S pumps, range 66

Up to 68 kW
50 Hz

Contents

Introduction

This data booklet deals with Grundfos heavy-duty sewage pumps called S pumps, range 66.

GrA7831

Fig. 1 S pump, range 66

The S pumps, range 66, are a range of free-flow channel impeller pumps specifically designed for pumping sewage and wastewater in a wide range of municipal, private and industrial applications.

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

The pumps are fitted with motors from 22 kW up to 68 kW. The motors are either 4, 8- or 10-pole motors, depending on the motor size.

The free passage in the pumps is 100 to 140 mm.

The pumps are available for:

- submerged installation on auto-coupling system
- submerged installation, free-standing
- dry installation, vertical
- dry installation, horizontal.

Applications

The S pumps, range 66, are designed for applications, such as:

- raw water intake
- wastewater treatment plants
- municipal pumping stations
- public buildings
- blocks of flats
- industries
- garages
- underground car parks
- car wash areas
- restaurants and hotels.

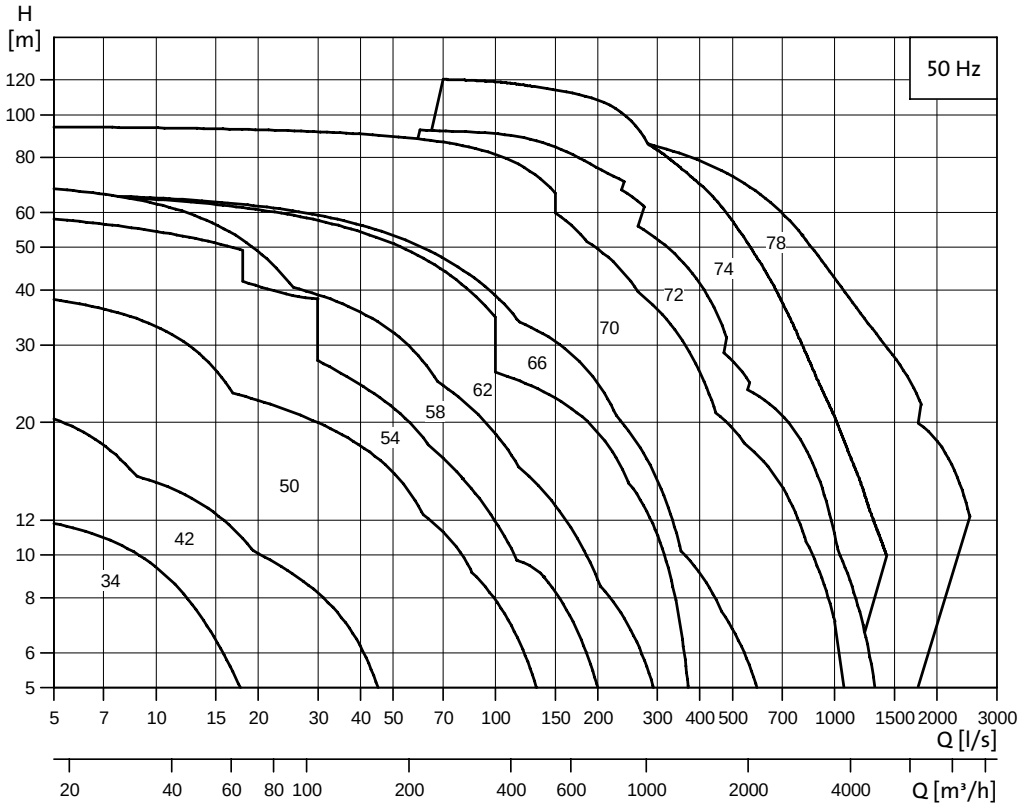
The pumps are suitable for both temporary and permanent installation. The lifting bracket fitted on the pumps facilitates easy transportation to as well as installation at the installation site.

Main constructional features

- leak-proof connections via the Grundfos SmartSeal gasket system
- double mechanical shaft seal system for reliable sealing between pumped liquid and motor
- watertight cable entry of corrosion-resistant polyamide
- moisture switch for continuous monitoring of motor housing and automatic cut-off of power in case liquid penetrates
- self-cleaning channel impeller with long vanes reducing the risk of jamming or clogging, or SuperVortex impeller with high pumping efficency and less downtime
- SmartTrim system allowing easy adjustment of impeller clearance and maintaining maximum pump efficiency over pump lifetime
- motor in insulation class F (155 °C), enclosure class IP68 with three thermal sensors in stator windings
- seal condition monitoring via water-in-oil sensor (optional)
- explosion-proof motors for applications involving high risk of explosion
- three stainless steel versions for use in corrosive or aggressive liquids:
  - stainless steel impeller, cast iron pump and motor housing
  - stainless steel pump housing, flange and impeller, cast iron motor housing
  - made entirely of corrosion-resistant stainless steel.

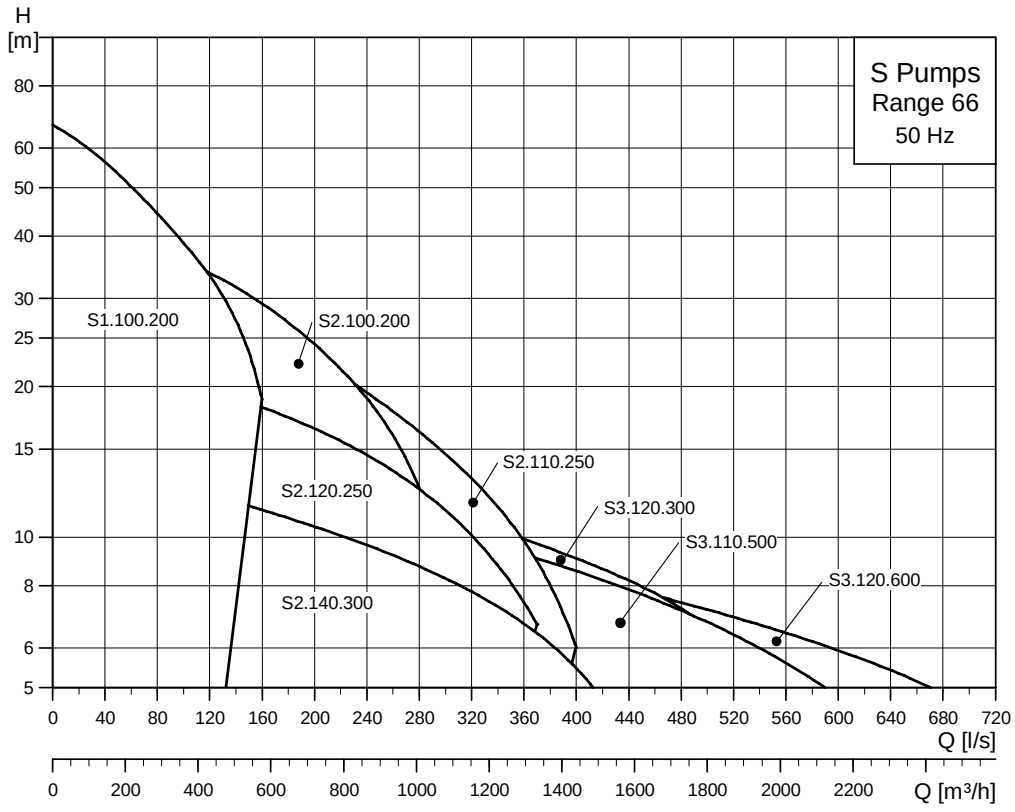
Performance range

Performance range, S pumps



TM03 5469 3706

Performance range, S pumps, range 66



TM04 1877 1308

Identification

Type key

Code	Example	S	1	.100	.200	.650	4	.66H	.S	.406	.G	.N	.D	

Pump type:
- S: Grundfos sewage and wastewater pump
- ST: Multi-channel impeller pump installed in a column pipe

Impeller type:
- 1: Single-channel impeller
- V: SuperVortex (free-flow) impeller

Pump passage:
Maximum solids size [mm]

Pump discharge:
Nominal diameter of pump discharge port [mm]

Output power, P2:
P2 = Code number from type designation/10 [kW]

Number of poles:
- 4: 4-pole motor
- 8: 8-pole motor
- 10: 10-pole motor

Pump range / Pressure version:
- 66H: High pressure
- 66M: Medium pressure
- 66L: Low pressure
- 66E: Extra-low pressure

Installation:
- S: Submersible installation without cooling jacket
- C: Submersible installation with cooling jacket
- D: Dry installation, vertical
- H: Dry installation, horizontal.

Actual impeller diameter:
[mm]

Material code for impeller, pump and motor housing:
- G: Impeller, pump housing and motor housing: Cast iron
- Q: Impeller: Stainless steel DIN W.-Nr. 1.4408

Pump version:
- N: Non-explosion-proof pump
- Ex: Explosion-proof pump

Sensor version:
- B: B = S pump with built-in SM 111 module. PTC sensors are connected directly to IO 111 or other PTC relay.
- C: C = Not in use
- D: D = S pump without built-in SM 111 module.

- Z: Custom-built products

Identification

Nameplates

Pump nameplate

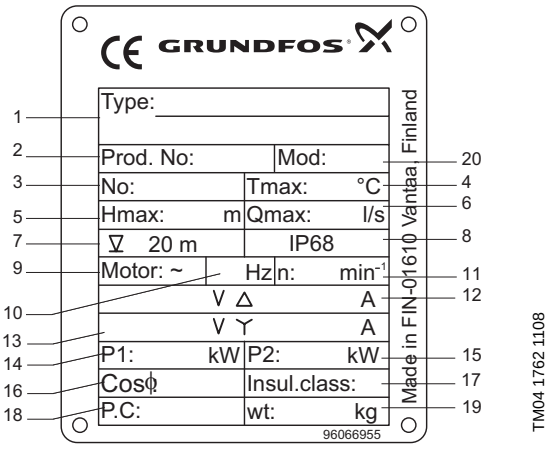


Fig. 2 Pump nameplate

Pos.	Description
1	Type designation
2	SAP code
3	Serial number
4	Maximum liquid temperature
5	Maximum head
6	Maximum flow
7	Maximum installation depth
8	Enclosure class
9	Number of phases
10	Frequency
11	Rated speed
12	Voltage/current, delta connection
13	Voltage/current, star connection
14	Power input
15	Shaft power
16	Power factor
17	Insulation class
18	Production code, year/week
19	Weight of the pump
20	Model

Ex approval plates

Fig. 3 Ex approval plates

The approval plate gives the following details:

Pos.	Description
Ex	EU ex-symbol
II	Equipment group (II = non-mining)
2	Equipment category (high protection)
G	Type of explosive atmosphere
CE	CE mark
1180	Number of quality assurance notified body
Ex	Motor explosion-proof according to European standard
b	Control of ignition sources
c	Constructional safety
d	Motor withstands explosion pressure
IIB	Gas group (Ethylene)
T3	Maximum surface temperature of the motor is 200 °C
T4	Maximum surface temperature of the motor is 135 °C
Gb	Equipment protection level, zone 1
Baseefa	Certificate number
IECEx	Certificate number

Selection of product

Ordering a pump

When ordering an S pump, range 66, you need to take the following four aspects into consideration.

1. Pump
2. Custom-built variation (option)
3. Accessories
4. Controller.

Pump

Use the *Product range* on page 8 and the *Type key* on page 5 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 no
S3.120.300.500.8.66M.S.449.G.N.D	96785383

- Pump as specified in the type key
- 10 m cable
- Paint: Graphic grey, NCS S8005-R80B, thickness 150 µ
- Three thermal switches (Klixon), one in each phase, or three thermal sensors (PTC)
- One moisture switch below the motor top cover (two moisture switches below the motor top cover on explosion-proof versions)
- Test according to DIN 9906, Annex A.

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

Note: Product specific data for the pump can also be seen in WebCAPS using the product number 96785383.

Custom-built variants

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

Variants can be seen in *List of variants* on page 15. For requirements or designs not included in the list, contact Grundfos.

Accessories

Depending on the installation type, you may need to order accessories. See *Accessories* page 58 for selection of the correct accessories.

Note: Ordered accessories are not fitted from factory.

Controller

The following controllers are available:

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

Standard pumps

Cast iron, 3 x 400/690 V

Pump type	Cable length [m]	Pump	Accessories			
			*** Horizontal base stand	To be ordered separately		
				Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.G.N.D	10	95112744	-	-	96641489	-
S1.100.200.650.4.66H.C.406.G.N.D	10	95112745	-	-	96641489	-
S1.100.200.650.4.66H.H.406.G.N.D	10	95112746	96308289	-	-	-
S1.100.200.650.4.66H.D.406.G.N.D	10	96785310	-	96308240	-	-
S2.100.200.550.4.66M.S.338.G.N.D	10	95112753	-	-	96641489	-
S2.100.200.550.4.66M.C.338.G.N.D	10	95112754	-	-	96641489	-
S2.100.200.550.4.66M.H.338.G.N.D	10	95112755	96308289	-	-	-
S2.100.200.550.4.66M.D.338.G.N.D	10	96785345	-	96308240	-	-
S2.100.200.650.4.66M.S.350.G.N.D	10	95112759	-	-	96641489	-
S2.100.200.650.4.66M.C.350.G.N.D	10	95112760	-	-	96641489	-
S2.100.200.650.4.66M.H.350.G.N.D	10	95112761	96308289	-	-	-
S2.100.200.650.4.66M.D.350.G.N.D	10	96785355	-	96308240	-	-
S2.110.250.650.4.66L.S.327.G.N.D	10	95112756	-	-	96782483	-
S2.110.250.650.4.66L.C.327.G.N.D	10	95112757	-	-	96782483	-
S2.110.250.650.4.66L.D.327.G.N.D	10	95112758	-	96308241	-	-
S2.110.250.650.4.66L.H.327.G.N.D	10	96785351	96308289	-	-	-
S2.120.250.500.8.66H.S.520.G.N.D	10	95112750	-	-	96782483	-
S2.120.250.500.8.66H.C.520.G.N.D	10	95112751	-	-	96782483	-
S2.120.250.500.8.66H.D.520.G.N.D	10	95112752	-	96308241	-	-
S2.120.250.500.8.66H.H.520.G.N.D	10	96785341	96308208	-	-	-
S2.140.300.350.8.66M.S.438.G.N.D	10	95112747	-	-	96782484	-
S2.140.300.350.8.66M.C.438.G.N.D	10	95112748	-	-	96782484	-
S2.140.300.350.8.66M.D.438.G.N.D	10	95112749	-	96308241	-	-
S2.140.300.350.8.66M.H.438.G.N.D	10	96785336	96308289	-	-	-
S3.110.500.220.10.66L.S.417.G.N.D	10	95112762	-	-	96782485	-
S3.110.500.220.10.66L.C.417.G.N.D	10	95112763	-	-	96782485	-
S3.110.500.220.10.66L.D.417.G.N.D	10	95112764	-	96308244	-	-
S3.110.500.220.10.66L.H.417.G.N.D	10	96785361	96308208	-	-	-
S3.110.500.350.10.66L.S.474.G.N.D	10	95112768	-	-	96782485	-
S3.110.500.350.10.66L.C.474.G.N.D	10	95112769	-	-	96782485	-
S3.110.500.350.10.66L.D.474.G.N.D	10	95112770	-	96308244	-	-
S3.110.500.350.10.66L.H.474.G.N.D	10	96785371	96308208	-	-	-
S3.110.500.500.8.66L.S.426.G.N.D	10	95112774	-	-	96782485	-
S3.110.500.500.8.66L.C.426.G.N.D	10	95112775	-	-	96782485	-
S3.110.500.500.8.66L.D.426.G.N.D	10	95112776	-	96308244	-	-
S3.110.500.500.8.66L.H.426.G.N.D	10	96785381	96308208	-	-	-
S3.120.300.500.8.66M.S.449.G.N.D	10	95112777	-	-	96782484	-
S3.120.300.500.8.66M.C.449.G.N.D	10	95112778	-	-	96782484	-
S3.120.300.500.8.66M.D.449.G.N.D	10	95112779	-	96308241	-	-
S3.120.300.500.8.66M.H.449.G.N.D	10	96785386	96308289	-	-	-
S3.120.600.350.10.66E.S.470.G.N.D	10	95112765	-	-	96782486	-
S3.120.600.350.10.66E.C.470.G.N.D	10	95112766	-	-	96782486	-
S3.120.600.350.10.66E.D.470.G.N.D	10	95112767	-	96308245	-	-
S3.120.600.350.10.66E.H.470.G.N.D	10	96785366	96308208	-	-	-
S3.120.600.500.8.66E.S.432.G.N.D	10	95112771	-	-	96782486	-
S3.120.600.500.8.66E.C.432.G.N.D	10	95112772	-	-	96782486	-
S3.120.600.500.8.66E.D.432.G.N.D	10	95112773	-	96308245	-	-
S3.120.600.500.8.66E.H.432.G.N.D	10	96785376	96308208	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

Cast iron, 3 x 415 V

Pump type	Cable length [m]	Pump	Accessories			
			*** Horizontal base stand	To be ordered separately		
				Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.G.N.D	10	96785308	-	-	96641489	-
S1.100.200.650.4.66H.C.406.G.N.D	10	96785309	-	-	96641489	-
S1.100.200.650.4.66H.D.406.G.N.D	10	96785311	-	96308240	-	-
S1.100.200.650.4.66H.H.406.G.N.D	10	96785332	96308289	-	-	-
S1.100.200.650.4.66H.S.406.G.N.D	15	96810482	-	-	96641489	-
S1.100.200.650.4.66H.C.406.G.N.D	15	96810483	-	-	96641489	-
S1.100.200.650.4.66H.D.406.G.N.D	15	96810484	-	96308240	-	-
S1.100.200.650.4.66H.H.406.G.N.D	15	96810485	96308289	-	-	-
S2.100.200.550.4.66M.S.338.G.N.D	10	96785343	-	-	96641489	-
S2.100.200.550.4.66M.C.338.G.N.D	10	96785344	-	-	96641489	-
S2.100.200.550.4.66M.D.338.G.N.D	10	96785346	-	96308240	-	-
S2.100.200.550.4.66M.H.338.G.N.D	10	96785347	96308289	-	-	-
S2.100.200.550.4.66M.S.338.G.N.D	15	96810494	-	-	96641489	-
S2.100.200.550.4.66M.C.338.G.N.D	15	96810495	-	-	96641489	-
S2.100.200.550.4.66M.D.338.G.N.D	15	96810496	-	96308240	-	-
S2.100.200.550.4.66M.H.338.G.N.D	15	96810497	96308289	-	-	-
S2.100.200.650.4.66M.S.350.G.N.D	10	96785353	-	-	96641489	-
S2.100.200.650.4.66M.C.350.G.N.D	10	96785354	-	-	96641489	-
S2.100.200.650.4.66M.D.350.G.N.D	10	96785356	-	96308240	-	-
S2.100.200.650.4.66M.H.350.G.N.D	10	96785357	96308289	-	-	-
S2.100.200.650.4.66M.S.350.G.N.D	15	96810502	-	-	96641489	-
S2.100.200.650.4.66M.C.350.G.N.D	15	96810503	-	-	96641489	-
S2.100.200.650.4.66M.D.350.G.N.D	15	96810504	-	96308240	-	-
S2.100.200.650.4.66M.H.350.G.N.D	15	96810505	96308289	-	-	-
S2.110.250.650.4.66L.S.327.G.N.D	10	96785348	-	-	96782483	-
S2.110.250.650.4.66L.C.327.G.N.D	10	96785349	-	-	96782483	-
S2.110.250.650.4.66L.D.327.G.N.D	10	96785350	-	96308241	-	-
S2.110.250.650.4.66L.H.327.G.N.D	10	96785352	96308289	-	-	-
S2.110.250.650.4.66L.S.327.G.N.D	15	96810498	-	-	96782483	-
S2.110.250.650.4.66L.C.327.G.N.D	15	96810499	-	-	96782483	-
S2.110.250.650.4.66L.D.327.G.N.D	15	96810500	-	96308241	-	-
S2.110.250.650.4.66L.H.327.G.N.D	15	96810501	96308289	-	-	-
S2.120.250.500.8.66H.S.520.G.N.D	10	96785338	-	-	96782483	-
S2.120.250.500.8.66H.C.520.G.N.D	10	96785339	-	-	96782483	-
S2.120.250.500.8.66H.D.520.G.N.D	10	96785340	-	96308241	-	-
S2.120.250.500.8.66H.H.520.G.N.D	10	96785342	96308208	-	-	-
S2.120.250.500.8.66H.S.520.G.N.D	15	96810490	-	-	96782483	-
S2.120.250.500.8.66H.C.520.G.N.D	15	96810491	-	-	96782483	-
S2.120.250.500.8.66H.D.520.G.N.D	15	96810492	-	96308241	-	-
S2.120.250.500.8.66H.H.520.G.N.D	15	96810493	96308208	-	-	-
S2.140.300.350.8.66M.S.438.G.N.D	10	96785333	-	-	96782484	-
S2.140.300.350.8.66M.C.438.G.N.D	10	96785334	-	-	96782484	-
S2.140.300.350.8.66M.D.438.G.N.D	10	96785335	-	96308241	-	-
S2.140.300.350.8.66M.H.438.G.N.D	10	96785337	96308289	-	-	-
S2.140.300.350.8.66M.S.438.G.N.D	15	96810486	-	-	96782484	-
S2.140.300.350.8.66M.C.438.G.N.D	15	96810487	-	-	96782484	-
S2.140.300.350.8.66M.D.438.G.N.D	15	96810488	-	96308241	-	-
S2.140.300.350.8.66M.H.438.G.N.D	15	96810489	96308289	-	-	-
S3.110.500.220.10.66L.S.417.G.N.D	10	96785358	-	-	96782485	-
S3.110.500.220.10.66L.C.417.G.N.D	10	96785359	-	-	96782485	-
S3.110.500.220.10.66L.D.417.G.N.D	10	96785360	-	96308244	-	-
S3.110.500.220.10.66L.H.417.G.N.D	10	96785362	96308208	-	-	-
S3.110.500.220.10.66L.S.417.G.N.D	15	96810506	-	-	96782485	-
S3.110.500.220.10.66L.C.417.G.N.D	15	96810507	-	-	96782485	-
S3.110.500.220.10.66L.D.417.G.N.D	15	96810508	-	96308244	-	-
S3.110.500.220.10.66L.H.417.G.N.D	15	96810509	96308208	-	-	-

Product range

Pump type	Cable length [m]	Pump	Accessories			
			*** Horizontal base stand	To be ordered separately		
				Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S3.110.500.350.10.66L.S.474.G.N.D	10	96785368	-	-	96782485	-
S3.110.500.350.10.66L.C.474.G.N.D	10	96785369	-	-	96782485	-
S3.110.500.350.10.66L.D.474.G.N.D	10	96785370	-	96308244	-	-
S3.110.500.350.10.66L.H.474.G.N.D	10	96785372	96308208	-	-	-
S3.110.500.350.10.66L.S.474.G.N.D	15	96810514	-	-	96782485	-
S3.110.500.350.10.66L.C.474.G.N.D	15	96810515	-	-	96782485	-
S3.110.500.350.10.66L.D.474.G.N.D	15	96810516	-	96308244	-	-
S3.110.500.350.10.66L.H.474.G.N.D	15	96810517	96308208	-	-	-
S3.110.500.500.8.66L.S.426.G.N.D	10	96785378	-	-	96782485	-
S3.110.500.500.8.66L.C.426.G.N.D	10	96785379	-	-	96782485	-
S3.110.500.500.8.66L.D.426.G.N.D	10	96785380	-	96308244	-	-
S3.110.500.500.8.66L.H.426.G.N.D	10	96785382	96308208	-	-	-
S3.110.500.500.8.66L.S.426.G.N.D	15	96810522	-	-	96782485	-
S3.110.500.500.8.66L.C.426.G.N.D	15	96810523	-	-	96782485	-
S3.110.500.500.8.66L.D.426.G.N.D	15	96810524	-	96308244	-	-
S3.110.500.500.8.66L.H.426.G.N.D	15	96810525	96308208	-	-	-
S3.120.300.500.8.66M.S.449.G.N.D	10	96785383	-	-	96782484	-
S3.120.300.500.8.66M.C.449.G.N.D	10	96785384	-	-	96782484	-
S3.120.300.500.8.66M.D.449.G.N.D	10	96785385	-	96308241	-	-
S3.120.300.500.8.66M.H.449.G.N.D	10	96785387	96308289	-	-	-
S3.120.300.500.8.66M.S.449.G.N.D	15	96810526	-	-	96782484	-
S3.120.300.500.8.66M.C.449.G.N.D	15	96810527	-	-	96782484	-
S3.120.300.500.8.66M.D.449.G.N.D	15	96810528	-	96308241	-	-
S3.120.300.500.8.66M.H.449.G.N.D	15	96810529	96308289	-	-	-
S3.120.600.350.10.66E.S.470.G.N.D	10	96785363	-	-	96782486	-
S3.120.600.350.10.66E.C.470.G.N.D	10	96785364	-	-	96782486	-
S3.120.600.350.10.66E.D.470.G.N.D	10	96785365	-	96308245	-	-
S3.120.600.350.10.66E.H.470.G.N.D	10	96785367	96308208	-	-	-
S3.120.600.350.10.66E.S.470.G.N.D	15	96810510	-	-	96782486	-
S3.120.600.350.10.66E.C.470.G.N.D	15	96810511	-	-	96782486	-
S3.120.600.350.10.66E.D.470.G.N.D	15	96810512	-	96308245	-	-
S3.120.600.350.10.66E.H.470.G.N.D	15	96810513	96308208	-	-	-
S3.120.600.500.8.66E.S.432.G.N.D	10	96785373	-	-	96782486	-
S3.120.600.500.8.66E.C.432.G.N.D	10	96785374	-	-	96782486	-
S3.120.600.500.8.66E.D.432.G.N.D	10	96785375	-	96308245	-	-
S3.120.600.500.8.66E.H.432.G.N.D	10	96785377	96308208	-	-	-
S3.120.600.500.8.66E.S.432.G.N.D	15	96810518	-	-	96782486	-
S3.120.600.500.8.66E.C.432.G.N.D	15	96810519	-	-	96782486	-
S3.120.600.500.8.66E.D.432.G.N.D	15	96810520	-	96308245	-	-
S3.120.600.500.8.66E.H.432.G.N.D	15	96810521	96308208	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

Pumps with 15 m cable are installed with PTC thermal protection.

