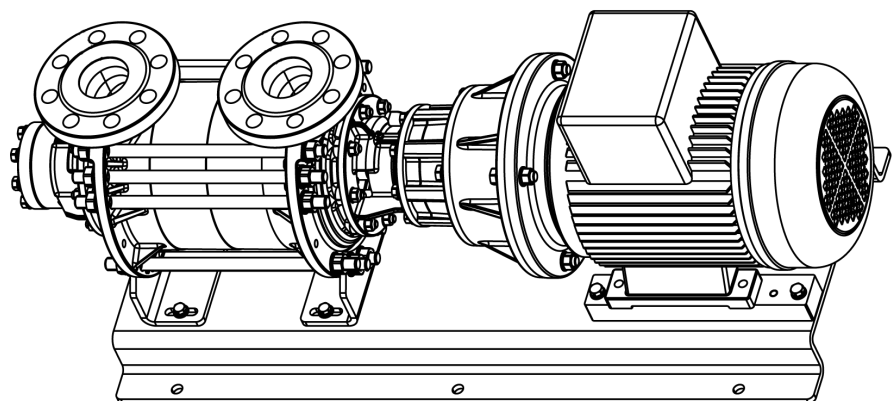


Multi stage pumps Series SKP

- Overview of products
- Executions
- Materials
- Types of seals
- Dimensional drawings

STROBL



General description

Multi stage centrifugal pumps series SKP are single or multi stage centrifugal pumps in horizontal or vertical construction. With this series the requested pressure increase can be varied brightly, according to the variable stage number. Some of the pumps are constructed for system pressures up to 250 bar, depending on the materials. The pumps are also available according to API 610 - BB4 or BB5. Balancing of axial thrust will be enabled by balancing holes in the impellers for the standard versions. Double casing version for higher pressure will have a back to back arrangement of the impellers to equalize the axial thrust.

Fields of application

Main field of application for the multi stage centrifugal pumps series SKP is the increase of pressure in the plant construction, as well as in the process technology. Due to the possibility of high system pressures as well as the different materials, the pumps are suitable for most application scenarios. Our customers use the pumps at the moment in the following aims:

- booster systems
- plant construction
- industry
- process technology
- reverse osmoses

Operating data

Flow:	Q up to 470 m ³ /h
Total head:	H up to 580 m (higher head is available on request)
Motor power:	P from 0.75 kW to 250 kW
Degrees of protection:	IP 55

Connections

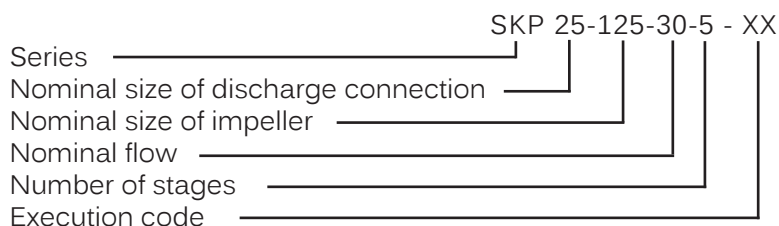
Suction and discharge connections are equipped with flanges according to EN 1092. Different dimensions of flanges are available on request.

Motors

As motors triple phase induction motors are used. These are executed in the degree of efficiency class IE3 as standard. Alternatively to the electric motors, gasoline, diesel or hydraulic motors are possible.

Voltages:	up to 2.2kW 230/400V, 50Hz	from 3kW 400/690V, 50Hz
	up to 2.6kW 265/460V, 60Hz	from 3.6kW 460V, 60Hz
	other voltages/frequencies are available on request.	
Degree of protection:	IP 55	
Direction of rotation:	Clock-wise viewed onto fan cover	

Type code



Series:

SKP	- standard version with 2 anti-friction bearings
SKPA	- pump with 2 anti-friction bearings and lantern
SKPAV	- pump with 2 anti-friction bearings, lantern and foot for vertical installation
SKPE	- pump with axial inlet, 1 sliding bearing and 1 anti-friction bearing
SKPEA	- pump with axial inlet, 1 sliding bearing, 1 anti-friction bearing and lantern
SKPD	- pump with 2 anti-friction bearings and double casing for system pressure up to 250 bar.
SKPDE	- double casing pump for system pressure up to 250 bar in end suction version with sliding bearing at inlet.
SKPDI	- pump in inline version with double casing for pressure up to 250 bar. Either with 2 anti-friction bearings or with sliding bearing at suction side.

