

# SL1, SLV pumps

1.1 to 11 kW

60 Hz



<b>1. Introduction</b>	<b>4</b>
Introduction	4
Applications	4
Grundfos blueflux®	5
smartdesign	5
<b>2. Performance range</b>	<b>6</b>
Performance overview	6
Performance range	7
<b>3. Identification</b>	<b>8</b>
Type key	8
Nameplate	8
<b>4. Selection of product</b>	<b>9</b>
Ordering the product	9
<b>5. Product range</b>	<b>10</b>
Standard pumps	10
Explosion-proof pumps	13
<b>6. Variants</b>	<b>16</b>
List of variants	16
<b>7. Construction</b>	<b>18</b>
Drawings - SL1 pumps	18
Drawings - SLV pumps	21
<b>8. Product description</b>	<b>25</b>
Features	25
Operating conditions	27
Motor range	27
Approvals	27
Controllers	28
Frequency converter, CUE/VFD	28
Wiring diagrams	31
<b>9. Curve charts</b>	<b>33</b>
How to read the curve charts	33
Curve conditions	34
Performance tests	34
Certificates	34
Witness test	34
<b>10. Performance curves and technical data</b>	<b>35</b>
SL1.50.65	35
SL1.50.80	38
SL1.80.80	41
SL1.80.100	47
SL1.100.100	53
SL1.100.150	56
SLV.65.65	59
SLV.65.80	62
SLV.80.80	65
SLV.80.100	75
SLV.100.100	85
<b>11. Dimension and weights</b>	<b>89</b>
Auto-coupling installation	89
Free standing installation (without ring stand)	90
Free standing installation (with ring stand)	92
Weights	93
<b>12. Accessories</b>	<b>94</b>
Installation systems	94

Other accessories .....	95
<b>13. Grundfos Product Center</b>	<b>96</b>

# 1. Introduction

## Introduction

This data booklet deals with Grundfos submersible wastewater and sewage pumps types SL1 and SLV.

Two types of pumps are available:

- SL1 pumps with S tube® impeller
- SLV pumps with SuperVortex (free-flow) impeller.



Fig. 1 SL1 (S tube®) and SLV (SuperVortex) pumps



The S tube® impeller is the only impeller available in the wastewater market that does not compromise either efficiency or free passage through the pump.

The pumps are specifically designed for pumping sewage and wastewater in a wide range of private, municipal and industrial applications.

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

The pumps are fitted with IEC IE3 and NEMA premium efficiency motors from 1.1 kW up to and including 11 kW. The motors are either 2- or 4-pole motors, depending on the motor size.

The free passage in the pumps is 50 to 100 mm.

The pumps are available for these types of installation:

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

## Applications

Typical applications are transfer of liquids, such as:

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

The pumps are ideal for pumping the above liquids from places such as:

- 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
- residential buildings
- factories and industry.

## Grundfos blueflux®



Grundfos blueflux® guarantees the highest motor efficiency from Grundfos. Every aspect of the technology driving a Grundfos blueflux® motor has been developed to meet the actual needs of the application for which the pumping system or solution is installed - and always with an emphasis on reliability and efficiency.

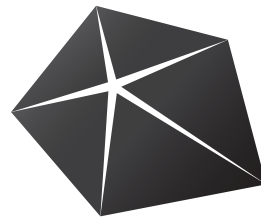
A pumping system or solution with a Grundfos blueflux® motor has a considerably higher total efficiency than comparable solutions and reduces life cycle costs substantially. The combination of motor technology, advanced pump design and speed control ensures superior system control, reduced day-to-day service costs and lower environmental impact.

Grundfos blueflux® represents a range of skills and innovative processes that Grundfos brings to motor technology development. Grundfos was instrumental in the drafting and passing of the EuP Directive, setting the ecodesign requirements for electric motors in the European Union.

As a technological leader within high-efficiency motors, Grundfos was invited to help with the technical aspects of the legislation. Grundfos was able to create political awareness of the huge savings potential of variable speed motors and, at a later stage, influence the decision-makers to include variable-frequency drives in the new legislation. As a consequence, Europe's annual electricity consumption will be reduced by 5 % by 2020 - about ten times more than originally planned before Grundfos intervened.

The Grundfos blueflux® label guarantees that the motor technology used is ahead of current market standards and either meets or exceeds legislative requirements for motor efficiency, where these applied.

## smartdesign



## smartdesign

The smartdesign features of our SL1 and SLV pumps include:

- moisture-proof cable plug connection made of corrosion-resistant stainless steel with conductors embedded in polyurethane sealant
- stainless steel clamp connection between motor housing and pump housing for easy service
- 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 S tube® impeller with a long vane reducing the risk of jamming or clogging, or SuperVortex impeller with high pumping efficiency and less downtime
- explosion-proof motors for potentially explosive environments (ATEX-approved pumps)
- motor in insulation class H (180 °C), enclosure class IP68 with one thermal sensor in each phase
- temperature rise class A
- service-friendly design:
- clamp connection between motor and pump housing
- double mechanical cartridge shaft seal
- cable connection to motor via plug.
- motor built of highly efficient components, offering lower motor temperature and longer life.

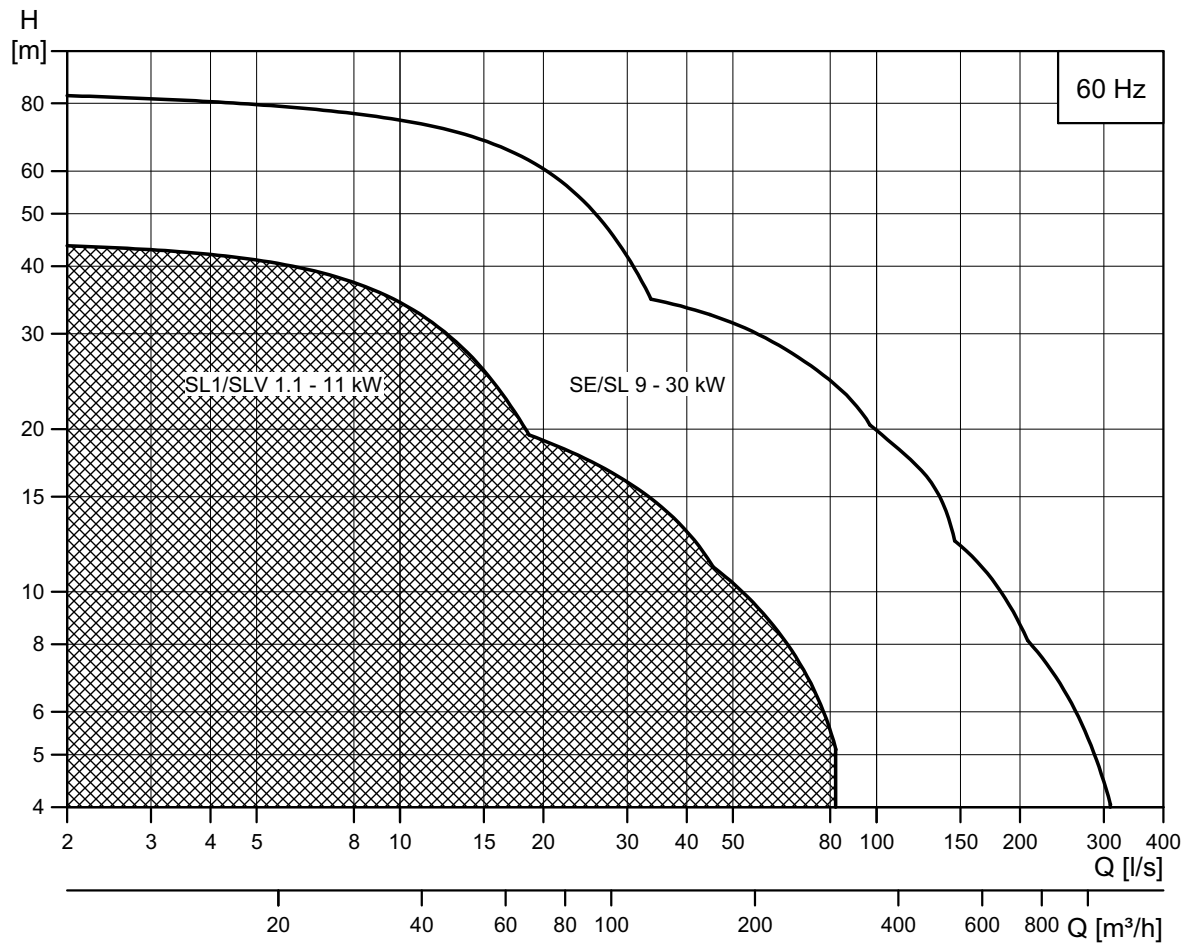
## 2. Performance range

### Performance overview

Figure 2 shows the performance overview of SE/SL pumps. Figure 3 shows the performance range of SL 1 and SLV sewage and wastewater pumps. It gives an overview of the various sizes and impeller types.

**Note:** For information about the performance range of each individual pump, see pages 35 to 88.

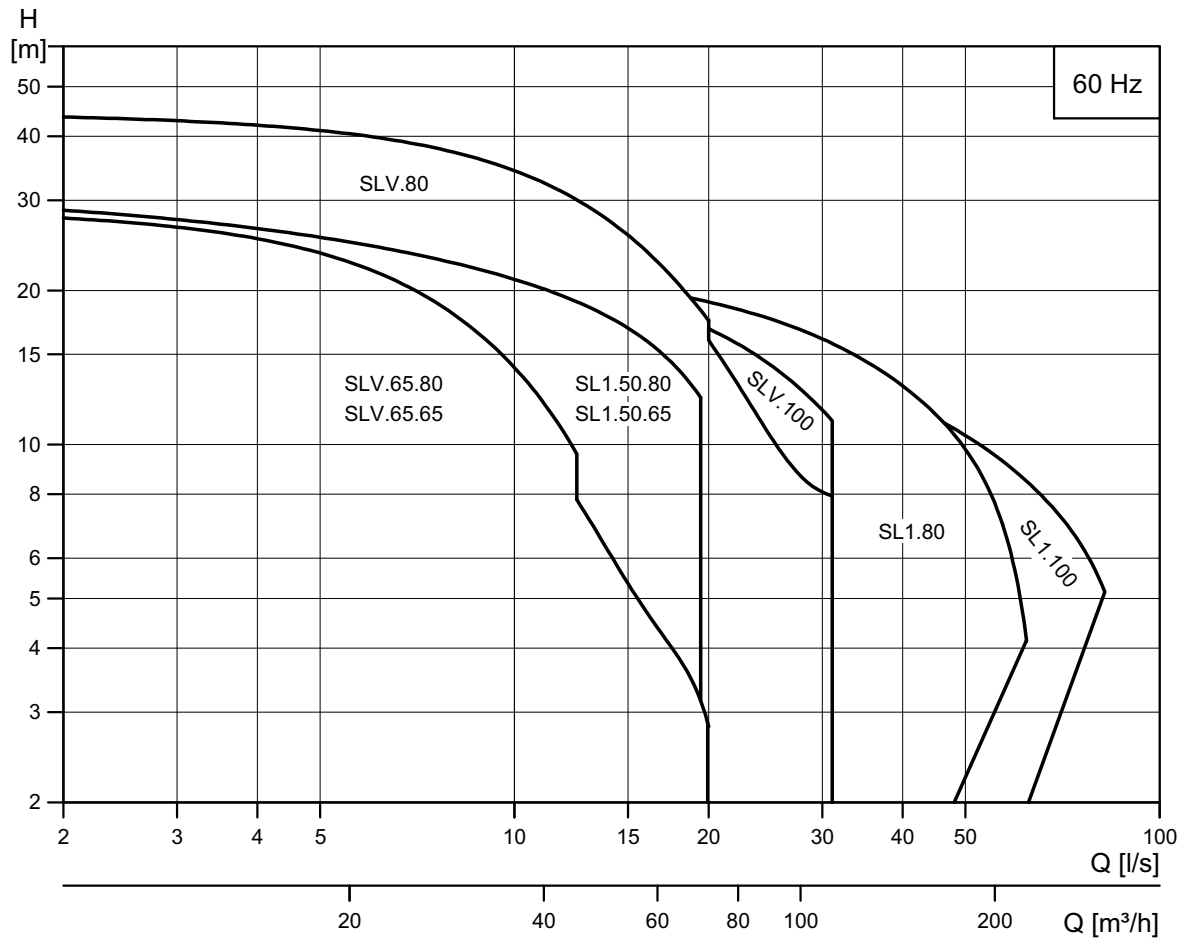
If your required duty point exceeds the performance range below, please see the Grundfos SE(1/V), SL(1/V) and S range data booklets available in Grundfos Product Center.



TM06 8317 0117

Fig. 2 Performance overview

Performance range



TM04 7577 0117

Fig. 3 Performance range

Performance curves and technical data

SL1 pumps	Page	SLV pumps	Page	SLV pumps	Page
SL1.50.65.22.(A).(EX).2--C	35	SLV.65.65.22.(A).(EX).2--C	59	SLV.80.100.92.(A).(EX).2--C	83
SL1.50.65.30.(A).(EX).2--C	36	SLV.65.65.30.(A).(EX).2--C	60	SLV.80.100.110.(A).(EX).2--C	84
SL1.50.65.40.(A).(EX).2--C	37	SLV.65.65.40.(A).(EX).2--C	61	SLV.100.100.30.(A).(EX).4--C	85
SL1.50.80.22.(A).(EX).2--C	38	SLV.65.80.22.(A).(EX).2--C	62	SLV.100.100.40.(A).(EX).4--C	86
SL1.50.80.30.(A).(EX).2--C	39	SLV.65.80.30.(A).(EX).2--C	63	SLV.100.100.55.(A).(EX).4--C	87
SL1.50.80.40.(A).(EX).2--C	40	SLV.65.80.40.(A).(EX).2--C	64	SLV.100.100.75.(A).(EX).4--C	88
SL1.80.80.15.(A).(EX).4--C	41	SLV.80.80.11.(A).(EX).4--C	65		
SL1.80.80.22.(A).(EX).4--C	42	SLV.80.80.13.(A).(EX).4--C	66		
SL1.80.80.30.(A).(EX).4--C	43	SLV.80.80.15.(A).(EX).4--C	67		
SL1.80.80.40.(A).(EX).4--C	44	SLV.80.80.22.(A).(EX).4--C	68		
SL1.80.80.55.(A).(EX).4--C	45	SLV.80.80.40.(A).(EX).2--C	69		
SL1.80.80.75.(A).(EX).4--C	46	SLV.80.80.40.(A).(EX).4--C	70		
SL1.80.100.15.(A).(EX).4--C	47	SLV.80.80.60.(A).(EX).2--C	71		
SL1.80.100.22.(A).(EX).4--C	48	SLV.80.80.75.(A).(EX).2--C	72		
SL1.80.100.30.(A).(EX).4--C	49	SLV.80.80.92.(A).(EX).2--C	73		
SL1.80.100.40.(A).(EX).4--C	50	SLV.80.80.110.(A).(EX).2--C	74		
SL1.80.100.55.(A).(EX).4--C	51	SLV.80.100.11.(A).(EX).4--C	75		
SL1.80.100.75.(A).(EX).4--C	52	SLV.80.100.13.(A).(EX).4--C	76		
SL1.100.100.40.(A).(EX).4--C	53	SLV.80.100.15.(A).(EX).4--C	77		
SL1.100.100.55.(A).(EX).4--C	54	SLV.80.100.22.(A).(EX).4--C	78		
SL1.100.100.75.(A).(EX).4--C	55	SLV.80.100.40.(A).(EX).2--C	79		
SL1.100.150.40.(A).(EX).4--C	56	SLV.80.100.40.(A).(EX).4--C	80		
SL1.100.150.55.(A).(EX).4--C	57	SLV.80.100.60.(A).(EX).2--C	81		
SL1.100.150.75.(A).(EX).4--C	58	SLV.80.100.75.(A).(EX).2--C	82		

## 3. Identification

### Type key

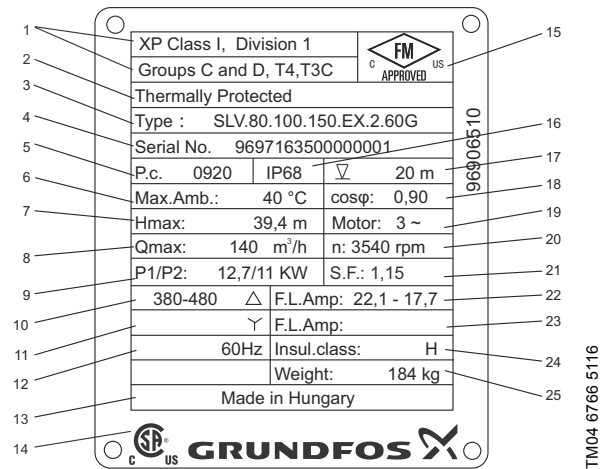
The pump can be identified by means of the type designation. The type designation is stated on the nameplate of the pump.

Example: **SL1.80.80.40.A.Ex.4.6.0D.A.Q.Z**

Code	Explanation	Designation
SL	Grundfos sewage/wastewater pump	Pump type
1	S tube® impeller	Impeller type
V	SuperVortex (free-flow) impeller	
50	50 mm	Free spherical passage
65	65 mm	
80	80 mm	
100	100 mm	
65	DN 65	Pump outlet
80	DN 80	
100	DN 100	
150	DN 150	
40	Output power, P2 / 10 40 = 4.0 kW	Power [kW]
[ ]	Standard	Sensor version
A	Sensor version	
2	2-pole	Number of poles
4	4-pole	
[ ]	Non-explosion-proof pump, standard	Pump version
Ex	Explosion-proof pump	
6	60 Hz	Frequency [Hz]
0F	3 x 220-277 V, DOL	Voltage code and starting method
0G	3 x 380-480 V, DOL	
1F	3 x 220-277 V, D / 380-480 V, Y	
1G	3 x 380-480 V, Y/D	
[ ]	1st generation	Generation
A	2nd generation	
B	3rd generation	
C	4th generation	
[ ]	Complete pump in cast iron	Pump material
Q	Cast iron pump with stainless steel impeller	
[ ]	Pump in standard range	Customisation
Z	Custom-built pump	

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

### Nameplate



**Fig. 4** Nameplate

Pos.	Description
1	FM marking
2	Thermally protected
3	Type designation
4	Serial number
5	Production code (year and week)
6	Maximum ambient temperature
7	Maximum head
8	Maximum flow rate
9	Rated input and output power
10	Rated voltage, D
11	Rated voltage, Y
12	Frequency
13	Country of production
14	CSA mark
15	FM mark
16	Enclosure class to IEC
17	Maximum installation depth
18	Power factor
19	Number of phases
20	Rated speed
21	Service factor
22	Full load current, D
23	Full load current, Y
24	Insulation class
25	Weight without cable



## 4. Selection of product

### Ordering the product

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

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

### Pump type

Use the table below to identify the pump type that best fulfils your needs. The table is for guidance only.

Description	SL1	SLV
<b>Liquid and operation characteristics</b>		
Dry matter content up to 3 %	•	•
Dry matter content up to 5 %		•
Relatively low content of fibres and solids	•	•
Relatively high content of fibres and solids		•
Relatively low number of operating hours	•	•
Relatively high number of operating hours	•	
<b>Application</b>		
Stormwater	•	•
Groundwater	•	•
Drainage and surface water	•	•
Drainage and surface water with small impurities	•	•
Abrasive surface water	•	•
Wastewater with long fibres e.g. from laundries	•	•
Domestic wastewater with discharge from toilets	•	•
Municipal sewage	•	•
Sewage from commercial buildings	•	•
Industrial process water with solids and fibres		•
Industrial process water with solids	•	•
Industrial process water without solids and fibres	•	

When you have selected the pump type, use the sections [Product range](#) on page 10 and [Type key](#) on page 8 to identify the pump that best fulfils your needs. The list below is a detailed description of the product you get if you order the following pump:

Pump	Product number
SLV.65.65.22.2.60G.C	98628551

- Pump as specified in the type key
- 10 m cable
- paint: NCS9000N black (RAL 9005), gloss code 30, thickness 100 µm
- thermal switch in the stator windings tested according to ISO 9906:2012, grade 3B.

See section 10. [Performance curves and technical data](#) for selection of a standard pump.

**Note:** Product-specific data for the pump can also be found in Grundfos Product Center using the product number 98628551.

### 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 section [Variants](#) on page 16. For requirements or designs outside the mentioned table, contact Grundfos.

### Explosion-proof version

The entire range is available in explosion-proof versions.

For further information about explosion-proof pumps, please see page 27.

### Accessories

Depending on the installation type, you may need to order accessories. See section [Accessories](#) on page 94 for selection of the correct accessories.

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

### Pump controller

The following controllers are available:

- LC, LCD 107 with air bells
- LC, LCD 108 with float switches
- LC, LCD 110 with level electrodes
- Grundfos Dedicated Controls.



Fig. 5 Grundfos Dedicated Controls

Grundfos Dedicated Controls is a control system designed for installation in either commercial buildings or network pumping stations with one to six pumps. As standard, the system is supplied with application-optimised software and can be configured to meet your specific pumping needs.

For further information about Grundfos Dedicated Controls, see page 28.

TM06 0918 1314

## 5. Product range

### Standard pumps

#### SL1, cast iron pumps

Pump type	Sensor		Poles	Voltage			
	Yes	No		3 x 220-277 V, DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
				[0F]	[0G]	[1F]	[1G]
SL1.50.65.22	•		2	98628646	98617694	98628700	98628808
		•	2	98628425	98617692	98625058	98628580
SL1.50.65.30	•		2	98628647	98628755	98628701	98628809
		•	2	98628426	98628532	98624737	98628581
SL1.50.65.40	•		2	98628648	98628756	98628702	98628810
		•	2	98628427	98624740	98628480	98628583
SL1.50.80.22	•		2	98628649	98628757	98628703	98628811
		•	2	98628428	98628533	98628481	98628584
SL1.50.80.30	•		2	98628650	98628758	98628704	98628812
		•	2	98628429	98628534	98628482	98628585
SL1.50.80.40	•		2	98628651	98628759	98628705	98628813
		•	2	98628430	98628535	98628483	98628586
SL1.80.80.15	•		4	98628652	98628760	98628706	98628814
		•	4	98628431	98624751	98628484	98628587
SL1.80.80.22	•		4	98628653	98628761	98628708	98628815
		•	4	98628432	98628536	98628485	98628588
SL1.80.80.30	•		4	98628654	98628762	98628709	98628816
		•	4	98628433	98628537	98628486	98628590
SL1.80.80.40	•		4	98628655	98628763	98628710	98628817
		•	4	98628434	98628538	98628487	98628591
SL1.80.80.55	•		4	98628656	98628764	98628711	98628818
		•	4	98628436	98628539	98628489	98628592
SL1.80.80.75	•		4	98628657	98628765	98628712	98628819
		•	4	98628437	98628540	98628490	98628593
SL1.80.100.15	•		4	98628658	98628766	98628713	98628820
		•	4	98628438	98628541	98628491	98628594
SL1.80.100.22	•		4	98628659	98628767	98628714	98628821
		•	4	98628439	98628542	98628492	98628596
SL1.80.100.30	•		4	98628660	98628768	98628715	98628822
		•	4	98628440	98628543	98628493	98628597
SL1.80.100.40	•		4	98628661	98628769	98628716	98628823
		•	4	98628441	98628544	98624738	98628598
SL1.80.100.55	•		4	98628662	98628770	98628717	98628824
		•	4	98628442	98628545	98628494	98628599
SL1.80.100.75	•		4	98628663	98628771	98628718	98628825
		•	4	98628443	98624752	98628496	98628600
SL1.100.100.40	•		4	98628664	98628772	98628719	98628826
		•	4	98628444	98624753	98628497	98628601
SL1.100.100.55	•		4	98628665	98628773	98628720	98628827
		•	4	98628446	98628546	98628498	98628603
SL1.100.100.75	•		4	98628666	98628774	98628721	98628828
		•	4	98628447	98628547	98624739	98628604
SL1.100.150.40	•		4	98628667	98628775	98628722	98628829
		•	4	98628448	98628548	98628499	98628605
SL1.100.150.55	•		4	98628668	98628776	98628723	98628830
		•	4	98628449	98628549	98628500	98628606
SL1.100.150.75	•		4	98628669	98628777	98628724	98628831
		•	4	98628450	98628550	98628501	98628607

## SLV, cast iron pumps

Pump type	Sensor		Poles	Voltage			
				3 x 220-277 V DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
	Yes	No		[0F]	[0G]	[1F]	[1G]
SLV.65.65.22	•		2	98628670	98628778	98628725	98628832
		•	2	98628451	98628551	98628502	98628608
SLV.65.65.30	•		2	98628671	98628779	98628726	98628833
		•	2	98628452	98628552	98628503	98628609
SLV.65.65.40	•		2	98628672	98628780	98628727	98628834
		•	2	98628453	98628553	98628504	98628610
SLV.65.80.22	•		2	98628673	98628781	98628728	98628835
		•	2	98624736	98628554	98628505	98628611
SLV.65.80.30	•		2	98628674	98628782	98628729	98628836
		•	2	98628454	98628555	98628506	98628612
SLV.65.80.40	•		2	98628675	98628783	98628730	98628837
		•	2	98628455	98628556	98628507	98628613
SLV.80.80.11	•		4	98628681	98628789	98628736	98628843
		•	4	98628461	98628561	98628513	98628619
SLV.80.80.13	•		4	98628682	98628790	98628737	98628844
		•	4	98628462	98628562	98628514	98628620
SLV.80.80.15	•		4	98628683	98628791	98628738	98628845
		•	4	98628463	98628563	98628515	98628621
SLV.80.80.22	•		4	98628684	98628792	98628739	98628846
		•	4	98628464	98628564	98628516	98628622
	•		2	98628676	98628784	98628731	98628838
SLV.80.80.40	•		4	98628685	98628793	98628740	98628847
		•	2	98628456	98628557	98628508	98628614
		•	4	98628465	98624754	98628517	98628624
SLV.80.80.60	•		2	98628677	98628785	98628732	98628839
		•	2	98628457	98628558	98628509	98628616
SLV.80.80.75	•		2	98628678	98628786	98628733	98628840
		•	2	98628458	98625059	98628510	98628617
SLV.80.80.92	•		2	98628679	98628787	98628734	98628841
		•	2	98628459	98628559	98628511	98624755
SLV.80.80.110	•		2	98628680	98628788	98628735	98628842
		•	2	98628460	98628560	98628512	98628618
SLV.80.100.11	•		4	98628691	98628799	98628746	98628853
		•	4	98628471	98628570	98628523	98628630
SLV.80.100.13	•		4	98628692	98628800	98628747	98628854
		•	4	98628472	98628571	98628524	98628631
SLV.80.100.15	•		4	98628693	98628801	98628748	98628855
		•	4	98628473	98628572	98628525	98628632
SLV.80.100.22	•		4	98628694	98628802	98628749	98628856
		•	4	98628474	98628574	98628526	98628634
	•		2	98628686	98628794	98628741	98628848
SLV.80.100.40	•		4	98628695	98628803	98628750	98628857
		•	2	98628466	98628565	98628518	98628625
		•	4	98628475	98628575	98628527	98628635
SLV.80.100.60	•		2	98628687	98628795	98628742	98628849
		•	2	98628467	98628566	98628519	98628626
SLV.80.100.75	•		2	98628688	98628796	98628743	98628850
		•	2	98628468	98628567	98628520	98628627
SLV.80.100.92	•		2	98628689	98628797	98628744	98628851
		•	2	98628469	98628568	98628521	98628628
SLV.80.100.110	•		2	98628690	98628798	98628745	98628852
		•	2	98628470	98628569	98628522	98628629
SLV.100.100.30	•		4	98628696	98628804	98628751	98628858
		•	4	98628476	98628576	98628528	98628636
SLV.100.100.40	•		4	98628697	98628805	98628752	98628859
		•	4	98628477	98628577	98628529	98628637
SLV.100.100.55	•		4	98628698	98628806	98628753	98628860
		•	4	98628478	98628578	98628530	98628638
SLV.100.100.75	•		4	98628699	98628807	98628754	98628861
		•	4	98628479	98628579	98628531	98628640

## SLV, cast iron pumps with stainless steel impeller

Pump type	Sensor		Poles	Voltage			
				3 x 220-277 V, DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
	Yes	No		[0F]	[0G]	[1F]	[1G]
SLV.65.65.40	•		2	98768121	98768437	98768129	98768145
		•	2	98768117	98768133	98768126	98758141
SLV.65.80.40	•		2	98768122	98768138	98768130	98768146
		•	2	98768118	98768134	98768126	98768142
SLV.80.80.11	•		4	98630790	98630840	98630815	98630865
		•	4	98630675	98630737	98630709	98630760
SLV.80.80.13	•		4	98630791	98630841	98630816	98630866
		•	4	98630676	98625060	98630710	98630761
SLV.80.80.15	•		4	98630792	98630843	98630817	98630868
		•	4	98630677	98630738	98630711	98630762
SLV.80.80.22	•		4	98630793	98630844	98630818	98630869
		•	4	98630678	98630739	98630712	98630763
	•		2	98630783	98630835	98630810	98630860
SLV.80.80.40	•		4	98630794	98630845	98630819	98630870
		•	2	98630649	98630731	98630704	98630755
		•	4	98630679	98630740	98630713	98630764
SLV.80.80.60	•		2	98630784	98630836	98630811	98630861
		•	2	98630650	98630732	98630705	98630756
SLV.80.80.75	•		2	98630786	98630837	98630812	98630862
		•	2	98630672	98630733	98630706	98630757
SLV.80.80.92	•		2	98630787	98630838	98630813	98630863
		•	2	98630673	98630734	98630707	98630758
SLV.80.80.110	•		2	98630788	98630839	98630814	98630864
		•	2	98630674	98630735	98630708	98630759
SLV.80.100.11	•		4	98630800	98630851	98630825	98630876
		•	4	98630685	98630746	98630721	98630770
SLV.80.100.13	•		4	98630802	98630852	98630826	98630877
		•	4	98630686	98630747	98630722	98630772
SLV.80.100.15	•		4	98630803	98630853	98630827	98630878
		•	4	98630687	98630748	98630723	98630773
SLV.80.100.22	•		4	98630804	98630854	98630828	98630879
		•	4	98630688	98630749	98630725	98630774
	•		2	98630795	98630846	98630820	98630871
SLV.80.100.40	•		4	98630805	98630855	98630829	98630880
		•	2	98630680	98630741	98630714	98630765
		•	4	98630689	98630750	98630726	98630775
SLV.80.100.60	•		2	98630796	98630847	98630821	98630872
		•	2	98630681	98630742	98630715	98630766
SLV.80.100.75	•		2	98630797	98630848	98630822	98630873
		•	2	98630682	98630743	98630716	98630767
SLV.80.100.92	•		2	98630798	98630849	98630823	98630874
		•	2	98630683	98630744	98630718	98630768
SLV.80.100.110	•		2	98630799	98630850	98630824	98630875
		•	2	98630684	98630745	98630720	98630769
SLV.100.100.30	•		4	98630806	98630856	98630830	98630881
		•	4	98630690	98630751	98630727	98630776
SLV.100.100.40	•		4	98630807	98630857	98630831	98630882
		•	4	98630701	98630752	98630728	98630777
SLV.100.100.55	•		4	98630808	98630858	98630832	98630883
		•	4	98630702	98630753	98630729	98630778
SLV.100.100.75	•		4	98630809	98630859	98630833	98630884
		•	4	98630703	98630754	98630730	98630779

## Explosion-proof pumps

## SL1, cast iron, Ex pumps

Pump type	Sensor		Poles	Voltage			
				3 x 220-277 V, DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
	Yes	No		[0F]	[0G]	[1F]	[1G]
SL1.50.65.22	•		2	98629100	98617695	98629154	98629261
		•	2	98628862	98617693	98628916	98629034
SL1.50.65.30	•		2	98629101	98629208	98629155	98629262
		•	2	98628863	98628980	98628917	98629035
SL1.50.65.40	•		2	98629102	98629209	98629156	98629263
		•	2	98628864	98628981	98628918	98629036
SL1.50.80.22	•		2	98629103	98629210	98629157	98629264
		•	2	98628865	98628982	98628919	98629037
SL1.50.80.30	•		2	98629104	98629211	98629158	98629265
		•	2	98628866	98628983	98628920	98629038
SL1.50.80.40	•		2	98629105	98629212	98629159	98629266
		•	2	98628867	98628984	98628921	98629039
SL1.80.80.15	•		4	98629106	98629213	98629160	98629267
		•	4	98628868	98628985	98628922	98629040
SL1.80.80.22	•		4	98629107	98629214	98629161	98629268
		•	4	98628869	98628986	98628923	98629041
SL1.80.80.30	•		4	98629108	98629215	98629162	98629269
		•	4	98628870	98628987	98628924	98629043
SL1.80.80.40	•		4	98629109	98629216	98629163	98629270
		•	4	98628871	98628988	98628925	98629044
SL1.80.80.55	•		4	98629110	98629217	98629164	98629271
		•	4	98628872	98628989	98628926	98629045
SL1.80.80.75	•		4	98629111	98629218	98629165	98629272
		•	4	98628873	98628990	98628927	98629046
SL1.80.100.15	•		4	98629112	98629219	98629166	98629273
		•	4	98628874	98628991	98628928	98629047
SL1.80.100.22	•		4	98629113	98629220	98629167	98629274
		•	4	98628875	98628992	98628929	98629048
SL1.80.100.30	•		4	98629114	98629221	98629168	98629275
		•	4	98628876	98628993	98628930	98629049
SL1.80.100.40	•		4	98629115	98629222	98629169	98629276
		•	4	98628877	98628994	98628931	98629050
SL1.80.100.55	•		4	98629116	98629223	98629170	98629277
		•	4	98628878	98628995	98628932	98629051
SL1.80.100.75	•		4	98629117	98629224	98629171	98629278
		•	4	98628879	98628996	98628933	98629052
SL1.100.100.40	•		4	98629118	98629225	98629172	98629279
		•	4	98628880	98628997	98628934	98629053
SL1.100.100.55	•		4	98629119	98629226	98629173	98629280
		•	4	98628881	98628998	98628935	98629054
SL1.100.100.75	•		4	98629120	98629227	98629174	98629281
		•	4	98628882	98628999	98628936	98629055
SL1.100.150.40	•		4	98629121	98629228	98629175	98629282
		•	4	98628883	98629000	98628937	98629056
SL1.100.150.55	•		4	98629122	98629229	98629176	98629283
		•	4	98628884	98629001	98628938	98629057
SL1.100.150.75	•		4	98629123	98629230	98629177	98629284
		•	4	98628885	98629002	98628939	98629058

## SLV, cast iron, Ex pumps

Pump type	Sensor		Poles	Voltage			
				3 x 220-277 V, DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
	Yes	No		[0F]	[0G]	[1F]	[1G]
SLV.65.65.22	•		2	98629124	98629231	98629178	98629285
		•	2	98628886	98629003	98628940	98629060
SLV.65.65.30	•		2	98629125	98629232	98629179	98629286
		•	2	98628887	98629004	98628941	98629061
SLV.65.65.40	•		2	98629126	98629233	98629180	98629287
		•	2	98628888	98629005	98628942	98629062
SLV.65.80.22	•		2	98629127	98629234	98629181	98629288
		•	2	98628889	98629006	98628943	98629063
SLV.65.80.30	•		2	98629128	98629235	98629182	98629289
		•	2	98628890	98629007	98628944	98629064
SLV.65.80.40	•		2	98629129	98629236	98629183	98629290
		•	2	98628891	98629008	98628945	98629065
SLV.80.80.11	•		4	98629135	98629242	98629189	98629296
		•	4	98628897	98629014	98628961	98629071
SLV.80.80.13	•		4	98629136	98629243	98629190	98629297
		•	4	98628898	98629015	98628962	98629072
SLV.80.80.15	•		4	98629137	98629244	98629191	98629298
		•	4	98628899	98629016	98628963	98629073
SLV.80.80.22	•		4	98629138	98629245	98629192	98629299
		•	4	98628900	98629017	98628964	98629074
	•		2	98629130	98629237	98629184	98629291
		•	4	98629139	98629246	98629193	98629300
SLV.80.80.40		•	2	98628892	98629009	98628946	98629066
		•	4	98628901	98629018	98628965	98629075
SLV.80.80.60	•		2	98629131	98629238	98629185	98629292
		•	2	98628893	98629010	98628947	98629067
SLV.80.80.75	•		2	98629132	98629239	98629186	98629293
		•	2	98628894	98629011	98628948	98629068
SLV.80.80.92	•		2	98629133	98629240	98629187	98629294
		•	2	98628895	98629012	98628949	98629069
SLV.80.80.110	•		2	98629134	98629241	98629188	98629295
		•	2	98628896	98629013	98628950	98629070
SLV.80.100.11	•		4	98629145	98629252	98629199	98629306
		•	4	98628907	98629025	98628971	98629091
SLV.80.100.13	•		4	98629146	98629253	98629200	98629307
		•	4	98628908	98629026	98628972	98629092
SLV.80.100.15	•		4	98629147	98629254	98629201	98629308
		•	4	98628909	98629027	98628973	98629093
SLV.80.100.22	•		4	98629148	98629255	98629202	98629309
		•	4	98628910	98629028	98628974	98629094
	•		2	98629140	98629247	98629194	98629301
SLV.80.100.40		•	4	98629149	98629256	98629203	98629310
		•	2	98628902	98629019	98628966	98629076
		•	4	98628475	98628575	98628527	98628635
SLV.80.100.60	•		2	98629141	98629248	98629195	98629302
		•	2	98628903	98629020	98628967	98629077
SLV.80.100.75	•		2	98629142	98629249	98629196	98629303
		•	2	98628904	98629021	98628968	98629078
SLV.80.100.92	•		2	98629143	98629250	98629197	98629304
		•	2	98628905	98629022	98628969	98629079
SLV.80.100.110	•		2	98629144	98629251	98629198	98629305
		•	2	98628906	98629023	98628970	98629080
SLV.100.100.30	•		4	98629150	98629257	98629204	98629311
		•	4	98628912	98629030	98628976	98629096
SLV.100.100.40	•		4	98629151	98629258	98629205	98629312
		•	4	98628913	98629031	98628977	98629097
SLV.100.100.55	•		4	98629152	98629259	98629206	98629313
		•	4	98628914	98629032	98628978	98629098
SLV.100.100.75	•		4	98629153	98629260	98629207	98629314
		•	4	98628915	98629033	98628979	98629099

