

Dry-installed Volute Casing Pump

**KWP**

**Type Series Booklet**



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Type Series Booklet KWP

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## Centrifugal Pumps with Shaft Seal

### Dry-installed Volute Casing Pumps

## KWP



#### Main applications

- Paper industry / pulp industry
- Sugar industry
- Food industry / beverage industry
- Fossil-fuelled power stations
- Chemical industry
- Petrochemical industry
- Flue gas desulphurisation
- Coal upgrading plants
- Industrial waste water treatment systems
- Seawater desalination/reverse osmosis

#### Fluids handled

- Contaminated fluids
- Fluids containing solids
- Pre-treated waste water
- All types of slurries without stringy material
- Industrial and municipal waste water
- Pulpes up to 5% bone dry with a maximum density of 2000 kg/m<sup>3</sup>, max. permissible viscosity 500 cSt

#### Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m <sup>3</sup> /h]	≤ 15000 <sup>1)</sup>
Head	H [m]	≤ 100 <sup>1)</sup>
Operating temperature	T [°C]	≥ -40 <sup>1)</sup>
		≤ +140 <sup>1)</sup>
Operating pressure	p [bar]	≤ 10 <sup>1)</sup>

#### Design details

##### Design

- Volute casing with integrally cast pump feet
- Radially split volute casing
- Back pull-out design
- Single-stage
- Single-suction

#### Installation types

- Horizontal installation

#### Drive

- Electric motor connected to the pump via a coupling or belt drive

#### Shaft seal

- Gland packing
- Single mechanical seal / double mechanical seal
- Shaft equipped with replaceable shaft protecting sleeve in the shaft seal area

#### Impeller type

- Various application-oriented impeller types (⇒ Page 11)

#### Bearings

- Oil-lubricated rolling element bearings
- Back pull-out design with axially adjustable pump rotor to adjust the clearance between impeller and wear plate

#### Automation

Automation options:

- Hyatronic N
- PumpDrive
- PumpMeter

#### Standard pressure class

- DN 40–DN 150: PN10/PN16
- DN 200–DN 900: PN10

<sup>1)</sup> Higher values on request

**Connections**

- DN 40–DN 600: discharge flange with throughholes in accordance with EN 1092-2 as per pressure class
  - From DN 600 for KWP KC: discharge flange with tapped throughholes in accordance with EN 1092
  - DN 40–DN 350: suction flange with tapped pocket holes in accordance with EN 1092-2 as per pressure class
  - From DN 400 plus 350-350-500: suction flange with throughholes in accordance with EN 1092-2 as per pressure class
- Flanges in accordance with ASME B 16.5:
- On request

**Designation**
**Table 2:** Designation example

Position																																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
K	W	P	F	1	2	5	-	1	0	0	-	0	2	5	0		G	N	N	G	1	0	P	4	X	3	N	H		5	5	4
See name plate and data sheet																					See data sheet											

**Table 3:** Designation key

Position	Code	Description	
1-3	Pump type		
	KWP	KWP	
4	Impeller		
	F	Vortex impeller	
	K	Closed multi-channel impeller	
	O	Open multi-vane impeller	
5-17	Size, e.g.		
	125	Nominal suction nozzle diameter [mm]	
	100	Nominal discharge nozzle diameter [mm]	
	0250	Nominal impeller diameter [mm]	
18	Pump casing material		
	D	Noridur	1.4593
	G	Grey cast iron	GJL-250
	H	Norihard NH 15 3	-
	K	Nodular cast iron/CeramikPolySiC	GJS-400-18-LT/CPS
O	Noriclor	1.4573	
19	Impeller material		
	D	Noridur	1.4593
	H	Norihard NH 15 3	-
	K	CeramikPolySiC	-
	M	Noricrom	1.4475
	N	ERN	-
	U	Noridur DAS	1.4593
O	Noriclor	1.4573	
20	Wear plate/wear ring material		
	D	Noridur	1.4593
	H	Norihard NH 15 3	-
	K <sup>2)</sup>	CeramikPolySiC	-
	M	Noricrom	1.4475
	N	ERN	-
	U	Noridur DAS	1.4593
O	Noriclor	1.4573	
21	Discharge cover material		
	D	Noridur	1.4593
	G	Grey cast iron	GJL-250
	H	Norihard NH 15 3	-
	K	CeramikPolySiC	-
	M	Noricrom	1.4475
O	Noriclor	1.4573	
22-23	Design version		

<sup>2</sup> K refers to a suction cover in GJS-400-18-LT/CeramikPolySiC for pumps without a separate wear plate.

Position	Code	Description
22-23	10	10
	11	11
24-25	Shaft seal operating mode	
	A	Single mechanical seal in A-type cover
	CA	Single cartridge seal
	CBA	Double cartridge seal, with barrier fluid
	DR	Double mechanical seal in cylindrical cover, with barrier fluid
	P3	Gland packing (arrangement I = 2/1/2) for barrier fluid
	P6	Gland packing (arrangement II = 1/1/3) for barrier fluid
	P4	Gland packing (arrangement IIa = -/1/3) for flushing liquid
	TA	Double mechanical seal in A-type cover, unpressurised
TS	Double mechanical seal in A-type cover, with barrier fluid	
26	Design	
	_3)	Standard
	X	Non-standard (BT3D, BT3)
27-29	Installation type	
	0	Pump only (Fig. 0)
	3N	Pump, motor, baseplate, non-spacer-type coupling (Fig. 3E)
	3NH	Pump, motor, baseplate, spacer-type coupling (Fig. 3E)
	BH	Close-coupled, horizontal
	BV	Close-coupled, vertical
30-32	Motor rating P <sub>N</sub> [kW]	
	055	55
	132	132
33	Number of motor poles	

<sup>3</sup> Blank

## Materials

Table 4: Materials depending on material variant

Part no.	Description	Material variant (Pump casing + impeller + wear plate + discharge cover)										
		DDDD	DKKM	DMKM	DUUD	GDNG	GHHH	GNNG	HHHH	KKKK	KUKK	OOOO <sup>4)</sup>
		Materials										
101	Pump casing	Noridur 1.4593	Noridur 1.4593 <sup>5)</sup>	Noridur 1.4593 <sup>5)</sup>	Noridur 1.4593 <sup>5)</sup>	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Norihard NH 15 3 <sup>5)</sup>	Nodular cast iron GJS-400-18-LT Ceramik PolySiC <sup>5)</sup>	Nodular cast iron GJS-400-18-LT Ceramik PolySiC <sup>5)</sup>	Noriclor 1.4573
135.01	Wear plate, suction side	Noridur 1.4593	Ceramik PolySiC	Ceramik PolySiC	Noridur DAS 1.4593	ERN	Norihard NH 15 3	ERN	Norihard NH 15 3	Ceramik PolySiC	Ceramik PolySiC	Noriclor 1.4573
162	Suction cover	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Norihard NH 15 3	Nodular cast iron GJS-400-18-LT Ceramik PolySiC	Nodular cast iron GJS-400-18-LT Ceramik PolySiC	Noriclor 1.4573
163	Discharge cover	Noridur 1.4593	Noricrom 1.4475	Noricrom 1.4475	Noridur 1.4593	Grey cast iron GJL-250	Norihard NH 15 3	Grey cast iron GJL-250	Norihard NH 15 3	Ceramik PolySiC	Ceramik PolySiC	Noriclor 1.4573
210	Shaft	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N	C45+N
230	Impeller	Noridur 1.4593	Ceramik PolySiC	Noricrom 1.4475	Noridur DAS 1.4593	Noridur 1.4593	Norihard NH 15 3	ERN	Norihard NH 15 3	Ceramik PolySiC	Noridur DAS 1.4593	Noriclor 1.4573
330	Bearing bracket	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250
344	Bearing bracket lantern	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250
451.01	Stuffing box housing	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Grey cast iron GJL-250	Noridur 1.4593	Noridur 1.4593	Hastelloy
524.01	Shaft protecting sleeve (gland packing)	1.4539	1.4539	1.4539	1.4539	1.4122 HV500+80	1.4122 HV500+80	1.4122 HV500+80	1.4122 HV500+80	1.4539	1.4539	2.4610
524.01	Shaft protecting sleeve (mechanical seal)	1.4539	1.4539	1.4539	1.4539	1.4539	1.4539	1.4539	1.4539	1.4539	1.4539	2.4610
906	Impeller screw <sup>6)</sup>	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	Noridur 1.4593	C35E+N	C35E+N	C35E+N	C35E+N	Noridur 1.4593	Noridur 1.4593	2.4610

<sup>4)</sup> On request

<sup>5)</sup> Without auxiliary connection holes (drain hole and pressure gauge connection)

<sup>6)</sup> Bearing bracket P08sx and above: impeller hub cap 260

### Coating and preservation

- Coating and preservation to KSB standard

### Product benefits

- Easy maintenance due to back pull-out design
- Safe design: all pressure-retaining components cast with extra corrosion/wear allowance
- Wear-resistant standard pump in diagonal gap design with suction-side wear plate
- High levels of efficiency with channel-type impeller, impeller with front vanes and diagonal gap, back vanes reduce axial thrust
- Dry shaft: no special materials required
- Reinforced, adjustable bearing assembly design
- Optimum circulation around the mechanical seal, venting and drainage of the shaft seal chamber due to the mechanical seal fitted in a conical shaft seal chamber


### Product information

#### Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see <https://www.ksb.com/ksb-en/About-KSB/Corporate-responsibility/reach/>.

### Certifications

Table 5: Overview

Label	Effective in:	Comment
	All countries	Certified quality management to ISO 9001

### Acceptance tests and warranty

- Materials testing
  - Test report 2.2 on request
- Final inspection
  - Inspection certificate 3.1 to EN 10204 on request
- Hydraulic test
 

The operating point of each pump is guaranteed to ISO 9906/3B.

The following acceptance tests can be performed and certified at extra charge:

  - Performance test to ISO 9906
  - NPSH test

- Other inspections/tests on request

- Warranty

Warranties are given within the scope of the valid terms and conditions of sale and delivery.



Overview of product features / selection tables

Overview of product features

Table 6: Impeller types and material variants per pump size

Size	Impeller type (⇒ Page 11)																
	F					K											O
						Nodular cast iron											
	Material variant (⇒ Page 7)																
DDDD	GDNG	GHHH	GNGG	HHHH	DDDD	DKKM	DMKM	DUUD	GDNG	GHHH	GNGG	HHHH	KKKK	KUKK	DDDD	GDNG	
065-040-0250	-	-	-	-	-	X	-	X	X	X	X	X	X	-	-	-	-
065-050-0200	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
065-050-0201	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
080-040-0315	-	-	-	-	-	X	-	X	X	X	X	X	X	-	-	-	-
080-050-0400	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
080-065-0200	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
080-065-0201	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
080-065-0313	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
080-065-0315	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
080-065-0400	-	-	-	-	-	X	-	X	X	X	X	X	X	-	-	-	-
100-080-0250	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
100-080-0251	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
100-080-0311	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
100-080-0315	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
100-080-0400	-	-	-	-	-	X	-	X	X	X	X	X	X	-	-	X	X
100-080-0403	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
125-080-0500	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
125-100-0250	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
125-100-0251	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
125-100-0253	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
125-100-0315	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
125-100-0400	-	-	-	-	-	X	X	X	X	X	X	X	X	-	-	X	X
125-100-0403	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
150-125-0500	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
150-125-0503	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
150-150-0311	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
150-150-0315	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
150-150-0400	-	-	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-
150-150-0403	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
200-200-0320	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
200-200-0400	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
200-200-0403	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
200-200-0500	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
200-200-0501	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
200-200-0503	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0315	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0400	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0403	-	-	-	-	-	X	-	X	X	X	X	X	X	-	-	-	-
250-250-0500	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	X	X
250-250-0503	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0505	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0630	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
250-250-0634	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
300-300-0400	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-
300-300-0500	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-



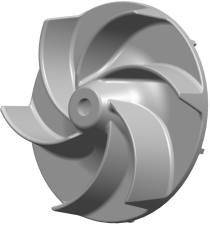
<sup>7</sup> C/CPS (CeramikPolySiC— lined pressure boundary, casing + suction cover+ discharge cover)

Size	Impeller type (⇒ Page 11)																	
	F					K										O		
						Nodular cast iron												C <sup>7)</sup>
	Material variant (⇒ Page 7)																	
DDDD	GDNG	GHHH	GNGG	HHHH	DDDD	DKKM	DMKM	DJUD	GDNG	GHHH	GNGG	HHHH	KKKK	KUKK	DDDD	GDNG		
300-300-0503	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0400	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0500	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0503	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0504	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0630	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
350-350-0633	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
400-400-0500	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
400-400-0503	-	-	-	-	-	X	-	-	DUKD	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
400-400-0533	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	-	-	-	-	
400-400-0583	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
500-400-0710	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
500-400-0713	-	-	-	-	-	X	-	-	X	X	X	X	X	-	-	-	-	
500-500-0544	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
500-500-0630	-	-	-	-	-	X	-	-	-	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
500-500-0633	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	X	<sup>8)</sup>	-	-	-	-	
500-500-0634	-	-	-	-	-	X	-	-	<sup>8)</sup>	X	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	-	-	-	-	
500-500-0635	-	-	-	-	-	X	-	-	<sup>8)</sup>	X	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	-	-	-	-	
500-500-0637	-	-	-	-	-	X	-	-	X	X	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	-	-	-	-	
600-600-0663	-	-	-	-	-	-	-	-	DDKD + DUKD + GNKG + GGKG				-	-	-	-		
600-600-0669	-	-	-	-	-	-	-	-	DKKD				-	-	-	-		
600-600-0710	-	-	-	-	-	<sup>8)</sup>	-	-	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	<sup>8)</sup>	-	-	-	-	
600-600-0753	-	-	-	-	-	-	-	-	DUKD				-	-	-	-	-	
600-600-0803	-	-	-	-	-	-	-	-	DUKD				-	-	-	-	-	
600-600-0813	-	-	-	-	-	-	-	-	DUKD				-	-	-	-	-	
600-600-0824	-	-	-	-	-	-	-	-	DUKD				-	-	-	X	-	-
600-600-0825	-	-	-	-	-	-	-	-	DUKD				-	-	-	X	-	-
600-600-0829	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
600-600-0873	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
600-600-0923	-	-	-	-	-	-	-	-	DUKD				-	-	-	-	-	-
700-700-0923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
700-700-0929	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
800-700-0953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
800-700-0959	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
800-800-0934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
800-800-0935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
800-800-0939	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
800-900-0883	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
900-900-1133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
900-900-1134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
900-900-1137	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
900-900-1138	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
900-900-1139	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	

<sup>8</sup> On request

### Impellers

- Various application-oriented impeller types
- Back vanes reduce axial thrust.

