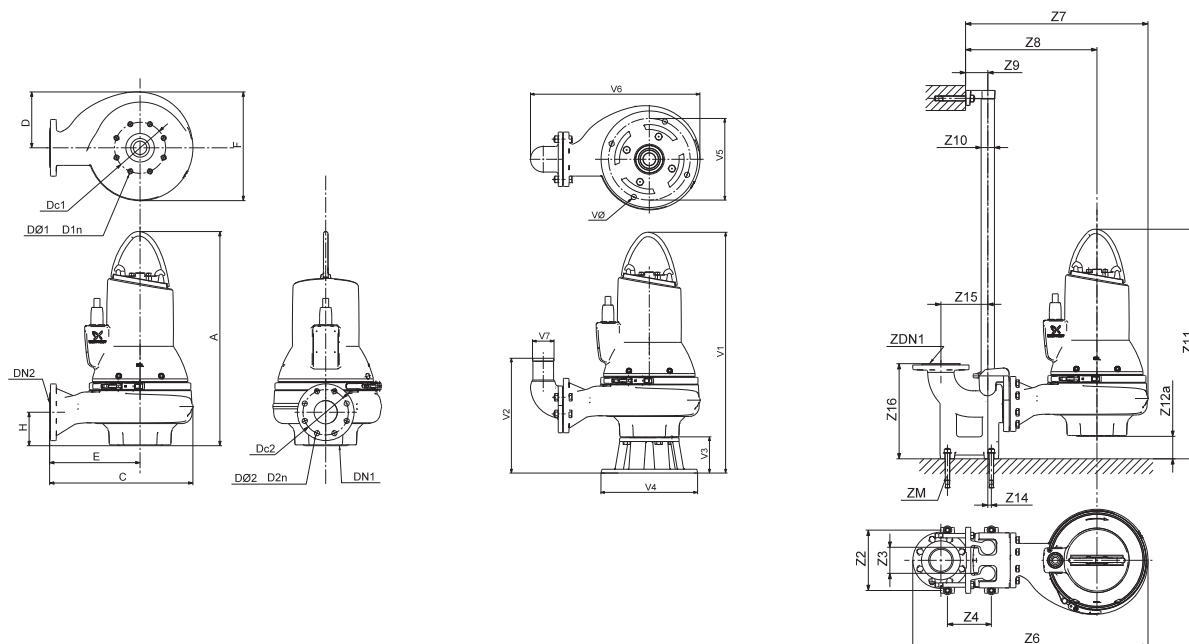
Performance curves SLV.80.80.40 - 2 Pole



TM04 3541 4608

# Technical data

## Dimension sketches SLV.80.80.40 - 2 Pole



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 748 | 460 | 200 | 267 | 393 | 109 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 134         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 813 | 620 | 428 | 81  | 1½" | 839     | 91   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 876 |     |     | 379 |     | 128 |     | 330 |         | 280  |     | 578     |             | 80  |     | 18      |

## Electrical data

| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.80.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7               | 161                    | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |
| SLV.80.80.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |
| SLV.80.80.40.2.50B | 3x400-415V D | 4.8     | 4.0     | 2           | 2925 | DOL             | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |

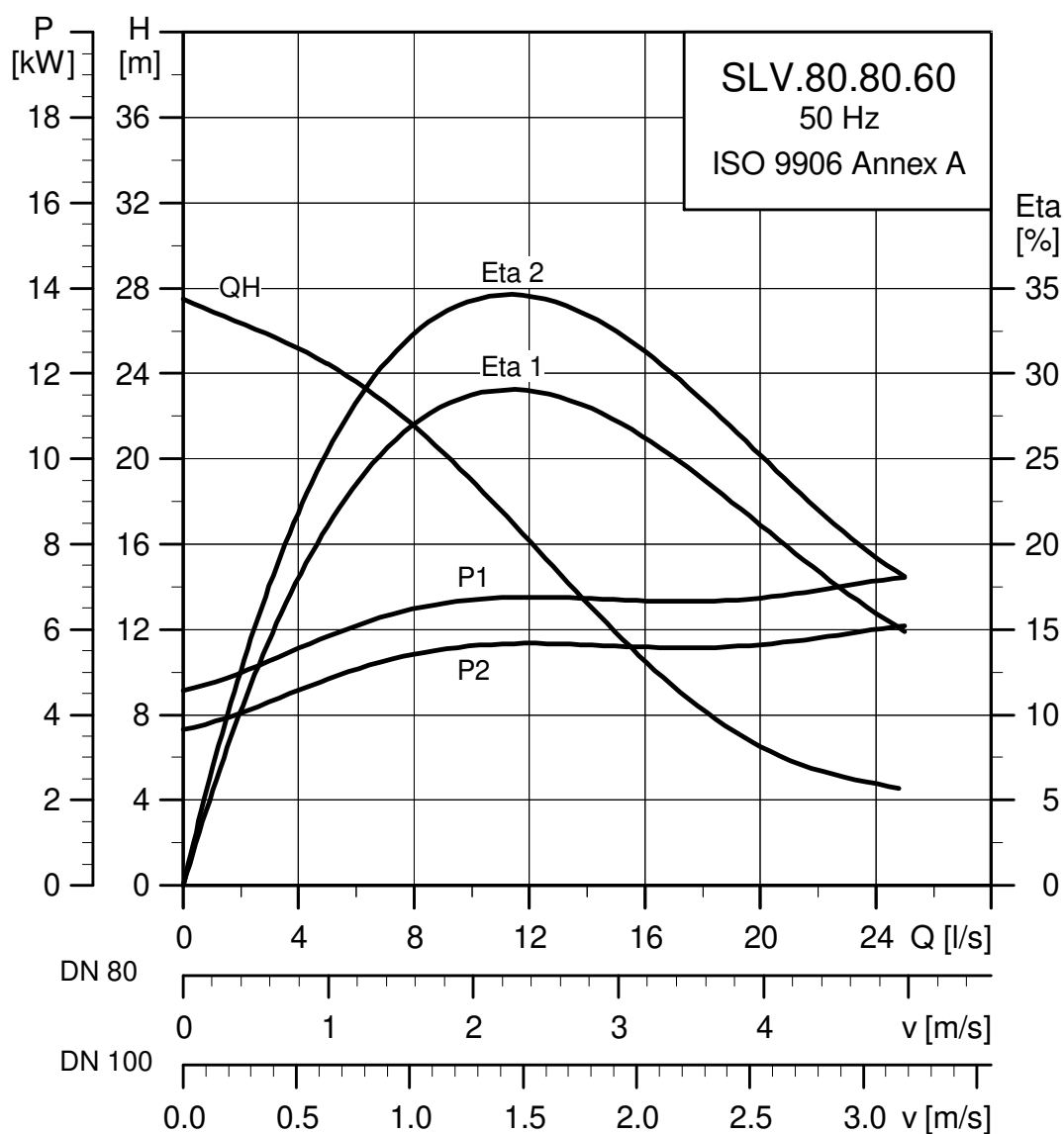
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

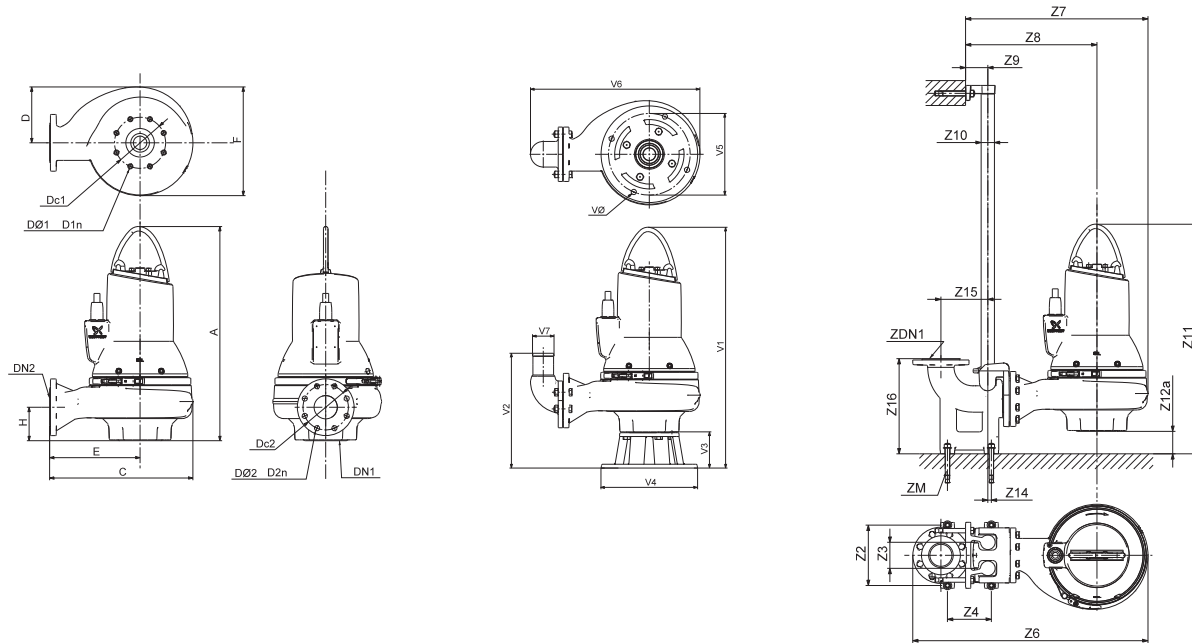
Performance curves SLV.80.80.60



TM04 3542 4608

# Technical data

## Dimension sketches SLV.80.80.60



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |       |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|-------|
| 751 | 456 | 200 | 276 | 380 | 104 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 140         |     |     |       |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM    |
| 220 | 95  | 160 | 809 | 617 | 437 | 81  | 1½" | 847     | 96   | 13  | 171     | 345         | 160 | 80  | 4XM16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |       |
| 879 |     | 374 |     | 128 |     | 330 |     | 280     |      | 574 |         | 80          |     | 18  |       |

## Electrical data

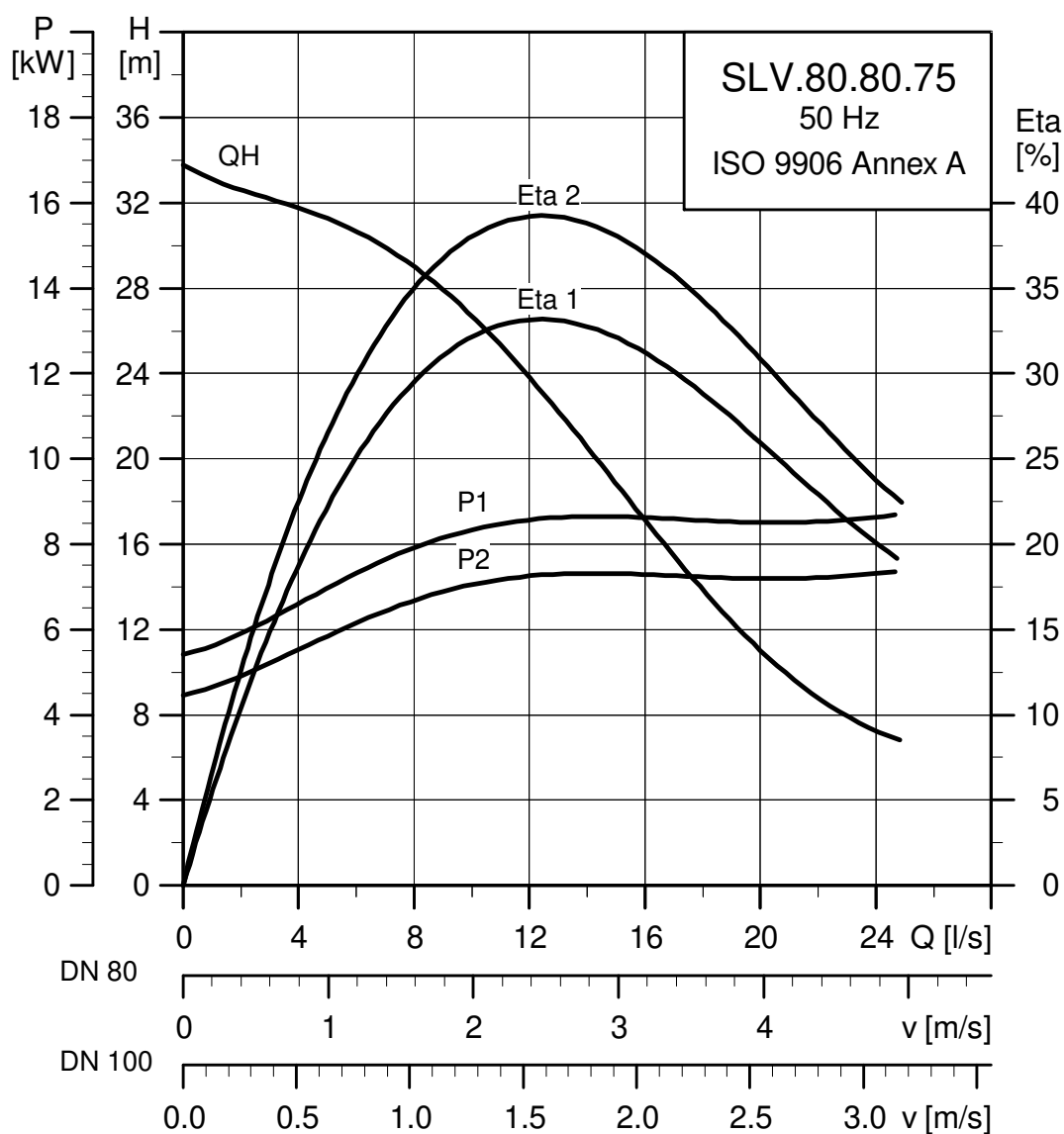
| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      | Cos φ  |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|------|--------|----|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1  |        |    |                                       |                                        |
| SLV.80.80.60.2.51E | 3x220-240V D | 6.9     | 6.0     | 2           | 2940 | SD              | 21.7           | 211 | 81.9               | 85.2 | 86.4                   | 0.68 | 0.78 | 0.84 | 0.0190 | 83 |                                       |                                        |
| SLV.80.80.60.2.51D | 3x380-415V D | 6.9     | 6.0     | 2           | 2940 | SD              | 12.5           | 122 | 81.9               | 85.2 | 86.4                   | 0.68 | 0.78 | 0.84 | 0.0190 | 83 |                                       |                                        |
| SLV.80.80.60.2.50B | 3x400-415V D | 6.9     | 6.0     | 2           | 2940 | DOL             | 12.5           | 122 | 81.9               | 85.2 | 86.4                   | 0.68 | 0.78 | 0.84 | 0.0190 | 83 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

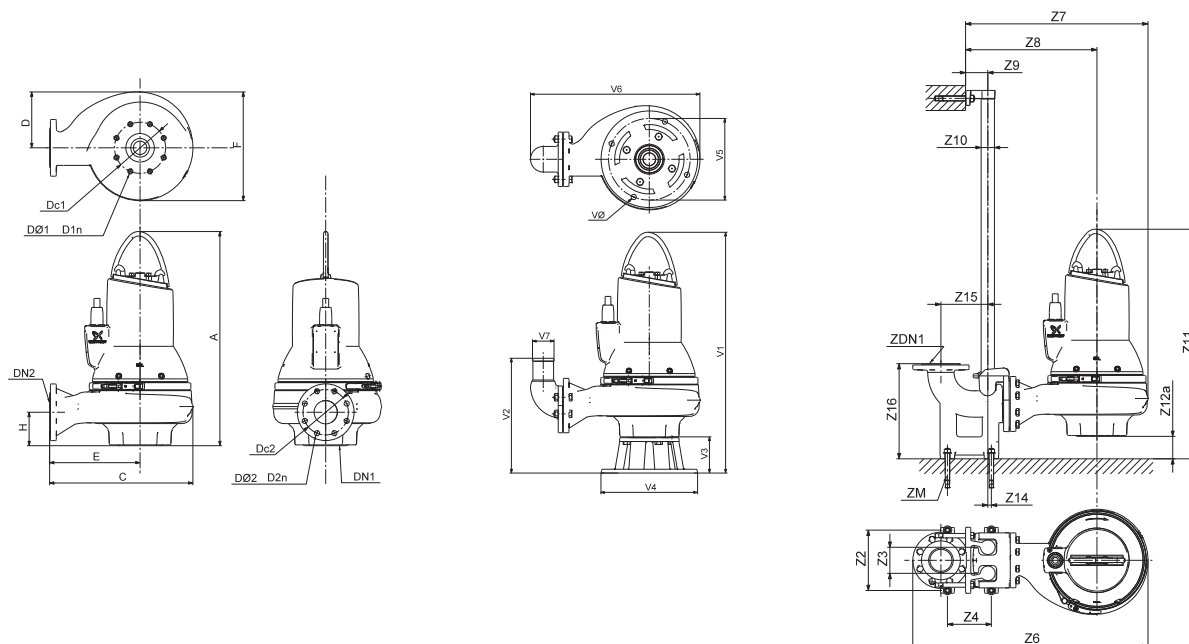
Performance curves SLV.80.80.75



TM04 3543 4608

# Technical data

## Dimension sketches SLV.80.80.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| Pump type    | A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2 | Dc2 | DØ2 D2n | Weight [kg] |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|---------|-------------|
| SLV.80.80.75 | 751 | 456 | 200 | 276 | 380 | 104 | 80  | 160 | 8x18    | 80  | 160 | 8x18    | 141         |

| Pump type    | Z2  | Z3 | Z4  | Z6  | Z7  | Z8  | Z9 | Z10 | Z11 | Z12a | Z14 | Z15 | Z16 | Dc1 | DN1 | ZM      |
|--------------|-----|----|-----|-----|-----|-----|----|-----|-----|------|-----|-----|-----|-----|-----|---------|
| SLV.80.80.75 | 220 | 95 | 160 | 809 | 617 | 437 | 81 | 1½" | 847 | 96   | 13  | 171 | 345 | 160 | 80  | 4 x M16 |

| Pump type    | V1  | V2  | V3  | V4  | V5  | V6  | V7 | VØ |
|--------------|-----|-----|-----|-----|-----|-----|----|----|
| SLV.80.80.75 | 879 | 374 | 128 | 330 | 280 | 574 | 80 | 18 |

## Electrical data

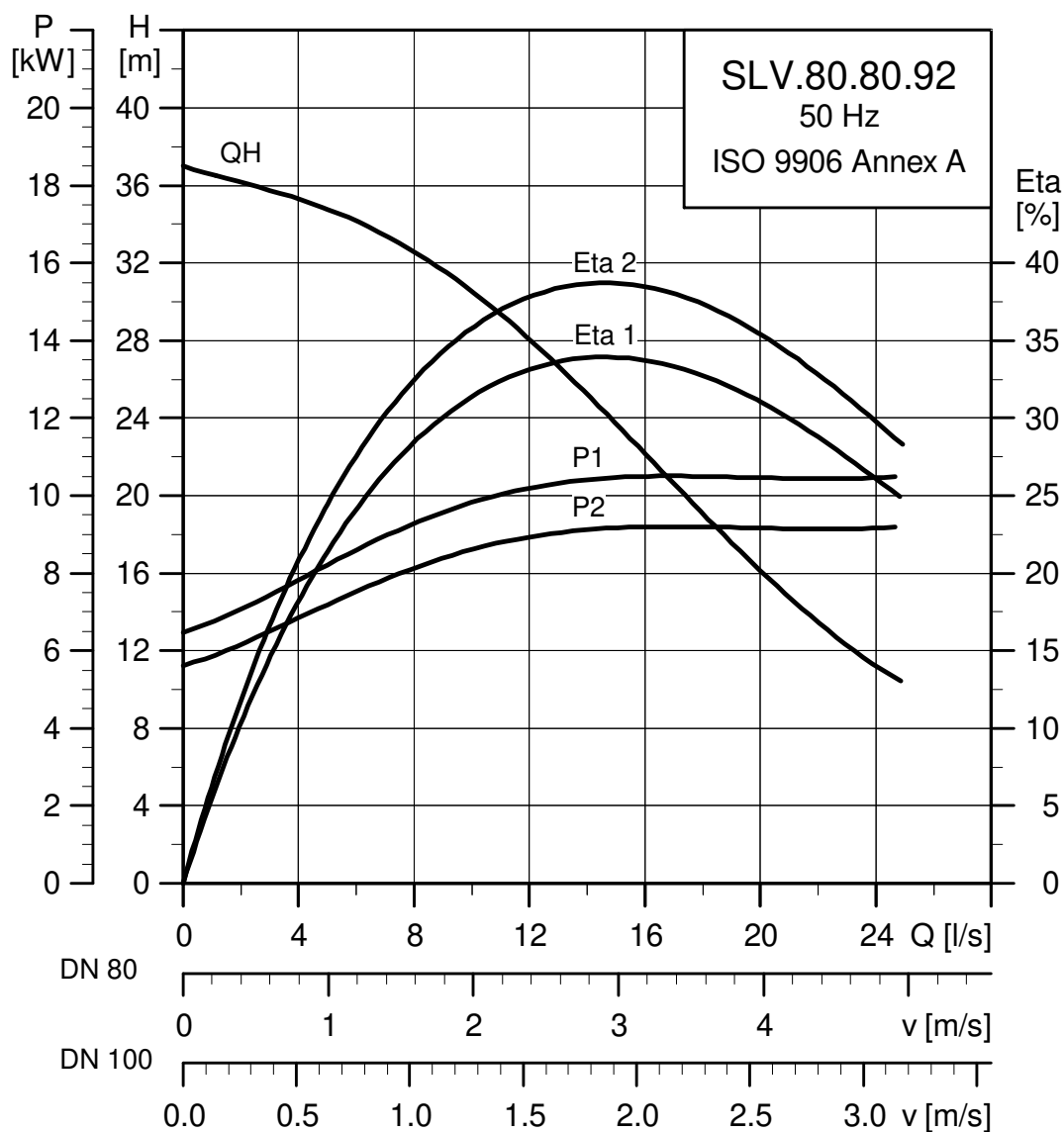
| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|--------|---------------------------------------|----------------------------------------|
|                    |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |        |                                       |                                        |
| SLV.80.80.75.2.51E | 3x220-240V D | 8.7     | 7.5     | 2           | 2920 | SD              | 26.2           | 211                | 84.1                   | 86.2 | 86.3 | 0.74 | 0.83  | 0.87 | 0.0215 | 83                                    |                                        |
| SLV.80.80.75.2.51D | 3x380-415V D | 8.7     | 7.5     | 2           | 2920 | SD              | 15.1           | 122                | 84.1                   | 86.2 | 86.3 | 0.74 | 0.83  | 0.87 | 0.0215 | 83                                    |                                        |
| SLV.80.80.75.2.50B | 3x400-415V D | 8.7     | 7.5     | 2           | 2920 | DOL             | 15.1           | 122                | 84.1                   | 86.2 | 86.3 | 0.74 | 0.83  | 0.87 | 0.0215 | 83                                    |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