Stainless steel impeller, 3 x 400/690 V

Pump type	Pump	Accessories			
			To be ordered separately		
		*** Horizontal base stand	Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.Q.N.D	96811703	-	-	96641489	-
S1.100.200.650.4.66H.C.406.Q.N.D	96811704	-	-	96641489	-
S1.100.200.650.4.66H.H.406.Q.N.D	96811705	96308289	-	-	-
S1.100.200.650.4.66H.D.406.Q.N.D	96811739	-	96308240	-	-
S2.100.200.550.4.66M.S.338.Q.N.D	96811712	-	-	96641489	-
S2.100.200.550.4.66M.C.338.Q.N.D	96811713	-	-	96641489	-
S2.100.200.550.4.66M.H.338.Q.N.D	96811714	96308289	-	-	-
S2.100.200.550.4.66M.D.338.Q.N.D	96811742	-	96308240	-	-
S2.100.200.650.4.66M.S.350.Q.N.D	96811718	-	-	96641489	-
S2.100.200.650.4.66M.C.350.Q.N.D	96811719	-	-	96641489	-
S2.100.200.650.4.66M.H.350.Q.N.D	96811720	96308289	-	-	-
S2.100.200.650.4.66M.D.350.Q.N.D	96811744	-	96308240	-	-
S2.110.250.650.4.66L.S.327.Q.N.D	96811715	-	-	96782483	-
S2.110.250.650.4.66L.C.327.Q.N.D	96811716	-	-	96782483	-
S2.110.250.650.4.66L.D.327.Q.N.D	96811717	-	96308241	-	-
S2.110.250.650.4.66L.H.327.Q.N.D	96811743	96308289	-	-	-
S2.120.250.500.8.66H.S.520.Q.N.D	96811709	-	-	96782483	-
S2.120.250.500.8.66H.C.520.Q.N.D	96811710	-	-	96782483	-
S2.120.250.500.8.66H.D.520.Q.N.D	96811711	-	96308241	-	-
S2.120.250.500.8.66H.H.520.Q.N.D	96811741	96308208	-	-	-
S2.140.300.350.8.66M.S.438.Q.N.D	96811706	-	-	96782484	-
S2.140.300.350.8.66M.C.438.Q.N.D	96811707	-	-	96782484	-
S2.140.300.350.8.66M.D.438.Q.N.D	96811708	-	96308241	-	-
S2.140.300.350.8.66M.H.438.Q.N.D	96811740	96308289	-	-	-
S3.110.500.220.10.66L.S.417.Q.N.D	96811721	-	-	96782485	-
S3.110.500.220.10.66L.C.417.Q.N.D	96811722	-	-	96782485	-
S3.110.500.220.10.66L.D.417.Q.N.D	96811723	-	96308244	-	-
S3.110.500.220.10.66L.H.417.Q.N.D	96811745	96308208	-	-	-
S3.110.500.350.10.66L.S.474.Q.N.D	96811727	-	-	96782485	-
S3.110.500.350.10.66L.C.474.Q.N.D	96811728	-	-	96782485	-
S3.110.500.350.10.66L.D.474.Q.N.D	96811729	-	96308244	-	-
S3.110.500.350.10.66L.H.474.Q.N.D	96811747	96308208	-	-	-
S3.110.500.500.8.66L.S.426.Q.N.D	96811733	-	-	96782485	-
S3.110.500.500.8.66L.C.426.Q.N.D	96811734	-	-	96782485	-
S3.110.500.500.8.66L.D.426.Q.N.D	96811735	-	96308244	-	-
S3.110.500.500.8.66L.H.426.Q.N.D	96811749	96308208	-	-	-
S3.120.300.500.8.66M.S.449.Q.N.D	96811736	-	-	96782484	-
S3.120.300.500.8.66M.C.449.Q.N.D	96811737	-	-	96782484	-
S3.120.300.500.8.66M.D.449.Q.N.D	96811738	-	96308241	-	-
S3.120.300.500.8.66M.H.449.Q.N.D	96811750	96308289	-	-	-
S3.120.600.350.10.66E.S.470.Q.N.D	96811724	-	-	96782486	-
S3.120.600.350.10.66E.C.470.Q.N.D	96811725	-	-	96782486	-
S3.120.600.350.10.66E.D.470.Q.N.D	96811726	-	96308245	-	-
S3.120.600.350.10.66E.H.470.Q.N.D	96811746	96308208	-	-	-
S3.120.600.500.8.66E.S.432.Q.N.D	96811730	-	-	96782486	-
S3.120.600.500.8.66E.C.432.Q.N.D	96811731	-	-	96782486	-
S3.120.600.500.8.66E.D.432.Q.N.D	96811732	-	96308245	-	-
S3.120.600.500.8.66E.H.432.Q.N.D	96811748	96308208	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

Explosion-proof pumps

Cast iron, 3 x 400/690 V

Pump type	Cable length [m]	Pump	Accessories			
			*** Horizontal base stand	To be ordered separately		
				Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.G.EX.D	10	95112785	-	-	96641489	-
S1.100.200.650.4.66H.C.406.G.EX.D	10	95112786	-	-	96641489	-
S1.100.200.650.4.66H.D.406.G.EX.D	10	95112787	-	96308240	-	-
S1.100.200.650.4.66H.H.406.G.EX.D	10	96796428	96308255	-	-	-
S2.100.200.550.4.66M.S.338.G.EX.D	10	95112791	-	-	96641489	-
S2.100.200.550.4.66M.C.338.G.EX.D	10	95112792	-	-	96641489	-
S2.100.200.550.4.66M.D.338.G.EX.D	10	95112793	-	96308240	-	-
S2.100.200.550.4.66M.H.338.G.EX.D	10	96796608	96308255	-	-	-
S2.100.200.650.4.66M.S.350.G.EX.D	10	95112797	-	-	96641489	-
S2.100.200.650.4.66M.C.350.G.EX.D	10	95112798	-	-	96641489	-
S2.100.200.650.4.66M.D.350.G.EX.D	10	95112799	-	96308240	-	-
S2.100.200.650.4.66M.H.350.G.EX.D	10	96796618	96308255	-	-	-
S2.110.250.650.4.66L.S.327.G.EX.D	10	95112794	-	-	96782483	-
S2.110.250.650.4.66L.C.327.G.EX.D	10	95112795	-	-	96782483	-
S2.110.250.650.4.66L.D.327.G.EX.D	10	95112796	-	96308241	-	-
S2.110.250.650.4.66L.H.327.G.EX.D	10	96796613	96308255	-	-	-
S2.120.250.500.8.66H.S.520.G.EX.D	10	95112788	-	-	96782483	-
S2.120.250.500.8.66H.C.520.G.EX.D	10	95112789	-	-	96782483	-
S2.120.250.500.8.66H.D.520.G.EX.D	10	95112790	-	96308241	-	-
S2.120.250.500.8.66H.H.520.G.EX.D	10	96796603	96308192	-	-	-
S3.110.500.500.8.66L.S.426.G.EX.D	10	95112803	-	-	96782485	-
S3.110.500.500.8.66L.C.426.G.EX.D	10	95112804	-	-	96782485	-
S3.110.500.500.8.66L.D.426.G.EX.D	10	95112805	-	96308244	-	-
S3.110.500.500.8.66L.H.426.G.EX.D	10	96796628	96308192	-	-	-
S3.120.300.500.8.66M.S.449.G.EX.D	10	95112806	-	-	96782484	-
S3.120.300.500.8.66M.C.449.G.EX.D	10	95112807	-	-	96782484	-
S3.120.300.500.8.66M.D.449.G.EX.D	10	95112808	-	96308241	-	-
S3.120.300.500.8.66M.H.449.G.EX.D	10	96796633	96308255	-	-	-
S3.120.600.500.8.66E.S.432.G.EX.D	10	95112800	-	-	96782486	-
S3.120.600.500.8.66E.C.432.G.EX.D	10	95112801	-	-	96782486	-
S3.120.600.500.8.66E.D.432.G.EX.D	10	95112802	-	96308245	-	-
S3.120.600.500.8.66E.H.432.G.EX.D	10	96796623	96308192	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

Cast iron, 3 x 415 V

Pump type	Cable length [m]	Pump	Accessories			
			*** Horizontal base stand	To be ordered separately		
				Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.G.EX.D	10	96796425	-	-	96641489	-
S1.100.200.650.4.66H.C.406.G.EX.D	10	96796426	-	-	96641489	-
S1.100.200.650.4.66H.D.406.G.EX.D	10	96796427	-	96308240	-	-
S1.100.200.650.4.66H.H.406.G.EX.D	10	96796429	96308255	-	-	-
S2.100.200.550.4.66M.S.338.G.EX.D	10	96796605	-	-	96641489	-
S2.100.200.550.4.66M.C.338.G.EX.D	10	96796606	-	-	96641489	-
S2.100.200.550.4.66M.D.338.G.EX.D	10	96796607	-	96308240	-	-
S2.100.200.550.4.66M.H.338.G.EX.D	10	96796609	96308255	-	-	-
S2.100.200.650.4.66M.S.350.G.EX.D	10	96796615	-	-	96641489	-
S2.100.200.650.4.66M.C.350.G.EX.D	10	96796616	-	-	96641489	-
S2.100.200.650.4.66M.D.350.G.EX.D	10	96796617	-	96308240	-	-
S2.100.200.650.4.66M.H.350.G.EX.D	10	96796619	96308255	-	-	-
S2.110.250.650.4.66L.S.327.G.EX.D	10	96796610	-	-	96782483	-
S2.110.250.650.4.66L.C.327.G.EX.D	10	96796611	-	-	96782483	-
S2.110.250.650.4.66L.D.327.G.EX.D	10	96796612	-	96308241	-	-
S2.110.250.650.4.66L.H.327.G.EX.D	10	96796614	96308255	-	-	-
S2.120.250.500.8.66H.S.520.G.EX.D	10	96796430	-	-	96782483	-
S2.120.250.500.8.66H.C.520.G.EX.D	10	96796431	-	-	96782483	-
S2.120.250.500.8.66H.D.520.G.EX.D	10	96796602	-	96308241	-	-
S2.120.250.500.8.66H.H.520.G.EX.D	10	96796604	96308192	-	-	-
S3.110.500.500.8.66L.S.426.G.EX.D	10	96796625	-	-	96782485	-
S3.110.500.500.8.66L.C.426.G.EX.D	10	96796626	-	-	96782485	-
S3.110.500.500.8.66L.D.426.G.EX.D	10	96796627	-	96308244	-	-
S3.110.500.500.8.66L.H.426.G.EX.D	10	96796629	96308192	-	-	-
S3.120.300.500.8.66M.S.449.G.EX.D	10	96796630	-	-	96782484	-
S3.120.300.500.8.66M.C.449.G.EX.D	10	96796631	-	-	96782484	-
S3.120.300.500.8.66M.D.449.G.EX.D	10	96796632	-	96308241	-	-
S3.120.300.500.8.66M.H.449.G.EX.D	10	96796634	96308255	-	-	-
S3.120.600.500.8.66E.S.432.G.EX.D	10	96796620	-	-	96782486	-
S3.120.600.500.8.66E.C.432.G.EX.D	10	96796621	-	-	96782486	-
S3.120.600.500.8.66E.D.432.G.EX.D	10	96796622	-	96308245	-	-
S3.120.600.500.8.66E.H.432.G.EX.D	10	96796624	96308192	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

Stainless steel impeller, 3 x 400/690 V

Pump type	Pump	Accessories			
			To be ordered separately		
		*** Horizontal base stand	Vertical base stand	** Auto-coupling system	* Ring stand for portable use
S1.100.200.650.4.66H.S.406.Q.EX.D	96811959	-	-	96641489	-
S1.100.200.650.4.66H.C.406.Q.EX.D	96811960	-	-	96641489	-
S1.100.200.650.4.66H.D.406.Q.EX.D	96811961	-	96308240	-	-
S1.100.200.650.4.66H.H.406.Q.EX.D	96811962	96308255	-	-	-
S2.100.200.550.4.66M.S.338.Q.EX.D	96811967	-	-	96641489	-
S2.100.200.550.4.66M.C.338.Q.EX.D	96811968	-	-	96641489	-
S2.100.200.550.4.66M.D.338.Q.EX.D	96811969	-	96308240	-	-
S2.100.200.550.4.66M.H.338.Q.EX.D	96811970	96308255	-	-	-
S2.100.200.650.4.66M.S.350.Q.EX.D	96811975	-	-	96641489	-
S2.100.200.650.4.66M.C.350.Q.EX.D	96811976	-	-	96641489	-
S2.100.200.650.4.66M.D.350.Q.EX.D	96811977	-	96308240	-	-
S2.100.200.650.4.66M.H.350.Q.EX.D	96811978	96308255	-	-	-
S2.110.250.650.4.66L.S.327.Q.EX.D	96811971	-	-	96782483	-
S2.110.250.650.4.66L.C.327.Q.EX.D	96811972	-	-	96782483	-
S2.110.250.650.4.66L.D.327.Q.EX.D	96811973	-	96308241	-	-
S2.110.250.650.4.66L.H.327.Q.EX.D	96811974	96308255	-	-	-
S2.120.250.500.8.66H.S.520.Q.EX.D	96811963	-	-	96782483	-
S2.120.250.500.8.66H.C.520.Q.EX.D	96811964	-	-	96782483	-
S2.120.250.500.8.66H.D.520.Q.EX.D	96811965	-	96308241	-	-
S2.120.250.500.8.66H.H.520.Q.EX.D	96811966	96308192	-	-	-
S3.110.500.500.8.66L.S.426.Q.EX.D	96811983	-	-	96782485	-
S3.110.500.500.8.66L.C.426.Q.EX.D	96811984	-	-	96782485	-
S3.110.500.500.8.66L.D.426.Q.EX.D	96811985	-	96308244	-	-
S3.110.500.500.8.66L.H.426.Q.EX.D	96811986	96308192	-	-	-
S3.120.300.500.8.66M.S.449.Q.EX.D	96811987	-	-	96782484	-
S3.120.300.500.8.66M.C.449.Q.EX.D	96811988	-	-	96782484	-
S3.120.300.500.8.66M.D.449.Q.EX.D	96811989	-	96308241	-	-
S3.120.300.500.8.66M.H.449.Q.EX.D	96811990	96308255	-	-	-
S3.120.600.500.8.66E.S.432.Q.EX.D	96811979	-	-	96782486	-
S3.120.600.500.8.66E.C.432.Q.EX.D	96811980	-	-	96782486	-
S3.120.600.500.8.66E.D.432.Q.EX.D	96811981	-	96308245	-	-
S3.120.600.500.8.66E.H.432.Q.EX.D	96811982	96308192	-	-	-

* Without hose connection.

** Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

*** The horizontal base stand is included in the pump product number.

List of variants

Motor		
Various cable lengths		15 m
		25 m
		50 m
EMC power cables	Screened power cables for variable speed drives	10 m
		15 m
		25 m
		50 m
Special motor		Insulation class H
		Special voltage
PTC thermistors in windings		
Special oil	Non-toxic Shell Ondina 917	
Motor protection		
PTC + moisture switch		FPV1
Klixon + moisture switch + WIO		FPV2a
PTC + moisture switch + WIO		FPV2b
Klixon + moisture switch + WIO + PT100 at lower and upper bearing + PVS 3		FPV4a
PTC + moisture switch + WIO + PT100 at lower and upper bearing + PVS 3		FPV4b
Materials		
Stainless steel lifting bracket	AISI 316	
Stainless steel shaft		
Tests		
Test at specified duty on standard impeller curve		
Trimmed impeller for specified duty test		
Additional test of entire QH curve (incl. report)	5-10 flows from pump performance curve	
Different test standard	Efficiency guaranteed by Grundfos	ISO 9906 grade 1 tolerances
		ISO 9906 grade 2 tolerances
Vibration test (incl. report)	According to Grundfos factory quality standard	
Performance test on dry test stand	Not yet available	
NPSHr test	Not yet available	
String test	Contact Grundfos	
Witness test	Contact Grundfos	
Miscellaneous		
Special packaging	Contact Grundfos	
Special nameplate	Contact Grundfos	
Other variants	Contact Grundfos	