## SLV, cast iron, Ex pumps with stainless steel impeller

Pump type	Sensor		Poles	Voltage			
				3 x 220-277 V, DOL	3 x 380-480 V DOL	3 x 220-277 V D / 380-480 V Y	3 x 380-480 V Y/D
	Yes	No		[0F]	[0G]	[1F]	[1G]
SLV.65.65.40	•		2	98768123	98768139	98768131	98768147
		•	2	98768119	98768135	98768127	98768143
SLV.65.80.40	•		2	98768124	98768140	98768132	98768148
		•	2	98768120	98768136	97868128	98768144
SLV.80.80.11	•		4	98630996	98631046	98631021	98631071
		•	4	98630890	98630942	98630914	98630969
SLV.80.80.13	•		4	98630997	98631047	98631022	98631072
		•	4	98630891	98630943	98630915	98630970
SLV.80.80.15	•		4	98630998	98631048	98631023	98631073
		•	4	98630892	98630944	98630916	98630971
SLV.80.80.22	•		4	98630999	98631049	98631024	98631074
		•	4	98630893	98630945	98630917	98630972
	•		2	98630990	98631040	98631016	98631066
SLV.80.80.40	•		4	98631000	98631050	98631025	98631075
		•	2	98630885	98630935	98630909	98630963
		•	4	98630894	98630946	98630918	98630973
SLV.80.80.60	•		2	98630991	98631041	98631017	98631067
		•	2	98630886	98630936	98630910	98630964
SLV.80.80.75	•		2	98630992	98631042	98631018	98631068
		•	2	98630887	98630938	98630911	98630966
SLV.80.80.92	•		2	98630994	98631043	98631019	98631069
		•	2	98630888	98630940	98630912	98630967
SLV.80.80.110	•		2	98630995	98631045	98631020	98631070
		•	2	98630889	98630941	98630913	98630968
SLV.80.100.11	•		4	98631007	98631056	98631031	98631081
		•	4	98630900	98630952	98630925	98630979
SLV.80.100.13	•		4	98631008	98631057	98631032	98631082
		•	4	98630901	98630954	98630926	98630980
SLV.80.100.15	•		4	98631009	98631058	98631033	98631083
		•	4	98630902	98630955	98630927	98630981
SLV.80.100.22	•		4	98631010	98631060	98631034	98631084
		•	4	98630903	98630957	98630928	98630982
	•		2	98631002	98631051	98631026	98631076
SLV.80.100.40	•		4	98631011	98631061	98631035	98631085
		•	2	98630895	98630947	98630919	98630974
		•	4	98630904	98630958	98630929	98630983
SLV.80.100.60	•		2	98631003	98631052	98631027	98631077
		•	2	98630896	98630948	98630920	98630975
SLV.80.100.75	•		2	98631004	98631053	98631028	98631078
		•	2	98630897	98630949	98630921	98630976
SLV.80.100.92	•		2	98631005	98631054	98631029	98631079
		•	2	98630898	98630950	98630923	98630977
SLV.80.100.110	•		2	98631006	98631055	98631030	98631080
		•	2	98630899	98630951	98630924	98630978
SLV.100.100.30	•		4	98631012	98631062	98631036	98631086
		•	4	98630905	98630959	98630930	98630985
SLV.100.100.40	•		4	98631013	98631063	98631037	98631087
		•	4	98630906	98630960	98630931	98630986
SLV.100.100.55	•		4	98631014	98631064	98631038	98631088
		•	4	98630907	98630961	98630932	98630988
SLV.100.100.75	•		4	98631015	98631065	98631039	98631089
		•	4	98630908	98630962	98630934	98630989

## 6. Variants

### List of variants

#### Motor

Various cable lengths	<b>Note:</b> When using a different cable length than the standard length, calculate a new cable cross section.	15 m
		20 m
		25 m
		30 m
		40 m
EMC power cables	Screened power cables for variable-speed drives	50 m
		10 m
		15 m
		20 m
		25 m
		30 m
		40 m
		50 m

#### Tests

**Note:** All requests regarding tests must be specified when ordering the pump.

Test at specified duty on standard impeller curve		
Trimmed impeller for specified duty test*		
Additional test of entire QH curve (incl. report)	5-10 duty points from pump performance curve	
Different test standard	Efficiency guaranteed by Grundfos	ISO 9906:2012 grade 1B tolerance
		ISO 9906:2012 grade 2B tolerance
Customer requested duty point	Test according to customer specified duty point on standard pump curve. Contact Grundfos	ISO 9906:2012 grade 1 and 2 tolerances
Vibration test (including report)	According to Grundfos factory quality standard	
String test	Contact Grundfos	
Witness test	Contact Grundfos	

#### Certificates

Atex approved pump report	Special Grundfos report.	
Certificate of compliance with order	According to EN10204 2.1	According to ISO 9906:2012 grades 1, 2 and 3B
Pump certificate	According to EN10204 2.2	According to ISO 9906:2012 grades 1, 2 and 3B
Inspection certificate	According to EN10204 3.1	According to ISO 9906:2012 grades 1, 2 and 3B
Material specification report	According to EN10204 3.1B	
Material report with certificate	According to EN10204 3.2	Material supplier information
Inspection certificate, Lloyds Register	According to EN10204 3.2	
Inspection certificate, DNV (Det Norske Veritas)	According to EN10204 3.2	
Inspection certificate, Germanischer Lloyd	According to EN10204 3.2	
Inspection certificate, American Bureau of shipping	According to EN10204 3.2	
Inspection certificate, Bureau Veritas	According to EN10204 3.2	
Registro Italiano Navale Argenture	According to EN10204 3.2	
Other third-party test certificate	Contact Grundfos	



**Miscellaneous**

Solution	Customer benefits	
FKM sealing (optional)	<ul style="list-style-type: none"> <li>Resistant to acids</li> <li>Resistant to mineral oils and vegetable oils</li> <li>Resistant to most solvents (toluene, petrol, trichloroethylene, etc.)</li> </ul>	Contact Grundfos
Cable protection hose	<ul style="list-style-type: none"> <li>Resistant to acids</li> <li>Resistant to most oils</li> <li>Resistant to most solvents, etc.</li> </ul>	Contact Grundfos
Heavy-duty wear ring kit	<ul style="list-style-type: none"> <li>Wear and seal ring kit for the handling of abrasive media</li> <li>Increased wear resistance of impeller in abrasive applications</li> <li>Increased reliability and life of pump</li> </ul>	Contact Grundfos
Stainless steel SuperVortex impeller according to EN 1.4517	Increased wear resistance	Contact Grundfos
Pump housing with cutted inlet (only for SLV pumps)	To avoid dogging	Contact Grundfos
Ceramic coating of impeller and pump housing	<ul style="list-style-type: none"> <li>Reduce wear rate of cast iron parts</li> <li>Increased corrosion resistance</li> <li>Beneficial in case of low number of operating hours</li> </ul>	Contact Grundfos
Extra epoxy coating 300 µm		Contact Grundfos
Top coating (black RAL9005, red RAL 3000 and other colours)		Contact Grundfos
Special packaging		Contact Grundfos
Special nameplate		Contact Grundfos
Other variants		Contact Grundfos

\* SLV impellers can be trimmed on request.

## 7. Construction

### Drawings - SL1 pumps

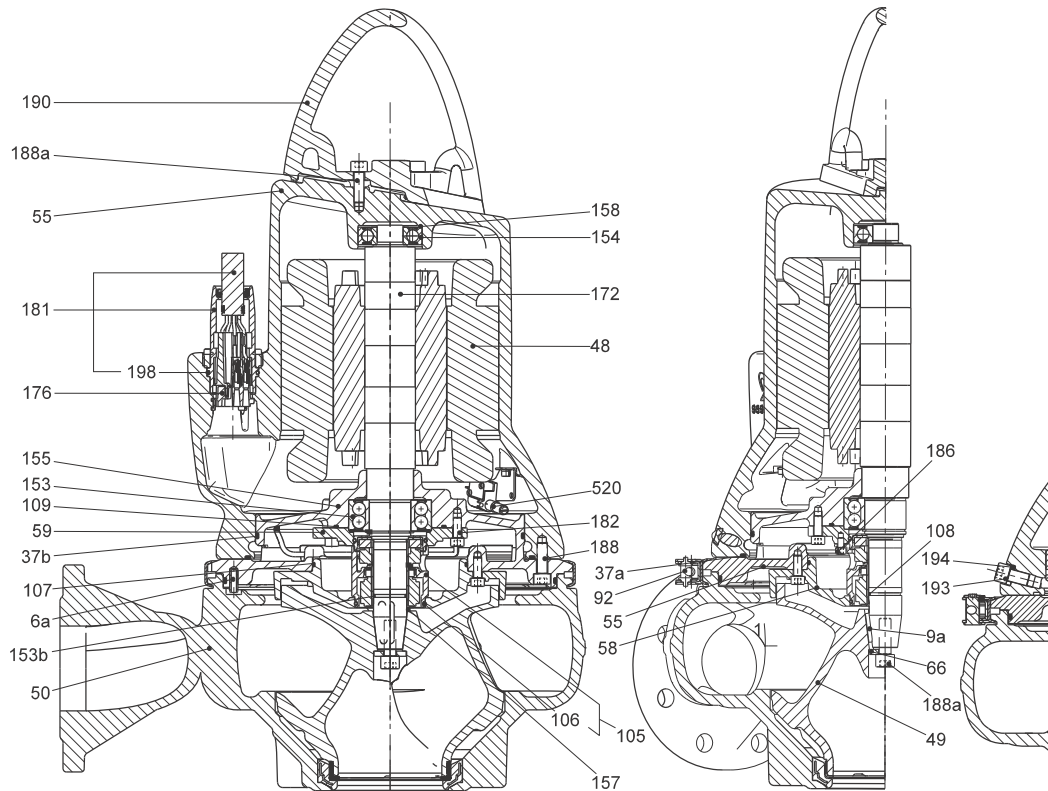


Fig. 6 Sectional view of SL1 pump, standard version

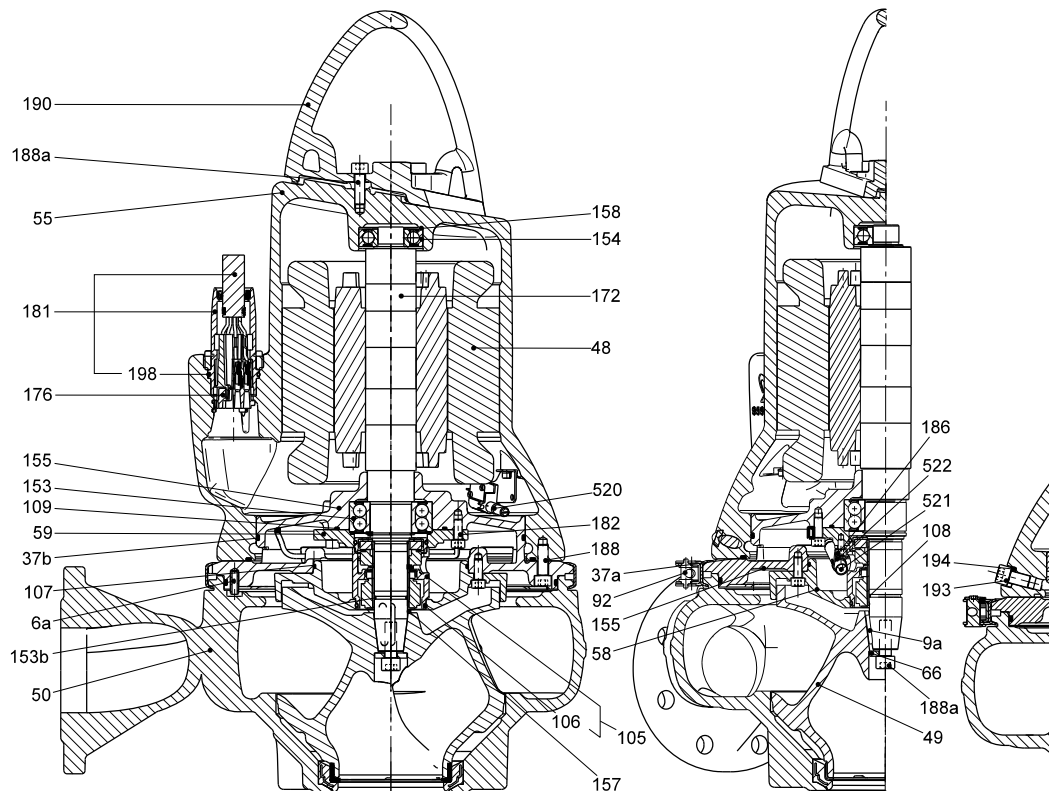


Fig. 7 Sectional view of SL1 pump, sensor version

TM06 1071 1514

TM04 2788 1009

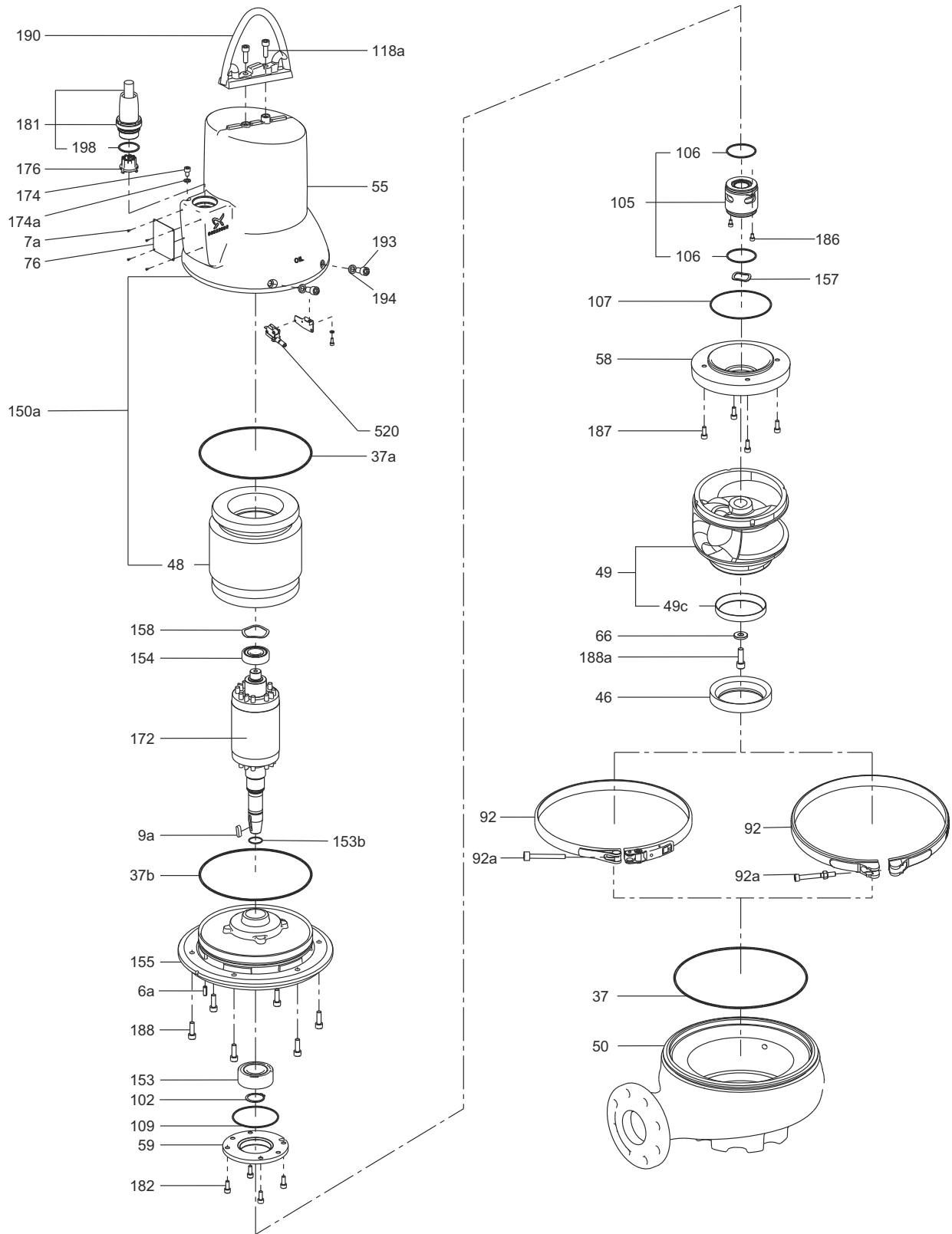


Fig. 8 Exploded view of SL1 pump, standard version

TM06 0886 5116

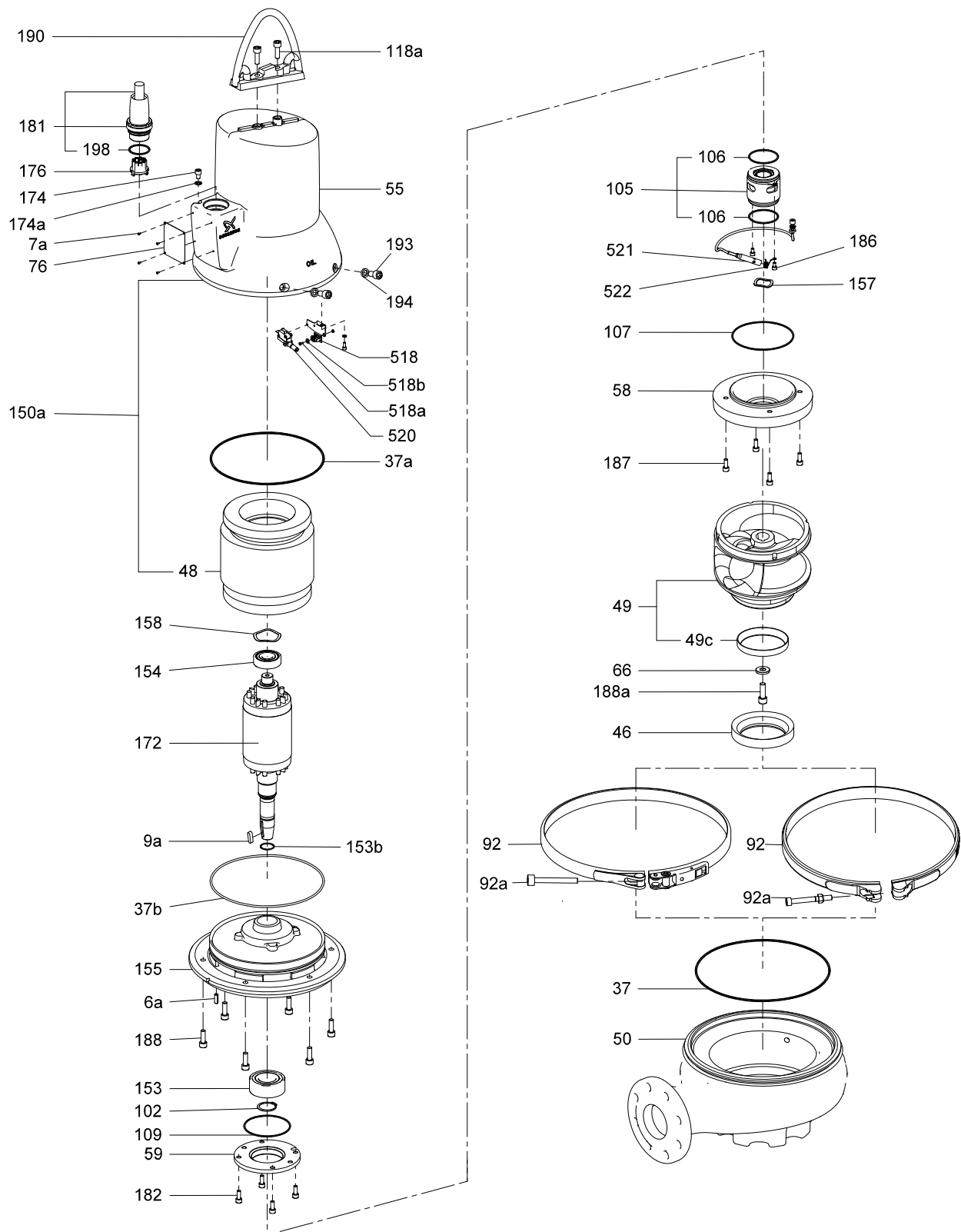


Fig. 9 Exploded view of SL1 pump, sensor version

TM06 0573 0914

Drawings - SLV pumps

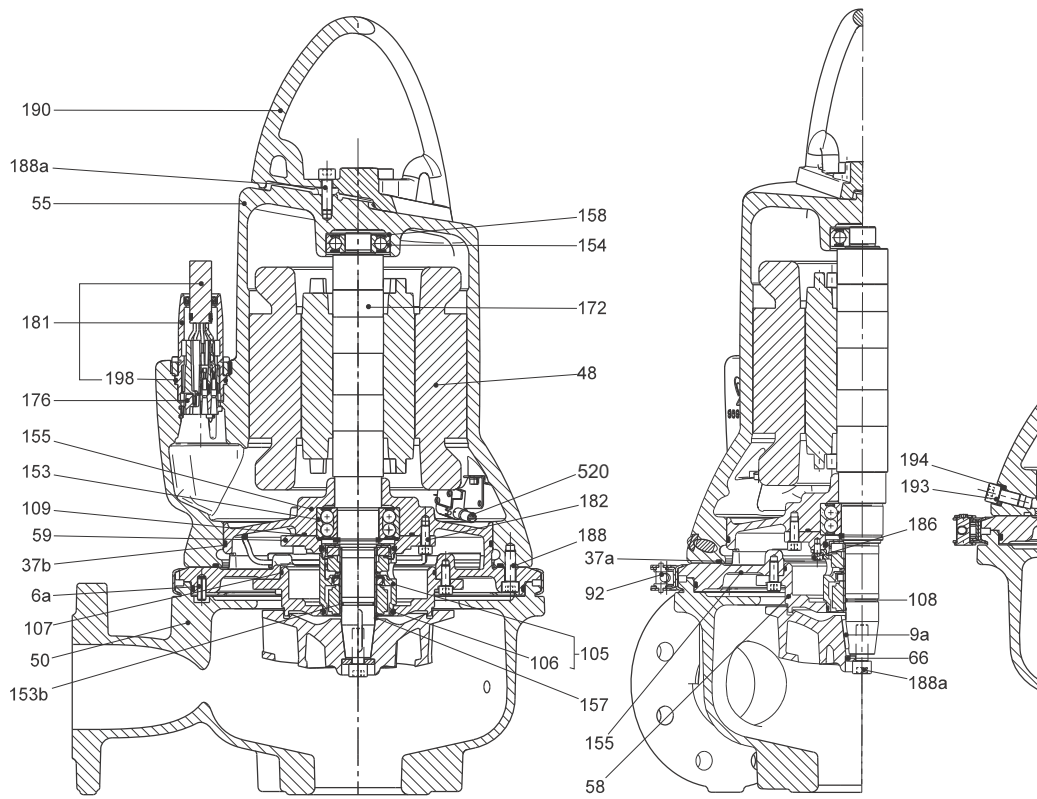


Fig. 10 Sectional view of SLV pump, standard version

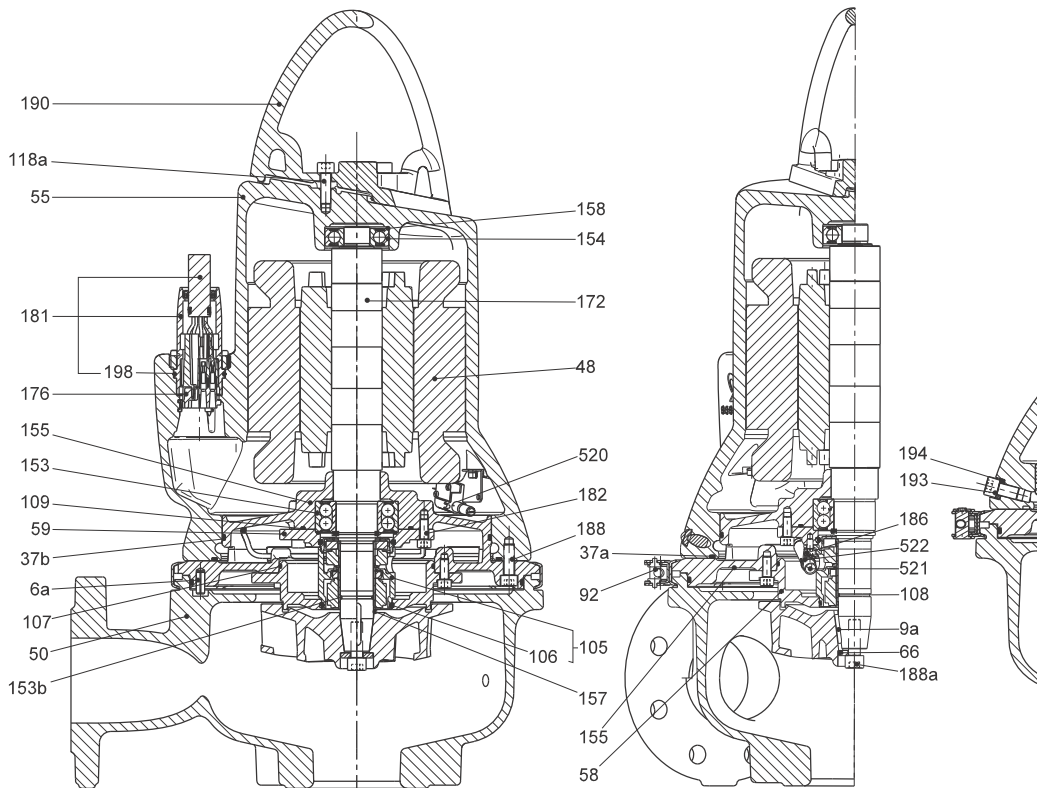


Fig. 11 Sectional view of SLV pump, sensor version

TM06 1072 1514

TM04 2786 2908

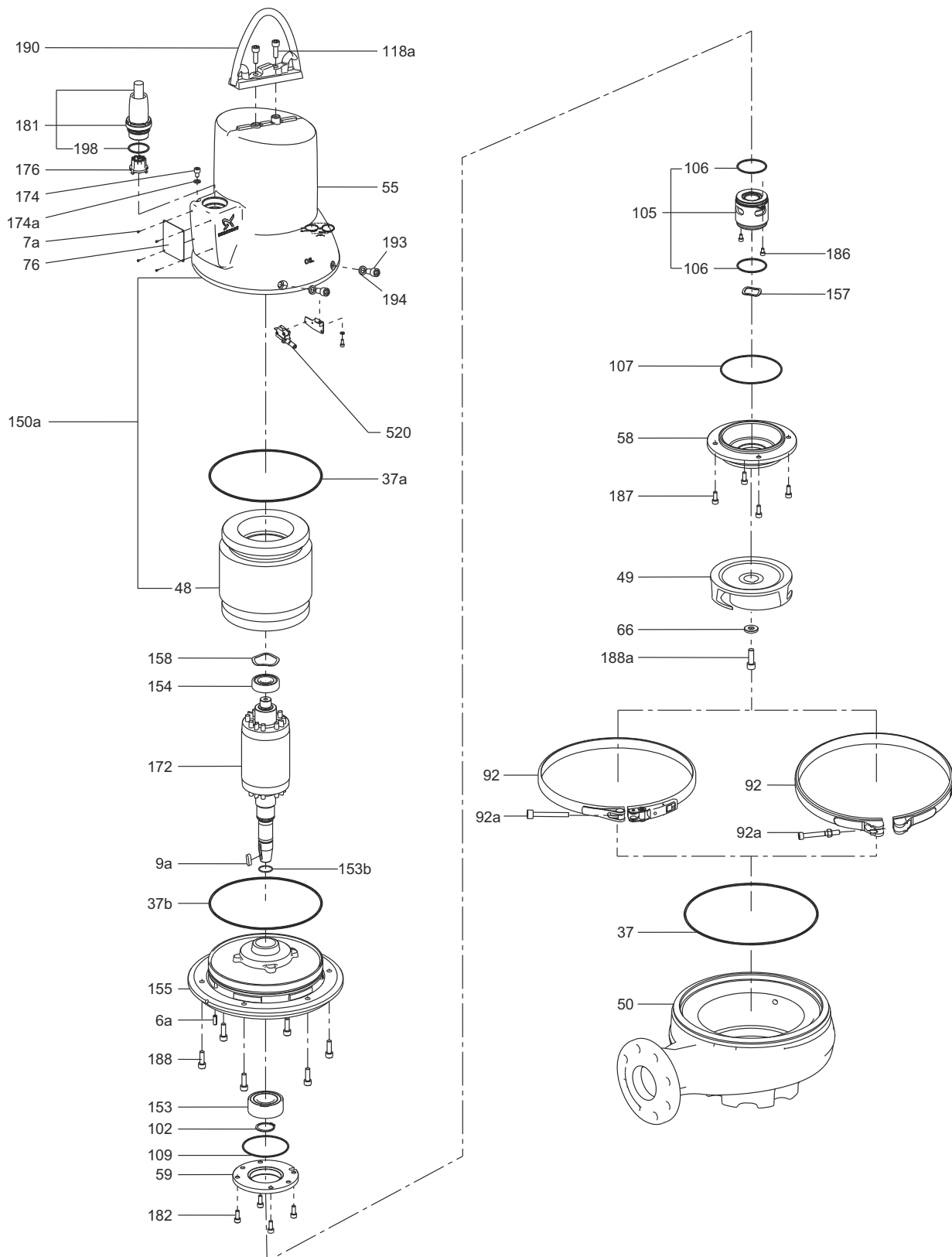


Fig. 12 Exploded view of SLV pump, standard

TM06 0884 5116

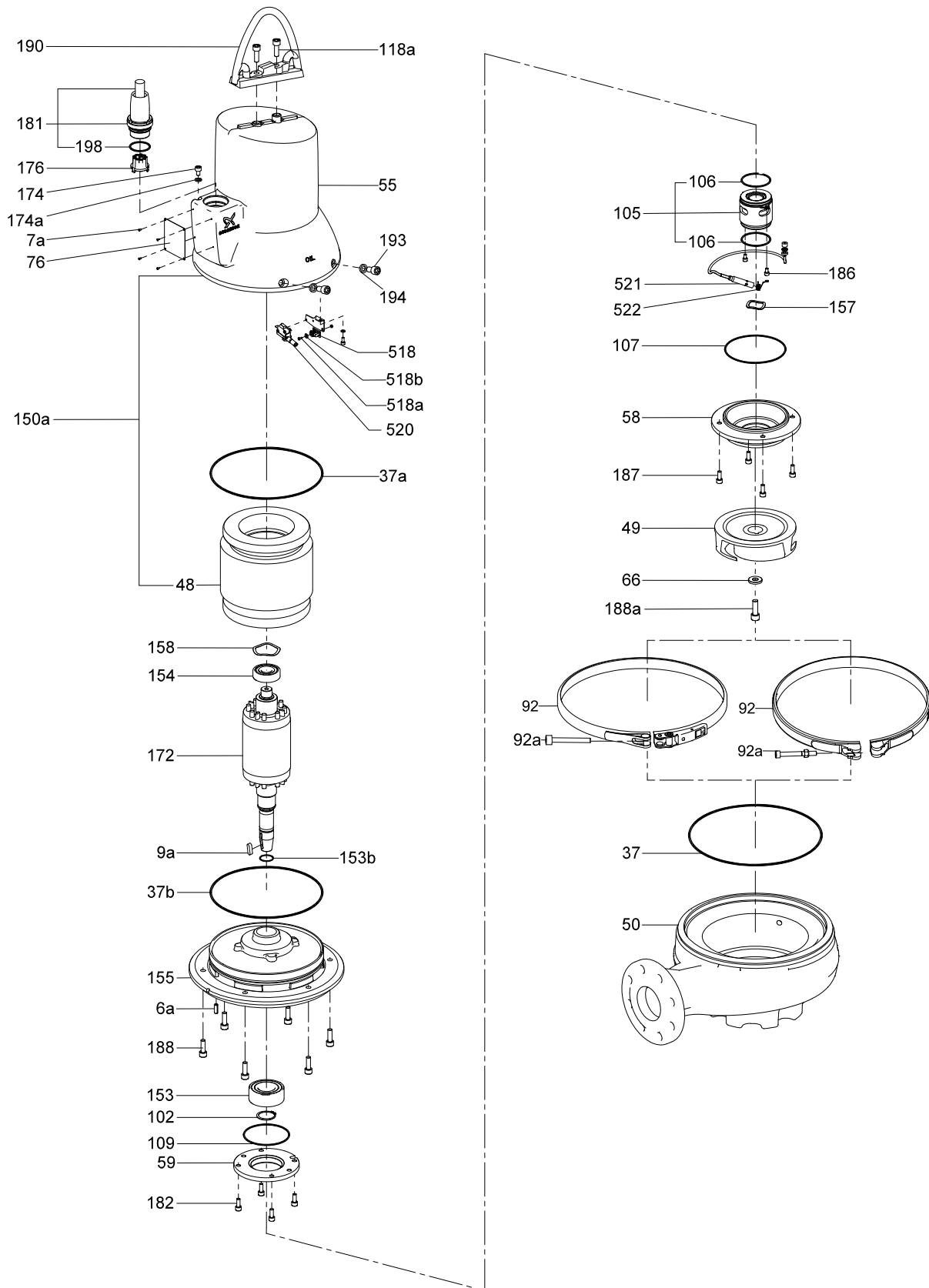


Fig. 13 Exploded view of SLV pump, sensor version

TM06 0885 1114

## Material specification

Pos.	Component	Material	DIN W.-Nr. / 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
9a	Key	Stainless steel	1.4301	304
37	O-ring	NBR rubber		
37a	O-ring	NBR rubber		
37b	O-ring	NBR rubber		
46	Seal ring, inlet	NBR rubber/stainless steel	1.4301	304
48	Stator package			
49	SuperVortex impeller	Cast iron EN-GJL-250/stainless steel	5.1301/1.4408	ASTM A48 Class 250B
	S tube <sup>®</sup> impeller	Cast iron, EN-GJL-250/stainless steel	5.1301/1.4408	ASTM A48 Class 250B
49c	Wear ring, impeller	Stainless steel	1.4301	304
50	Pump housing	Cast iron EN-GJL-250	5.1301	ASTM A48 Class 250B
55	Stator housing	Cast iron EN-GJL-250	5.1301	ASTM A48 Class 250B
58	Cover for oil chamber	Cast iron EN-GJL-250	5.1301	ASTM A48 Class 250B
59	Bearing cover	Cast iron EN-GJL-250	5.1301	ASTM A48 Class 250B
66	Washer	Stainless steel	1.4436	316
76	Nameplate	Stainless steel	1.4401	316
92	Clamp	Stainless steel	1.4401	316
92a	Screw	Stainless steel	1.4436	316
102	Circlip			
105	Shaft seal complete (rotating part of MG1/25-G60 Q1Q1PGG, stationary part of MG1/25-G60 Q1Q1PGG; rotating part of BT-AR/25 BXPFF, stationary part of BT-AR/25 BXPFF)	Stainless steel, SiC/SiC		
		Carbon/ceramic		
106	O-ring for shaft seal	NBR rubber		
107	O-ring (cover for oil chamber)	NBR rubber		
108	O-ring for shaft seal	NBR rubber		
109	O-ring for bearing cover D-end	NBR rubber		
118a	Screw	Stainless steel	1.4436	316
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 EN-GJL-250	5.1301	ASTM A48 Class 250B
157	Corrugated spring (bearing D-end)	Stainless steel		
158	Corrugated spring (bearing N-end)	Stainless steel	Inconel X750 1.1248	
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 + 3 x 1		
182	Screw	Stainless steel	1.4436	316
186	Screw	Stainless steel	1.4436	316
187	Screw	Stainless steel	1.4436	316
188	Screw	Stainless steel	1.4436	316
188a	Screw	Stainless steel	1.4436	316
190	Lifting bracket	Stainless steel	1.4308	CF8
193	Plug	Stainless steel	1.4436	316
194	Gasket			
198	O-ring	NBR rubber		
518	Transient barrier (only sensor versions)			
518a	Screw			
518b	Washer			
520	Moisture switch			
521	WIO sensor (only sensor versions)			
522	Bracket for WIO sensor (only sensor versions)	Stainless steel	1.4310	301

Material declaration:

Grey cast iron is manufactured according to EN 1561:2012.