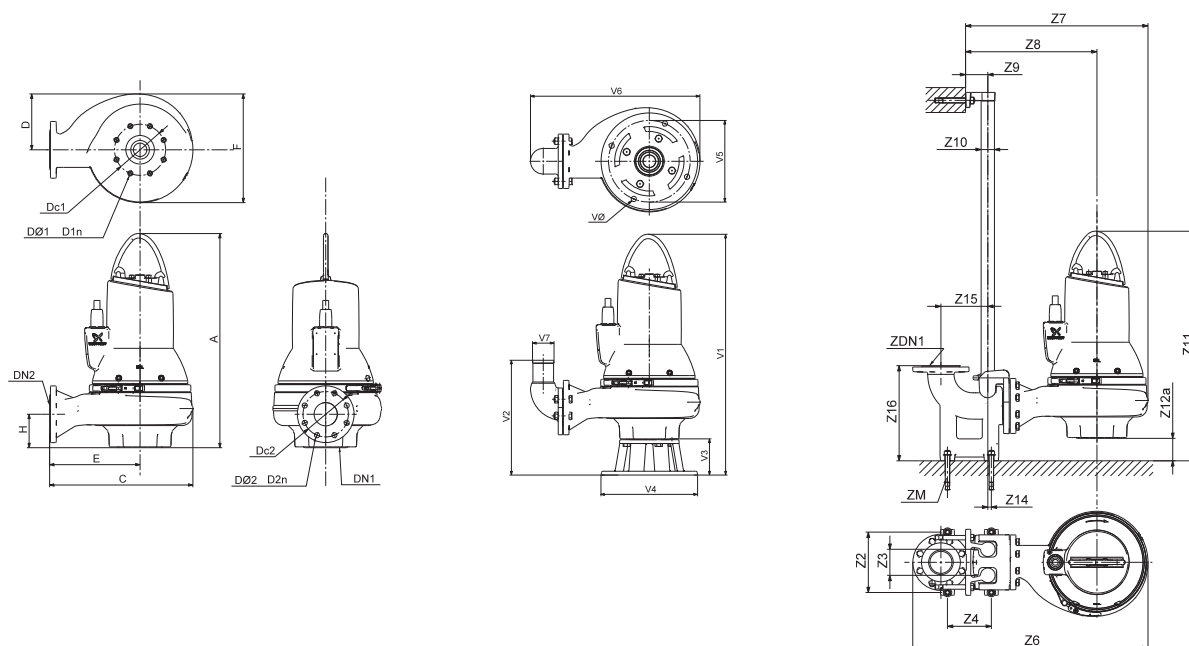
Performance curves SLV.80.80.92



TM04 3544 4608

# Technical data

## Dimension sketches SLV.80.80.92



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 782 | 489 | 217 | 293 | 413 | 123 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 183         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 842 | 650 | 454 | 81  | 1½" | 858     | 77   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 910 | 393 | 128 | 330 | 280 | 607 | 80  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

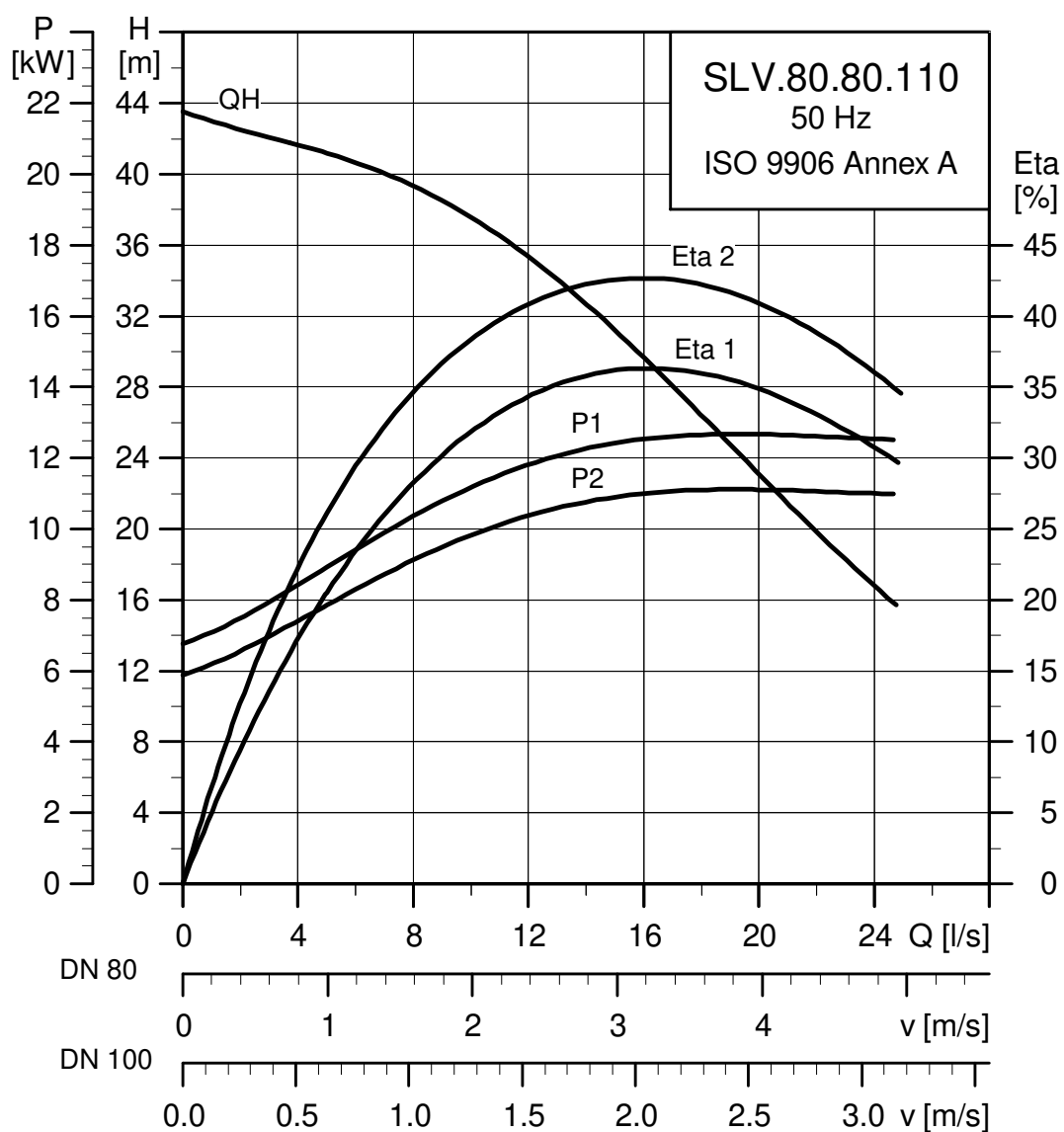
| Pump type          | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm²] | Breakdown torque M <sub>max</sub> [Nm] |
|--------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|--------------------------|----------------------------------------|
| SLV.80.80.92.2.51E | 3x220-240V D | 10.5    | 9.2     | 2           | 2960 | SD              | 31.2               | 288                    | 85.5 87.6 88.1         | 0.76 0.84 0.88 | 0.0334                   | 103                                    |
| SLV.80.80.92.2.51D | 3x380-415V D | 10.5    | 9.2     | 2           | 2960 | SD              | 18.0               | 166                    | 85.5 87.6 88.1         | 0.76 0.84 0.88 | 0.0334                   | 103                                    |
| SLV.80.80.92.2.50B | 3x400-415V D | 10.5    | 9.2     | 2           | 2960 | DOL             | 18.0               | 166                    | 85.5 87.6 88.1         | 0.76 0.84 0.88 | 0.0334                   | 103                                    |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

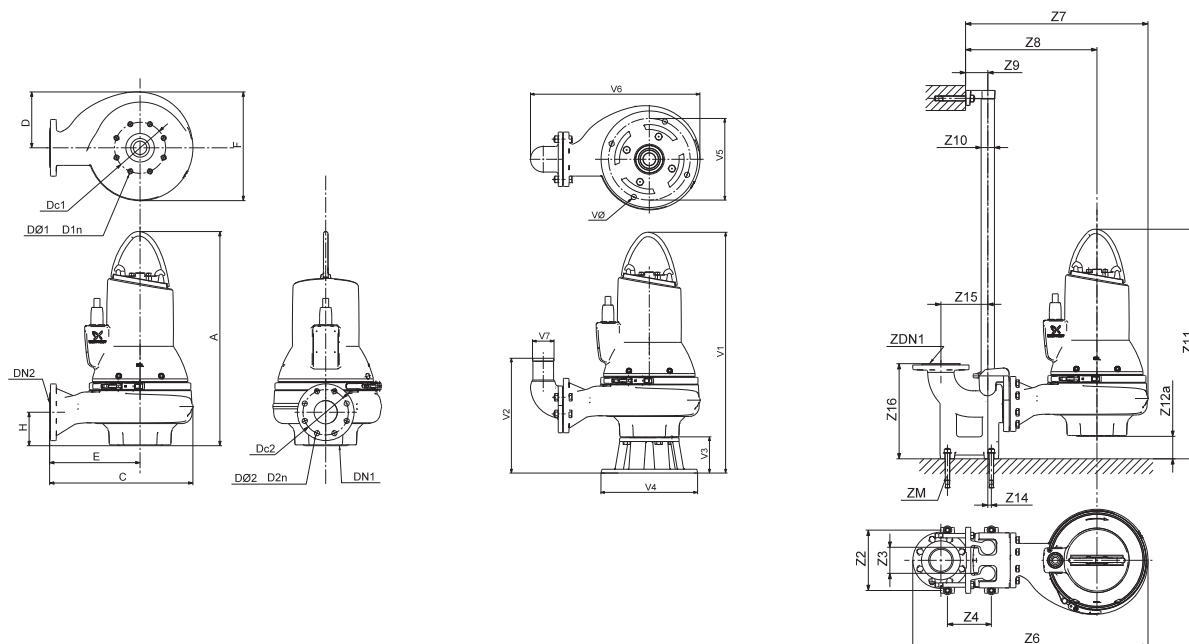
Performance curves SLV.80.80.110



TM04 3545 4608

# Technical data

## Dimension sketches SLV.80.80.110



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 782 | 489 | 217 | 293 | 413 | 123 | 80  | 160 | 8x18    | 80   | 160 | 8x18    | 183         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 220 | 95  | 160 | 842 | 650 | 454 | 81  | 1½" | 858     | 77   | 13  | 171     | 345         | 160 | 80  | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 910 | 393 | 128 | 330 | 280 | 607 | 80  | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |                                       |                                        |
| SLV.80.80.110.2.51E | 3x220-240V D | 12.5    | 11.0    | 2           | 2950 | SD              | 37.1           | 288                | 86.6                   | 88.0 | 87.8 | 0.79 | 0.86  | 0.89 | 0.0368                                | 103                                    |
| SLV.80.80.110.2.51D | 3x380-415V D | 12.5    | 11.0    | 2           | 2950 | SD              | 21.4           | 166                | 86.6                   | 88.0 | 87.8 | 0.79 | 0.86  | 0.89 | 0.0368                                | 103                                    |
| SLV.80.80.110.2.50B | 3x400-415V D | 12.5    | 11.0    | 2           | 2950 | DOL             | 21.4           | 166                | 86.6                   | 88.0 | 87.8 | 0.79 | 0.86  | 0.89 | 0.0368                                | 103                                    |

## Pump data

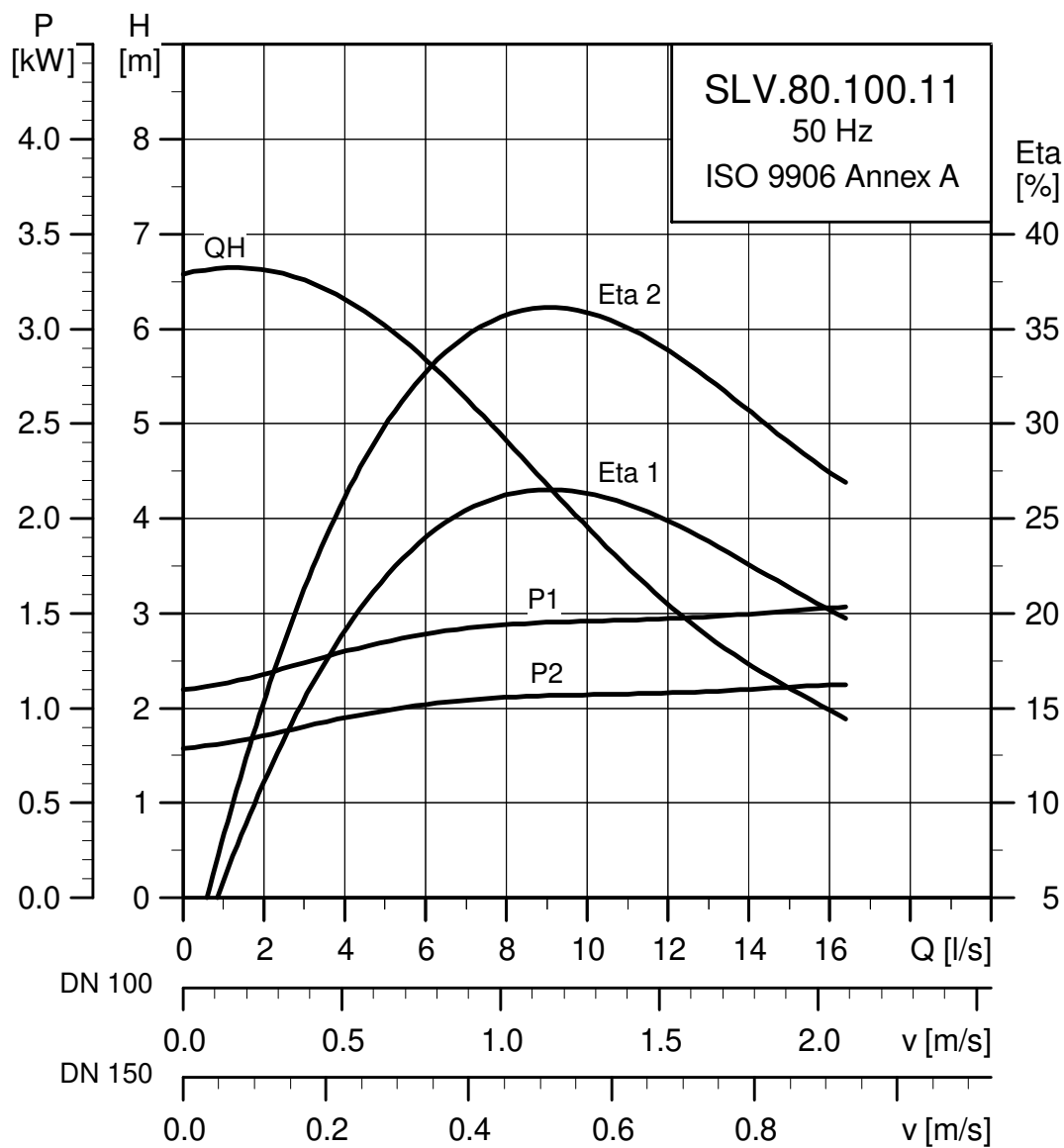
| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

## SLV.80.100

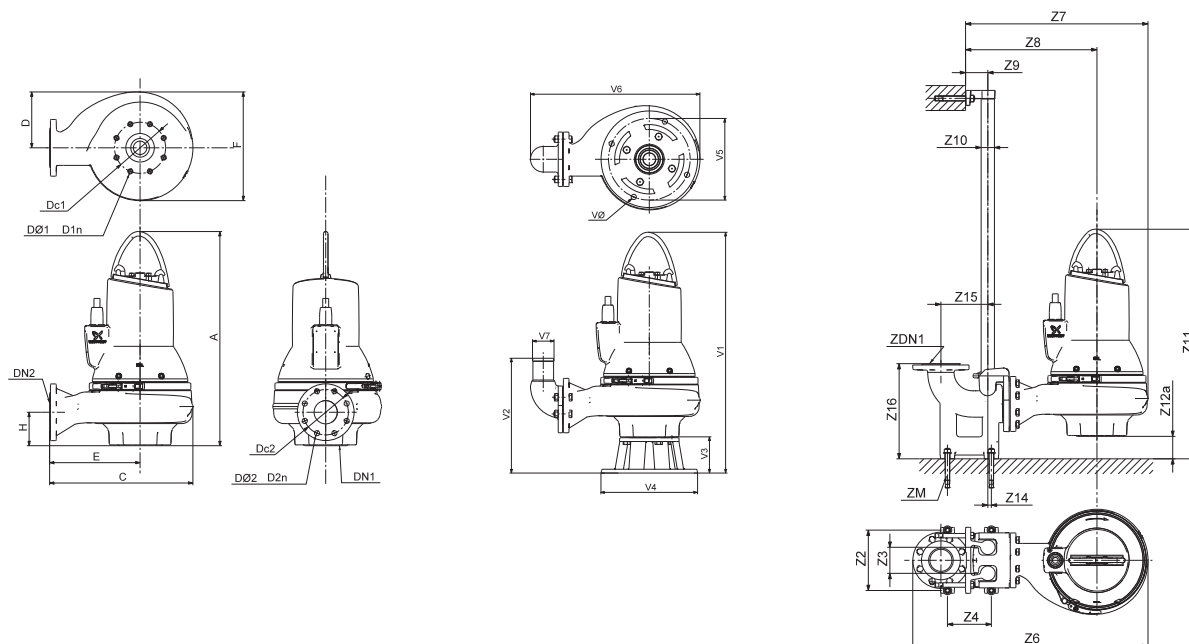
### Performance curves SLV.80.100.11



TM04 3550 4608

# Technical data

## Dimension sketches SLV.80.100.11



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F     | H     | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-------|-------|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 407 | 171 | 241 | 336.5 | 109   | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 95          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7    | Z8    | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 850 | 624   | 458   | 110 | 2"  | 842     | 131  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5    | V6    | V7  | VØ  |         |      |     |         |             |     |     |         |
| 839 | 354 | 128 | 330 | 280   | 548.7 | 100 | 18  |         |      |     |         |             |     |     |         |