	<p>Closed multi-channel impeller (impeller type K)</p>	<p><b>Suitable for the following fluids:</b> Contaminated, solids-laden fluids not containing stringy material and containing no or very little entrapped gas</p>
	<p>Open multi-vane impeller (impeller type O)</p>	<p><b>Suitable for the following fluids:</b> Uncontaminated or slightly contaminated fluids containing very little entrapped gas as well as fluids liable to form deposits and bunch</p>
	<p>Free-flow impeller (impeller type F)</p>	<p><b>Suitable for the following fluids:</b> Fluids containing coarse solids and stringy material as well as fluids with entrapped gas and entrapped air</p>

Shaft seal

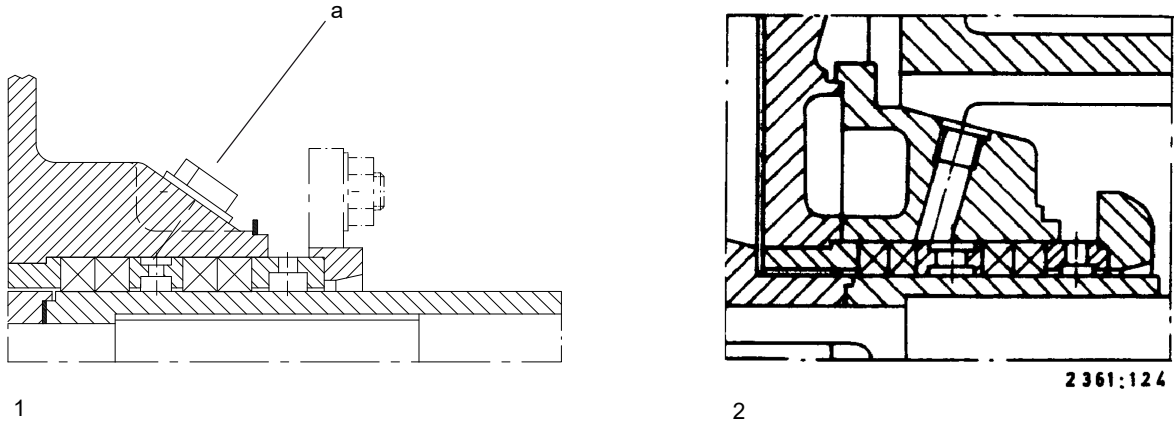


Fig. 1: Gland packing

1	Uncooled gland packing	2	Cooled gland packing
a	Connection for barrier fluid or flushing liquid (connections 10 A.1 and 10 E.1)		

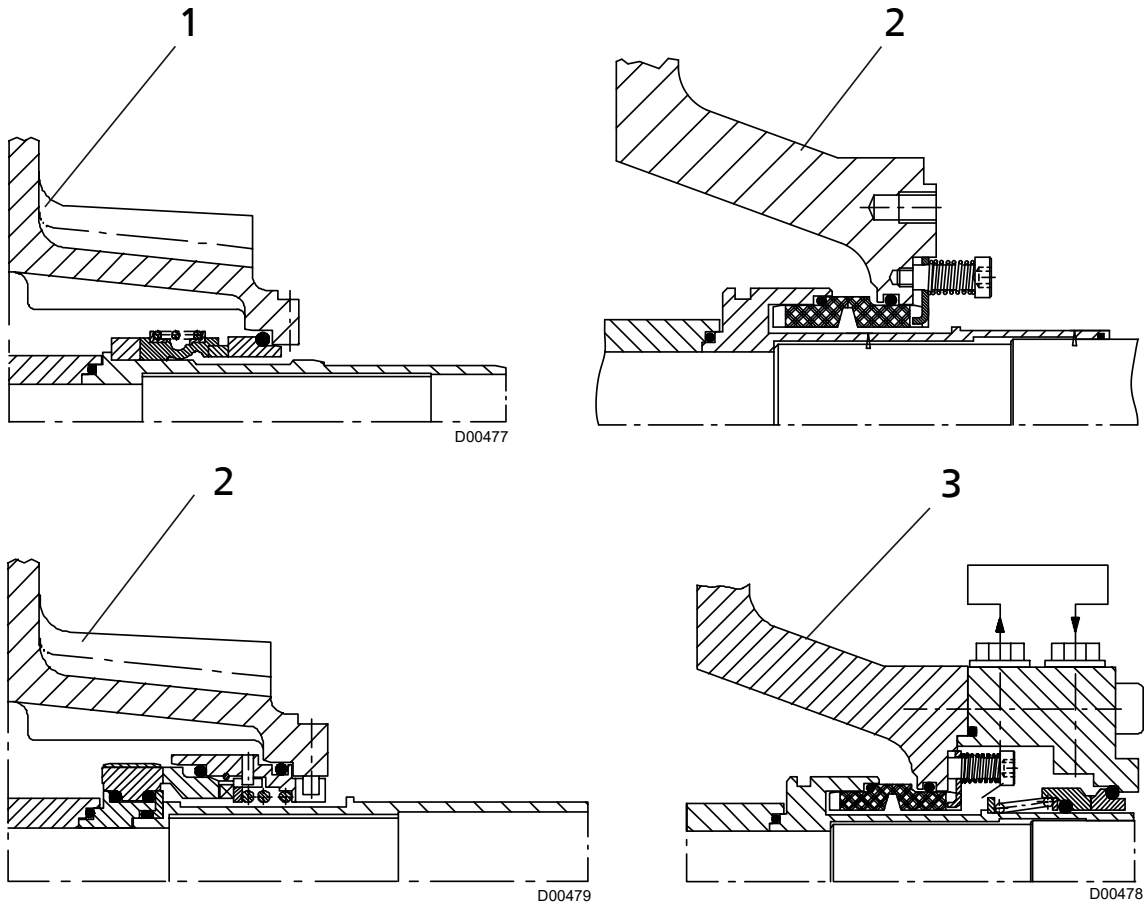


Fig. 2: Mechanical seals in conical shaft seal chamber (A-type)

1	Single mechanical seal, unbalanced	3	Mechanical seal in tandem arrangement, with quench
2	Single mechanical seal with spring-loaded stationary assembly		

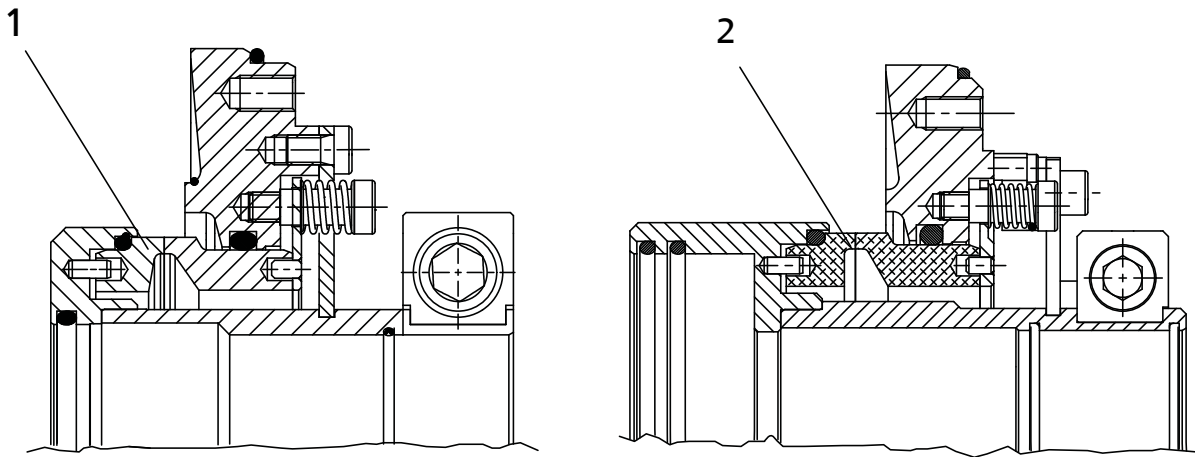


Fig. 3: Mechanical seals in conical shaft seal chamber (A-type)

1	Single mechanical seal, balanced, with spring-loaded stationary assembly, bi-directional, for P16ax/P20sx V10	2	Single mechanical seal, balanced, with spring-loaded stationary assembly, bi-directional, for P20sx V11
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**Discharge cover**

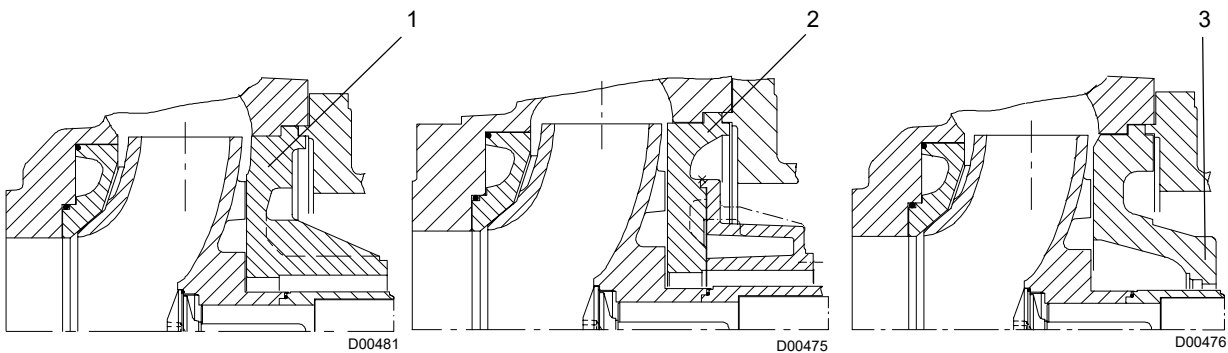


Fig. 4: Discharge cover versions

1	Discharge cover with integrally cast stuffing box housing (cylindrical cover) Material variants: GNNG, GDNG, DDDD	3	For pump sets with mechanical seal: discharge cover with conical seal chamber (A-type cover) Material variants: GNNG, GDNG, DDDD, DKKM, GHHH, HHHH
2	Discharge cover with bolted stuffing box housing (cylindrical cover, split) Material variants: GHHH, HHHH and all sizes on bearing brackets P08sx, P10ax, P12sx for all available materials.		

**Suction side versions**

- Wear plate
  - 065-040-0250 to 600-600-0669
- Casing wear ring
  - 250-250-0315
  - 300-300-0400
  - 350-350-0400
  - 400-400-0500
- Suction cover from 400-400-0533

**Technical data**
**Hydraulic system**
**Table 7: Technical data of hydraulic system**

Sizes	Bearing bracket	Impeller type K				Impeller type O				Impeller type F			
		Free passage	Number of vanes	Impeller diameter		Free passage	Number of vanes	Impeller diameter		Free passage	Number of vanes	Impeller diameter	
				max.	min.			max.	min.			max.	min.
		[mm]		[mm]	[mm]	[mm]		[mm]	[mm]	[mm]		[mm]	[mm]
065-040-0250	P03ax	15	3	260	170	-	-	-	-	-	-	-	-
065-050-0200	P03ax	34	2	209	120	30	3	209	160	-	-	-	-
065-050-0201	P03ax	-	-	-	-	-	-	-	-	45	6	209	130
080-040-0315	P04ax	15	2	320	230	-	-	-	-	-	-	-	-
080-050-0400	P04ax	15	2	408	330	-	-	-	-	-	-	-	-
080-065-0200	P03ax	46	2	209	145	30	3	209	160	-	-	-	-
080-065-0201	P03ax	-	-	-	-	-	-	-	-	55	6	209	145
080-065-0313	P04ax	15	5	320	230	-	-	-	-	-	-	-	-
080-065-0315	P04ax	42	2	320	230	25	3	320	230	-	-	-	-
080-065-0400	P04ax	34	2	408	330	-	-	-	-	-	-	-	-
100-080-0250	P03ax	50	2	260	170	36	3	260	170	-	-	-	-
100-080-0251	P03ax	-	-	-	-	-	-	-	-	60	7	260	170
100-080-0311	P04ax	-	-	-	-	-	-	-	-	50	7	320	260
100-080-0315	P04ax	44	2	320	260	-	-	-	-	-	-	-	-
100-080-0400	P05ax	46	2	404	280	28	3	404	280	-	-	-	-
100-080-0403	P05ax	16	5	404	280	-	-	-	-	-	-	-	-
125-080-0500	P06x	20	3	504	380	-	-	-	-	-	-	-	-
125-100-0250	P04ax	60	2	260	180	50	3	260	180	-	-	-	-
125-100-0251	P04ax	-	-	-	-	-	-	-	-	70	7	260	180
125-100-0253	P04ax	28	6	260	180	-	-	-	-	-	-	-	-
125-100-0315	P04ax	54	2	320	230	-	-	-	-	-	-	-	-
125-100-0400	P05ax	50	2	404	280	35	4	404	280	-	-	-	-
125-100-0403	P05ax	20	6	404	280	-	-	-	-	-	-	-	-
150-125-0500	P06x	50	3	504	350	-	-	-	-	-	-	-	-
150-125-0503	P06x	21	6	509	350	-	-	-	-	-	-	-	-
150-150-0311	P05ax	-	-	-	-	-	-	-	-	90	7	320	260
150-150-0315	P05ax	88	2	320	260	65	5	320	260	-	-	-	-
150-150-0400	P05ax	64	3	404	320	-	-	-	-	-	-	-	-
150-150-0403	P05ax	41	5	404	320	-	-	-	-	-	-	-	-
200-200-0320	P05ax	75	3	320	257	-	-	-	-	-	-	-	-
200-200-0400	P06x	80	3	403	320	78	5	404	320	-	-	-	-
200-200-0403	P06x	40	6	404	320	-	-	-	-	-	-	-	-
200-200-0500	P08sx, P10ax, P12sx	75	3	504	400	70	5	504	400	-	-	-	-
200-200-0501	P08sx, P10ax, P12sx	75	3	504	400	-	-	-	-	-	-	-	-
200-200-0503	P08sx, P10ax, P12sx	40	5	504	400	-	-	-	-	-	-	-	-
250-250-0315	P06x	70	3	324	285	-	-	-	-	-	-	-	-
250-250-0400	P08sx, P10ax	80	3	409	338	-	-	-	-	-	-	-	-
250-250-0403	P08sx, P10ax	44	5	409	340	-	-	-	-	-	-	-	-
250-250-0500	P08sx, P10ax, P12sx	85	3	504	400	70	4	504	400	-	-	-	-
250-250-0503	P08sx, P10ax, P12sx	48	6	504	400	-	-	-	-	-	-	-	-
250-250-0505	P08sx, P10ax, P12sx	70	4	504	436	-	-	-	-	-	-	-	-
250-250-0630	P08sx, P10ax, P12sx	86	4	630	500	-	-	-	-	-	-	-	-
250-250-0634	P08sx, P10ax, P12sx	41	5	630	480	-	-	-	-	-	-	-	-
300-300-0400	P08sx, P10ax	85	3	409	320	-	-	-	-	-	-	-	-
300-300-0500	P08sx, P10ax, P12sx	89	3	504	400	-	-	-	-	-	-	-	-
300-300-0503	P08sx, P10ax, P12sx	50	5	504	420	-	-	-	-	-	-	-	-
350-350-0400	P08sx, P10ax	110	3	408	330	-	-	-	-	-	-	-	-
350-350-0500	P08sx, P10ax, P12sx	110	3	508	390	-	-	-	-	-	-	-	-

Sizes	Bearing bracket	Impeller type K				Impeller type O				Impeller type F			
		Free passage [mm]	Number of vanes	Impeller diameter		Free passage [mm]	Number of vanes	Impeller diameter		Free passage [mm]	Number of vanes	Impeller diameter	
				max.	min.			max.	min.			max.	min.
				[mm]	[mm]			[mm]	[mm]			[mm]	[mm]
350-350-0503	P08sx, P10ax, P12sx	65	5	508	472	-	-	-	-	-	-	-	-
350-350-0504	P08sx, P10ax, P12sx	55	5	507	460	-	-	-	-	-	-	-	-
350-350-0630	P08sx, P10ax, P12sx	135	3	630	500	-	-	-	-	-	-	-	-
350-350-0633	P08sx, P10ax, P12sx	75	5	630	500	-	-	-	-	-	-	-	-
400-400-0500	P08sx, P10ax, P12sx	123	3	508	430	-	-	-	-	-	-	-	-
400-400-0503	P08sx, P10ax, P12sx	90	4	508	445	-	-	-	-	-	-	-	-
400-400-0533	P10ax, P12sx	90	5	538	496	-	-	-	-	-	-	-	-
400-400-0583	P10ax, P12sx	90	5	600	550	-	-	-	-	-	-	-	-
500-400-0710	P10ax, P12sx, P16ax	160	3	730	630	-	-	-	-	-	-	-	-
500-400-0713	P10ax, P12sx, P16ax	65	5	730	630	-	-	-	-	-	-	-	-
500-500-0544	P10ax, P12sx	75	4	572	495	-	-	-	-	-	-	-	-
500-500-0630	P10ax, P12sx, P16ax	142	3	636	528	-	-	-	-	-	-	-	-
500-500-0633	P10ax, P12sx, P16ax	90	5	636	534	-	-	-	-	-	-	-	-
500-500-0634	P10ax, P12sx, P16ax	85	5	636	554	-	-	-	-	-	-	-	-
500-500-0635	P10ax, P12sx, P16ax	75	5	636	565	-	-	-	-	-	-	-	-
500-500-0637	P10ax, P12sx, P16ax	85	5	636	540	-	-	-	-	-	-	-	-
600-600-0663	P12sx	80	5	700	620	-	-	-	-	-	-	-	-
600-600-0669	P12sx	80	5	700	630	-	-	-	-	-	-	-	-
600-600-0710	P12sx, P16ax	165	3	716	650	-	-	-	-	-	-	-	-
600-600-0753	P16ax	112	5	750	675	-	-	-	-	-	-	-	-
600-600-0803	P16ax	100	5	780	718	-	-	-	-	-	-	-	-
600-600-0813	P16ax	95	5	830	710	-	-	-	-	-	-	-	-
600-600-0824	P16ax	95	5	794	720	-	-	-	-	-	-	-	-
600-600-0825	P16ax	95	5	800	709	-	-	-	-	-	-	-	-
600-600-0829	P16ax	90	6	800	714	-	-	-	-	-	-	-	-
600-600-0873	P16ax	97	5	880	800	-	-	-	-	-	-	-	-
600-600-0923	P20sx	113	5	930	840	-	-	-	-	-	-	-	-
700-700-0923	P20sx	115	5	870	765	-	-	-	-	-	-	-	-
700-700-0929	P20sx	100	6	870	780	-	-	-	-	-	-	-	-
800-700-0953	P20sx	110	5	940	834	-	-	-	-	-	-	-	-
800-700-0959	P20sx	105	5	940	820	-	-	-	-	-	-	-	-
800-800-0934	P20sx	115	5	950	845	-	-	-	-	-	-	-	-
800-800-0935	P20sx	155	4	940	850	-	-	-	-	-	-	-	-
800-800-0939	P20sx	86	6	950	854	-	-	-	-	-	-	-	-
800-900-0883	P20sx	155	4	855	750	-	-	-	-	-	-	-	-
900-900-1133	P20sx	140	5	1120	1018	-	-	-	-	-	-	-	-
900-900-1134	P20sx	150	5	1120	1008	-	-	-	-	-	-	-	-
900-900-1137	P20sx	120	6	1122	1006	-	-	-	-	-	-	-	-
900-900-1138	P20sx	120	6	1122	1006	-	-	-	-	-	-	-	-
900-900-1139	P20sx	110	6	1120	980	-	-	-	-	-	-	-	-