Nominal size of discharge connection:

See dimensional drawing, characteristic curve, resp.

Nominal size of impeller:

Nominal size of impeller in millimetres

Nominal flow:

Flow in the efficiency optimum

Number of stages:

Number of stages

Execution code:

XX - markings for special versions

Materials

Part	Werkstoffe								
	Y101	Y301	Y302	Y403	Y404	Y501	Y601	Y602	Y505
Casing	Cast iron - GG25	Bronze	Aluminium bronze	Carbon steel	Chromstahl	Stainless steel	Duplex	Superduplex	High alloy stainless steel
Stage casing	Cast iron - GG25	Bronze	Aluminium bronze	Carbon steel (CI for SKPD)	Chromstahl	Stainless steel	Duplex	Superduplex	High alloy stainless steel
Impeller	Cast iron - GG20	Bronze	Aluminium bronze	Cast iron - GG20	Chromstahl	Stainless steel	Duplex	Superduplex	High alloy stainless steel
Diffusor	Cast iron - GG20	Bronze	Aluminium bronze	Cast iron - GG20	Chromstahl	Stainless steel	Duplex	Superduplex	High alloy stainless steel
Shaft	Chromium steel	Duplex		Chromium steel		Duplex		Superduplex	High alloy stainless steel
Seal cover	Chromium steel	Duplex		Chromium steel		Duplex		Superduplex	High alloy stainless steel
Stage bushing	Duplex							Superduplex	High alloy stainless steel
Bearing bracket	Cast iron - GG 20								
Additional for execution SKPA									
Lantern	Cast iron - GG 20 / Carbon steel								
Additional for execution SKPE									
Suction cover	Cast iron - GG25	Bronze	Aluminium-bronze	Carbon steel	Chromium Steel	Stainless steel	Duplex	Superduplex	High alloy stainless steel
Sliding bearing	Siliziumkarbid								
Additional for execution SKPD									
Shell	Carbon steel	Stainless steel	Duplex	Carbon steel	Chromium Steel	Stainless steel	Duplex	Superduplex	High alloy stainless steel

Other materials are available on request.

Possible impeller - casing material combinations								
Basis execution	Impeller / Diffusor options							
	Bronze	Aluminium bronze	Carbon steel	Chromium steel	Stainless steel - 316	Duplex	Super duplex	High alloy SS
Y101	X	X	X	X	X	X	X	X
Y301		X			X	X	X	X
Y302					X	X	X	X
Y403	X	X	X	X	X	X	X	X
Y404	X	X			X	X	X	X
Y501						X	X	X
Y601							X	X
Y602								X