Sectional drawings, motors

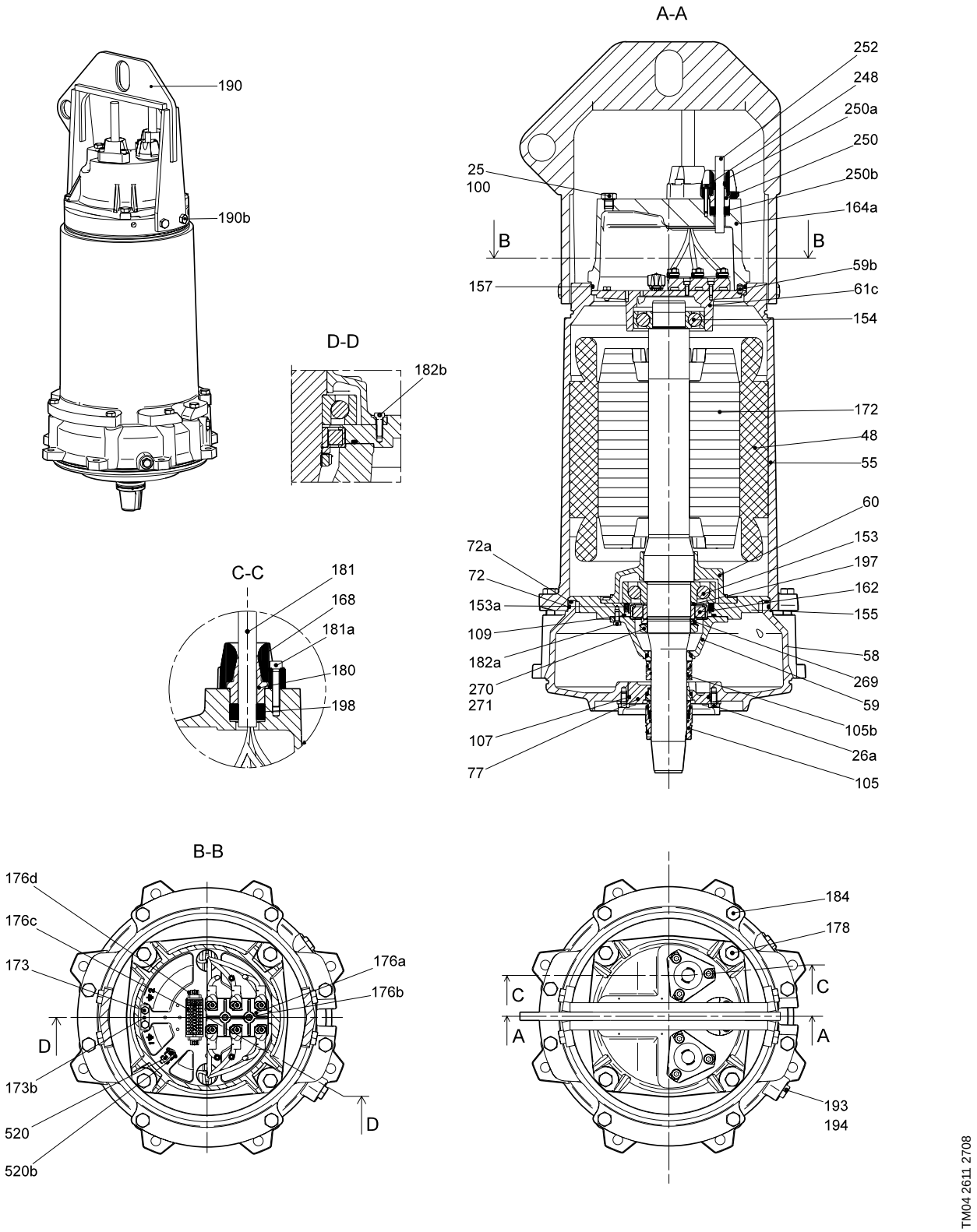


Fig. 4 Non-explosion-proof motor without cooling jacket

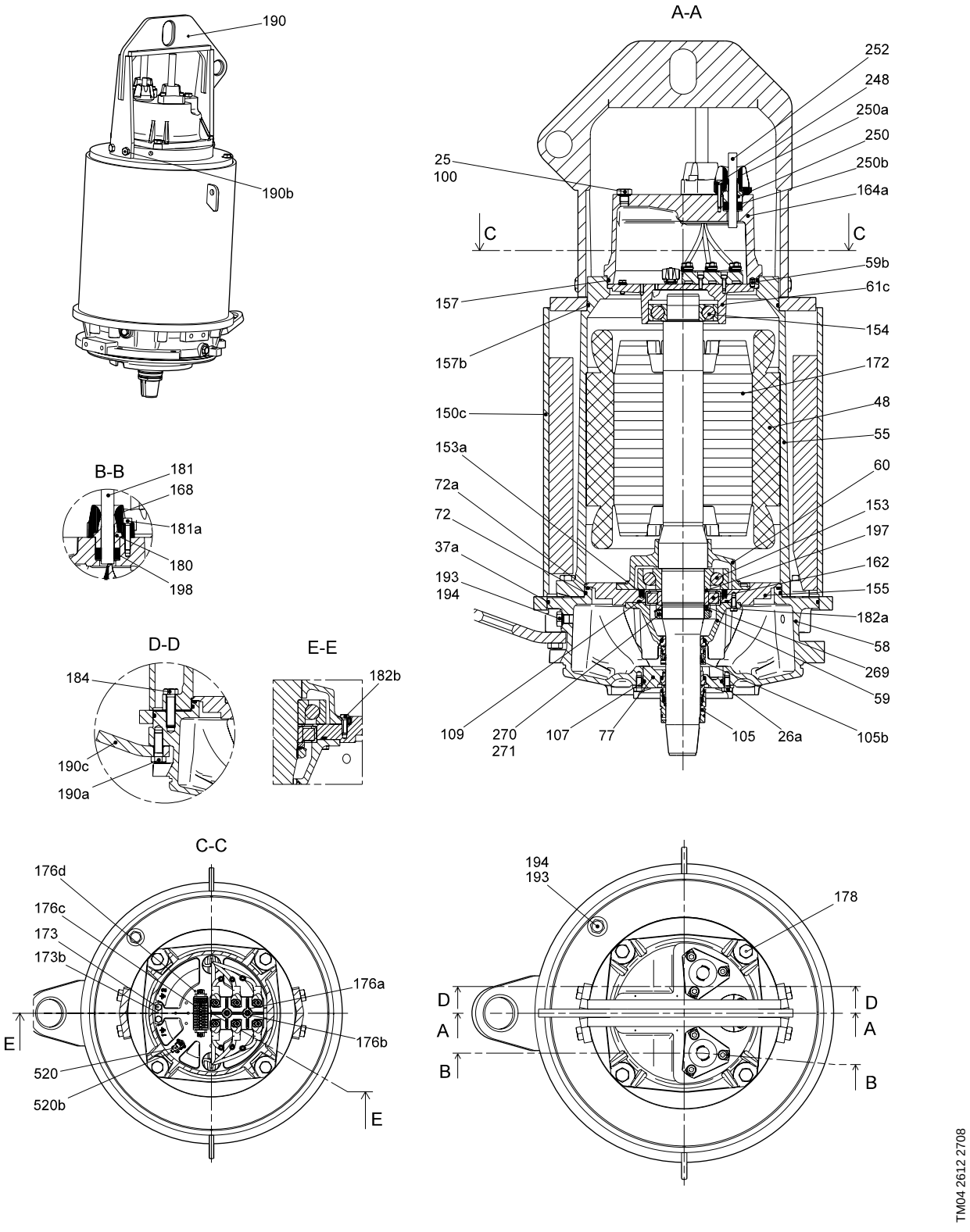


Fig. 5 Non-explosion-proof motor with cooling jacket

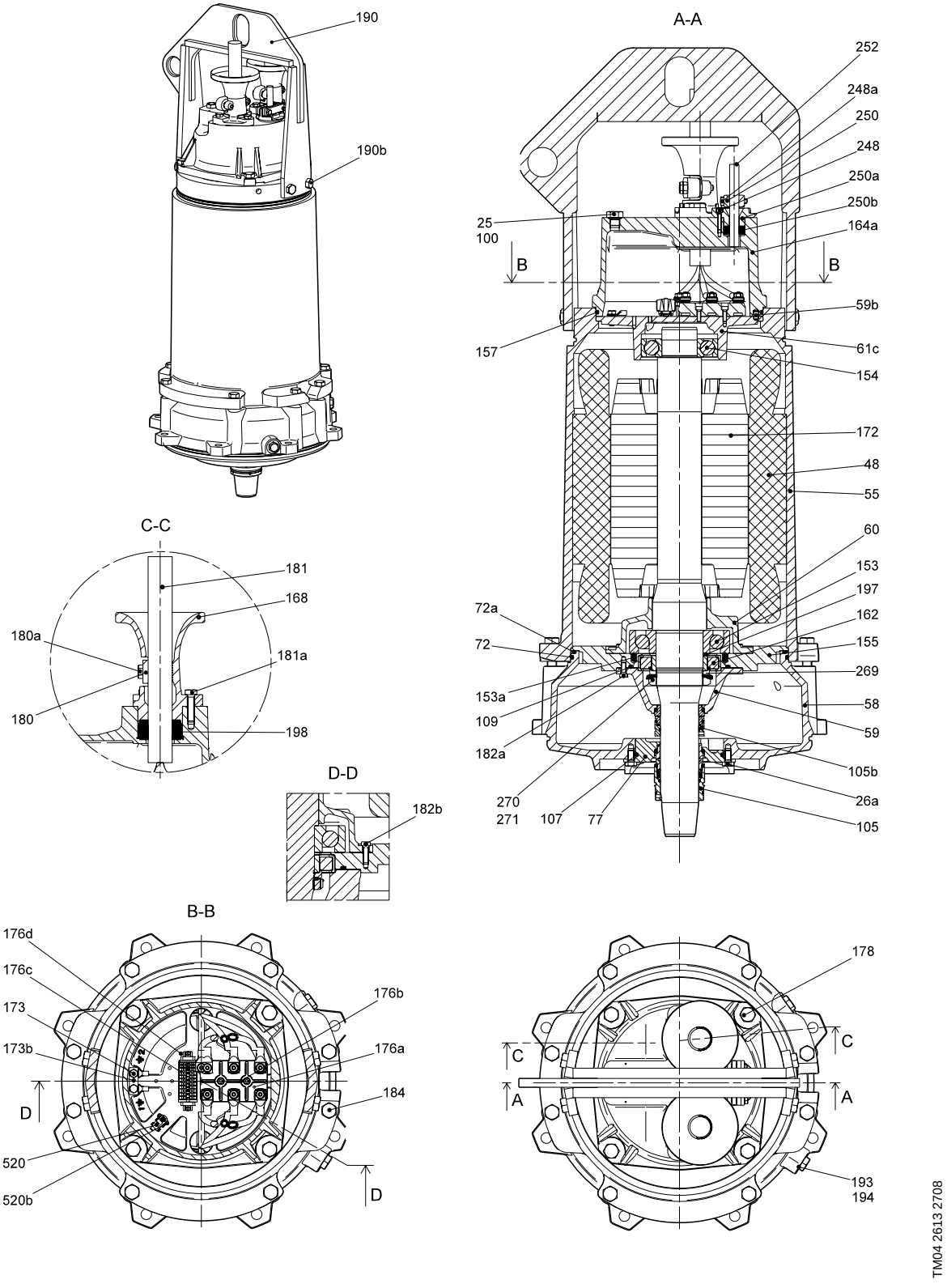


Fig. 6 Explosion-proof motor without cooling jacket

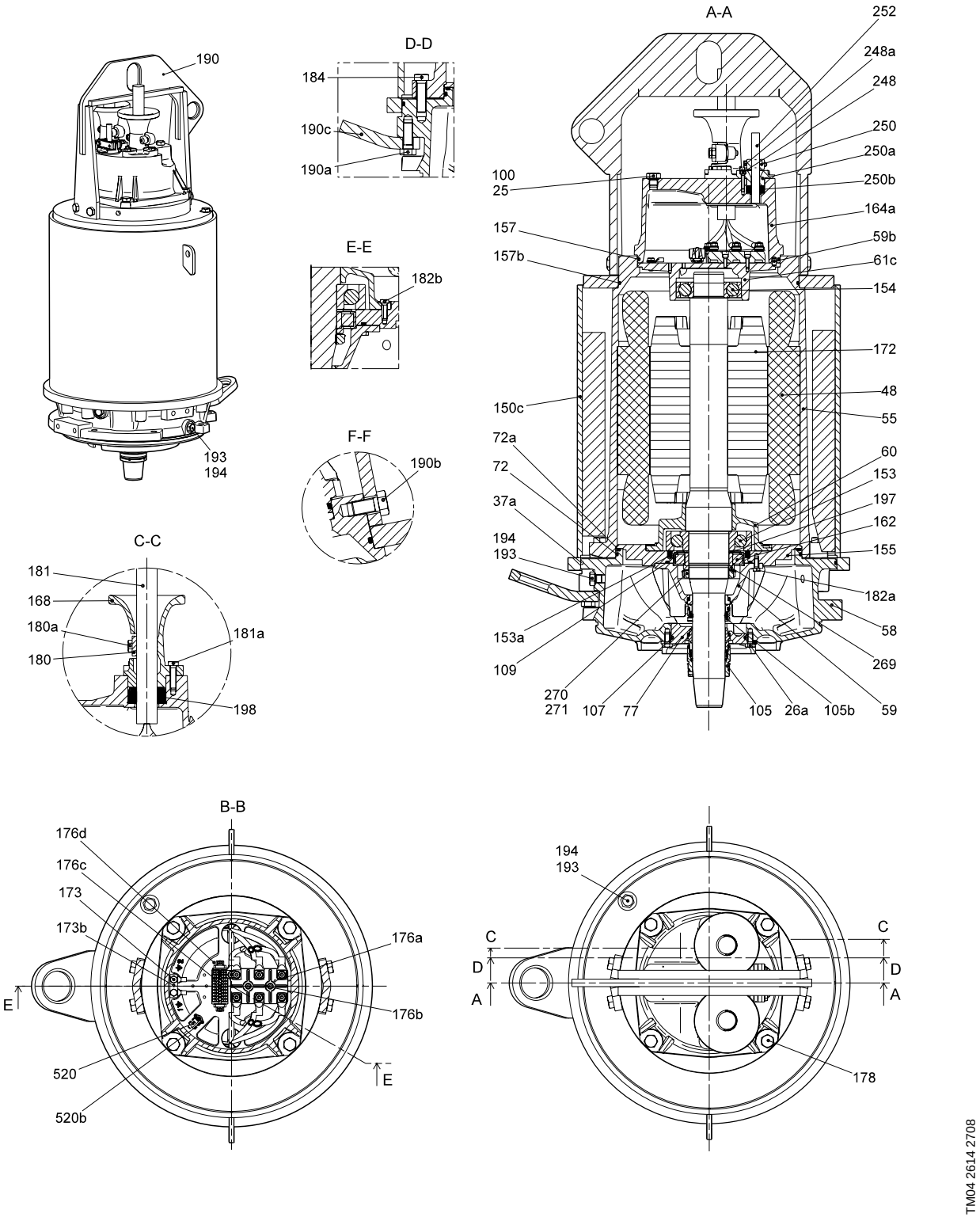


Fig. 7 Explosion-proof motor with cooling jacket

Sectional drawings, pumps

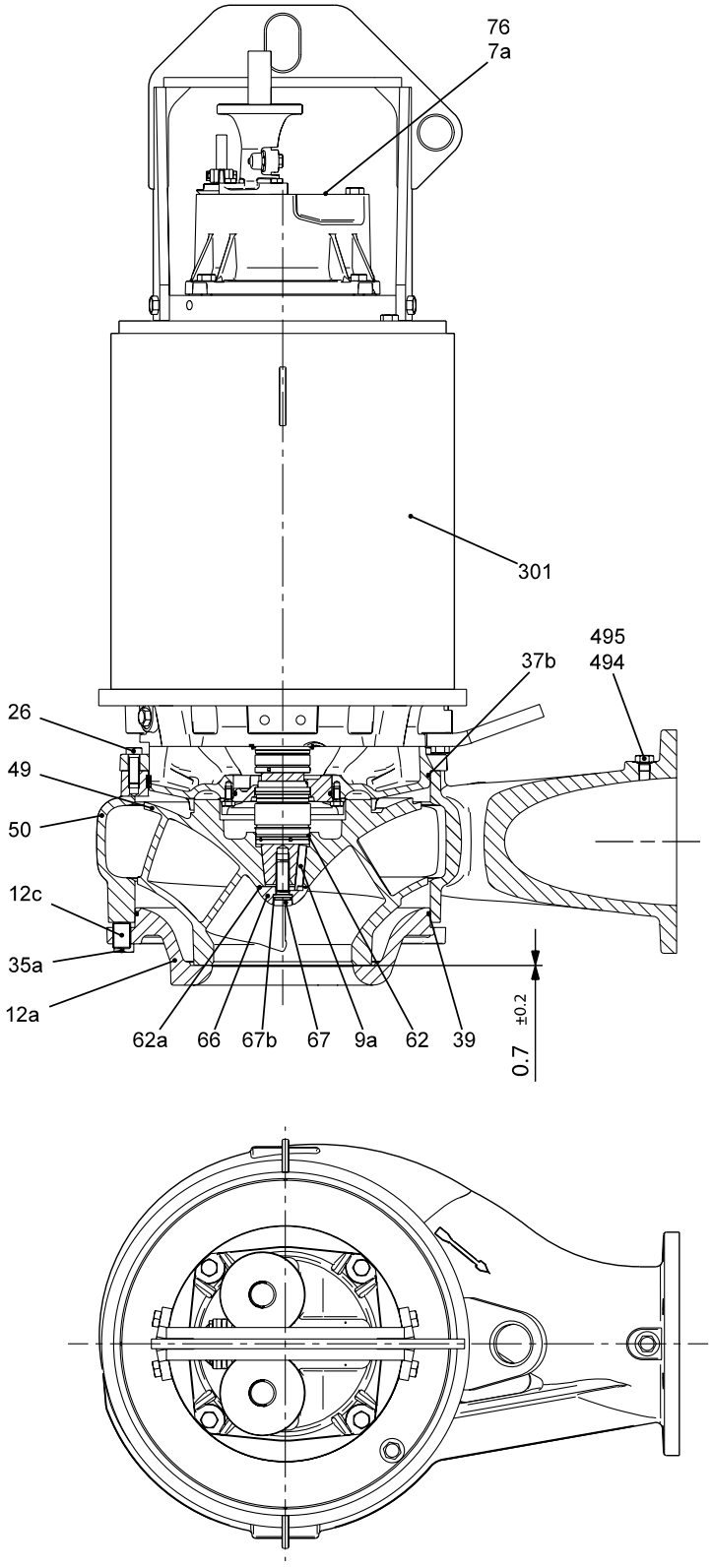


Fig. 8 Submerged installation pump with cooling jacket

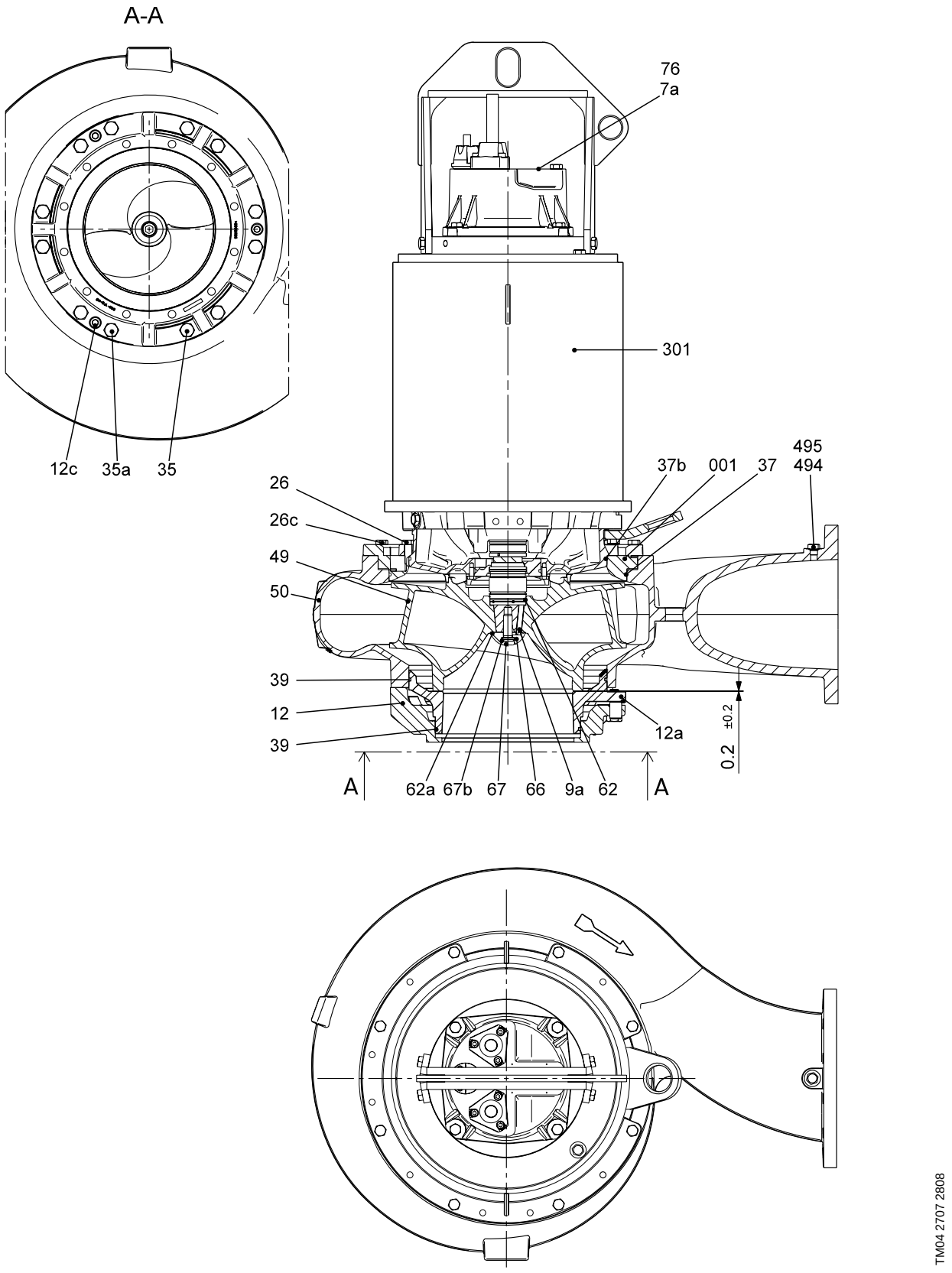


Fig. 9 Dry installation pump with cooling jacket

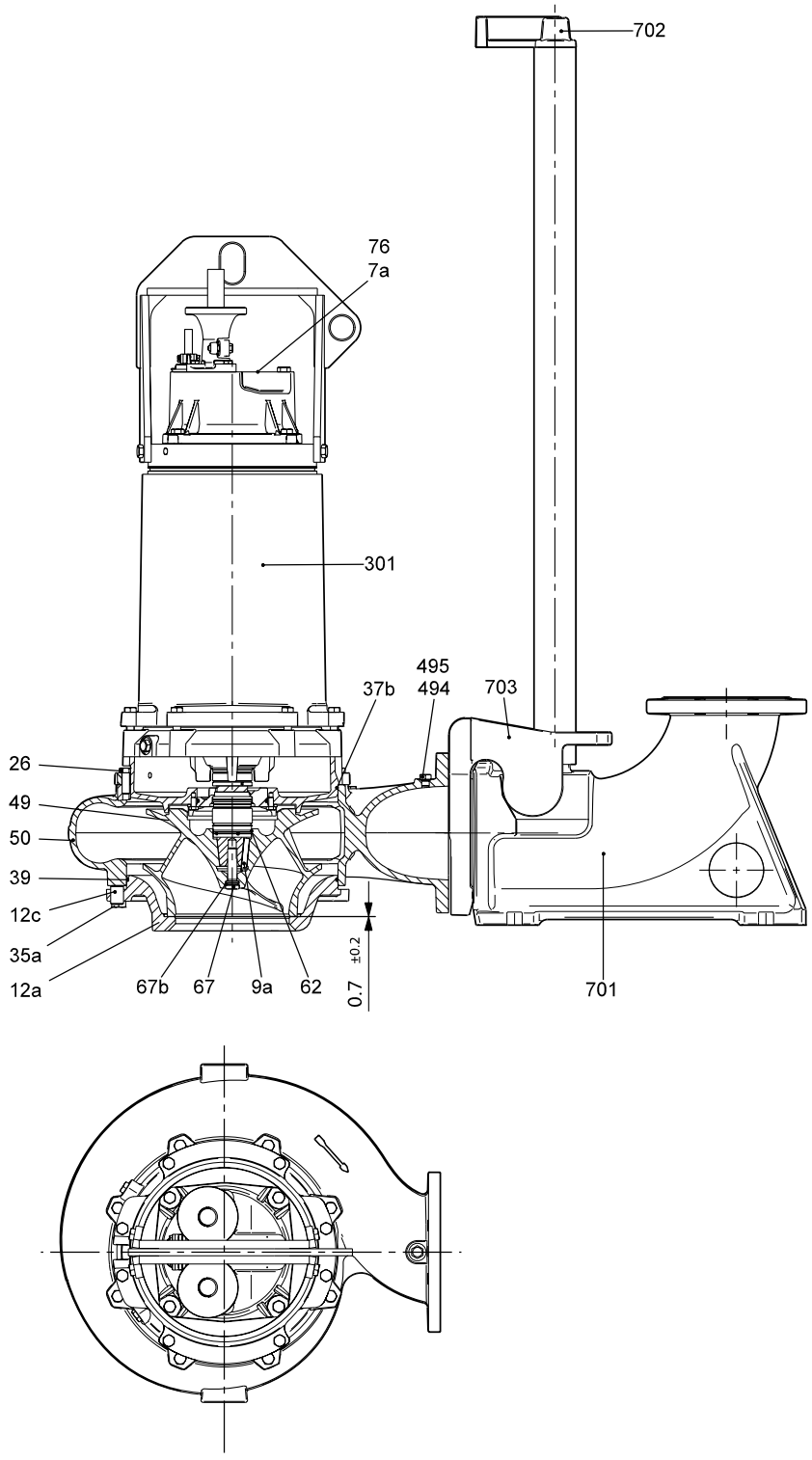
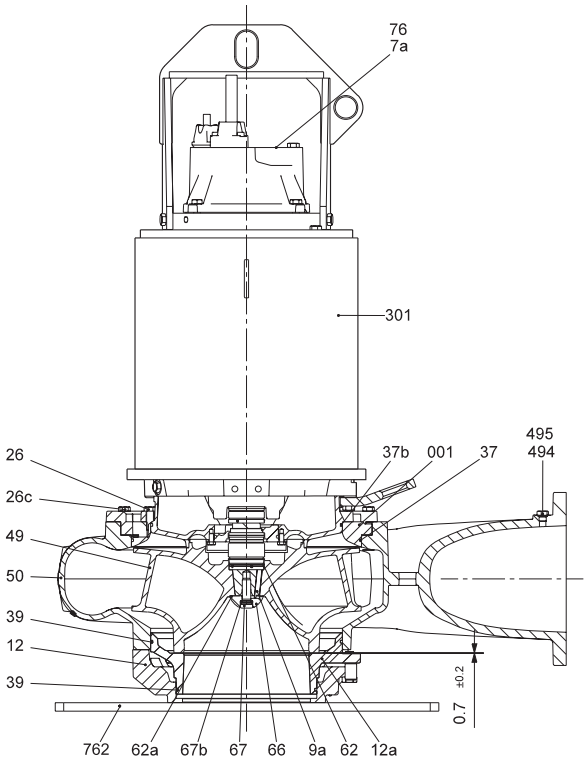


Fig. 10 Installation type S pump on auto coupling



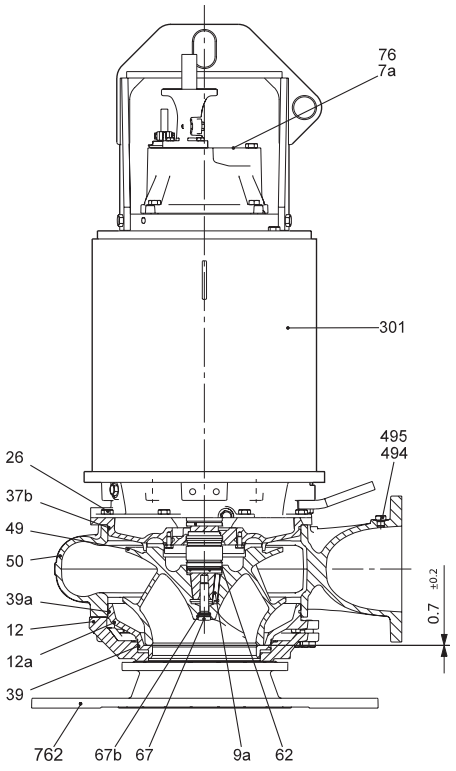
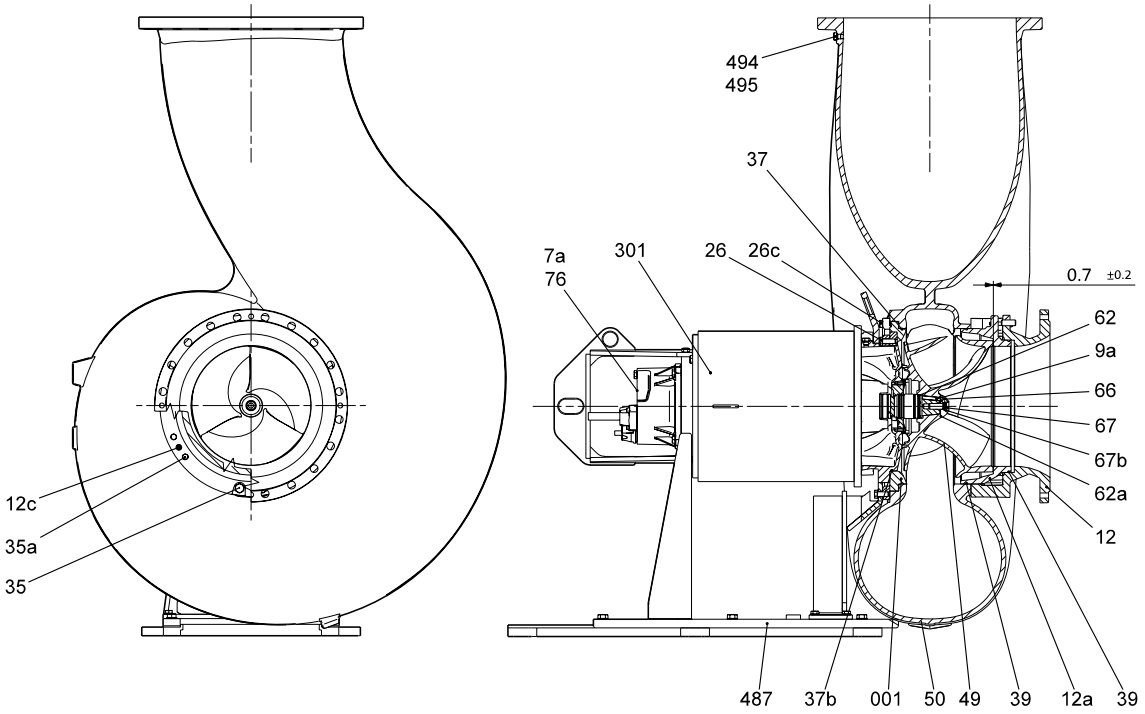
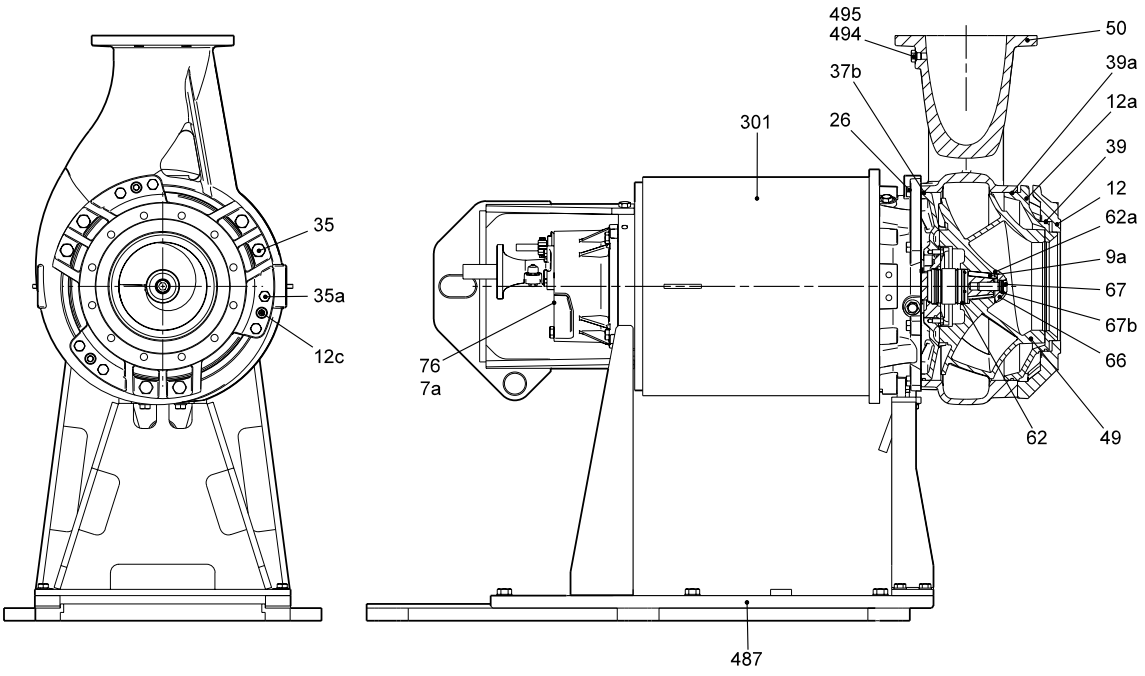


Fig. 11 Installation type D pump



TM04 2590 2708



TM04 2591 2708

Fig. 12 Dry, horizontal, installation type H pump

Components and material specification

Motor

Pos.	Component	Material
7a	Rivet	Stainless steel (1.4436/316)
25a	Screw	Stainless steel (1.4436/316)
25	Pressure test plug	Stainless steel (1.4436/316)
48	Stator lamination	
**55	Stator housing	Cast iron (EN-JL 1040/A48 30)
58	Seal housing	Cast iron
60	Bearing bracket cover	Cast iron
61c	Upper bearing bracket	Cast iron
72a	O-ring	NBR rubber
72	O-ring	NBR rubber
76a	Approval plate	
100	O-ring	NBR rubber
105b	Mechanical seal	SiC/SiC or SiC/carbon
105	Mechanical seal	SiC/SiC or SiC/carbon
150c	Cooling jacket	Galvanized steel
153	Ball bearing	Stainless steel
154	Ball bearing	Stainless steel
**155	Lower bearing bracket	Cast iron
157b	O-ring	NBR rubber
157	O-ring	NBR rubber
**164a	Motor top cover	Cast iron
*168	Cable entry	PA or cast iron
172	Shaft with rotor	Stainless steel (1.4462/329)
173b	Earth terminal	
173c	Washer	Stainless steel (1.4436/316)
173e	Screw	Stainless steel (1.4436/316)
173f	Spring washer	Stainless steel (1.4436/316)
173g	Earth connector	
173	Screw	Stainless steel (1.4436/316)
176a	Terminal block	
176b	Screw	Stainless steel (1.4436/316)
176c	Terminal block	
176d	Terminal block	
178	Screw	Stainless steel (1.4436/316)
180	Cable clamp	PA or cast iron
181a	Screw	Stainless steel (1.4436/316)
181	Cable	ATON
182b	Hexagon socket head cap screw	Stainless steel (1.4436/316)
184b	Screw	Stainless steel (1.4436/316)
184	Screw	Stainless steel (1.4436/316)
187a	Washer	Stainless steel (1.4436/316)
187	Circlip	
188	Circlip	
190	Lifting bracket	Stainless steel (1.4408/316)
193	Plug	Stainless steel (1.4408/316)
194	O-ring	NBR rubber
197	Washer	Stainless steel (1.4436/316)
198	Rubber seal	
248	Screw	Stainless steel (1.4436/316)
250a	Cable entry	PA or cast iron
250b	Rubber seal	
250	Cable clamp	PA or cast iron
252	Cable	ATON
520a	Screw	Stainless steel (1.4436/316)
520b	Nut	Stainless steel (1.4436/316)
*520	Moisture switch	
522	Holder	

Pump

Pos.	Component	Material
7a	Rivet	
9a	Key (for keyway)	Stainless steel (1.4436/316)
12c	Adjusting screw	Stainless steel (1.4436/316)
26	Screw	Stainless steel (1.4436/316)
37	O-ring	NBR rubber
37b	O-ring	NBR rubber
**49	Impeller	Cast iron EN-JL 1050
**50	Volute casing	Cast iron EN-JS 1050
67	Impeller screw	Stainless steel (1.4436/316)
76	Nameplate	
301	Motor housing	
494	Plug	Stainless steel (1.4436/316)
495	O-ring	NBR rubber

Accessories

Pos.	Component	Material
**701	Auto-coupling base unit	Cast iron
**702	Guide rail bracket	Cast iron
**703	Guide claw	Cast iron
749	Bend	Cast iron
**761	Hose connector	Cast iron or stainless steel
762	Base plate	Cast iron or steel
487	Base stand, horizontal	Galvanized steel
799	Anchor bolt	

* Ex versions have cast iron cable entry and two moisture switches.

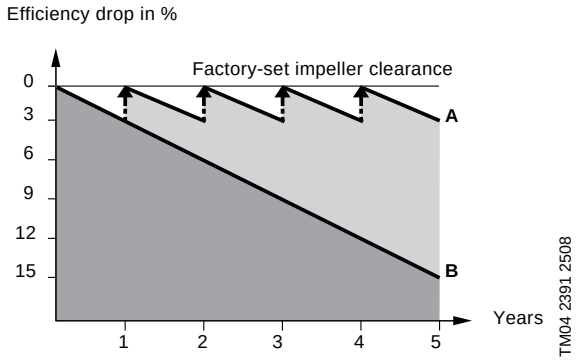
** Available of stainless steel (custom-built option).

Features

SmartTrim

On conventional pumps, maintaining factory-set impeller clearance is a time-consuming and costly task. The pumps need to be disconnected from the pipework and to be totally dismantled, and new parts need to be mounted in order to maintain full pumping efficiency. Not so with Grundfos SmartTrim!

All Grundfos heavy-duty channel-impeller pumps, whether for submerged or dry installation, are equipped with the unique SmartTrim impeller clearance adjustment system. This enables you to easily restore factory-set impeller clearance and maintain peak pumping efficiency. All you need to do is to tighten the adjustment screws on the exterior of the impeller housing. This can be done on site, quickly and easily, without dismantling the pump and without using special tools.



A: With Grundfos SmartTrim impeller clearance adjustment system

B: Without impeller clearance adjustment system

SmartSeal

The Grundfos SmartSeal auto-coupling gasket mounted on the pump discharge flange provides a completely leak-proof connection between the pump and the base unit of the auto-coupling system. This optimises the efficiency of the entire pumping system and keeps operating costs at a minimum.

Ball bearings

The bearings are greased for life.

Main bearings: Double-row angular contact ball bearing

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

Shaft seal

The pumps have a shaft seal consisting of a primary and a secondary shaft seal.

The material combination of the primary shaft seal of all pump types is silicon carbide/silicon carbide. For the secondary shaft seal, the mateial combination is silicon carbide/carbon.

The shaft seals are placed in the oil chamber of the pump. The oil chamber provides reliable sealing between the pumped liquid and the motor.

The shaft seals have no springs or other parts in direct contact with the pumped liquid. This prevents rags and fibres from getting caught. The shaft seals are bidirectional, meaning that they can operate in either direction thus allowing for opposite rotation caused by back-flow of liquid through the pump.

Motor

The motor is a watertight, totally encapsulated motor with:

- insulation class F (155 °C)
- temperature rise class F (105 °C)
- enclosure class IP68.

For motor protection and sensors, see *Sensors* below.

Power cables

Cable	Motor power [kW]
2 x 4 x 10 mm^2 + 7 x 1.5 mm^2	22 - 35
2 x 4 x 16 mm^2 + 7 x 1.5 mm^2	50
2 x 4 x 25 mm^2 + 7 x 1.5 mm^2	58 - 68

Standard cable

The pumps have H07RN-F AT cables as standard or screened ATON EMC VSCCB cables on request.

The cables are 10 m long as standard. Other cable lengths are available on request. See *List of variants* on page 15.