**Bearing bracket**
**Table 8: Technical data of bearing bracket**

Bearing bracket	Gland packing						Shaft diameter					Shaft protecting sleeve Gland packing	Shaft protecting sleeve Mechanical seal	Bearings Pump end <sup>9)</sup>	Bearings Drive end <sup>10)</sup>
	Bore diameter	Length	Packing ring dimensions	Number of packing rings	Width of lantern ring	Clearance for removing the gland packing	In stuffing box housing	At bearings Pump end	At bearings Drive end	At coupling					
	[mm]	[mm]	[mm]	[Qty]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]				
P03ax	65	64	10 x 10	4	20	80	33	45	45	32	45	Depending on make	NU 409	2 x 7309 B-UA	
P04ax	75	64	10 x 10	4	20	65	42	55	55	42	55		NU 411	2 x 7311 B-UA	
P05ax	95	79	12,5 x 12,5	4	25	75	53	65	65	48	70		NU 413	2 x 7313 B-UA	
P06x	95	79	12,5 x 12,5	4	25	75	65	65	65	60	80		NU 413	2 x 7313 B-UA	
P08sx	103	132	16 x 16	4	30	105	80	80	95	75	100		NU 416	2 x 7319 B-UA	
P10ax	103	152	16 x 16	4	30	105	100	120	120	95	120		NU 324	2 x 7224 B-UA	
P12sx	103	172	16 x 16	4	30	105	120	120	120	110	140		NU 324	2 x 7224 B-UA	
P16ax	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	160	160/140	120	<sup>11)</sup>		NU 232 EC3	NU 232 EC3 <sup>9)</sup> QJ 328-N2	
P20sx	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	<sup>11)</sup>	200	200/190	145	<sup>11)</sup>		NU 240 E	NJ 238 E <sup>9)</sup> 29340-E1 <sup>12)</sup>	