## Electrical data

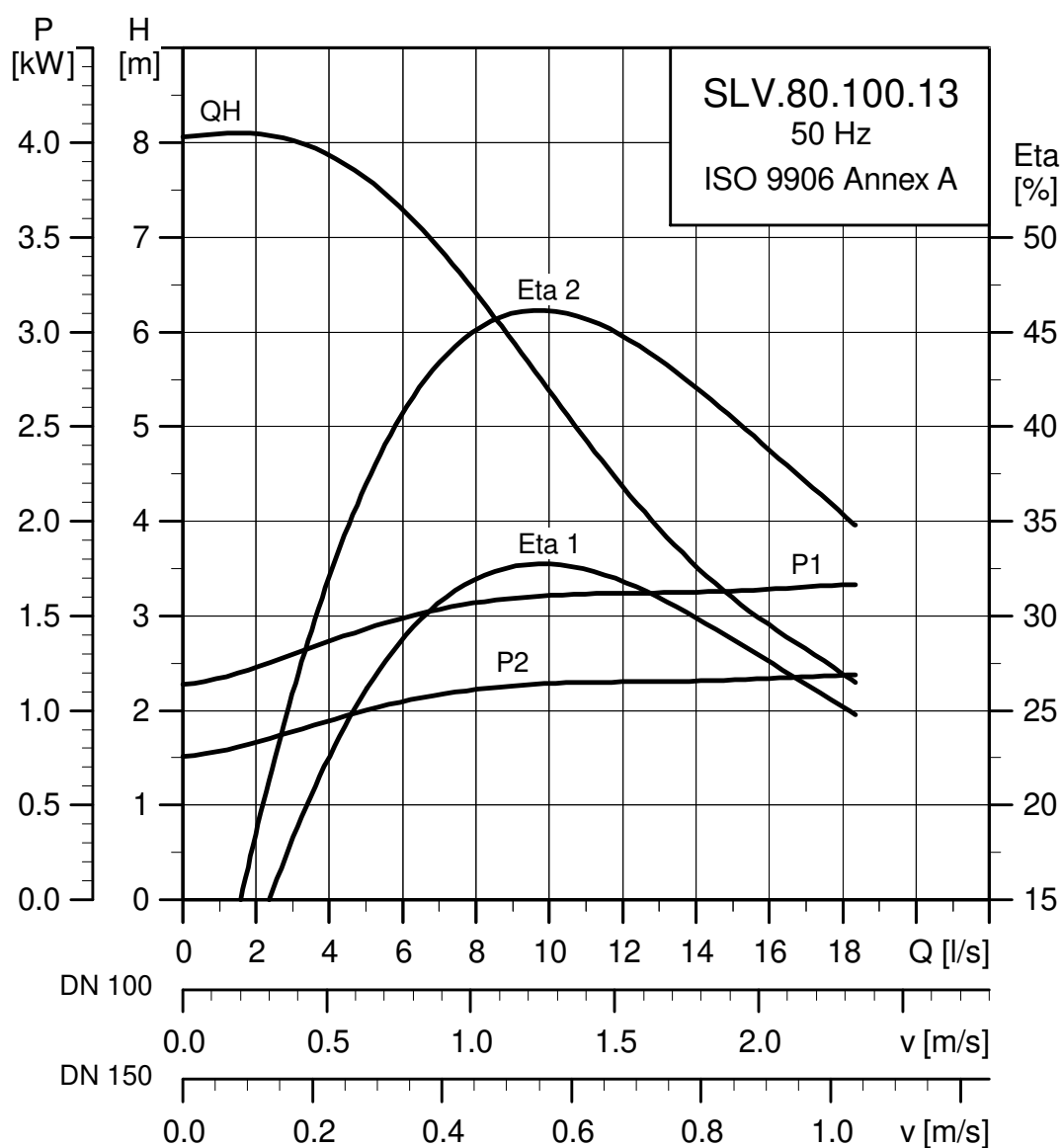
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SLV.80.100.11.4.50E | 3x220-240V D | 1.5     | 1.1     | 4           | 1450 | DOL             | 5.1            | 34                 | 67.2                   | 72.7 | 75.2 | 0.58 | 0.68 | 0.75  | 0.0142 | 26 |                                       |                                        |
| SLV.80.100.11.4.50D | 3x380-415V Y | 1.5     | 1.1     | 4           | 1450 | DOL             | 3.0            | 20                 | 67.2                   | 72.7 | 75.2 | 0.58 | 0.68 | 0.75  | 0.0142 | 26 |                                       |                                        |
| SLV.80.100.11.4.50B | 3x400-415V Y | 1.5     | 1.1     | 4           | 1450 | DOL             | 3.0            | 20                 | 67.2                   | 72.7 | 75.2 | 0.58 | 0.68 | 0.75  | 0.0142 | 26 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max . number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                              | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

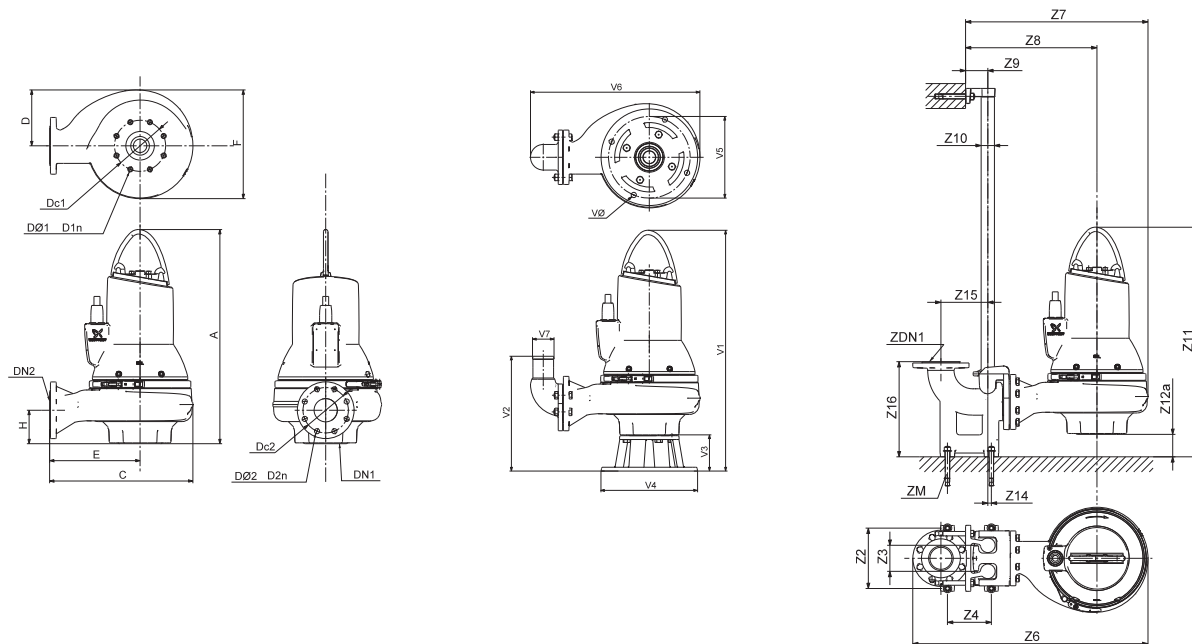
Performance curves SLV.80.100.13



TM04 3551 4608

# Technical data

## Dimension sketches SLV.80.100.13



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F     | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-------|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 407 | 171 | 241 | 336.5 | 109 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 95          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7    | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 850 | 624   | 458 | 110 | 2"  | 842     | 131  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5    | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 812 | 369 | 130 | 355 | 300   | 591 | 100 | 18  |         |      |     |         |             |     |     |         |

## Electrical data

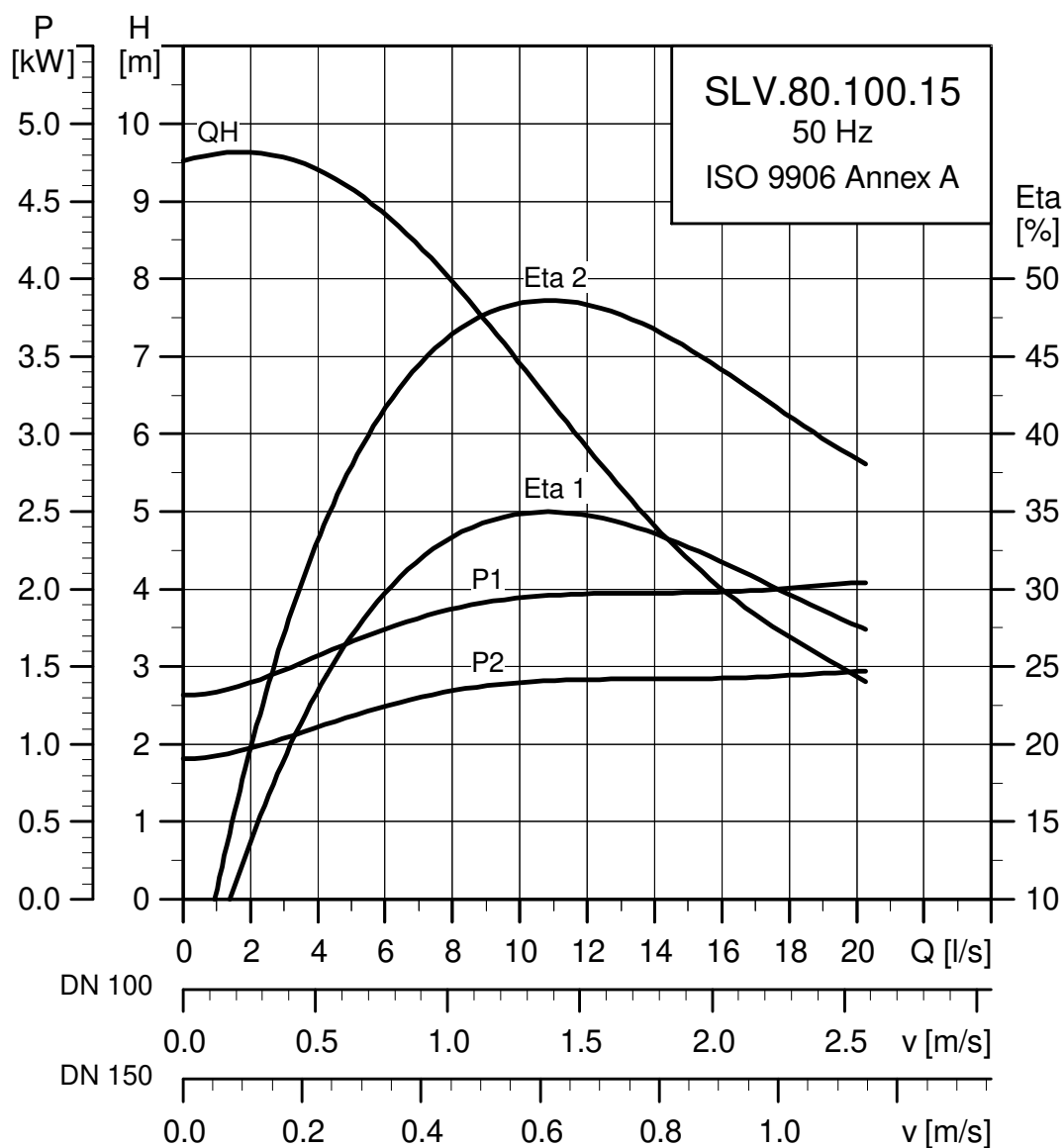
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      |      | Cos φ |        |    | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|------|-------|--------|----|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4  | 1/1   |        |    |                                       |                                        |
| SLV.80.100.13.4.50E | 3x220-240V D | 1.8     | 1.3     | 4           | 1460 | DOL             | 6.2            | 26                 | 68.2                   | 74.2 | 76.4 | 0.53 | 0.65 | 0.73  | 0.0165 | 34 |                                       |                                        |
| SLV.80.100.13.4.50D | 3x380-415V Y | 1.8     | 1.3     | 4           | 1460 | DOL             | 3.6            | 26                 | 68.2                   | 74.2 | 76.4 | 0.53 | 0.65 | 0.73  | 0.0165 | 34 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

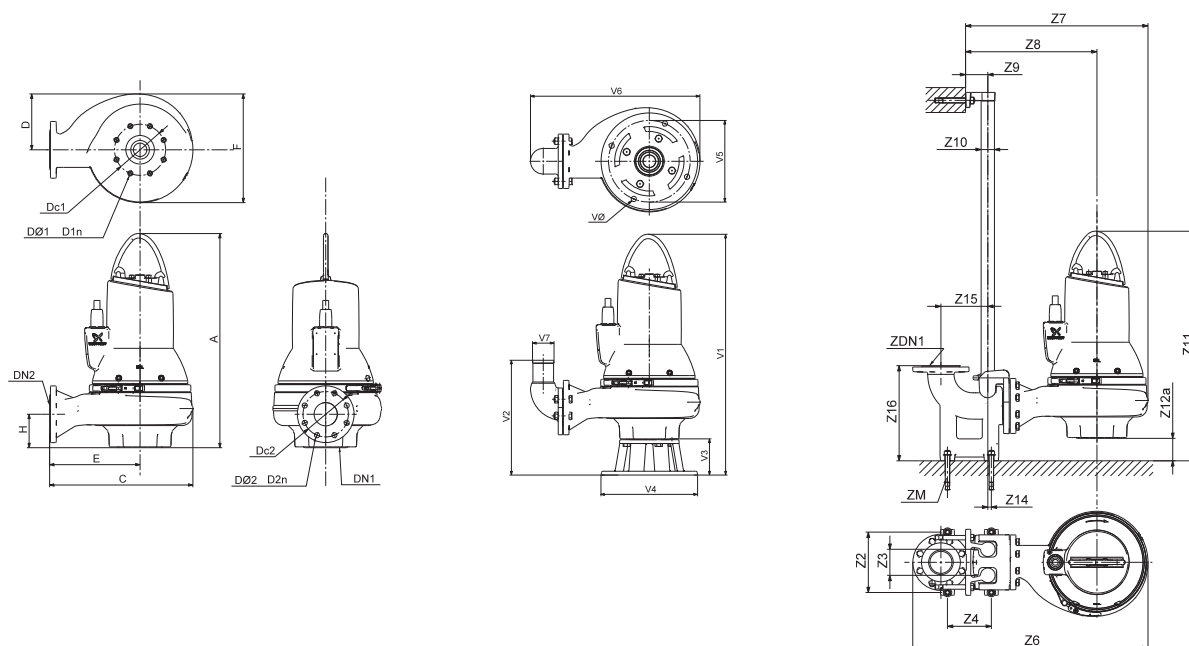
Performance curves SLV.80.100.15



TM04 3552 4608

# Technical data

## Dimension sketches SLV.80.100.15



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F     | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-------|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 407 | 171 | 241 | 336.5 | 109 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 95          |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7    | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 850 | 624   | 458 | 110 | 2"  | 842     | 131  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5    | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 812 | 369 | 130 | 355 | 300   | 591 | 100 | 18  |         |      |     |         |             |     |     |         |

## Electrical data

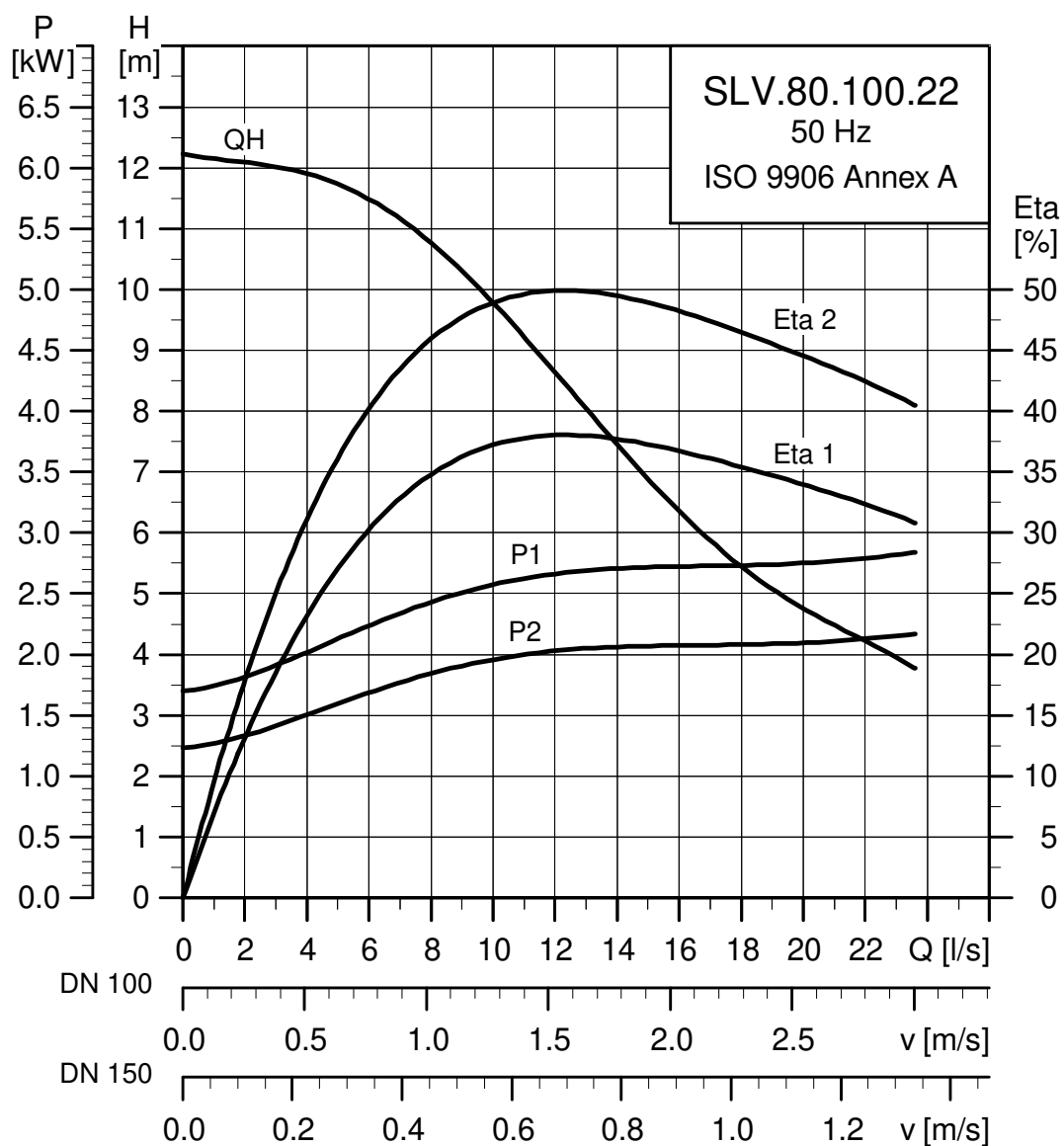
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|-------|--------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |                                       |                                        |
| SLV.80.100.15.4.50E | 3x220-240V D | 2.1     | 1.5     | 4           | 1450 | DOL             | 6.8            | 45  | 70.6               | 75.4 | 77.1                   | 0.57 | 0.68 | 0.76  | 0.0185 | 34                                    |                                        |
| SLV.80.100.15.4.50D | 3x380-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9            | 26  | 70.6               | 75.4 | 77.1                   | 0.57 | 0.68 | 0.76  | 0.0185 | 34                                    |                                        |
| SLV.80.100.15.4.50B | 3x400-415V Y | 2.1     | 1.5     | 4           | 1450 | DOL             | 3.9            | 26  | 70.6               | 75.4 | 77.1                   | 0.57 | 0.68 | 0.76  | 0.0185 | 34                                    |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

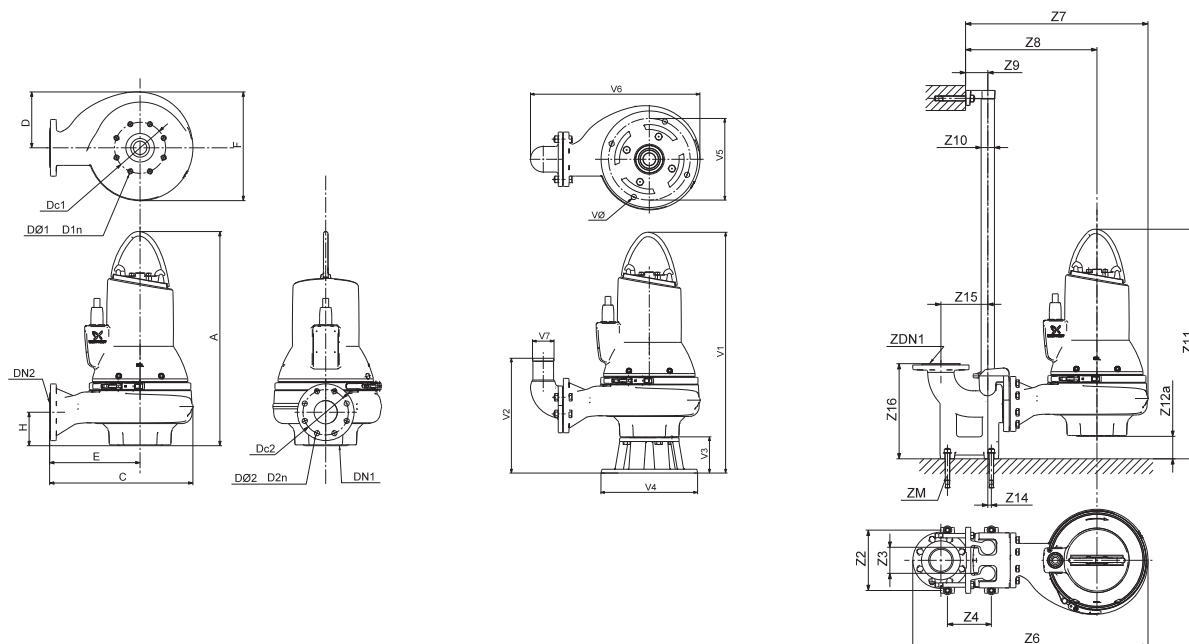
Performance curves SLV.80.100.22



TM04 3553 4608

# Technical data

## Dimension sketches SLV.80.100.22



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F     | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-------|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 711 | 407 | 171 | 241 | 336.5 | 109 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 107         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7    | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 850 | 624   | 458 | 110 | 2"  | 842     | 131  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |       | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 812 |     |     | 369 |       | 130 |     | 355 |         | 300  |     | 591     |             | 100 |     | 18      |