Cast stainless steel is manufactured according to EN 10283:2010.

Conversion to other standards such as AISI or ASTM are normative, and products are not manufactured according to these.



## 8. Product description

### Features

#### Ball bearings

The ball bearings are greased for life:

- Main bearings: Double-row angular contact ball bearing.
- Support bearings: Single-row deep-groove ball bearing.

#### Shaft seal



TM05 0015 0511

Fig. 14 Double mechanical cartridge 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 conventional 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: H (180 °C)  
Motor insulation fulfils NEMA MG1 part 31 for frequency converter duty.
- Temperature rise class: A (60 °C)
- Enclosure class IP68.

For motor protection and sensors, see [Sensors](#), page 26.

#### Surface treatment

Grundfos SL1 and SLV pumps are given the following surface treatment:

- Cathaphoresis treatment of all cast iron parts.
- Powder painting: NCS 9000N (black), gloss code 30, thickness 100 µm.

#### Power cables

##### Standard cable

Cable type [mm <sup>2</sup> ]	Outer cable diameter [mm]	Bending radius	
		Fixed	Free
7 G AWG 16	13.3	31.8	47.6
4 G AWG 14 + 3 G 16 AWG	16.2	31.8	47.6
7 G AWG 14 + 3 G 16 AWG	20.6	38.1	57.2

##### EMC cable

Cable type [mm <sup>2</sup> ]	Outer cable diameter [mm]	Bending radius	
		Fixed	Free
4 G AWG 14 + 3 G 16 AWG screened cable	17.7	38.1	57.2

The standard cable length is 10 m. Other cable lengths are available on request. See section [List of variants](#), page 16.

The cable dimension depends on the motor size.

#### Cable entry



TM05 0016 0511

Fig. 15 Moisture-proof cable plug

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

The plug is filled with a polyamide material that is cast into the plug around the conductors of the cable to prevent moisture from penetrating into the motor via the cable core.

## Sensors



Fig. 16 Analog water-in-oil sensor

As standard, the pump is equipped with thermal switches in the stator windings.

**Customised analog sensor options**

1. Pt1000 sensor in motor windings for stator temperature measurements.
2. The WIO sensor fitted in the oil chamber of the pump, monitors if water enters the pump from the liquid side.  
The sensor measures the water content (0 to 20 %) in the oil and converts the value into an analog current signal which is sent to the IO 113 sensor module. 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. See fig. 16.
3. The moisture switch fitted in the motor chamber monitors whether water enters the motor. If moisture is detected in the motor chamber, the moisture switch will trip and send a signal to the IO 113 sensor module.

TM05 0017 0511

## IO 113 sensor module



Fig. 17 Grundfos IO 113 sensor module

The IO 113 module is a protection module for Grundfos wastewater pumps.

IO 113 has inputs for digital and analog pump sensors and can stop the pump if a sensor indicates a pump fault.

IO 113 can be connected to the Grundfos Dedicated Controls system which provides advanced monitoring functions:

- motor temperature
- moisture in motor
- water in oil
- insulation resistance.

TM05 4166 2112

## Operating conditions

The pumps are designed for intermittent operation (S3). When completely submerged, the pump can also operate continuously (S1).

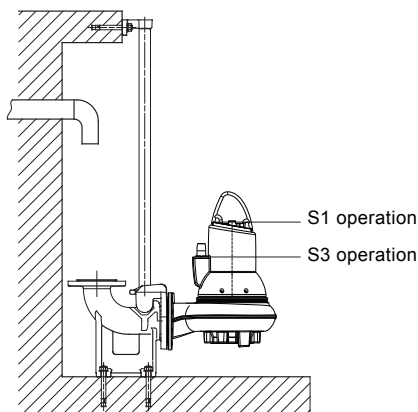


Fig. 18 Operation levels

TM04 2649 2808

### S3, intermittent operation

S3 operating mode is a series of duty cycles each with a constant load for a period followed by a rest period. Thermal equilibrium is not reached during the cycle. Intermittent operation S3 with maximum 20 starts per hour when the pump is submerged to the bottom of the cable plug. The pump must run for maximum 4 minutes and stop for minimum 6 minutes. See fig. 19.

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

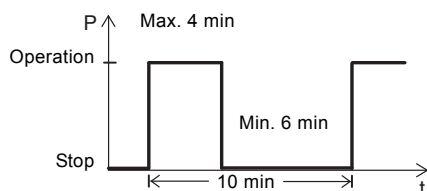


Fig. 19 S3 operation

TM04 2656 2808

### S1, continuous operation

In this operating mode, the pump can operate continuously without having to be stopped for cooling. Being completely submerged, the pump is sufficiently cooled by the surrounding liquid. See fig. 20.

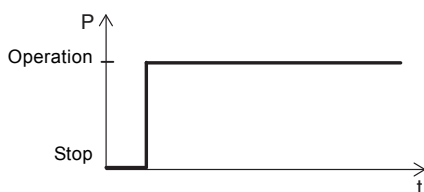


Fig. 20 S1 operation

TM02 7776 4003

## Pumped liquids

Pump type	Material variant	Material	pH value
SL1, SLV	Standard	Cast iron impeller and pump housing	6.5 - 14 <sup>1</sup>
SLV	Q	Stainless steel impeller cast iron pump housing	6-14 <sup>1</sup>

<sup>1</sup> For fluctuating pH values, the range is pH 4 to 14.

**Liquid temperature:** 0-40 °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 (maximum 3 minutes), a temperature of up to 60 °C is 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 2006/42/EC relating to machinery (the EC Machinery Directive).

## Motor range

Output power [kW]	Number of poles
1.1	2, 4
1.3	2, 4
1.5	2, 4
2.2	2, 4
3	2, 4
4	2, 4
6	2
7.5	2, 4
9.2	2
11	2

## Approvals

The SL1 and SLV pumps have been approved by CSA and FM, and the explosion-proof versions hold an FM type examination certificate, number 3035318

### Approval standards

These pumps are approved by CSA and FM according to UL778, C22.2 No 108 and FM 3600, FM 3615 and FM 3615.80.

### Explanation to FM approval

The SL1 and SLV pumps have the following explosion protection classification: Class I, Division 1, Groups C and D, T4, T3, IP68.

Standards	Code	Description
FM 3600 FM 3615 FM 3615.80	Class I	= Explosive atmosphere is caused by gas or vapours.
	Division 1	= Area classification.
	Groups C and D	= Classification of gases.
	T4/T3	= The maximum surface temperature is 135 °C / 200 °C.
	IP68	= The enclosure class is according to IEC 60529.

## Controllers

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

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

## Frequency converter, CUE/VFD

All SL1 and SLV pump types are designed for speed-controlled operation to keep the energy consumption at a minimum.

To avoid the risk of sedimentation in the pipes, we recommend that you operate the speed-controlled pump within a speed range of 30 to 100 % and at a flow rate above 1 m/s.

For more information, see the installation and operating instructions for the relevant frequency converter on [www.grundfos.com](http://www.grundfos.com) (Grundfos Product Center).

### Additional features

The CUE/VFD (optional), which is either a Grundfos variable-frequency converter or a general variable-frequency converter, also offers better pump protection and a more steady flow through the pipe system.

In addition, Grundfos CUE/VFD offers these features and benefits:

- anti-blocking
- automatic energy optimisation
- specific-energy test
- output frequency
- monitoring of:
  - voltage\*
  - current\*
  - phase sequence\*
  - power\*
  - energy\*
  - torque\*
- reverse start
- run flushing
- stop flushing
- PID control.

\* These functions are only available with a Grundfos CUE.

## Level controllers

Grundfos offers a wide range of pump controllers to keep a watchful eye on liquid levels in the wastewater collecting tank, ensuring correct operation and protection of the pumps.

Controller ranges:

- Dedicated Controls, DC control cabinets
- LC and LCD level controllers.

## Dedicated Controls



Fig. 21 Dedicated Controls control cabinet

Grundfos Dedicated Controls is a control system that can control and monitor one to six Grundfos wastewater pumps and a mixer or a flush valve.

Dedicated Controls is used in installations requiring advanced control and data communication.

The main components of the Dedicated Controls system are as follows:

- CU 362 control unit
- IO 351B module (general I/O module).

Dedicated Controls is available either as separate components or as control cabinets.

The control system can be operated by the following:

- float switches
- a level sensor
- a level sensor and safety float switches.

The control cabinet is available for the following pump sizes and starting methods:

- pumps up to and including 9 kW, direct-on-line starting
- pumps up to and including 30 kW, star-delta starting
- pumps up to and including 30 kW, soft starter.

The separate control unit and modules can be built for practically any size of system.

TM06 0918 1214

The DC control cabinets can be fitted with various units:

- The CU 362 control unit, which is the "brain" of the Dedicated Controls system, is fitted in the cabinet front. CU 362 can be fitted with one of the Grundfos CIM communication modules mentioned below, depending on the monitoring needs or the SCADA system:
  - CIM 202 is a communication module used for the Modbus RTU fieldbus protocol.
  - CIM 252 is a communication module used for GSM/GPRS communication. CIM 252 establishes communication between CU 362 and a SCADA system, thereby allowing the application to be monitored and controlled remotely. This module also offers SMS messaging, for example status and alarm messages.
  - CIM 272 is a communication module for the Grundfos Remote Management system (GRM). CIM 272 establishes communication between CU 362 and GRM, thereby allowing the application to be monitored and controlled remotely.
- The IO 351B module is a general I/O module. IO 351B communicates with CU 362 via GENibus.
- The MP 204 motor protector (optional) provides many electrical status values, for example voltage, current, power, insulation resistance and energy. MP 204 offers better protection of the pumps than a conventional motor protection device.

CUE/VFD (optional), which is either a Grundfos variable-frequency converter or a general variable-frequency converter, (also) offers better pump protection and a more steady flow through the pit pipes, so the pumps are treated well and the energy consumption is kept at a minimum. For further information, see the data booklet or installation and operating instructions for Dedicated Controls on [www.grundfos.com](http://www.grundfos.com) (Grundfos Product Center).

#### LC and LCD

The Grundfos LC and LCD ranges of level controllers comprise three series with a total of six variants:

- LC and LCD 107 level controllers operated by air bells
- LC and LCD 108 level controllers operated by float switches
- LC and LCD 110 level controllers operated by electrodes.

All controllers are ideally suited for applications requiring up to 11 kW motors for direct-on-line starting. The LC and LCD can also be supplied with an integrated star-delta starter for applications requiring larger motors up to and including 30 kW.

#### Features and benefits

- Control of one pump (LC) or two pumps (LCD).
- Automatic alternating operation of two pumps (LCD).
- Automatic test run (prevents shaft seals from becoming jammed in the event of long periods of inactivity).
- Water hammer protection.
- Starting delay after power supply failure.
- Automatic alarm resetting, if required.
- Automatic restarting, if required.
- Alarm output as NO and NC.



TM04 2360 2408

Fig. 22 LCD 110 for two-pump installations

When an SMS module (optional) is fitted in an LC or LCD controller, it acts as a time recorder for the pumps, and when programmed (using an ordinary mobile telephone with text messaging facility), it can send text messages containing "high-level alarm" and "general alarm" information about operation and the number of times the pump has started. The SMS module is also available with battery and can thus send text messages that will inform you of power failure and when power has been restored. For further information, see the data booklet or installation and operating instructions for the LC and LCD controllers on [www.grundfos.com](http://www.grundfos.com) (Grundfos Product Center).

Name	DC	LC	LCD
<b>Application</b>			
One pump	•	•	•
Two pumps	•		•
Mixer	•		
Battery backup	•		
<b>Level sensor</b>			
Float switch	•	•	•
Electrodes		•	•
Air bell		•	•
Pressure sensor	•		
Ultrasonic sensor	•		
Analog level sensor with safety float switches	•		
<b>Starting method</b>			
Direct-on-line starting (DOL)	•	•	•
Star-delta starting	•	•	•
Soft starter	•		
<b>Basic functions</b>			
Start and stop of pump(s)	•	•	•
Pump alternation	•		•
High-level alarm	•	•	•
Dry-running-level alarm	•	•	•
Flow measurement (calculated or via flow sensor)	•		
Pump statistics	•		
Conflicting-levels alarm	•		
<b>Advanced functions</b>			
Start and stop delays (prevent water hammering)	•	•	•
Motor temperature sensor	•	•	•
Test run/anti-seizing	•	•	•
Daily emptying (emptying the pit once a day)	•		
Water-in-oil sensor input	•		
<b>Communication</b>			
SMS messaging	• <sup>1</sup>	• <sup>2</sup>	• <sup>2</sup>
SCADA communication (GSM/GPRS)	• <sup>1</sup>		
<b>User interface</b>			
Level indication	•	•	•
Graphical display	•		
PC Tool WW Controls	•		

<sup>1</sup> This only applies if a CIM 250 GSM/GPRS module is fitted in the CU 362.

<sup>2</sup> This only applies if an SMS module is fitted.

### Wiring diagrams

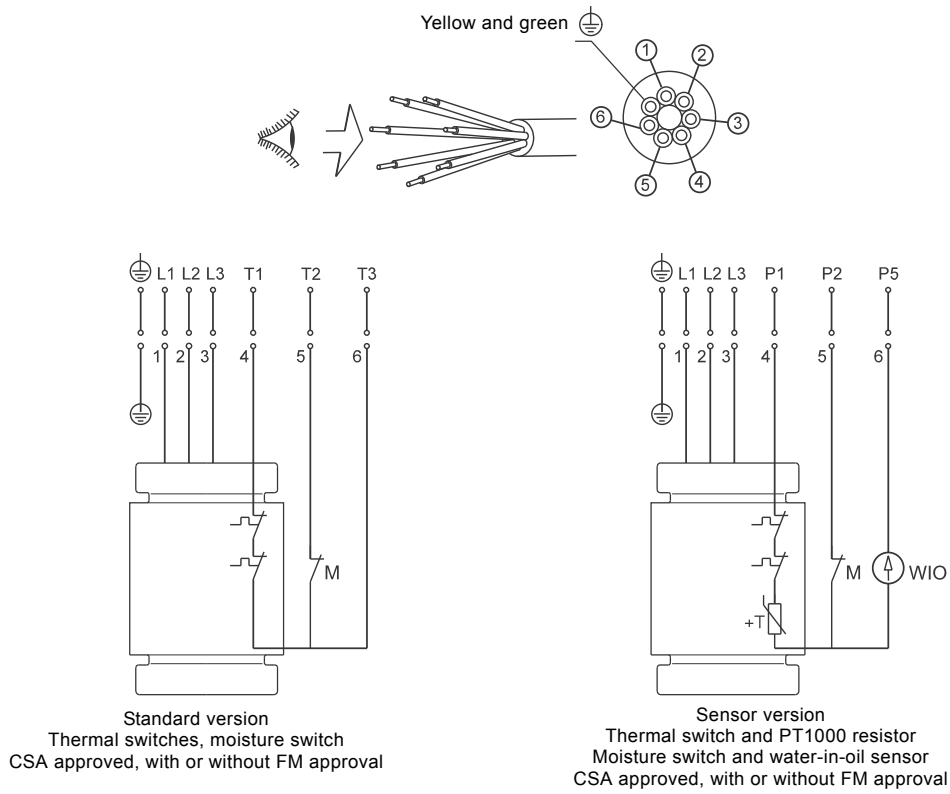


Fig. 23 Wiring diagram, 7-core cable, DOL

TM04 6689 1317

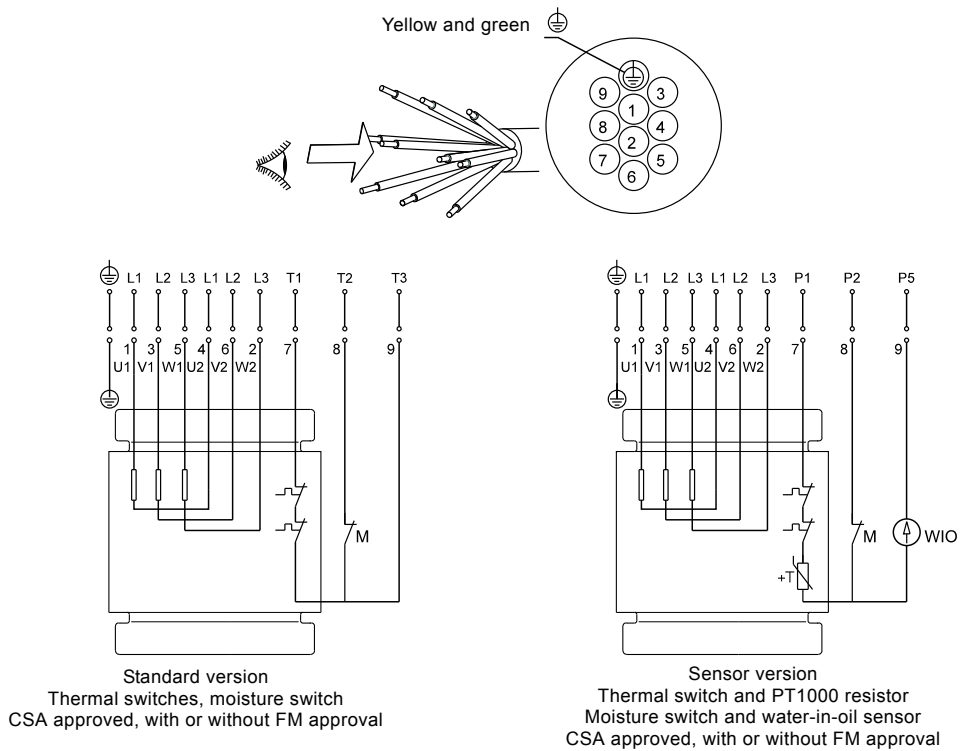


Fig. 24 Wiring diagram, 10-core cable, star/delta (Y/D)

TM04 6690 1317

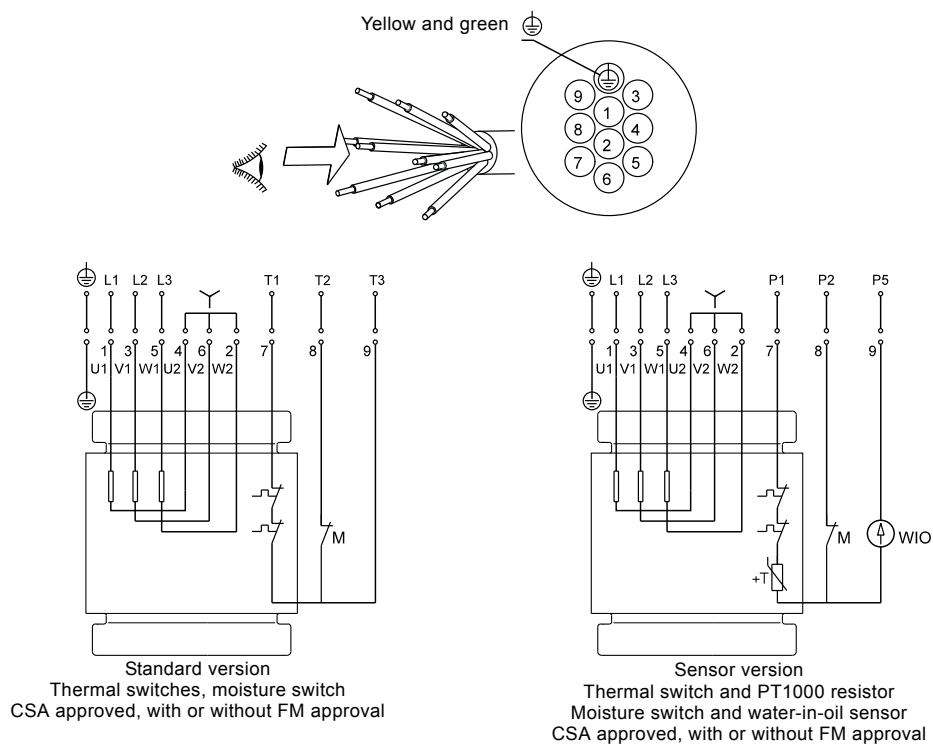


Fig. 25 Wiring diagram, 10-core cable, star-connected (Y)

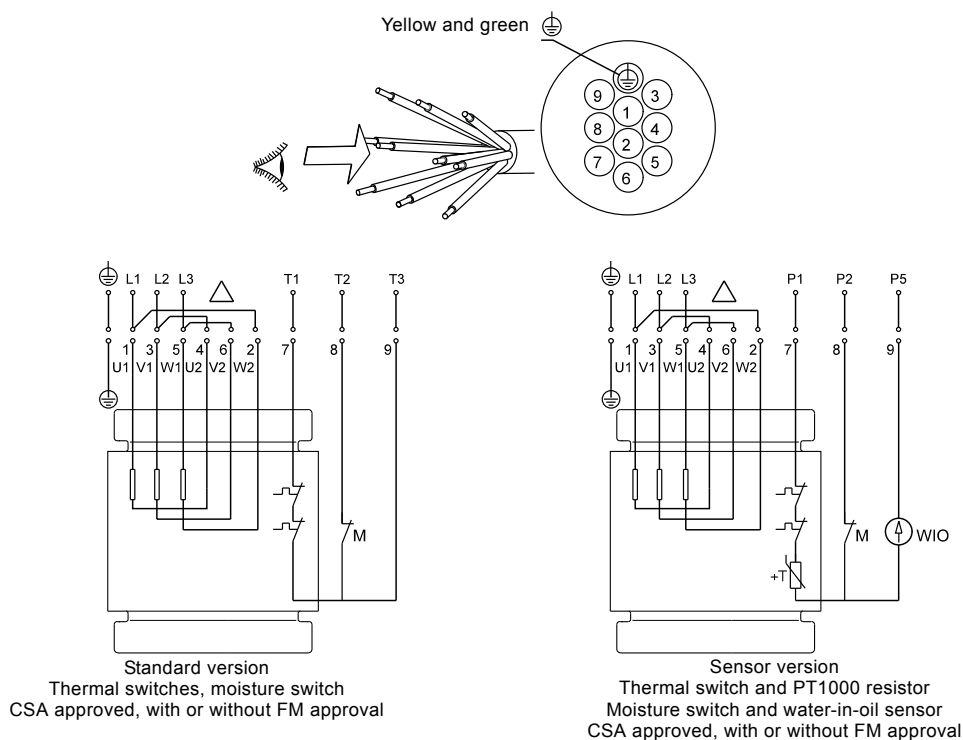


Fig. 26 Wiring diagram, 10-core cable, delta-connected (D)

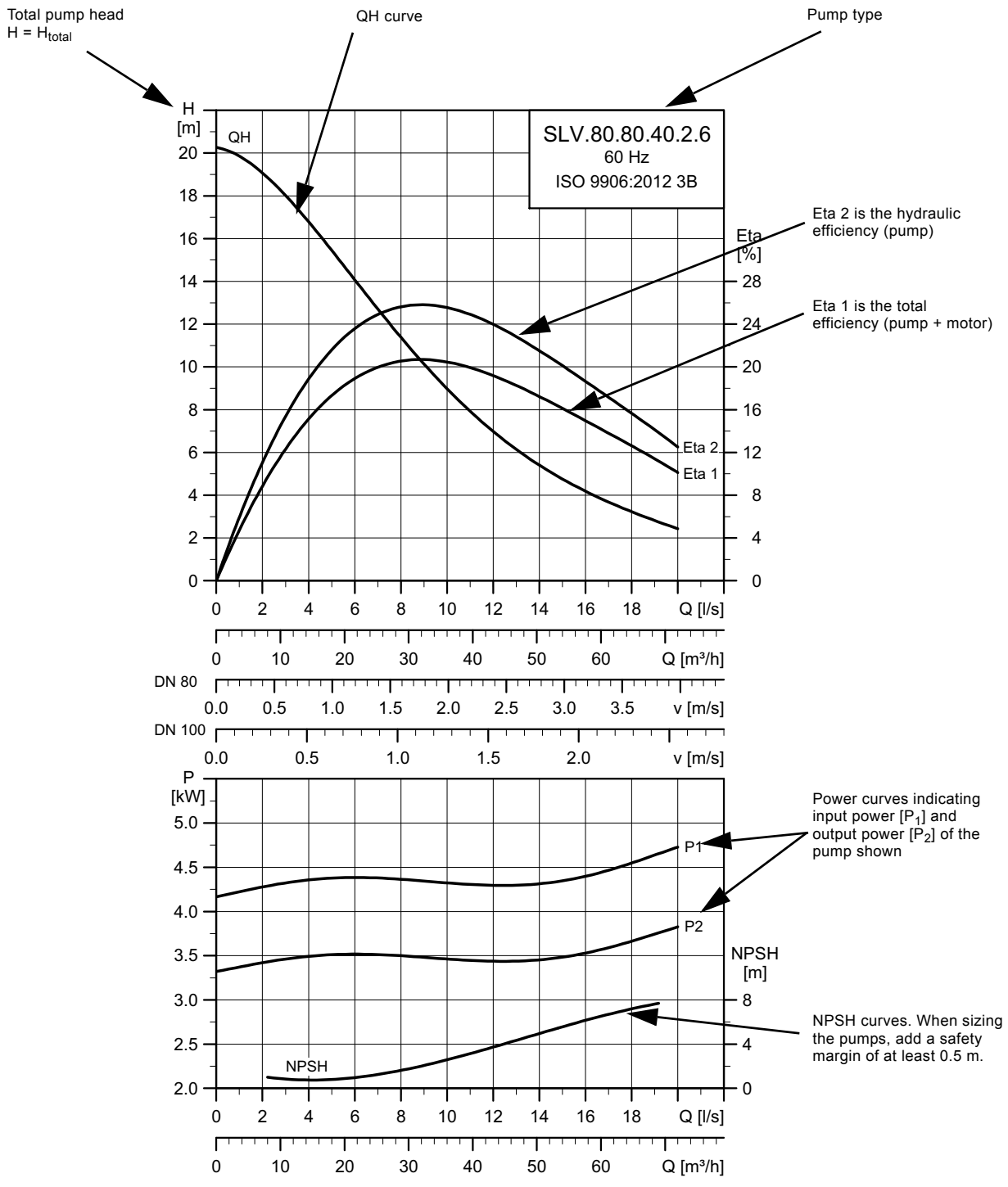
TM04 6691 1317

TM04 6692 1317



# 9. Curve charts

## How to read the curve charts



**Note:** The pumps are tested according to ISO 9906:2012, grade 3B tolerance. Testing equipment and measuring instruments are designed and calibrated according to the standards mentioned. The pump is approved according to tolerances for entire curves, specified in grade 3B.

TM04 6944 1914

## Curve conditions

The guidelines below apply to the curves shown in the performance charts on pages 35 to 88.

- Tolerances are according to ISO 9906:2012, grade 3B.
- The curves show pump performance with different impeller diameters at the rated speed.
- 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).
- The Eta curves show the efficiency of the pump for the different impeller diameters.
- The NPSH 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 outlet pressure is proportional to the density.
- When pumping liquids with a density higher than 1000 kg/m<sup>3</sup>, use motors with correspondingly higher outputs.

### 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 the inlet and the outlet side of the pump.

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

## Performance tests

Pumps are tested according to ISO 9906:2012 grade 3B.

Testing equipment and measuring instruments are designed and calibrated in accordance with the mentioned standards.

The pump is approved according to tolerances for the entire curve, specified in grade 3B.

For customised duty point or other grades with 5-point test certificate, please contact Grundfos in order to agree on terms before ordering.

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 you can order a certificate.

## 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 9906:2012, grade 3B.

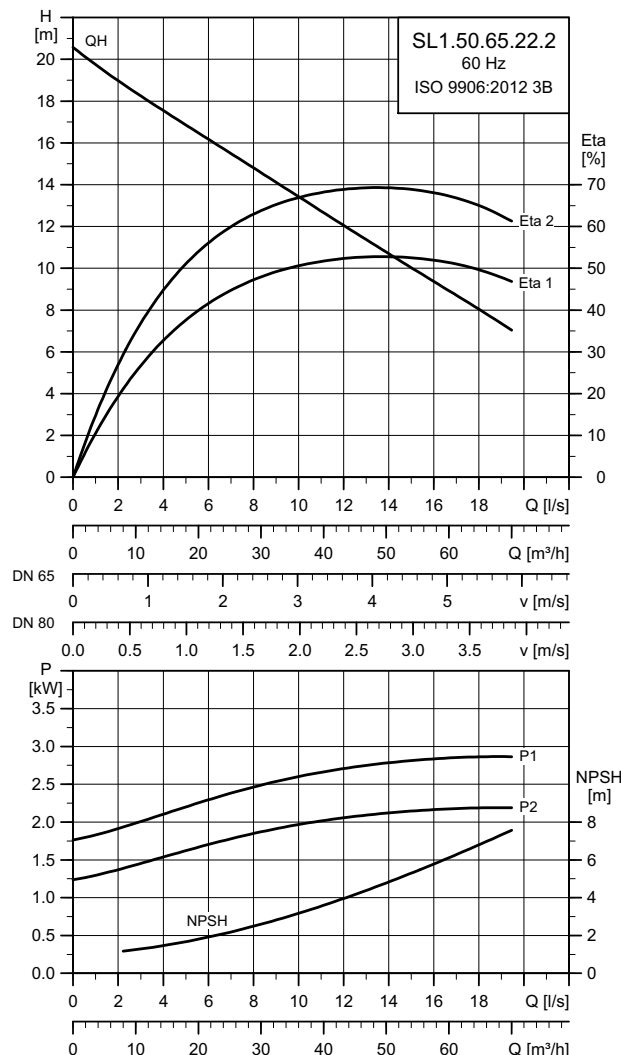
The witness test is not a certificate and will not result in a written statement from Grundfos. The witness test only guarantees that everything is carried out as prescribed in the testing procedure.

If the customer wants to carry out a witness test of the pump performance, such request must be stated on the order.

## 10. Performance curves and technical data

### SL1.50.65

#### SL1.50.65.22.(A).(EX).2.--.C



TM04 7484 1914

#### Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	3.0	2.2	2	3481	DOL	9.0 - 7.4	61	83.8	85.8	85.0	0.78	0.85	0.89	0.0065	21				
61F	3 x 220-277 V D / 380-480 V Y	3.0	2.2	2	3481	Y/D	9.0 - 7.4 / 5.2 - 4.3	61/35	83.8	85.8	85.0	0.78	0.85	0.89	0.0065	21				
60G	3 x 380-480 V Y	3.0	2.2	2	3481	DOL	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0065	21				
61G	3 x 380-480 V D	3.0	2.2	2	3481	Y/D	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0065	21				

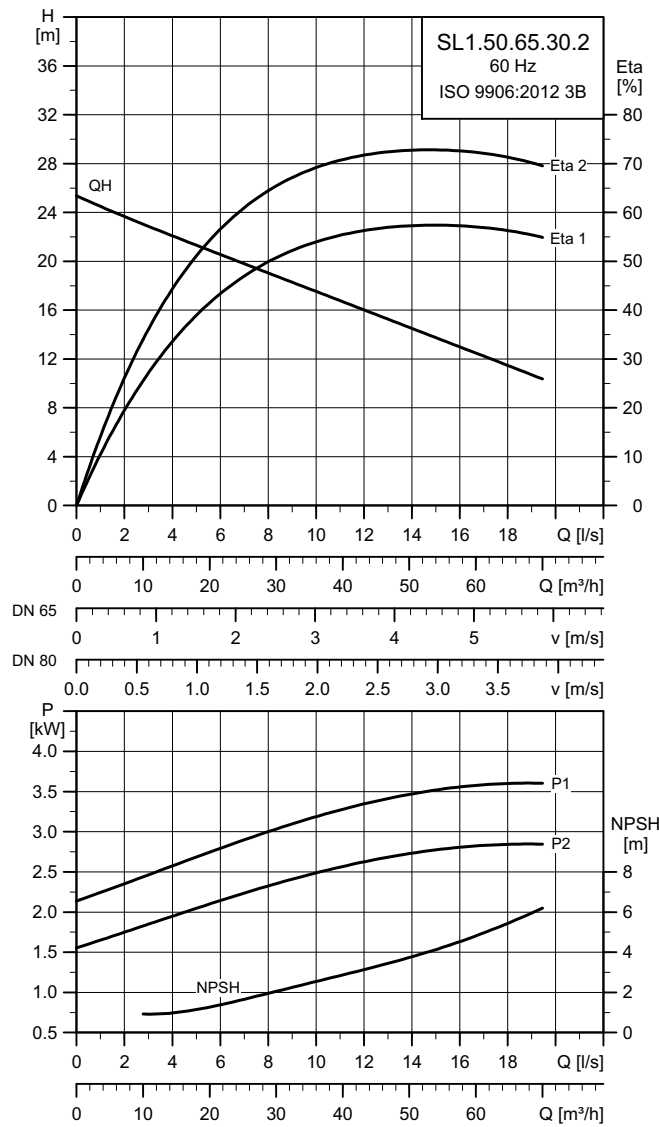
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

#### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14

SL1.50.65.30.(A).(EX).2.--.C



TM04 7485 1914

Electrical data

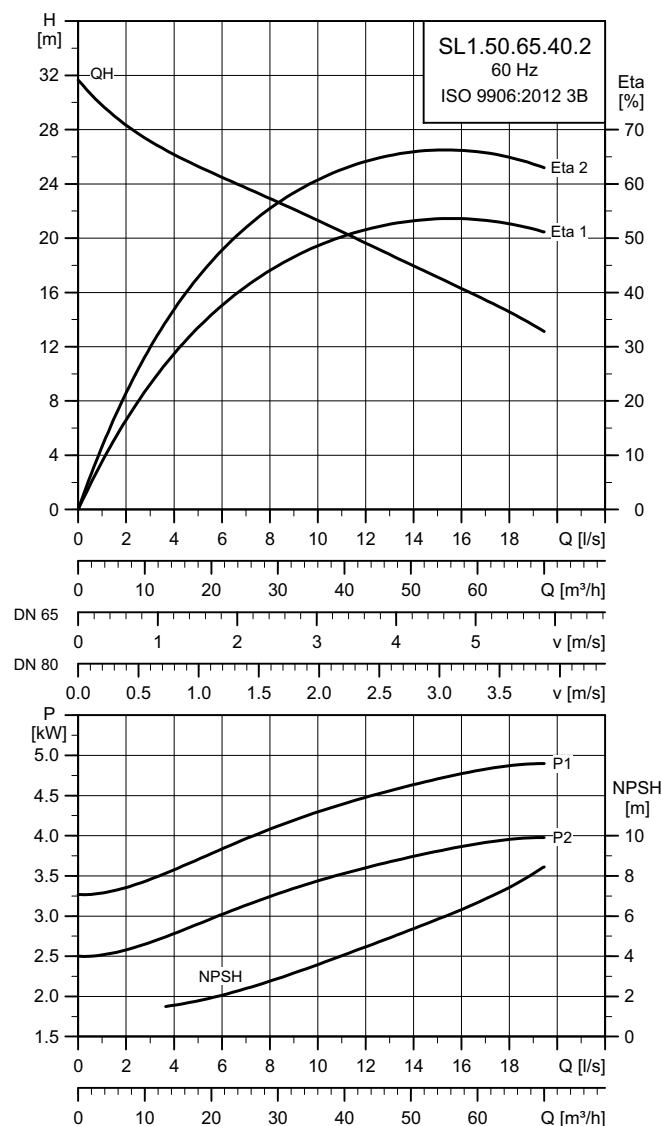
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	3.8	3.0	2	3510	DOL	11.7 - 10.2	87	84.8	86.5	86.5	0.74	0.83	0.87	0.0065	55	
61F	3 x 220-277 V D / 380-480 V Y	3.8	3.0	2	3510	Y/D	11.7 - 10.2 / 6.8 - 5.9	87/50	84.8	86.5	86.5	0.74	0.83	0.87	0.0065	55	
60G	3 x 380-480 V Y	3.8	3.0	2	3510	DOL	6.8 - 5.9	50	84.8	86.5	86.5	0.74	0.83	0.87	0.0065	55	
61G	3 x 380-480 V D	3.8	3.0	2	3510	Y/D	6.8 - 5.9	50	84.8	86.5	86.5	0.74	0.83	0.87	0.0065	55	

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14

## SL1.50.65.40.(A).(EX).2.--.C



TM04 7486 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0050	56				
61F	3 x 220-277 V D / 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147/ 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0050	56				
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0050	56				
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0050	56				

\* For low-high voltage variants.