<sup>9)</sup> To DIN 5412

<sup>10)</sup> To DIN 628

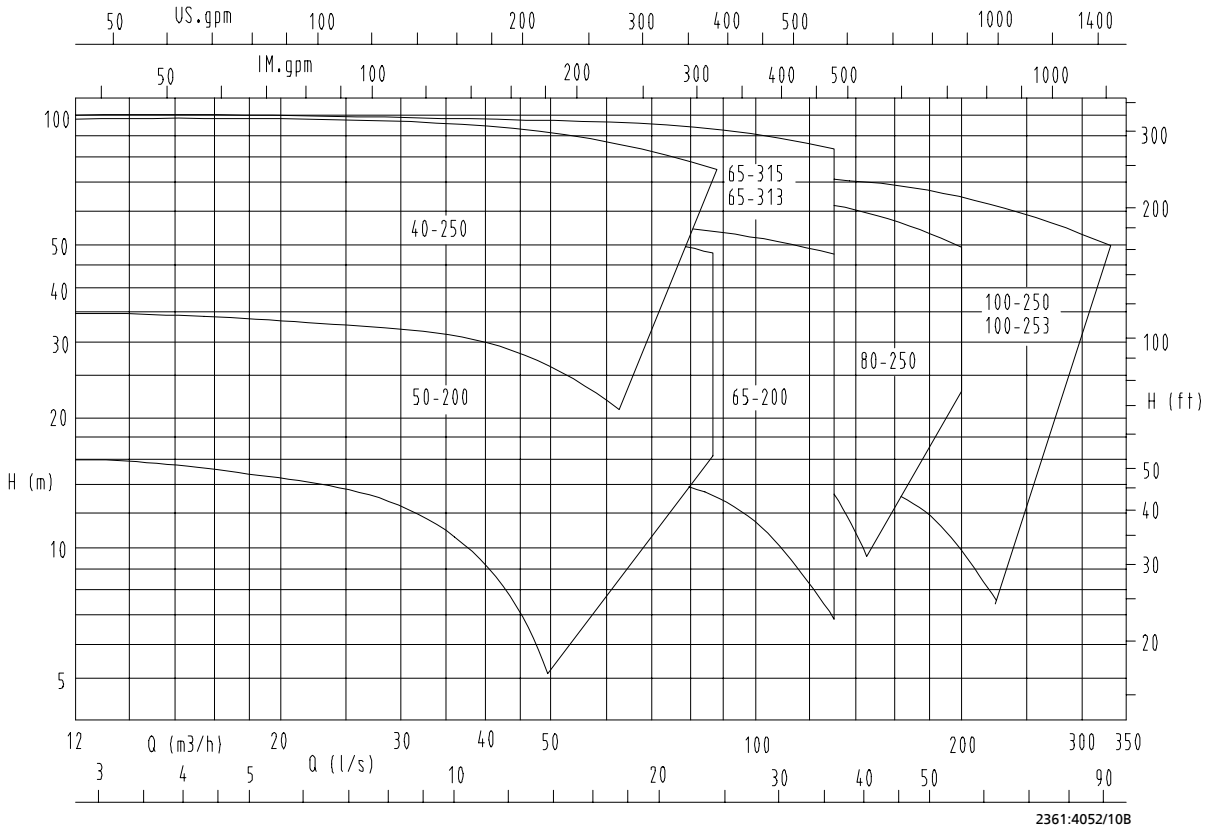
<sup>11)</sup> On request

<sup>12)</sup> To DIN 728

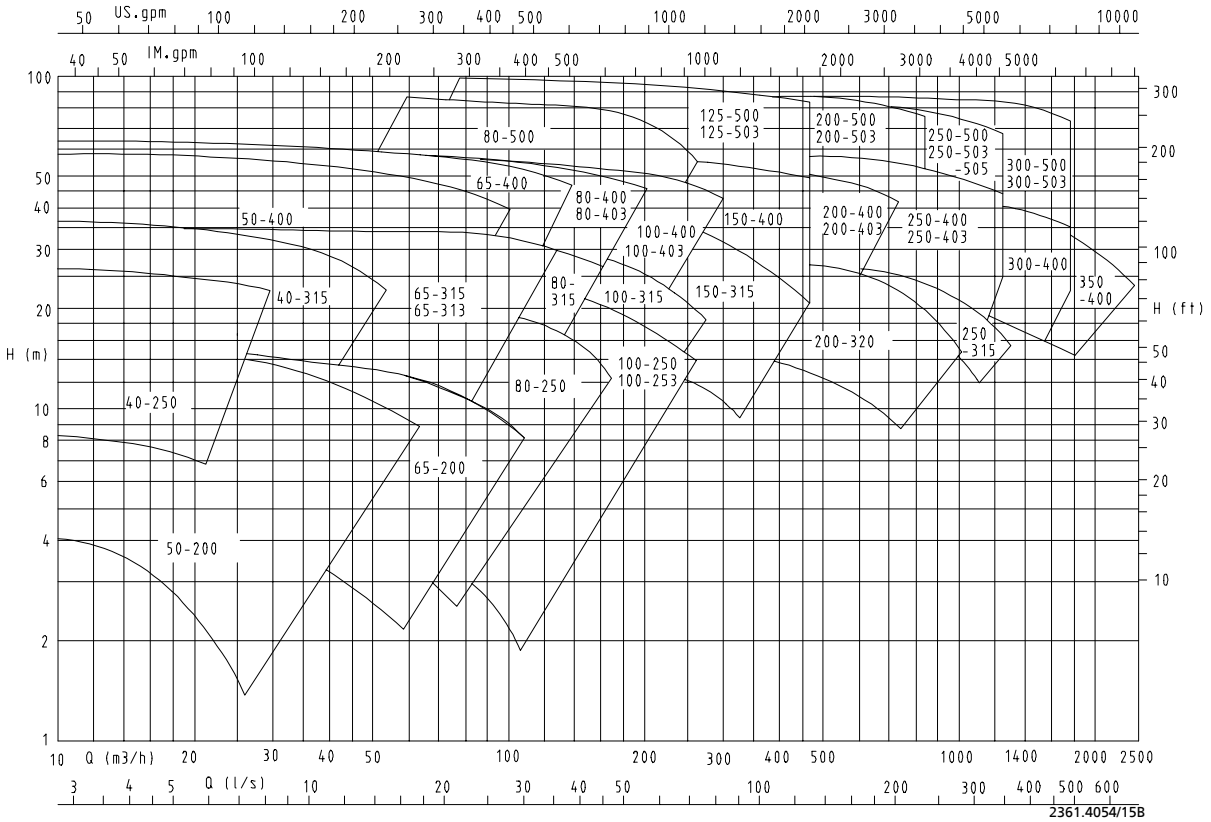


Selection charts

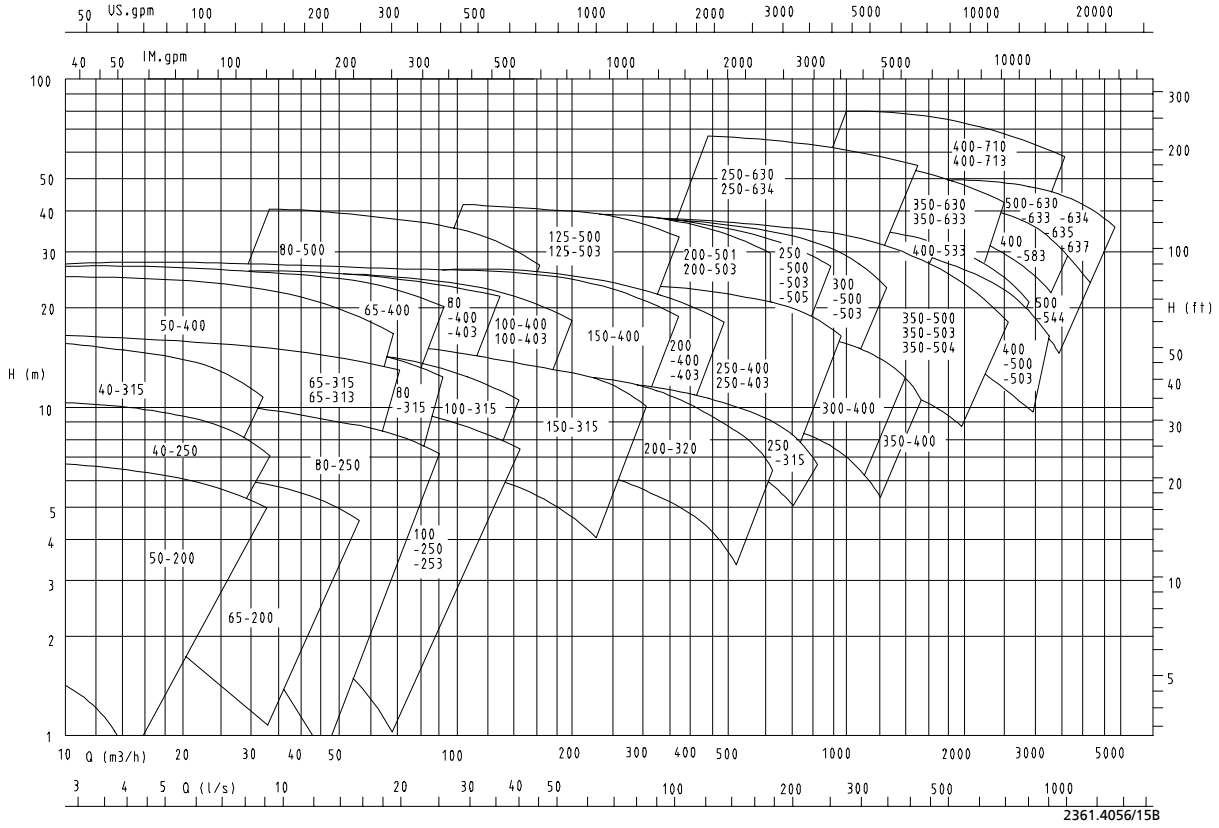
KWP K, n = 2900 rpm



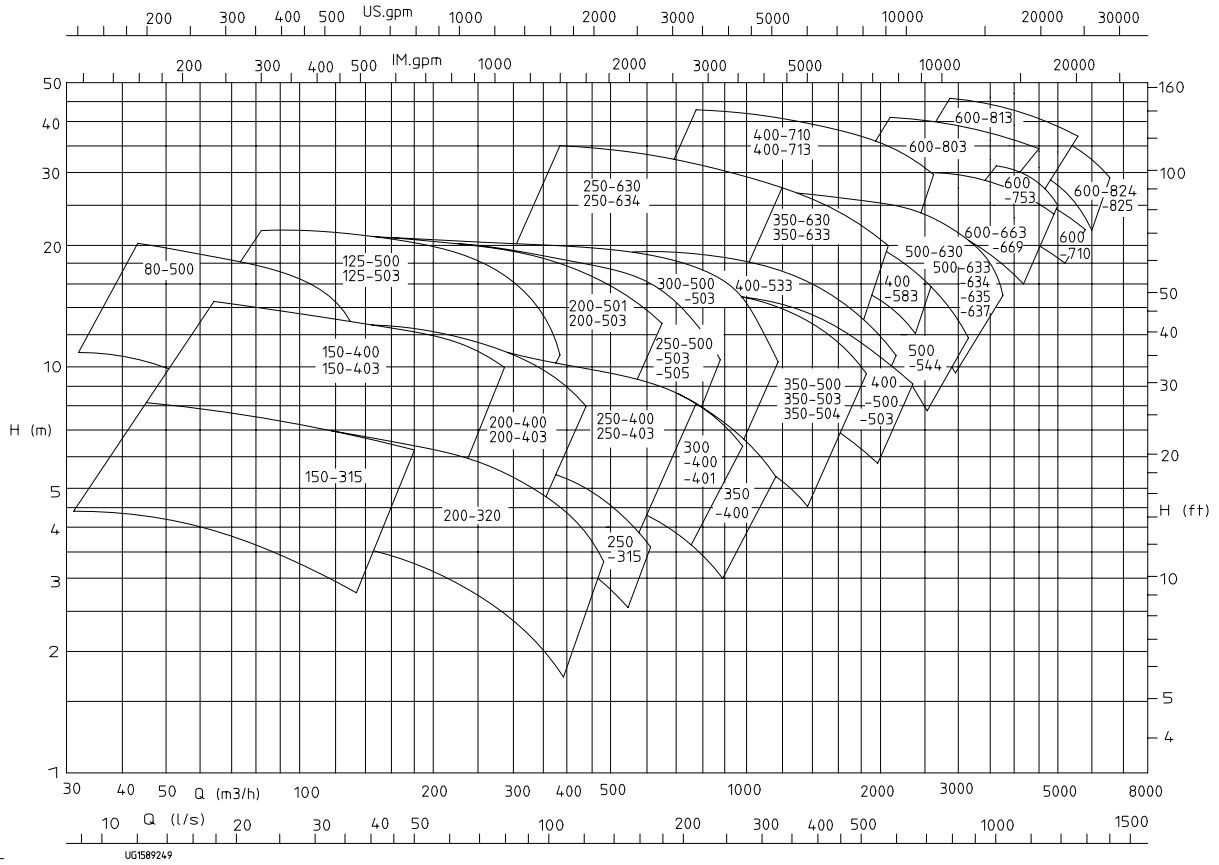
KWP K, n = 1450 rpm



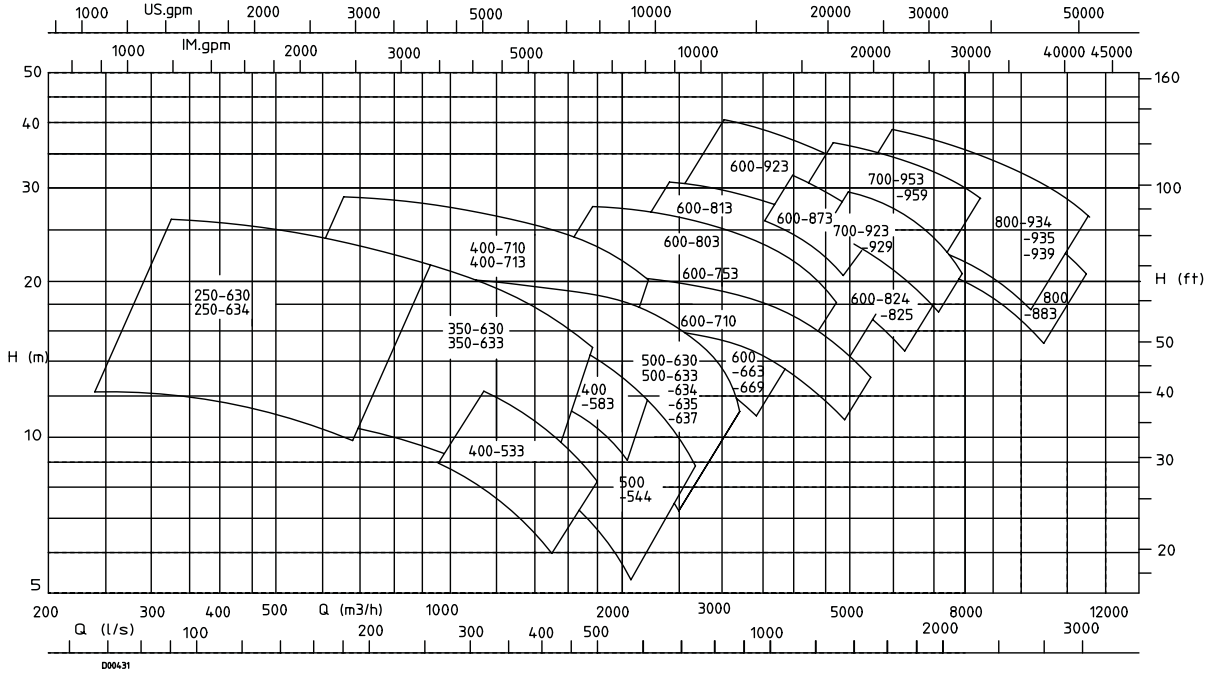
KWP K, n = 960 rpm



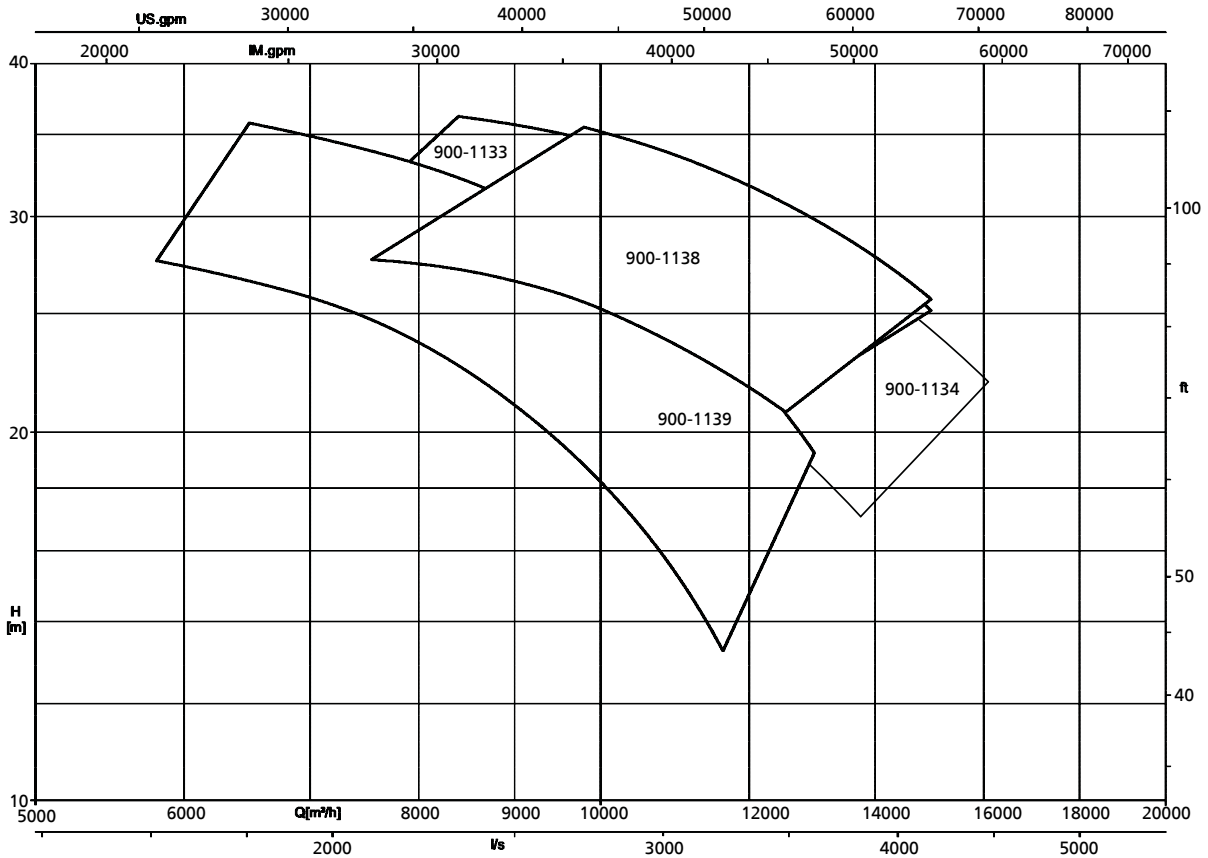
KWP K, n = 700 rpm



KWP K, n = 580 rpm



KWP K, n = 480 rpm



Dimensions and connections

Dimensions

Shaft end, pump feet, pump with bearing brackets P03ax to P06x

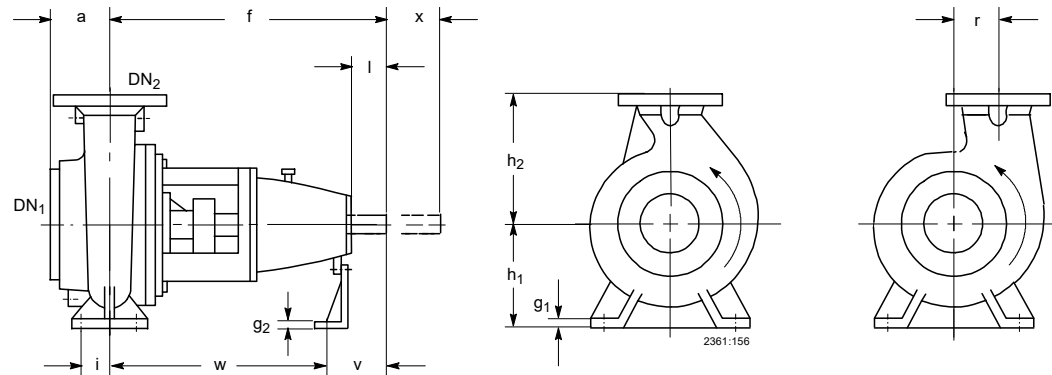


Fig. 5: Dimensions of pump with bearing brackets P03ax to P06x

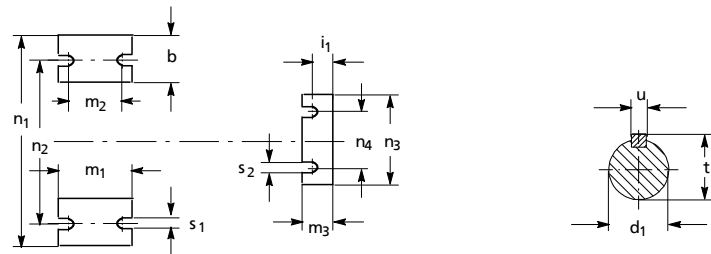


Fig. 6: Dimensions of shaft end and pump feet for pumps with bearing brackets P03ax to P06x

Table 9: Dimensions of shaft end, pump feet, pumps with bearing brackets P03ax to P06x

Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump													Shaft end				Pump feet								
				a	b	f	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>13)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	s <sub>1</sub>	s <sub>2</sub>	v	w
[mm]																													
065-040-0250	P03ax	65	40	100	65	500	16	4	180	225	-	125	48	320	160	100	32	80	35,3	10	47,5	30	95	250	110	16	14	130	370
065-050-0200	P03ax	65	50	112	50	500	14	4	160	200	-	100	48	265	160	100	32	80	35,3	10	35	30	70	212	110	14	14	130	370
065-050-0201	P03ax	65	50	112	50	500	14	4	160	200	-	100	48	265	160	100	32	80	35,3	10	35	30	70	212	110	14	14	130	370
080-040-0315	P04ax	80	40	125	80	530	18	6	225	250	-	160	48	400	160	140	42	110	45,1	12	60	33	120	315	110	18	14	160	370
080-050-0400	P04ax	80	50	120	80	530	18	6	280	325	-	160	48	435	160	140	42	110	45,1	12	60	33	120	355	110	19	14	160	370

<sup>13)</sup> x = clearance for removal (without removing the motor)

Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump													Shaft end				Pump feet									
				a	b	f	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>(13)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	s <sub>1</sub>	s <sub>2</sub>	v	w	
				[mm]																										
080-065-0200	P03ax	80	65	125	65	500	16	4	180	225	-	125	48	320	160	100	32	80	35,3	10	47,5	30	95	250	110	14	14	130	370	
080-065-0201	P03ax	80	65	125	65	500	16	4	180	225	-	125	48	320	160	100	32	80	35,3	10	47,5	30	95	250	110	14	14	130	370	
080-065-0311	P04ax	80	65	140	80	530	18	6	225	280	-	160	48	400	160	120	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
080-065-0313	P04ax	80	65	140	80	530	18	6	225	280	-	160	48	400	160	120	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
080-065-0315	P04ax	80	65	140	80	530	18	6	225	280	-	160	48	400	160	120	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
080-065-0400	P04ax	80	65	140	80	530	18	6	280	355	-	160	48	435	160	120	42	110	45,1	12	60	33	120	355	110	19	14	160	370	
100-080-0250	P03ax	100	80	125	80	500	18	6	225	280	-	160	48	400	160	120	32	80	35,3	10	60	30	120	315	110	18	14	130	370	
100-080-0251	P03ax	100	80	125	80	500	18	6	225	280	-	160	48	400	160	120	32	80	35,3	10	60	30	120	315	110	18	14	130	370	
100-080-0311	P04ax	100	80	140	80	530	18	6	225	280	-	160	48	400	160	120	42	110	45,1	12	60	33	120	315	110	19	14	160	370	
100-080-0315	P04ax	100	80	140	80	530	18	6	225	280	-	160	48	400	160	120	42	110	45,1	12	60	33	120	315	110	19	14	160	370	
100-080-0400	P05ax	100	80	140	80	670	18	12	280	355	-	160	60	435	200	120	48	110	51,5	14	60	39	120	355	140	18	18	170	500	
100-080-0403	P05ax	100	80	140	80	670	18	12	280	355	-	160	60	435	200	120	48	110	51,5	14	60	39	120	355	140	18	18	170	500	
125-080-0500	P06x	125	80	140	100	720	24	12	355	450	-	200	60	550	200	160	60	140	64,2	18	75	39	150	450	140	23	18	205	515	
125-100-0250	P04ax	125	100	140	80	530	18	6	225	280	-	160	48	400	160	140	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
125-100-0251	P04ax	125	100	140	80	530	18	6	225	280	-	160	48	400	160	140	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
125-100-0253	P04ax	125	100	140	80	530	18	6	225	280	-	160	48	400	160	140	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
125-100-0315	P04ax	125	100	140	80	530	18	6	250	315	-	180	48	400	160	140	42	110	45,1	12	60	33	120	315	110	18	14	160	370	
125-100-0400	P05ax	125	100	140	100	670	20	12	280	355	-	200	60	500	200	160	48	110	51,5	14	75	39	150	400	140	23	18	170	500	
125-100-0403	P05ax	125	100	140	100	670	20	12	280	355	-	200	60	500	200	160	48	110	51,5	14	75	39	150	400	140	23	18	170	500	
150-125-0500	P06x	150	125	160	100	720	24	12	355	450	-	200	60	550	200	160	60	140	64,2	18	75	39	150	450	140	23	18	205	515	
150-125-0503	P06x	150	125	160	100	720	24	12	355	450	-	200	60	550	200	160	60	140	64,2	18	75	39	150	450	140	23	18	205	515	
150-150-0311	P05ax	150	150	180	100	670	22	12	315	400	-	200	60	550	200	160	48	110	51,5	14	75	39	150	450	140	23	18	170	500	
150-150-0315	P05ax	150	150	180	100	670	22	12	315	400	-	200	60	550	200	160	48	110	51,5	14	75	39	150	450	140	23	18	170	500	
150-150-0400	P05ax	150	150	160	100	670	22	12	315	450	-	200	60	550	200	160	48	110	51,5	14	75	39	150	450	140	23	18	170	500	
150-150-0403	P05ax	150	150	160	100	670	22	12	315	450	-	200	60	550	200	160	48	110	51,5	14	75	39	150	450	140	23	18	170	500	
200-200-0320	P05ax	200	200	200	100	697	22	12	355	450	-	200	60	550	200	160	48	110	51,5	14	75	39	150	450	140	22	18	170	527	
200-200-0400	P06x	200	200	180	100	720	24	12	355	500	-	200	60	550	200	160	60	140	64,2	18	75	39	150	450	140	23	18	205	515	
200-200-0403	P06x	200	200	180	100	720	24	12	355	500	-	200	60	550	200	160	60	140	64,2	18	75	39	150	450	140	23	18	205	515	
250-250-0315	P06x	250	250	215	130	720	26	12	500	400	315	260	60	800	200	160	60	140	64,2	18	95	39	190	670	140	26	18	205	515	

Shaft end, pump feet, pumps with bearing brackets P08sx to P12sx

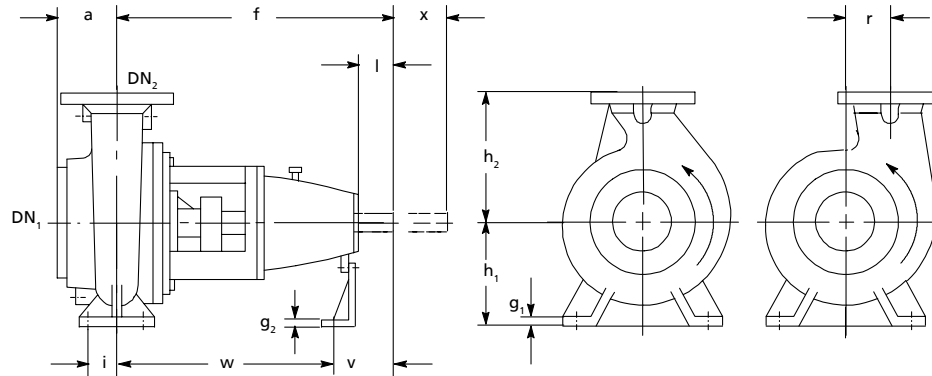


Fig. 7: Dimensions of pumps with bearing brackets P08sx to P12sx

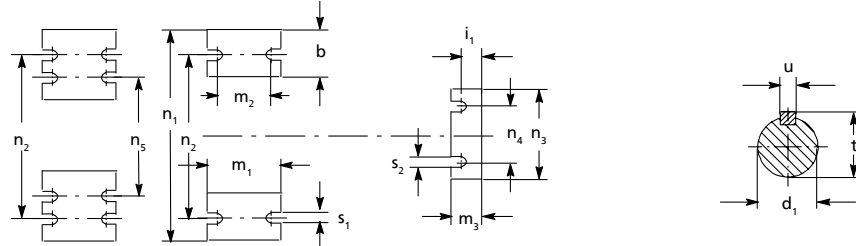


Fig. 8: Dimensions of shaft end and pump feet for pumps with bearing brackets P08sx to P12sx

Table 10: Dimensions of shaft end, pump feet, pumps with bearing brackets P08sx to P12sx

Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump												Shaft end				Pump feet										
				a	b	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>14)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	s <sub>1</sub>	s <sub>2</sub>	f	v	w
				[mm]																										
200-200-0500	P08sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	75	150	97,7	20	75	39	150	560	140	-	23	18	970	220	750
200-200-0500	P10ax	200	200	200	120	24	12	375	560	-	200	60	700	200	250	95	220	100,2	25	75	39	150	560	140	-	23	18	1160	410	750
200-200-0500	P12sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	110	220	116,2	28	75	39	150	560	140	-	23	18	1160	410	750
200-200-0501	P08sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	75	150	97,7	20	75	39	150	560	140	-	23	18	970	220	750
200-200-0501	P10ax	200	200	200	120	24	12	375	560	-	200	60	700	200	250	95	220	100,2	25	75	39	150	560	140	-	23	18	1160	410	750
200-200-0501	P12sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	110	220	116,2	28	75	39	150	560	140	-	23	18	1160	410	750
200-200-0503	P08sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	75	150	97,7	20	75	39	150	560	140	-	23	18	970	220	750
200-200-0503	P10ax	200	200	200	120	24	12	375	560	-	200	60	700	200	250	95	220	100,2	25	75	39	150	560	140	-	23	18	1160	410	750
200-200-0503	P12sx	200	200	200	120	24	12	375	560	-	200	60	700	200	250	110	220	116,2	28	75	39	150	560	140	-	23	18	1160	410	750
250-250-0400	P08sx	250	250	180	130	26	12	425	375	300	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	26	18	1000	220	780

<sup>14)</sup> x = clearance for removal (without removing the motor)

Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump												Shaft end				Pump feet										
				a	b	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>(14)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	s <sub>1</sub>	s <sub>2</sub>	f	v	w
				[mm]																										
250-250-0400	P10ax	250	250	180	130	26	12	425	375	300	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	26	18	1190	410	780
250-250-0403	P08sx	250	250	180	130	26	12	425	375	300	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	26	18	1000	220	780
250-250-0403	P10ax	250	250	180	130	26	12	425	375	300	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	26	18	1190	410	780
250-250-0500	P08sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	28	18	1000	220	780
250-250-0500	P10ax	250	250	200	130	26	12	425	400	315	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	28	18	1190	410	780
250-250-0500	P12sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	110	220	116,2	28	95	39	190	670	140	-	28	18	1190	410	780
250-250-0503	P08sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	28	18	1000	220	780
250-250-0503	P10ax	250	250	200	130	26	12	425	400	315	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	28	18	1190	410	780
250-250-0503	P12sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	110	220	116,2	28	95	39	190	670	140	-	28	18	1190	410	780
250-250-0505	P08sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	28	18	1000	220	780
250-250-0505	P10ax	250	250	200	130	26	12	425	400	315	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	28	18	1190	410	780
250-250-0505	P12sx	250	250	200	130	26	12	425	400	315	260	60	800	200	315	110	220	116,2	28	95	39	190	670	140	-	28	18	1190	410	780
250-250-0630	P08sx	250	250	200	150	32	12	500	450	400	260	60	900	200	315	75	150	97,7	20	95	39	190	750	140	-	26	18	1000	220	780
250-250-0630	P10ax	250	250	200	150	32	12	500	450	400	260	60	900	200	315	95	220	100,2	25	95	39	190	750	140	-	26	18	1190	410	780
250-250-0630	P12sx	250	250	200	150	32	12	500	450	400	260	60	900	200	315	110	220	116,2	28	95	39	190	750	140	-	26	18	1190	410	780
250-250-0634	P08sx	250	250	200	150	32	12	500	450	400	260	60	900	200	315	75	150	97,7	20	95	39	190	750	140	-	26	18	1000	220	780
250-250-0634	P10ax	250	250	200	150	32	12	500	450	400	260	60	900	200	315	95	220	100,2	25	95	39	190	750	140	-	26	18	1190	410	780
250-250-0634	P12sx	250	250	200	150	32	12	500	450	400	260	60	900	200	315	110	220	116,2	28	95	39	190	750	140	-	26	18	1190	410	780
300-300-0400	P08sx	300	300	180	180	32	12	500	400	390	360	60	900	200	315	75	150	97,7	20	125	39	250	750	140	-	28	18	1000	220	780
300-300-0400	P10ax	300	300	180	180	32	12	500	400	390	360	60	900	200	315	95	220	100,2	25	125	39	250	750	140	-	28	18	1190	410	780
300-300-0500	P08sx	300	300	200	130	26	12	450	450	315	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	28	18	1000	220	780
300-300-0500	P10ax	300	300	200	130	26	12	450	450	315	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	28	18	1190	410	780
300-300-0500	P12sx	300	300	200	130	26	12	450	450	315	260	60	800	200	315	110	220	116,2	28	95	39	190	670	140	-	28	18	1190	410	780
300-300-0503	P08sx	300	300	200	130	26	12	450	450	315	260	60	800	200	315	75	150	97,7	20	95	39	190	670	140	-	28	18	1000	220	780
300-300-0503	P10ax	300	300	200	130	26	12	450	450	315	260	60	800	200	315	95	220	100,2	25	95	39	190	670	140	-	28	18	1190	410	780
300-300-0503	P12sx	300	300	200	130	26	12	450	450	315	260	60	800	200	315	110	220	116,2	28	95	39	190	670	140	-	28	18	1190	410	780
350-350-0400	P08sx	350	350	200	225	32	12	560	450	395	400	60	1080	200	315	75	150	97,7	20	150	39	300	1000	140	750	28	18	1000	220	780
350-350-0400	P10ax	350	350	200	225	32	12	560	450	395	400	60	1080	200	315	95	220	100,2	25	150	39	300	1000	140	750	28	18	1190	410	780
350-350-0500 <sup>15)</sup>	P08sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	75	150	97,7	20	150	39	300	1000	140	750	28	18	1000	220	780
350-350-0500 <sup>15)</sup>	P10ax	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	95	220	100,2	25	150	39	300	1000	140	750	28	18	1190	410	780
350-350-0500 <sup>15)</sup>	P12sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	110	220	116,2	28	150	39	300	1000	140	750	28	18	1190	410	780
350-350-0503 <sup>15)</sup>	P08sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	75	150	97,7	20	150	39	300	1000	140	750	28	18	1000	220	780
350-350-0503 <sup>15)</sup>	P10ax	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	95	220	100,2	25	150	39	300	1000	140	750	28	18	1190	410	780
350-350-0503 <sup>15)</sup>	P12sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	110	220	116,2	28	150	39	300	1000	140	140	28	18	1190	410	780
350-350-0504 <sup>15)</sup>	P08sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	75	150	97,7	20	150	39	300	1000	140	750	28	18	1000	220	780

<sup>15)</sup> No block flange but standard flange with throughholes

Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump												Shaft end				Pump feet										
				a	b	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>(14)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	s <sub>1</sub>	s <sub>2</sub>	f	v	w
				[mm]																										
350-350-0504 <sup>15)</sup>	P10ax	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	95	220	100,2	25	150	39	300	1000	140	750	28	18	1190	410	780
350-350-0504 <sup>15)</sup>	P12sx	350	350	290	225	32	12	560	500	415	400	60	1080	200	315	110	220	116,2	28	150	39	300	1000	140	140	28	18	1190	410	780
350-350-0630	P08sx	350	350	250	150	32	12	560	560	400	360	60	900	200	350	75	150	97,7	20	125	39	250	750	140	-	28	18	1000	220	780
350-350-0630	P10ax	350	350	250	150	32	12	560	560	400	360	60	900	200	350	95	220	100,2	25	125	39	250	750	140	-	28	18	1190	410	780
350-350-0630	P12sx	350	350	250	150	32	12	560	560	400	360	60	900	200	350	110	220	116,2	28	125	39	250	750	140	-	28	18	1190	410	780
350-350-0633	P08sx	350	350	250	150	32	12	560	560	400	360	60	900	200	350	75	150	97,7	20	125	39	250	750	140	-	28	18	1000	220	780
350-350-0633	P10ax	350	350	250	150	32	12	560	560	400	360	60	900	200	350	95	220	100,2	25	125	39	250	750	140	-	28	18	1190	410	780
350-350-0633	P12sx	350	350	250	150	32	12	560	560	400	360	60	900	200	350	110	220	116,2	28	125	39	250	750	140	-	28	18	1190	410	780
400-400-0500	P08sx	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	75	150	97,7	20	150	59	300	1040	140	800	39	18	1000	220	780
400-400-0500	P10ax	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	95	220	100,2	25	150	59	300	1040	140	800	39	18	1190	410	790
400-400-0500	P12sx	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	110	220	116,2	28	150	59	300	1040	140	800	39	18	1190	410	790
400-400-0503	P08sx	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	75	150	97,7	20	150	59	300	1040	140	800	39	18	1000	220	780
400-400-0503	P10ax	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	95	220	100,2	25	150	59	300	1040	140	800	39	18	1190	410	790
400-400-0503	P12sx	400	400	260	250	40	16	670	500	490	400	85	1150	216	400	110	220	116,2	28	150	59	300	1040	140	800	39	18	1190	410	790
400-400-0533 <sup>15)</sup>	P10ax	400	400	350	250	40	16	630	525	475	360	70	1150	200	400	95	220	100,2	25	125	50	250	1040	140	800	40	18	1175	410	760
400-400-0533 <sup>15)</sup>	P12sx	400	400	350	250	40	16	630	525	475	360	70	1150	200	400	110	220	116,2	28	125	50	250	1040	140	800	40	18	1175	410	760
400-400-0583 <sup>15)</sup>	P10ax	400	400	390	250	40	16	700	540	510	400	110	1150	216	400	95	220	100,2	25	150	50	300	1040	140	800	40	18	1180	450	730
400-400-0583 <sup>15)</sup>	P12sx	400	400	390	250	40	16	700	540	510	400	110	1150	216	400	110	220	116,2	28	150	50	300	1040	140	800	40	18	1180	450	730
500-400-0710 <sup>15)</sup>	P10ax	500	400	350	250	40	16	670	600	480	400	65	1150	216	350	95	220	100,2	25	150	59	300	1040	140	800	38	18	1205	425	780
500-400-0710 <sup>15)</sup>	P12sx	500	400	350	250	40	16	670	600	480	400	65	1150	216	350	110	220	116,2	28	150	59	300	1040	140	800	38	18	1205	425	780
500-400-0713 <sup>15)</sup>	P10ax	500	400	350	250	40	16	670	600	480	400	65	1150	216	350	95	220	100,2	25	150	59	300	1040	140	800	38	18	1205	425	780
500-400-0713 <sup>15)</sup>	P12sx	500	400	350	250	40	16	670	600	480	400	65	1150	216	350	110	220	116,2	28	150	59	300	1040	140	800	38	18	1205	425	780
500-500-0544 <sup>15)</sup>	P10ax	500	500	425	250	40	30	800	630	585	400	90	1400	600	450	95	220	100,2	25	150	60	300	1290	520	1050	38	18	1190	435	755
500-500-0544 <sup>15)</sup>	P12sx	500	500	425	250	40	30	800	630	585	400	90	1400	600	450	110	220	116,2	28	150	60	300	1290	520	1050	38	18	1190	435	755
500-500-0630 <sup>15)</sup>	P10ax	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	95	220	100,2	25	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0630 <sup>15)</sup>	P12sx	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	110	220	116,2	28	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0633 <sup>15)</sup>	P10ax	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	95	220	100,2	25	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0633 <sup>15)</sup>	P12sx	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	110	220	116,2	28	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0634 <sup>15)</sup>	P10ax	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	95	220	100,2	25	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0634 <sup>15)</sup>	P12sx	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	110	220	116,2	28	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0635 <sup>15)</sup>	P10ax	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	95	220	100,2	25	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0635 <sup>15)</sup>	P12sx	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	110	220	116,2	28	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0637 <sup>15)</sup>	P10ax	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	95	220	100,2	25	150	50	300	1290	140	1050	38	18	1190	410	780
500-500-0637 <sup>15)</sup>	P12sx	500	500	375	250	40	16	750	630	575	400	100	1400	216	400	110	220	116,2	28	150	50	300	1290	140	1050	38	18	1190	410	780



Size	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump												Shaft end				Pump feet										
				a	b	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>(14)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	s <sub>1</sub>	s <sub>2</sub>	f	v	w
				[mm]																										
600-600-0663 <sup>15)</sup>	P12sx	600	600	400	250	40	16	800	630	615	400	125	1400	200	500	110	220	116,2	28	150	60	300	1310	140	1150	39	18	1238	457	781
600-600-0669 <sup>15)</sup>	P12sx	600	600	400	250	40	16	800	630	615	400	125	1400	200	500	110	220	116,2	28	150	60	300	1310	140	1150	39	18	1238	457	781
600-600-0710 <sup>15)</sup>	P12sx	600	600	500	250	40	18	900	750	680	400	70	1600	200	500	110	220	116,2	28	150	55	300	1490	140	1250	38	18	1240	450	790

Shaft end, pump feet, pumps with bearing brackets P16ax to P20sx

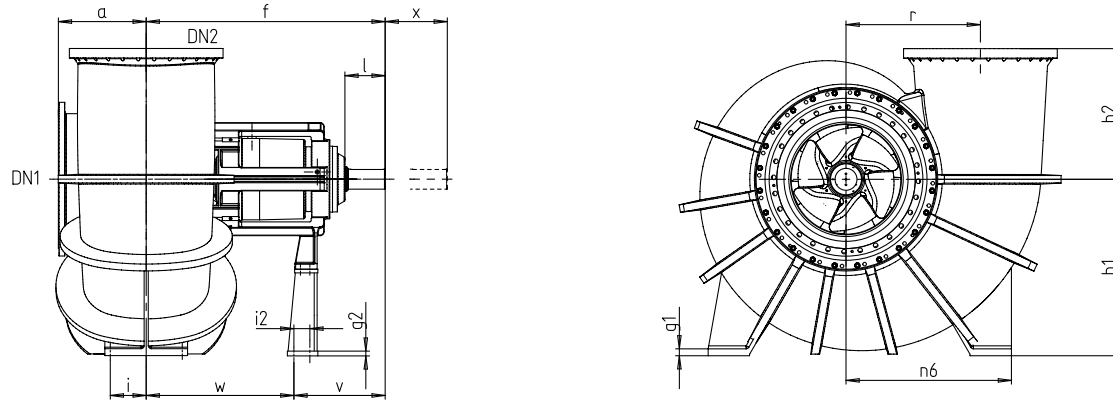


Fig. 9: Dimensions of pumps with bearing brackets P16sx and P20sx

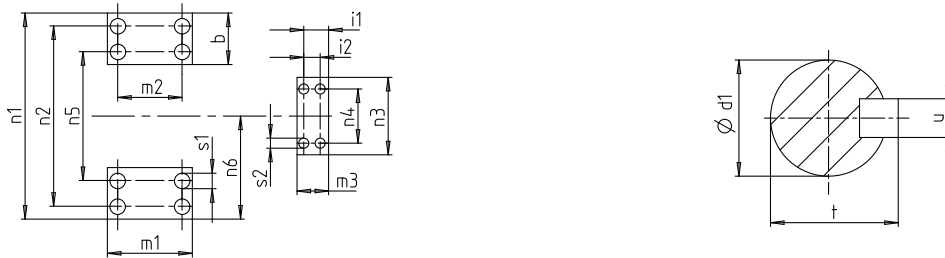


Fig. 10: Dimensions of shaft end and pump feet for pumps with bearing brackets P16ax and P20sx

Table 11: Dimensions of shaft end, pump feet, pumps with bearing brackets P16ax and P20sx

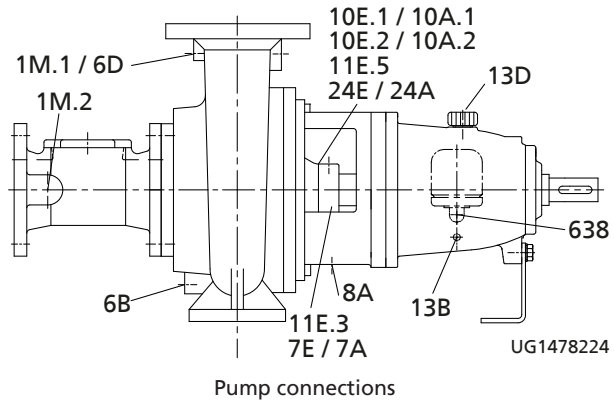
Size	Design version	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump													Shaft end				Pump feet											
					a	b	f	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>16)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	i <sub>2</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	n <sub>6</sub>	s <sub>1</sub>	s <sub>2</sub>	v	w
[mm]																																	
500-400-0710	10	P16ax	500	400	350	250	1306	40	16	670	600	480	400	180	1150	350	350	120	210	127,2	32	150	130	85	300	1040	250	800	575	38	18	476	830
500-400-0713	10	P16ax	500	400	350	250	1306	40	16	670	600	480	400	180	1150	350	350	120	210	127,2	32	150	130	85	300	1040	250	800	575	38	18	476	830
500-500-0630	10	P16ax	500	500	375	250	1190	40	<sup>17)</sup>	750	630	575	400	<sup>17)</sup>	1400	<sup>17)</sup>	400	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1290	<sup>17)</sup>	1050	700	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>
500-500-0633	10	P16ax	500	500	375	250	1190	40	<sup>17)</sup>	750	630	575	400	<sup>17)</sup>	1400	<sup>17)</sup>	400	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1290	<sup>17)</sup>	1050	700	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>

<sup>16)</sup> x = clearance for removal (without removing the motor)