## Electrical data

| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |                                       |                                        |
| SLV.80.100.22.4.50E | 3x220-240V D | 2.9     | 2.2     | 4           | 1460 | DOL             | 9.1            | 66                 | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.100.22.4.51D | 3x380-415V D | 2.9     | 2.2     | 4           | 1460 | SD              | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.100.22.4.50D | 3x380-415V Y | 2.9     | 2.2     | 4           | 1460 | DOL             | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |
| SLV.80.100.22.4.50B | 3x400-415V Y | 2.9     | 2.2     | 4           | 1460 | DOL             | 5.3            | 38.3               | 78.4                   | 81.7 | 82.7 | 0.58 | 0.70  | 0.77 | 0.0240                                | 50                                     |

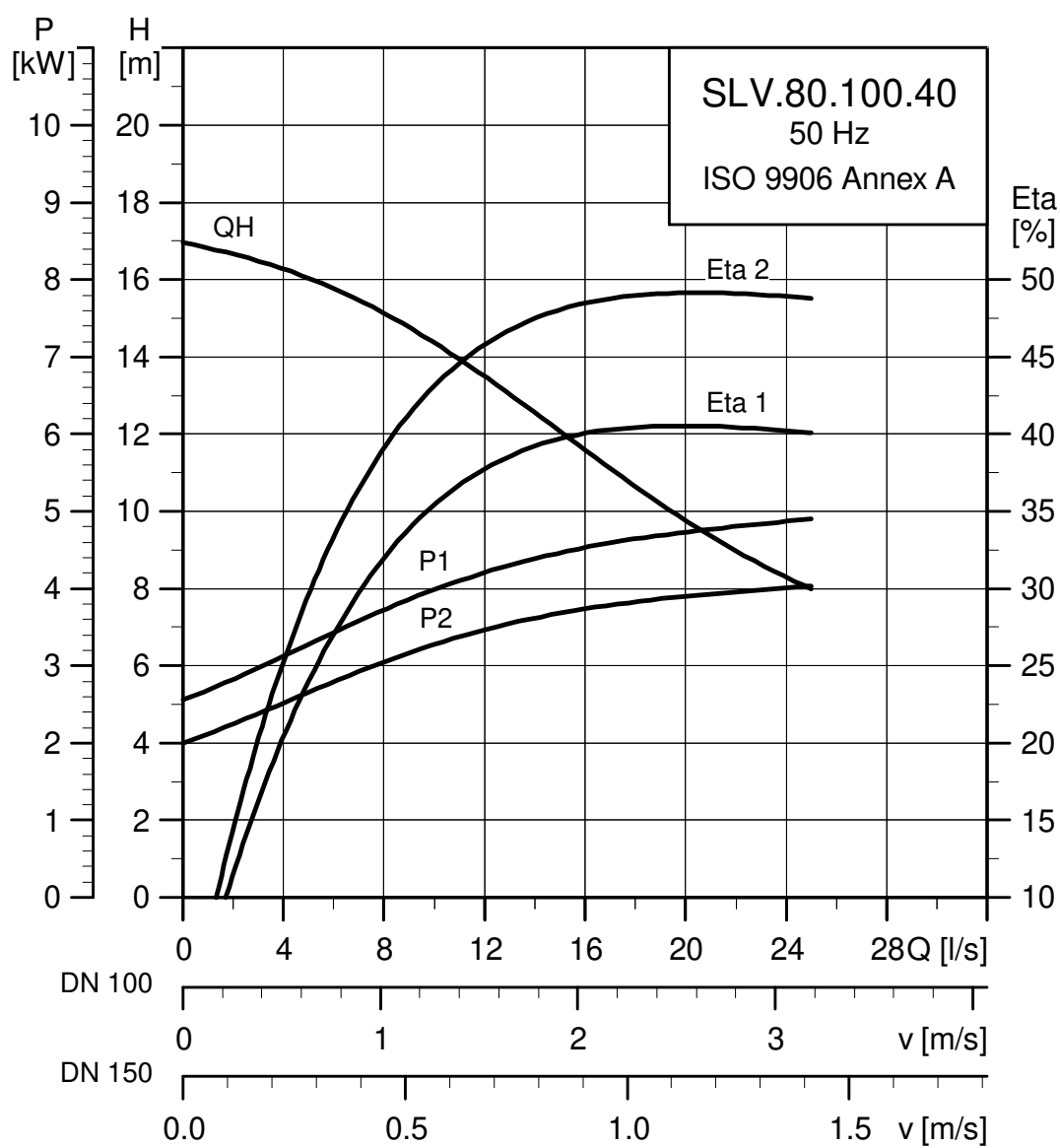
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

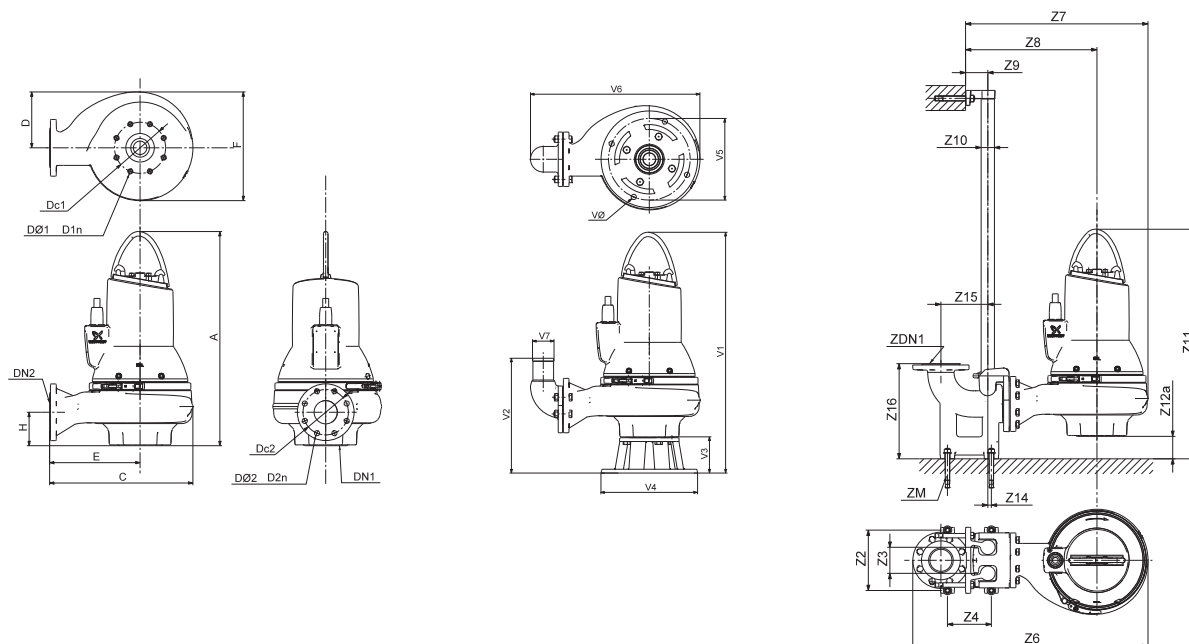
Performance curves SLV.80.100.40 - 4 pole



TM04 3554 4608

# Technical data

## Dimension sketches SLV.80.100.40 - 4 pole



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 744 | 466 | 200 | 286 | 380 | 108 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 135         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 909 | 683 | 503 | 110 | 2"  | 876     | 132  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 878 |     |     | 395 |     | 130 |     | 355 |         | 300  |     | 647     |             | 100 |     | 18      |

## Electrical data

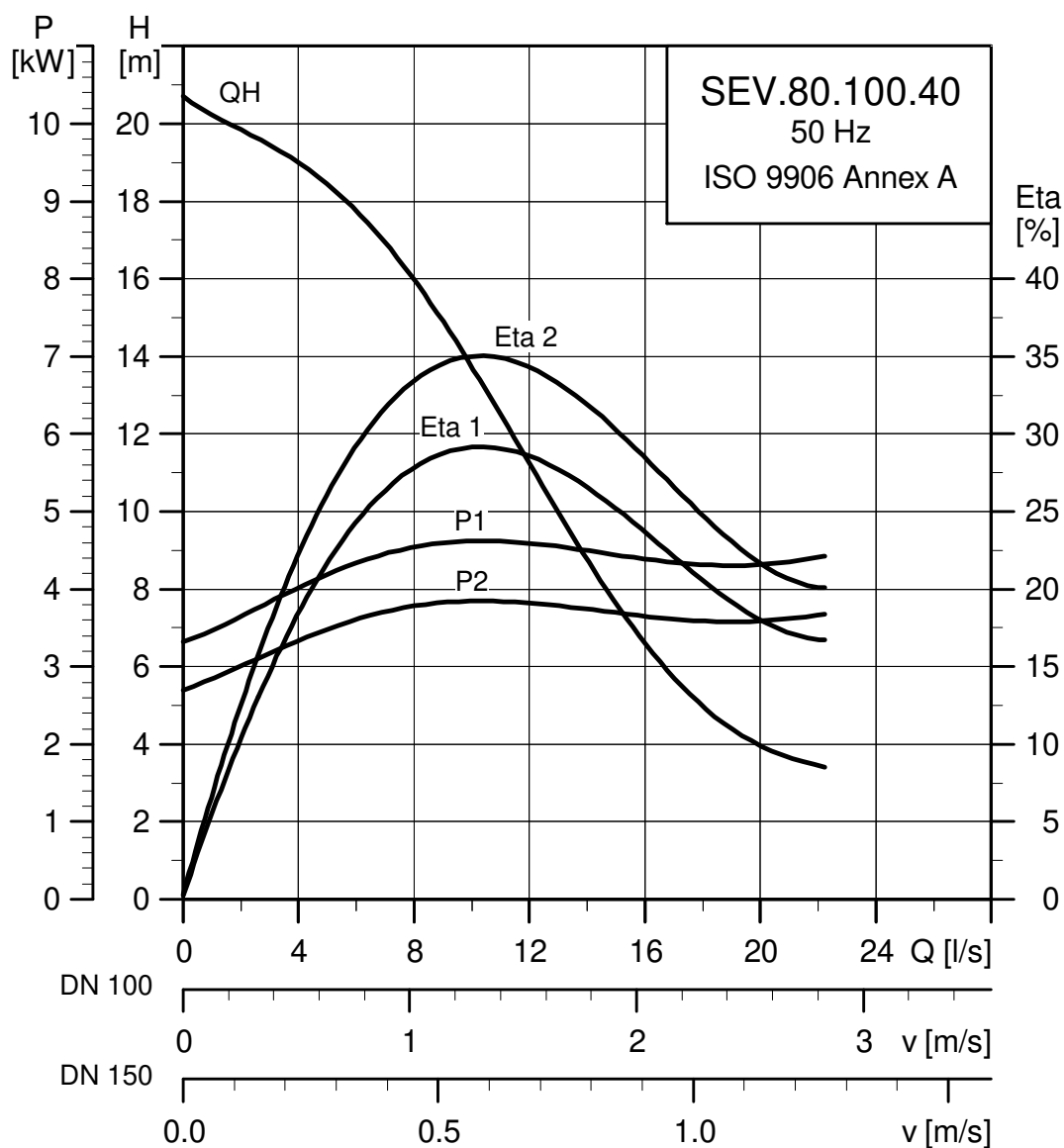
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> | I <sub>start</sub> | η <sub>motor</sub> [%] |      |      |      | Cos φ |      |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|--------------------|------------------------|------|------|------|-------|------|--------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A]                | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |        |                                       |                                        |
| SLV.80.100.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9           | 88                 | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0479 | 90                                    |                                        |
| SLV.80.100.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7            | 51                 | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0479 | 90                                    |                                        |
| SLV.80.100.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7            | 51                 | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0479 | 90                                    |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max . number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                              | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

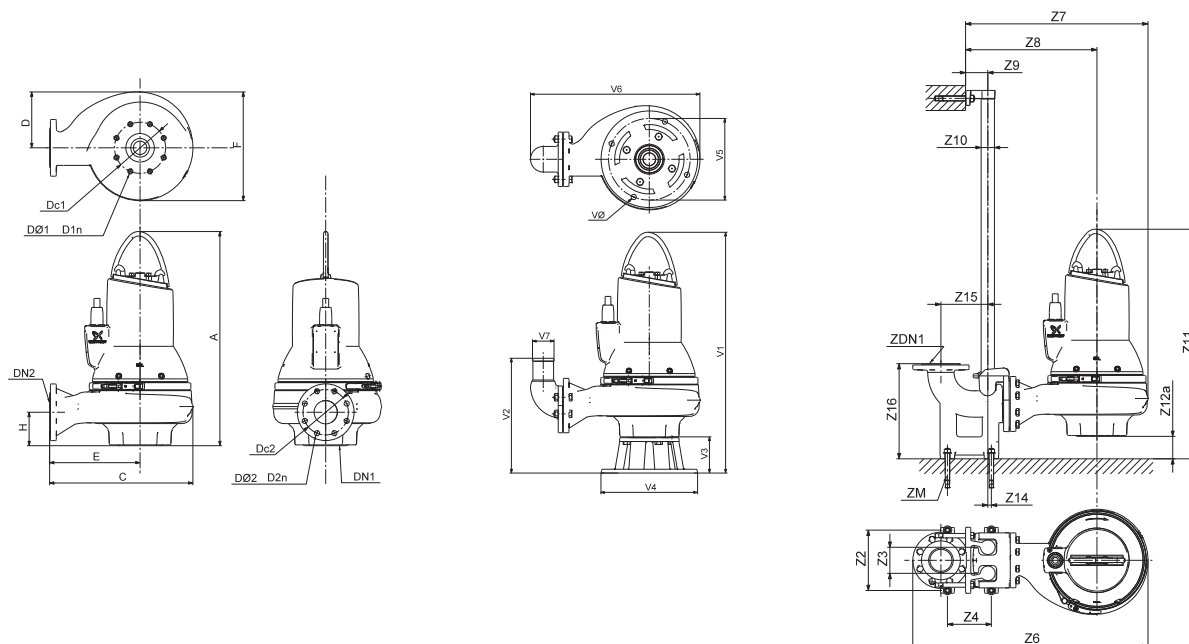
Performance curves SLV.80.100.40 - 2 pole



TM04 3555 4608

# Technical data

## Dimension sketches SLV.80.100.40 - 2 pole



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 748 | 458 | 200 | 267 | 391 | 109 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 122         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 901 | 675 | 484 | 110 | 2"  | 857     | 109  | 0   | 220     | 413         | 80  | 160 | 4 x M16 |
| V1  |     | V2  |     | V3  |     | V4  |     | V5      |      | V6  |         | V7          |     | VØ  |         |
| 876 |     | 354 |     | 128 |     | 330 |     | 280     |      | 600 |         | 100         |     | 18  |         |

## Electrical data

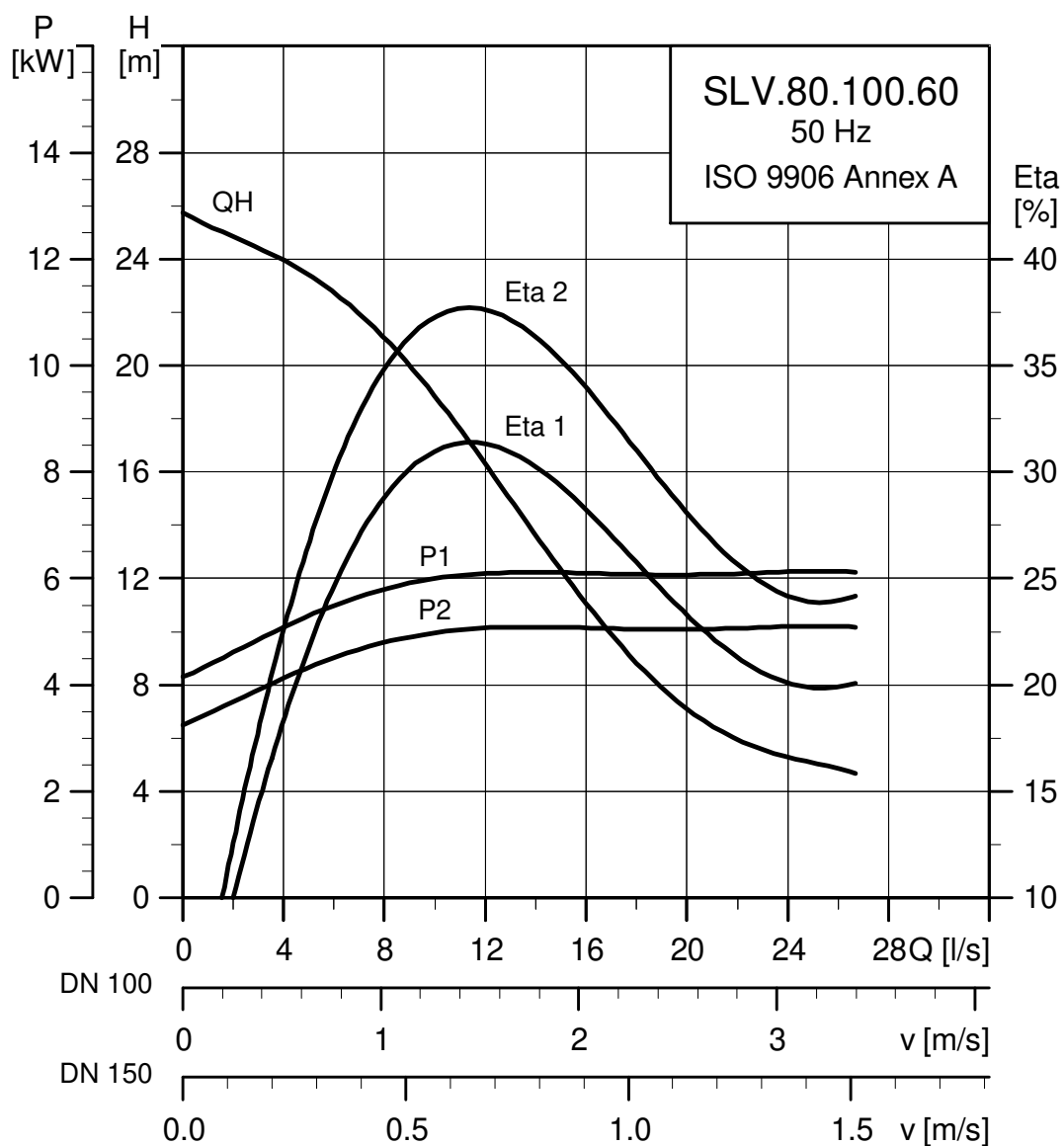
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.100.40.2.51E | 3x220-240V D | 4.8     | 4.0     | 2           | 2930 | SD              | 14.7               | 161                    | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |
| SLV.80.100.40.2.51D | 3x380-415V D | 4.8     | 4.0     | 2           | 2930 | SD              | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |
| SLV.80.100.40.2.50B | 3x400-415V D | 4.8     | 4.0     | 2           | 2925 | DOL             | 8.5                | 93                     | 75.8 80.9 82.7         | 0.71 0.82 0.87 | 0.0127                                | 56                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max . number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|---------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                              | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