Material	German de- scription	Cast material	German material code number	EU descripton	EU material code number	ASTM - UNS - description
Cast iron	GG 20	X	0.6020	EN-GJL-200	JL 1030	A48 - Grade 30
	GG 25	X	0.6025	EN-GJL-250	JL 1040	A48 - Grade 35
Bronze	G-CuSn10	X	2.1050.01	CuSn10-C	CC480K-GS	B505 - C90700
Aluminium bronze	G-CuAl10Ni	X	2.0975.01	CuAl10 Fe5Ni5-C	CC333G-GS	B505 - C95500
Carbon steel	St 37		1.0037	S235JR	1.0037	A29 - 1013
	C 22		1.0402	C22	1.0402	A29 - 1020
	GS-C25	X	1.0619	GP240GH	1.0619	A216 - WCB - J03002
Chromium steel	G-X4 CrNi 13-4	X	1.4317	GX4CrNi 13-4	1.4317	A487 - CA6NM - J91540
	X20 Cr13		1.4021	X20Cr13	1.4021	A276 - S42000
Stainless steel - 316	G-X5 CrNiMo 19-11-2	X	1.4408	GX5CrNiMo 19-11-2	1.4408	A351 - CF8M - J92900
	X5 CrNiMo 17-12-2		1.4401	X5CrNiMo 17-12-2	1.4401	A276 - S31600
	X6 CrNiMoTi 17-12-2		1.4571	X6CrNiMoTi 17-12-2	1.4571	A276 - S31635
Duplex	G-X2 CrNiMoN 22-5-3	X	1.4470	GX2CrNiMoN 22-5-3	1.4470	A995-4A - J92905
	G-X2 CrNiMo CuN 25-6-3-3	X	1.4517	Gx2CrNiMo CuN 25-6-3-3	1.4517	A995-4A - J93372
	X2 CrNiMoN 22-5-3		1.4462	X2CrNiMoN 22-5-3	1.4462	A276 - S31803
Super duplex	G-X2 CrNiMoN 26-7-4	X	1.4469	GX2CrNiMoN 26-7-4	1.4469	A995-5A - J93404
	X2CrNiMo CuWN 25-7-4		1.4501	X2CrNiMo CuWN 25-7-4	1.4501	A275 - S32760
High alloy stainless steel	G-X2CrNiMo CuN 20-18-6	X	1.4557	GX2CrNiMoN 20-18-6	1.4557	A744 - 6MO - J93254
	X1 CrNiMoCuN 20-18-7		1.4547	X1CrNiMoCuN 20-18-7	1.4547	A276 - 6MO - S31254