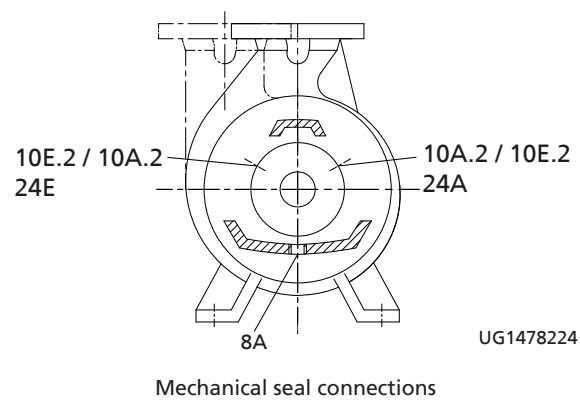
<sup>17)</sup> On request

Size	Design version	Bearing bracket	DN <sub>1</sub>	DN <sub>2</sub>	Pump													Shaft end				Pump feet											
					a	b	f	g <sub>1</sub>	g <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	r	m <sub>1</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>3</sub>	x <sup>16)</sup>	d <sub>1</sub>	l	t	u	i	i <sub>1</sub>	i <sub>2</sub>	m <sub>2</sub>	n <sub>2</sub>	n <sub>4</sub>	n <sub>5</sub>	n <sub>6</sub>	s <sub>1</sub>	s <sub>2</sub>	v	w
					[mm]																												
500-500-0634	10	P16ax	500	500	375	250	1190	40	<sup>17)</sup>	750	630	575	400	<sup>17)</sup>	1400	<sup>17)</sup>	400	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1290	<sup>17)</sup>	1050	700	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>
500-500-0635	10	P16ax	500	500	375	250	1190	40	<sup>17)</sup>	750	630	575	400	<sup>17)</sup>	1400	<sup>17)</sup>	400	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1290	<sup>17)</sup>	1050	700	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>
500-500-0637	10	P16ax	500	500	375	250	1190	40	<sup>17)</sup>	750	630	575	400	<sup>17)</sup>	1400	<sup>17)</sup>	400	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1290	<sup>17)</sup>	1050	700	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>
600-600-0710	10	P16ax	600	600	500	250	<sup>17)</sup>	40	<sup>17)</sup>	900	750	680	400	<sup>17)</sup>	1600	<sup>17)</sup>	500	120	210	127,2	32	150	<sup>17)</sup>	<sup>17)</sup>	300	1490	<sup>17)</sup>	1250	800	38	<sup>17)</sup>	<sup>17)</sup>	<sup>17)</sup>
600-600-0753	10	P16ax	600	600	450	240	1296	40	25	900	680	690	400	180	1600	350	450	120	210	127,2	32	150	130	85	300	1490	250	1250	800	39	17,5	476	820
600-600-0803	10	P16sx	600	600	450	250	1318	40	25	880	800	675	400	180	1600	350	460	120	210	127,2	32	150	130	85	300	1490	250	1250	800	40	18	476	842
600-600-0813	10	P16sx	600	600	500	250	1296	40	25	900	900	730	400	180	1560	350	450	120	210	127,2	32	150	130	85	300	1450	250	1250	780	39	17,5	476	820
600-600-0824	10	P16ax	600	600	445	250	1363	40	25	950	750	715	400	180	1560	350	500	120	210	127,2	32	150	130	85	300	1450	250	1250	800	39	18	476	887
600-600-0825	10	P16ax	600	600	445	250	1363	40	25	950	750	715	400	180	1560	350	500	120	210	127,2	32	150	130	85	300	1450	250	1250	800	39	18	476	887
600-600-0829	10	P16ax	600	600	445	250	1363	40	25	950	750	715	400	180	1560	350	500	120	210	127,2	32	150	130	85	300	1450	250	1250	800	39	18	476	887
600-600-0873	10	P16ax	600	600	470	240	1300	40	25	970	770	700	400	180	1650	350	470	120	210	127,2	32	150	130	85	300	1540	250	1300	825	39	18	476	824
600-600-0923	10	P20sx	600	600	500	250	1642	40	25	900	840	730	400	210	1560	450	450	145	270	153	36	150	165	110	300	1450	350	1250	800	39	17,5	658,5	983,5
700-700-0923	11	P20sx	700	700	490	250	1724	40	25	1050	690	770	500	210	1670	450	560	145	270	153	36	200	165	110	400	1550	350	1330	850	39	17,5	658,5	1065,5
700-700-0929	11	P20sx	700	700	490	250	1724	40	25	1050	690	770	500	210	1670	450	560	145	270	153	36	200	165	110	400	1550	350	1330	850	39	17,5	658,5	1065,5
800-700-0953	11	P20sx	800	700	550	210	1691,5	50	25	1100	720	770	500	210	1740	450	590	145	270	153	36	200	165	110	400	1640	350	1460	870	39	17,5	658,5	1033,5
800-700-0959	11	P20sx	800	700	550	210	1691,5	50	25	1100	720	770	500	210	1740	450	590	145	270	153	36	200	165	110	400	1640	350	1460	870	39	17,5	658,5	1033,5
800-800-0934	11	P20sx	800	800	500	240	1711,5	50	25	1080	760	832	500	210	1840	450	640	145	270	153	36	200	165	110	400	1740	350	1500	920	39	17,5	658,5	1053
800-800-0935	11	P20sx	800	800	500	240	1711,5	50	25	1080	760	832	500	210	1840	450	640	145	270	153	36	200	165	110	400	1740	350	1500	920	39	17,5	658,5	1053
800-800-0939	11	P20sx	800	800	500	240	1711,5	50	25	1080	760	832	500	210	1840	450	640	145	270	153	36	200	165	110	400	1740	350	1500	920	39	17,5	658,5	1053
800-900-0883	10	P20sx	800	900	622	300	1784	50	25	1250	950	925	600	210	2250	450	660	145	270	153	36	200	165	110	400	2140	350	1860	1270	39	17,5	658,5	1125
900-900-1133	11	P20sx	900	900	492	300	1732,5	50	25	1280	950	975	600	210	2200	450	695	145	270	153	36	250	165	110	500	2040	350	1800	1200	39	17,5	658,5	1075
900-900-1134	11	P20sx	900	900	492	300	1732,5	50	25	1280	950	975	600	210	2200	450	695	145	270	153	36	250	165	110	500	2040	350	1800	1200	39	17,5	658,5	1075
900-900-1137	11	P20sx	900	900	492	300	1732,5	50	25	1280	950	975	600	210	2200	450	695	145	270	153	36	250	165	110	500	2040	350	1800	1200	39	17,5	658,5	1075
900-900-1138	11	P20sx	900	900	492	300	1732,5	50	25	1280	950	975	600	210	2200	450	695	145	270	153	36	250	165	110	500	2040	350	1800	1200	39	17,5	658,5	1075
900-900-1139	11	P20sx	900	900	492	300	1732,5	50	25	1280	950	975	600	210	2200	450	695	145	270	153	36	250	165	110	500	2040	350	1800	1200	39	17,5	658,5	1075

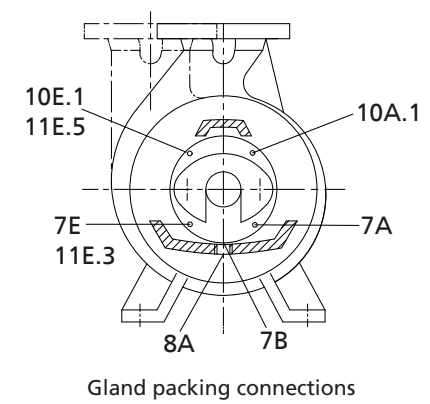
## Connections



Pump connections



Mechanical seal connections



Gland packing connections

Table 12: Connections

Connection	Description	Connection	Description
1M.1/2	Pressure gauge	10E.1	Barrier fluid inlet (gland packing)
6B	Casing drain	10E.2	Barrier fluid inlet (mechanical seal)
6D	Vent	11E.3	Gap flush, outboard (stuffing box housing)
7A	Cooling liquid OUT	11E.5	Flushing liquid inlet (gland packing)
7B	Cooling chamber drain	13B	Oil drain
7E	Cooling liquid IN	13D	Vent plug
8A	Leakage drain	24A	Quench liquid OUT
10A.1	Barrier fluid outlet (gland packing)	24E	Quench liquid IN
10A.2	Barrier fluid outlet (mechanical seal)	638	Constant level oiler

**Table 13:** Connection thread sizes depending on the pump size

Size	1M.1	1M.2	6B	6D	7A/7E	7B	8A	10A.1/10E.1	10A.2 <sup>(18)</sup> (mechanical seal) Seal cover	10E.2 <sup>(18)</sup> (mechanical seal) Discharge cover	10A.2/10E.2 <sup>(19)</sup> (mechanical seal) Seal cover	10A.2/10E.2 <sup>(20)</sup> (mechanical seal)	10A.2/10E.2 <sup>(21)</sup> (mechanical seal) Seal cover	11E.3	11E.5	13B	13D	24A/24E <sup>(22)</sup> Seal cover	24A/24E <sup>(23)</sup> (mechanical seal) Seal cover	638
065-040-0250	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
065-050-0200	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
065-050-0201	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-040-0315	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-050-0400	G 1/2	G 1/2	G 1	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-065-0200	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-065-0201	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-065-0313	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-065-0315	G 1/2	G 1/2	G 3/4	G 1/2	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
080-065-0400	G 1	G 1/2	G 1	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0250	G 1	G 1/2	G 3/4	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0251	G 1	G 1/2	G 3/4	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0311	G 1	G 1/2	G 3/4	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0315	G 1	G 1/2	G 3/4	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0400	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
100-080-0403	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-080-0500	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0250	G 1	G 1/2	G 1	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0251	G 1	G 1/2	G 1	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0253	G 1	G 1/2	G 1	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0315	G 1	G 1/2	G 1	G 1	G 1/4	G 1/8	R 1/2	G 1/4	G 1/4	G 1/4	G 1/4	NPT 3/8	G 1/4	G 1/4	G 1/4	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0400	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
125-100-0403	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-125-0500	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-125-0503	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-150-0311	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-150-0315	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-150-0400	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
150-150-0403	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4

18 For mechanical seal type: TS/BU M7N/M7F1A  
 19 For mechanical seal type: TS/CR 587SP-D DW/M3  
 20 For mechanical seal type: TS/BU Cartex DN  
 21 For mechanical seal type: TS/KSB 4KD/M3  
 22 For mechanical seal type: TA/BU MG1-G6/M3, BU HRZ/M3, CR 587SP-D/M3  
 23 For mechanical seal type: TA/KSB 4K/M3

Size	1M.1	1M.2	6B	6D	7A/7E	7B	8A	10A.1/10E.1	10A.2 <sup>(18)</sup> (mechanical seal) Seal cover	10E.2 <sup>(18)</sup> (mechanical seal) Discharge cover	10A.2/10E.2 <sup>(19)</sup> (mechanical seal) Seal cover	10A.2/10E.2 <sup>(20)</sup> (mechanical seal)	10A.2/10E.2 <sup>(21)</sup> (mechanical seal) Seal cover	11E.3	11E.5	13B	13D	24A/24E <sup>(22)</sup> Seal cover	24A/24E <sup>(23)</sup> (mechanical seal) Seal cover	638
200-200-0320	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
200-200-0400	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
200-200-0403	G 1	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
200-200-0500	G 1	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
200-200-0501	G 1	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
200-200-0503	G 1	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0315	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/8	R 1/2	G 3/8	G 1/4	G 3/8	G 1/4	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/4	Ø 20	G 1/4	G 1/4	R 1/4
250-250-0400	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0403	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0500	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0503	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0505	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0630	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
250-250-0634	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
300-300-0400	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
300-300-0500	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
300-300-0503	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0400	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0500	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0503	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0504	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0630	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
350-350-0633	G 1/2	G 1/2	G 1	G 1	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
400-400-0500	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4 <sup>(25)</sup>	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
400-400-0503	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4 <sup>(25)</sup>	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
400-400-0533	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4 <sup>(25)</sup>	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
400-400-0583	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4 <sup>(25)</sup>	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
500-400-0710	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-400-0713	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-500-0544	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
500-500-0630	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-500-0633	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-500-0634	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-500-0635	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
500-500-0637	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8 <sup>(25)</sup>	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8 <sup>(25)</sup>	G 1/4 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 3/8 <sup>(25)</sup>	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4

<sup>24</sup> Bearing bracket P08sx/P10ax = G 1/4

<sup>25</sup> Not provided for this size on bearing bracket P16ax

Size	1M.1	1M.2	6B	6D	7A/7E	7B	8A	10A.1/10E.1	10A.2 <sup>(18)</sup> (mechanical seal) Seal cover	10E.2 <sup>(18)</sup> (mechanical seal) Discharge cover	10A.2/10E.2 <sup>(19)</sup> (mechanical seal) Seal cover	10A.2/10E.2 <sup>(20)</sup> (mechanical seal)	10A.2/10E.2 <sup>(21)</sup> (mechanical seal) Seal cover	11E.3	11E.5	13B	13D	24A/24E <sup>(22)</sup> Seal cover	24A/24E <sup>(23)</sup> (mechanical seal) Seal cover	638
600-600-0663	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
600-600-0669	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)</sup>	G 1/4	R 1/4
600-600-0710	G 1/2	G 1/2	G 1 1/2	G 2	G 3/8	G 1/4	R 1/2	G 3/8	-	-	G 1/2 <sup>(24)(25)</sup>	NPT 3/8	G 1/4	G 3/8	G 3/8	G 1/2	Ø 20	G 1/2 <sup>(24)(25)</sup>	G 1/4 <sup>(25)</sup>	R 1/4
600-600-0753	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0803	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0813	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0824	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0825	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0829	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0873	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
600-600-0923	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
700-700-0923	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
700-700-0929	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-700-0953	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-700-0959	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-800-0934	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-800-0935	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-800-0939	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
800-900-0883	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
900-900-1133	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
900-900-1134	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
900-900-1137	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
900-900-1138	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4
900-900-1139	-	-	-	-	-	-	R 1 1/2	-	-	-	-	-	-	-	-	G 1/2	Ø 20	-	-	R 1/4



General drawings with list of components

Pump with bearing bracket P03ax to P06x

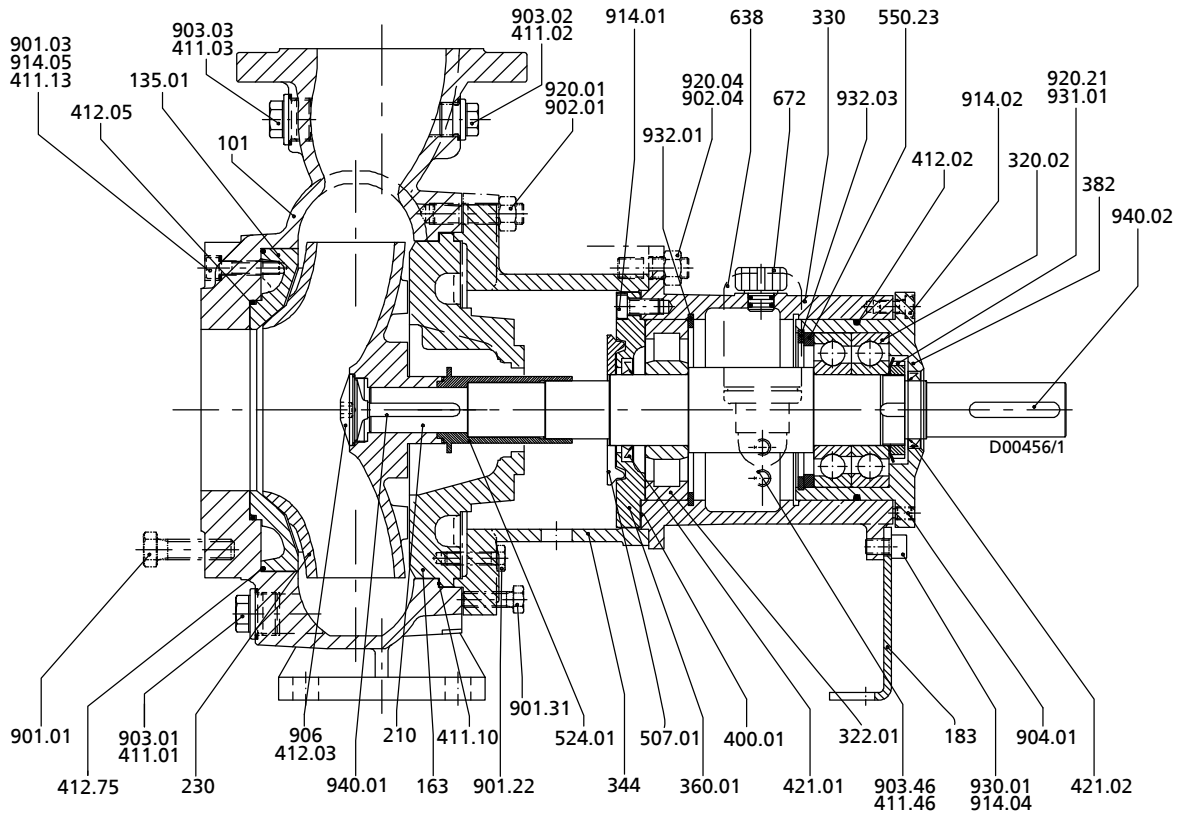


Fig. 11: General assembly drawing of pump with bearing bracket P03ax to P06x

Table 14: List of components

Part No.	Description	Part No.	Description
101	Pump casing	507.01	Thrower
135.01 <sup>26)</sup>	Wear plate	524.01	Shaft protecting sleeve
163	Discharge cover	550.23	Disc
183	Support foot	638	Constant level oiler
210	Pump shaft	672	Vent
230	Impeller	901.01/.03/.22/.31	Hexagon head bolt
320.02	Rolling element bearings	902.01/.04	Stud
322.01	Radial roller bearing	903.01/.02/.03/.46	Screw plug
330	Bearing bracket	904.01	Grub screw
344	Bearing bracket lantern	906	Impeller screw
360.01	Bearing cover	914.01/.02/.04/.05	Hexagon socket head cap screw
382	Bearing carrier	920.01/.04/.21	Nut
400.01	Gasket	930.01	Safety device
411.01/.02/.03/.10/.13/.46	Joint ring	931.01	Lock washer
412.02/.03/.05/.75	O-ring	932.01/.03	Circlip
421.01/.02	Lip seal	940.01/.02	Key

<sup>26)</sup> Sizes KWP 250-250-315, 300-300-400, 350-350-400 and 400-400-500 are equipped with a casing wear ring 502.01 instead of a wear plate.