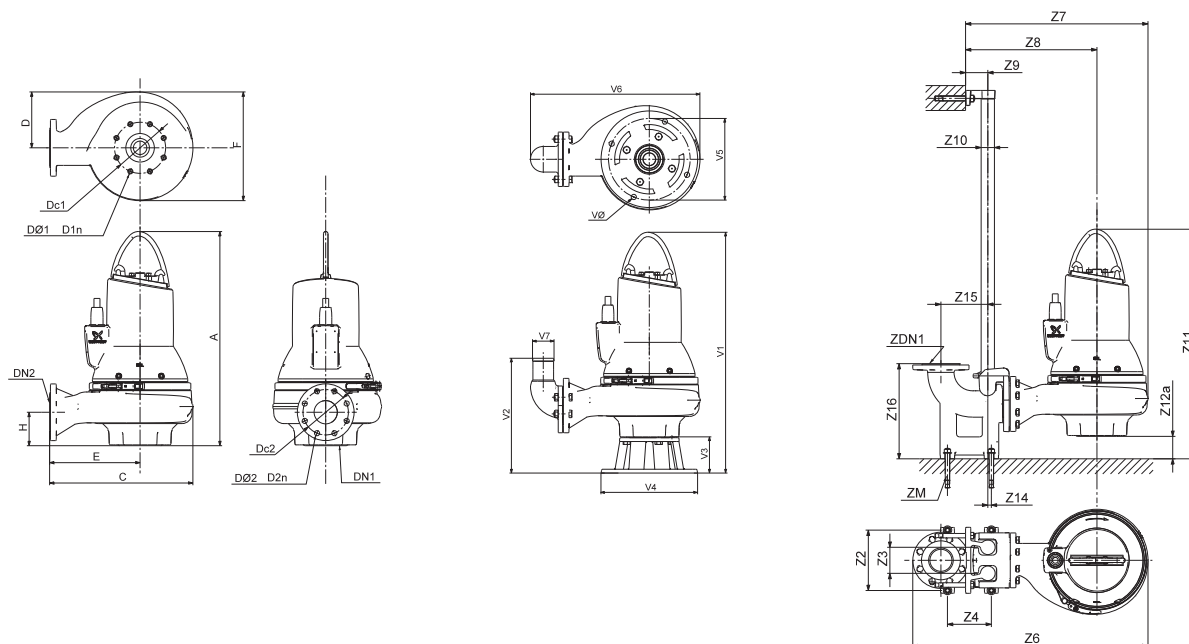
Performance curves SLV.80.100.60



TM04 35556 4608

# Technical data

## Dimension sketches SLV.80.100.60



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| Pump type     | A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2 | Dc2 | DØ2 D2n | Weight [kg] |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|---------|-------------|
| SLV.80.100.60 | 751 | 466 | 200 | 286 | 380 | 108 | 80  | 160 | 8x18    | 100 | 180 | 8x18    | 141         |

| Pump type     | Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11 | Z12a | Z14 | Z15 | Z16 | Dc1 | DN1 | ZM      |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|---------|
| SLV.80.100.60 | 260 | 110 | 270 | 909 | 683 | 503 | 110 | 2"  | 883 | 132  | 0   | 220 | 413 | 80  | 160 | 4 x M16 |

| Pump type     | V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ |
|---------------|-----|-----|-----|-----|-----|-----|-----|----|
| SLV.80.100.60 | 879 | 353 | 128 | 330 | 280 | 598 | 100 | 18 |

## Electrical data

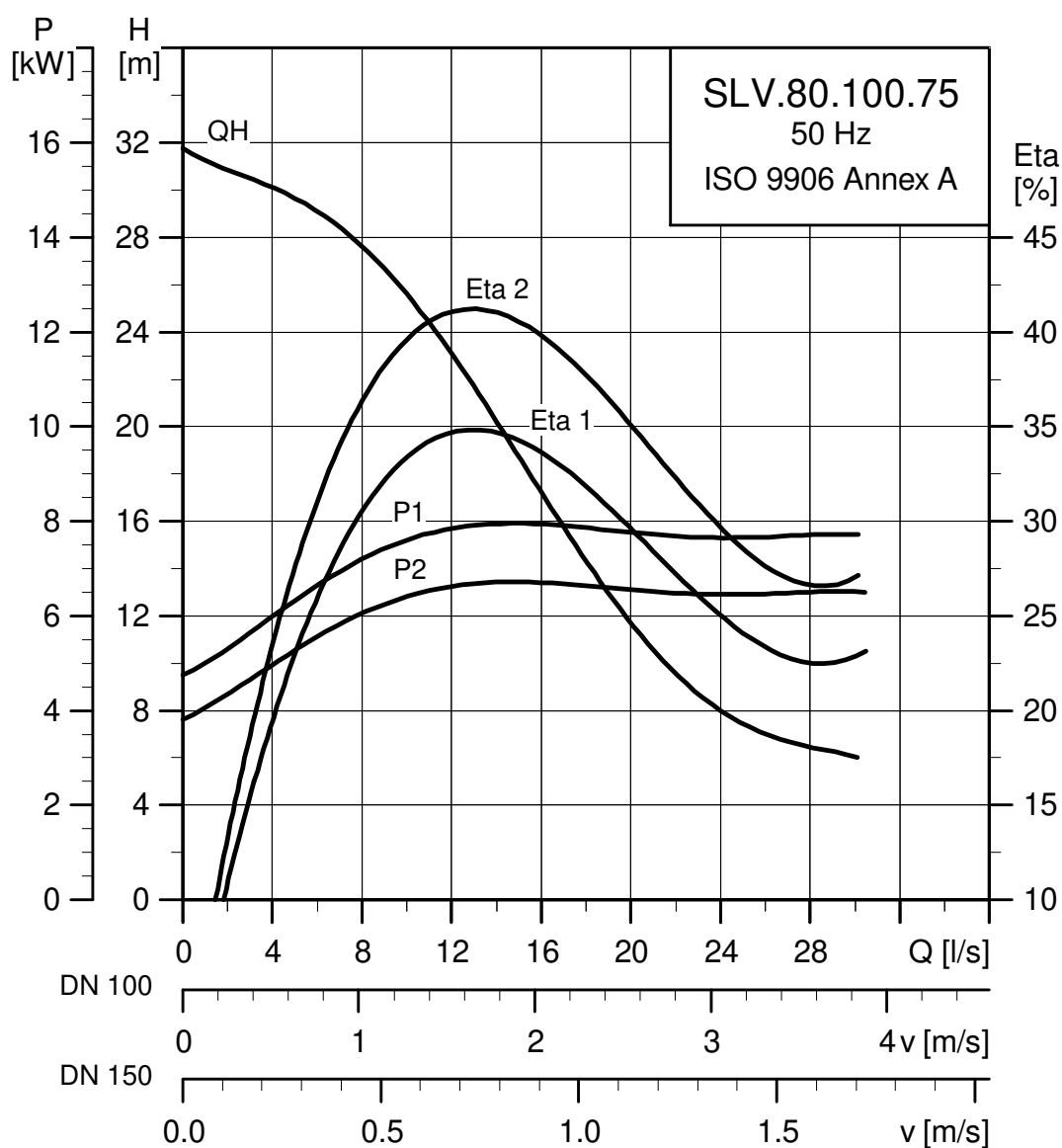
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> [A] | I <sub>start</sub> [A] | η <sub>motor</sub> [%] | Cos φ          | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|--------------------|------------------------|------------------------|----------------|---------------------------------------|----------------------------------------|
| SLV.80.100.60.2.51E | 3x220-240V D | 6.9     | 6.0     | 2           | 2940 | SD              | 21.7               | 211                    | 81.9 85.2 86.4         | 0.68 0.78 0.84 | 0.0190                                | 83                                     |
| SLV.80.100.60.2.51D | 3x380-415V D | 6.9     | 6.0     | 2           | 2940 | SD              | 12.5               | 122                    | 81.9 85.2 86.4         | 0.68 0.78 0.84 | 0.0190                                | 83                                     |
| SLV.80.100.60.2.50B | 3x400-415V D | 6.9     | 6.0     | 2           | 2940 | DOL             | 12.5               | 122                    | 81.9 85.2 86.4         | 0.68 0.78 0.84 | 0.0190                                | 83                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

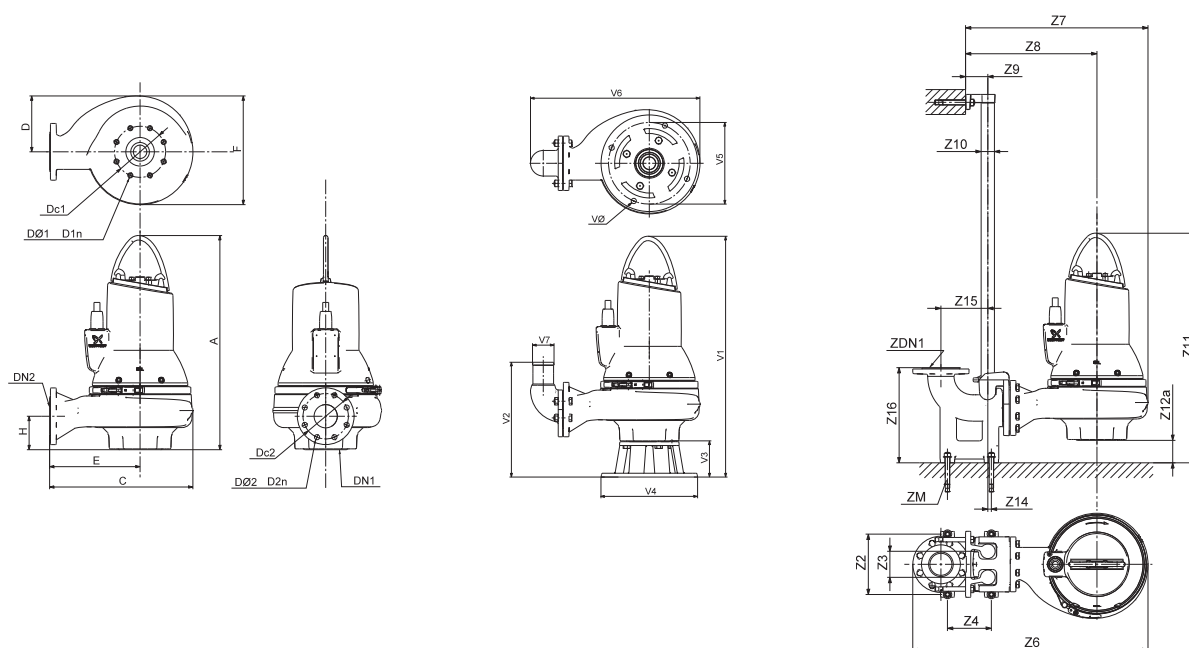
Performance curves SLV.80.100.75



TM04 3557 4608

# Technical data

## Dimension sketches SLV.80.100.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 782 | 499 | 217 | 303 | 413 | 123 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 141         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 942 | 716 | 520 | 110 | 2"  | 899     | 117  | 0   | 220     | 413         | 80  | 160 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 879 |     |     | 353 |     | 128 |     | 330 |         | 280  |     | 598     |             | 100 |     | 18      |

## Electrical data

| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     |      | I <sub>start</sub> |      |      | η <sub>motor</sub> [%] |      |     | Cos φ |  |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|------|--------------------|------|------|------------------------|------|-----|-------|--|--------|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A] | [A]  | 1/2                | 3/4  | 1/1  | 1/2                    | 3/4  | 1/1 |       |  |        |                                       |                                        |
| SLV.80.100.75.2.51E | 3x220-240V D | 8.7     | 7.5     | 2           | 2920 | SD              | 26.2           | 211 | 84.1 | 86.2               | 86.3 | 0.74 | 0.83                   | 0.87 |     |       |  | 0.0215 | 83                                    |                                        |
| SLV.80.100.75.2.51D | 3x380-415V D | 8.7     | 7.5     | 2           | 2920 | SD              | 15.1           | 122 | 84.1 | 86.2               | 86.3 | 0.74 | 0.83                   | 0.87 |     |       |  | 0.0215 | 83                                    |                                        |
| SLV.80.100.75.2.50B | 3x400-415V D | 8.7     | 7.5     | 2           | 2920 | DOL             | 15.1           | 122 | 84.1 | 86.2               | 86.3 | 0.74 | 0.83                   | 0.87 |     |       |  | 0.0215 | 83                                    |                                        |

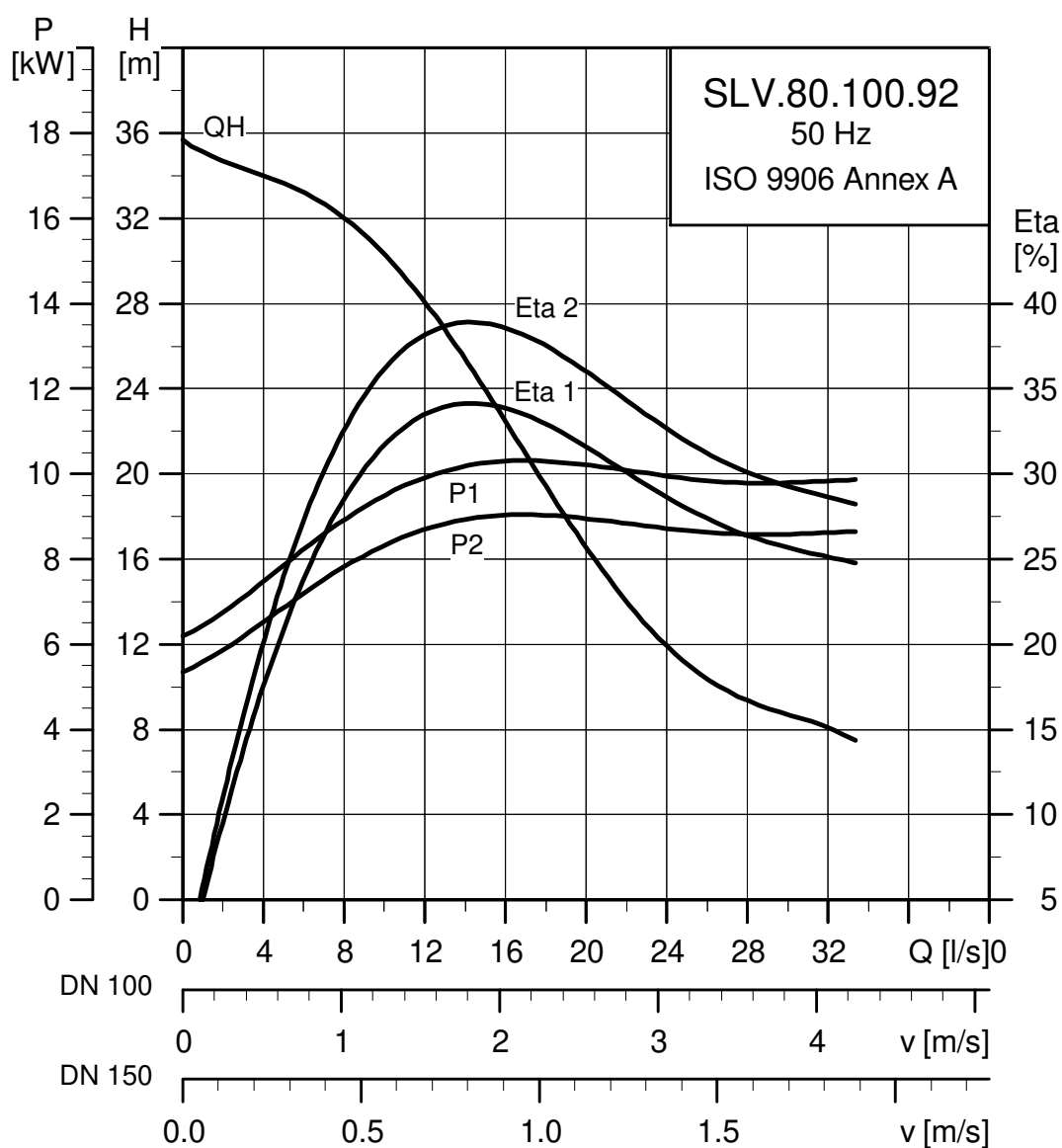
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

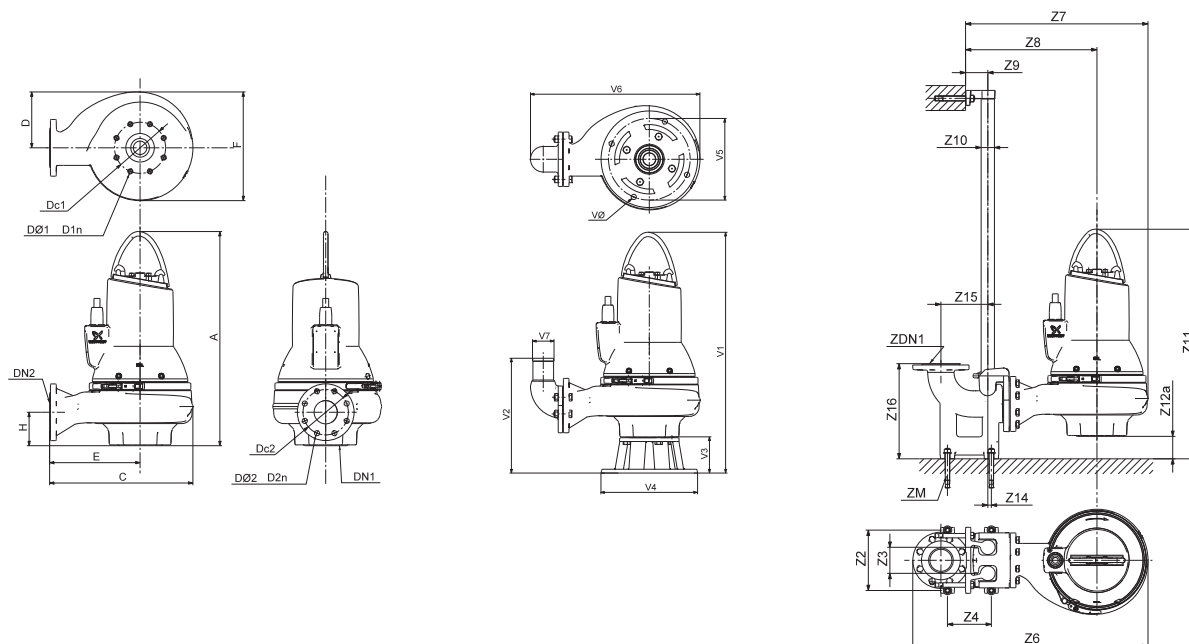
Performance curves SLV.80.100.92



TM04 3558 4608

# Technical data

## Dimension sketches SLV.80.100.92



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 782 | 499 | 217 | 303 | 413 | 123 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 184         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 942 | 716 | 520 | 110 | 2"  | 899     | 117  | 0   | 220     | 413         | 80  | 160 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 910 |     |     | 368 |     | 128 |     | 330 |         | 280  |     | 641     |             | 100 |     | 18      |