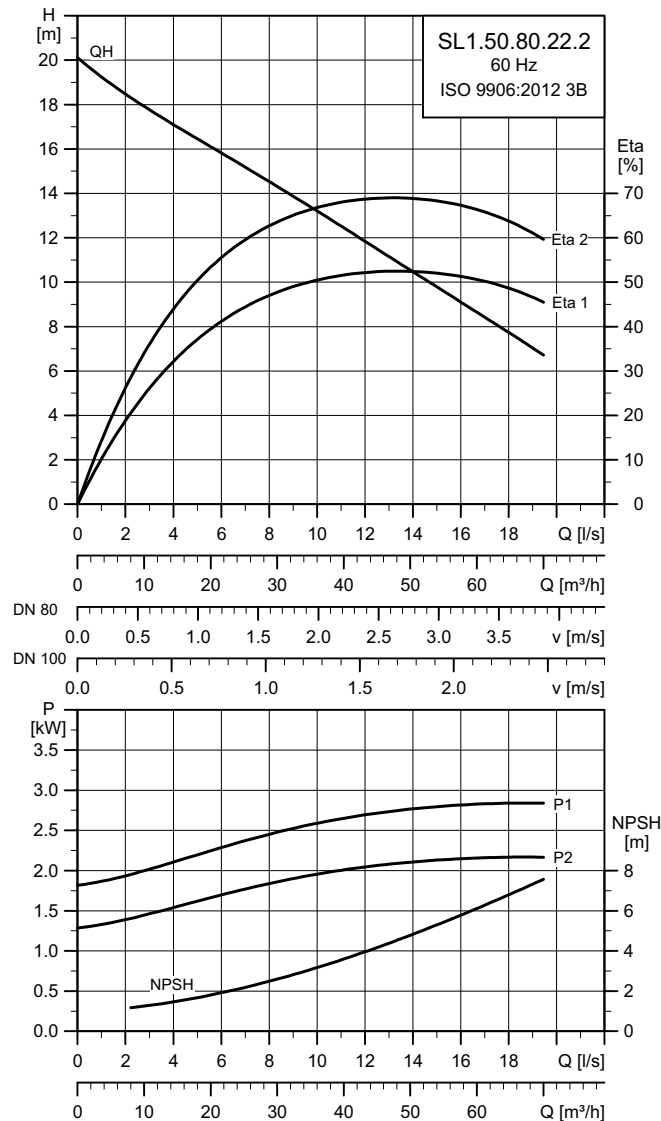
\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14

# SL1.50.80

## SL1.50.80.22.(A).(EX).2.--.C



TM04 7487 1914

### Electrical data

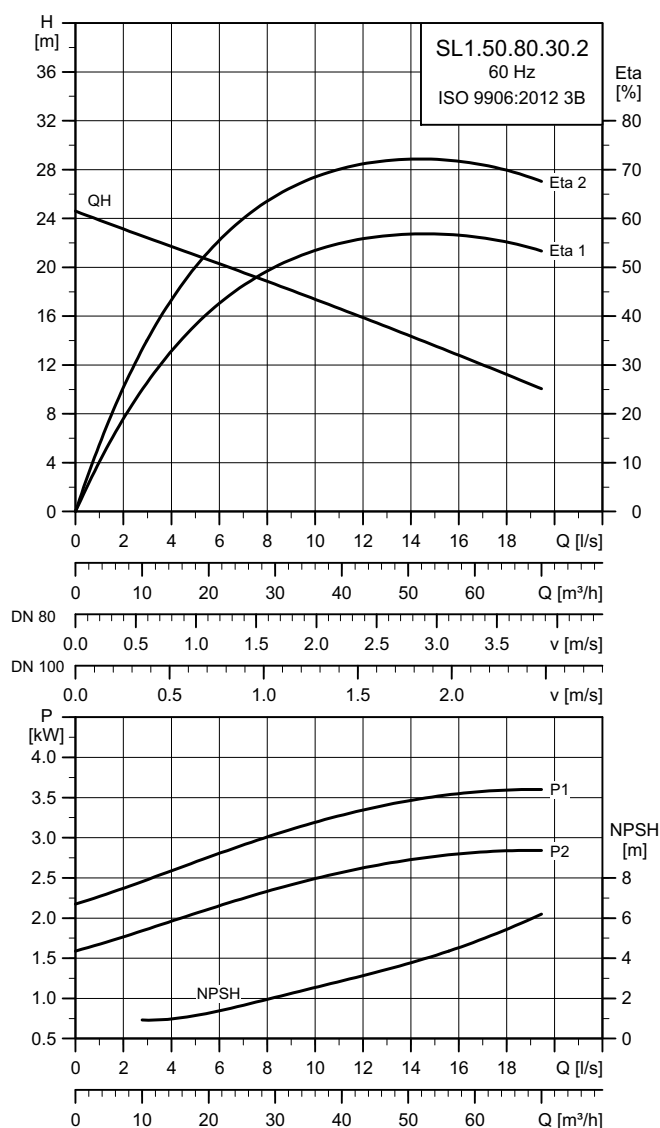
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	3.0	2.2	2	3481	DOL	9.0 - 7.4	61	83.8	85.8	85.0	0.78	0.85	0.89	0.0050	21				
61F	3 x 220-277 V D / 380-480 V Y	3.0	2.2	2	3481	Y/D	9.0 - 7.4 / 5.2 - 4.3	61/35	83.8	85.8	85.0	0.78	0.85	0.89	0.0050	21				
60G	3 x 380-480 V Y	3.0	2.2	2	3481	DOL	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0050	21				
61G	3 x 380-480 V D	3.0	2.2	2	3481	Y/D	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0050	21				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14

## SL1.50.80.30.(A).(EX).2.--.C



TM04 7488 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$\eta_{motor}$ [%]			Cos $\varphi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	3.8	3.0	2	3510	DOL	11.7 - 10.2	87	84.8	86.5	86.5	0.74	0.83	0.87	0.0086	55
61F	3 x 220-277 V D / 380-480 V Y	3.8	3.0	2	3510	Y/D	11.7 - 10.2 / 6.8 - 5.9	87/50	84.8	86.5	86.5	0.74	0.83	0.87	0.0086	55
60G	3 x 380-480 V Y	3.8	3.0	2	3510	DOL	6.8 - 5.9	50	84.8	86.5	86.5	0.74	0.83	0.87	0.0086	55
61G	3 x 380-480 V D	3.8	3.0	2	3510	Y/D	6.8 - 5.9	50	84.8	86.5	86.5	0.74	0.83	0.87	0.0086	55

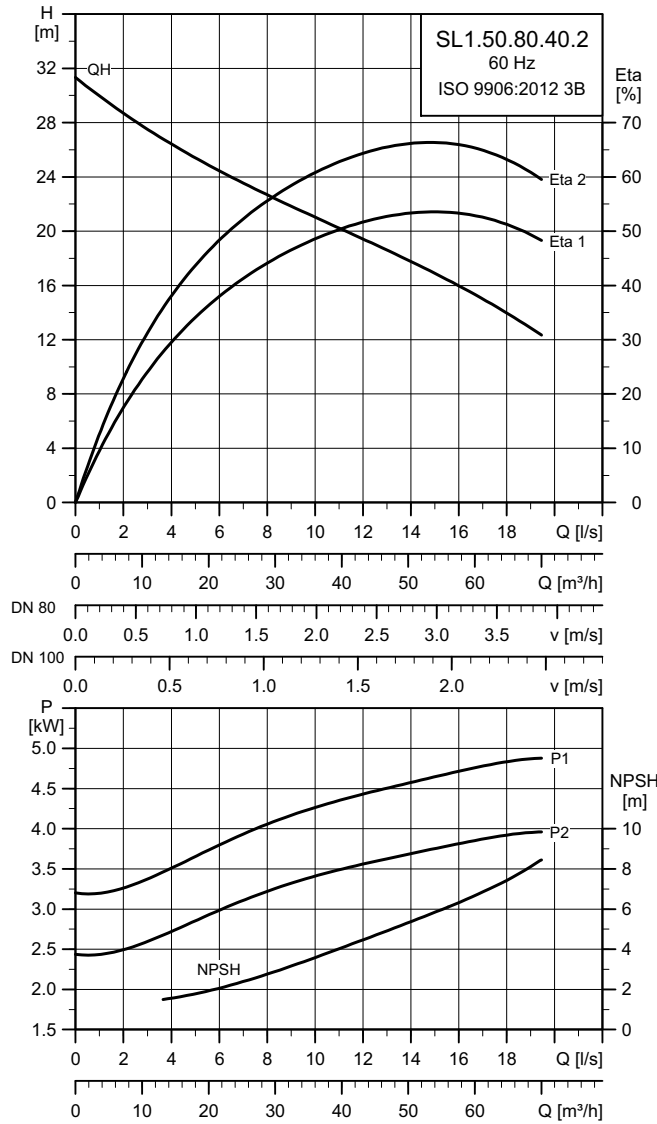
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14

SL1.50.80.40.(A).(EX).2.--.C



TM04 7489 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0086	56				
61F	3 x 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147 / 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0086	56				
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0086	56				
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0086	56				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

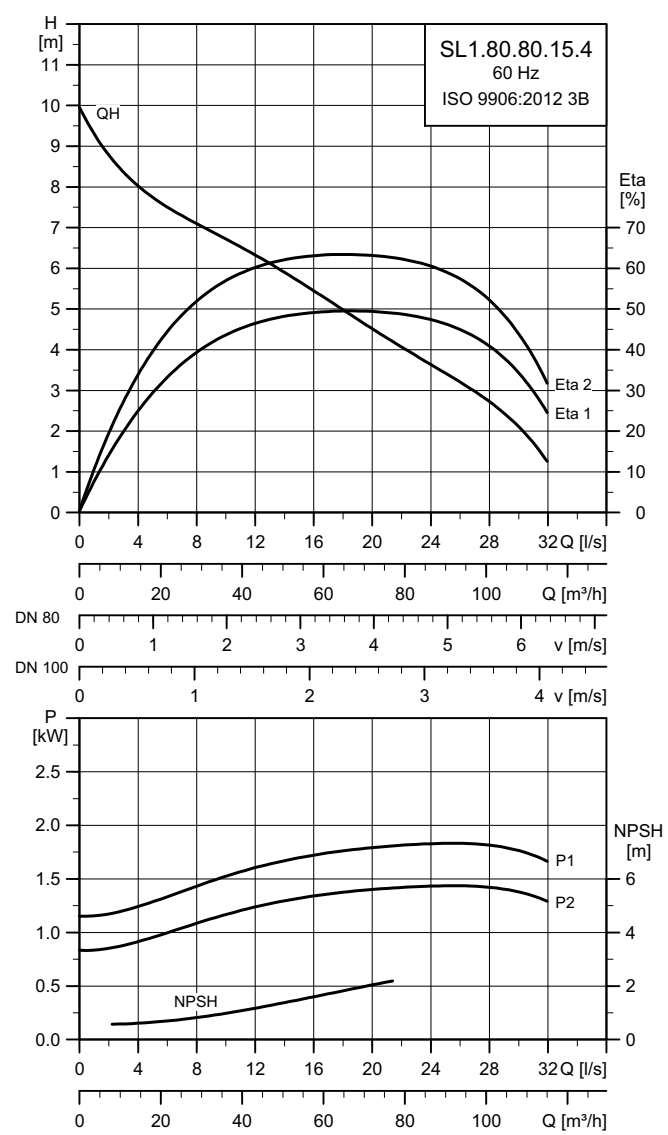
Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	50	10	20	IP68	H	A	40	6.5 - 14



# SL1.80.80

## SL1.80.80.15.(A).(EX).4.--.C



TM04 7490 1914

### Electrical data

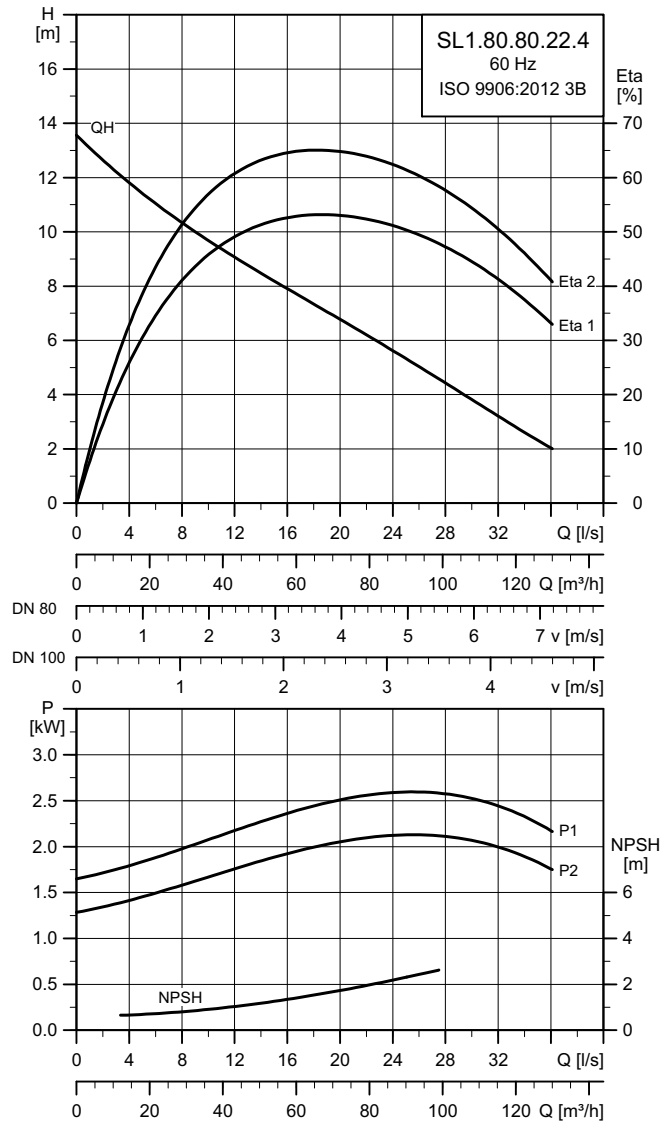
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	1.9	1.5	4	1751	DOL	6.7 - 6.5	47	83.3	85.7	86.0	0.51	0.63	0.72	0.0125	30				
61F	3 x 220-277 V D / 380-480 V Y	1.9	1.5	4	1751	Y/D	6.7 - 6.5 / 3.9 - 3.8	47/27	83.3	85.7	86.0	0.51	0.63	0.72	0.0125	30				
60G	3 x 380-480 V Y	1.9	1.5	4	1751	DOL	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0125	30				
61G	3 x 380-480 V D	1.9	1.5	4	1751	Y/D	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0125	30				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.80.22.(A).(EX).4.--.C



TM04 7491 1914

Electrical data

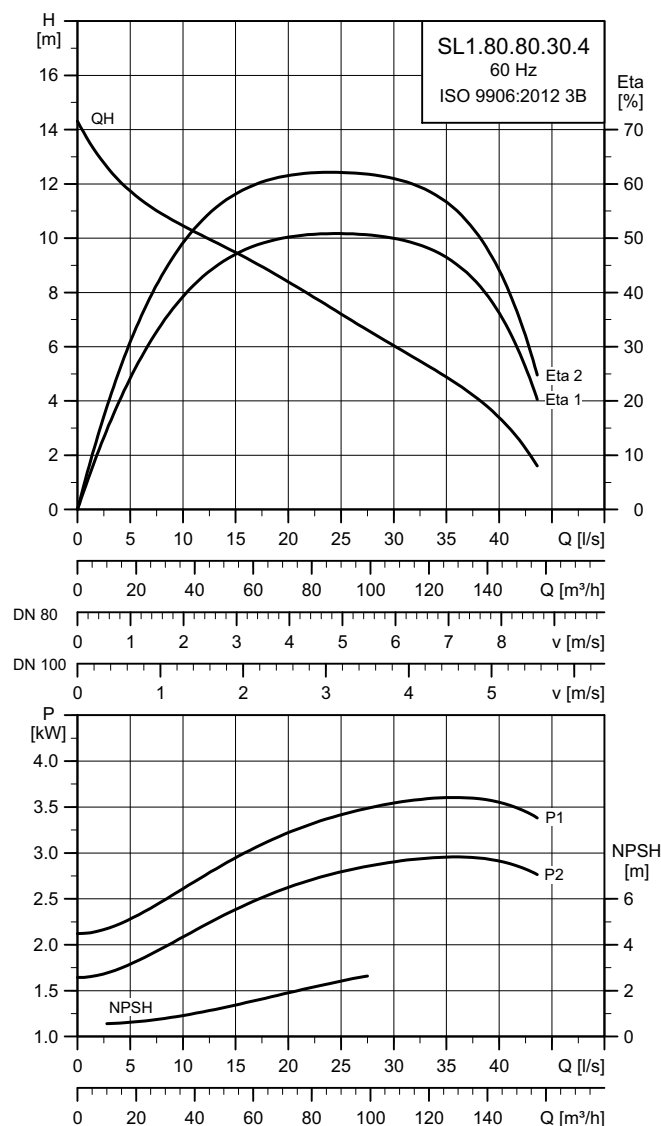
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	2.7	2.2	4	1761	DOL	9.2 - 8.8	62	84.7	86.6	87.0	0.59	0.70	0.76	0.0125	36				
61F	3 x 220-277 V D / 380-480 V Y	2.7	2.2	4	1761	Y/D	9.2 - 8.8 / 5.3 - 5.1	62/36	84.7	86.6	87.0	0.59	0.70	0.76	0.0125	36				
60G	3 x 380-480 V Y	2.7	2.2	4	1761	DOL	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0125	36				
61G	3 x 380-480 V D	2.7	2.2	4	1761	Y/D	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0125	36				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

## SL1.80.80.30.(A).(EX).4.--.C



TM04 7492 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	3.7	3.0	4	1752	DOL	11.8 - 10.7		87	84.6	86.3	86.4	0.63	0.75	0.79	0.0142	55			
61F	3 x 220-277 V D / 380-480 V Y	3.7	3.0	4	1752	Y/D	11.8 - 10.7 / 6.8 - 6.2		87/50	84.6	86.3	86.4	0.63	0.75	0.79	0.0142	55			
60G	3 x 380-480 V Y	3.7	3.0	4	1752	DOL	6.8 - 6.2		50	84.6	86.3	86.4	0.63	0.75	0.79	0.0142	55			
61G	3 x 380-480 V D	3.8	3.0	4	1752	Y/D	6.8 - 6.2		50	84.6	86.3	86.4	0.63	0.75	0.79	0.0142	55			

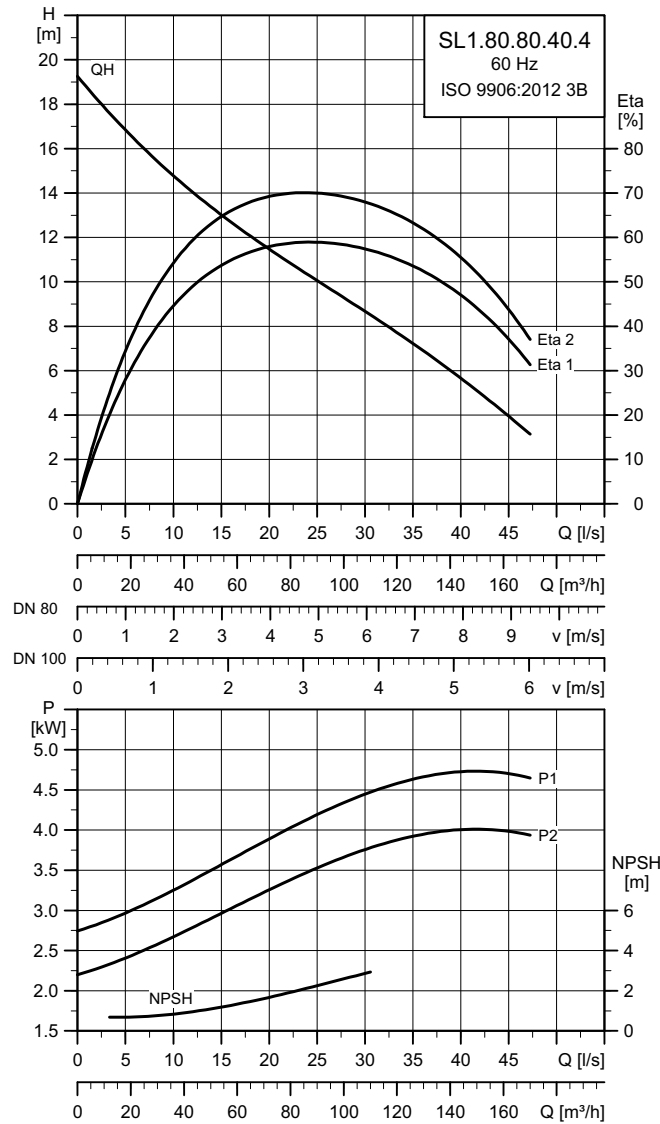
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.80.40.(A).(EX).4.--.C



TM04 7493 1914

Electrical data

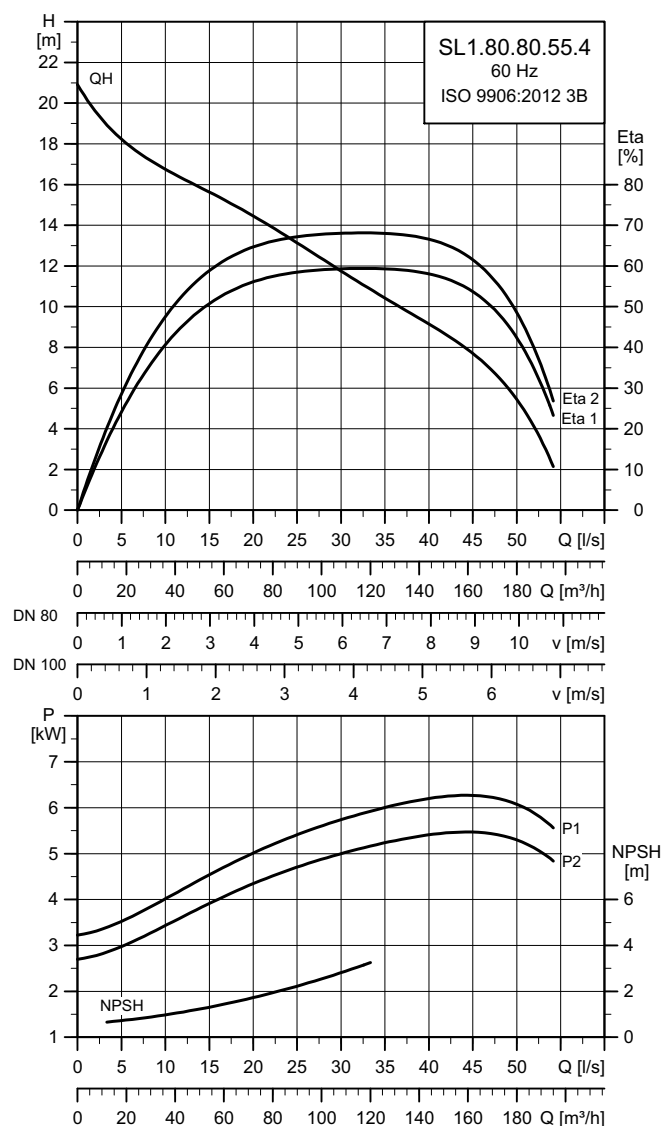
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.0142	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	118 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.0142	83				
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0142	83				
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0142	83				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

## SL1.80.80.55.(A).(EX).4.--.C



TM04 7494 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	6.4	5.5	4	1763	DOL	19.1 - 16.3	132	88.9	90.0	89.6	0.73	0.81	0.86	0.0271	99				
61F	3 x 220-277 V D / 380-480 V Y	6.4	5.5	4	1763	Y/D	19.1 - 16.3 / 11.1 - 9.4	132/ 76	88.9	90.0	89.6	0.73	0.81	0.86	0.0271	99				
60G	3 x 380-480 V D	6.4	5.5	4	1763	DOL	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0271	99				
61G	3 x 380-480 V D	6.3	5.5	4	1763	Y/D	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0271	99				

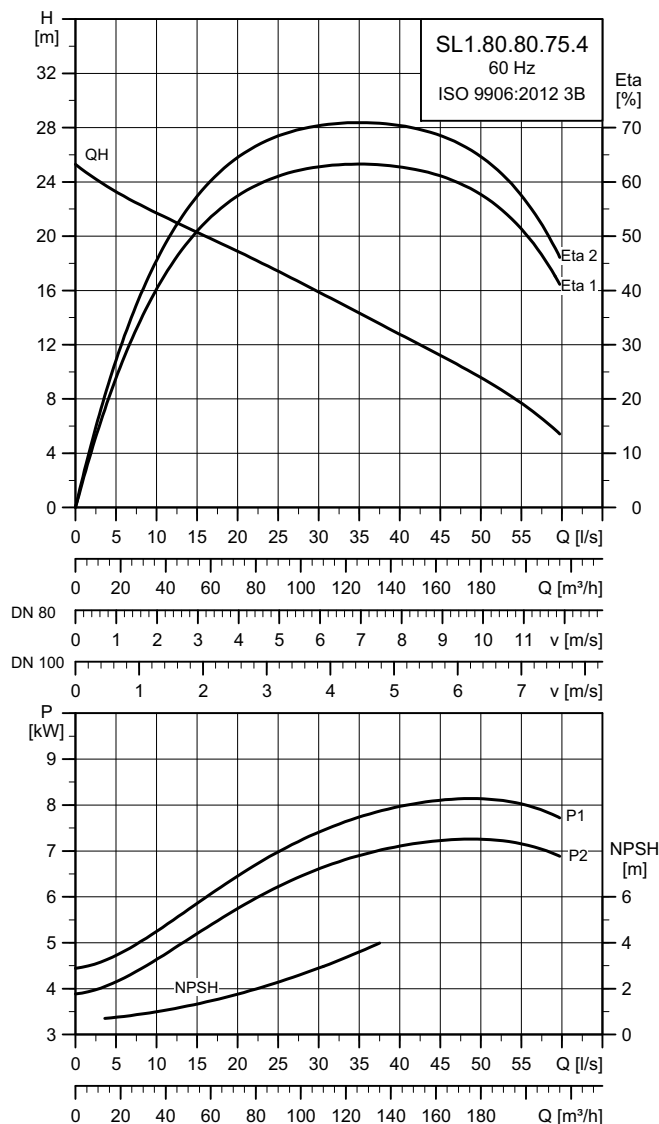
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.80.75.(A).(EX).4.--.C



TM04 7495 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	8.6	7.5	4	1763	DOL	25.5 - 22.8	182	91.0	91.4	91.0	0.71	0.81	0.85	0.0271	160
61F	3 x 220-277 V D / 380-480 V Y	8.6	7.5	4	1763	Y/D	25.5 - 22.8 / 14.7 - 13.2	185 / 105	91.0	91.4	91.0	0.71	0.81	0.85	0.0271	160
60G	3 x 380-480 V D	8.6	7.5	4	1763	DOL	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0271	160
61G	3 x 380-480 V D	8.4	7.5	4	1763	Y/D	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0271	160

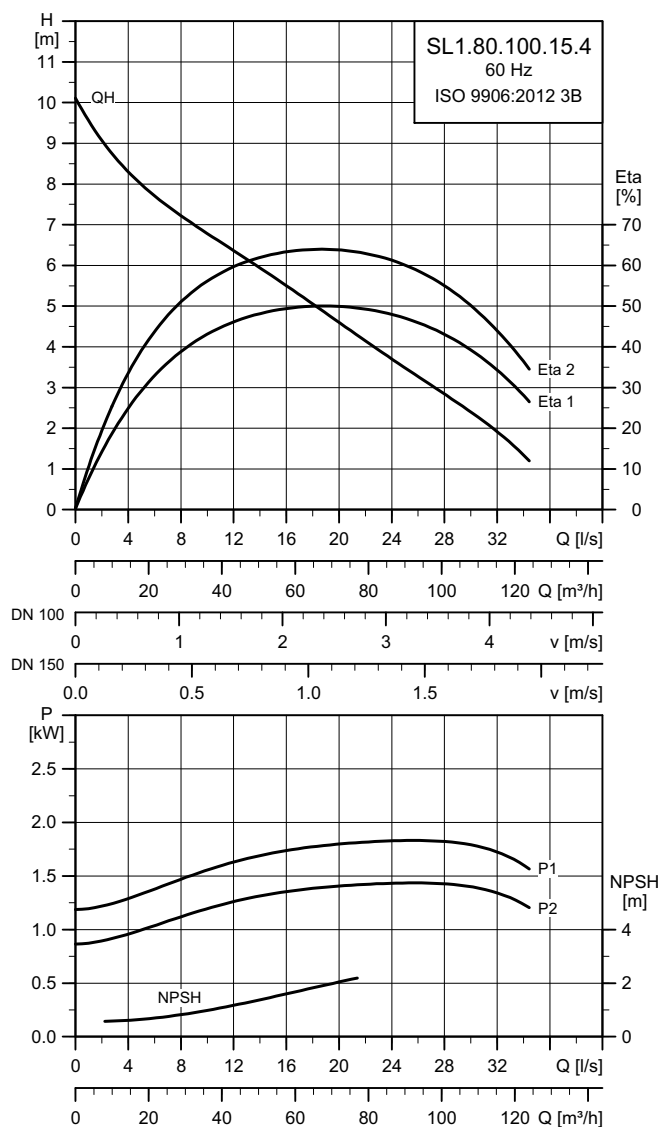
\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

## SL1.80.100

## SL1.80.100.15.(A).(EX).4.--.C



TM04 7496 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	1.9	1.5	4	1751	DOL	6.7 - 6.5	47	83.3	85.7	86.0	0.51	0.63	0.72	0.0152	30				
61F	3 x 220-277 V D / 380-480 V Y	1.9	1.5	4	1751	Y/D	6.7 - 6.5 / 3.9 - 3.8	47/27	83.3	85.7	86.0	0.51	0.63	0.72	0.0152	30				
60G	3 x 380-480 V Y	1.9	1.5	4	1751	DOL	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0152	30				
61G	3 x 380-480 V D	1.9	1.5	4	1751	Y/D	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0152	30				

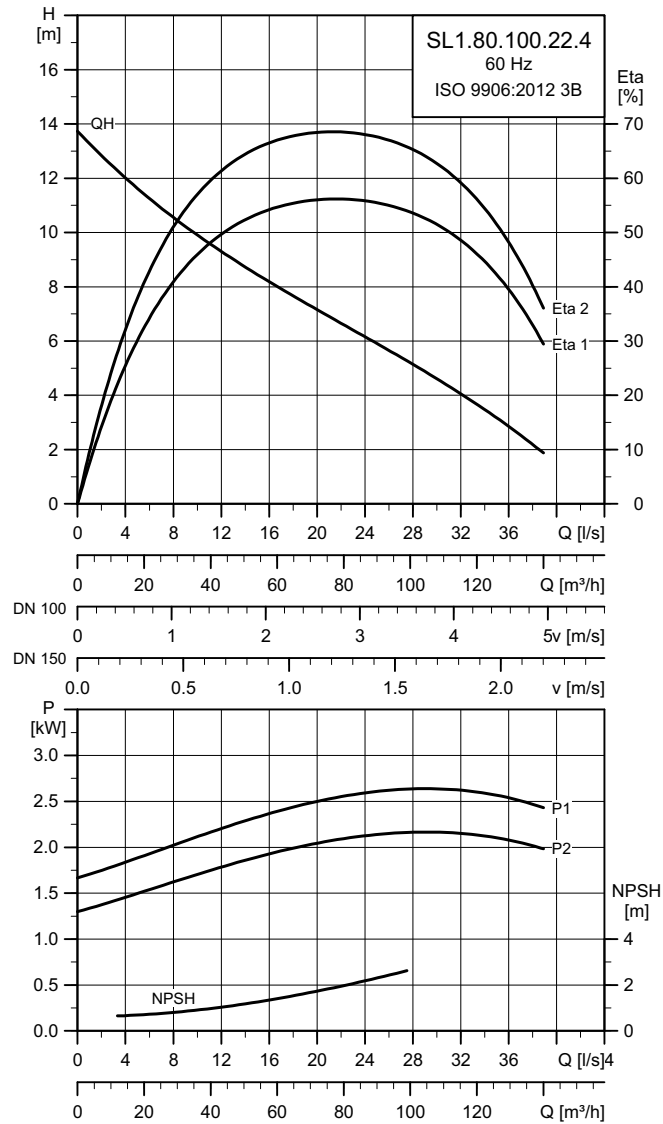
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.100.22.(A).(EX).4.--.C



TM04 7497 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	2.7	2.2	4	1761	DOL	9.2 - 8.8	62	84.7	86.6	87.0	0.59	0.70	0.76	0.0152	36				
61F	3 x 220-277 V D / 380-480 V Y	2.7	2.2	4	1761	Y/D	9.2 - 8.8 / 5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0152	36				
60G	3 x 380-480 V Y	2.7	2.2	4	1761	DOL	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0152	36				
61G	3 x 380-480 V D	2.7	2.2	4	1761	Y/D	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0152	36				

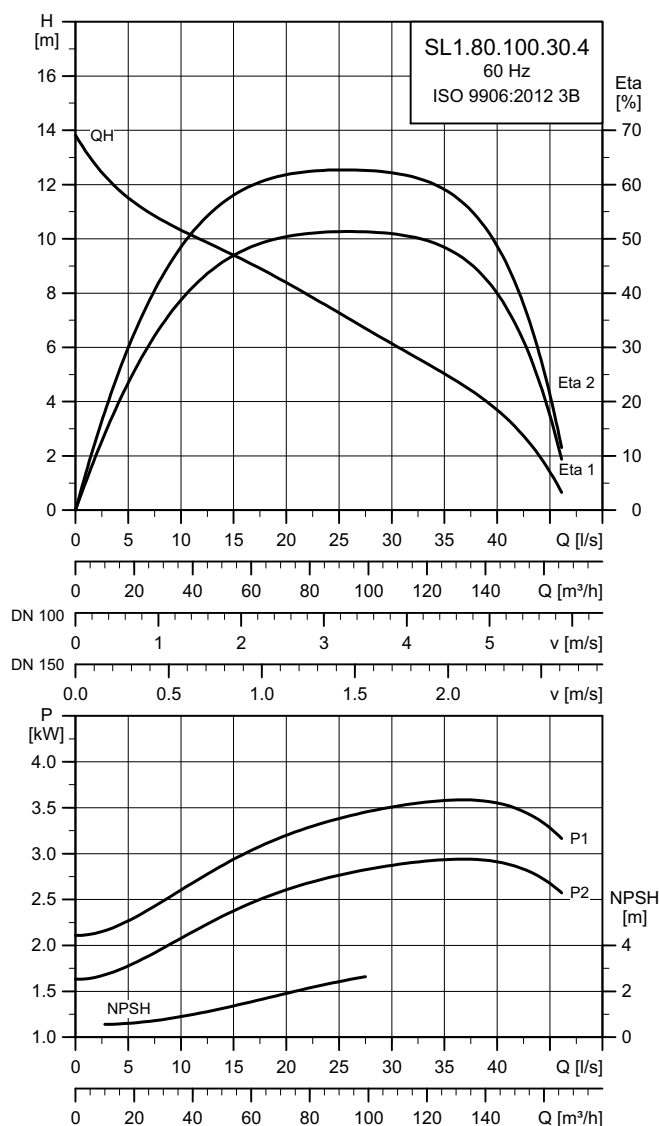
\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14



## SL1.80.100.30.(A).(EX).4.--.C



TM04 7498 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	3.7	3.0	4	1752	DOL	11.8 - 10.7	87	84.6	86.3	86.4	0.63	0.75	0.79	0.0403	55				
61F	3 x 220-277 V D / 380-480 V Y	3.7	3.0	4	1752	Y/D	11.8 - 10.7 / 6.8 - 6.2	87/50	84.6	86.3	86.4	0.63	0.75	0.79	0.0403	55				
60G	3 x 380-480 V Y	3.7	3.0	4	1752	DOL	6.8 - 6.2	50	84.6	86.3	86.4	0.63	0.75	0.79	0.0403	55				
61G	3 x 380-480 V D	3.8	3.0	4	1752	Y/D	6.8 - 6.2	50	84.6	86.3	86.4	0.63	0.75	0.79	0.0403	55				