Pump with bearing bracket P08sx to P12sx

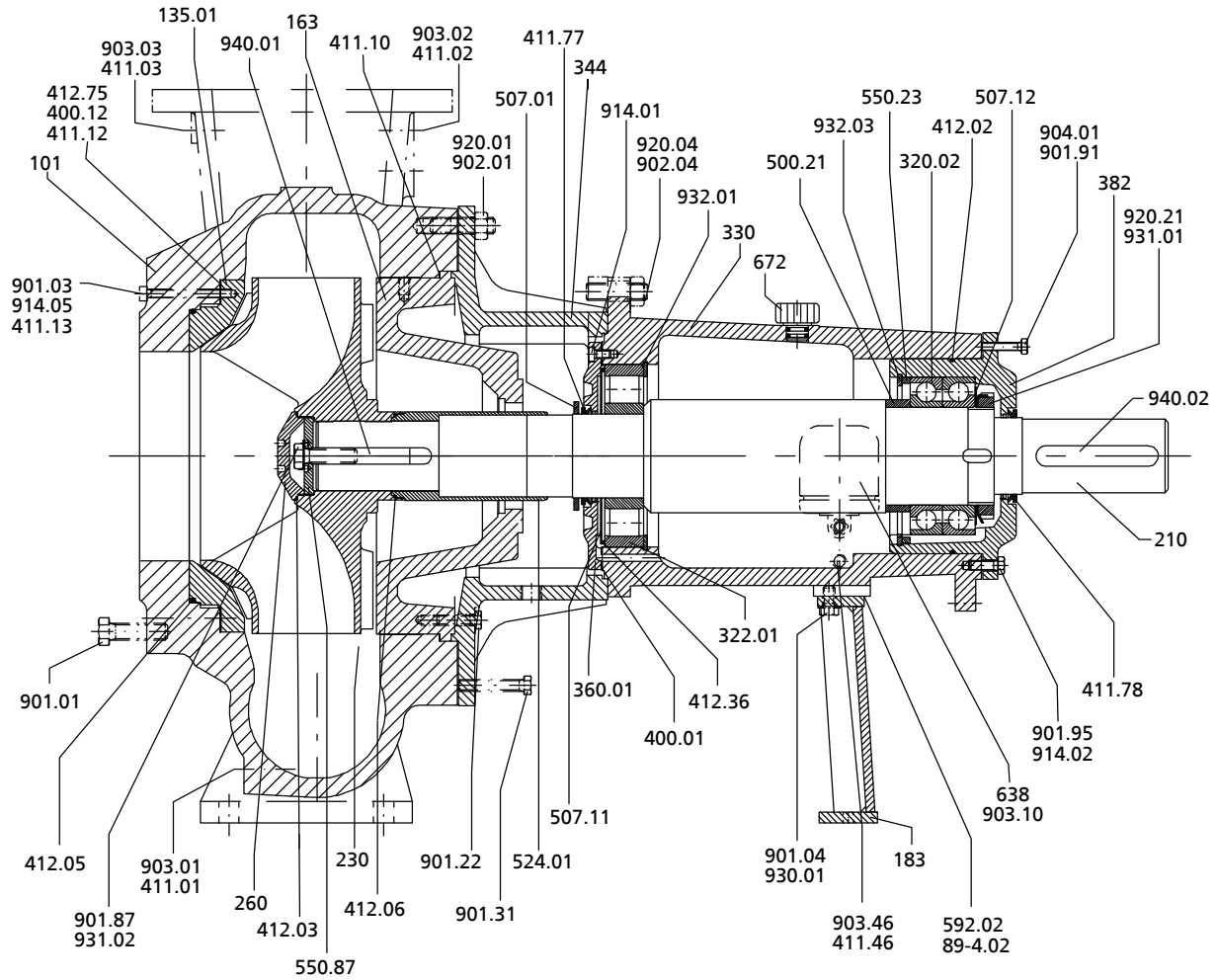


Fig. 12: General assembly drawing of pump with bearing bracket P08sx to P12sx

Table 15: List of components

Part No.	Description	Part No.	Description
101	Pump casing	507.01/.11/.12	Thrower
135.01	Wear plate	524.01	Shaft protecting sleeve
163	Discharge cover	550.23/.87	Disc
183	Support foot	592.02	Base
210	Pump shaft	638	Constant level oiler
230	Impeller	672	Vent
260	Impeller hub cap	89-4.02	Shim
320.02	Rolling element bearings	901.01/.03/.04/.22/.31/.87/.91/.95	Hexagon head bolt
322.01	Radial roller bearing	902.01/.04	Stud
330	Bearing bracket	903.01/.02/.03/.10/.46	Screw plug
344	Bearing bracket lantern	904.01	Grub screw
360.01	Bearing cover	914.01/.02/.05	Hexagon socket head cap screw
382	Bearing carrier	920.01/.04/.21	Nut
400.01/.12	Gasket	930.01	Safety device
411.01/.02/.03/.10/.12/.13/.46/.77/.78	Joint ring	931.01/.02	Lock washer
412.02/.03/.05/.06/.36/.75	O-ring	932.01/.03	Circlip
500.21	Ring	940.01/.02	Key

Pumps with bearing brackets P10ax to P12sx (sizes 500-400-0710, 500-400-0713)

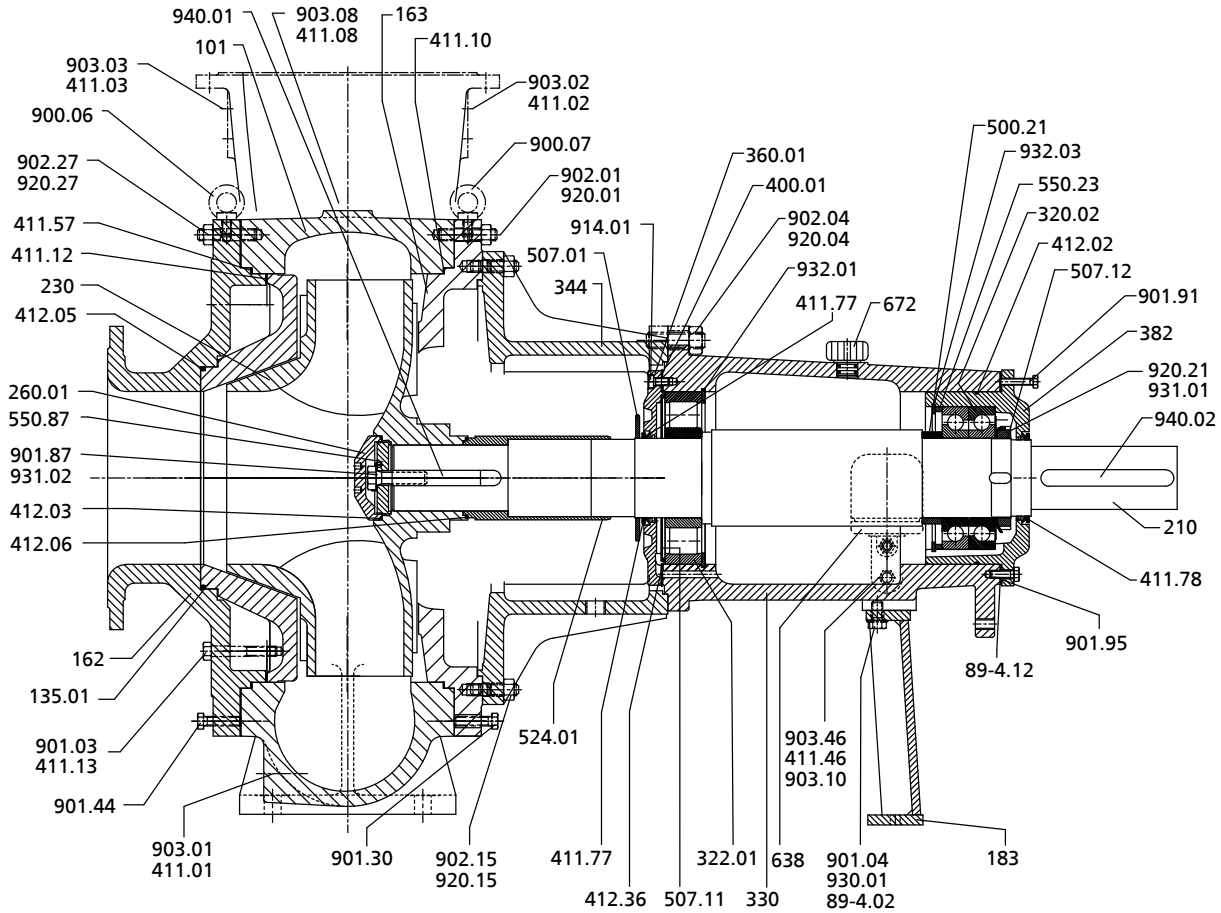


Fig. 13: General assembly drawing of pump with bearing brackets P10ax to P12sx (sizes 500-400-0710, 500-400-0713)

Table 16: List of components

Part No.	Description	Part No.	Description
101	Pump casing	507.01/.11/.12	Thrower
135.01	Wear plate	524.01	Shaft protecting sleeve
162	Suction cover	550.23/.87	Disc
163	Discharge cover	638	Constant level oiler
183	Support foot	672	Vent
210	Shaft	89-4.02/.12	Shim
230	Impeller	900.06/.07	Bolt
260.01	Impeller hub cap	901.03/.04/.30/.44/.87/.91/.95	Hexagon head bolt
320.02	Rolling element bearings	902.01/.04/.15/.27	Stud
322.01	Radial roller bearing	903.01/.02/.03/.08/.10/.46	Screw plug
330	Bearing bracket	914.01	Hexagon socket head cap screw
344	Bearing bracket lantern	920.01/.04/.15/.21/.27	Nut
360.01	Bearing cover	930.01	Safety device
400.01	Gasket	931.01/.02	Lock washer
411.01/.02/.03/.08/.10/.12/.13 .46/.57/.77/.78	Seal ring	932.01/.03	Circlip
412.02/.03/.05/.06/.36	O-ring	940.01/.02	Key
500.21	Ring		

Pumps with bearing bracket P12sx (sizes 500-500-0544, 600-660-0663, 600-600-0669)

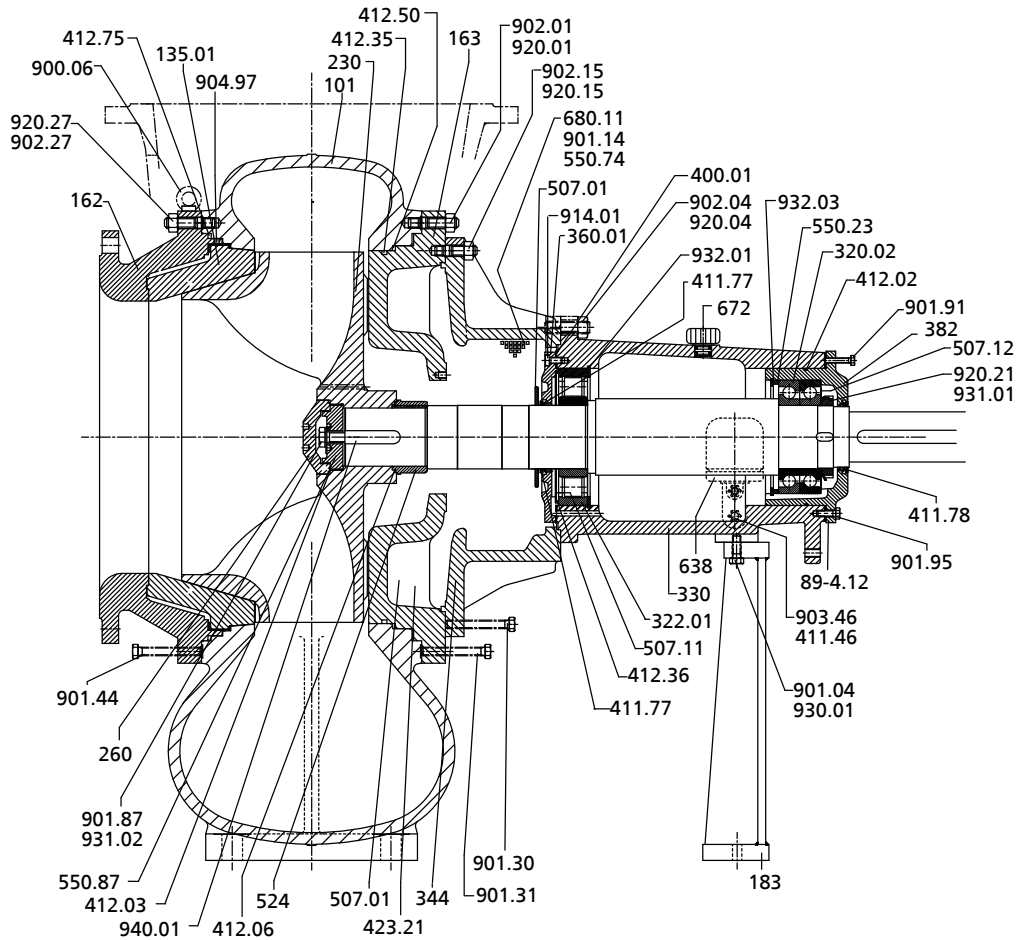


Fig. 14: General assembly drawing of pump with bearing bracket P12sx (sizes 500-500-0544, 600-660-0663, 600-600-0669)

Table 17: List of components

Part No.	Description	Part No.	Description
101	Pump casing	524	Shaft protecting sleeve
135.01	Wear plate	550.23/.74/.87	Disc
162	Suction cover	638	Constant level oiler
163	Discharge cover	672	Vent
183	Support foot	680.11	Guard
230	Impeller	89-4.12	Shim
260	Impeller hub cap	900.06	Bolt
320.02	Rolling element bearings	901.04/.14/.30/.31/.44/.87/.91/.95	Hexagon head bolt
322.01	Radial roller bearing	902.01/.04/.15/.27	Stud
330	Bearing bracket	903.46	Screw plug
344	Bearing bracket lantern	904.97	Grub screw
360.01	Bearing cover	914.01	Hexagon socket head cap screw
382	Bearing carrier	920.01/.04/.15/.21/.27	Nut
400.01	Gasket	930.01	Safety device
411.46/.77/.78	Seal ring	931.01/.02	Lock washer
412.02/.03/.06/.35/.36/.50/.75	O-ring	932.01/.03	Circlip
423.21	Labyrinth ring	940.01	Key
507.01/.11/.12	Thrower		

Pump with bearing bracket P16ax V10

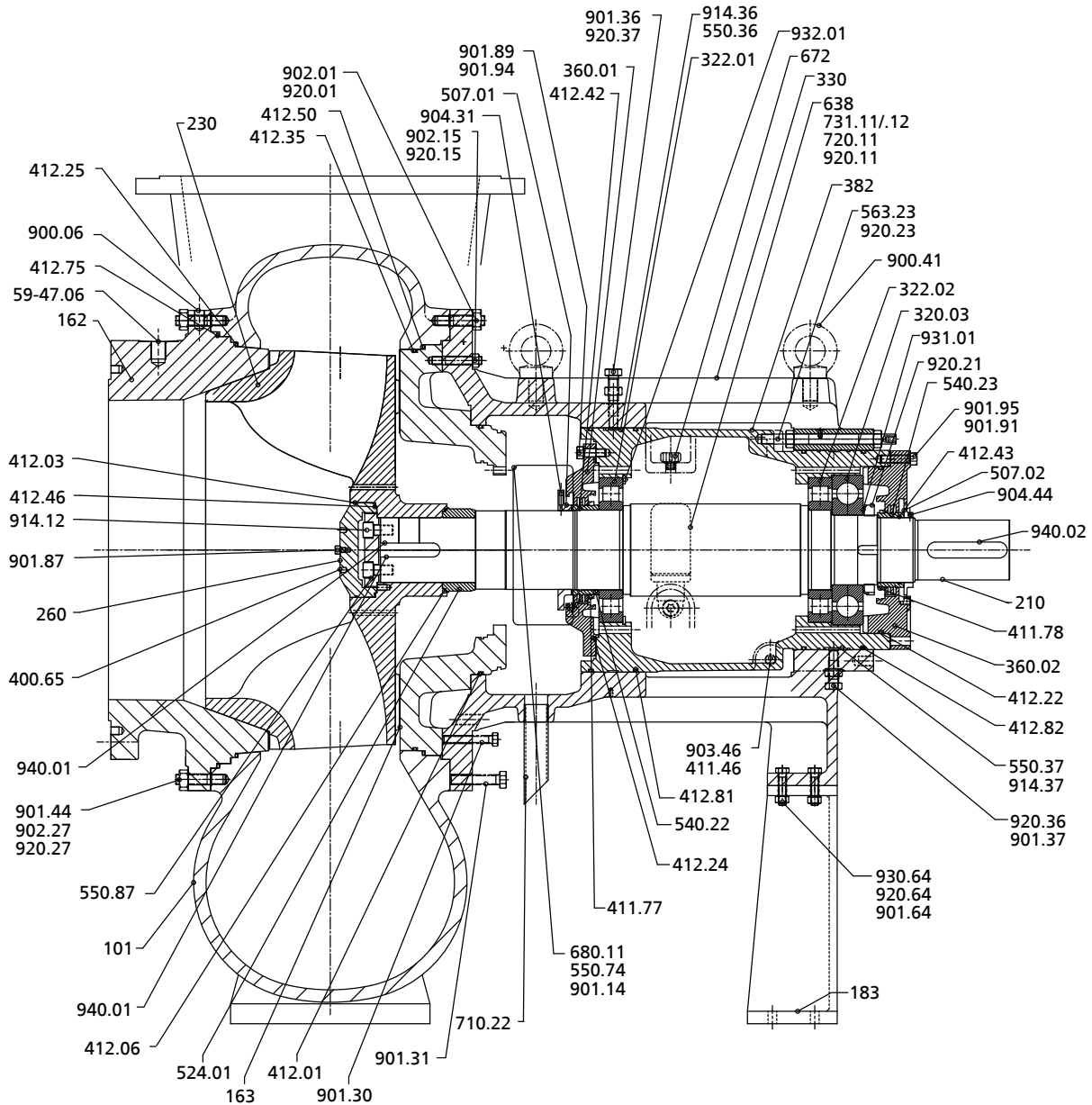


Fig. 15: General assembly drawing of pump with bearing bracket P16ax V10

Table 18: List of components

Part No.	Description	Part No.	Description
101	Pump casing	563.23	Bolt/stud
162	Suction cover	59-47.06	Lifting lug
163	Discharge cover	638	Constant level oiler
183	Support foot	672	Vent
210	Shaft	680.11	Guard
230	Impeller	710.22	Pipe
260	Impeller hub cap	720.11	Fitting
320.03	Rolling element bearing	731.11/.12	Pipe union
322.01/.02	Radial roller bearing	900.06/.41	Screw
330	Bearing bracket	901.14/.30/.31/.36/.37/.44/.64 /.87/.89/.91/.94/.95	Hexagon head bolt
360.01/.02	Bearing cover	902.01/.15/.27	Stud
382	Bearing carrier	903.46	Screw plug
400.65	Gasket	904.31/.44	Grub screw
411.46/.77/.78	Joint ring	914.12/.36/.37	Hexagon socket head cap screw