## Electrical data

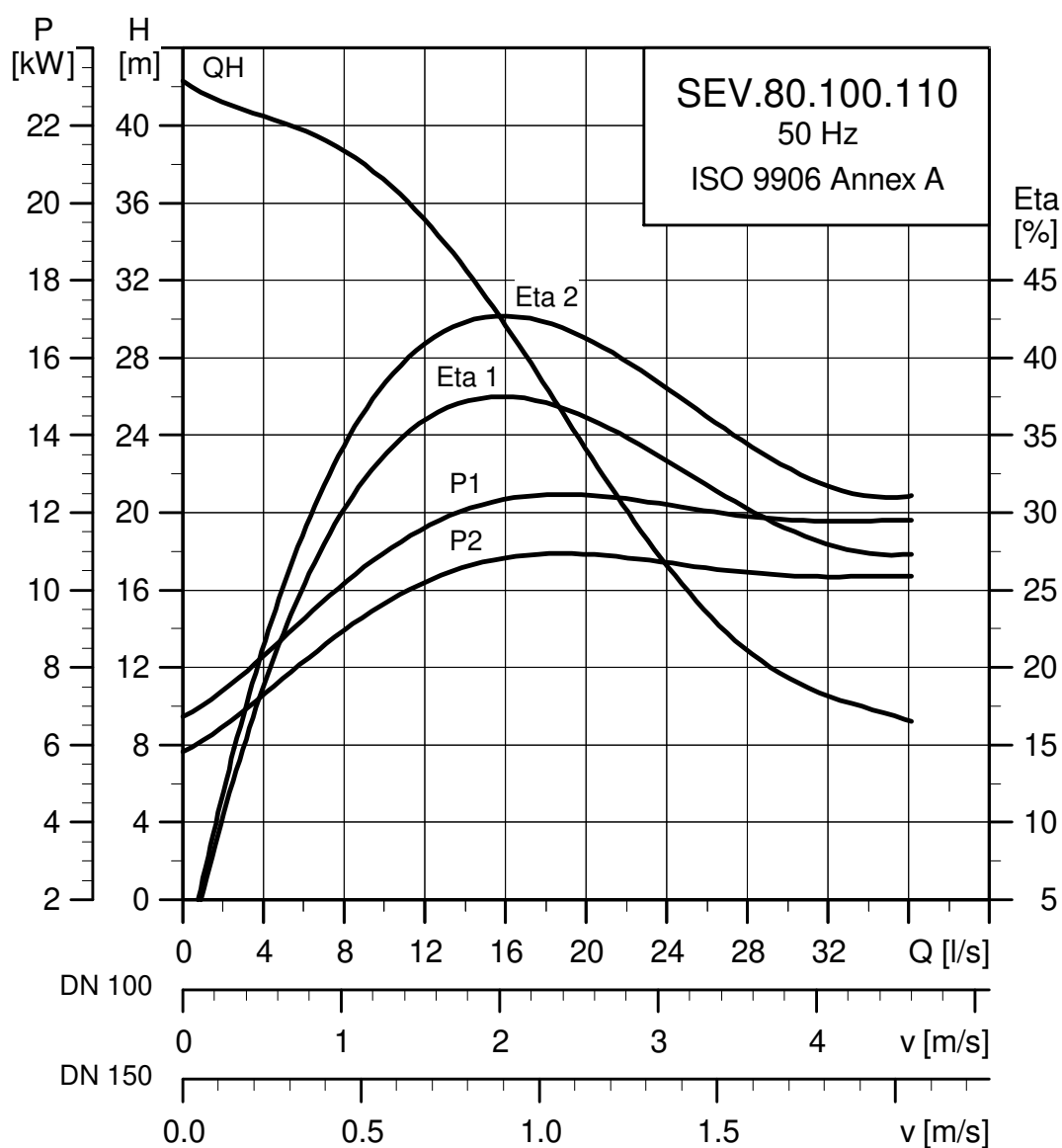
| Pump type           | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      | Cos φ |        |     | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|---------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|-------|--------|-----|---------------------------------------|----------------------------------------|
|                     |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1   |        |     |                                       |                                        |
| SLV.80.100.92.2.51E | 3x220-240V D | 10.5    | 9.2     | 2           | 2960 | SD              | 31.2           | 288 | 85.5               | 87.6 | 88.1                   | 0.76 | 0.84 | 0.88  | 0.0334 | 103 |                                       |                                        |
| SLV.80.100.92.2.51D | 3x380-415V D | 10.5    | 9.2     | 2           | 2960 | SD              | 18.0           | 166 | 85.5               | 87.6 | 88.1                   | 0.76 | 0.84 | 0.88  | 0.0334 | 103 |                                       |                                        |
| SLV.80.100.92.2.50B | 3x400-415V D | 10.5    | 9.2     | 2           | 2960 | DOL             | 18.0           | 166 | 85.5               | 87.6 | 88.1                   | 0.76 | 0.84 | 0.88  | 0.0334 | 103 |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

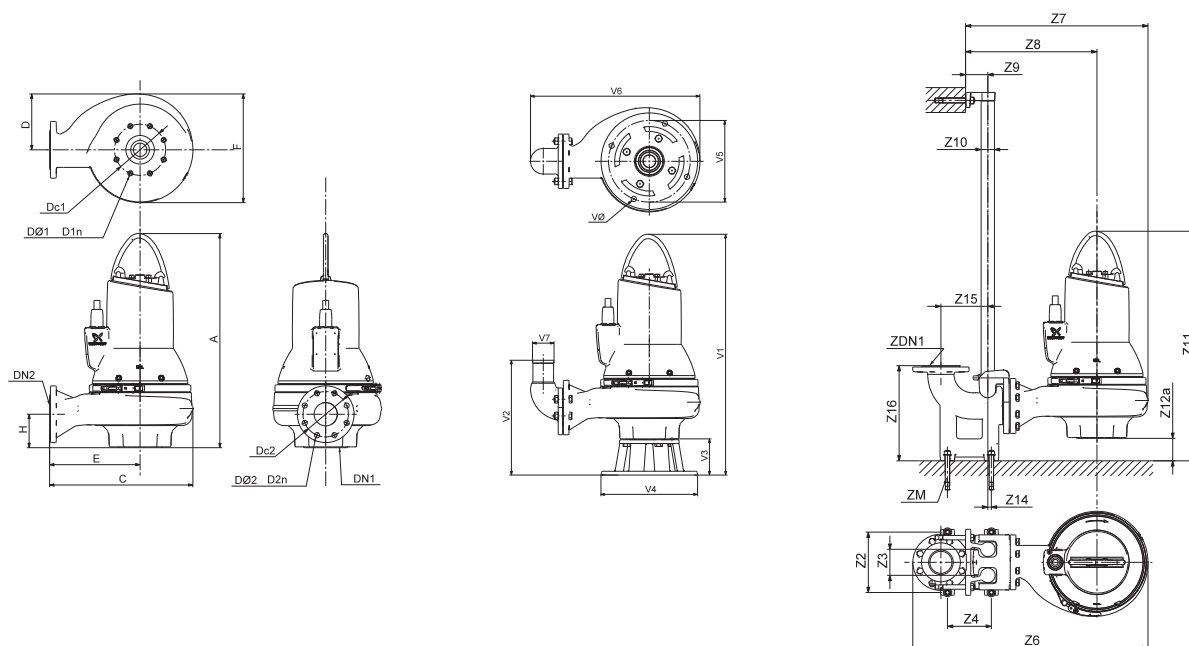
Performance curves SLV.80.100.110



TM04 3559 4608

# Technical data

## Dimension sketches SLV.80.100.110



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 782 | 499 | 217 | 303 | 413 | 123 | 80  | 160 | 8x18    | 100  | 180 | 8x18    | 184         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 942 | 716 | 520 | 110 | 2"  | 899     | 117  | 0   | 220     | 413         | 80  | 160 | 4 x M16 |
| V1  | V2  | V3  | V4  | V5  | V6  | V7  | VØ  |         |      |     |         |             |     |     |         |
| 910 | 368 | 128 | 330 | 280 | 641 | 100 | 18  |         |      |     |         |             |     |     |         |

## Electrical data

| Pump type            | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      | η <sub>motor</sub> [%] |      |      |      | Cos φ |  |  | Moment of inertia [kgm²] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------------------------|------|------|------|-------|--|--|--------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | [A]            | [A] | 1/2                | 3/4  | 1/1                    | 1/2  | 3/4  | 1/1  |       |  |  |                          |                                        |
| SLV.80.100.110.2.51E | 3x220-240V D | 12.5    | 11.0    | 2           | 2950 | SD              | 37.1           | 288 | 86.6               | 88.0 | 87.8                   | 0.79 | 0.86 | 0.89 |       |  |  | 0.0368                   | 103                                    |
| SLV.80.100.110.2.51D | 3x380-415V D | 12.5    | 11.0    | 2           | 2950 | SD              | 21.4           | 166 | 86.6               | 88.0 | 87.8                   | 0.79 | 0.86 | 0.89 |       |  |  | 0.0368                   | 103                                    |
| SLV.80.100.110.2.50B | 3x400-415V D | 12.5    | 11.0    | 2           | 2950 | DOL             | 21.4           | 166 | 86.6               | 88.0 | 87.8                   | 0.79 | 0.86 | 0.89 |       |  |  | 0.0368                   | 103                                    |

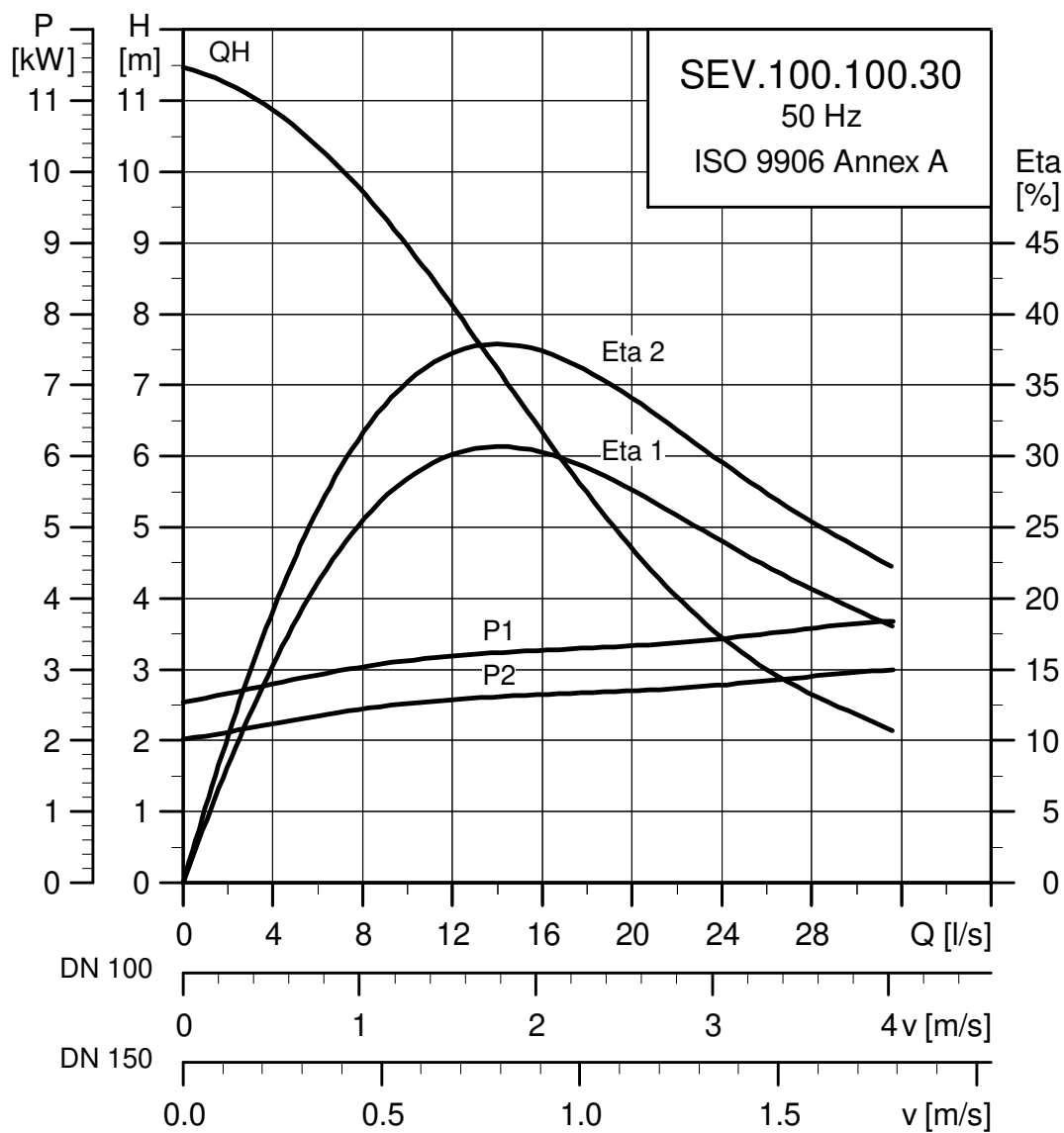
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 80                    | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

## SLV.100.100

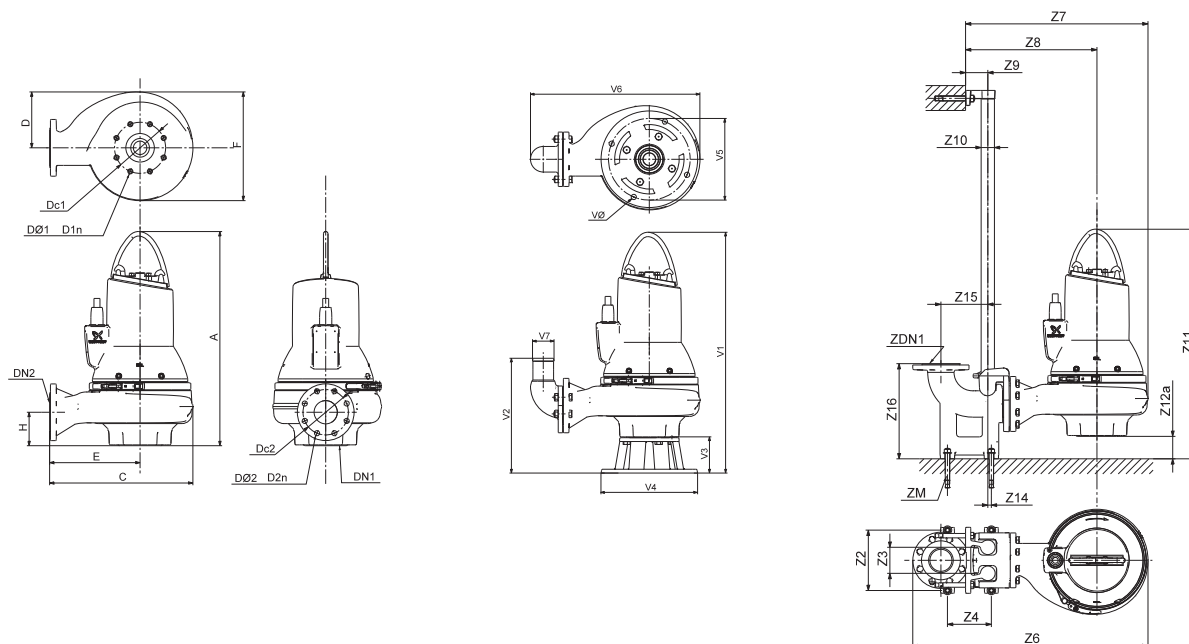
### Performance curves SLV.100.100.30



TM04 3546 4608

# Technical data

## Dimension sketches SLV.100.100.30



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 737 | 457 | 200 | 277 | 380 | 134 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 125         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 900 | 674 | 494 | 110 | 2"  | 844     | 106  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 867 |     |     | 411 |     | 130 |     | 355 |         | 300  |     | 599     |             | 100 |     | 19      |

## Electrical data

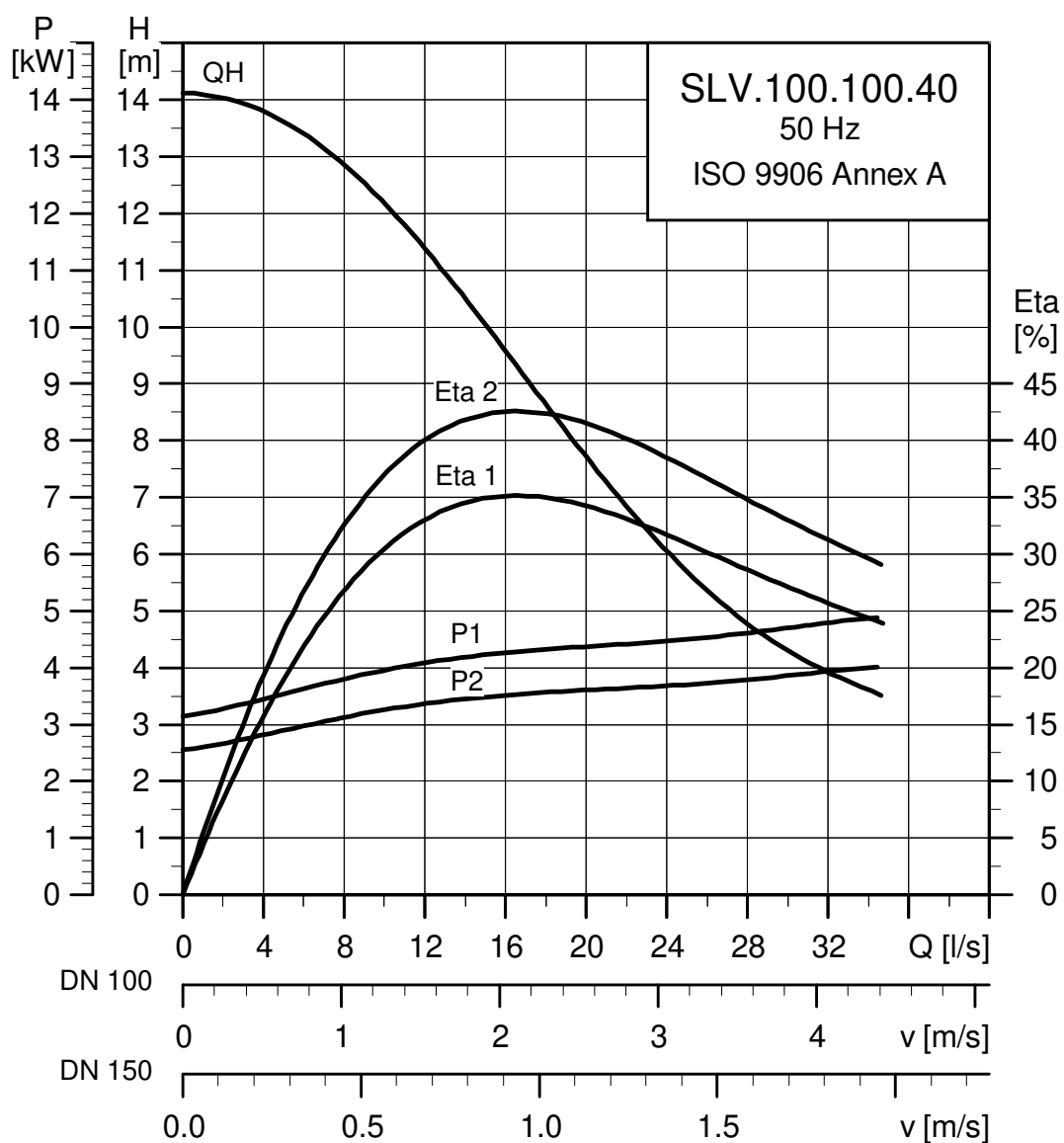
| Pump type            | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> I <sub>start</sub> η <sub>motor</sub> [%] |                        |      |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------------------------------------------------|------------------------|------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | I <sub>N</sub> [A]                                       | I <sub>start</sub> [A] | 1/2  | 3/4  | 1/1  | 1/2   | 3/4  | 1/1  |                                       |                                        |
| SLV.100.100.30.4.50E | 3x220-240V D | 3.7     | 3.0     | 4           | 1450 | DOL             | 12.5                                                     | 87                     | 75.4 | 79.7 | 80.7 | 0.58  | 0.72 | 0.78 | 0.0450                                | 64                                     |
| SLV.100.100.30.4.51D | 3x380-415V D | 3.7     | 3.0     | 4           | 1450 | SD              | 7.2                                                      | 50                     | 75.4 | 79.7 | 80.7 | 0.58  | 0.72 | 0.78 | 0.0450                                | 64                                     |
| SLV.100.100.30.4.50D | 3x380-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2                                                      | 50                     | 75.4 | 79.7 | 80.7 | 0.58  | 0.72 | 0.78 | 0.0450                                | 64                                     |
| SLV.100.100.30.4.50B | 3x400-415V Y | 3.7     | 3.0     | 4           | 1450 | DOL             | 7.2                                                      | 50                     | 75.4 | 79.7 | 80.7 | 0.58  | 0.72 | 0.78 | 0.0450                                | 64                                     |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

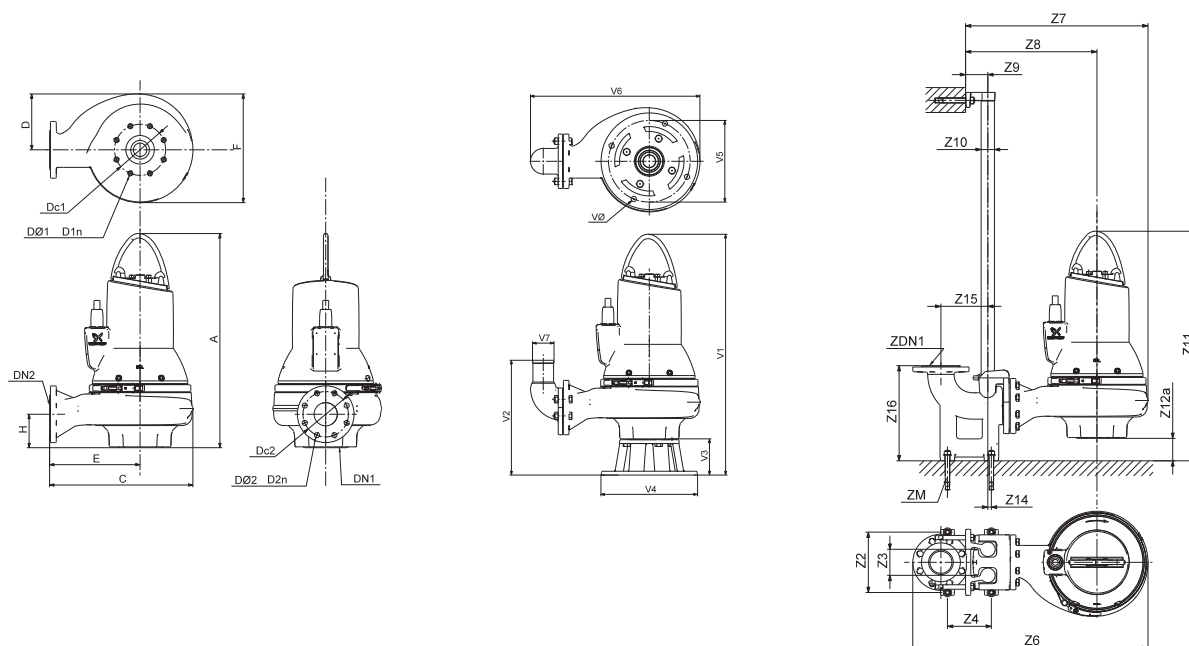
Performance curves SLV.100.100.40



TM04 3547 4608

# Technical data

## Dimension sketches SLV.100.100.40



| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 759 | 457 | 200 | 277 | 380 | 134 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 130         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 900 | 674 | 494 | 110 | 2"  | 866     | 106  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 889 |     |     | 411 |     | 130 |     | 355 |         | 300  |     | 599     |             | 100 |     | 19      |