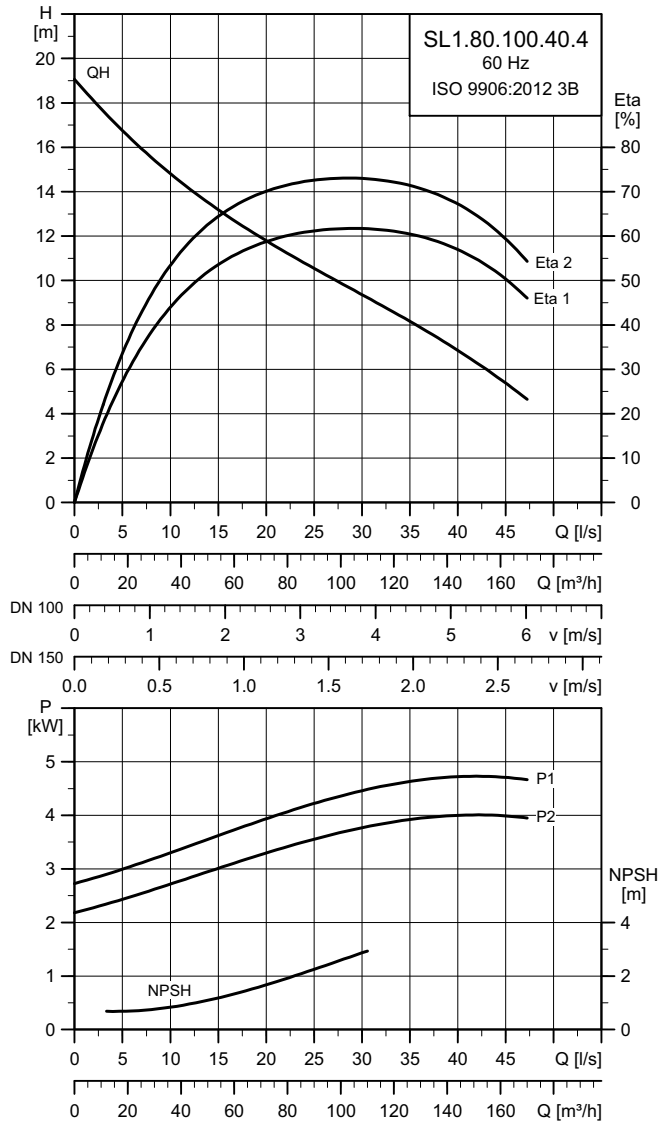
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.100.40.(A).(EX).4.--.C



TM04 7499 1914

Electrical data

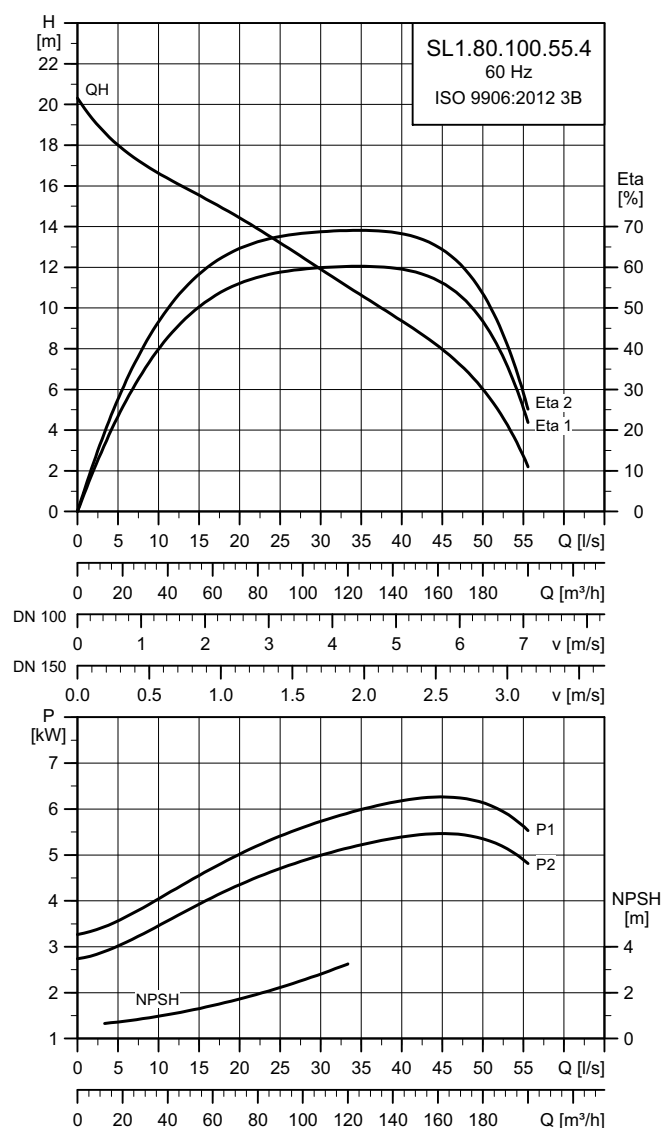
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	4.8	4.0	4	1763	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.0403	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1763	Y/D	16.4 - 15.7 / 11.1 - 9.4	118 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.0403	83				
60G	3 x 380-480 V D	4.8	4.0	4	1763	DOL	11.1 - 9.4	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0403	83				
61G	3 x 380-480 V D	4.8	4.0	4	1763	Y/D	11.1 - 9.4	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0403	83				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

## SL1.80.100.55.(A).(EX).4.--.C



TM04 7500 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	6.4	5.5	4	1763	DOL	19.1 - 16.3	132	88.9	90.0	89.6	0.73	0.81	0.86	0.0203	99				
61F	3 x 220-277 V D / 380-480 V Y	6.4	5.5	4	1763	Y/D	19.1 - 16.3 / 11.1 - 9.4	132 / 76	88.9	90.0	89.6	0.73	0.81	0.86	0.0203	99				
60G	3 x 380-480 V D	6.4	5.5	4	1763	DOL	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0203	99				
61G	3 x 380-480 V D	6.3	5.5	4	1763	Y/D	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0203	99				

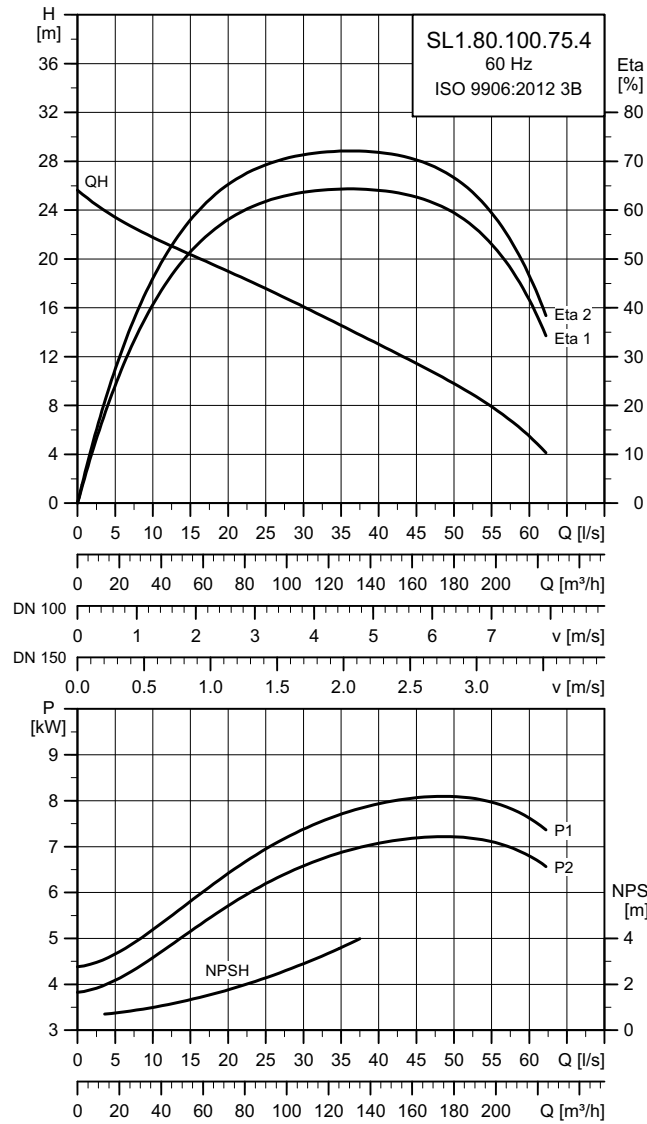
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

SL1.80.100.75.(A).(EX).4.--.C



TM04 7501 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	8.6	7.5	4	1763	DOL	25.5 - 22.8	182	91.0	91.4	91.0	0.71	0.81	0.85	0.0193	160				
61F	3 x 220-277 V D / 380-480 V Y	8.6	7.5	4	1763	Y/D	25.5 - 22.8 / 14.7 - 13.2	182 / 105	91.0	91.4	91.0	0.71	0.81	0.85	0.0193	160				
60G	3 x 380-480 V D	8.6	7.5	4	1763	DOL	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0193	160				
61G	3 x 380-480 V D	8.4	7.5	4	1763	Y/D	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0193	160				

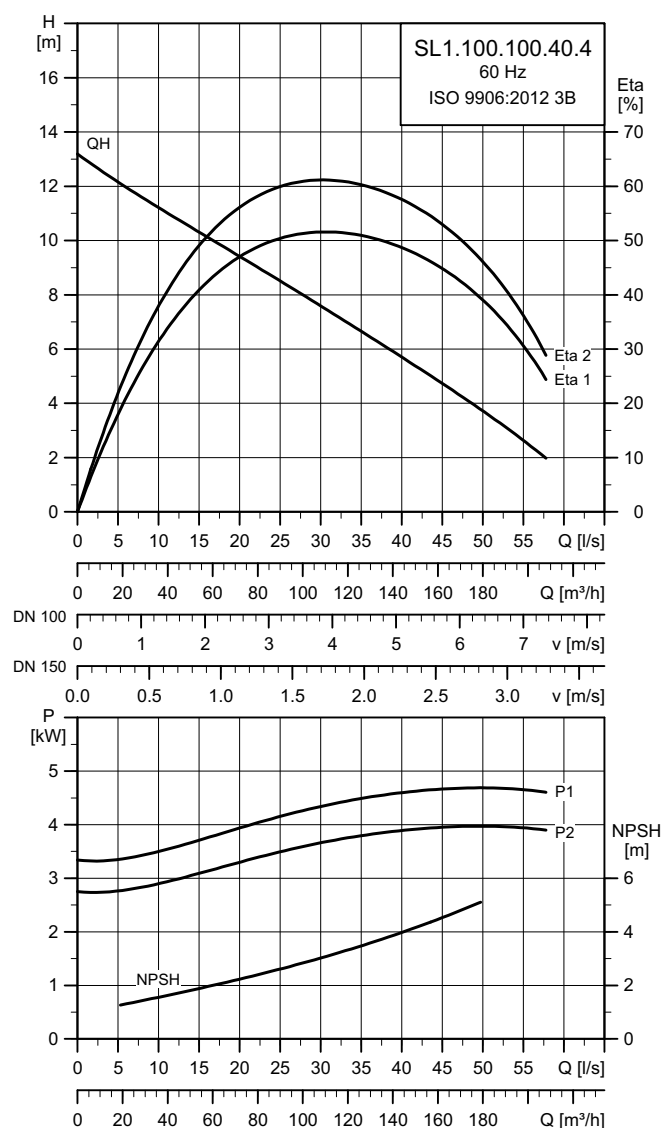
\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	80	10	20	IP68	H	A	40	6.5 - 14

## SL1.100.100

## SL1.100.100.40.(A).(EX).4.--.C



TM04 7502 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.059	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	188 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.059	83				
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.059	83				
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.059	83				

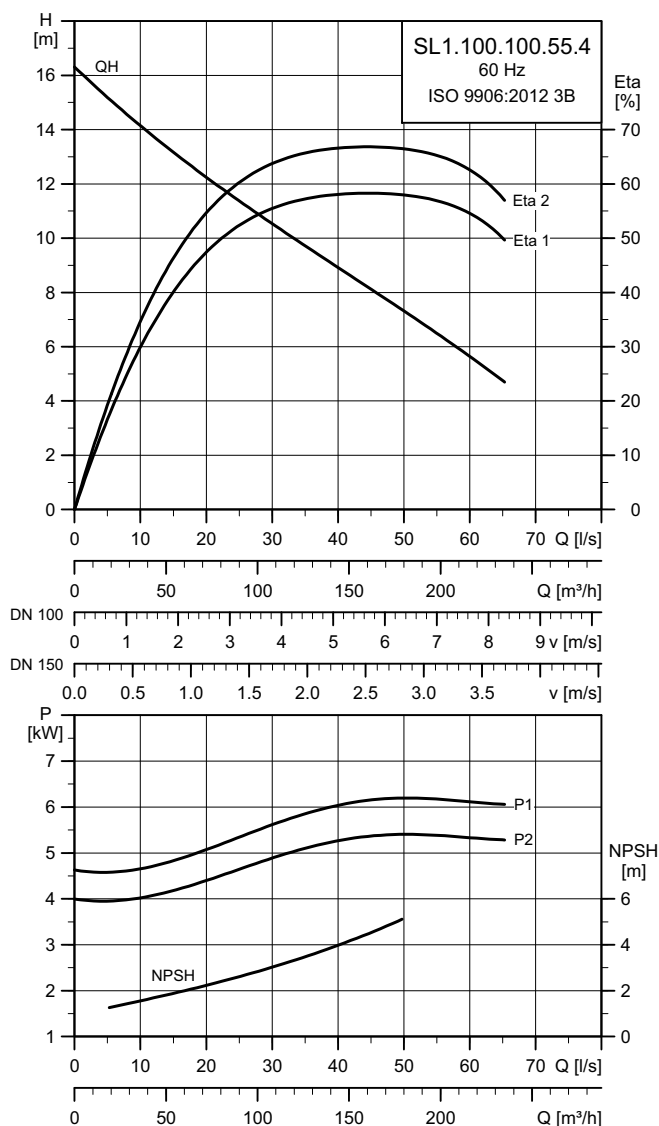
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14

## SL1.100.100.55.(A).(EX).4.--.C



TM04 7503 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$I_{start}^{**}$ [A]	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]		1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	6.4	5.5	4	1763	DOL	19.1 - 16.3	132	88.9	90.0	89.6	0.73	0.81	0.86	0.0590	99	
61F	3 x 220-277 V D / 380-480 V Y	6.4	5.5	4	1763	Y/D	19.1 - 16.3 / 11.1 - 9.4	132 / 76	88.9	90.0	89.6	0.73	0.81	0.86	0.0590	99	
60G	3 x 380-480 V D	6.4	5.5	4	1763	DOL	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0590	99	
61G	3 x 380-480 V D	6.3	5.5	4	1763	Y/D	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0590	99	

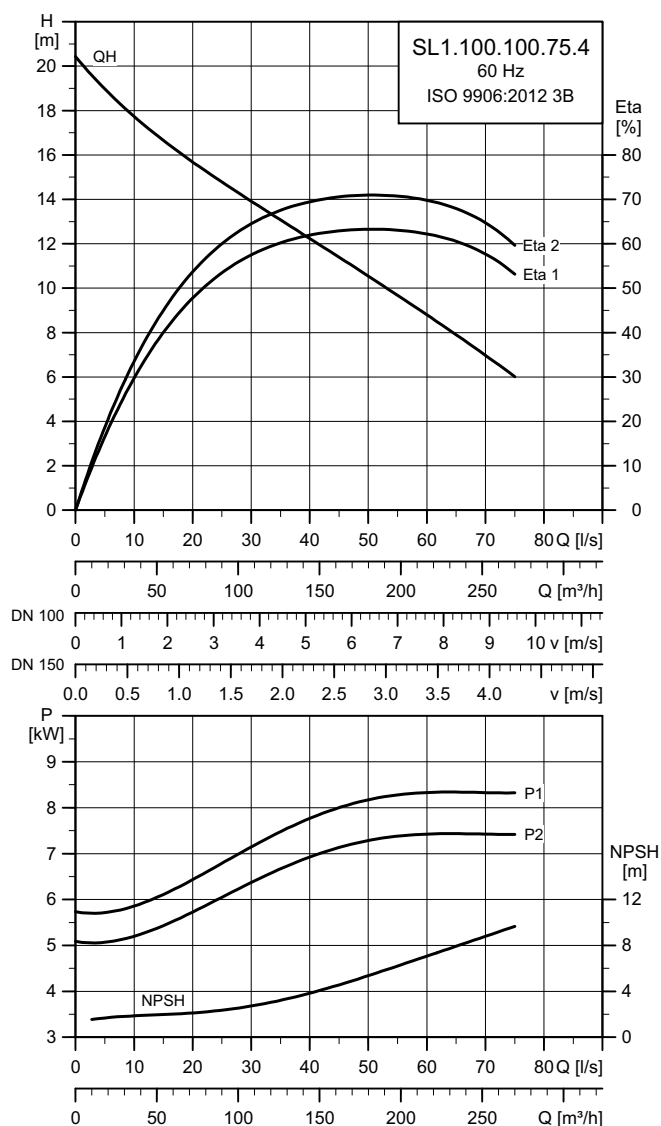
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14

## SL1.100.100.75.(A).(EX).4.--.C



TM04 7504 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	8.6	7.5	4	1763	DOL	25.5 - 22.8	182	91.0	91.4	91.0	0.71	0.81	0.85	0.049	160				
61F	3 x 220-277 V D / 380-480 V Y	8.6	7.5	4	1763	Y/D	25.5 - 22.8 / 14.7 - 13.2	182 / 105	91.0	91.4	91.0	0.71	0.81	0.85	0.049	160				
60G	3 x 380-480 V D	8.6	7.5	4	1763	DOL	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.049	160				
61G	3 x 380-480 V D	8.4	7.5	4	1763	Y/D	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.049	160				

\* For low-high voltage variants.

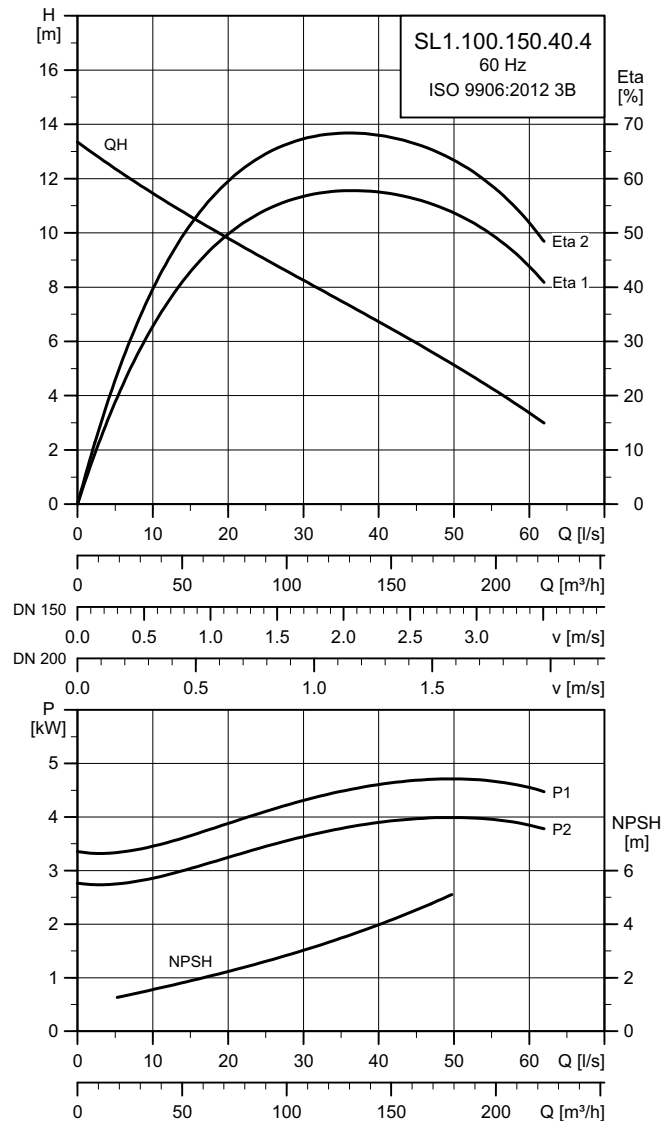
\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14

# SL1.100.150

## SL1.100.150.40.(A).(EX).4.--.C



TM04 7505 1914

### Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.0713	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	118 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.0713	83				
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0713	83				
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0713	83				

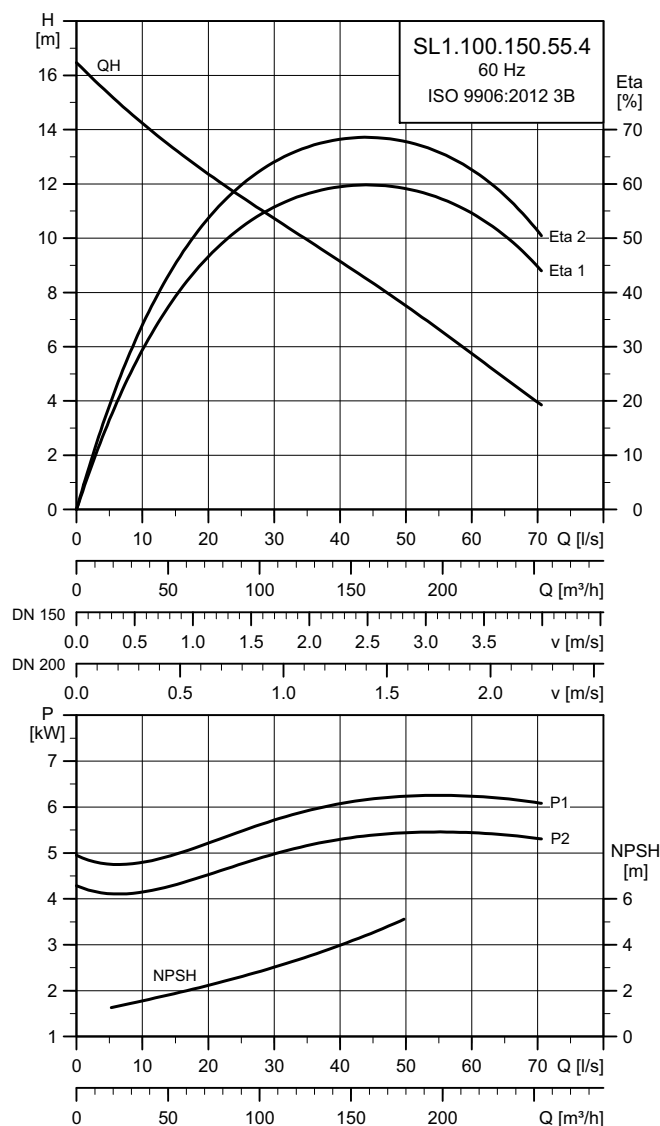
\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14



## SL1.100.150.55.(A).(EX).4.--.C



TM04 7506 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	6.4	5.5	4	1763	DOL	19.1 - 16.3	132	88.9	90.0	89.6	0.73	0.81	0.86	0.0713	99				
61F	3 x 220-277 V D / 380-480 V Y	6.4	5.5	4	1763	Y/D	19.1 - 16.3 / 11.1 - 9.4	132 / 76	88.9	90.0	89.6	0.73	0.81	0.86	0.0713	99				
60G	3 x 380-480 V D	6.4	5.5	4	1763	DOL	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0713	99				
61G	3 x 380-480 V D	6.3	5.5	4	1763	Y/D	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.0713	99				

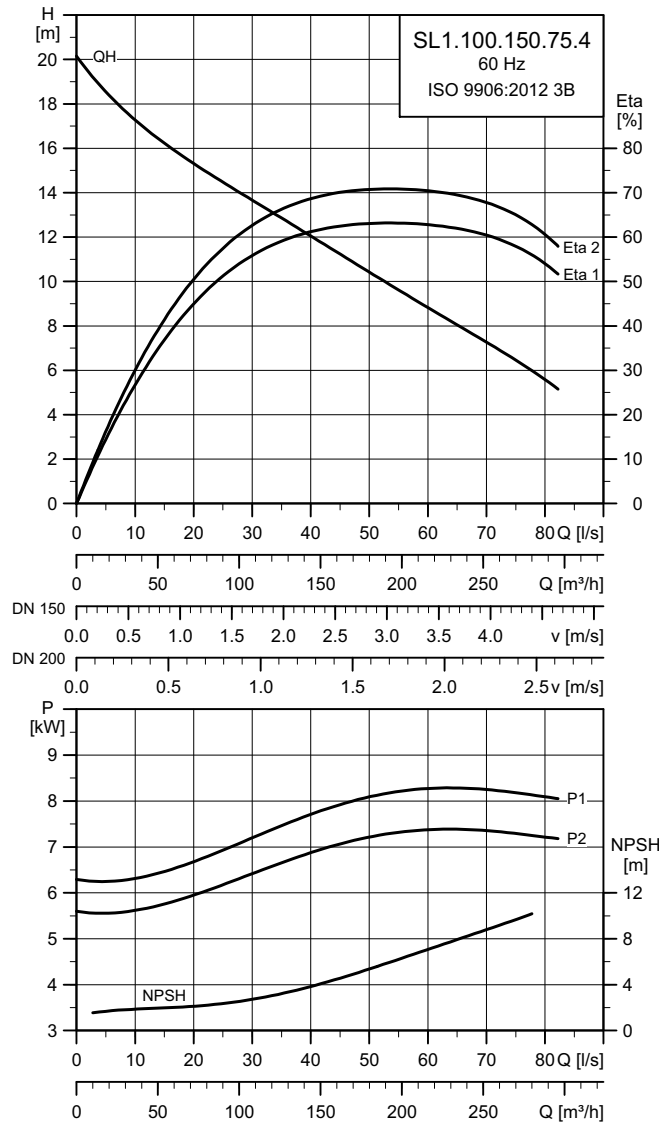
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14

SL1.100.150.75.(A).(EX).4.--.C



TM04 7507 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	8.6	7.5	4	1763	DOL	25.5 - 22.8	182	91.0	91.4	91.0	0.71	0.81	0.85	0.0903	160
61F	3 x 220-277 V D / 380-480 V Y	8.6	7.5	4	1763	Y/D	25.5 - 22.8 / 14.7 - 13.2	182 / 105	91.0	91.4	91.0	0.71	0.81	0.85	0.0903	160
60G	3 x 380-480 V D	8.6	7.5	4	1763	DOL	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0903	160
61G	3 x 380-480 V D	8.4	7.5	4	1763	Y/D	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0903	160

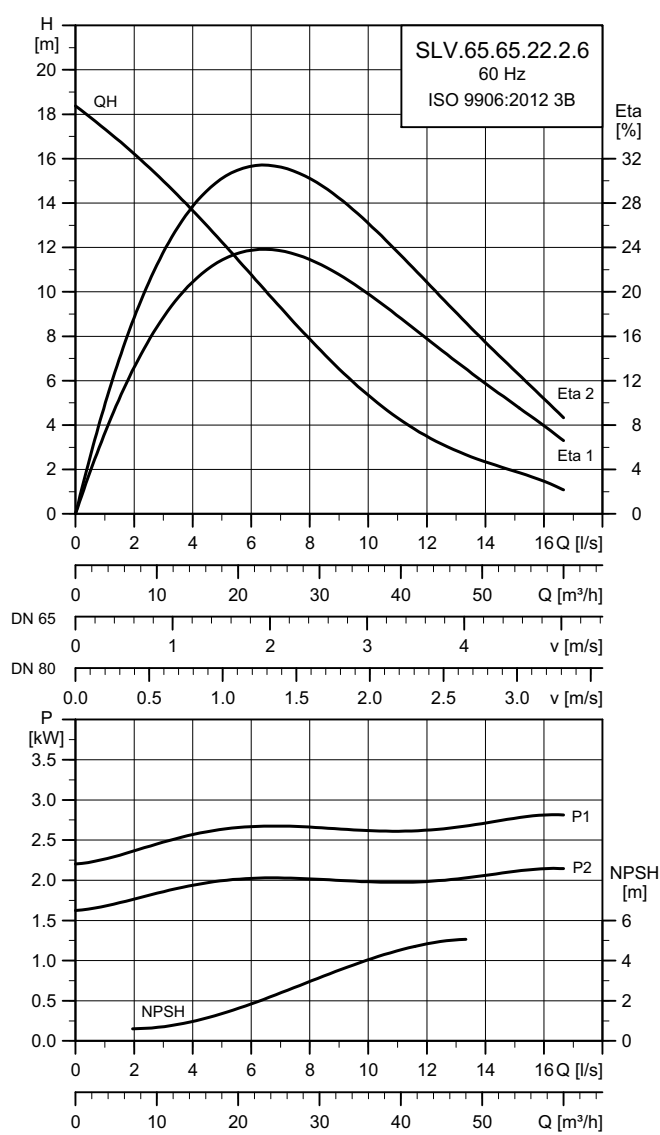
\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
S tube	100	10	20	IP68	H	A	40	6.5 - 14

# SLV.65.65

## SLV.65.65.22.(A).(EX).2.--.C



TM04 6934 1914

### Electrical data

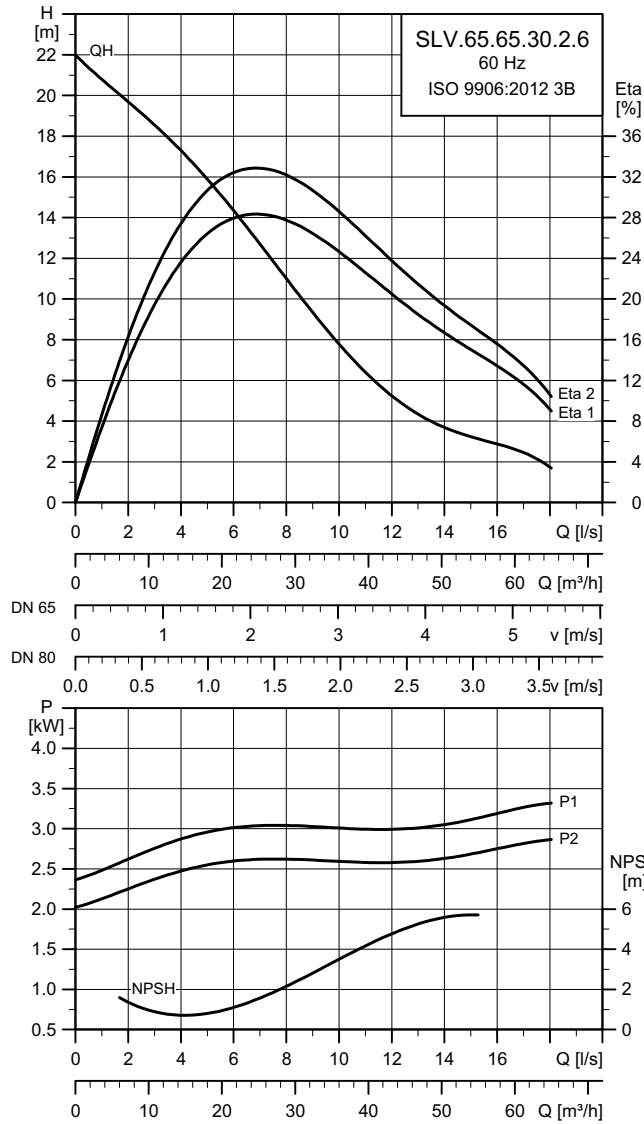
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \varphi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	3.0	2.2	2	3481	DOL	9.0 - 7.4	61	83.8	85.8	85.0	0.78	0.85	0.89	0.0057	21				
61F	3 x 220-277 V D / 380-480 V Y	3.0	2.2	2	3481	Y/D	9.0 - 7.4 / 5.2 - 4.3	61/35	83.8	85.8	85.0	0.78	0.85	0.89	0.0057	21				
60G	3 x 380-480 V Y	3.0	2.2	2	3481	DOL	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0057	21				
61G	3 x 380-480 V D	3.0	2.2	2	3481	Y/D	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0057	21				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14

SLV.65.65.30.(A).(EX).2.--.C



TM04 6935 1914

Electrical data

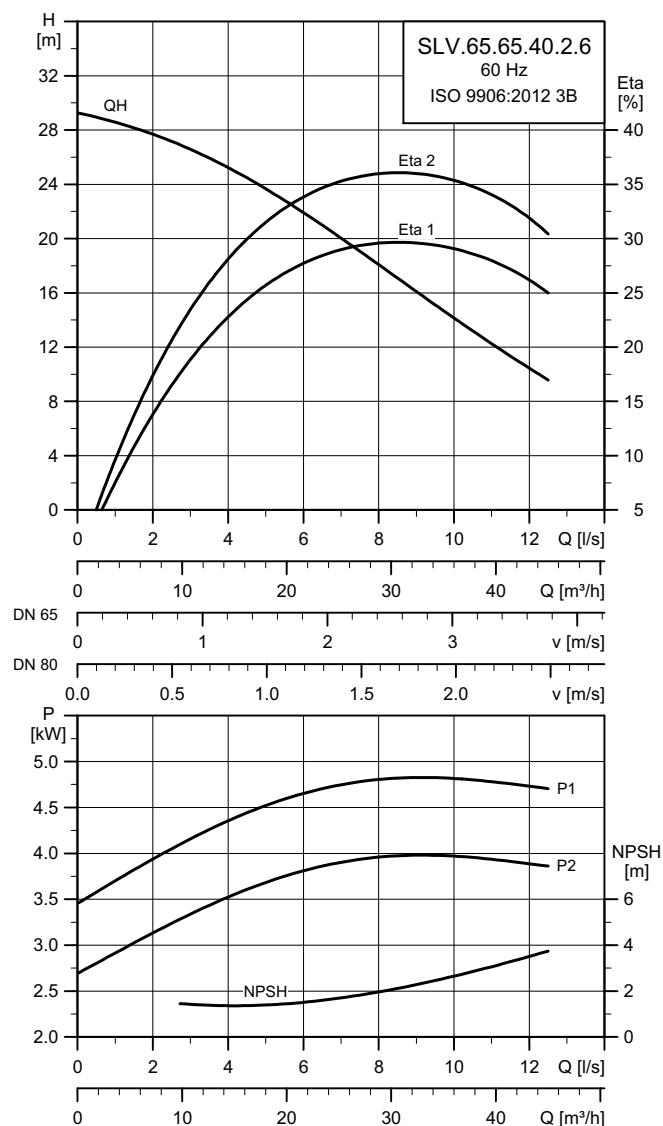
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	3.8	3.0	2	3510	DOL	11.7 - 10.2		87	84.8	86.5	86.5	0.74	0.83	0.87	0.0057	55			
61F	3 x 220-277 V D / 380-480 V Y	3.8	3.0	2	3510	Y/D	11.7 - 10.2 / 6.8 - 5.9		87/50	84.8	86.5	86.5	0.74	0.83	0.87	0.0057	55			
60G	3 x 380-480 V Y	3.8	3.0	2	3510	DOL	6.8 - 5.9		50	84.8	86.5	86.5	0.74	0.83	0.87	0.0057	55			
61G	3 x 380-480 V D	3.8	3.0	2	3510	Y/D	6.8 - 5.9		50	84.8	86.5	86.5	0.74	0.83	0.87	0.0057	55			

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14

## SLV.65.65.40.(A).(EX).2.--.C



TM04 6936 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0144	56				
61F	3 x 220-277 V D / 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147 / 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0144	56				
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0144	56				
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0144	56				

\* For low-high voltage variants.