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

Motor power [kW]	Voltage	Cable
32 - 41	3 x 460 V	2 x 4 x 10 mm^2 + 7 x 1.5 mm^2
	3 x 380/660 V	2 x 4 x 16 mm^2 + 7 x 1.5 mm^2
57	3 x 460 V/3 x 380/660 V	2 x 4 x 16 mm^2 + 7 x 1.5 mm^2
73	3 x 460 V/3 x 380/660 V	2 x 4 x 25 mm^2 + 7 x 1.5 mm^2

Standard cable

Cable type [mm^2]	Outer cable diameter [mm]		Bending radius
	min.	max.	[cm]
4 x 10	20.9	23.4	14
4 x 16	23.8	26.3	16
4 x 25	28.9	31.4	19

EMC cable

Cable type [mm^2]	Outer cable diameter [mm]		Bending radius
	min.	max.	[cm]
3 x 10	17.8	19.8	9.9
3 x 16	20.9	22.9	11.5
3 x 35	28.3	31.3	15.7

Control cable

Cable type [mm^2]	Outer cable diameter [mm]		Bending radius
	min.	max.	[cm]
7 x 1.5	14.4	16.0 - 16.4	10

Cable entry

Watertight PA or cast iron cable entry with soft shape and sealing rings to prevent damage of the cable or leaks.

Sensors

As standard the pump is equipped with:

- Three thermal switches (Klixon), one in each phase.
- One moisture switch in terminal block.

Customised sensor options

1. WIO (water-in-oil) sensor
   The WIO sensor measures the water content in the oil and converts the value into an analogue current signal. The two sensor conductors are for power supply as well as for carrying the signal to the measuring device or controller. The sensor measures the water content from 0 to 20 %. It also sends a signal if the water content is outside the normal range (warning), or if there is air in the oil chamber (alarm). The sensor is fitted in a stainless steel tube for mechanical protection.
   The WIO sensor is connected to the Grundfos IO 111 module.
2. PVS 3 (pump vibration sensor)
   The vibration sensor monitors the vibration level of the pump. A change in the vibration level indicates an abnormal situation. The cause of this can be a clogged impeller, worn bearings, closed discharge valve, etc., indicating that service inspection should be carried out now in order to protect the pump or the pipe system from being damaged.
3. Bearing temperature sensor.

Testing

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

Other tests or third party inspection certificates are available on request. See *List of variants* on page 15.

Operating conditions

Pumps without cooling jacket in submerged installation:

- Continuous operation when pump is fully submerged to top of motor.
- Intermittent operation with max. 20 starts per hour when pump is submerged to middle of motor and with short periods of operation down to the top of the pump housing
  Note: Explosion proof pumps must always be fully submerged

Pumps with cooling jacket in submerged and dry installation:

- Continuous and intermittent operation with max. 20 starts per hour with water level down to the top of the pump housing.

Pumped liquids

pH value: 4-10

Liquid temperature: 0 °C - +40 °C

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

Sound pressure

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

Motor range

Shaft power[kW]	No. of poles
22	10
35	8 - 10
50	8
58	4
68	4

Explosion-proof pumps

Use explosion-proof pumps in potentially explosive environments. The explosion protection classification of the pumps is Ex c d IIB T3. The Ex d IIB T4 protection classification is available on request. Operation of the pump via a frequency converter requires temperature class T3. All installations must be approved by the local authorities.

Pump controllers

S pumps, range 66, can be controlled by the following LC and LCD pump controllers:

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

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

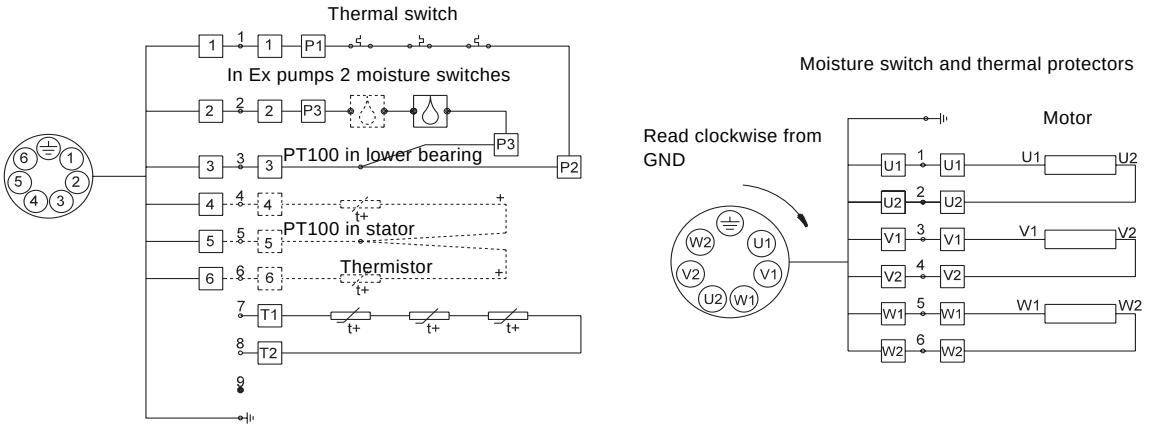
In the following description, “level switch” means level pickup, float switch or level electrode, depending on the pump controller selected.

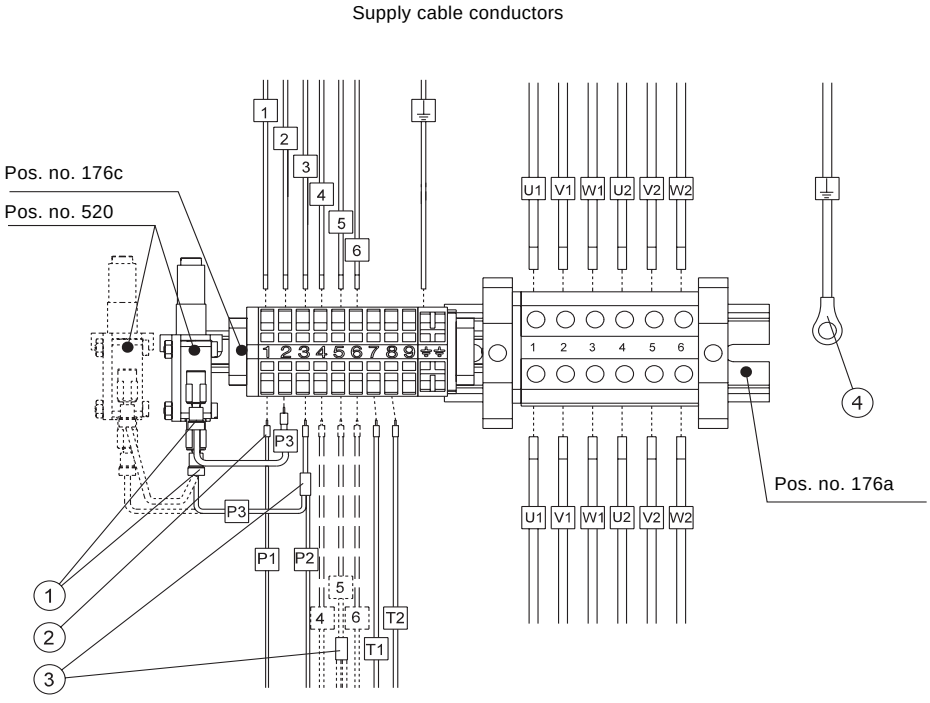
The LC controller is fitted with two or three level switches: One for start and one for stop of pump. The third - optional - level switch, is for high-level alarm.

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

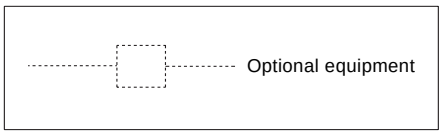
For further settings, see the installation and operating instructions for the pump controller selected.

Wiring diagrams



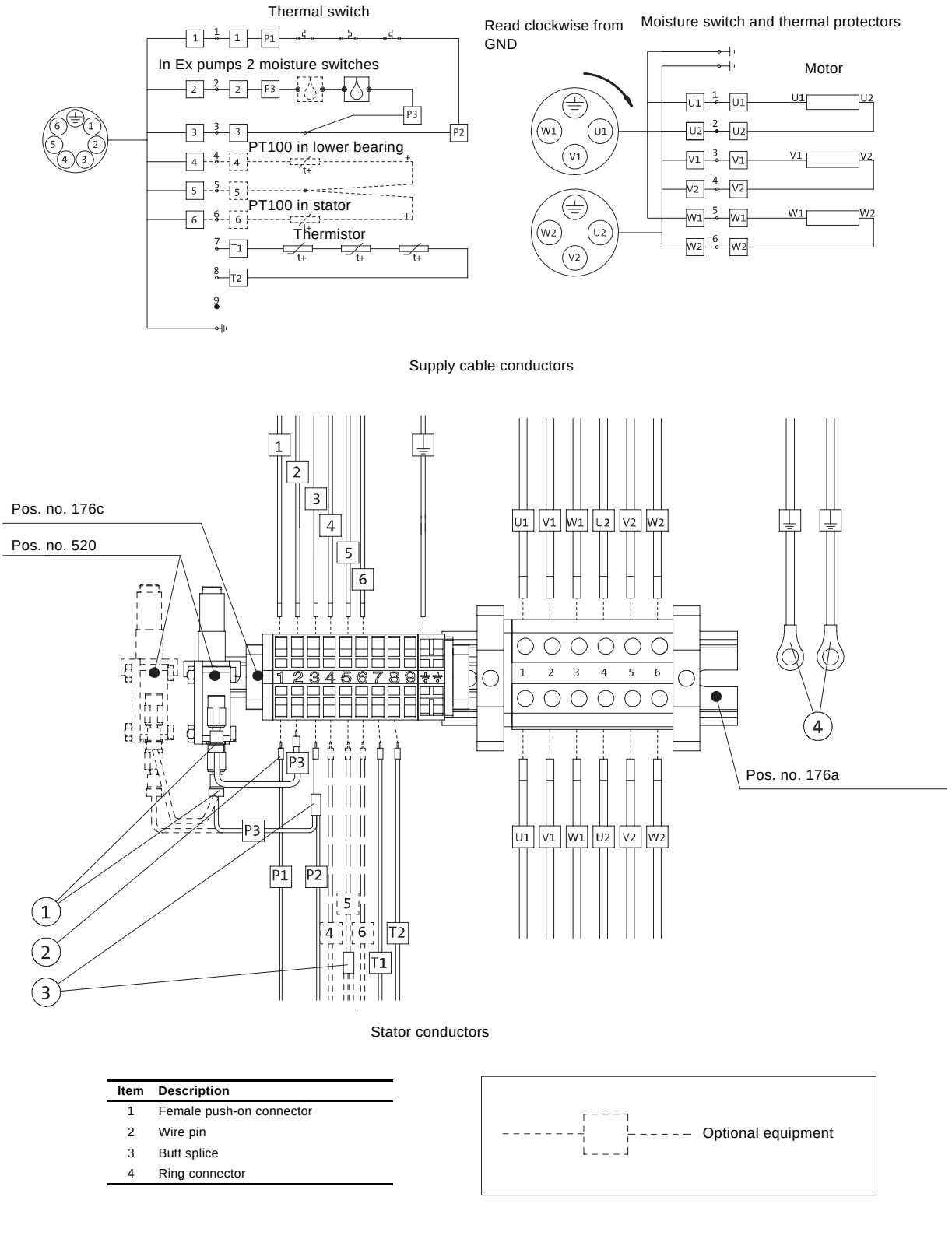


Item	Description
1	Female push-on connector
2	Wire pin
3	Butt splice
4	Ring connector



TM043729 5008

Fig. 13 Wiring diagrams, pumps with one power cable



Item	Description
1	Female push-on connector
2	Wire pin
3	Butt splice
4	Ring connector

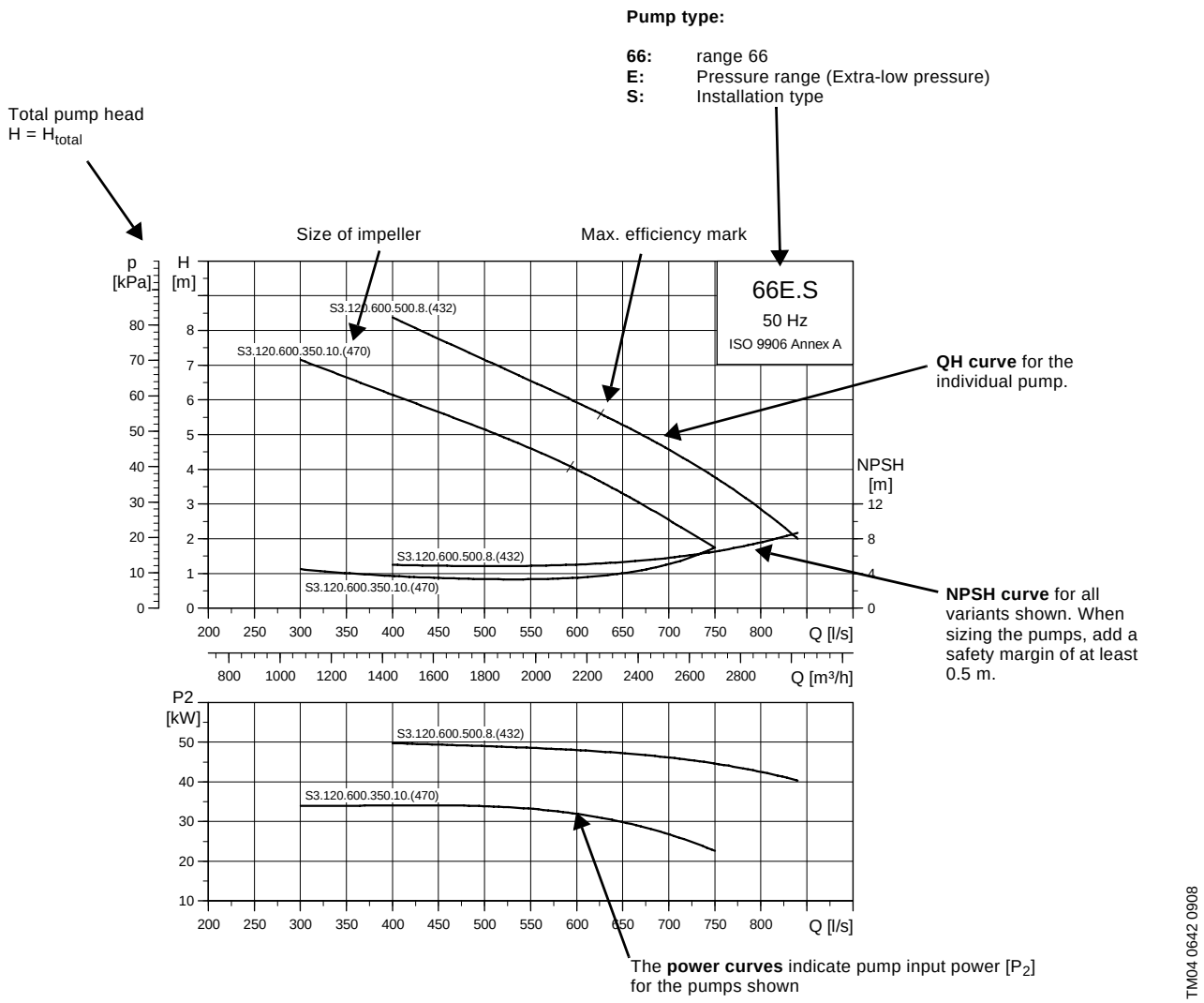
Fig. 14 Wiring diagrams, pumps with two power cables

Curve charts and technical data

The following many pages are divided into sections:

Performance curves and technical data:

How to read the curve charts



Curve conditions

The guidelines below apply to the curves shown in the performance charts on page 34 to page 53.

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

Calculation of total head

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

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

H_{geo}: Height difference between measuring points.

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

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

Performance tests

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

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

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

Certificates

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

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

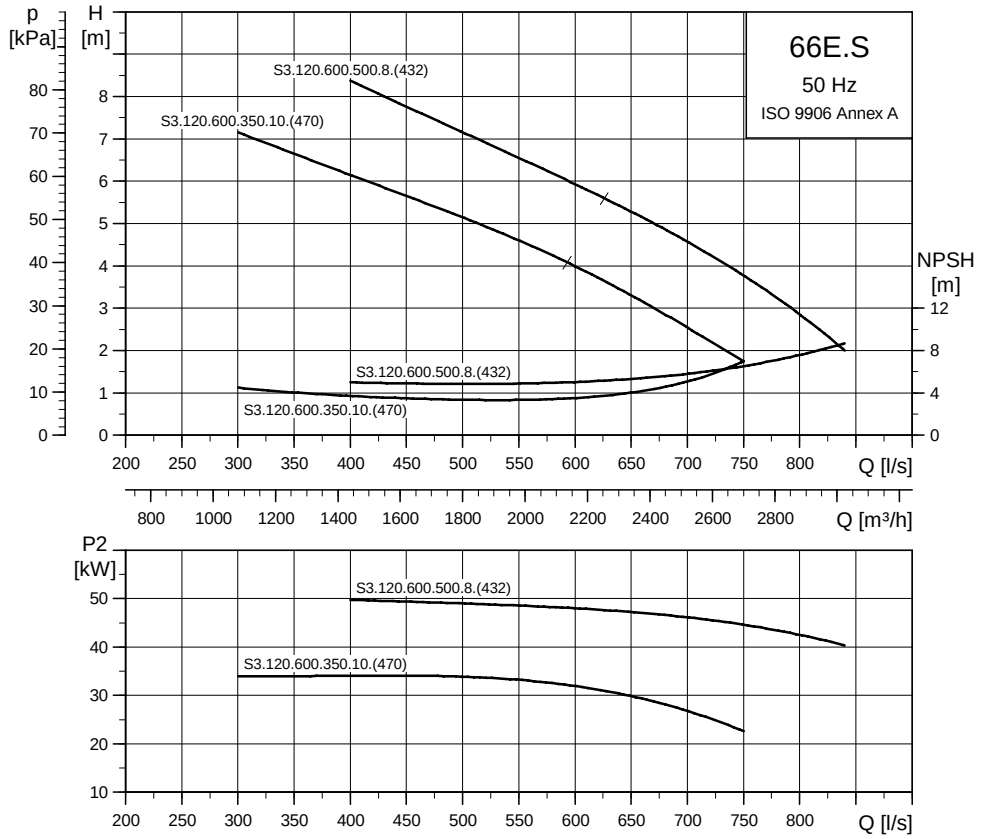
Witness test

When the pumps are being tested or are tested with a certification it is possible for the customer to witness the testing procedure according to ISO 9906.

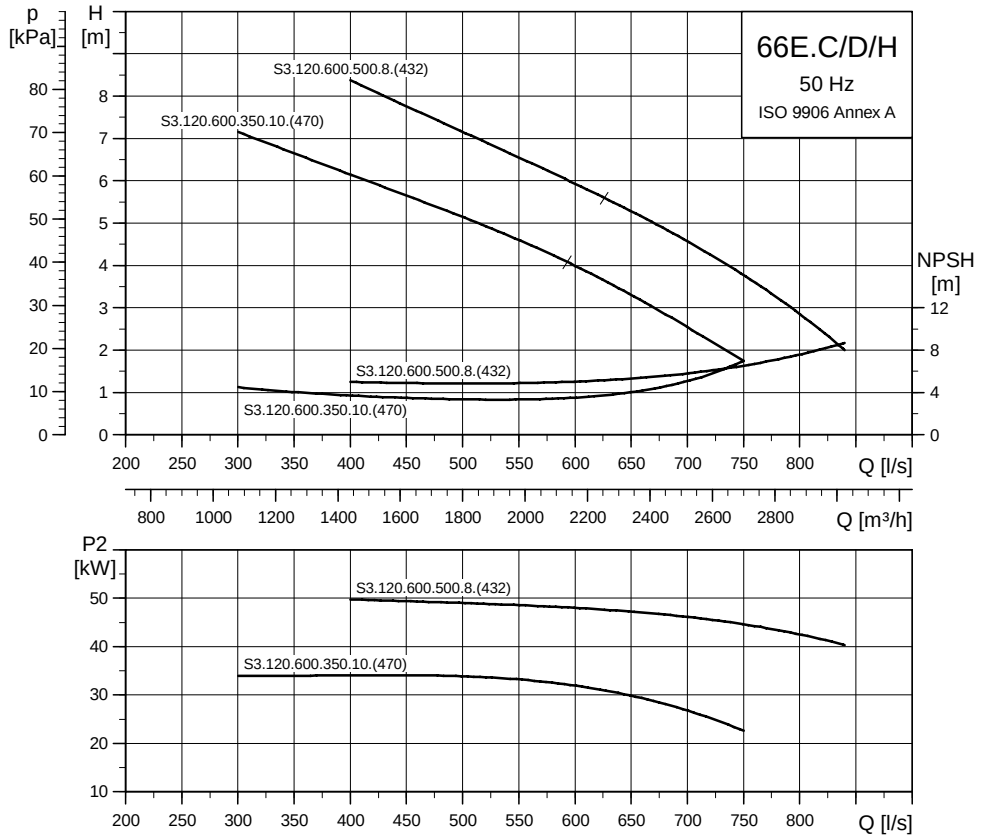
The witness test is not a certificate and will not result in a written statement from Grundfos. The witness itself is the only guarantee that everything is carried out as prescribed in the testing procedure.

If the customer wants to witness test the pump performance, place this request on the order.

Extra-low pressure - 3 x 400/690 V



TM04 0673 0908



TM04 0674 0908

Technical data

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.120.600.350.10.66E.S.470.G.N.D	S	1757	2124	886	1350	1506	450	-	600	840	95112765
S3.120.600.350.10.66E.C.470.G.N.D	C	1757	2124	886	1350	1506	450	-	600	1000	95112766
S3.120.600.350.10.66E.D.470.G.N.D	D	1723	2124	886	1350	1506	417	DN 500	600	1050	95112767
S3.120.600.350.10.66E.H.470.G.N.D	H	1723	2124	886	1350	1506	417	DN 500	600	1050	96785366
S3.120.600.500.8.66E.S.432.G.N.D	S	1757	2124	886	1350	1506	450	-	600	1050	95112771
S3.120.600.500.8.66E.C.432.G.N.D	C	1757	2124	886	1350	1506	450	-	600	1200	95112772
S3.120.600.500.8.66E.D.432.G.N.D	D	1723	2124	886	1350	1506	417	DN 500	600	1400	95112773
S3.120.600.500.8.66E.H.432.G.N.D	H	1723	2124	886	1350	1506	417	DN 500	600	1400	96785376

With 10 m cable

Electrical data

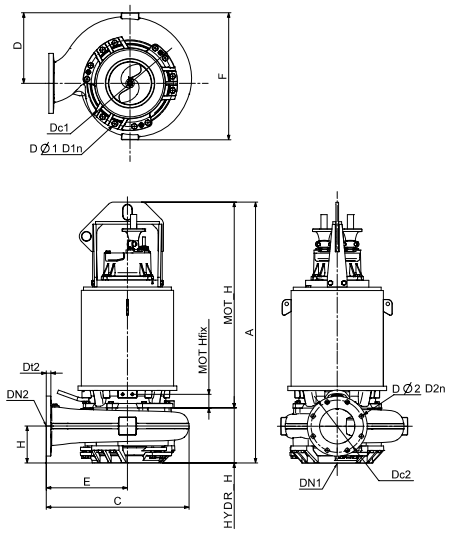
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N [A]	I_{start} [A]	η_{motor} [%] 1/2	3/4	1/1	Cos φ 1/2	3/4	1/1	Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
S3.120.600.350.10.66E.S.470.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.C.470.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.D.470.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.H.470.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.500.8.66E.S.432.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.C.432.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.D.432.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.H.432.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.1443	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.120.600.350.10.66E.S.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.C.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.D.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.H.470.G.N.D	470	120	10	20
S3.120.600.500.8.66E.S.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.C.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.D.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.H.432.G.N.D	432	120	10	20

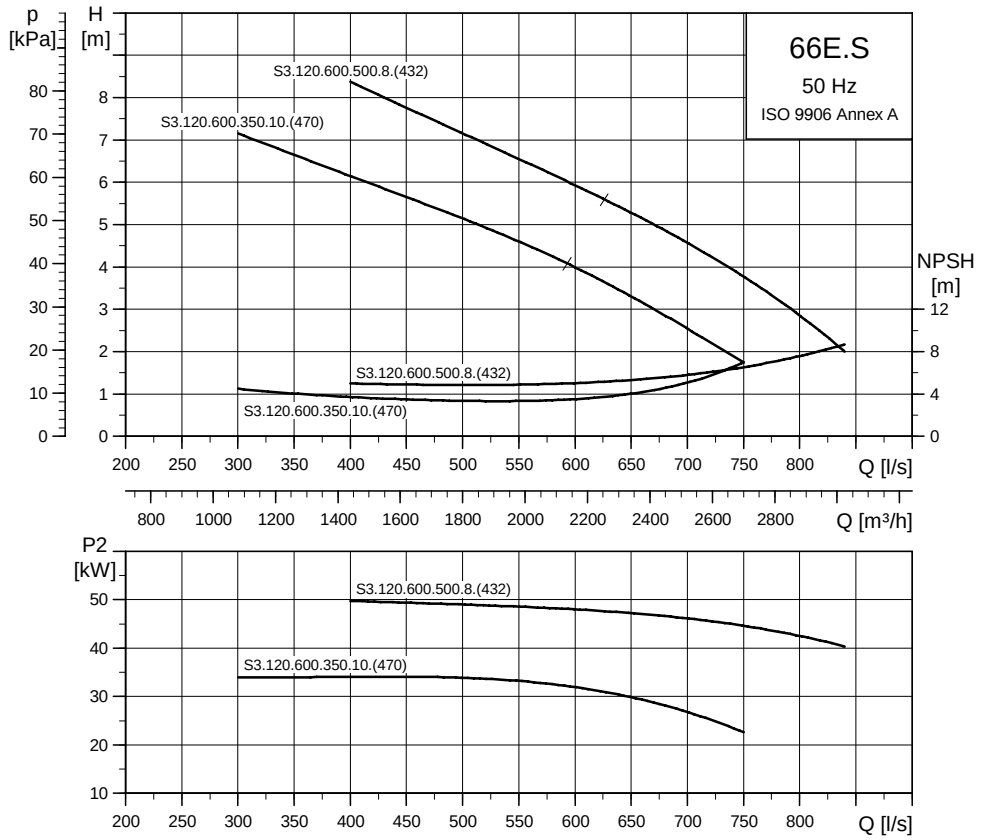
Dimensional sketches



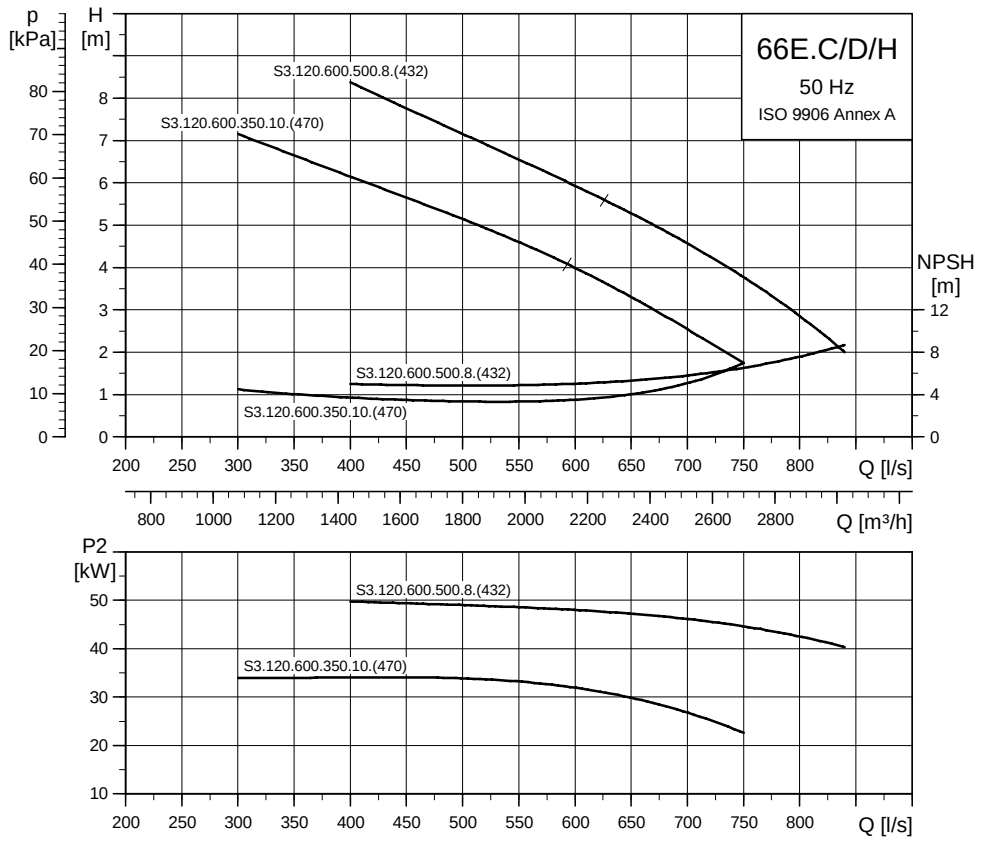
TM04 2412 2508

Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Extra-low pressure - 3 x 415 V