## Electrical data

| Pump type            | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | η <sub>motor</sub> [%] |      |      |      | Cos φ |      |        | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|------------------------|------|------|------|-------|------|--------|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | [A]            | [A] | 1/2                    | 3/4  | 1/1  | 1/2  | 3/4   | 1/1  |        |                                       |                                        |
| SLV.100.100.40.4.51E | 3x220-240V D | 4.8     | 4.0     | 4           | 1460 | SD              | 16.9           | 88  | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0501 | 90                                    |                                        |
| SLV.100.100.40.4.51D | 3x380-415V D | 4.8     | 4.0     | 4           | 1460 | SD              | 9.7            | 51  | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0501 | 90                                    |                                        |
| SLV.100.100.40.4.50B | 3x400-415V D | 4.8     | 4.0     | 4           | 1460 | DOL             | 9.7            | 51  | 78.6                   | 82.3 | 83.6 | 0.53 | 0.66  | 0.75 | 0.0501 | 90                                    |                                        |

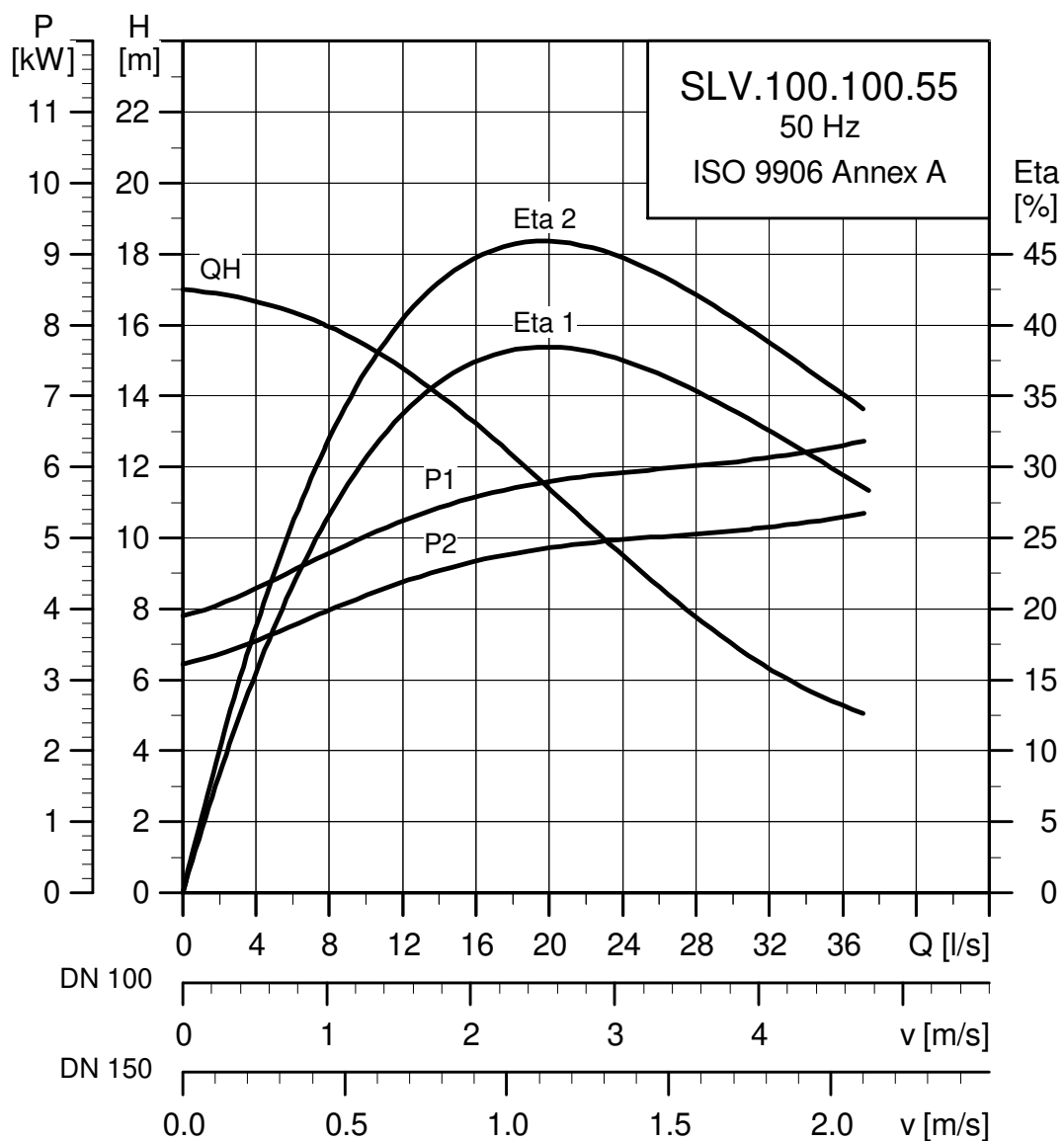
## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |



# Performance curves

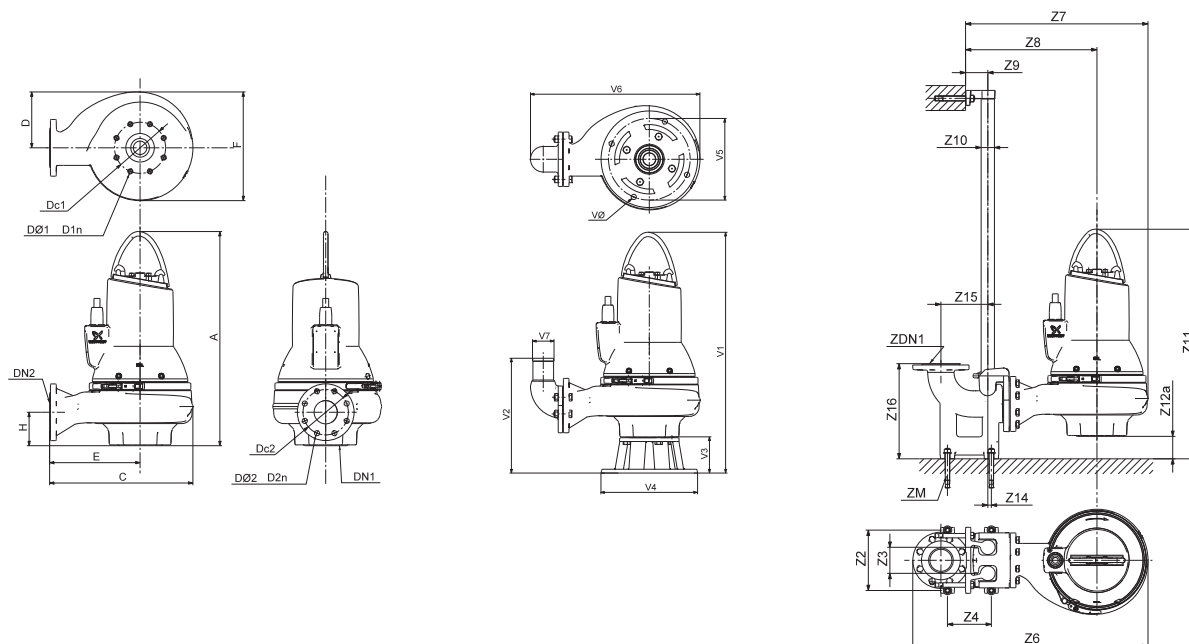
Performance curves SLV.100.100.55



TM04 3548 4608

# Technical data

## Dimension sketches SLV.100.100.55



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 766 | 457 | 200 | 277 | 380 | 134 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 136         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 900 | 674 | 494 | 110 | 2"  | 873     | 106  | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 896 |     |     | 411 |     | 130 |     | 355 |         | 300  |     | 599     |             | 100 |     | 19      |

## Electrical data

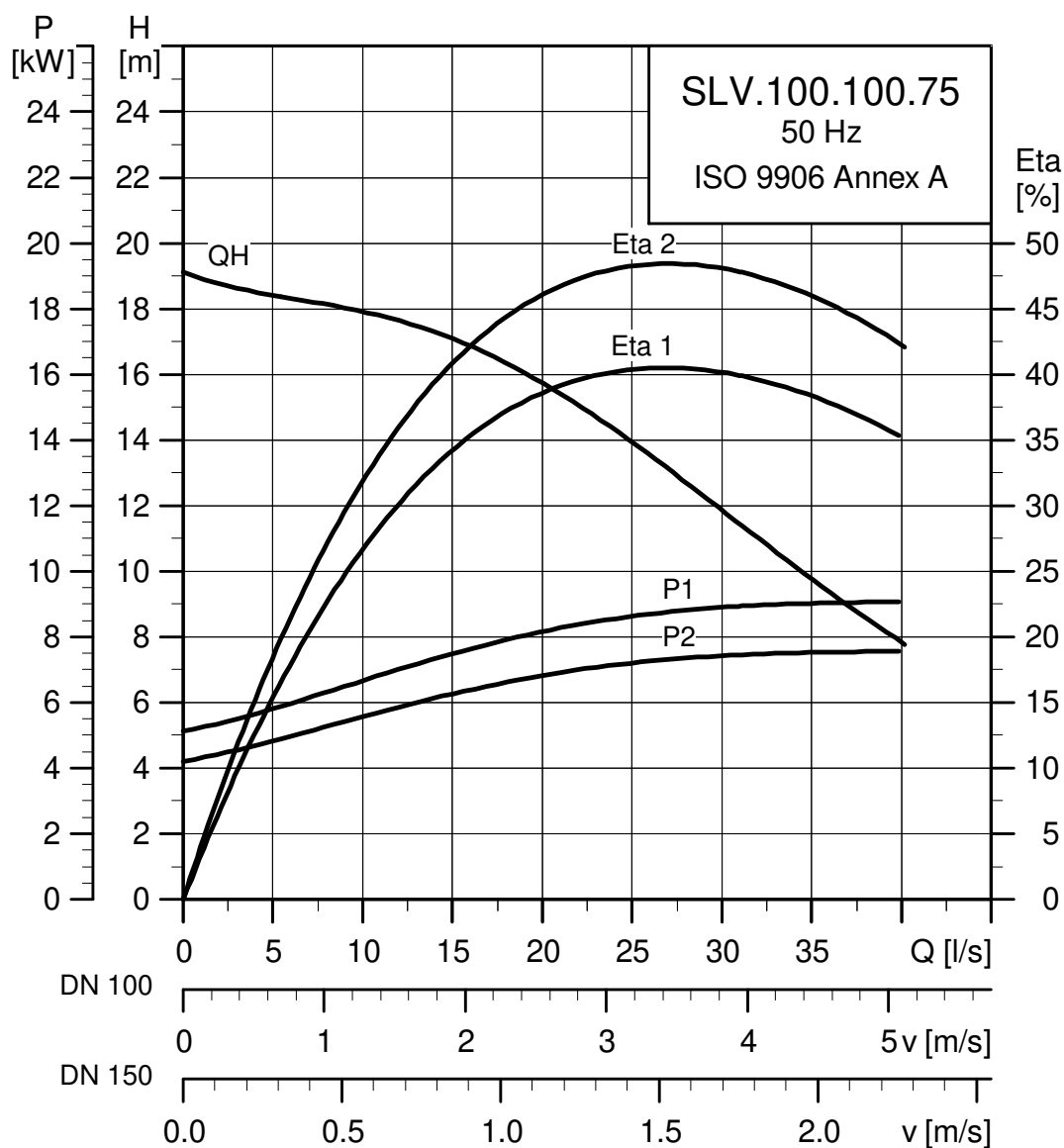
| Pump type            | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> |     | I <sub>start</sub> |      |      | η <sub>motor</sub> [%] |      |      | Cos φ  |     |  | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------|-----|--------------------|------|------|------------------------|------|------|--------|-----|--|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | [A]            | [A] | [A]                | [A]  | 1/2  | 3/4                    | 1/1  | 1/2  | 3/4    | 1/1 |  |                                       |                                        |
| SLV.100.100.55.4.51E | 3x220-240V D | 6.4     | 5.5     | 4           | 1460 | SD              | 20.4           | 140 | 82.0               | 84.8 | 85.6 | 0.67                   | 0.77 | 0.82 | 0.0552 | 110 |  |                                       |                                        |
| SLV.100.100.55.4.51D | 3x380-415V D | 6.4     | 5.5     | 4           | 1460 | SD              | 11.8           | 81  | 82.0               | 84.8 | 85.6 | 0.67                   | 0.77 | 0.82 | 0.0552 | 110 |  |                                       |                                        |
| SLV.100.100.55.4.50B | 3x400-415V D | 6.4     | 5.5     | 4           | 1460 | DOL             | 11.8           | 81  | 82.0               | 84.8 | 85.6 | 0.67                   | 0.77 | 0.82 | 0.0552 | 110 |  |                                       |                                        |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

# Performance curves

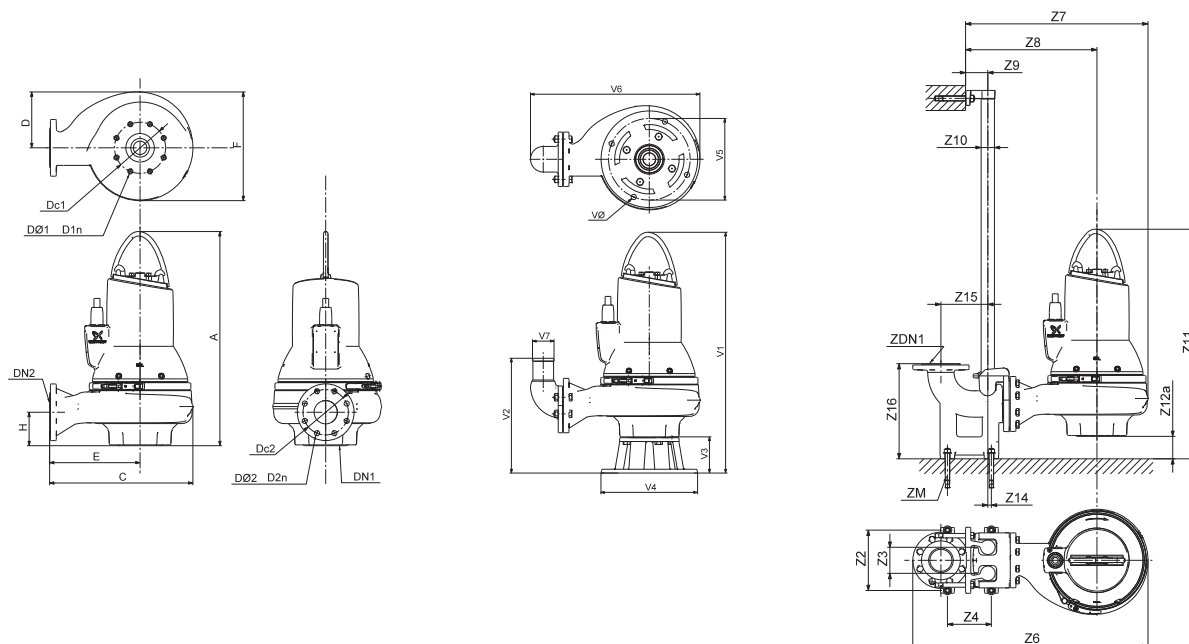
Performance curves SLV.100.100.75



TM04 3549 4608

# Technical data

## Dimension sketches SLV.100.100.75



TM04 2793 3008/TM04 2794 3008/TM04 2795 3008

| A   | C   | D   | E   | F   | H   | DN1 | Dc1 | DØ1 D1n | DN2  | Dc2 | DØ2 D2n | Weight [kg] |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|---------|-------------|-----|-----|---------|
| 842 | 490 | 217 | 294 | 413 | 145 | 100 | 180 | 8x18    | 100  | 180 | 8x18    | 179         |     |     |         |
| Z2  | Z3  | Z4  | Z6  | Z7  | Z8  | Z9  | Z10 | Z11     | Z12a | Z14 | Z15     | Z16         | Dc1 | DN1 | ZM      |
| 260 | 110 | 270 | 933 | 707 | 511 | 110 | 2"  | 938     | 95   | 0   | 220     | 413         | 180 | 100 | 4 x M16 |
| V1  |     |     | V2  |     | V3  |     | V4  |         | V5   |     | V6      |             | V7  |     | VØ      |
| 972 |     |     | 422 |     | 130 |     | 355 |         | 300  |     | 632     |             | 100 |     | 19      |

## Electrical data

| Pump type            | Volt [V]     | P1 [kW] | P2 [kW] | No of poles | RPM  | Starting method | I <sub>N</sub> I <sub>start</sub> η <sub>motor</sub> [%] |                        |      |      |      | Cos φ |      |      | Moment of inertia [kgm <sup>2</sup> ] | Breakdown torque M <sub>max</sub> [Nm] |
|----------------------|--------------|---------|---------|-------------|------|-----------------|----------------------------------------------------------|------------------------|------|------|------|-------|------|------|---------------------------------------|----------------------------------------|
|                      |              |         |         |             |      |                 | I <sub>N</sub> [A]                                       | I <sub>start</sub> [A] | 1/2  | 3/4  | 1/1  | 1/2   | 3/4  | 1/1  |                                       |                                        |
| SLV.100.100.75.4.51E | 3x220-240V D | 8.6     | 7.5     | 4           | 1460 | SD              | 26.3                                                     | 189                    | 85.7 | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.0692                                | 141                                    |
| SLV.100.100.75.4.51D | 3x380-415V D | 8.6     | 7.5     | 4           | 1460 | SD              | 15.2                                                     | 109                    | 85.7 | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.0692                                | 141                                    |
| SLV.100.100.75.4.50B | 3x400-415V D | 8.6     | 7.5     | 4           | 1460 | DOL             | 15.2                                                     | 109                    | 85.7 | 87.2 | 87.0 | 0.72  | 0.81 | 0.86 | 0.0692                                | 141                                    |

## Pump data

| Impeller type | Max. solids size [mm] | Pump housing pressure PN | Max. number of starts per hour | Max. installation depth [m] | Enclosure class | Insulation class | Max. liquid temperature [°C] | pH   |
|---------------|-----------------------|--------------------------|--------------------------------|-----------------------------|-----------------|------------------|------------------------------|------|
| Vortex        | 100                   | 10                       | 20                             | 20                          | 68              | F                | 40                           | 4-10 |