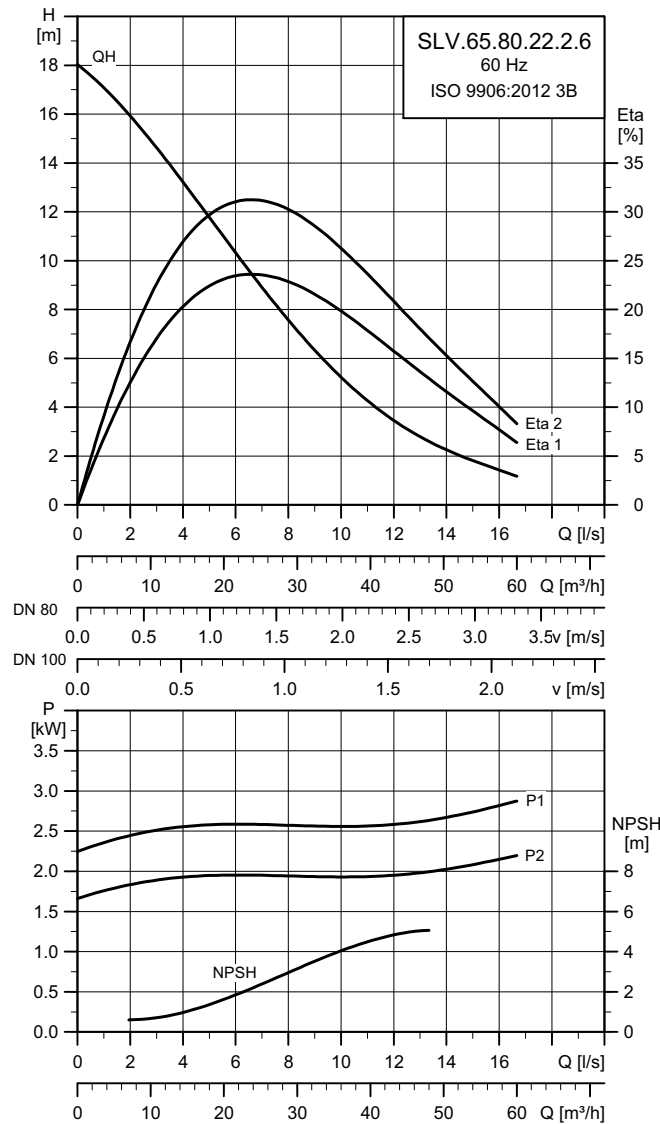
\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14

# SLV.65.80

## SLV.65.80.22.(A).(EX).2.--.C



TM04 6937 1914

### Electrical data

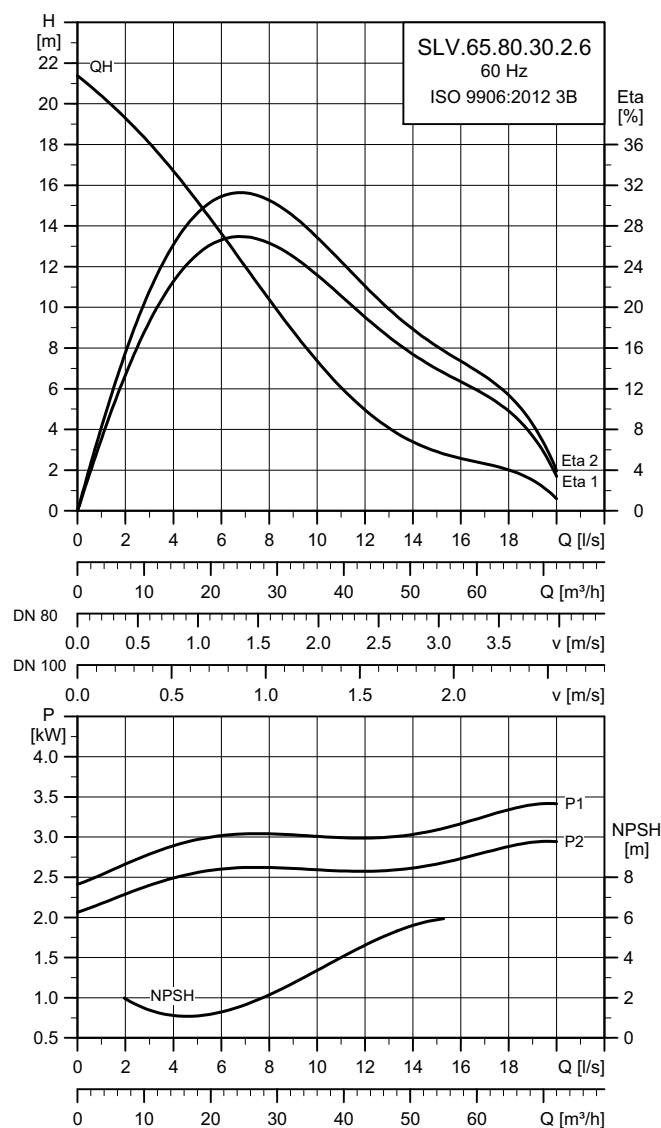
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \varphi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	3.0	2.2	2	3481	DOL	9.0 - 7.4	61	83.8	85.8	85.0	0.78	0.85	0.89	0.0144	21				
61F	3 x 220-277 V D / 380-480 V Y	3.0	2.2	2	3481	Y/D	9.0 - 7.4 / 5.2 - 4.3	61/35	83.8	85.8	85.0	0.78	0.85	0.89	0.0144	21				
60G	3 x 380-480 V Y	3.0	2.2	2	3481	DOL	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0144	21				
61G	3 x 380-480 V D	3.0	2.2	2	3481	Y/D	5.2 - 4.3	35	83.8	85.8	85.0	0.78	0.85	0.89	0.0144	21				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14

## SLV.65.80.30.(A).(EX).2.--.C



TM04 6938 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	3.8	3.0	2	3510	DOL	11.7 - 10.2		87	84.8	86.5	86.5	0.74	0.83	0.87	0.0144	55			
61F	3 x 220-277 V D / 380-480 V Y	3.8	3.0	2	3510	Y/D	11.7 - 10.2 / 6.8 - 5.9		87/50	84.8	86.5	86.5	0.74	0.83	0.87	0.0144	55			
60G	3 x 380-480 V Y	3.8	3.0	2	3510	DOL	6.8 - 5.9		50	84.8	86.5	86.5	0.74	0.83	0.87	0.0144	55			
61G	3 x 380-480 V D	3.8	3.0	2	3510	Y/D	6.8 - 5.9		50	84.8	86.5	86.5	0.74	0.83	0.87	0.0144	55			

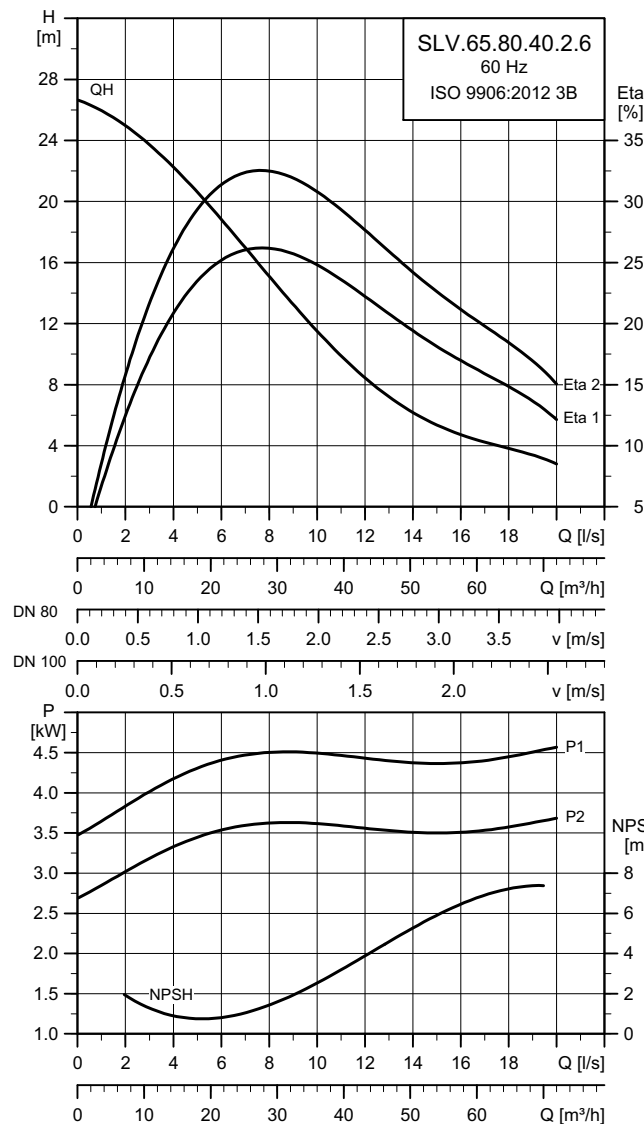
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14

SLV.65.80.40.(A).(EX).2.--.C



TM04 6939 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
61F	3 x 220-277 V D / 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147 / 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

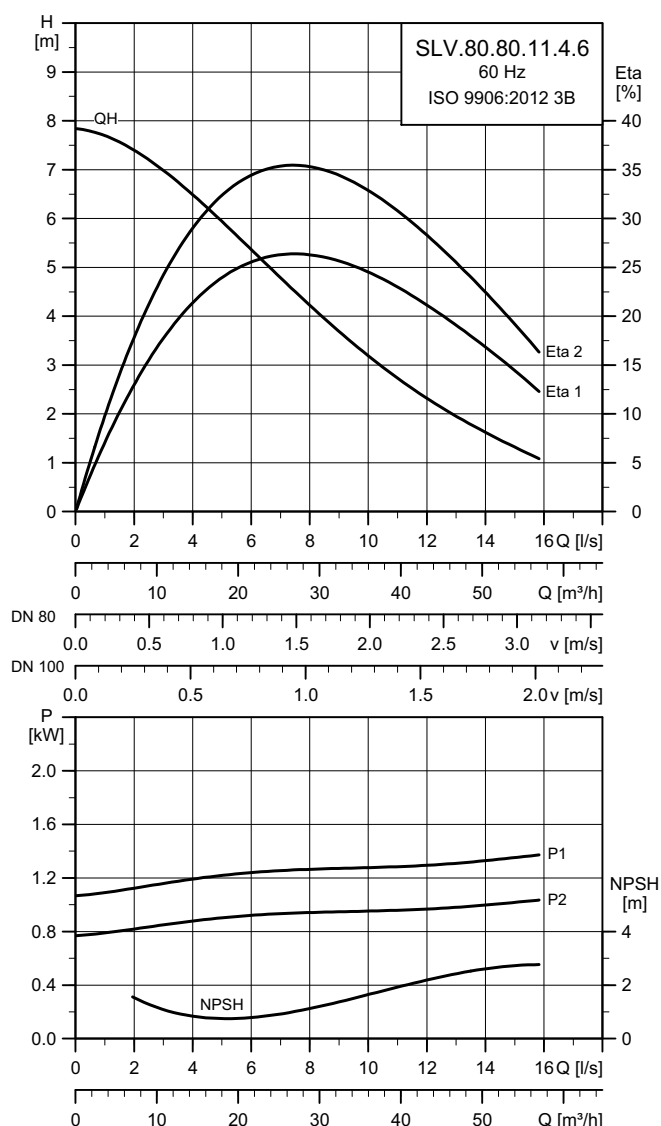
Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	65	10	20	IP68	H	A	40	6.5 - 14



# SLV.80.80

## SLV.80.80.11.(A).(EX).4.--.C



TM04 6940 1914

### Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	1.5	1.1	4	1751	DOL	5.1 - 4.9	29	81.0	84.2	84.6	0.52	0.65	0.72	0.0903	24				
61F	3 x 220-277 V D / 380-480 V Y	1.5	1.1	4	1751	Y/D	5.1 - 4.9 / 3.0 - 2.8	29/17	81.0	84.2	84.6	0.52	0.65	0.72	0.0903	24				
60G	3 x 380-480 V Y	1.5	1.1	4	1751	DOL	3.0 - 2.8	17	81.0	84.2	84.6	0.52	0.65	0.72	0.0903	24				
61G	3 x 380-480 V D	1.5	1.1	4	1751	Y/D	3.0 - 2.8	17	81.0	84.2	84.6	0.52	0.65	0.72	0.0903	24				

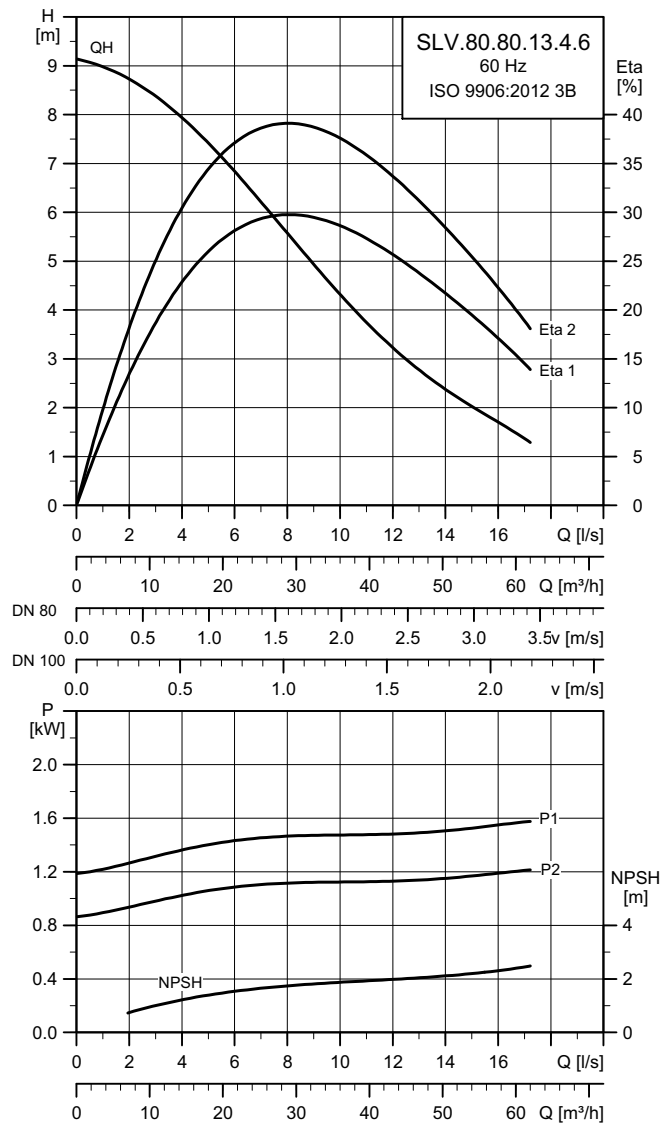
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.80.13.(A).(EX).4.--.C



TM04 6941 1914

Electrical data

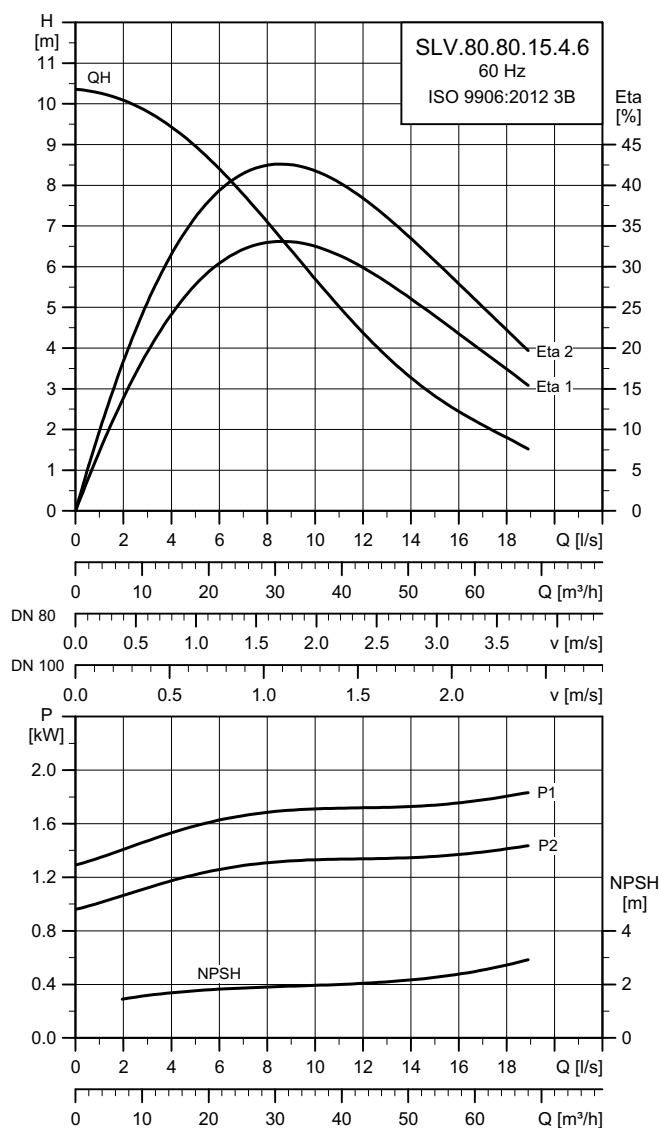
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^*$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	1.8	1.3	4	1760	DOL	6.6 - 6.4	47	82.0	85.2	86.0	0.30	0.39	0.46	0.0523	30				
61F	3 x 220-277 V D / 380-480 V Y	1.8	1.3	4	1760	Y/D	6.6 - 6.4 / 3.8 - 3.7	47/27	82.0	85.2	86.0	0.30	0.39	0.46	0.0523	30				
60G	3 x 380-480 V Y	1.8	1.3	4	1760	DOL	3.8 - 3.7	27	82.0	85.2	86.0	0.30	0.39	0.46	0.0523	30				
61G	3 x 380-480 V D	1.8	1.3	4	1760	Y/D	3.8 - 3.7	27	82.0	85.2	86.0	0.30	0.39	0.46	0.0523	30				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.80.15.(A).(EX).4.--.C



TM04 6942 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	1.9	1.5	4	1751	DOL	6.7 - 6.5	47	83.3	85.7	86.0	0.51	0.63	0.72	0.0513	30				
61F	3 x 220-277 V D / 380-480 V Y	1.9	1.5	4	1751	Y/D	6.7 - 6.5 / 3.9 - 3.8	47/27	83.3	85.7	86.0	0.51	0.63	0.72	0.0513	30				
60G	3 x 380-480 V Y	1.9	1.5	4	1751	DOL	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0513	30				
61G	3 x 380-480 V D	1.9	1.5	4	1751	Y/D	3.9 - 3.8	27	83.3	85.7	86.0	0.51	0.63	0.72	0.0513	30				

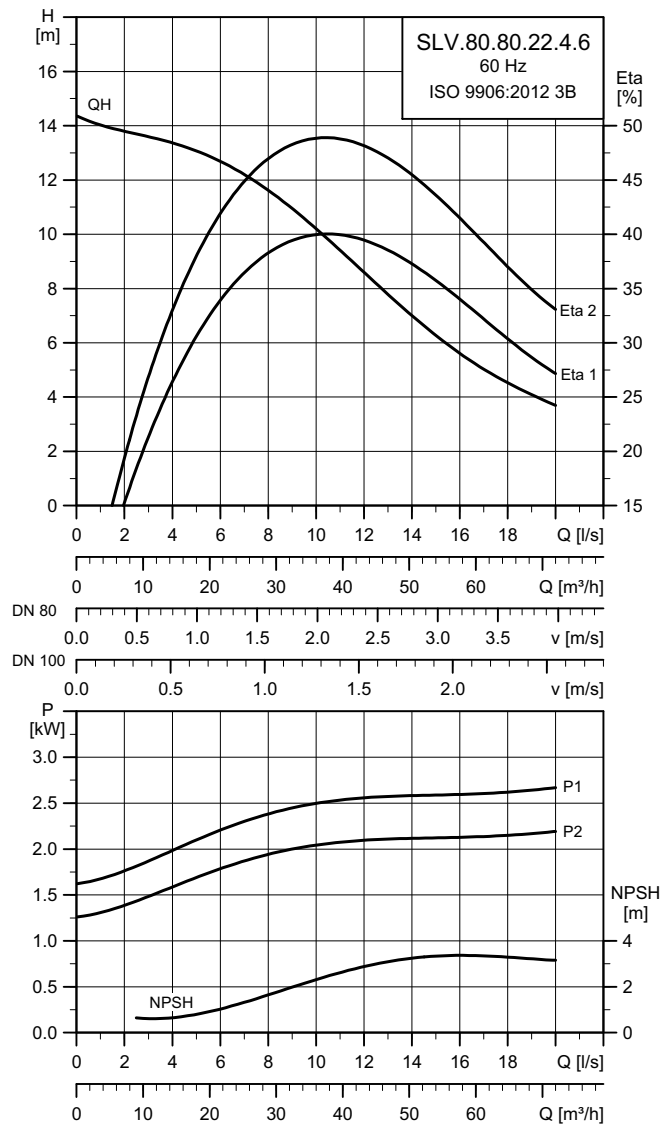
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.80.22.(A).(EX).4.--.C



TM04 6943 1914

Electrical data

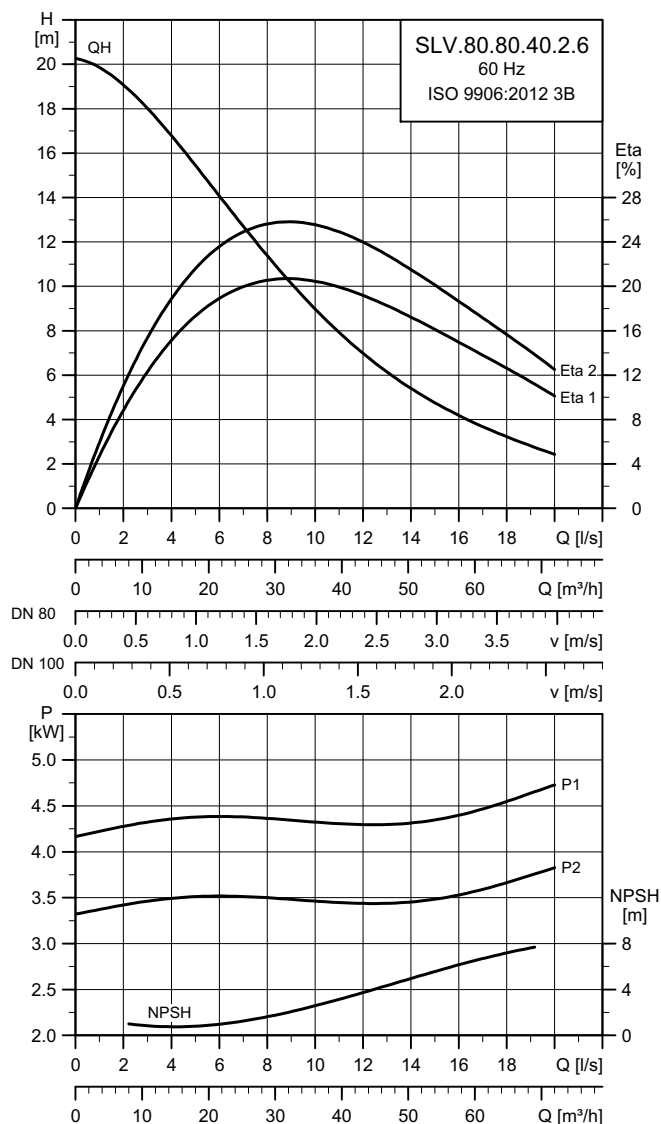
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	2.7	2.2	4	1761	DOL	9.2 - 8.8	62	84.7	86.6	87.0	0.59	0.70	0.76	0.0533	36				
61F	3 x 220-277 V D / 380-480 V Y	2.7	2.2	4	1761	Y/D	9.2 - 8.8 / 5.3 - 5.1	62/36	84.7	86.6	87.0	0.59	0.70	0.76	0.0533	36				
60G	3 x 380-480 V Y	2.7	2.2	4	1761	DOL	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0533	36				
61G	3 x 380-480 V D	2.7	2.2	4	1761	Y/D	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0533	36				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.80.40.(A).(EX).2.--.C



TM04 6944 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
61F	3 x 220-277 V D / 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147/ 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0134	56				

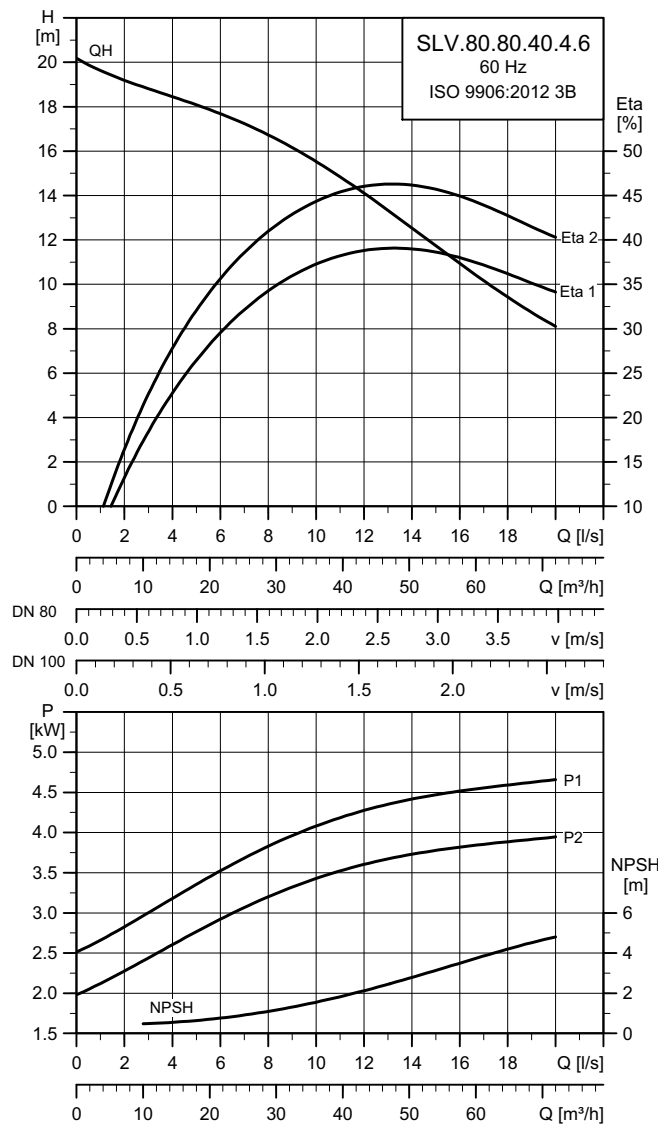
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.80.40.(A).(EX).4.--.C



TM04 6945 1914

Electrical data

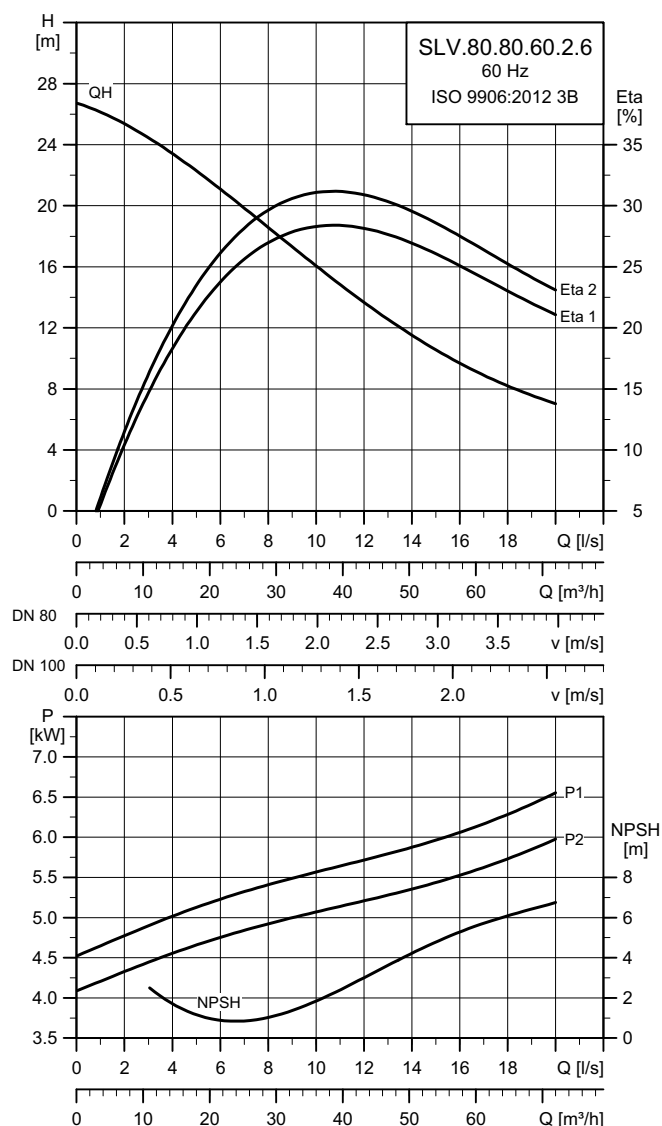
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$I_{start}^{**}$ [A]	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]		1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.0917	83	
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	118/ 68	85.3	87.4	88.2	0.53	0.66	0.74	0.0917	83	
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0917	83	
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.0917	83	

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.80.60.(A).(EX).2.--.C



TM04 6946 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	7.2	6.0	2	3540	DOL	21.7 - 18.2	191	89.5	89.7	90.2	0.70	0.79	0.83	0.0134	85				
61F	3 x 220-277 V D / 380-480 V Y	7.2	6.0	2	3540	Y/D	21.7 - 18.2 / 12.5 - 10.5	191/ 110	89.5	89.7	90.2	0.70	0.79	0.83	0.0134	85				
60G	3 x 380-480 V D	7.2	6.0	2	3540	DOL	12.5 - 10.5	110	89.5	89.7	90.2	0.70	0.79	0.83	0.0134	85				
61G	3 x 380-480 V D	7.2	6.0	2	3540	Y/D	12.5 - 10.5	110	89.5	89.7	90.2	0.70	0.79	0.83	0.0134	85				

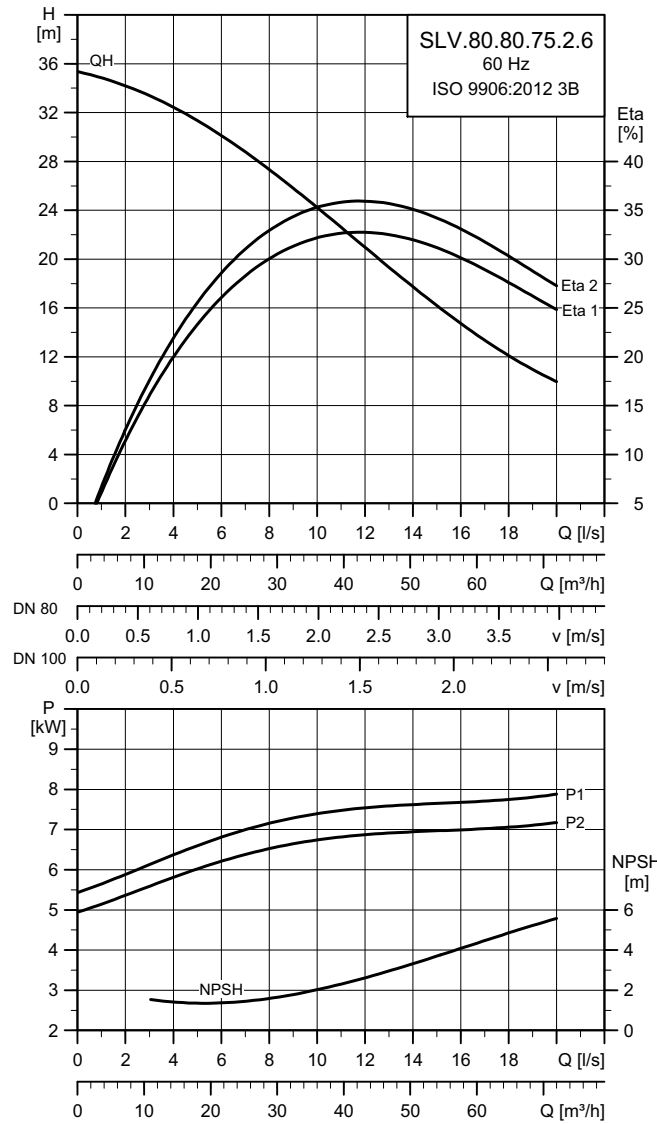
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.80.75.(A).(EX).2.--.C



TM04 6947 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$	$I_{start}^{**}$	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	8.8	7.5	2	3519	DOL	26.1 - 21.9	191	90.3	90.8	90.1	0.74	0.82	0.86	0.0146	85
61F	3 x 220-277 V D / 380-480 V Y	8.8	7.5	2	3519	Y/D	26.1 - 21.9 / 15.0 - 12.6	191 / 110	90.3	90.8	90.1	0.74	0.82	0.86	0.0146	85
60G	3 x 380-480 V D	8.8	7.5	2	3519	DOL	15.0 - 12.6	110	90.3	90.8	90.1	0.74	0.82	0.86	0.0146	85
61G	3 x 380-480 V D	8.7	7.5	2	3519	Y/D	15.0 - 12.6	110	90.3	90.8	90.1	0.74	0.82	0.86	0.0146	85

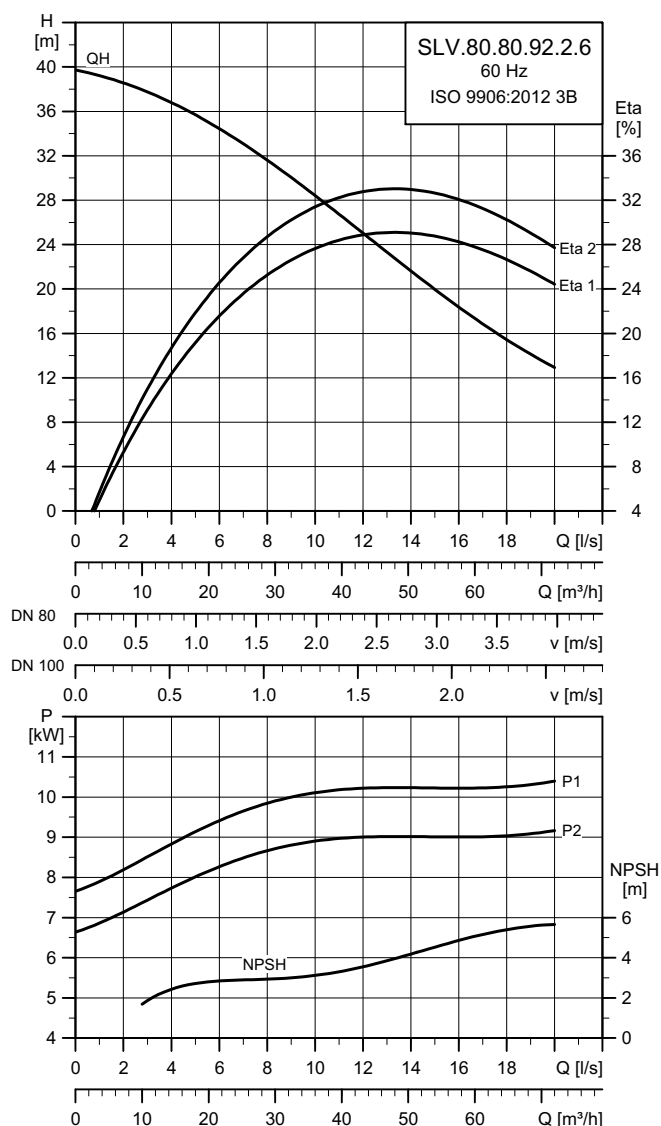
\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14



## SLV.80.80.92.(A).(EX).2.--.C



TM04 6948 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$	$I_{start}^{**}$	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	10.6	9.2	2	3555	DOL	30.0 - 26.3	274	91.6	91.6	91.7	0.65	0.78	0.82	0.0136	110
61F	3 x 220-277 V D / 380-480 V Y	10.6	9.2	2	3555	Y/D	30.0 - 26.3 / 17.3 - 15.2	274/ 158	91.6	91.6	91.7	0.65	0.78	0.82	0.0136	110
61G	3 x 380-480 V D	10.6	9.2	2	3555	Y/D	17.3 - 15.2	158	91.6	91.6	91.7	0.65	0.78	0.82	0.0136	110
60G	3 x 380-480 V D	10.6	9.2	2	3555	DOL	17.3 - 15.2	158	91.6	91.6	91.7	0.65	0.78	0.82	0.0136	110

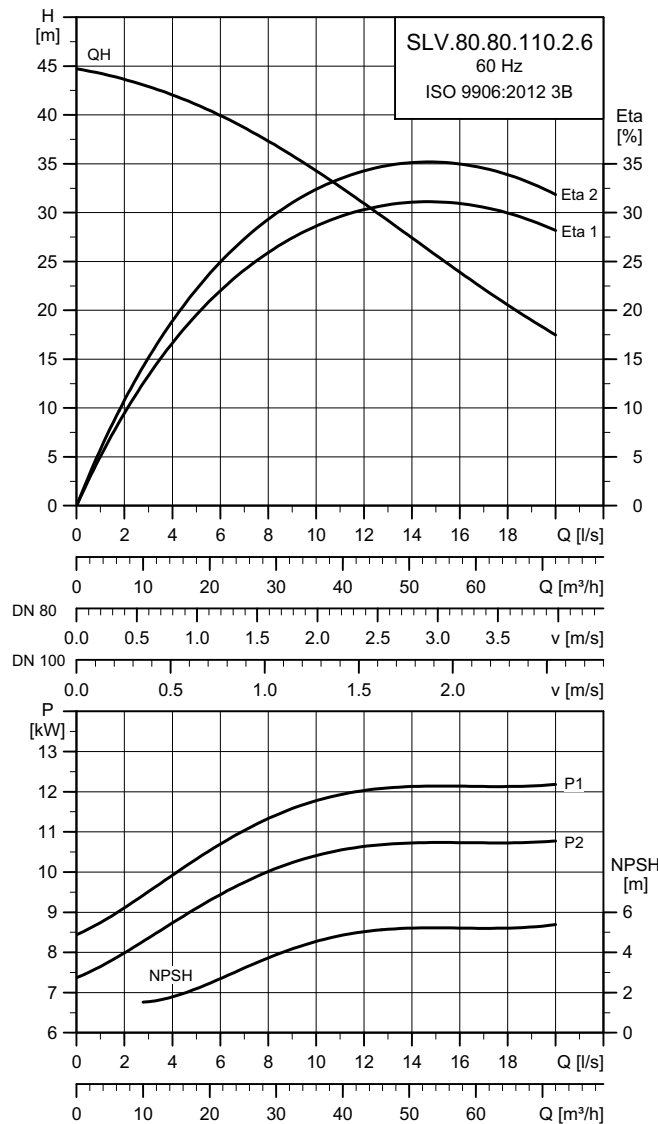
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.80.110.(A).(EX).2.--.C



TM04 6949 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$	$I_{start}^{**}$	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	12.6	11.0	2	3548	DOL	29.1 - 32.1	274	91.6	91.8	91.6	0.73	0.82	0.86	0.0176	110
61F	3 x 220-277 V D / 380-480 V Y	12.6	11.0	2	3548	Y/D	29.1 - 32.1 / 22.0 - 18.5	274 / 158	91.6	91.8	91.6	0.73	0.82	0.86	0.0176	110
60G	3 x 380-480 V D	12.6	11.0	2	3548	DOL	22.0 - 18.5	158	91.6	91.8	91.6	0.73	0.82	0.86	0.0176	110
61G	3 x 380-480 V D	12.5	11.0	2	3548	Y/D	22.0 - 18.5	158	91.6	91.8	91.6	0.73	0.82	0.86	0.0176	110