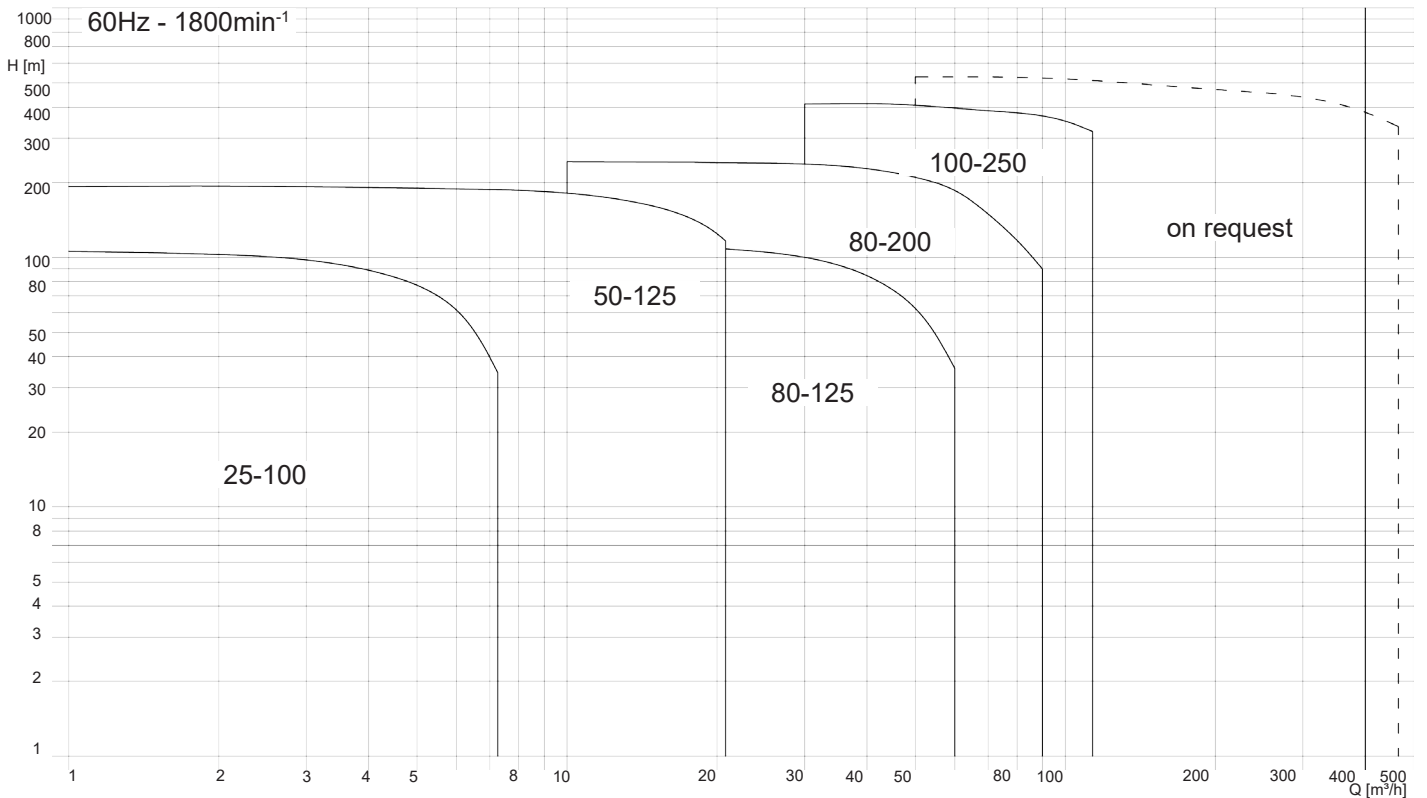
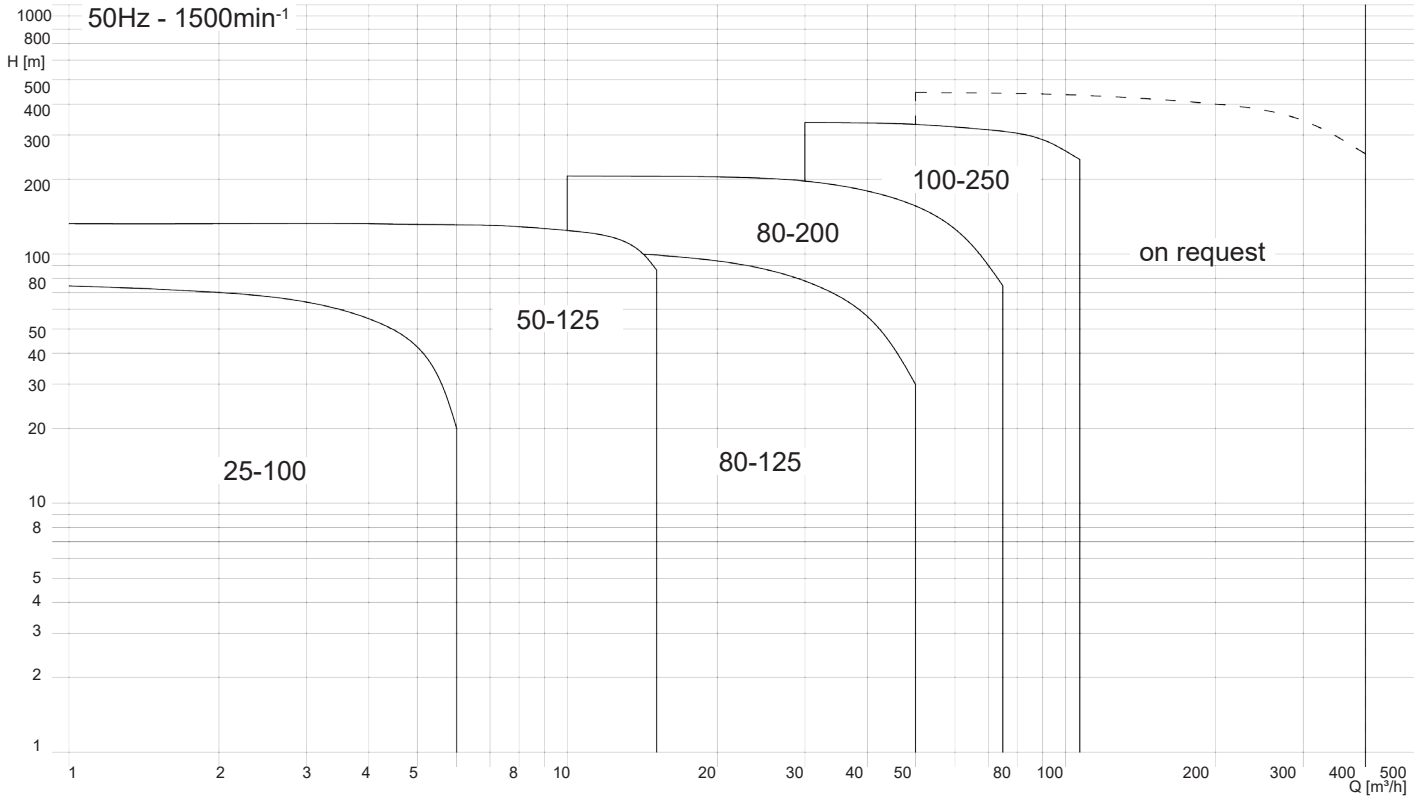
Materials are available also in special standards (NORSOK, etc.).
Other materials are available on request.