TM04 0673 0908



TM04 0674 0908

Technical data

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.120.600.350.10.66E.S.470.G.N.D	S	1757	2124	886	1350	1506	450	-	600	1000	96785363
S3.120.600.350.10.66E.C.470.G.N.D	C	1757	2124	886	1350	1506	450	-	600	1050	96785364
S3.120.600.350.10.66E.D.470.G.N.D	D	1723	2124	886	1350	1506	417	DN 500	600	1050	96785365
S3.120.600.350.10.66E.H.470.G.N.D	H	1723	2124	886	1350	1506	417	DN 500	600	1050	96785367
S3.120.600.500.8.66E.S.432.G.N.D	S	1757	2124	886	1350	1506	450	-	600	1200	96785373
S3.120.600.500.8.66E.C.432.G.N.D	C	1757	2124	886	1350	1506	450	-	600	1400	96785374
S3.120.600.500.8.66E.D.432.G.N.D	D	1723	2124	886	1350	1506	417	DN 500	600	1400	96785375
S3.120.600.500.8.66E.H.432.G.N.D	H	1723	2124	886	1350	1506	417	DN 500	600	1400	96785377

With 10 m cable

Electrical data

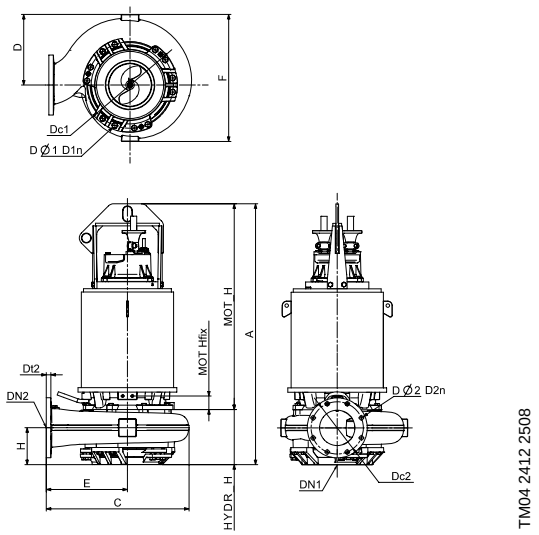
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia	Breakdown torque [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1	[kgm²]	M_{max} [Nm]
S3.120.600.350.10.66E.S.470.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.C.470.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.D.470.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.350.10.66E.H.470.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.656	1087
S3.120.600.500.8.66E.S.432.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.C.432.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.D.432.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.1443	1532
S3.120.600.500.8.66E.H.432.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.1443	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.120.600.350.10.66E.S.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.C.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.D.470.G.N.D	470	120	10	20
S3.120.600.350.10.66E.H.470.G.N.D	470	120	10	20
S3.120.600.500.8.66E.S.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.C.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.D.432.G.N.D	432	120	10	20
S3.120.600.500.8.66E.H.432.G.N.D	432	120	10	20

Dimensional sketches



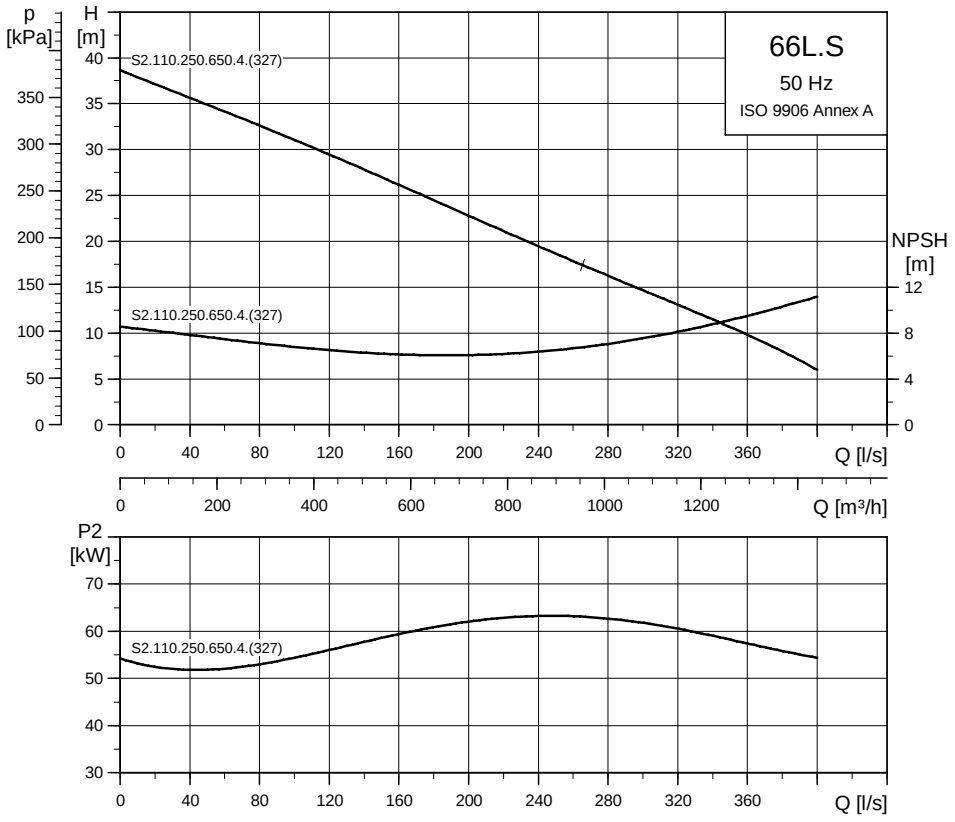
TM04 2412 2508

Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

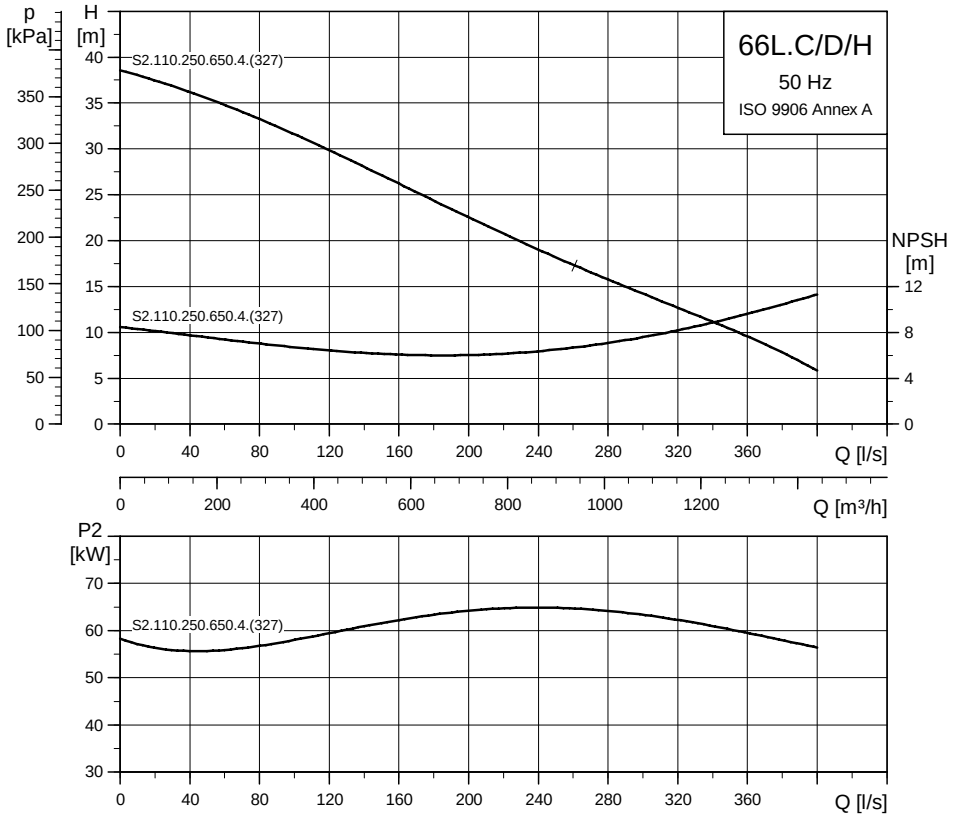
Performance curves

Low pressure - 3 x 400/690 V

S2.110.250.650



TM04 0677 0908



TM04 0678 0908

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S2.110.250.650.4.66L.S.327.G.N.D	S	1516	1070	410	730	900	233	-	250	810	95112756
S2.110.250.650.4.66L.C.327.G.N.D	C	1516	1070	410	730	900	233	-	250	810	95112757
S2.110.250.650.4.66L.D.327.G.N.D	D	1516	1070	410	730	900	233	DN 300	250	840	95112758
S2.110.250.650.4.66L.H.327.G.N.D	H	1516	1070	410	730	900	233	DN 300	250	840	96785351

With 10 m cable

Electrical data

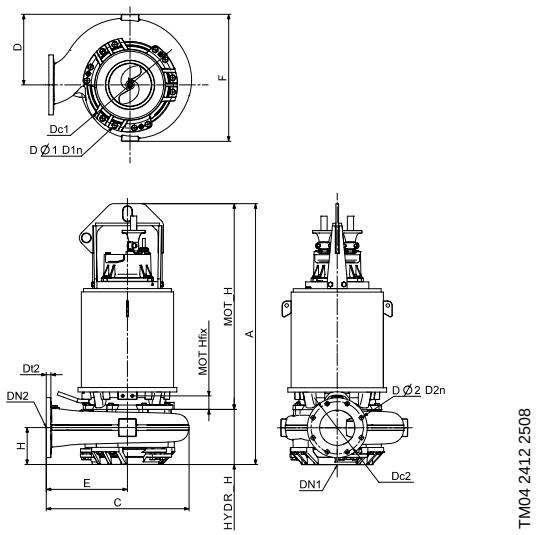
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S2.110.250.650.4.66L.S.327.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.C.327.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.D.327.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.H.327.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.1743	1096

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S2.110.250.650.4.66L.S.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.C.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.D.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.H.327.G.N.D	327	110	10	20

Dimensional sketches



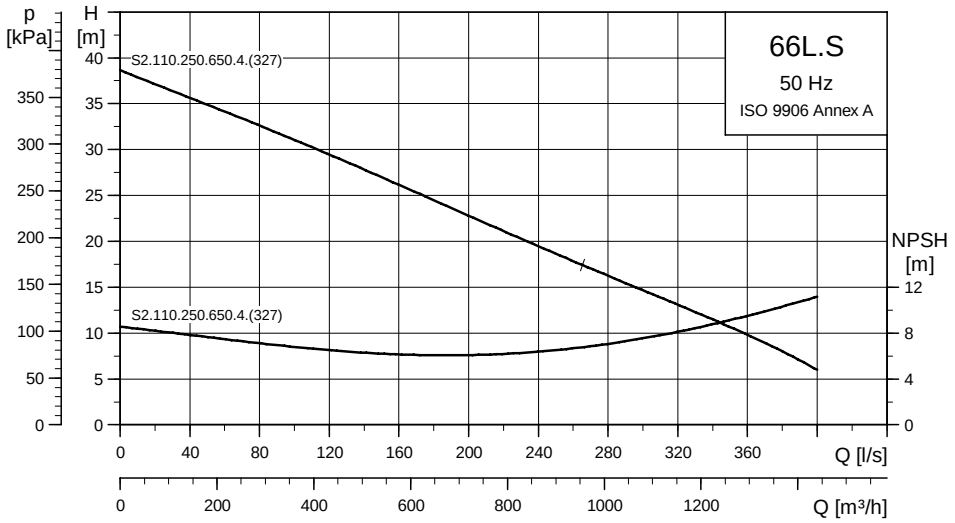
TM04 2412 2508

Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

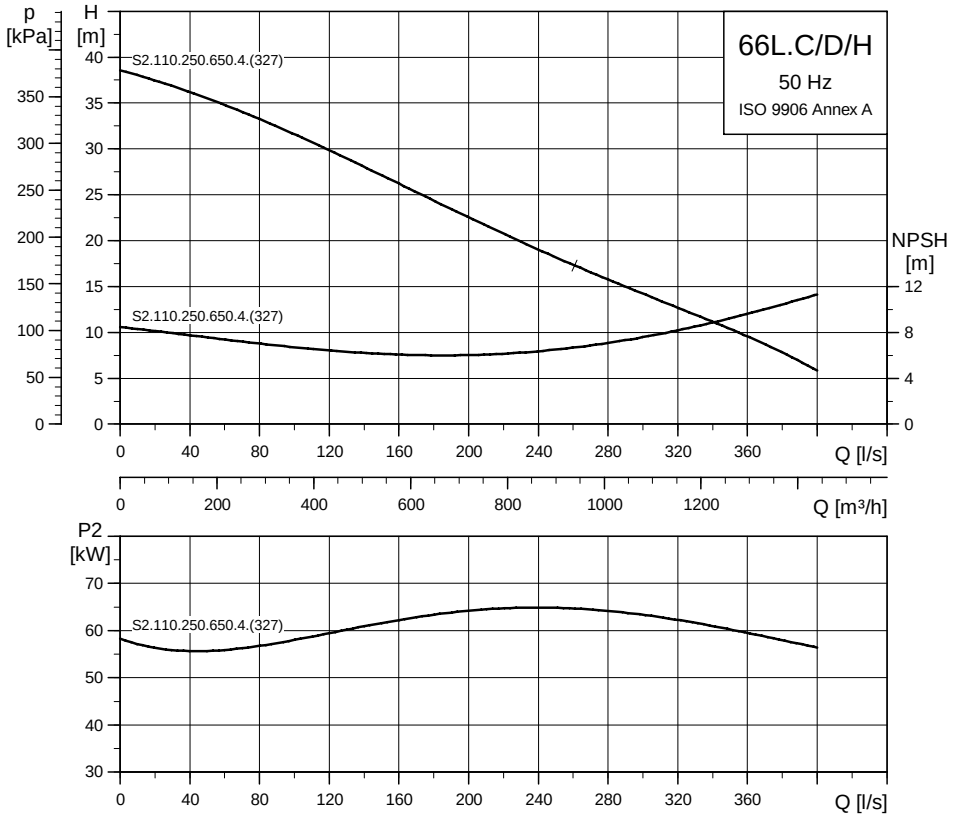
Performance curves

Low pressure - 3 x 415 V

S2.110.250.650



TM04 0677 0908



TM04 0678 0908

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S2.110.250.650.4.66L.S.327.G.N.D	S	1516	1070	410	730	900	233	-	250	810	96785348
S2.110.250.650.4.66L.C.327.G.N.D	C	1516	1070	410	730	900	233	-	250	840	96785349
S2.110.250.650.4.66L.D.327.G.N.D	D	1516	1070	410	730	900	233	DN 300	250	840	96785350
S2.110.250.650.4.66L.H.327.G.N.D	H	1516	1070	410	730	900	233	DN 300	250	840	96785352

With 10 m cable

Electrical data

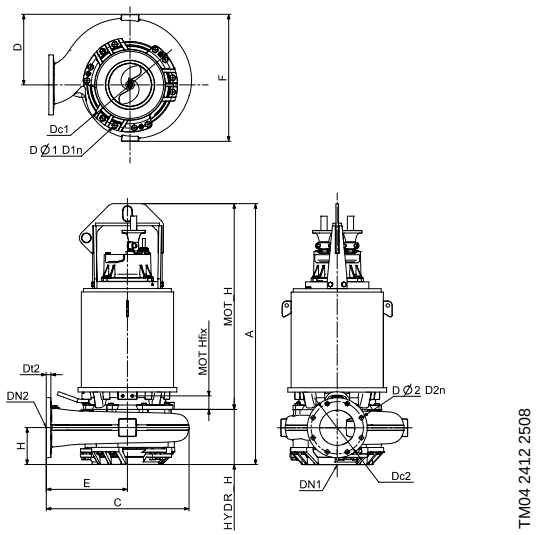
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S2.110.250.650.4.66L.S.327.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.C.327.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.D.327.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.1743	1096
S2.110.250.650.4.66L.H.327.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.1743	1096

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S2.110.250.650.4.66L.S.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.C.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.D.327.G.N.D	327	110	10	20
S2.110.250.650.4.66L.H.327.G.N.D	327	110	10	20

Dimensional sketches

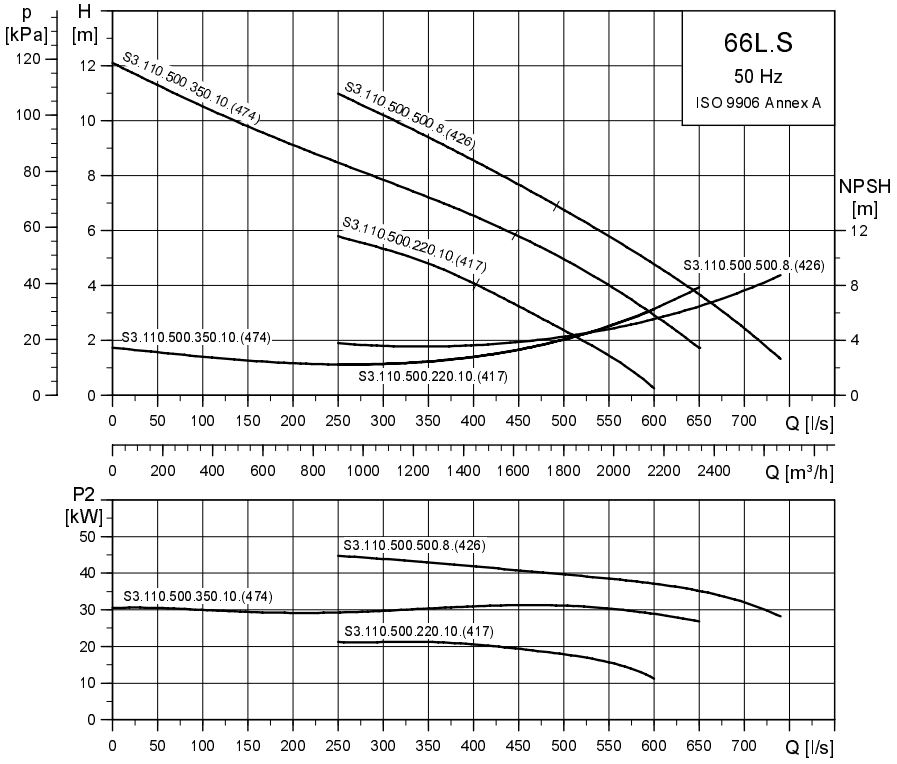


TM04 2412 2508

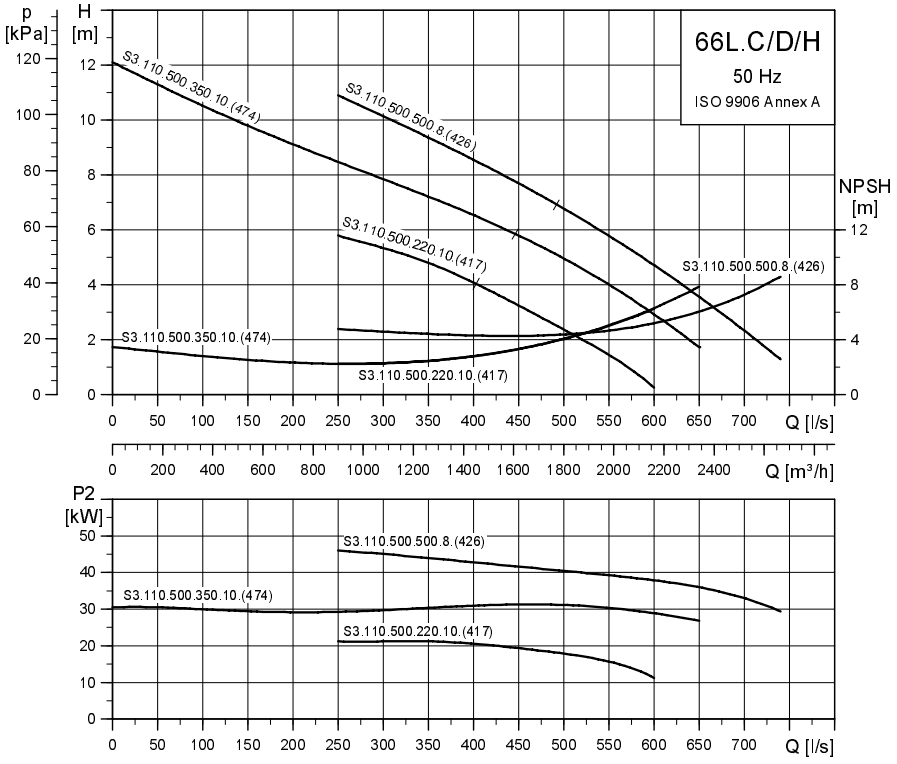
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Low pressure - 3 x 400/690 V

S3.110.500



TM04 0679 2709



TM04 0680 2709

Technical data

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.110.500.220.10.66L.S.417.G.N.D	S	1676	1843	719	1200	1269	380	-	500	840	95112762
S3.110.500.220.10.66L.C.417.G.N.D	C	1676	1843	719	1200	1269	380	-	500	810	95112763
S3.110.500.220.10.66L.D.417.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	840	95112764
S3.110.500.220.10.66L.H.417.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	840	96785361
S3.110.500.350.10.66L.S.474.G.N.D	S	1676	1843	719	1200	1269	380	-	500	1050	95112768
S3.110.500.350.10.66L.C.474.G.N.D	C	1676	1843	719	1200	1269	380	-	500	1000	95112769
S3.110.500.350.10.66L.D.474.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	1050	95112770
S3.110.500.350.10.66L.H.474.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	1050	96785371
S3.110.500.500.8.66L.S.426.G.N.D	S	1676	1843	719	1200	1269	380	-	500	1400	95112774
S3.110.500.500.8.66L.C.426.G.N.D	C	1676	1843	719	1200	1269	380	-	500	1200	95112775
S3.110.500.500.8.66L.D.426.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	1300	95112776
S3.110.500.500.8.66L.H.426.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	1300	96785381

With 10 m cable

Electrical data

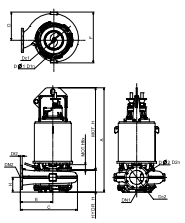
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S3.110.500.220.10.66L.S.417.G.N.D	25	22	10	585	Y/D	53	282	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.C.417.G.N.D	25	22	10	585	Y/D	53	282	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.D.417.G.N.D	25	22	10	585	Y/D	53	282	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.H.474.G.N.D	25	22	10	585	Y/D	53	282	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.350.10.66L.S.474.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.C.474.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.D.474.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.H.474.G.N.D	40	35	10	585	Y/D	80	375	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.500.8.66L.S.426.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.C.426.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.D.426.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.H.426.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.9057	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.110.500.220.10.66L.S.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.C.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.D.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.H.417.G.N.D	417	110	10	20
S3.110.500.350.10.66L.S.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.C.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.D.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.H.474.G.N.D	474	110	10	20
S3.110.500.500.8.66L.S.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.C.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.D.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.H.426.G.N.D	426	110	10	20

Dimensional sketches

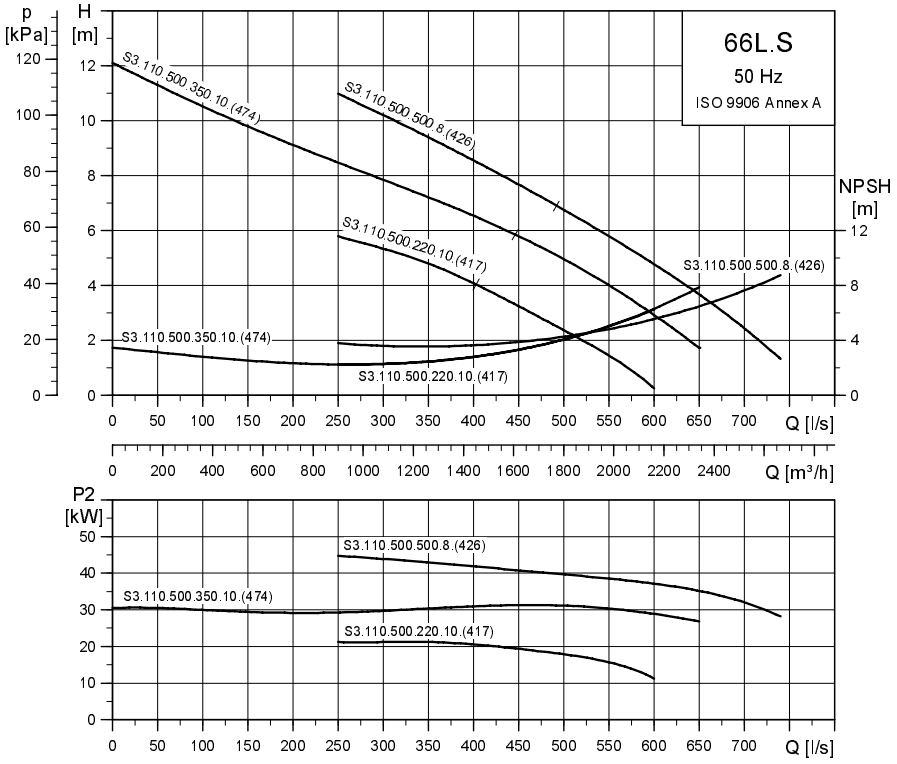


TM04 2412 2508

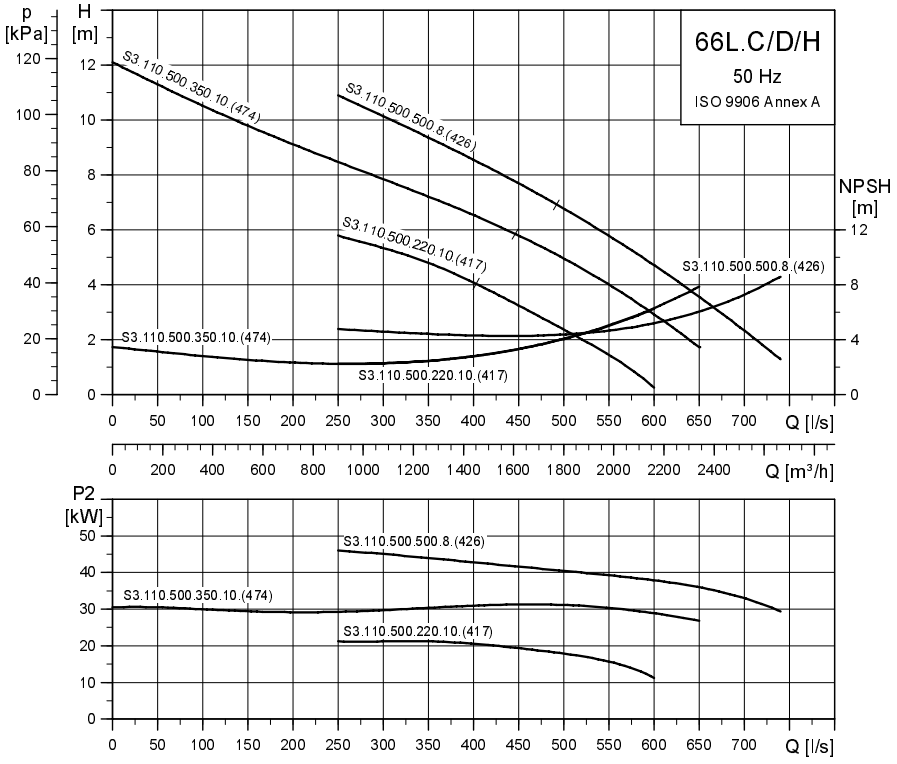
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Low pressure - 3 x 415 V