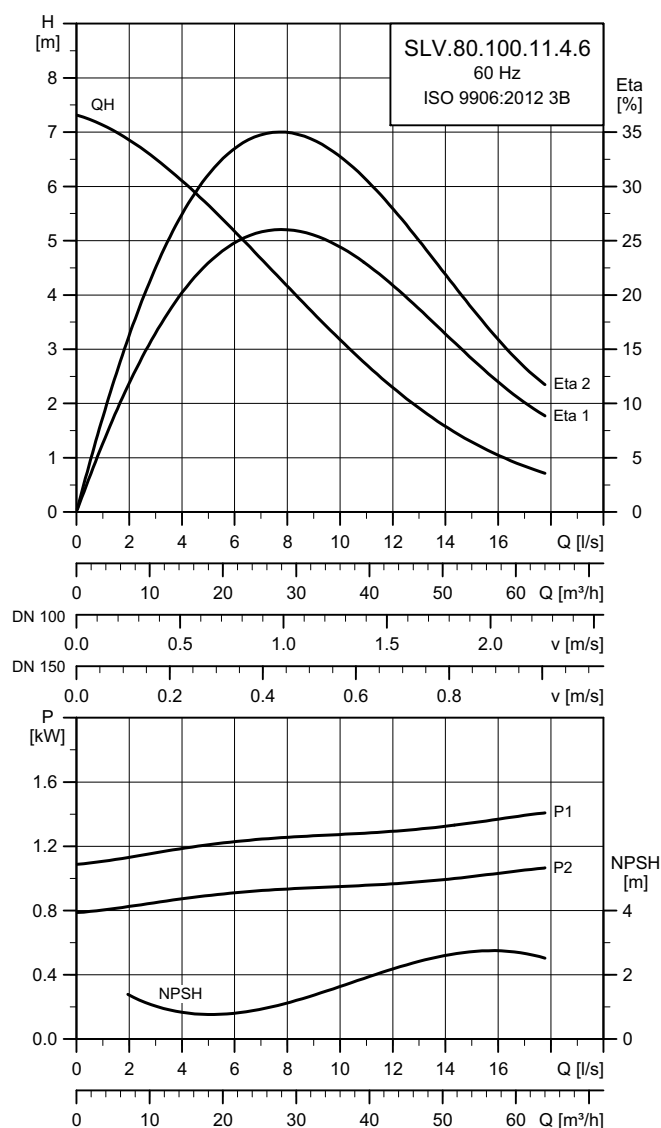
\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

# SLV.80.100

## SLV.80.100.11.(A).(EX).4.--.C



TM04 6950 1914

### Electrical data

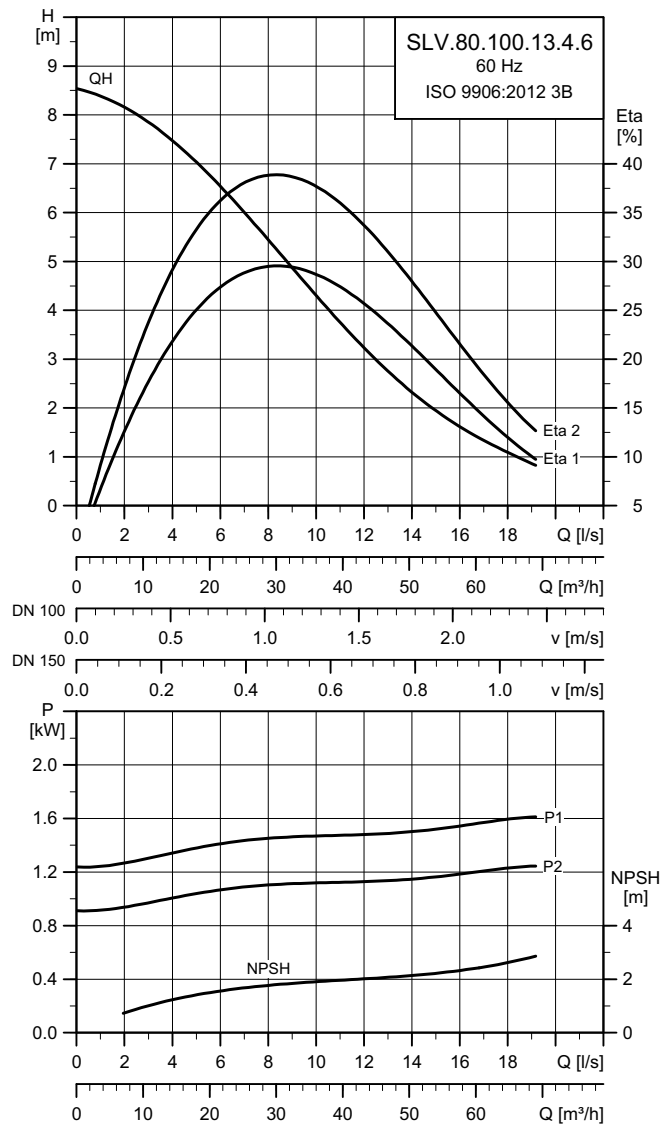
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \varphi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	1.5	1.1	4	1751	DOL	5.1 - 4.9	29	81.0	84.2	84.6	0.52	0.65	0.72	0.0917	24				
61F	3 x 220-277 V D / 380-480 V Y	1.5	1.1	4	1751	Y/D	5.1 - 4.9 / 3.0 - 2.8	29/17	81.0	84.2	84.6	0.52	0.65	0.72	0.0917	24				
60G	3 x 380-480 V Y	1.5	1.1	4	1751	DOL	3.0 - 2.8	17	81.0	84.2	84.6	0.52	0.65	0.72	0.0917	24				
61G	3 x 380-480 V D	1.5	1.1	4	1751	Y/D	3.0 - 2.8	17	81.0	84.2	84.6	0.52	0.65	0.72	0.0917	24				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.100.13.(A).(EX).4.--.C



TM04 6951 1914

Electrical data

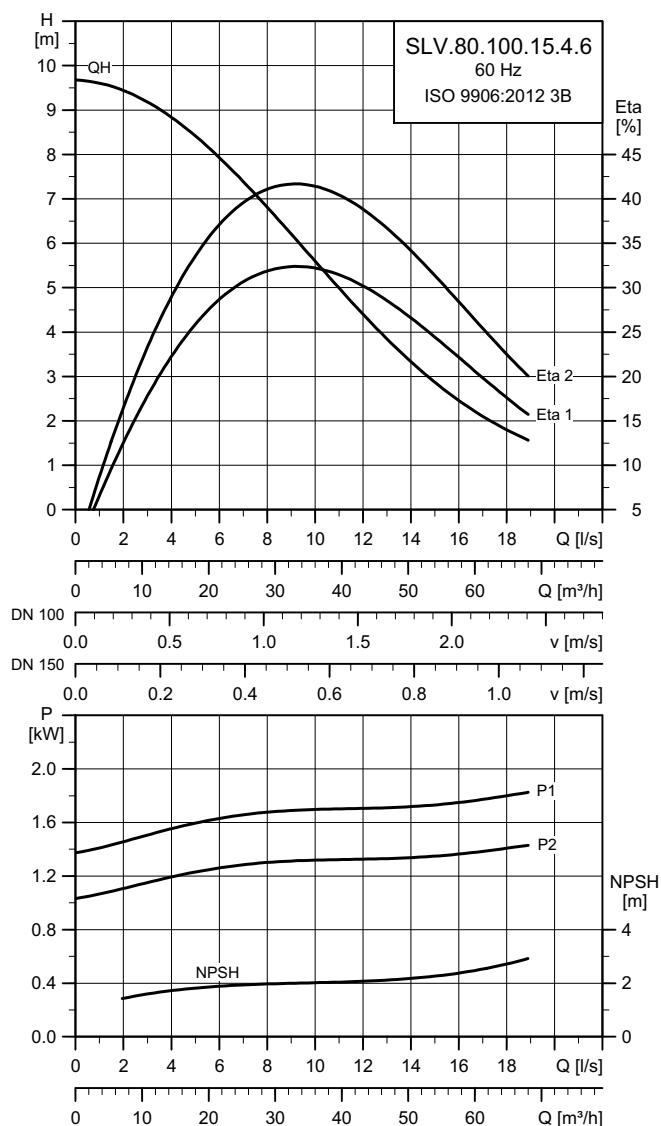
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	1.8	1.3	4	1760	DOL	6.6 - 6.4		47	82.0	85.2	86.0	0.30	0.39	0.46	0.1047	30			
61F	3 x 220-277 V D / 380-480 V Y	1.8	1.3	4	1760	Y/D	6.6 - 6.4 / 3.8 - 3.7		47/27	82.0	85.2	86.0	0.30	0.39	0.46	0.1047	30			
60G	3 x 380-480 V Y	1.8	1.3	4	1760	DOL	3.8 - 3.7		27	82.0	85.2	86.0	0.30	0.39	0.46	0.1047	30			
61G	3 x 380-480 V D	1.8	1.3	4	1760	Y/D	3.8 - 3.7		27	82.0	85.2	86.0	0.30	0.39	0.46	0.1047	30			

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.100.15.(A).(EX).4.--.C



TM04 6952 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number 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]	1/2	3/4	1/1	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	1.9	1.5	4	1751	DOL	6.7 - 6.5		47	83.3	85.7	86.0	0.51	0.63	0.72	0.1047	30			
61F	3 x 220-277 V D / 380-480 V Y	1.9	1.5	4	1751	Y/D	6.7 - 6.5 / 3.9 - 3.8		47/27	83.3	85.7	86.0	0.51	0.63	0.72	0.1047	30			
60G	3 x 380-480 V Y	1.9	1.5	4	1751	DOL	3.9 - 3.8		27	83.3	85.7	86.0	0.51	0.63	0.72	0.1047	30			
61G	3 x 380-480 V D	1.9	1.5	4	1751	Y/D	3.9 - 3.8		27	83.3	85.7	86.0	0.51	0.63	0.72	0.1047	30			

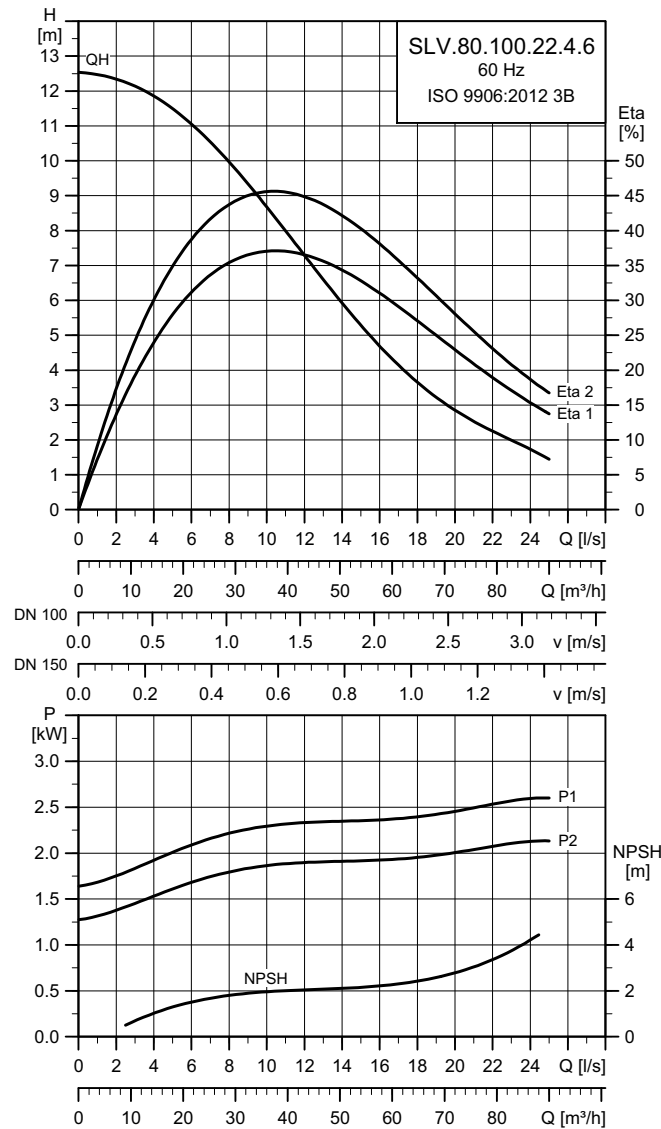
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.100.22.(A).(EX).4.--.C



TM04 6953 1914

Electrical data

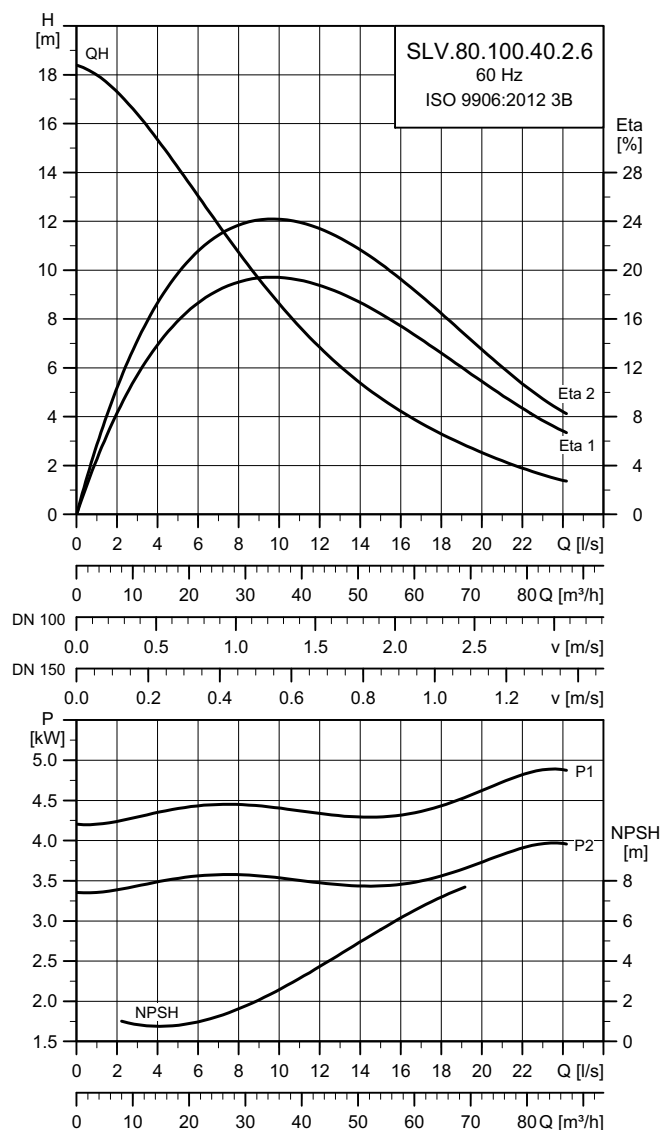
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	2.7	2.2	4	1761	DOL	9.2 - 8.8	62	84.7	86.6	87.0	0.59	0.70	0.76	0.0577	36				
61F	3 x 220-277 V D / 380-480 V Y	2.7	2.2	4	1761	Y/D	9.2 - 8.8 / 5.3 - 5.1	62/36	84.7	86.6	87.0	0.59	0.70	0.76	0.0577	36				
60G	3 x 380-480 V Y	2.7	2.2	4	1761	DOL	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0577	36				
61G	3 x 380-480 V D	2.7	2.2	4	1761	Y/D	5.3 - 5.1	36	84.7	86.6	87.0	0.59	0.70	0.76	0.0577	36				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.100.40.(A).(EX).2.--.C



## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$		$I_{start}^{**}$ [A]	$\eta_{motor}$ [%]			$\cos \phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]		1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	5.0	4.0	2	3508	DOL	14.4 - 12.2	147	82.0	85.0	86.0	0.76	0.84	0.88	0.0146	56	
61F	3 x 220-277 V D / 380-480 V Y	5.0	4.0	2	3508	Y/D	14.4 - 12.2 / 8.3 - 7.0	147 / 85	82.0	85.0	86.0	0.76	0.84	0.88	0.0146	56	
60G	3 x 380-480 V D	5.0	4.0	2	3508	DOL	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0146	56	
61G	3 x 380-480 V D	5.0	4.0	2	3508	Y/D	8.3 - 7.0	85	82.0	85.0	86.0	0.76	0.84	0.88	0.0146	56	

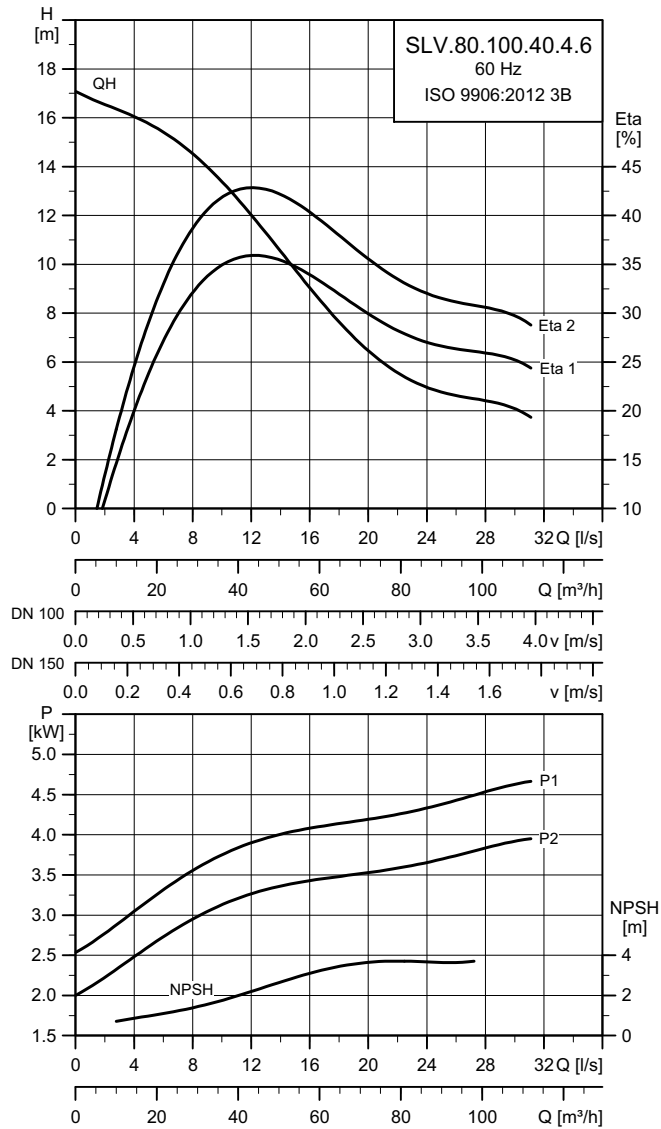
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.100.40.(A).(EX).4.--.C



TM04 6955 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque M <sub>max</sub> [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.1305	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	118 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.1305	83				
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.1305	83				
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.1305	83				

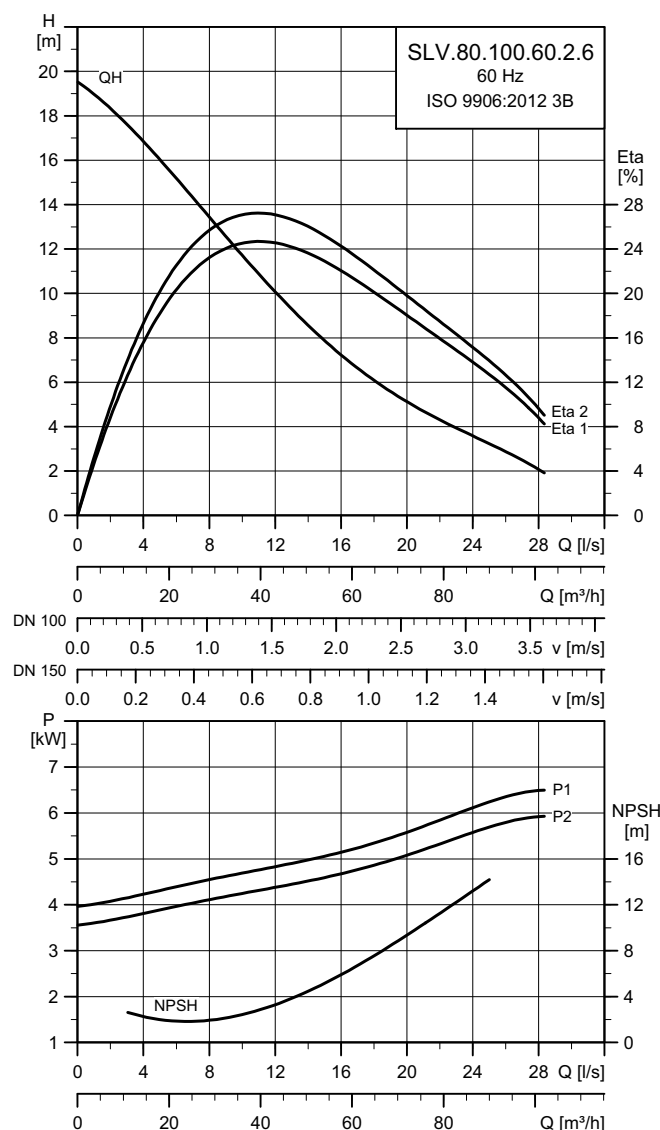
\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14



## SLV.80.100.60.(A).(EX).2.--.C



TM04 6956 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$	$I_{start}^{**}$	$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	7.2	6.0	2	3519	DOL	21.7 - 18.2	191	89.5	89.7	90.2	0.70	0.79	0.83	0.0269	85
61F	3 x 220-277 V D / 380-480 V Y	7.2	6.0	2	3519	Y/D	21.7 - 18.2 / 12.5 - 10.5	191 / 110	89.5	89.7	90.2	0.70	0.79	0.83	0.0269	85
60G	3 x 380-480 V D	7.2	6.0	2	3519	DOL	12.5 - 10.5	110	89.5	89.7	90.2	0.70	0.79	0.83	0.0269	85
61G	3 x 380-480 V D	7.2	6.0	2	3519	Y/D	12.5 - 10.5	110	89.5	89.7	90.2	0.70	0.79	0.83	0.0269	85

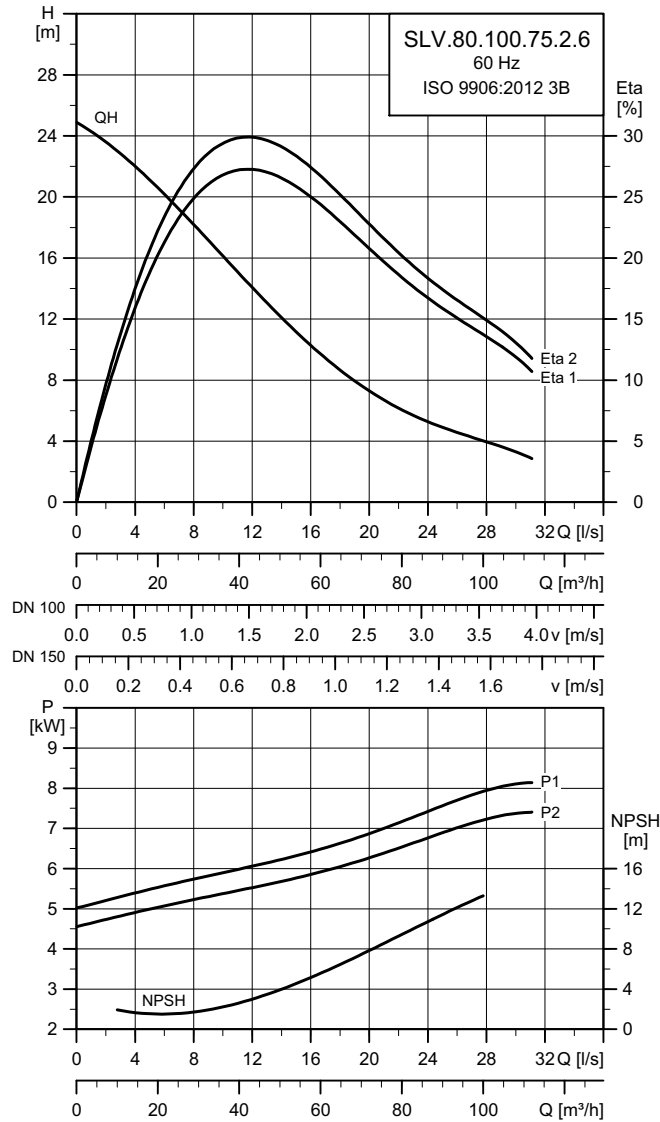
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.100.75.(A).(EX).2.--.C



TM04 6957 1914

Electrical data

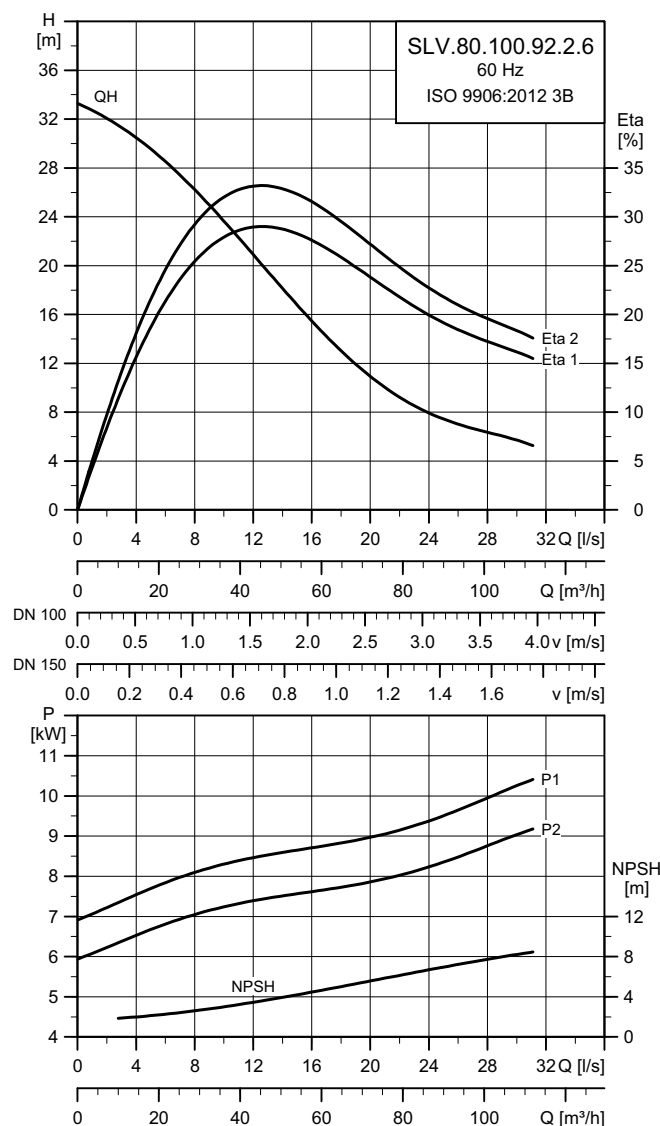
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	8.8	7.5	2	3519	DOL	26. - 21.9	191	90.3	90.8	90.1	0.74	0.82	0.86	0.0248	85				
61F	3 x 220-277 V D / 380-480 V Y	8.8	7.5	2	3519	Y/D	26. - 21.9 / 15.0 - 12.6	191/ 110	90.3	90.8	90.1	0.74	0.82	0.86	0.0248	85				
60G	3 x 380-480 V D	8.8	7.5	2	3519	DOL	15.0 - 12.6	110	90.3	90.8	90.1	0.74	0.82	0.86	0.0248	85				
61G	3 x 380-480 V D	8.7	7.5	2	3519	Y/D	15.0 - 12.6	110	90.3	90.8	90.1	0.74	0.82	0.86	0.0248	85				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

## SLV.80.100.92.(A).(EX).2.--.C



TM04 6958 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
60F	3 x 220-277 V D	10.6	9.2	2	3555	DOL	30.0 - 26.3	274	91.6	91.6	91.7	0.65	0.78	0.82	0.0289	110				
61F	3 x 220-277 V D / 380-480 V Y	10.6	9.2	2	3555	Y/D	30.0 - 26.3 / 17.3 - 15.2	274 / 158	91.6	91.6	91.7	0.65	0.78	0.82	0.0289	110				
60G	3 x 380-480 V D	10.6	9.2	2	3555	DOL	17.3 - 15.2	158	91.6	91.6	91.7	0.65	0.78	0.82	0.0289	110				
61G	3 x 380-480 V D	10.6	9.2	2	3555	Y/D	17.3 - 15.2	158	91.6	91.6	91.7	0.65	0.78	0.82	0.0289	110				

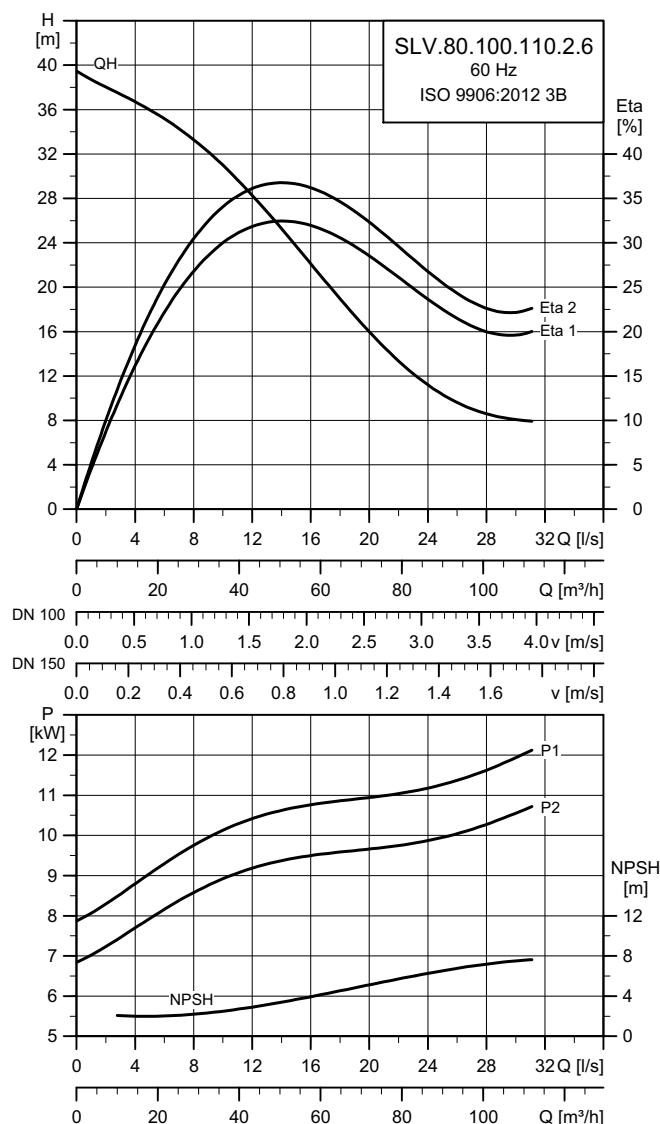
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

SLV.80.100.110.(A).(EX).2.--.C



TM04 6959 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque M <sub>max</sub> [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	12.6	11.0	2	3548	DOL	38.1 - 32.1	274	91.6	91.8	91.6	0.73	0.82	0.86	0.0269	110				
61F	3 x 220-277 V D / 380-480 V Y	12.6	11.0	2	3548	Y/D	38.1 - 32.1 / 22.0 - 18.5	274 / 158	91.6	91.8	91.6	0.73	0.82	0.86	0.0269	110				
60G	3 x 380-480 V D	12.6	11.0	2	3548	DOL	22.0 - 18.5	158	91.6	91.8	91.6	0.73	0.82	0.86	0.0269	110				
61G	3 x 380-480 V D	12.5	11.0	2	3548	Y/D	22.0 - 18.5	158	91.6	91.8	91.6	0.73	0.82	0.86	0.0269	110				

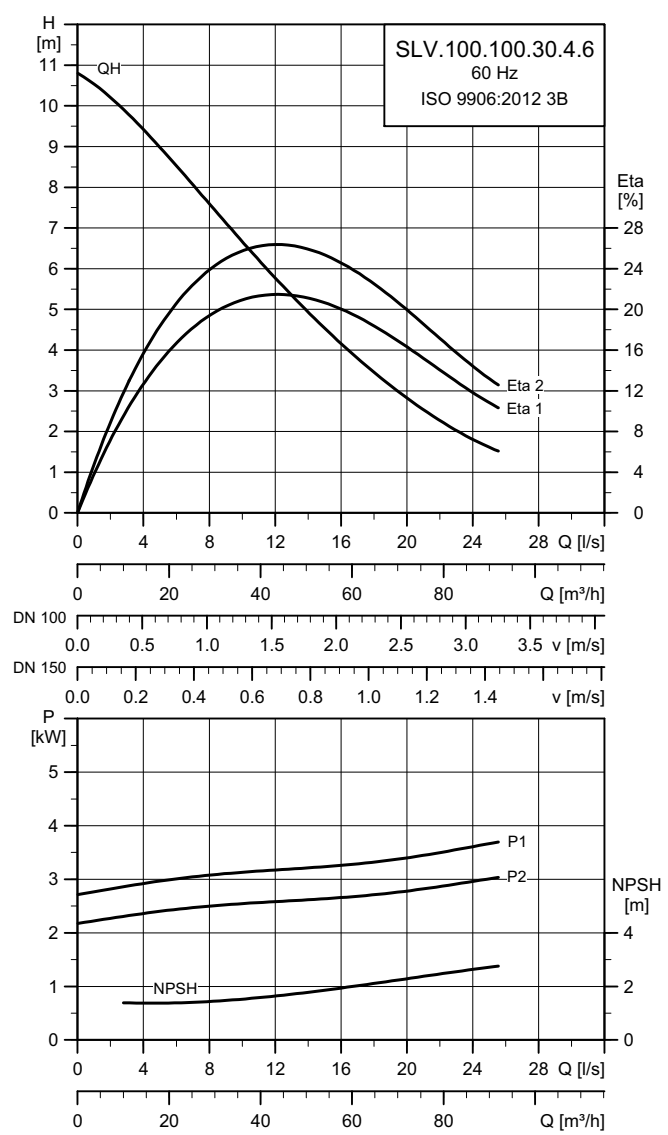
\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	80	10	20	IP68	H	A	40	6.5 - 14

# SLV.100.100

## SLV.100.100.30.(A).(EX).4.--.C



TM04 6960 1914

### Electrical data

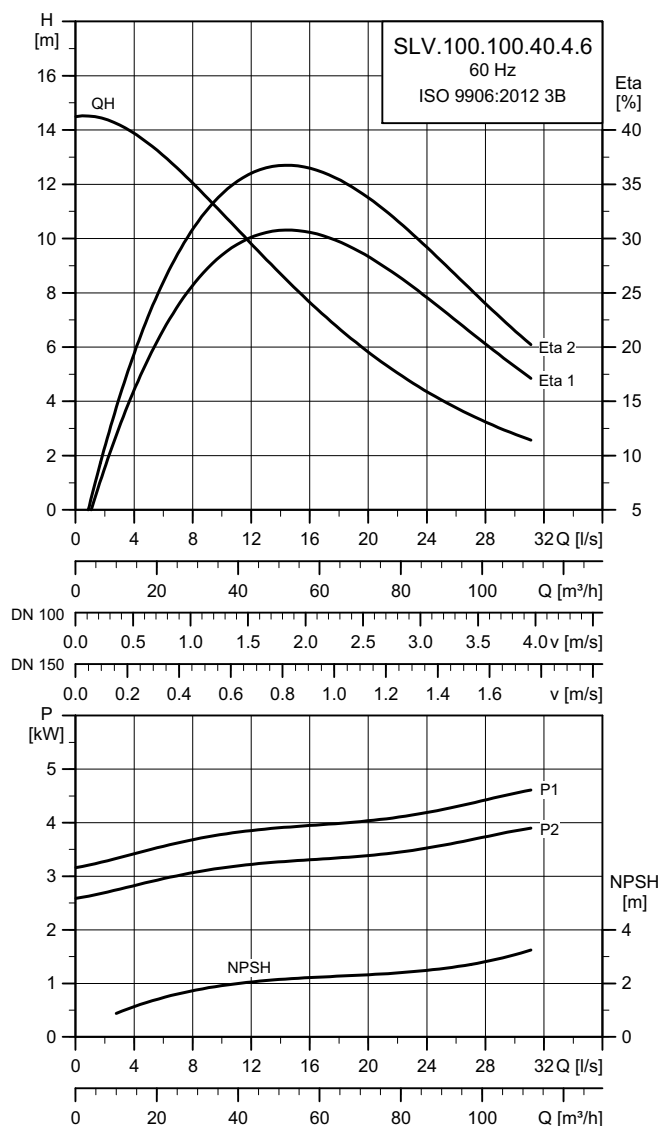
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor} [\%]$			$\cos \varphi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1					
60F	3 x 220-277 V D	3.7	3.0	4	1752	DOL	11.8 - 10.7	87	84.6	86.3	86.4	0.63	0.75	0.79	0.1305	55				
61F	3 x 220-277 V D / 380-480 V Y	3.7	3.0	4	1752	Y/D	11.8 - 10.7 / 6.8 - 6.2	87/50	84.6	86.3	86.4	0.63	0.75	0.79	0.1305	55				
60G	3 x 380-480 V Y	3.7	3.0	4	1752	DOL	6.8 - 6.2	50	84.6	86.3	86.4	0.63	0.75	0.79	0.1305	55				
61G	3 x 380-480 V D	3.8	3.0	4	1752	Y/D	6.8 - 6.2	50	84.6	86.3	86.4	0.63	0.75	0.79	0.1305	55				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

### Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	100	10	20	IP68	H	A	40	6.5 - 14

## SLV.100.100.40.(A).(EX).4.--.C



TM04 6961 1914

## Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	4.8	4.0	4	1764	DOL	16.4 - 15.7	118	85.3	87.4	88.2	0.53	0.66	0.74	0.1295	83				
61F	3 x 220-277 V D / 380-480 V Y	4.8	4.0	4	1764	Y/D	16.4 - 15.7 / 9.5 - 9.1	118 / 68	85.3	87.4	88.2	0.53	0.66	0.74	0.1295	83				
60G	3 x 380-480 V D	4.8	4.0	4	1764	DOL	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.1295	83				
61G	3 x 380-480 V D	4.8	4.0	4	1764	Y/D	9.5 - 9.1	68	85.3	87.4	88.2	0.53	0.66	0.74	0.1295	83				

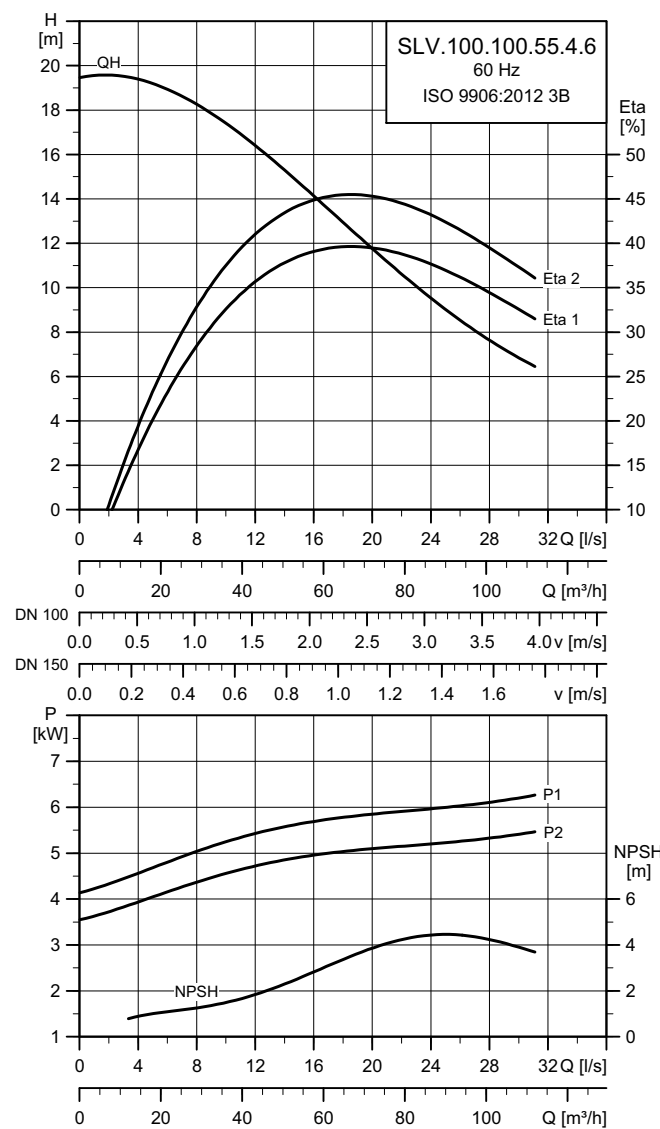
\* For low-high voltage variants.