## Accessories

### Installation systems

| Pictures                                                                                                                                                                   | Description                                                                                                                                 | Size                               | Weight | PN | Product number |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------|----|----------------|
|                                                                                           | Auto-coupling system complete<br>- upper guide rail holder, nuts, bolts, gaskets, guide claw and base                                       | DN 65                              |        |    | 96090992       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80                              |        |    | 96090993       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80/DN 65                        |        |    | 96102238       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100                             |        |    | 96090994       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100/DN 80                       |        |    | 96102240       |
|                                                                                                                                                                            |                                                                                                                                             | DN 150                             |        |    | 96090995       |
|                                                                                                                                                                            |                                                                                                                                             | DN 150/DN 100                      |        |    | 96102241       |
| Intermediate guide rail bracket                                                                                                                                            | For guide rails longer than 6 m                                                                                                             |                                    |        |    | 96046827       |
|                                                                                          | Hook-up 2"                                                                                                                                  |                                    |        |    | 96004445       |
| Guide rails                                                                                                                                                                | Standard pipes. Not delivered by Grundfos.                                                                                                  |                                    |        |    |                |
| <br> | Ring stand with flanged 90° elbow and hose connection.<br>With bolts, nuts, gaskets and anchor bolts.<br>Cast iron, epoxy-coated.           | DN 65/DN 65/2½"                    |        |    | 96102253       |
|                                                                                                                                                                            |                                                                                                                                             | DN 65/DN 80/3"                     |        |    | 96102378       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80/DN 65/2½"                    |        |    | 96102439       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80/DN 80/3"                     |        |    | 96102254       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100/DN 80/3"                    |        |    | 96102313       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100/DN 100/4"                   |        |    | 96102255       |
|                                                                                                                                                                            |                                                                                                                                             | DN 150/DN 100/4" galvanized steel  |        |    | 96102314       |
|                                                                                                                                                                            | Ring stand with flanged 90° elbow and outside thread connection.<br>With bolts, nuts, gaskets and anchor bolts.<br>Cast iron, epoxy-coated. | DN 150/DN 150/6" galvanized steel  |        |    | 96102256       |
|                                                                                                                                                                            |                                                                                                                                             | DN 65/DN 65/R 2½                   |        |    | 96102379       |
|                                                                                                                                                                            |                                                                                                                                             | DN 65/DN 80/R 3                    |        |    | 96102380       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80/DN 65/R 2½                   |        |    | 96102440       |
|                                                                                                                                                                            |                                                                                                                                             | DN 80/DN 80/R 3                    |        |    | 96102381       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100/DN 80/R 3                   |        |    | 96102382       |
|                                                                                                                                                                            |                                                                                                                                             | DN 100/DN 100/R 4                  |        |    | 96102383       |
|                                                                                                                                                                            |                                                                                                                                             | DN 150/DN 100/R 4 galvanized steel |        |    | 96102384       |
|                                                                                                                                                                            |                                                                                                                                             | DN 150/DN 150/R 6 galvanized steel |        |    | 96102385       |
|                                                                                                                                                                            |                                                                                                                                             |                                    |        |    |                |

## Other accessories

| Pictures                                                                            | Description                                                                              | Size              | Weight | PN | Product number |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------|--------|----|----------------|
|    | 4 m galvanized lifting chain with lifting link and safety hook. With certificates.       |                   | 800 kg |    | 96735550       |
|                                                                                     | 6 m galvanized lifting chain with lifting link and safety hook. With certificates.       |                   |        |    | 96735553       |
|                                                                                     | 8 m galvanized lifting chain with lifting link and safety hook. With certificates.       |                   |        |    | 96735554       |
|                                                                                     | 10 m galvanized lifting chain with lifting link and safety hook. With certificates.      |                   |        |    | 96735556       |
|                                                                                     | 12 m galvanized lifting chain with lifting link and safety hook. With certificates.      |                   |        |    | 96735557       |
|                                                                                     | 4 m stainless steel lifting chain with lifting link and safety hook. With certificates.  |                   |        |    | 96735559       |
|                                                                                     | 6 m stainless steel lifting chain with lifting link and safety hook. With certificates.  |                   |        |    | 96735564       |
|                                                                                     | 8 m stainless steel lifting chain with lifting link and safety hook. With certificates.  |                   |        |    | 96735566       |
|                                                                                     | 10 m stainless steel lifting chain with lifting link and safety hook. With certificates. |                   |        |    | 96735567       |
|                                                                                     | 12 m stainless steel lifting chain with lifting link and safety hook. With certificates. |                   |        |    | 96735569       |
|    | AMD.07.18.1410 mixer, 3 x 400 V, 50 Hz                                                   |                   |        |    | 96113490       |
|                                                                                     | Bracket for wall mounting                                                                | 2" thread         |        |    | 96115291       |
|                                                                                     | Bracket for floor mounting                                                               | 2" thread         |        |    | 96115292       |
|                                                                                     | Bracket for suspended mounting                                                           | 2" thread         |        |    | 96115293       |
|                                                                                     | 3 m tube for suspended mounting                                                          | 2" thread         |        |    | 96115294       |
|  | 90° elbow<br>Galvanized steel                                                            | R2"               |        |    | 96001980       |
|                                                                                     |                                                                                          | R/Rp 2½           |        |    | 96001981       |
|                                                                                     |                                                                                          | R/Rp 3            |        |    | 96006563       |
|                                                                                     |                                                                                          | R/Rp 4            |        |    | 96006564       |
|  | Coupling half, Storz coupling<br>Aluminium                                               | Rp 2 for 2" hose  |        |    | 96001982       |
|                                                                                     |                                                                                          | Rp 2½ for 2" hose |        |    | 96001983       |
|                                                                                     |                                                                                          | Rp 2½ - 3" hose   |        |    | 96002086       |
|                                                                                     |                                                                                          | Rp 3 - 3" hose    |        |    | 96001984       |
|                                                                                     |                                                                                          | Rp 4 - 4" hose    |        |    | 96005252       |
|                                                                                     |                                                                                          | Rp 6 - 6" hose    |        |    | 96005253       |
|  | 10 m rubber hose<br>incl. Storz couplings                                                | 2"                |        |    | 96001987       |
|                                                                                     |                                                                                          | 3"                |        |    | 96001989       |
|                                                                                     |                                                                                          | 4"                |        |    | 96005255       |
|                                                                                     |                                                                                          | 6"                |        |    | 96005256       |
|                                                                                     | 20 m rubber hose<br>incl. Storz couplings                                                | 3"                |        |    | 96005259       |
|                                                                                     |                                                                                          | 4"                |        |    | 96005260       |
|                                                                                     |                                                                                          | 6"                |        |    | 96005261       |
|                                                                                     |                                                                                          |                   |        |    |                |

| Pictures                                                                            | Description                                                                                                                                                      | Size                         | Weight | PN | Product number |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------|----|----------------|
|    | 90° elbow                                                                                                                                                        | R/Rp 2                       |        |    | 96001990       |
|                                                                                     |                                                                                                                                                                  | R/Rp 2½                      |        |    | 96001991       |
|                                                                                     |                                                                                                                                                                  | Rp/Rp 3                      |        |    | 96001992       |
|                                                                                     |                                                                                                                                                                  | Rp/Rp 4                      |        |    | 96006565       |
|    | Flanged 90° elbow                                                                                                                                                | R/Rp 2                       |        |    | 96001990       |
|                                                                                     |                                                                                                                                                                  | R/Rp 2½                      |        |    | 96001991       |
|    | Hexagon nipple                                                                                                                                                   | R/Rp 2                       |        |    | 96001993       |
|                                                                                     |                                                                                                                                                                  | R/Rp 2½                      |        |    | 96001994       |
|    | Threaded flange                                                                                                                                                  | DN 50, Rp 2                  |        |    | 96001993       |
|                                                                                     |                                                                                                                                                                  | DN 65, Rp 2½                 |        |    | 96001994       |
|  | Bolts, nuts and gaskets                                                                                                                                          | 4 of each M16 x 65 mm, DN 50 |        |    | 96004452       |
|                                                                                     |                                                                                                                                                                  | 4 of each M16 x 65 mm, DN 65 |        |    | 96001998       |
|  | Non-return valve<br>Cast iron ball-type valve                                                                                                                    | Rp/Rp 2                      |        |    | 96002002       |
|  | Isolating valve<br>Brass                                                                                                                                         | R/Rp 2                       |        |    | 96002005       |
|                                                                                     |                                                                                                                                                                  | R/Rp 2½                      |        |    | 96002006       |
|  | Isolating valve<br>Cast iron                                                                                                                                     | Rp/Rp 2                      |        |    | 96489976       |
|  | Non-return valve<br>Cast iron ball-type valve                                                                                                                    | DN 50                        |        |    | 96489974       |
|                                                                                     |                                                                                                                                                                  | DN 65                        |        |    | 96002008       |
|  | Isolating valve<br>Cast iron                                                                                                                                     | DN 50                        |        |    | 96489975       |
|                                                                                     |                                                                                                                                                                  | DN 65                        |        |    | 96002010       |
|  | LC 107 controller, pneumatic version with bell-shaped level pickups and tube for 1 pump, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors. | 3.7 - 12.0 A 30μ             |        |    | 96125595       |
|                                                                                     |                                                                                                                                                                  | 1 - 2.9 A                    |        |    | 96002467       |
|                                                                                     | LC 107 controller, pneumatic version with bell-shaped level pickups and tube for 1 pump, 3 x 400 V, direct-on-line-starting                                      | 1.6 - 5.0 A                  |        |    | 96002468       |
|                                                                                     |                                                                                                                                                                  | 3.7 - 12.0 A                 |        |    | 96002469       |
|                                                                                     |                                                                                                                                                                  | 12.0 - 23.0 A                |        |    | 96002470       |

| Pictures                                                                                                   | Description                                                                                                                                                        | Size                                                                                                                      | Weight           | PN | Product number |          |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------|----|----------------|----------|
|                           | LCD 107 controller, pneumatic version with bell-shaped level pickups and tube for 2 pumps, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors. | 3.7 - 12.0 A 30μ                                                                                                          |                  |    | 96125596       |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | 96002474       |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | 96002475       |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | 96002476       |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | 96002477       |          |
|                           | LC 108 controller for level switches for 1 pump, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors.                                           | 3.7 - 12.0 A 30μ                                                                                                          |                  |    | 96125597       |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | *96433975      |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | *96433979      |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | *96433983      |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | *96433987      |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | *96433991      |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | *96433995      |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | *96433999      |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | *96434003      |          |
|                                                                                                            |                                                                                                                                                                    | LCD 108 controller for level switches for 1 pump, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors. | 3.7 - 12.0 A 30μ |    |                | 96125598 |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | *96434023      |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | *96434027      |          |
|                         |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | *96434031      |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | *96434035      |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | *96434039      |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | *96434043      |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | *96434047      |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | *96434051      |          |
|                                                                                                            |                                                                                                                                                                    | LCD 108 controller for level switches for 2 pumps, 3 x 400 V, direct-on-line-starting                                     |                  |    |                |          |
|                                                                                                            |                                                                                                                                                                    |                                                                                                                           |                  |    |                |          |
| * Supplied with English installation and operating instructions. Other languages are available on request. |                                                                                                                                                                    |                                                                                                                           |                  |    |                |          |
|                         | LC 110 controller for electrodes for 1 pump, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors.                                               | 3.7 - 12.0 A 30μ                                                                                                          |                  |    | 96125599       |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | 96484085       |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | 96484086       |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | 96484087       |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | 96484088       |          |
|                         | LCD 110 controller for electrodes for 2 pumps, 1 x 230 V, direct-on-line-starting. With built-in operating capacitors.                                             | 3.7 - 12.0 A 30μ                                                                                                          |                  |    | 96125600       |          |
|                                                                                                            |                                                                                                                                                                    | 1 - 2.9 A                                                                                                                 |                  |    | 96484093       |          |
|                                                                                                            |                                                                                                                                                                    | 1.6 - 5.0 A                                                                                                               |                  |    | 96484094       |          |
|                                                                                                            |                                                                                                                                                                    | 3.7 - 12.0 A                                                                                                              |                  |    | 96484095       |          |
|                                                                                                            |                                                                                                                                                                    | 12.0 - 23.0 A                                                                                                             |                  |    | 96484096       |          |



| Pictures                                                                            | Description                                                                                                                                                                                                                                     | Size                                                                        | Weight | PN | Product number |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------|----|----------------|
|    | CU 100 control box for one pump<br>A models include a float switch for automatic operation.                                                                                                                                                     | CU100.230.1.9.30                                                            |        |    | 96076194       |
|                                                                                     |                                                                                                                                                                                                                                                 | CU100.230.1.9.30.A                                                          |        |    | 96076195       |
|                                                                                     |                                                                                                                                                                                                                                                 | CU100.230.3.5.A                                                             |        |    | 96076198       |
|                                                                                     |                                                                                                                                                                                                                                                 | CU100.230.3.12.A                                                            |        |    | 96076199       |
|                                                                                     |                                                                                                                                                                                                                                                 | CU100.400.3.2,9.A                                                           |        |    | 96076200       |
|                                                                                     |                                                                                                                                                                                                                                                 | CU100.400.3.5.A                                                             |        |    | 96076201       |
|    | For LC 108 and LCD 108 controllers                                                                                                                                                                                                              | Float switch with 10 m cable                                                |        |    | 96003332       |
|                                                                                     |                                                                                                                                                                                                                                                 | Float switch with 20 m cable                                                |        |    | 96003695       |
|                                                                                     | For LC 108 and LCD 108 controllers connected to LC-Ex4                                                                                                                                                                                          | Float switch for use in potentially explosive environments, with 10 m cable |        |    | 96003421       |
|                                                                                     |                                                                                                                                                                                                                                                 | Float switch for use in potentially explosive environments, with 20 m cable |        |    | 96003536       |
|    | Bracket for float switch                                                                                                                                                                                                                        |                                                                             |        |    | 96003338       |
|   | Standard float switches with 10 m cable, counter weight and bracket                                                                                                                                                                             | 1 pump without alarm (2 switches)                                           |        |    | 62500013       |
|                                                                                     |                                                                                                                                                                                                                                                 | 1 pump with alarm (3 switches)                                              |        |    | 62500014       |
|                                                                                     |                                                                                                                                                                                                                                                 | 2 pumps without alarm (3 switches)                                          |        |    | 62500014       |
|                                                                                     |                                                                                                                                                                                                                                                 | 2 pumps with alarm (4 switches)                                             |        |    | 62500015       |
|  | Float switches for use in potentially explosive environments, with 10 m cable, counter weight and bracket                                                                                                                                       | 1 pump without alarm (3 switches)                                           |        |    | 62500016       |
|                                                                                     |                                                                                                                                                                                                                                                 | 1 pump with alarm (4 switches)                                              |        |    | 62500017       |
|                                                                                     |                                                                                                                                                                                                                                                 | 2 pumps without alarm (4 switches)                                          |        |    | 62500017       |
|  | LC-Ex4 intrinsically safe barrier for use in potentially explosive environments, for float switch applications.<br>The LC-Ex4 can be installed at ambient temperatures ranging from -25 °C to +50 °C.<br>Safety class: II (1) G [EEx ia] II °C. |                                                                             |        |    | 96440300       |
|  | Electrodes for LC 110 and LCD 110                                                                                                                                                                                                               | 1 electrode with 10 m cable                                                 |        |    | 96076289       |
|                                                                                     |                                                                                                                                                                                                                                                 | 3 electrodes with 10 m cable                                                |        |    | 96076189       |
|                                                                                     |                                                                                                                                                                                                                                                 | 4 electrodes with 10 m cable                                                |        |    | 91713437       |
|  | Bracket for electrodes                                                                                                                                                                                                                          | To be mounted on a 38 mm pipe                                               |        |    | 91713196       |
|  | Signal lamp, 1 x 230 V                                                                                                                                                                                                                          | Outdoor mounting                                                            |        |    | 62500020       |
|  | Acoustic signal (horn), 1 x 230 V                                                                                                                                                                                                               | Outdoor mounting                                                            |        |    | 62500021       |
|                                                                                     |                                                                                                                                                                                                                                                 | Indoor mounting                                                             |        |    | 62500022       |

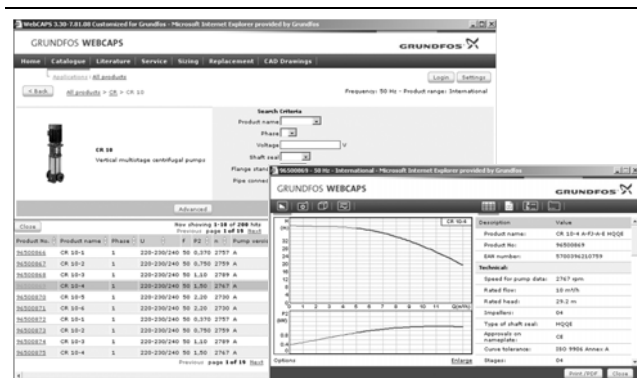
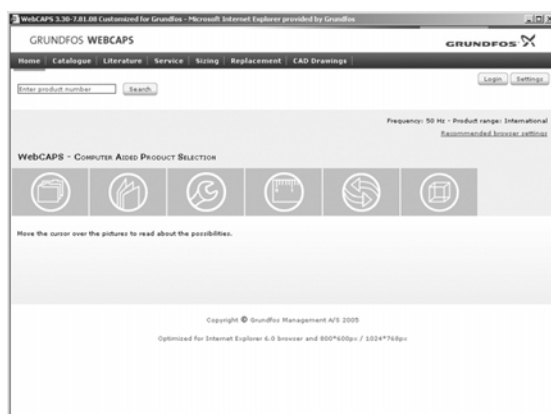


WebCAPS is a **Web**-based **C**omputer **A**ided **P**roduct  
**S**election program available on [www.grundfos.com](http://www.grundfos.com).

WebCAPS contains detailed information on more than 185.000 Grundfos products in more than 20 languages.

In WebCAPS, all information is divided into 6 sections:

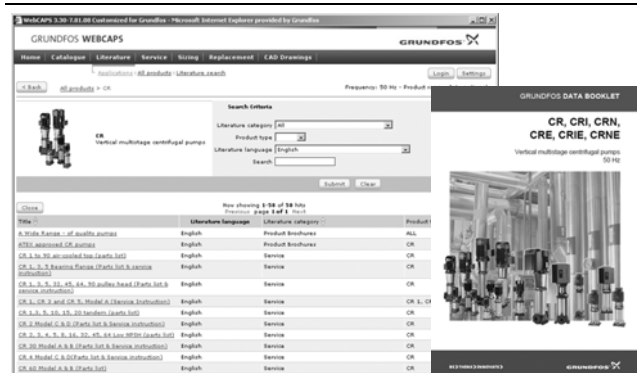
- Catalogue
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



**Catalogue** 

This section is based on fields of application and pump types, and contains

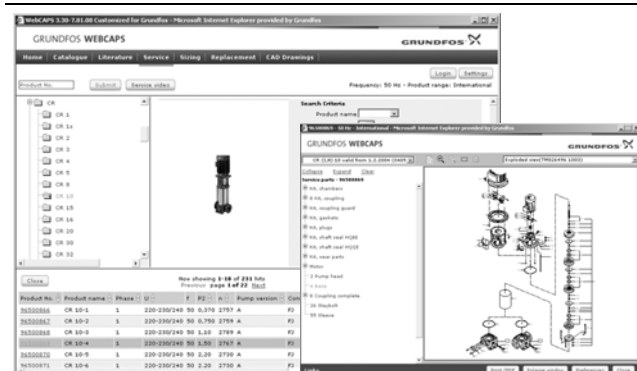
- technical data
- curves (QH, Eta, P1, P2, etc) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.

Literature 

In this section you can access all the latest documents of a given pump, such as

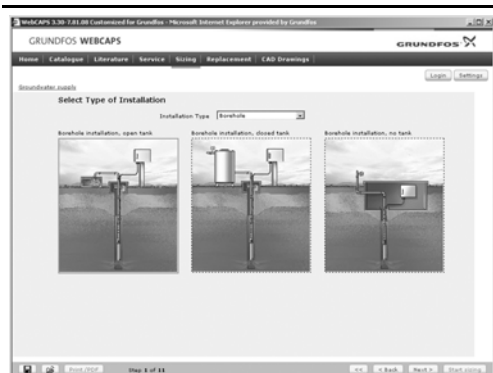
- data booklets

- data booklets
- installation and operating instructions
- service documentation, such as Service kit catalogue and Service kit instructions
- quick guides
- product brochures.

Service 

This section contains an easy-to-use interactive service catalogue. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.

Furthermore, this section contains service videos showing you how to replace service parts.



## Sizing

This section is based on different fields of application and installation examples, and gives easy step-by-step instructions in how to:

- select the most suitable and efficient pump for your installation
- carry out advanced calculations based on energy consumption, payback periods, load profiles, life cycle costs, etc.
- analyse your selected pump via the built-in life cycle cost tool
- determine the flow velocity in wastewater applications, etc.



## Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump.

The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

Based on an easy step-by-step guide, you can compare Grundfos pumps with the one you have installed on your site. When you have specified the installed pump, the guide will suggest a number of Grundfos pumps which can improve both comfort and efficiency.



## CAD drawings

In this section it is possible to download 2-dimensional (2D) and 3-dimensional (3D) CAD drawings of most Grundfos pumps.

These formats are available in WebCAPS:

2-dimensional drawings:

- .dxf, wireframe drawings
- .dwg, wireframe drawings.

3-dimensional drawings:

- .dwg, wireframe drawings (without surfaces)
- .stp, solid drawings (with surfaces)
- .eprt, E-drawings.



## WinCAPS



Fig. 1 WinCAPS CD-ROM

WinCAPS is a **Windows-based Computer Aided Product Selection** program containing detailed information on more than 185,000 Grundfos products in more than 20 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no Internet connection is available.

WinCAPS is available on CD-ROM and updated once a year.





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Subject to alterations.