S3.110.500



TM04 0679 0908



TM04 0680 0908

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.110.500.220.10.66L.S.417.G.N.D	S	1676	1843	719	1200	1269	380	-	500	810	96785358
S3.110.500.220.10.66L.C.417.G.N.D	C	1676	1843	719	1200	1269	380	-	500	840	96785359
S3.110.500.220.10.66L.D.417.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	840	96785360
S3.110.500.220.10.66L.H.417.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	840	96785362
S3.110.500.350.10.66L.S.474.G.N.D	S	1676	1843	719	1200	1269	380	-	500	1000	96785368
S3.110.500.350.10.66L.C.474.G.N.D	C	1676	1843	719	1200	1269	380	-	500	1050	96785369
S3.110.500.350.10.66L.D.474.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	1050	96785370
S3.110.500.350.10.66L.H.474.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	1050	96785372
S3.110.500.500.8.66L.S.426.G.N.D	S	1676	1843	719	1200	1269	380	-	500	1200	96785378
S3.110.500.500.8.66L.C.426.G.N.D	C	1676	1843	719	1200	1269	380	-	500	1200	96785379
S3.110.500.500.8.66L.D.426.G.N.D	D	1629	1843	719	1200	1269	333	DN 500	500	1300	96785380
S3.110.500.500.8.66L.H.426.G.N.D	H	1629	1843	719	1200	1269	333	DN 500	500	1300	96785382

With 10 m cable

Electrical data

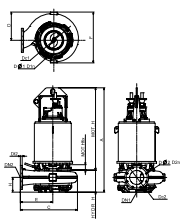
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S3.110.500.220.10.66L.S.417.G.N.D	25	22	10	585	Y/D	51	272	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.C.417.G.N.D	25	22	10	585	Y/D	51	272	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.D.417.G.N.D	25	22	10	585	Y/D	51	272	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.220.10.66L.H.417.G.N.D	25	22	10	585	Y/D	51	272	84	87	88	0.52	0.62	0.69	2.7713	936
S3.110.500.350.10.66L.S.474.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.C.474.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.D.474.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.350.10.66L.H.474.G.N.D	40	35	10	585	Y/D	77	361	87	88	88	0.55	0.65	0.72	3.4577	1087
S3.110.500.500.8.66L.S.426.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.C.426.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.D.426.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.9057	1532
S3.110.500.500.8.66L.H.426.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.9057	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.110.500.220.10.66L.S.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.C.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.D.417.G.N.D	417	110	10	20
S3.110.500.220.10.66L.H.417.G.N.D	417	110	10	20
S3.110.500.350.10.66L.S.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.C.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.D.474.G.N.D	474	110	10	20
S3.110.500.350.10.66L.H.474.G.N.D	474	110	10	20
S3.110.500.500.8.66L.S.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.C.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.D.426.G.N.D	426	110	10	20
S3.110.500.500.8.66L.H.426.G.N.D	426	110	10	20

Dimensional sketches

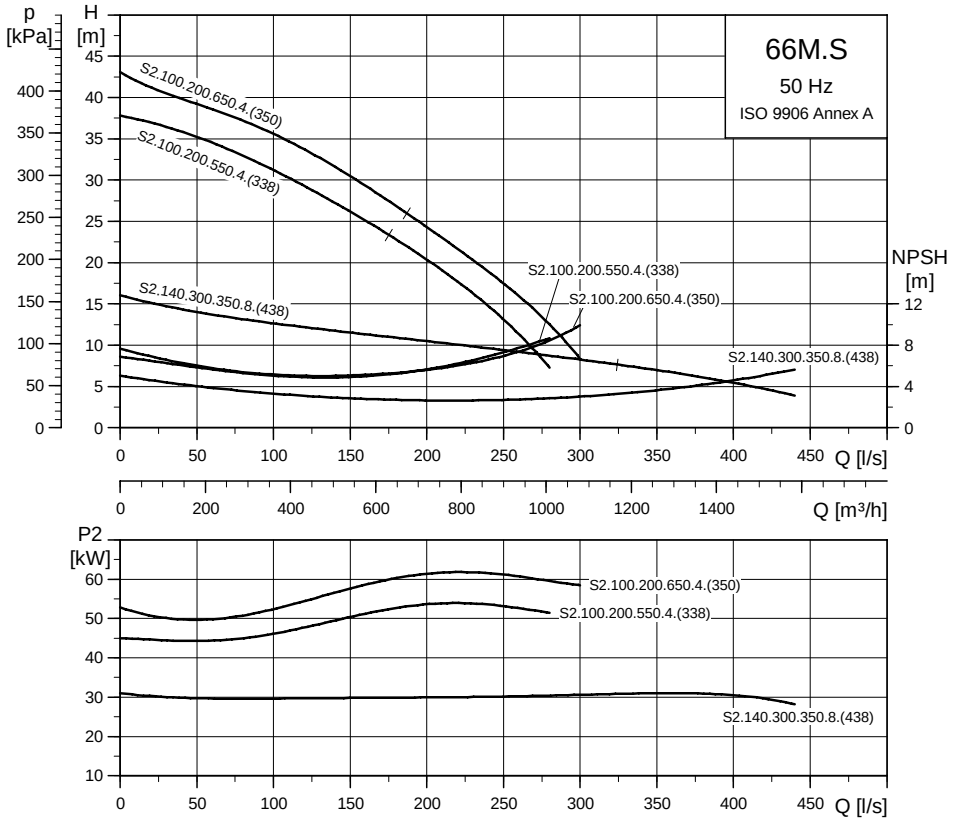


TM04 2412 2508

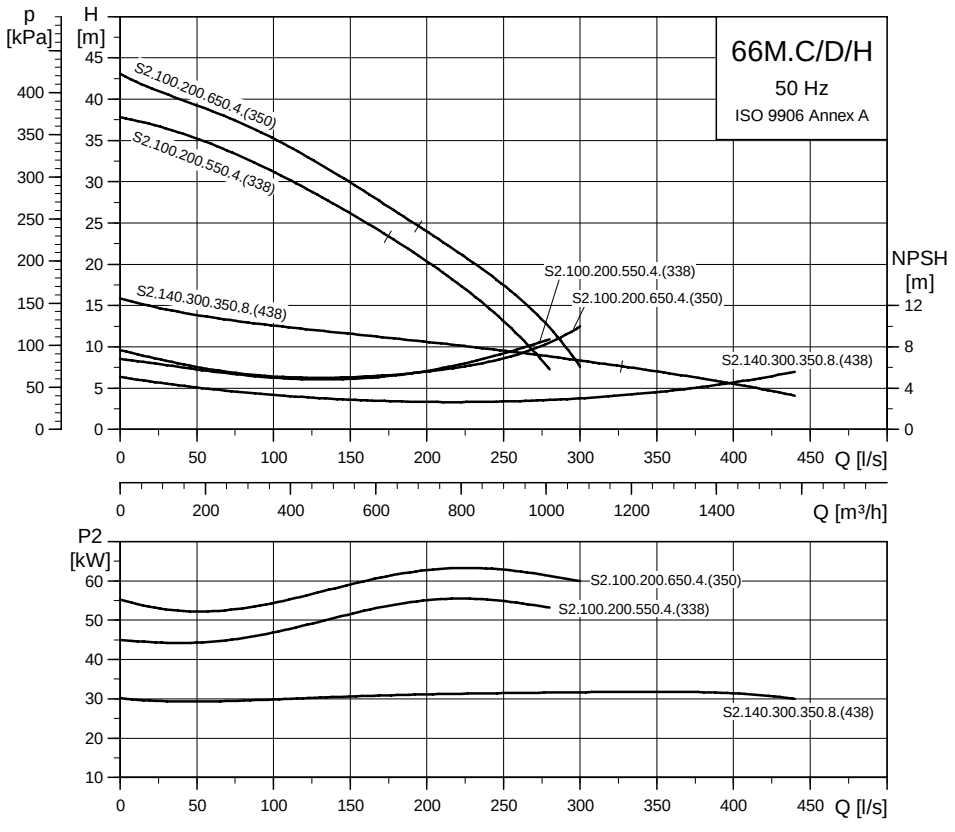
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Medium pressure - 3 x 400/690 V

S2



TM04 0681 0908



TM04 0682 0908

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S2.100.200.550.4.66M.S.338.G.N.D	S	1484	809	400	460	720	215	-	200	740	95112753
S2.100.200.550.4.66M.C.338.G.N.D	C	1484	809	400	460	720	215	-	200	760	95112754
S2.100.200.550.4.66M.H.338.G.N.D	H	1484	809	400	460	720	215	DN 250	200	760	95112755
S2.100.200.550.4.66M.D.338.G.N.D	D	1484	809	400	460	720	215	DN 250	200	760	96785345
S2.100.200.650.4.66M.S.350.G.N.D	S	1484	809	400	460	720	215	-	200	840	95112759
S2.100.200.650.4.66M.C.350.G.N.D	C	1484	809	400	460	720	215	-	200	810	95112760
S2.100.200.650.4.66M.H.350.G.N.D	H	1484	809	400	460	720	215	DN 250	200	840	95112761
S2.100.200.650.4.66M.D.350.G.N.D	D	1484	809	400	460	720	215	DN 250	200	840	96785355
S2.140.300.350.8.66M.S.438.G.N.D	S	1536	1139	522	700	907	225	-	300	855	95112747
S2.140.300.350.8.66M.C.438.G.N.D	C	1536	1139	522	700	907	225	-	300	965	95112748
S2.140.300.350.8.66M.D.438.G.N.D	D	1590	1139	522	700	907	279	DN 300	300	965	95112749
S2.140.300.350.8.66M.H.438.G.N.D	H	1590	1139	522	700	907	279	DN 300	300	965	96785336

With 10 m cable

Electrical data

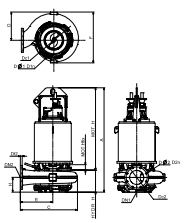
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S2.100.200.550.4.66M.S.338.G.N.D	62	58	4	1482	Y/D	115	827	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.C.338.G.N.D	62	58	4	1482	Y/D	115	827	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.H.338.G.N.D	62	58	4	1482	Y/D	115	827	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.D.338.G.N.D	62	58	4	1482	Y/D	115	827	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.650.4.66M.S.350.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.C.350.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.H.350.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.D.350.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.27	1096
S2.140.300.350.8.66M.S.438.G.N.D	40	35	8	732	Y/D	76	376	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.C.438.G.N.D	40	35	8	732	Y/D	76	376	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.D.438.G.N.D	40	35	8	732	Y/D	76	376	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.H.438.G.N.D	40	35	8	732	Y/D	76	376	87	88	88	0.59	0.70	0.76	2.062	989

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S2.100.200.550.4.66M.S.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.C.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.H.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.D.338.G.N.D	338	100	10	20
S2.100.200.650.4.66M.S.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.C.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.H.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.D.350.G.N.D	350	100	10	20
S2.140.300.350.8.66M.S.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.C.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.D.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.H.438.G.N.D	438	140	10	20

Dimensional sketches



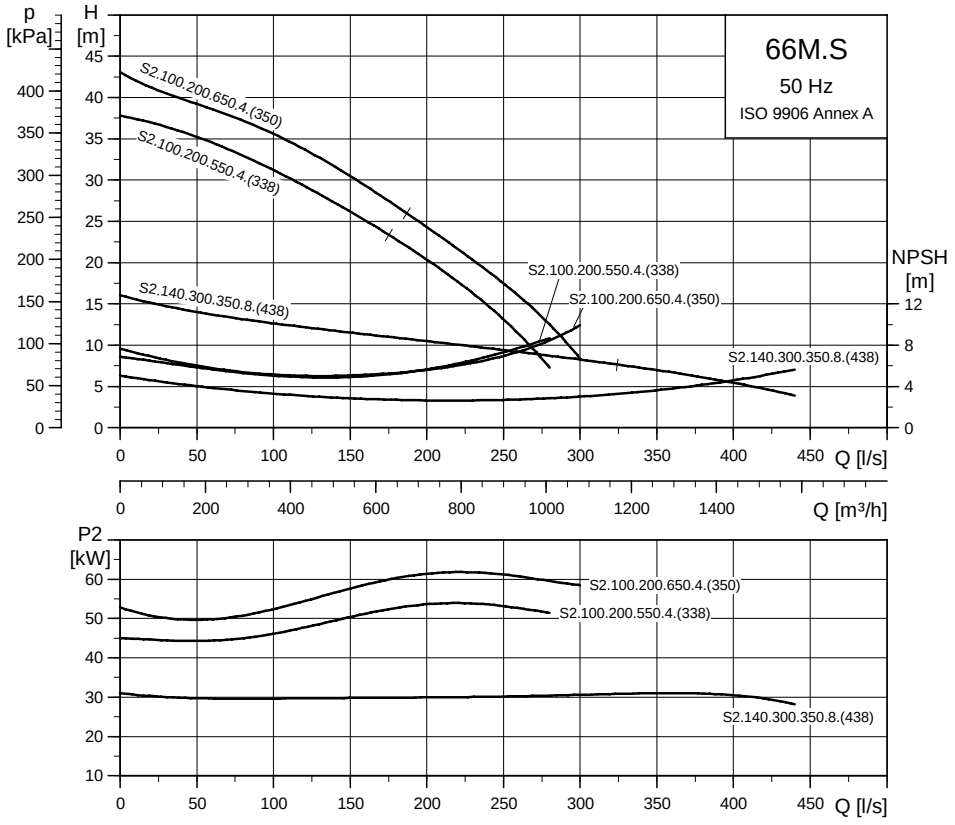
TM04 2412 2508

Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

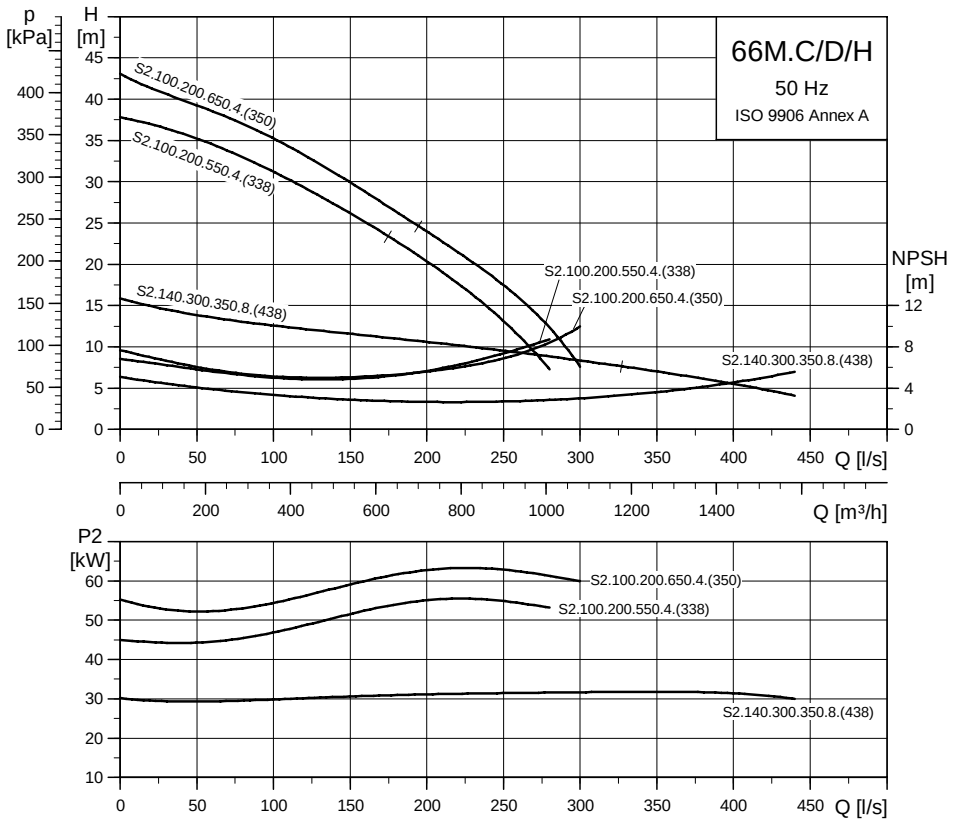
Performance curves

Medium pressure - 3 x 415 V

S2



TM04 0681 0908



TM04 0682 0908

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S2.100.200.550.4.66M.S.338.G.N.D	S	1484	809	400	460	720	215	-	200	740	96785343
S2.100.200.550.4.66M.C.338.G.N.D	C	1484	809	400	460	720	215	-	200	760	96785344
S2.100.200.550.4.66M.D.338.G.N.D	D	1484	809	400	460	720	215	DN 250	200	760	96785346
S2.100.200.550.4.66M.H.338.G.N.D	H	1484	809	400	460	720	215	DN 250	200	760	96785347
S2.100.200.650.4.66M.S.350.G.N.D	S	1484	809	400	460	720	215	-	200	810	96785353
S2.100.200.650.4.66M.C.350.G.N.D	C	1484	809	400	460	720	215	-	200	840	96785354
S2.100.200.650.4.66M.D.350.G.N.D	D	1484	809	400	460	720	215	DN 250	200	840	96785356
S2.100.200.650.4.66M.H.350.G.N.D	H	1484	809	400	460	720	215	DN 250	200	840	96785357
S2.140.300.350.8.66M.S.438.G.N.D	S	1536	1139	522	700	907	225	-	300	855	96785333
S2.140.300.350.8.66M.C.438.G.N.D	C	1536	1139	522	700	907	225	-	300	965	96785334
S2.140.300.350.8.66M.D.438.G.N.D	D	1590	1139	522	700	907	279	DN 300	300	965	96785335
S2.140.300.350.8.66M.H.438.G.N.D	H	1590	1139	522	700	907	279	DN 300	300	965	96785337

With 10 m cable

Electrical data

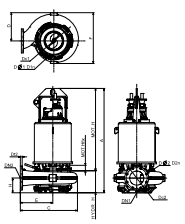
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S2.100.200.550.4.66M.S.338.G.N.D	62	58	4	1482	Y/D	111	797	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.C.338.G.N.D	62	58	4	1482	Y/D	111	797	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.D.338.G.N.D	62	58	4	1482	Y/D	111	797	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.550.4.66M.H.338.G.N.D	62	58	4	1482	Y/D	111	797	91	93	93	0.62	0.73	0.78	1.1887	1096
S2.100.200.650.4.66M.S.350.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.C.350.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.D.350.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.27	1096
S2.100.200.650.4.66M.H.350.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.27	1096
S2.140.300.350.8.66M.S.438.G.N.D	40	35	8	732	Y/D	73	362	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.C.438.G.N.D	40	35	8	732	Y/D	73	362	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.D.438.G.N.D	40	35	8	732	Y/D	73	362	87	88	88	0.59	0.70	0.76	2.062	989
S2.140.300.350.8.66M.H.438.G.N.D	40	35	8	732	Y/D	73	362	87	88	88	0.59	0.70	0.76	2.062	989

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S2.100.200.550.4.66M.S.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.C.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.D.338.G.N.D	338	100	10	20
S2.100.200.550.4.66M.H.338.G.N.D	338	100	10	20
S2.100.200.650.4.66M.S.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.C.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.D.350.G.N.D	350	100	10	20
S2.100.200.650.4.66M.H.350.G.N.D	350	100	10	20
S2.140.300.350.8.66M.S.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.C.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.D.438.G.N.D	438	140	10	20
S2.140.300.350.8.66M.H.438.G.N.D	438	140	10	20

Dimensional sketches

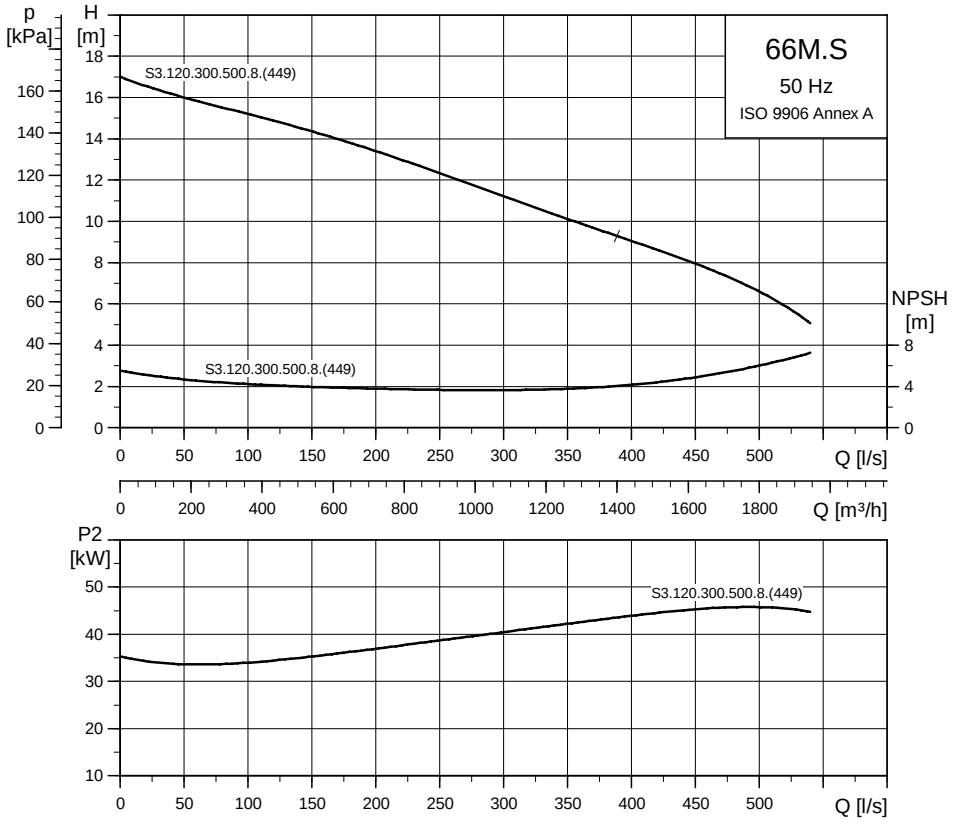


TM04 2412 2508

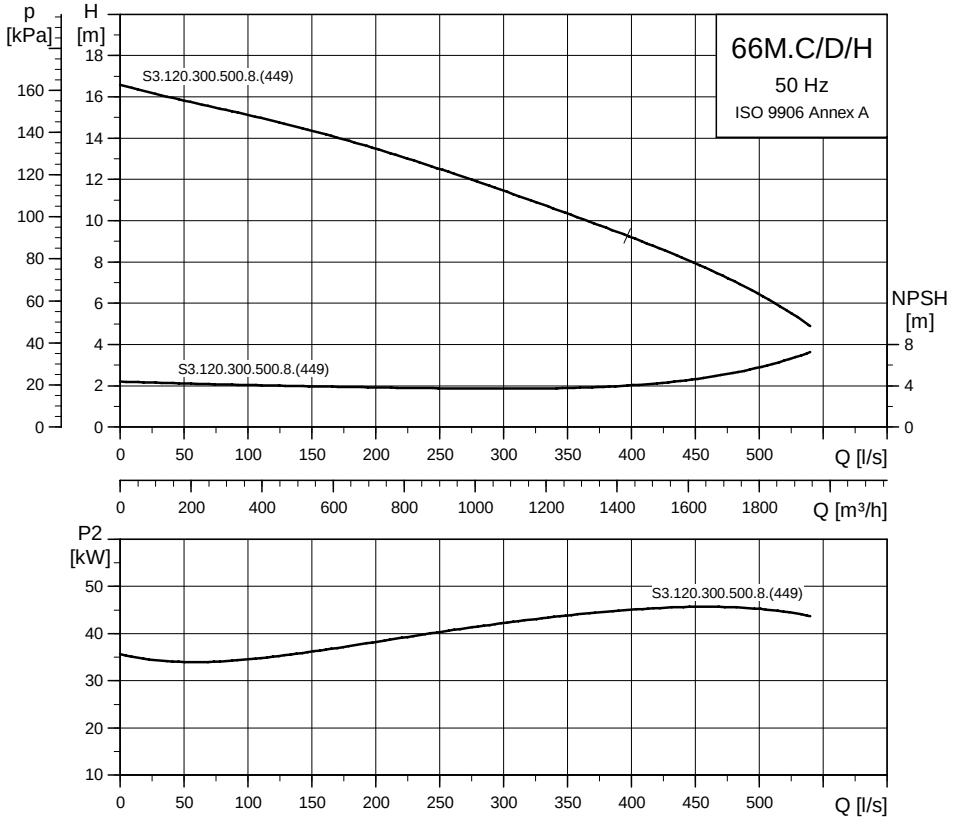
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Medium pressure - 3 x 400/690 V

S3



TM04 1944 1308



TM04 1945 1308

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.120.300.500.8.66M.S.449.G.N.D	S	1761	1139	522	700	907	450	-	300	1300	95112777
S3.120.300.500.8.66M.C.449.G.N.D	C	1761	1139	522	700	907	450	-	300	1050	95112778
S3.120.300.500.8.66M.D.449.G.N.D	D	1590	1139	522	700	907	279	DN 300	300	1100	95112779
S3.120.300.500.8.66M.H.449.G.N.D	H	1590	1139	522	700	907	279	DN 300	300	1100	96785386

With 10 m cable

Electrical data

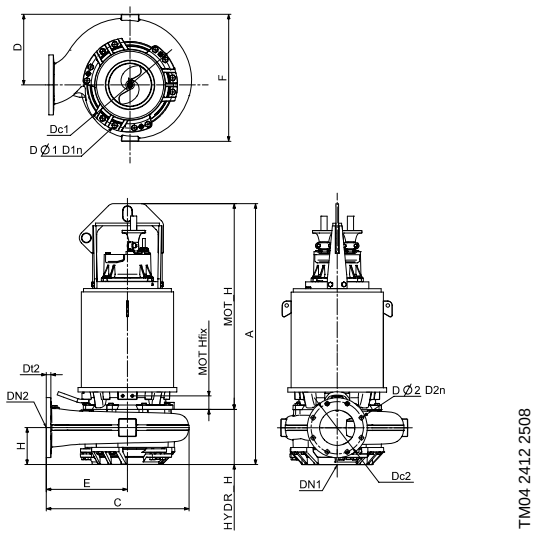
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S3.120.300.500.8.66M.S.449.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.C.449.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.D.449.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.H.449.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	2.437	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.120.300.500.8.66M.S.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.C.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.D.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.H.449.G.N.D	449	120	10	20