\*\* For 220-227/380-480 variants.

## Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	100	10	20	IP68	H	A	40	6.5 - 14

SLV.100.100.55.(A).(EX).4.--.C



TM04 6962 1914

Electrical data

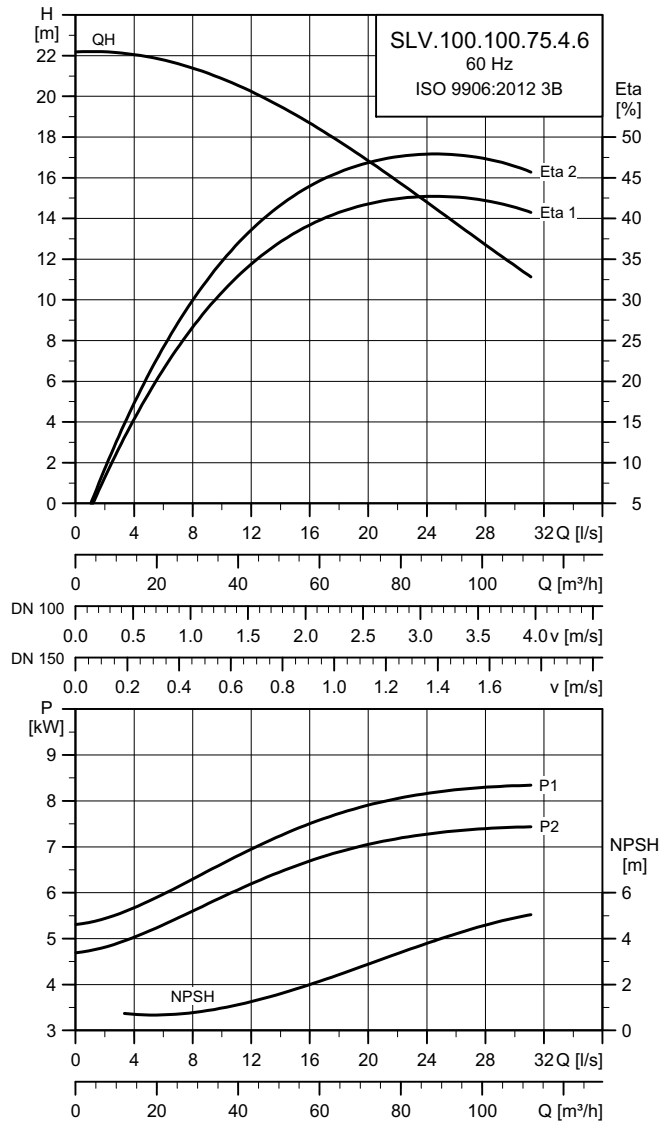
Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	6.4	5.5	4	1763	DOL	19.1 - 16.3	132	88.9	90.0	89.6	0.73	0.81	0.86	0.1295	99				
61F	3 x 220-277 V D / 380-480 V Y	6.4	5.5	4	1763	Y/D	19.1 - 16.3 / 11.1 - 9.4	132 / 76	88.9	90.0	89.6	0.73	0.81	0.86	0.1295	99				
60G	3 x 380-480 V D	6.4	5.5	4	1763	DOL	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.1295	99				
61G	3 x 380-480 V D	6.3	5.5	4	1763	Y/D	11.1 - 9.4	76	88.9	90.0	89.6	0.73	0.81	0.86	0.1295	99				

\* For low-high voltage variants.  
\*\* For 220-227/380-480 variants.

Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	100	10	20	IP68	H	A	40	6.5 - 14

SLV.100.100.75.(A).(EX).4.--.C



TM04 6963 1914

Electrical data

Pump type	Voltage [V]	P1 [kW]	P2 [kW]	Number of poles	RPM	Starting method	$I_N^*$			$I_{start}^{**}$			$\eta_{motor}$ [%]			Cos $\phi$			Moment of inertia [kgm <sup>2</sup> ]	Breakdown torque $M_{max}$ [Nm]
							[A]	[A]	[A]	[A]	[A]	[A]	[A]	1/2	3/4	1/1	1/2	3/4		
60F	3 x 220-277 V D	8.6	7.5	4	1763	DOL	25.5 - 22.8	182	91.0	91.4	91.0	0.71	0.81	0.85	0.0775	160				
61F	3 x 220-277 V D / 380-480 V Y	8.6	7.5	4	1763	Y/D	25.5 - 22.8 / 14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0775	160				
60G	3 x 380-480 V D	8.6	7.5	4	1763	DOL	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0775	160				
61G	3 x 380-480 V D	8.4	7.5	4	1763	Y/D	14.7 - 13.2	105	91.0	91.4	91.0	0.71	0.81	0.85	0.0775	160				

\* For low-high voltage variants.  
 \*\* For 220-227/380-480 variants.

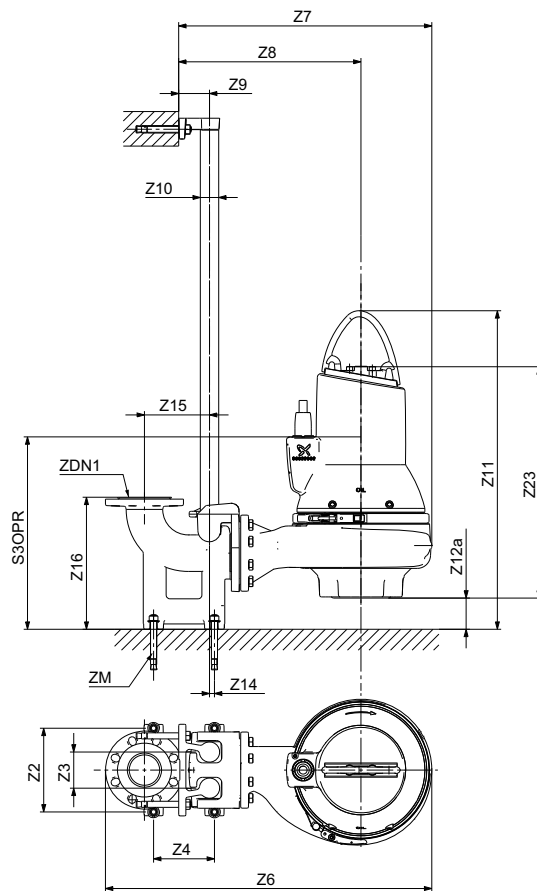
Pump data

Impeller type	Max. solids size [mm]	Pump housing pressure PN	Max. number of starts per hour	Enclosure class	Insulation class	Temperature rise class	Max. liquid temperature [°C]	pH
SuperVortex	100	10	20	IP68	H	A	40	6.5 - 14



# 11. Dimension and weights

## Auto-coupling installation



TM04 2794 0917

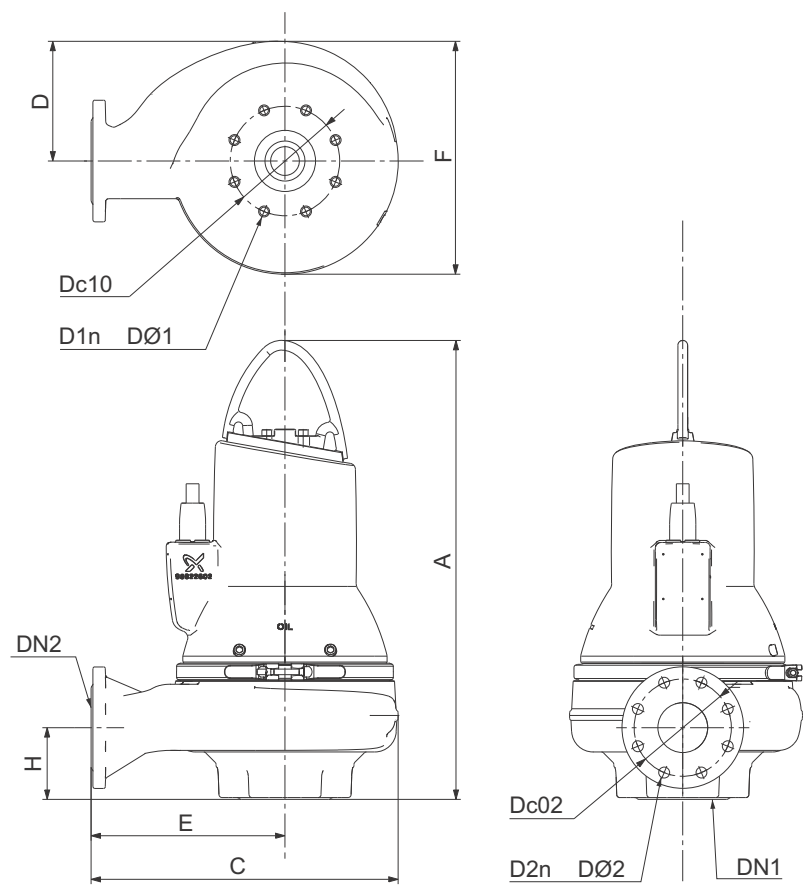
### SL1 pumps

Pump type	Z2	Z3	Z4	Z6	Z7	Z8	Z9	Z10	Z11	Z12a	Z14	Z15	Z16	Z23	ZDN1	S3OPR	ZM
SL1.50.65.22.(A).(EX).2.--C	210	95	140	525	514	364	81	1 1/2"	738	321	1	175	266	292	DN 65	463	4 x M16
SL1.50.65.30.(A).(EX).2.--C	210	95	140	525	514	364	81	1 1/2"	738	321	1	175	266	292	DN 65	468	4 x M16
SL1.50.65.40.(A).(EX).2.--C	210	95	140	566	555	375	81	1 1/2"	774	379	1	175	266	270	DN 65	460	4 x M16
SL1.50.80.22.(A).(EX).2.--C	220	95	160	548	526	376	81	1 1/2"	772	321	13	171	345	326	DN 80	495	4 x M16
SL1.50.80.30.(A).(EX).2.--C	220	95	160	548	526	376	81	1 1/2"	772	321	13	171	345	326	DN 80	500	4 x M16
SL1.50.80.40.(A).(EX).2.--C	220	95	160	589	567	387	81	1 1/2"	808	379	13	171	345	304	DN 80	495	4 x M16
SL1.80.80.15.(A).(EX).4.--C	220	95	160	617	595	432	81	1 1/2"	793	347	13	171	345	321	DN 80	513	4 x M16
SL1.80.80.22.(A).(EX).4.--C	220	95	160	617	595	432	81	1 1/2"	793	347	13	171	345	321	DN 80	518	4 x M16
SL1.80.80.30.(A).(EX).4.--C	220	95	160	687	665	479	81	1 1/2"	793	397	13	171	345	271	DN 80	512	4 x M16
SL1.80.80.40.(A).(EX).4.--C	220	95	160	687	665	479	81	1 1/2"	830	397	13	171	345	308	DN 80	517	4 x M16
SL1.80.80.55.(A).(EX).4.--C	220	95	160	687	665	479	81	1 1/2"	837	397	13	171	345	280	DN 80	507	4 x M16
SL1.80.80.75.(A).(EX).4.--C	220	95	160	712	690	488	81	1 1/2"	900	423	13	171	345	317	DN 80	528	4 x M16
SL1.80.100.15.(A).(EX).4.--C	260	110	220	878	852	489	110	2"	832	347	0	220	413	360	DN 100	553	4 x M16
SL1.80.100.22.(A).(EX).4.--C	260	110	220	878	852	489	110	2"	832	347	0	220	413	360	DN 100	558	4 x M16
SL1.80.100.30.(A).(EX).4.--C	260	110	220	948	922	536	110	2"	851	397	0	220	413	329	DN 100	555	4 x M16
SL1.80.100.40.(A).(EX).4.--C	260	110	220	948	922	536	110	2"	873	397	0	220	413	351	DN 100	560	4 x M16
SL1.80.100.55.(A).(EX).4.--C	260	110	220	948	922	536	110	2"	880	397	0	220	413	323	DN 100	550	4 x M16
SL1.80.100.75.(A).(EX).4.--C	260	110	220	973	947	545	110	2"	942	423	0	220	413	359	DN 100	565	4 x M16
SL1.100.100.40.(A).(EX).4.--C	260	110	220	984	958	537	110	2"	880	438	0	220	413	317	DN 100	572	4 x M16
SL1.100.100.55.(A).(EX).4.--C	260	110	220	984	958	537	110	2"	887	438	0	220	413	289	DN 100	562	4 x M16
SL1.100.100.75.(A).(EX).4.--C	260	110	220	984	958	529	110	2"	952	462	0	220	413	330	DN 100	576	4 x M16
SL1.100.150.40.(A).(EX).4.--C	300	110	280	1093	1067	559	110	2"	919	440	0	280	450	354	DN 150	611	4 x M16
SL1.100.150.55.(A).(EX).4.--C	300	110	280	1093	1067	559	110	2"	926	440	0	280	450	326	DN 150	601	4 x M16
SL1.100.150.75.(A).(EX).4.--C	300	110	280	1093	1067	545	110	2"	991	472	0	280	450	359	DN 150	615	4 x M16

**SLV pumps**

Pump type	Z2	Z3	Z4	Z6	Z7	Z8	Z9	Z10	Z11	Z12a	Z14	Z15	Z16	Z23	ZDN1	S3OPR	ZM
SLV.65.65.22.(A).(EX).2.--C	210	95	140	555	544	394	81	1 1/2"	748	321	1	175	266	302	DN 65	479	4 x M16
SLV.65.65.30.(A).(EX).2.--C	210	95	140	555	544	394	81	1 1/2"	748	321	1	175	266	302	DN 65	485	4 x M16
SLV.65.65.40.(A).(EX).2.--C	210	95	140	615	604	424	81	1 1/2"	778	380	1	175	266	273	DN 65	476	4 x M16
SLV.65.80.22.(A).(EX).2.--C	220	95	160	579	557	407	81	1 1/2"	782	321	13	171	345	336	DN 80	513	4 x M16
SLV.65.80.30.(A).(EX).2.--C	220	95	160	579	557	407	81	1 1/2"	782	321	13	171	345	336	DN 80	518	4 x M16
SLV.65.80.40.(A).(EX).2.--C	220	95	160	637	615	436	81	1 1/2"	812	379	13	171	345	308	DN 80	510	4 x M16
SLV.80.80.11.(A).(EX).4.--C	220	95	160	591	569	401	81	1 1/2"	802	339	13	171	345	338	DN 80	526	4 x M16
SLV.80.80.13.(A).(EX).4.--C	220	95	160	591	569	401	81	1 1/2"	802	339	13	171	345	338	DN 80	526	4 x M16
SLV.80.80.15.(A).(EX).4.--C	220	95	160	591	569	401	81	1 1/2"	802	339	13	171	345	338	DN 80	526	4 x M16
SLV.80.80.22.(A).(EX).4.--C	220	95	160	591	569	401	81	1 1/2"	802	339	13	171	345	338	DN 80	531	4 x M16
SLV.80.80.40.(A).(EX).2.--C	220	95	160	638	616	436	81	1 1/2"	840	380	13	171	345	335	DN 80	537	4 x M16
SLV.80.80.40.(A).(EX).4.--C	220	95	160	642	620	427	81	1 1/2"	839	393	13	171	345	321	DN 80	537	4 x M16
SLV.80.80.60.(A).(EX).2.--C	220	95	160	638	616	436	81	1 1/2"	847	380	13	171	345	307	DN 80	537	4 x M16
SLV.80.80.75.(A).(EX).2.--C	220	95	160	638	616	436	81	1 1/2"	847	380	13	171	345	307	DN 80	527	4 x M16
SLV.80.80.92.(A).(EX).2.--C	220	95	160	671	649	453	81	1 1/2"	859	413	13	171	345	286	DN 80	535	4 x M16
SLV.80.80.110.(A).(EX).2.--C	220	95	160	671	649	453	81	1 1/2"	859	413	13	171	345	286	DN 80	535	4 x M16
SLV.80.100.11.(A).(EX).4.--C	260	110	220	850	824	458	110	2"	842	337	0	220	413	380	DN 100	569	4 x M16
SLV.80.100.13.(A).(EX).4.--C	260	110	220	850	824	458	110	2"	842	337	0	220	413	380	DN 100	569	4 x M16
SLV.80.100.15.(A).(EX).4.--C	260	110	220	850	824	458	110	2"	842	337	0	220	413	380	DN 100	569	4 x M16
SLV.80.100.22.(A).(EX).4.--C	260	110	220	850	824	458	110	2"	842	337	0	220	413	380	DN 100	574	4 x M16
SLV.80.100.40.(A).(EX).2.--C	260	110	220	909	883	503	110	2"	880	380	0	220	413	375	DN 100	570	4 x M16
SLV.80.100.40.(A).(EX).4.--C	260	110	220	901	875	484	110	2"	879	391	0	220	413	363	DN 100	570	4 x M16
SLV.80.100.60.(A).(EX).2.--C	260	110	220	909	883	503	110	2"	887	380	0	220	413	347	DN 100	560	4 x M16
SLV.80.100.75.(A).(EX).2.--C	260	110	220	909	883	503	110	2"	887	380	0	220	413	347	DN 100	560	4 x M16
SLV.80.100.92.(A).(EX).2.--C	260	110	220	942	916	520	110	2"	899	413	0	220	413	326	DN 100	571	4 x M16
SLV.80.100.110.(A).(EX).2.--C	260	110	220	942	916	520	110	2"	899	413	0	220	413	326	DN 100	571	4 x M16
SLV.100.100.30.(A).(EX).4.--C	260	110	220	900	874	494	110	2"	843	380	0	220	413	338	DN 100	552	4 x M16
SLV.100.100.40.(A).(EX).4.--C	260	110	220	900	874	494	110	2"	865	380	0	220	413	360	DN 100	557	4 x M16
SLV.100.100.55.(A).(EX).4.--C	260	110	220	900	874	494	110	2"	872	380	0	220	413	332	DN 100	547	4 x M16
SLV.100.100.75.(A).(EX).4.--C	260	110	220	933	907	511	110	2"	937	413	0	220	413	364	DN 100	555	4 x M16

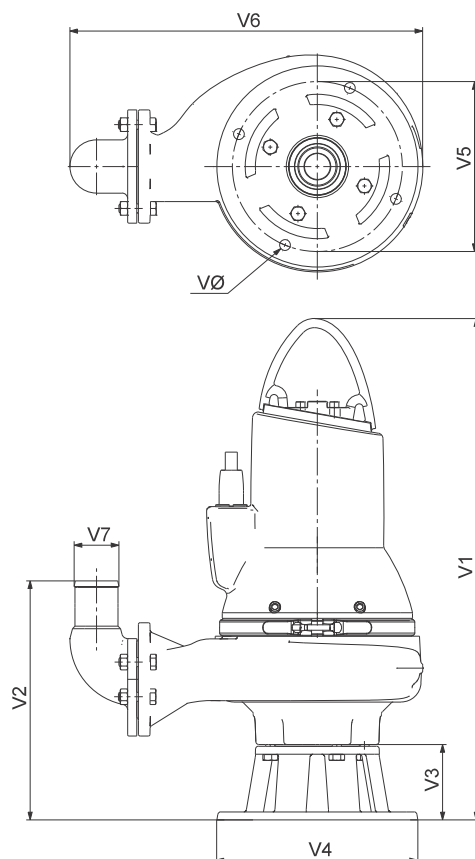
**Free standing installation (without ring stand)**



TM04 2793 5116



## Free standing installation (with ring stand)



TM04 2795 3008

## SL1 pumps

Pump type	V1	V2	V3	V4	V5	V6	V7	VØ
SL1.50.65.22.(A).(EX).2.--.C	771	358	130	325	270	479	65	19
SL1.50.65.30.(A).(EX).2.--.C	771	358	130	325	270	479	65	19
SL1.50.65.40.(A).(EX).2.--.C	807	358	130	325	270	520	65	19
SL1.50.80.22.(A).(EX).2.--.C	771	373	130	325	270	482	80	19
SL1.50.80.30.(A).(EX).2.--.C	771	373	130	325	270	482	80	19
SL1.50.80.40.(A).(EX).2.--.C	807	373	130	325	270	523	80	19
SL1.80.80.15.(A).(EX).4.--.C	812	393	130	355	300	551	80	19
SL1.80.80.22.(A).(EX).4.--.C	812	393	130	355	300	551	80	19
SL1.80.80.30.(A).(EX).4.--.C	841	422	130	355	300	621	80	19
SL1.80.80.40.(A).(EX).4.--.C	878	422	130	355	300	621	80	19
SL1.80.80.55.(A).(EX).4.--.C	885	422	130	355	300	621	80	19
SL1.80.80.75.(A).(EX).4.--.C	948	422	130	355	300	646	80	19
SL1.80.100.15.(A).(EX).4.--.C	812	364	130	355	300	598	100	19
SL1.80.100.22.(A).(EX).4.--.C	812	364	130	355	300	598	100	19
SL1.80.100.30.(A).(EX).4.--.C	856	389	130	355	300	668	100	19
SL1.80.100.40.(A).(EX).4.--.C	878	389	130	355	300	668	100	19
SL1.80.100.55.(A).(EX).4.--.C	885	389	130	355	300	668	100	19
SL1.80.100.75.(A).(EX).4.--.C	948	390	130	355	300	693	100	19
SL1.100.100.40.(A).(EX).4.--.C	941	445	186	450	400	704	100	22
SL1.100.100.55.(A).(EX).4.--.C	948	445	186	450	400	704	100	22
SL1.100.100.75.(A).(EX).4.--.C	1013	445	186	450	400	704	100	22
SL1.100.150.40.(A).(EX).4.--.C	941	570	186	450	400	803	150	22
SL1.100.150.55.(A).(EX).4.--.C	948	570	186	450	400	803	150	22
SL1.100.150.75.(A).(EX).4.--.C	1013	570	186	450	400	803	150	22

## SLV pumps

Pump type	V1	V2	V3	V4	V5	V6	V7	VØ
SLV.65.65.22.(A).(EX).2.--C	812	389	128	330	280	509	65	18
SLV.65.65.30.(A).(EX).2.--C	812	389	128	330	280	509	65	18
SLV.65.65.40.(A).(EX).2.--C	846	393	128	330	280	569	65	18
SLV.65.80.22.(A).(EX).2.--C	813	405	128	330	280	513	80	18
SLV.65.80.30.(A).(EX).2.--C	813	405	128	330	280	513	80	18
SLV.65.80.40.(A).(EX).2.--C	846	408	128	330	280	571	80	18
SLV.80.80.11.(A).(EX).4.--C	839	411	128	330	280	525	80	18
SLV.80.80.13.(A).(EX).4.--C	839	411	128	330	280	525	80	18
SLV.80.80.15.(A).(EX).4.--C	839	411	128	330	280	525	80	18
SLV.80.80.22.(A).(EX).4.--C	839	411	128	330	280	525	80	18
SLV.80.80.40.(A).(EX).2.--C	872	406	128	330	280	572	80	18
SLV.80.80.40.(A).(EX).4.--C	876	411	128	330	280	576	80	18
SLV.80.80.60.(A).(EX).2.--C	879	406	128	330	280	572	80	18
SLV.80.80.75.(A).(EX).2.--C	879	406	128	330	280	572	80	18
SLV.80.80.92.(A).(EX).2.--C	910	425	128	330	280	605	80	18
SLV.80.80.110.(A).(EX).2.--C	910	425	128	330	280	605	80	18
SLV.80.100.11.(A).(EX).4.--C	839	381	128	330	280	570	100	18
SLV.80.100.13.(A).(EX).4.--C	839	381	128	330	280	570	100	18
SLV.80.100.15.(A).(EX).4.--C	839	381	128	330	280	570	100	18
SLV.80.100.22.(A).(EX).4.--C	839	381	128	330	280	570	100	18
SLV.80.100.40.(A).(EX).2.--C	872	376	128	330	280	629	100	18
SLV.80.100.40.(A).(EX).4.--C	876	381	128	330	280	621	100	18
SLV.80.100.60.(A).(EX).2.--C	879	376	128	330	280	629	100	18
SLV.80.100.75.(A).(EX).2.--C	879	376	128	330	280	629	100	18
SLV.80.100.92.(A).(EX).2.--C	910	395	128	330	280	662	100	18
SLV.80.100.110.(A).(EX).2.--C	910	395	128	330	280	662	100	18
SLV.100.100.30.(A).(EX).4.--C	867	408	130	355	300	620	100	19
SLV.100.100.40.(A).(EX).4.--C	889	408	130	355	300	620	100	19
SLV.100.100.55.(A).(EX).4.--C	896	408	130	355	300	620	100	19
SLV.100.100.75.(A).(EX).4.--C	972	419	130	355	300	653	100	19

## Weights

## SL1 pumps

Type	Pump	Weight [kg]
SL1.50.65	SL1.50.65.22.(A).(EX).2.--C	62.5
	SL1.50.65.30.(A).(EX).2.--C	94.0
	SL1.50.65.40.(A).(EX).2.--C	125.0
SL1.50.80	SL1.50.80.22.(A).(EX).2.--C	63.3
	SL1.50.80.30.(A).(EX).2.--C	91.7
	SL1.50.80.40.(A).(EX).2.--C	125.8
SL1.80.80	SL1.80.80.15.(A).(EX).4.--C	96.8
	SL1.80.80.22.(A).(EX).4.--C	106.0
	SL1.80.80.30.(A).(EX).4.--C	128.0
	SL1.80.80.40.(A).(EX).4.--C	142.5
	SL1.80.80.55.(A).(EX).4.--C	153.2
	SL1.80.80.75.(A).(EX).4.--C	188.1
SL1.80.100	SL1.80.100.15.(A).(EX).4.--C	97.9
	SL1.80.100.22.(A).(EX).4.--C	106.8
	SL1.80.100.30.(A).(EX).4.--C	129.0
	SL1.80.100.40.(A).(EX).4.--C	145.4
	SL1.80.100.55.(A).(EX).4.--C	154.1
	SL1.80.100.75.(A).(EX).4.--C	189.1
SL1.100.100	SL1.100.100.40.(A).(EX).4.--C	148.8
	SL1.100.100.55.(A).(EX).4.--C	159.8
	SL1.100.100.75.(A).(EX).4.--C	188.6
SL1.100.150	SL1.100.150.40.(A).(EX).4.--C	151.9
	SL1.100.150.55.(A).(EX).4.--C	162.8
	SL1.100.150.75.(A).(EX).4.--C	191.4

## SLV pumps


Type	Pump	Weight [kg]
SLV.65.65	SLV.65.65.22.(A).(EX).2.--C	62.1
	SLV.65.65.30.(A).(EX).2.--C	90.6
	SLV.65.65.40.(A).(EX).2.--C	115.0
SLV.65.80	SLV.65.80.22.(A).(EX).2.--C	63.2
	SLV.65.80.30.(A).(EX).2.--C	91.7
	SLV.65.80.40.(A).(EX).2.--C	115.5
SLV.80.80	SLV.80.80.11.(A).(EX).4.--C	89.3
	SLV.80.80.13.(A).(EX).4.--C	92.7
	SLV.80.80.15.(A).(EX).4.--C	92.9
	SLV.80.80.22.(A).(EX).4.--C	100.3
	SLV.80.80.40.(A).(EX).2.--C	119.7
	SLV.80.80.40.(A).(EX).4.--C	131.2
SLV.80.100	SLV.80.80.60.(A).(EX).2.--C	134.8
	SLV.80.80.75.(A).(EX).2.--C	135.3
	SLV.80.80.92.(A).(EX).2.--C	176.0
	SLV.80.80.110.(A).(EX).2.--C	173.7
	SLV.80.100.11.(A).(EX).4.--C	87.5
	SLV.80.100.13.(A).(EX).4.--C	90.9
	SLV.80.100.15.(A).(EX).4.--C	91.1
	SLV.80.100.22.(A).(EX).4.--C	98.5
	SLV.80.100.40.(A).(EX).2.--C	121.8
	SLV.80.100.40.(A).(EX).4.--C	128.8
SLV.100.100	SLV.80.100.60.(A).(EX).2.--C	136.9
	SLV.80.100.75.(A).(EX).2.--C	137.4
	SLV.80.100.92.(A).(EX).2.--C	173.5
	SLV.80.100.110.(A).(EX).2.--C	173.2
	SLV.100.100.30.(A).(EX).4.--C	114.9
	SLV.100.100.40.(A).(EX).4.--C	128.1
	SLV.100.100.55.(A).(EX).4.--C	138.4
	SLV.100.100.75.(A).(EX).4.--C	168.7

## 12. Accessories

### Installation systems

Picture	Description	Dimensions	SL1.50.65	SL1.50.80	SL1.80.80	SL1.80.100	SL1.100.100	SL1.100.150	SLV.65.65	SLV.65.80	SLV.80.80	SLV.80.100	SLV.100.100	Product number	
	Complete auto-coupling system, including guide shoe, base plate and upper guide rail holder. Cast iron, epoxy-coated. With bolts, nuts and gaskets. <b>Note:</b> If your guide rails exceed 4 meter, please consider the use of intermediate guide rail brackets to support your system. TM04 4490 1409	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 brackets in stainless steel (EN 1.4308 and AISI 304) TM05 4253 2112	DN 65 / 2 1/2"	•						•					96825119	
		DN 80 / 3"		•	•					•	•			96825142	
		DN 100 / 4"				•	•						•	•	96825161
		DN 150 / 6"							•						96887674
	Ring stand with flanged 90° elbow and hose connection. Cast iron, epoxy-coated. With bolts, nuts, gaskets and anchor bolts. TM04 6086 4809	DN 65 / DN 65 / 2 1/2"	•											96102253	
		DN 65 / DN 80 / 3"		•											96102378
		DN 80 / DN 65 / 2 1/2"								•					96102439
		DN 80 / DN 80 / 3"									•	•			96102254
		DN 80 / DN 100 / 4"											•		96943236
		DN 100 / DN 80 / 3"				•									96102313
		DN 100 / DN 100 / 4"					•							•	96102255
		DN 150 / DN 100 / 4", galvanised steel						•							96102314
		DN 150 / DN 150 / 6", galvanised steel							•						96102256
		DN 65 / DN 65 / R 2 1/2	•												96102379
		DN 65 / DN 80 / R 3		•											96102380
		DN 80 / DN 65 / R 2 1/2"								•					96102440
		DN 80 / DN 80 / R 3									•	•			96102381
		DN 80 / DN 100 / R 4											•		96943237
DN 100 / DN 80 / R 3				•									96102382		
DN 100 / DN 100 / R 4					•							•	96102383		
DN 150 / DN 100 / R 4, galvanised steel						•							96102384		
DN 150 / DN 150 / R 6, galvanised steel							•						96102385		

Other accessories

Picture	Description	Max. load [kg]	SL1.50.65	SL1.50.80	SL1.80.80	SL1.80.100	SL1.100.100	SL1.100.150	SLV.65.65	SLV.65.80	SLV.80.80	SLV.100.100	Product number	
 <p>TM02 6126 5102</p>	2 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.	500	•	•	•	•	•	•	•	•	•	•	98540141	
	3 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595457
	4 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595458
	6 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595459
	8 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595460
	10 m hot dip galvanised lifting chain with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595471
	2 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.	500	•	•	•	•	•	•	•	•	•	•	•	98540142
	3 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595472
	4 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595474
	6 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595475
	8 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595476
	10 m stainless steel lifting chain (according to EN/DIN 1.4401) with lifting link and safety hook. With certificates.		•	•	•	•	•	•	•	•	•	•	•	98595478

## 13. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

<http://product-selection.grundfos.com>



**SIZING** enables you to size a pump based on entered data and selection choices.

**REPLACEMENT** enables you to find a replacement product. Search results will include information on

- the lowest purchase price
- the lowest energy consumption
- the lowest total life cycle cost.

The screenshot shows the Grundfos Product Center website. At the top, there is a navigation bar with the logo and menu items: HOME, FIND PRODUCT, COMPARE, YOUR PROJECTS, SAVED ITEMS, and HELP. Below this is a search bar with a magnifying glass icon and a 'SEARCH' button. The main content area features four large buttons: SIZING (with a scale icon), CATALOGUE (with a book icon), REPLACEMENT (with a double-headed arrow icon), and LIQUIDS (with a water drop icon). Below these buttons is the 'QUICK SIZING' section, which includes input fields for 'Flow (Q)\*' (m³/h) and 'Head (H)\*' (m), a 'Select what to size by' section with radio buttons for 'Size by application', 'Size by pump design', and 'Size by pump family', and a 'START SIZING' button. At the bottom of the quick sizing section, there are links for 'ADVANCED SIZING' with options for 'Advanced sizing by application' and 'Guided selection'.

**CATALOGUE** gives you access to the Grundfos product catalogue.

**LIQUIDS** enables you to find pumps designed for aggressive, flammable or other special liquids.

### All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

### Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc. in PDF format.





be think innovate

---

<b>97656960</b> 1117
----------------------

ECM: 1220207
--------------

**GRUNDFOS A/S**  
DK-8850 Bjerringbro . Denmark  
Telephone: +45 87 50 14 00  
[www.grundfos.com](http://www.grundfos.com)

**GRUNDFOS** 

© Copyright Grundfos Holding A/S

The name Grundfos, the Grundfos logo, and be think innovate are registered trademarks owned by Grundfos Holding A/S or Grundfos A/S, Denmark. All rights reserved worldwide.