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Part No.	Description	Part No.	Description
412.01/03/06/22/24/25/35 /42/43/46/50/75/81/82	O-ring	920.01/11/15/21/23/27/36 /37/64	Nut
507.01/02	Thrower	930.64	Safety device
524.01	Shaft protecting sleeve	931.01	Lock washer
540.22/23	Bush	932.01	Circlip
550.36/37/74/87	Disc	940.01/02	Key

Pumps with bearing bracket P16ax V10 (sizes 500-400-0710, 500-400-0713, 500-500-0633, 500-500-0637)

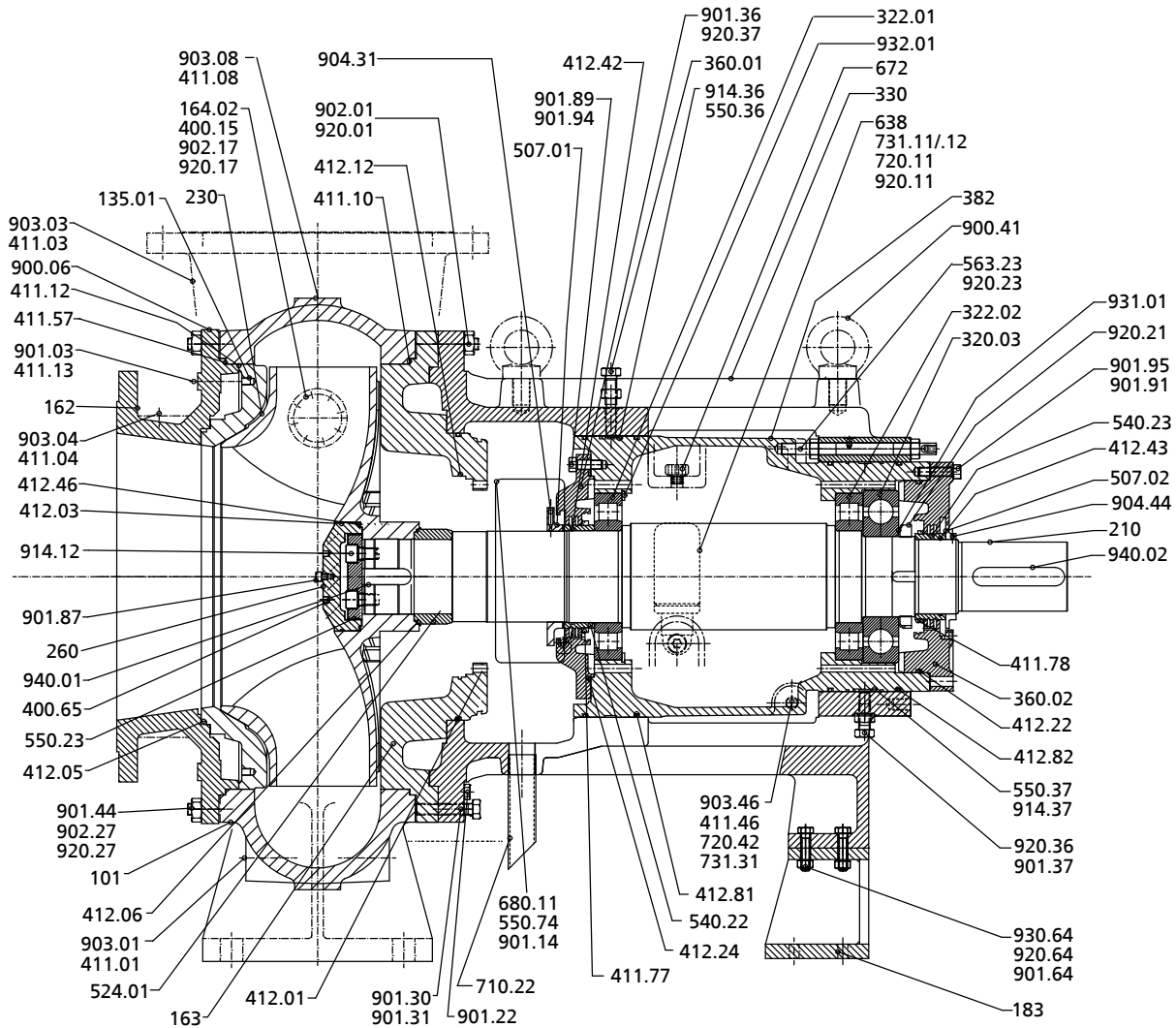


Fig. 16: General assembly drawing of pump with bearing bracket P16ax V10 (sizes 500-400-0710, 500-400-0713, 500-500-0633, 500-500-0637)

Table 19: List of components

Part No.	Description	Part No.	Description
101	Pump casing	550.23/.36/.37/.74	Disc
135.01	Wear plate	563.23	Pin
162	Suction cover	638	Constant level oiler
163	Discharge cover	672	Vent
164.02	Inspection cover	680.11	Guard
183	Support foot	710.22	Pipe
210	Shaft	720.11/.42	Special pipe part
230	Impeller	731.11/.12/.31	Pipe union
260	Impeller hub cap	900.06/.41	Bolt
320.03	Rolling element bearings	901.03/.14/.22/.30/.31/.36/.37 /.44/.64/.87/.89/.91/.94/.95	Hexagon head bolt
322.01/.02	Radial roller bearing	902.01/.17/.27	Stud
330	Bearing bracket	903.01/.03/.04/.08/.46	Screw plug
360.01/.02	Bearing cover	904.31/.44	Grub screw
382	Bearing carrier	914.12/.36/.37	Hexagon socket head cap screw
400.15/.65	Gasket	920.01/.11/.17/.21/.23/.27/.36 /.37/.64	Nut
411.01/.03/.04/.08/.10/.12/.46 /.57/.77/.78	Seal ring	930.64	Safety device
412.01/.03/.05/.06/.12/.22/.24 /.42/.43/.46/.81/.82	O-ring	931.01	Lock washer

Part No.	Description	Part No.	Description
507.01/02	Thrower	932.01	Circlip
524.01	Shaft protecting sleeve	940.01/02	Key
540.22/23	Bush		



Pump with bearing bracket P20sx V10

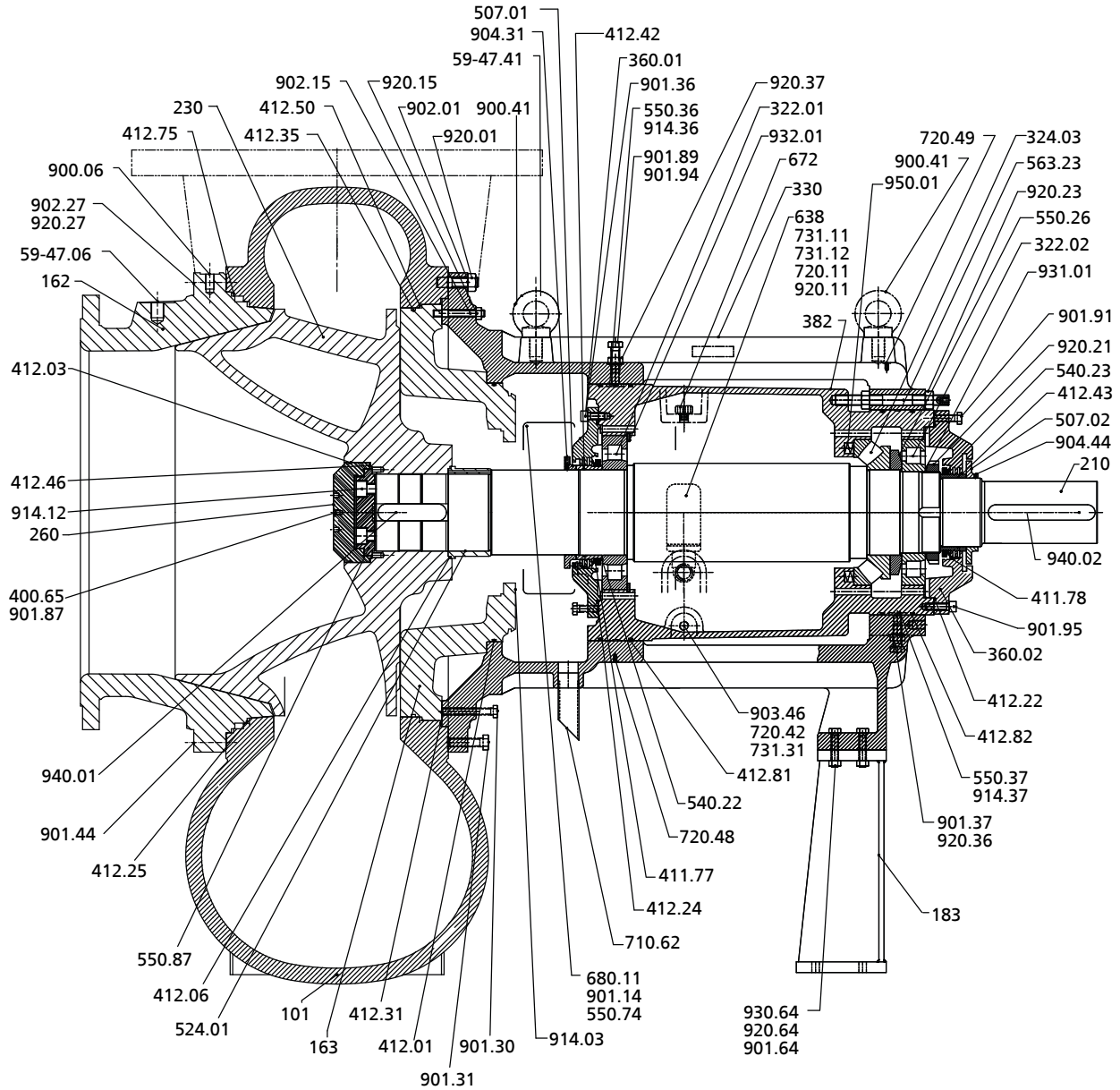


Fig. 17: General assembly drawing of pump with bearing bracket P20sx V10

Table 20: List of components

Part No.	Description	Part No.	Description
101	Pump casing	59-47.06/.41	Lifting lug
162	Suction cover	638	Constant level oiler
163	Discharge cover	672	Vent
183	Support foot	680.11	Guard
210	Shaft	710.62	Pipe
230	Impeller	720.11/.42/.48/.49	Fitting
260	Impeller hub cap	731.11/.12/.31	Pipe union
322.01/.02	Radial roller bearing	900.06/.41	Screw
324.03	Thrust roller bearing	901.14/.30/.31/.36/.37/.44/.64 /1.87/.89/.91/.94/.95	Hexagon head bolt
330	Bearing bracket	902.01/.15/.27	Stud
360.01/.02	Bearing cover	903.46	Screw plug
382	Bearing carrier	904.31/.44	Grub screw
400.65	Gasket	914.03/.12/.36/.37	Hexagon socket head cap screw
411.77/.87	Joint ring	920.01/.11/.15/.21/.23/.27/.36 /1.37/.64	Nut



Part No.	Description	Part No.	Description
412.01/03/06/22/24/25/31 /35/42/43/46/50/75/81/8 2	O-ring	930.64	Safety device
507.01/02	Thrower	931.01	Lock washer
524.01	Shaft protecting sleeve	932.01	Circlip
540.22/23	Bush	940.01/02	Key
550.26/36/37/74/87	Disc	950.01	Spring
563.23	Bolt/stud		



Shaft seals

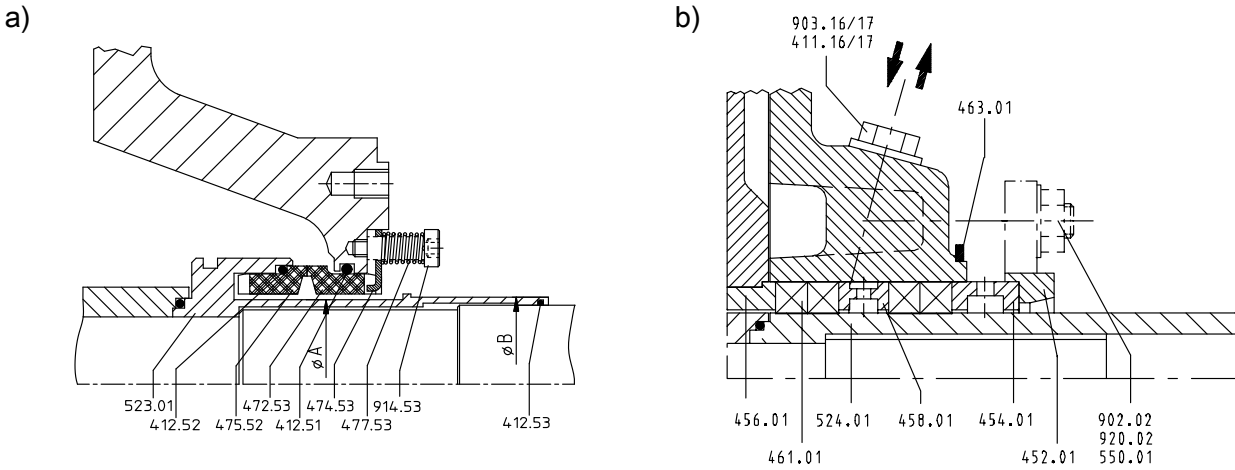


Fig. 19: Shaft seals P03ax to P12sx:  
a) 4K mechanical seal  
b) Coolable gland packing

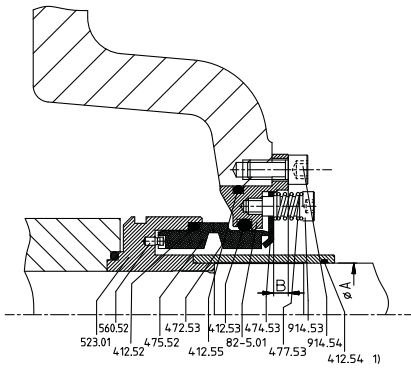


Fig. 20: 4K-120M mechanical seal<sup>27)</sup>

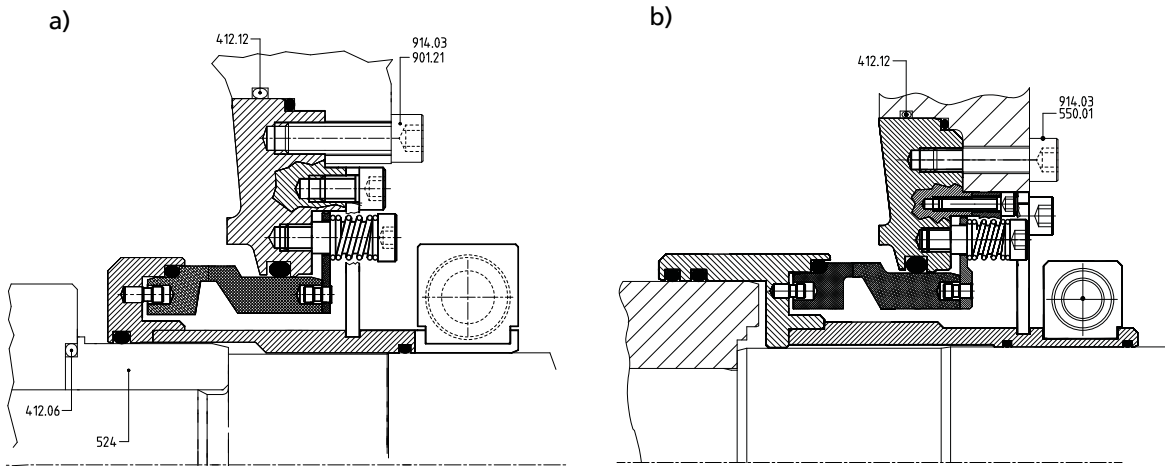


Fig. 21: Mechanical seal  
a) P16ax/P20sx: mechanical seal 4K-160/-200 (for V10)  
b) P20sx: mechanical seal 4K-253 (for V11)

Table 22: List of components

Part No.	Description	Part No.	Description
82-5.01	Adapter	475.52	Mating ring
411.16/17	Seal ring	477.53	Spring
412.06/.12/.51/.52/.53/.54/.55	O-ring	523.01	Shaft sleeve

<sup>27)</sup> Only for sizes 600-600-0663 and 600-600-0669

Part No.	Description	Part No.	Description
452.01	Gland follower	524.01	Shaft protecting sleeve
454.01	Stuffing box ring, split	550.01	Disc
456.01	Neck bush	560.52	Pin
458.01	Lantern ring, split	901.21	Hexagon head bolt
461.01	Packing ring	902.02	Stud
463.01	Drip plate	903.16/.17	Screw plug
472.53	Primary ring	914.03/.53/.54	Hexagon socket head cap screw
474.53	Thrust ring	920.02	Hexagon nut





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