Dimensional sketches

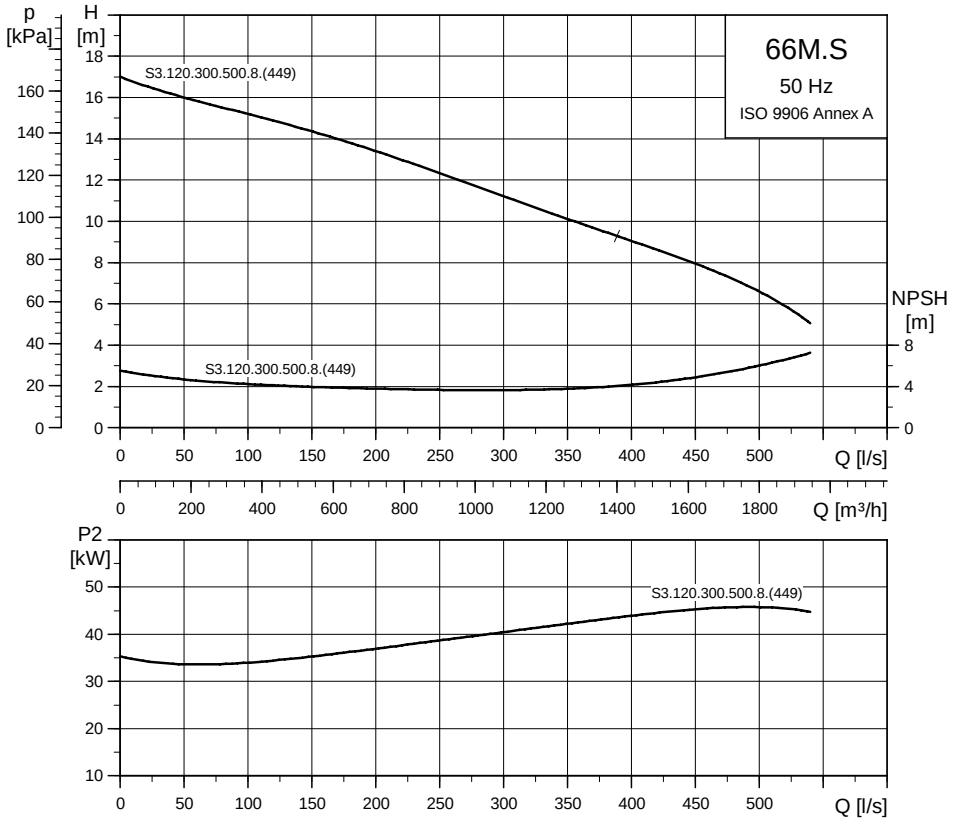


TM04 2412 2508

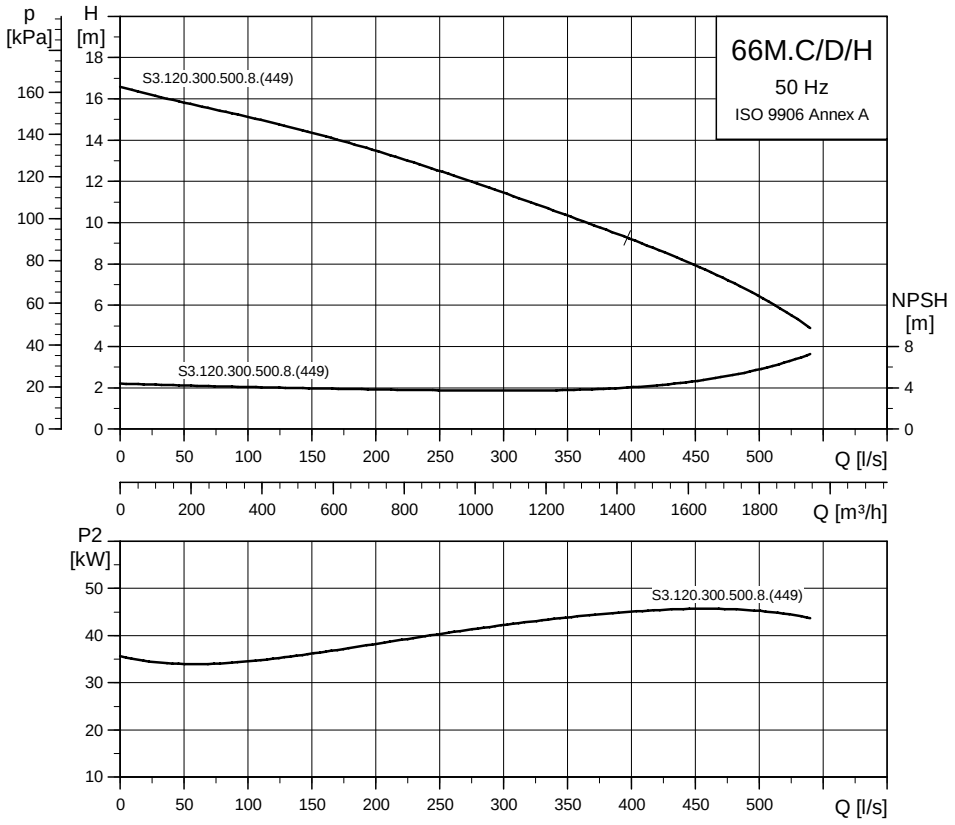
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Medium pressure - 3 x 415 V

S3



TM04 1944 1308



TM04 1945 1308

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S3.120.300.500.8.66M.S.449.G.N.D	S	1761	1139	522	700	907	450	-	300	1050	96785383
S3.120.300.500.8.66M.C.449.G.N.D	C	1761	1139	522	700	907	450	-	300	1100	96785384
S3.120.300.500.8.66M.D.449.G.N.D	D	1590	1139	522	700	907	279	DN 300	300	1100	96785385
S3.120.300.500.8.66M.H.449.G.N.D	H	1590	1139	522	700	907	279	DN 300	300	1100	96785387

With 10 m cable

Electrical data

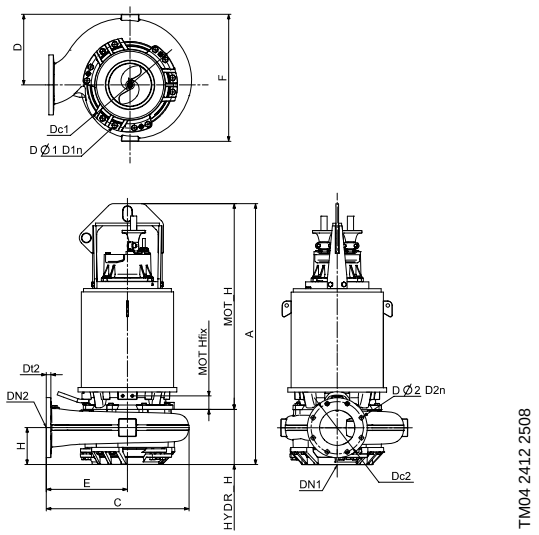
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S3.120.300.500.8.66M.S.449.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.C.449.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.D.449.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.437	1532
S3.120.300.500.8.66M.H.449.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	2.437	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S3.120.300.500.8.66M.S.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.C.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.D.449.G.N.D	449	120	10	20
S3.120.300.500.8.66M.H.449.G.N.D	449	120	10	20

Dimensional sketches

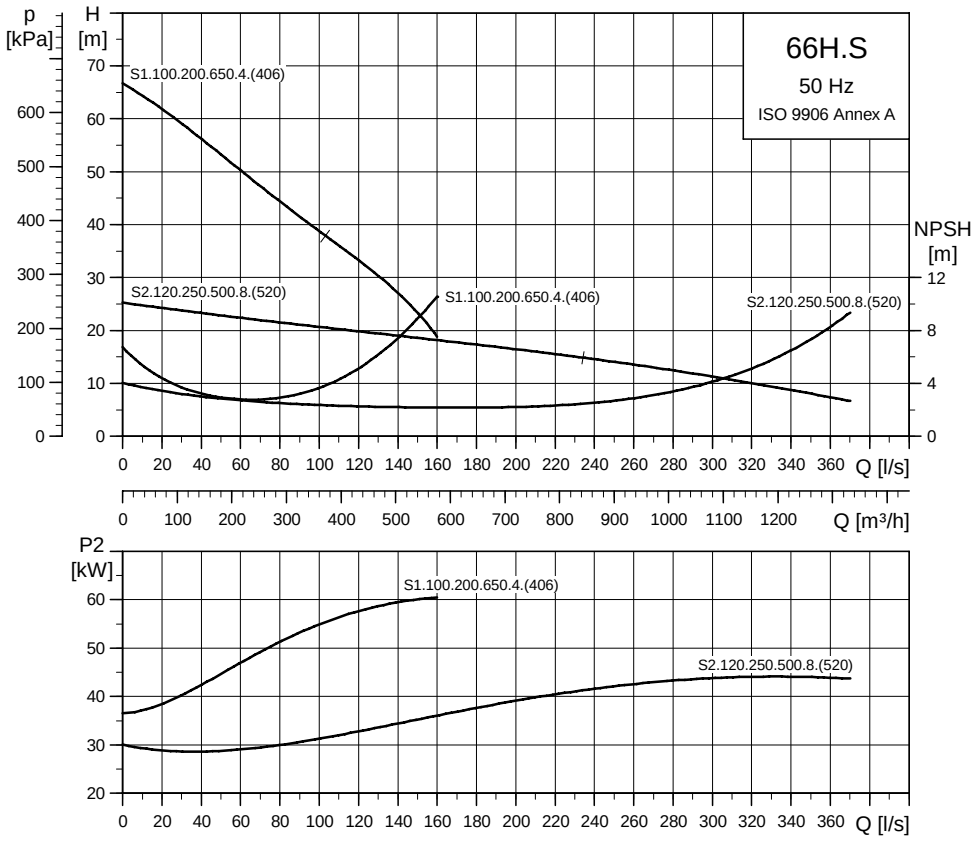


TM04 2412 2508

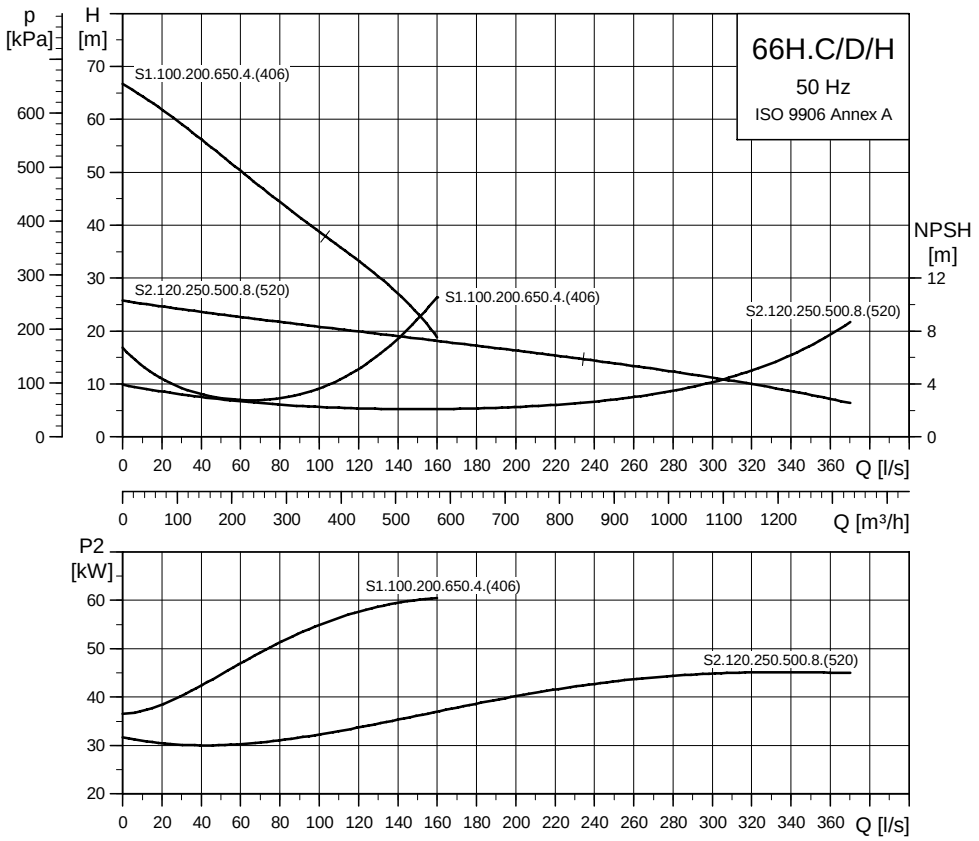
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Performance curves

High pressure - 3 x 400/690 V



TM04 0675 0908



TM04 0676 0908

Technical data

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S1.100.200.650.4.66H.S.406.G.N.D	S	1494	883	300	600	596	220	-	200	800	95112744
S1.100.200.650.4.66H.C.406.G.N.D	C	1494	883	300	600	596	220	-	200	830	95112745
S1.100.200.650.4.66H.H.406.G.N.D	H	1500	883	300	600	596	226	DN 250	200	830	95112746
S1.100.200.650.4.66H.D.406.G.N.D	D	1500	883	300	600	596	226	DN 250	200	830	96785310
S2.120.250.500.8.66H.S.520.G.N.D	S	1535	1193	478	750	891	235	-	250	1100	95112750
S2.120.250.500.8.66H.C.520.G.N.D	C	1535	1193	478	750	891	235	-	250	1130	95112751
S2.120.250.500.8.66H.D.520.G.N.D	D	1590	1193	478	750	891	290	DN 300	250	1130	95112752
S2.120.250.500.8.66H.H.520.G.N.D	H	1590	1193	478	750	891	290	DN 300	250	1130	96785341

With 10 m cable

Electrical data

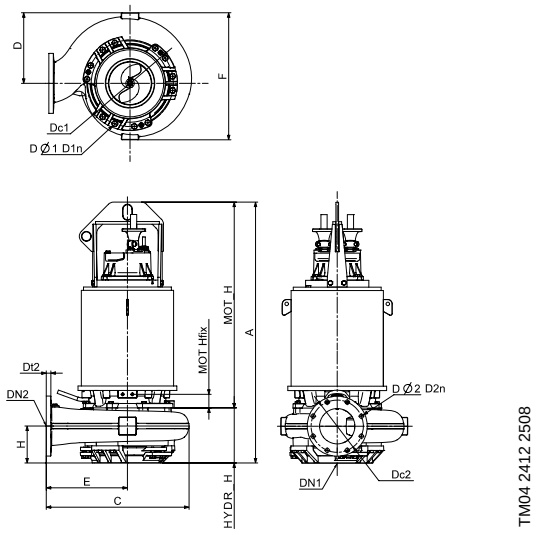
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S1.100.200.650.4.66H.S.406.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.C.406.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.H.406.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.D.406.G.N.D	73	68	4	1476	Y/D	134	827	92	93	93	0.67	0.76	0.79	1.7733	1096
S2.120.250.500.8.66H.S.520.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.C.520.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.D.520.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.H.520.G.N.D	56	50	8	726	Y/D	102	547	90	91	89	0.68	0.77	0.80	3.5043	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S1.100.200.650.4.66H.S.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.C.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.H.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.D.406.G.N.D	406	100	10	20
S2.120.250.500.8.66H.S.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.C.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.D.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.H.520.G.N.D	520	120	10	20

Dimensional sketches

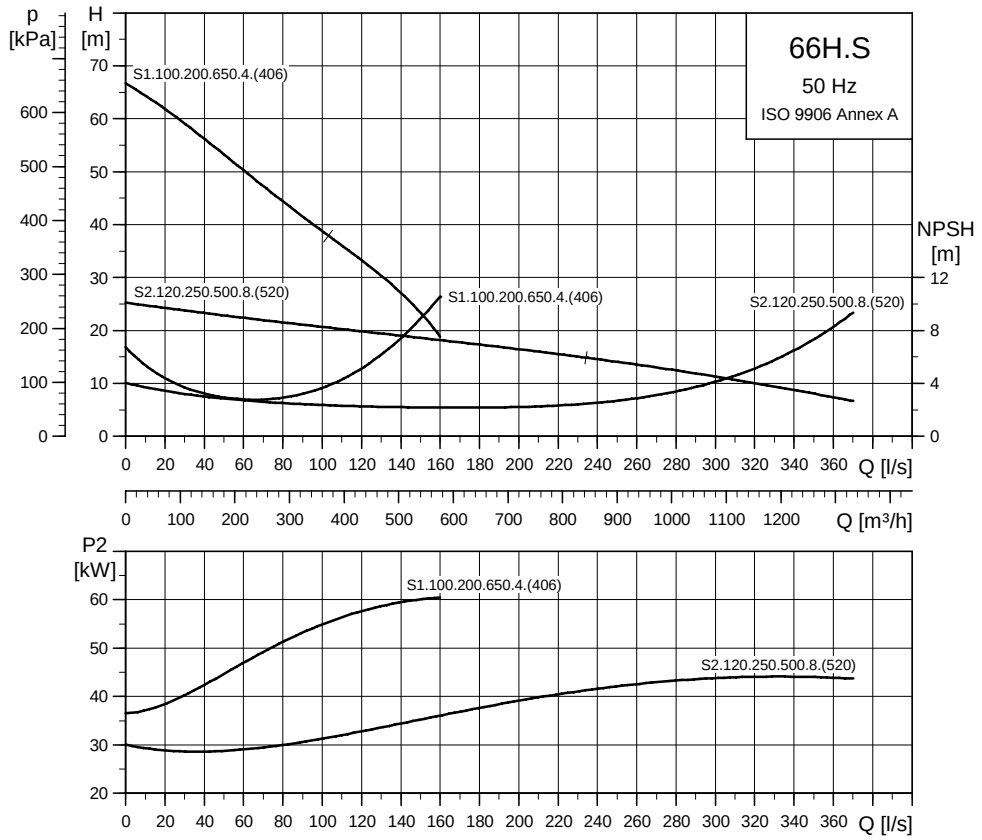


TM04 2412 2508

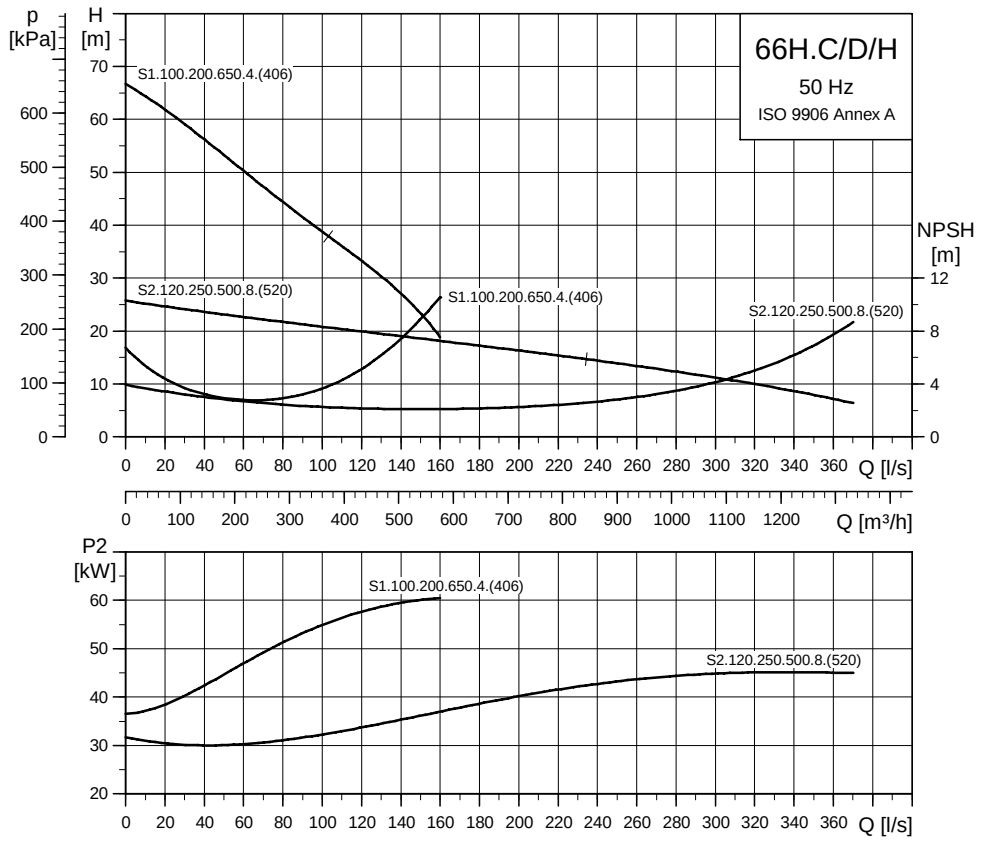
Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Performance curves

High pressure - 3 x 415 V



TM04 0675 0908



TM04 0676 0908

Technical data

Product range and dimensions

Pump type	Installation type	A	C	D	E	F	H	DN1	DN2	Weight [kg]	Product number
S1.100.200.650.4.66H.S.406.G.N.D	S	1494	883	300	600	596	220	-	200	800	96785308
S1.100.200.650.4.66H.C.406.G.N.D	C	1494	883	300	600	596	220	-	200	830	96785309
S1.100.200.650.4.66H.D.406.G.N.D	D	1500	883	300	600	596	226	DN 250	200	830	96785311
S1.100.200.650.4.66H.H.406.G.N.D	H	1500	883	300	600	596	226	DN 250	200	830	96785332
S2.120.250.500.8.66H.S.520.G.N.D	S	1535	1193	478	750	891	235	-	250	1100	96785338
S2.120.250.500.8.66H.C.520.G.N.D	C	1535	1193	478	750	891	235	-	250	1130	96785339
S2.120.250.500.8.66H.D.520.G.N.D	D	1590	1193	478	750	891	290	DN 300	250	1130	96785340
S2.120.250.500.8.66H.H.520.G.N.D	H	1590	1193	478	750	891	290	DN 300	250	1130	96785342

With 10 m cable

Electrical data

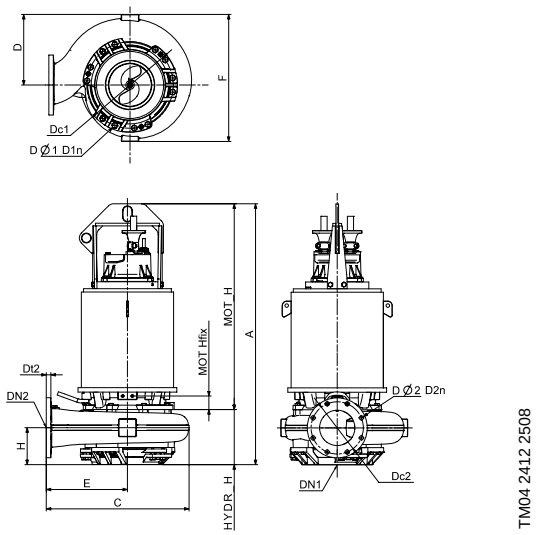
Pump type	P1 [kW]	P2 [kW]	No. of poles	RPM	Starting method	I_N	I_{start}	η_{motor} [%]			Cos φ			Moment of inertia [kgm^2]	Breakdown torque [Nm] M_{max} [Nm]
						[A]	[A]	1/2	3/4	1/1	1/2	3/4	1/1		
S1.100.200.650.4.66H.S.406.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.C.406.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.D.406.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.7733	1096
S1.100.200.650.4.66H.H.406.G.N.D	73	68	4	1476	Y/D	129	797	92	93	93	0.67	0.76	0.79	1.7733	1096
S2.120.250.500.8.66H.S.520.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.C.520.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.D.520.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.5043	1532
S2.120.250.500.8.66H.H.520.G.N.D	56	50	8	726	Y/D	98	528	90	91	89	0.68	0.77	0.80	3.5043	1532

Note: Enclosure class: IP68

Pump data

Pump type	Impeller diameter [mm]	Max. solids size [mm]	Pump housing pressure PN	Max. installation depth [m]
S1.100.200.650.4.66H.S.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.C.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.D.406.G.N.D	406	100	10	20
S1.100.200.650.4.66H.H.406.G.N.D	406	100	10	20
S2.120.250.500.8.66H.S.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.C.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.D.520.G.N.D	520	120	10	20
S2.120.250.500.8.66H.H.520.G.N.D	520	120	10	20

Dimensional sketches

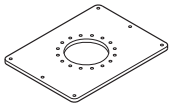
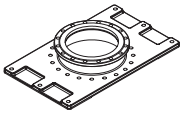
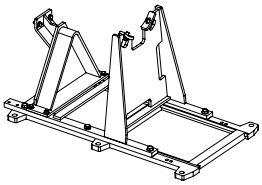
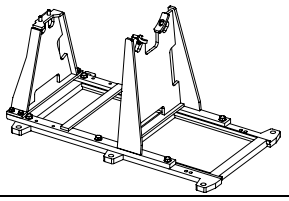
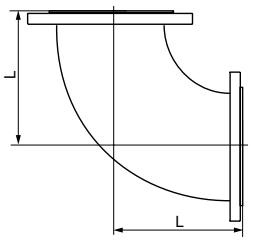


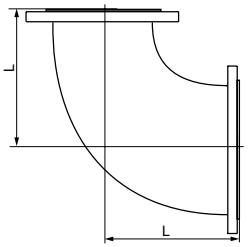
TM04 2412 2508

Size DN	PN	Dc	Dt	DØ
100	10	180	20	8 x 18
125	10	210	22	8 x 18
150	10	240	22	8 x 22
200	10	295	24	8 x 22
250	10	350	26	12 x 22

Accessories (for installation)

Pump type	Installation accessories
S 50-70 S and C	DN 80-200 without guide claw (guide claw included in auto-coupling kit)
S 50-70 S and C	DN 250-600 with guide claw mounted on the pump
S 50-70 D	Pump without installation accessories (accessories as separate kit)
S 50-70 H	Base stand for horizontal, dry installation supplied together with the pump

Pictures		Description		Size	Weight [kg]	PN	Product number
	GR8126	Cast-iron, epoxy-coated auto-coupling system complete with: • guide claw * • base unit • upper guide rail bracket • gaskets and bolts.	Discharge flange	DN 200	250	10	96641489
				DN 250	225	10	96782483
				DN 300	275	10	96782484
				DN 500	705	10	96782485
				DN 600	900	10	96782486
Intermediate guide rail bracket		For guide rails longer than 6 m		DN 200-600	8		96255842
Guide rails		Standard pipes. Not supplied by Grundfos					
	TM03 2015 3505	Base plate for vertical, dry installation. With gaskets and bolts. Steel, epoxy-coated.	Suction flange	DN 250	90		96308240
				DN 300	87		96308241
				DN 500	167		96308245
	TM04 3693 4908	Base plate for vertical, dry installation. With gaskets and bolts. Cast iron, epoxy-coated.		DN 400	195		96308244
	TM04 4158 0909	Base stand for horizontal dry installation.			125		96308208
	TM04 4159 0909				113		96308289
	TM04 4033 0509	Equal bend L = 350 mm		DN 250		10	96060942
		Equal bend L = 400 mm		DN 300		10	96060946
		Equal bend L = 500 mm		DN 400		10	96060949
		Equal bend L = 600 mm		DN 500		10	96060951

Pictures	Description	Size	Weight [kg]	PN	Product number
 TM04 4034 0509	Reducing bend L = 400			10	96060943
	Reducing bend L = 450			10	96060944
	Reducing bend L = 500			10	96060945
	Reducing bend L = 500			10	96060947
	Reducing bend L = 600			10	96060950
	Reducing bend L = 700			10	96733539

* Installation type S and C pumps with discharge flange size DN 250 and higher are supplied with guide claw mounted on the flange.

Other accessories

Pictures		Description	Dimensions		Product number
	TM02 6126 5102	4 m galvanized lifting chain with lifting link and safety hook. Certified.	2000 kg	S 62-66	96468289
		6 m galvanized lifting chain with lifting link and safety hook. Certified.			96468290
		8 m galvanized lifting chain with lifting link and safety hook. Certified.			96468291
		10 m galvanized lifting chain with lifting link and safety hook. Certified.			96468292
		12 m galvanized lifting chain with lifting link and safety hook. Certified.			96468293
		4 m stainless steel lifting chain with lifting link and safety hook. Certified.	2000 kg	S 62-66	96490254
		6 m stainless steel lifting chain with lifting link and safety hook. Certified.			96490255
		8 m stainless steel lifting chain with lifting link and safety hook. Certified.			96490256
		10 m stainless steel lifting chain with lifting link and safety hook. Certified.			96490257
		12 m stainless steel lifting chain with lifting link and safety hook. Certified.			96490258
	GR7871	AMD.07.18.1410 mixer, 3 x 400 V, 50 Hz			96113490
		Bracket for wall mounting	2” thread		96115291
		Bracket for floor mounting	2” thread		96115292
		Bracket for suspended mounting	2” thread		96115293
		Tube for suspended mounting, length 3 m	2” thread		96115294
	TM01 6982 3999	Float switch with 10 m cable			96003332
		Float switch with 20 m cable			96003695
		Float switch for use in potentially explosive environments. With 10 m cable			96003421
		Float switch for use in potentially explosive environments. With 20 m cable			96003536
	TM02 8862 0904	Bracket for two float switches			96003338
	TM02 0670 5000	Float switches with bracket, 10 m cable	2 switches, 1 pump without alarm		
			3 switches, 1 pump with alarm		
			3 switches, 2 pumps with alarm		
			4 switches, 2 pumps with alarm		
	TM02 0670 5000	Float switches for use in potentially explosive environments. With bracket and 10 m cable.	2 switches, 1 pump without alarm		62500016
			3 switches, 1 pump with alarm		62500017
			3 switches, 2 pumps with alarm		62500017
			4 switches, 2 pumps with alarm		62500018
	TM02 8860 0904	Bracket for level electrodes	For mounting on a 38 mm pipe		91713196

Installation on auto coupling

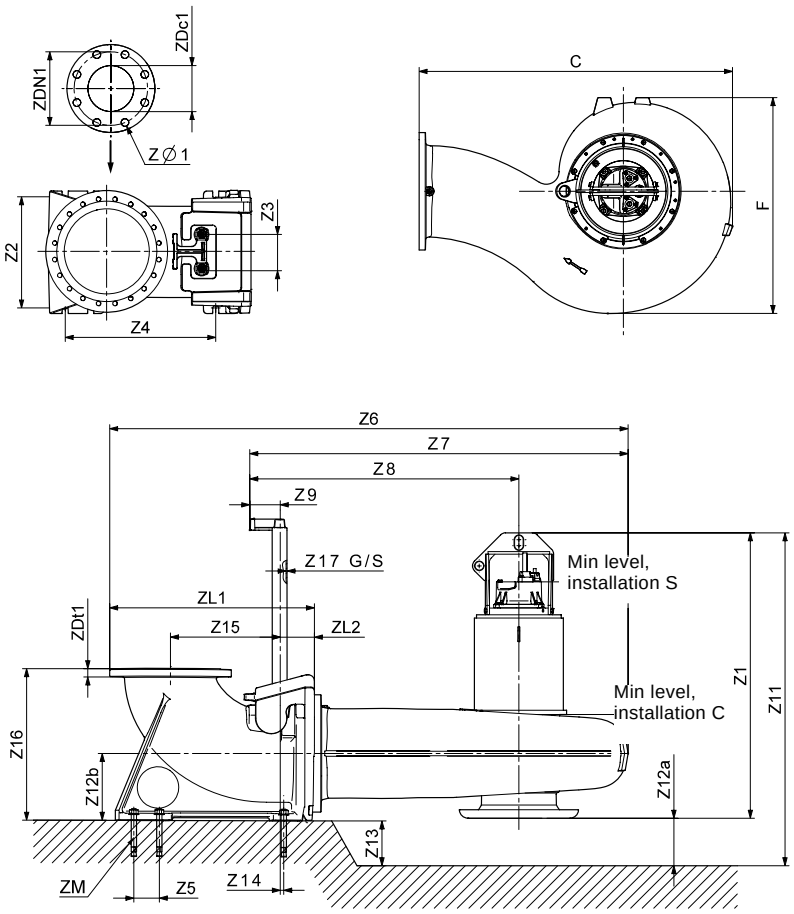


Fig. 15 Dimensional sketches, installation on auto coupling

Note: Z12a is minimal recommended distance from pit bottom to bottom of pump suction side.
Z11 is total height of pump installed on Grundfos installation accessory in the pit. NOTE: This figure might not equal Z12a + Z1.

Dimensions

Pump type	C	F	Zø1	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	Z11
S1.100.200.650.4.66H.S.xxx.G.N.D	883	596	8 x 23	1494	430	200	535	-	1644	1275	992	170	88.0	1620
S1.100.200.650.4.66H.S.xxx.Q.N.D	883	596	8 x 23	1494	430	200	535	-	1644	1275	992	170	88.0	1620
S2.100.200.550.4.66M.S.xxx.G.N.D	809	720	8 x 23	1484	430	200	535	-	1570	1201	852	170	88.0	1615
S2.100.200.550.4.66M.S.xxx.Q.N.D	809	720	8 x 23	1484	430	200	535	-	1570	1201	852	170	88.0	1615
S2.100.200.650.4.66M.S.xxx.G.N.D	809	720	8 x 23	1484	430	200	535	-	1570	1201	852	170	88.0	1615
S2.100.200.650.4.66M.S.xxx.Q.N.D	809	720	8 x 23	1484	430	200	535	-	1570	1201	852	170	88.0	1615
S2.110.250.650.4.66L.S.xxx.G.N.D	1070	730	12 x 23	1516	471	200	565	-	1869	1462	1142	170	88.0	1657
S2.110.250.650.4.66L.S.xxx.Q.N.D	1070	730	12 x 23	1516	471	200	565	-	1869	1462	1142	170	88.0	1657
S2.120.250.500.8.66H.S.xxx.G.N.D	1193	891	12 x 23	1535	471	200	565	-	1992	1585	1142	170	88.0	1674
S2.120.250.500.8.66H.S.xxx.Q.N.D	1193	891	12 x 23	1535	471	200	565	-	1992	1585	1142	170	88.0	1674
S2.140.300.350.8.66M.S.xxx.G.N.D	1139	907	12 x 23	1536	551	200	670	-	2040	1531	1092	170	88.0	1717
S2.140.300.350.8.66M.S.xxx.Q.N.D	1139	907	12 x 23	1536	551	200	670	-	2040	1531	1092	170	88.0	1717
S3.110.500.220.10.66L.S.xxx.G.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.110.500.220.10.66L.S.xxx.Q.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.110.500.350.10.66L.S.xxx.G.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.110.500.350.10.66L.S.xxx.Q.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.110.500.500.8.66L.S.xxx.G.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.110.500.500.8.66L.S.xxx.Q.N.D	1843	1269	20 x 27	1676	657	200	885	150	3028	2297	1654	170	88.0	1876
S3.120.300.500.8.66M.S.xxx.G.N.D	1139	907	12 x 23	1761	551	200	670	-	2040	1531	1092	170	88.0	1967
S3.120.300.500.8.66M.S.xxx.Q.N.D	1139	907	12 x 23	1761	551	200	670	-	2040	1531	1092	170	88.0	1967
S3.120.600.350.10.66E.S.xxx.G.N.D	2124	1506	20 x 31	1757	710	200	990	160	3444	2574	1800	170	88.0	1988
S3.120.600.350.10.66E.S.xxx.Q.N.D	2124	1506	20 x 31	1757	710	200	990	160	3444	2574	1800	170	88.0	1988
S3.120.600.500.8.66E.S.xxx.G.N.D	2124	1506	20 x 31	1757	710	200	990	160	3444	2574	1800	170	88.0	1988
S3.120.600.500.8.66E.S.xxx.Q.N.D	2124	1506	20 x 31	1757	710	200	990	160	3444	2574	1800	170	88.0	1988

Pump type	Z12a	Z12b	Z13	Z14	Z15	Z16	Z17G	Z17S	ZDc1	ZDN1	ZDt1	ZL1	ZL2	ZM
S1.100.200.650.4.66H.S.xxx.G.N.D	126	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S1.100.200.650.4.66H.S.xxx.Q.N.D	126	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S2.100.200.550.4.66M.S.xxx.G.N.D	131	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S2.100.200.550.4.66M.S.xxx.Q.N.D	131	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S2.100.200.650.4.66M.S.xxx.G.N.D	131	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S2.100.200.650.4.66M.S.xxx.Q.N.D	131	196	150	86	365	485	3.0	3.0	295	200	31	761	222	4 x M24
S2.110.250.650.4.66L.S.xxx.G.N.D	141	224	150	86	375	545	3.0	3.0	350	250	32	799	222	4 x M24
S2.110.250.650.4.66L.S.xxx.Q.N.D	141	224	150	86	375	545	3.0	3.0	350	250	32	799	222	4 x M24
S2.120.250.500.8.66H.S.xxx.G.N.D	139	224	150	86	375	545	3.0	3.0	350	250	32	799	222	4 x M24
S2.120.250.500.8.66H.S.xxx.Q.N.D	139	224	150	86	375	545	3.0	3.0	350	250	32	799	222	4 x M24
S2.140.300.350.8.66M.S.xxx.G.N.D	181	256	150	95	450	650	3.0	3.0	400	300	32	901	222	4 x M24
S2.140.300.350.8.66M.S.xxx.Q.N.D	181	256	150	95	450	650	3.0	3.0	400	300	32	901	222	4 x M24
S3.110.500.220.10.66L.S.xxx.G.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.110.500.220.10.66L.S.xxx.Q.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.110.500.350.10.66L.S.xxx.G.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.110.500.350.10.66L.S.xxx.Q.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.110.500.500.8.66L.S.xxx.G.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.110.500.500.8.66L.S.xxx.Q.N.D	200	380	200	98	565	890	3.0	3.0	620	500	42	1185	284	6 x M30
S3.120.300.500.8.66M.S.xxx.G.N.D	206	256	400	95	450	650	3.0	3.0	400	300	32	901	222	4 x M24
S3.120.300.500.8.66M.S.xxx.Q.N.D	206	256	400	95	450	650	3.0	3.0	400	300	32	901	222	4 x M24
S3.120.600.350.10.66E.S.xxx.G.N.D	231	431	250	98	615	1050	3.0	3.0	725	600	48	1320	280	6 x M30
S3.120.600.350.10.66E.S.xxx.Q.N.D	231	431	250	98	615	1050	3.0	3.0	725	600	48	1320	280	6 x M30
S3.120.600.500.8.66E.S.xxx.G.N.D	231	431	250	98	615	1050	3.0	3.0	725	600	48	1320	280	6 x M30
S3.120.600.500.8.66E.S.xxx.Q.N.D	231	431	250	98	615	1050	3.0	3.0	725	600	48	1320	280	6 x M30

Dry, vertical installation on concrete foundation

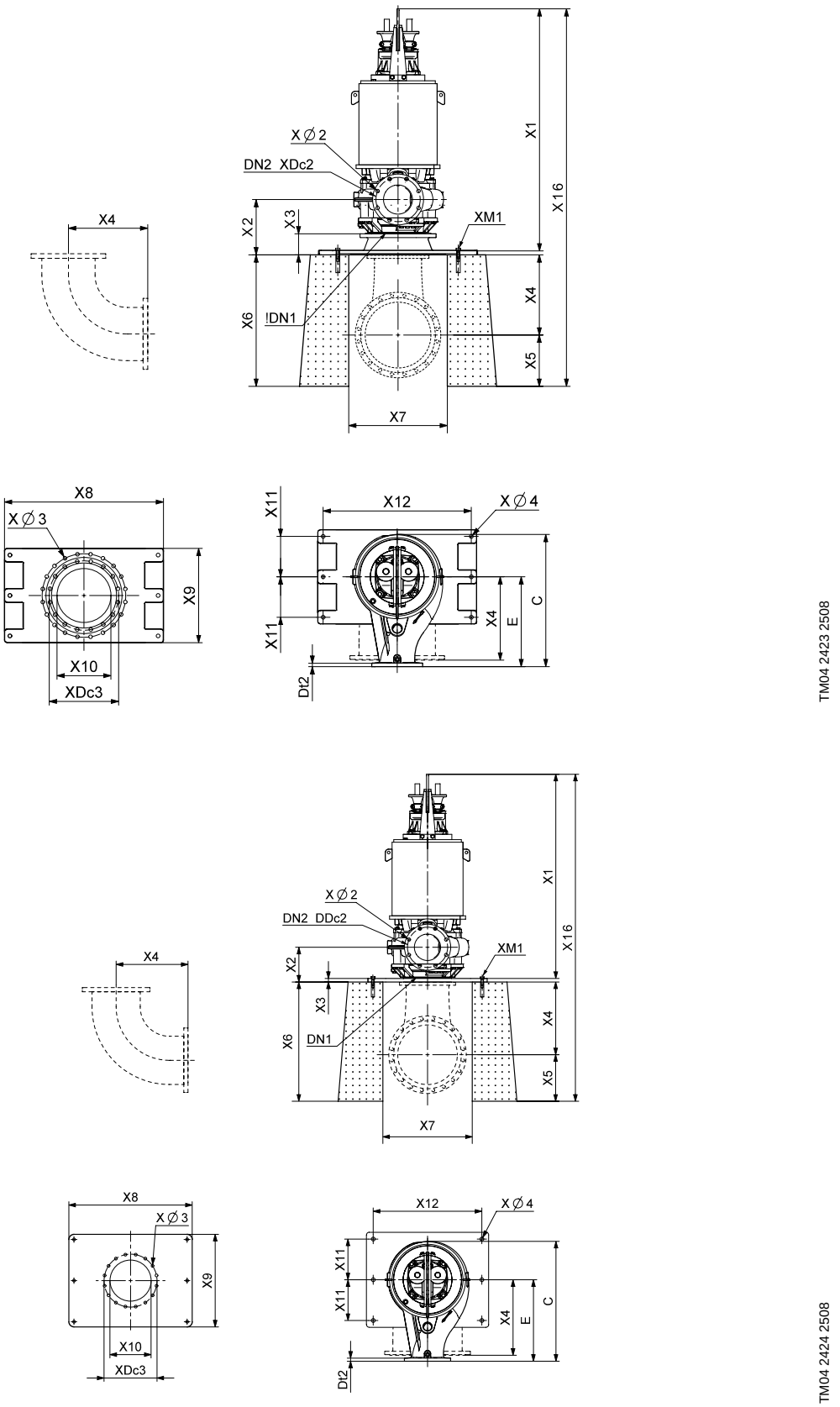


Fig. 16 Dimensional sketches, dry, vertical installation on concrete foundation

Dimensions

Pump type	C	E	Xø2	Xø3	Xø4	X1	X2	X3	X4	X5	X6	X7	X8
S1.100.200.650.4.66H.D	883	600	24	23	28	1500	246	20	400	300	700	500	900
S2.100.200.550.4.66M.D	809	460	24	23	28	1484	235	20	400	300	700	500	900
S2.100.200.650.4.66M.D	809	460	24	23	28	1484	235	20	400	300	700	500	900
S2.110.250.650.4.66L.D	1070	750	24	23	28	1516	253	20	500	300	800	600	900
S2.120.250.500.8.66H.D	1193	750	24	23	28	1590	310	20	500	300	800	600	900
S2.140.300.350.8.66M.D	1139	700	24	23	28	1590	299	20	500	300	800	600	900
S3.110.500.220.10.66L.D	1843	1200	27	27	28	1629	493	160	700	750	1450	850	1180
S3.110.500.350.10.66L.D	1843	1200	27	27	28	1629	493	160	700	750	1450	850	1180
S3.110.500.500.8.66L.D	1843	1200	27	27	28	1629	493	160	700	750	1450	850	1180
S3.120.300.500.8.66M.D	1139	700	24	23	28	1590	299	20	500	300	800	600	900
S3.120.600.350.10.66E.D	2124	1350	30	27	28	1723	452	35	700	750	1450	850	1180
S3.120.600.500.8.66E.D	2124	1350	30	27	28	1723	452	35	700	750	1450	850	1180

Pump type	X9	X10	X11	X12	X16	XDc3	DN1	DN2	XDc2	Dt2	XM1
S1.100.200.650.4.66H.D	700	250	300	800	2220	350	250	200	296	28	M24 x 6
S2.100.200.550.4.66M.D	700	250	300	800	2204	350	250	200	296	28	M24 x 6
S2.100.200.650.4.66M.D	700	250	300	800	2204	350	250	200	296	28	M24 x 6
S2.110.250.650.4.66L.D	700	300	300	800	2336	400	300	250	350	28	M24 x 6
S2.120.250.500.8.66H.D	700	300	300	800	2410	400	300	250	350	28	M24 x 6
S2.140.300.350.8.66M.D	700	300	300	800	2410	400	300	300	400	28	M24 x 6
S3.110.500.220.10.66L.D	700	400	300	1100	3239	620	400	500	620	34	M24 x 6
S3.110.500.350.10.66L.D	700	400	300	1100	3239	620	400	500	620	34	M24 x 6
S3.110.500.500.8.66L.D	700	400	300	1100	3239	620	400	500	620	34	M24 x 6
S3.120.300.500.8.66M.D	700	300	300	800	2410	400	300	300	400	28	M24 x 6
S3.120.600.350.10.66E.D	700	500	300	1100	3208	620	500	600	725	34	M24 x 6
S3.120.600.500.8.66E.D	700	500	300	1100	3208	620	500	600	725	34	M24 x 6

Dry, horisontal installation on base stand

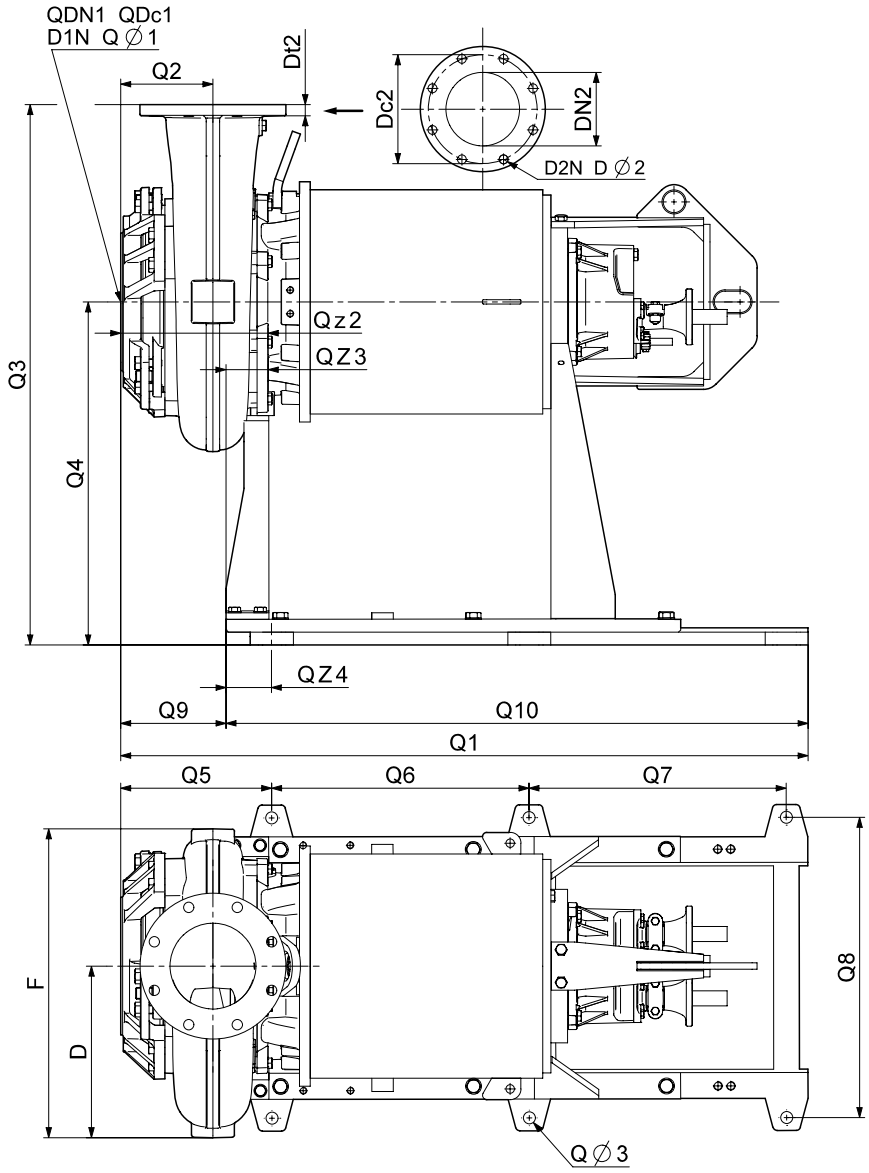


Fig. 17 Dimensional sketches, dry, horisontal installation on base stand

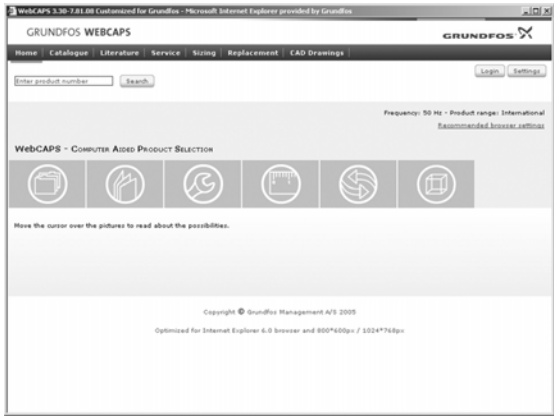
Dimensions

Pump type	D	F	Qø3	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
S1.100.200.650.4.66H.H	300	596	28	1500	226	1400	800	411	600	600	700	304	1357
S2.100.200.550.4.66M.H	400	720	28	1484	215	1260	800	395	600	600	700	288	1357
S2.100.200.650.4.66M.H	400	720	28	1484	215	1260	800	395	600	600	700	288	1357
S2.110.250.650.4.66L.H	410	730	28	1516	233	1550	800	427	600	600	700	320	1357
S2.120.250.500.8.66H.H	478	891	28	1590	290	1550	800	501	600	600	700	394	1357
S2.140.300.350.8.66M.H	522	907	28	1590	279	1500	800	501	600	600	700	394	1357
S3.110.500.220.10.66L.H	719	1269	28	1629	333	2000	800	540	600	600	700	433	1357
S3.110.500.350.10.66L.H	719	1269	28	1629	333	2000	800	540	600	600	700	433	1357
S3.110.500.500.8.66L.H	719	1269	28	1629	333	2000	800	540	600	600	700	433	1357
S3.120.300.500.8.66M.H	522	907	28	1590	279	1500	800	501	600	600	700	394	1357
S3.120.600.350.10.66E.H	886	1506	28	1723	417	2150	800	634	600	600	700	527	1357
S3.120.600.500.8.66E.H	886	1506	28	1723	417	2150	800	634	600	600	700	527	1357

Pump type	QDc1	QDN1	QD1N	Qø1	QZ1	DN2	D2N	Dø2	Dc2	Dt2	QZ2	QZ3	QZ4
S1.100.200.650.4.66H.H	350	250	12	M20	-	200	8	24	296	24	354	-50	107
S2.100.200.550.4.66M.H	350	250	12	M20	-	200	8	24	296	26	338	-50	107
S2.100.200.650.4.66M.H	350	250	12	M20	-	200	8	24	296	26	338	-50	107
S2.110.250.650.4.66L.H	400	300	12	M20	-	250	12	24	350	30	370	-50	107
S2.120.250.500.8.66H.H	400	300	12	M20	-	250	12	24	350	30	444	-50	107
S2.140.300.350.8.66M.H	400	300	12	M20	-	300	12	24	400	33	444	-50	107
S3.110.500.220.10.66L.H	515	400	16	M24	-	500	20	27	620	37	483	-50	107
S3.110.500.350.10.66L.H	515	400	16	M24	-	500	20	27	620	37	483	-50	107
S3.110.500.500.8.66L.H	515	400	16	M24	-	500	20	27	620	37	483	-50	107
S3.120.300.500.8.66M.H	400	300	12	M20	-	300	12	24	400	33	444	-50	107
S3.120.600.350.10.66E.H	620	500	20	M24	-	600	20	30	725	40	577	-50	107
S3.120.600.500.8.66E.H	620	500	20	M24	-	600	20	30	725	40	577	-50	107

Further product documentation

WebCAPS



WebCAPS is a **Web**-based **C**omputer **A**ided **P**roduct **S**election program available on www.grundfos.com.

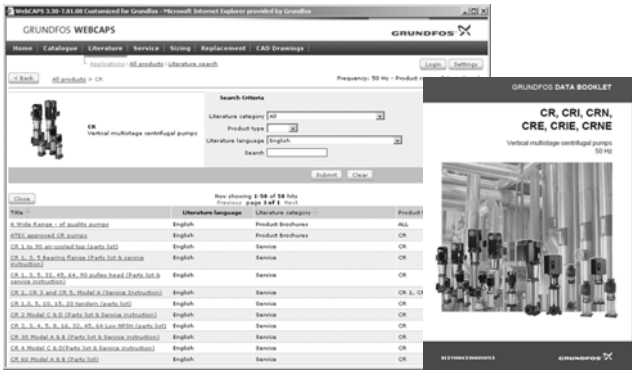
WebCAPS contains detailed information on more than 185,000 Grundfos products in more than 20 languages.

In WebCAPS, all information is divided into 6 sections:

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

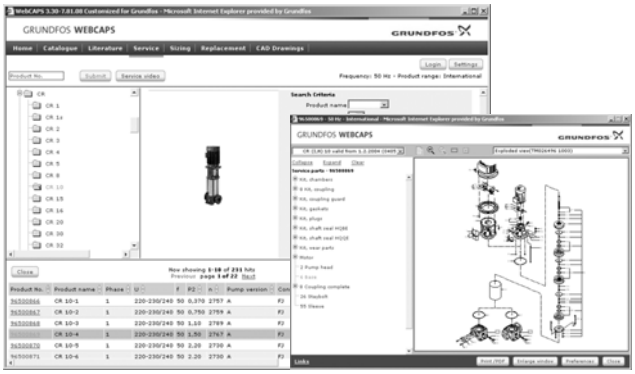
Catalogue

This section is based on fields of application and pump types, and contains
- technical data
- curves (QH, Eta, P1, P2, etc) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.



Literature

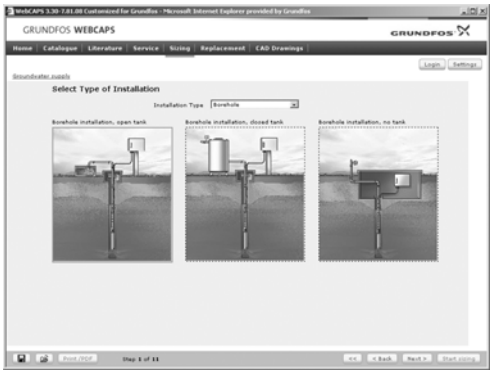
In this section you can access all the latest documents of a given pump, such as
- data booklets
- installation and operating instructions
- service documentation, such as Service kit catalogue and Service kit instructions
- quick guides
- product brochures.



Service

This section contains an easy-to-use interactive service catalogue. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.
Furthermore, this section contains service videos showing you how to replace service parts.

Further product documentation



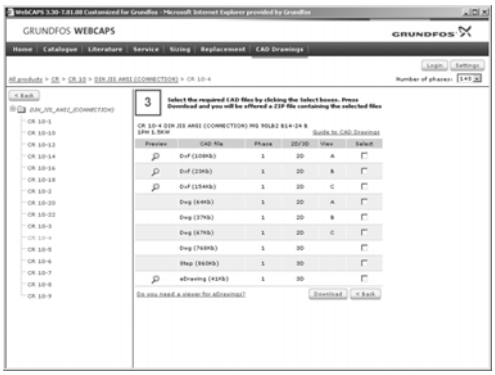
Sizing

This section is based on different fields of application and installation examples, and gives easy step-by-step instructions in how to
- select the most suitable and efficient pump for your installation
- carry out advanced calculations based on energy consumption, payback periods, load profiles, life cycle costs, etc.
- analyse your selected pump via the built-in life cycle cost tool
- determine the flow velocity in wastewater applications, etc.

Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump.
The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

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



CAD drawings

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

These formats are available in WebCAPS:

2-dimensional drawings:
- .dxf, wireframe drawings
- .dwg, wireframe drawings.

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

WinCAPS

Fig. 18 WinCAPS CD-ROM

WinCAPS is a **Win**dows-based **C**omputer **A**ided **P**roduct **S**election program containing detailed information on more than 185,000 Grundfos products in more than 20 languages.

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

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

BE > THINK > INNOVATE >

Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence

96805709 0709	**GB**
Repl. 96805709 0309	

Subject to alterations.

GRUNDFOS A/S . DK-8850 Bjerringbro . Denmark
Telephone: +45 87 50 14 00

www.grundfos.com

GRUNDFOS