Types of seals

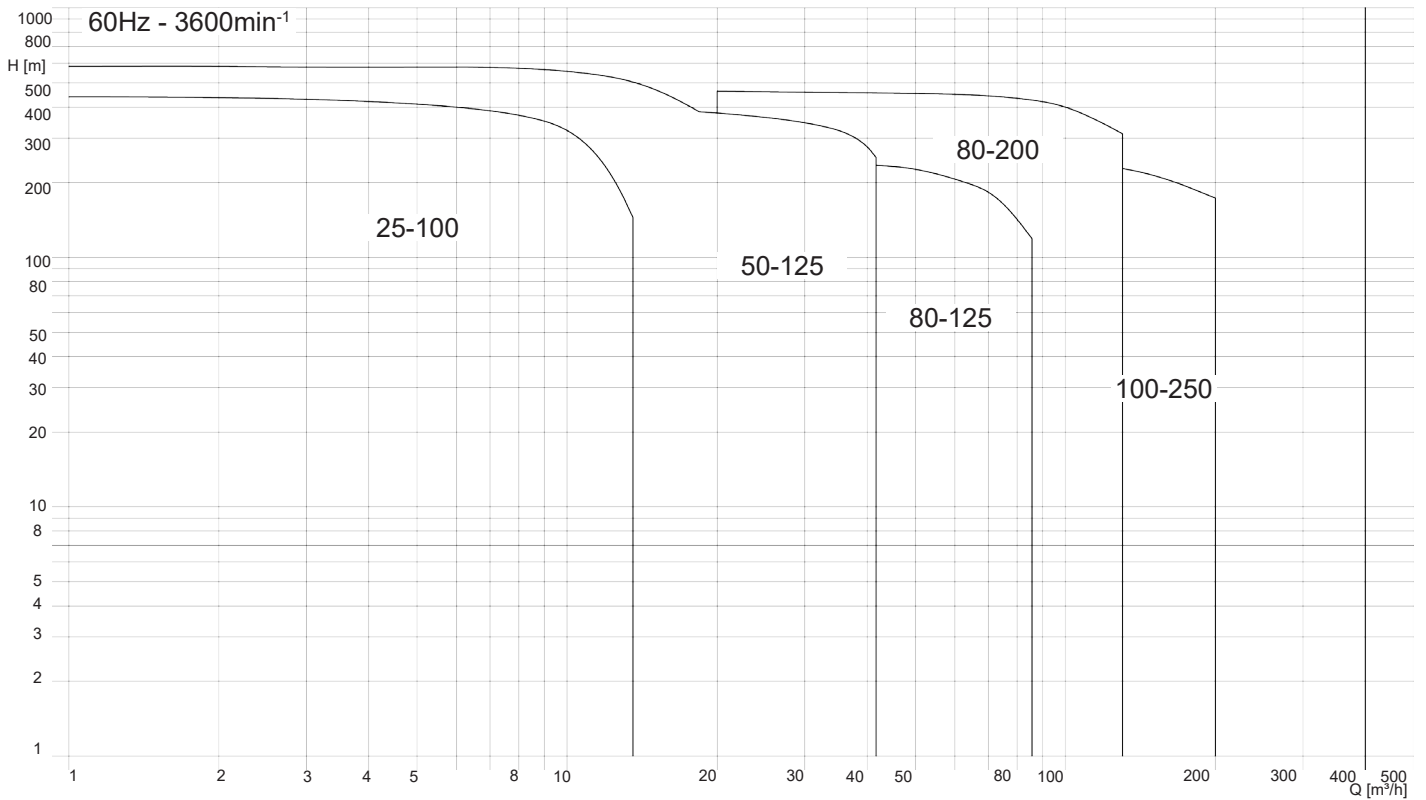
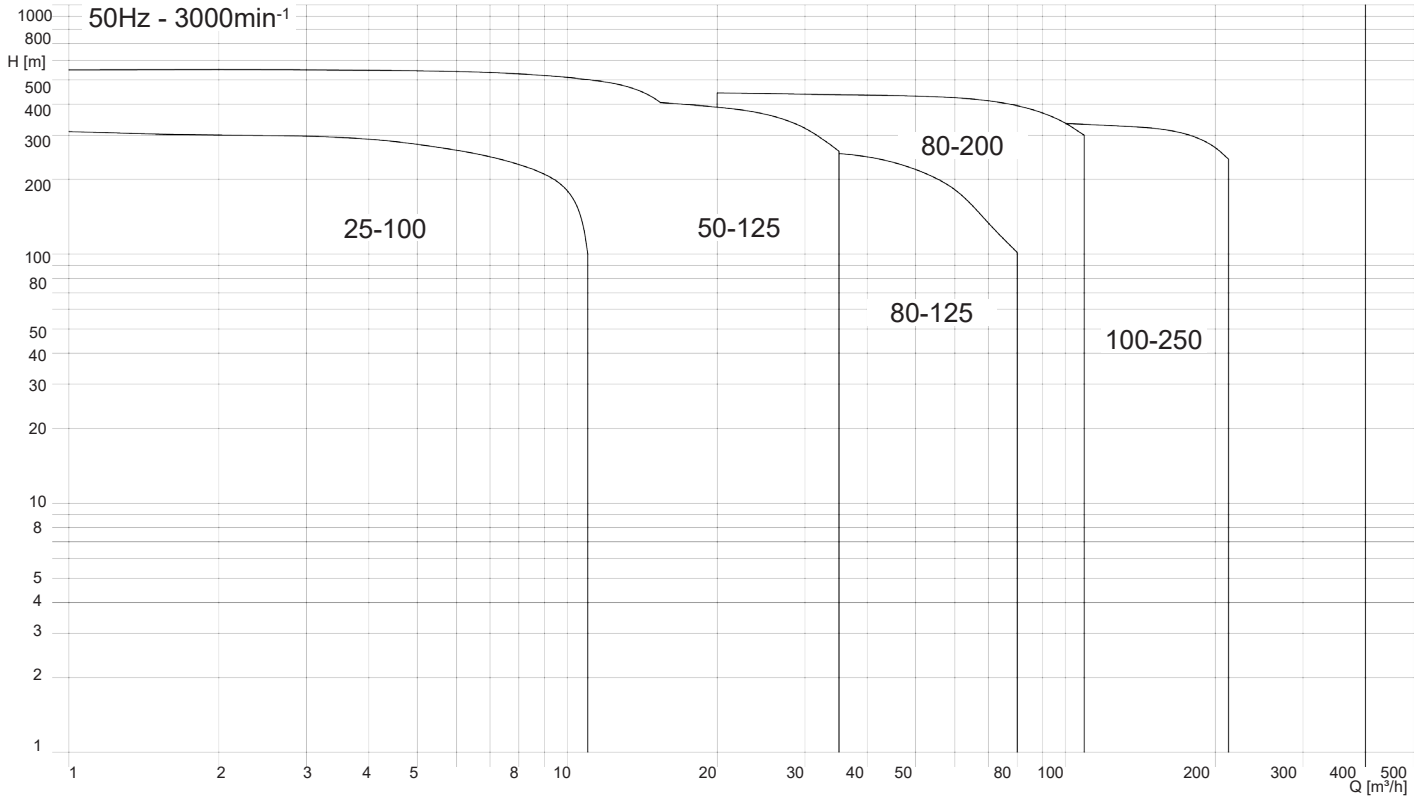
	Seal code					
	Z1xx	Z2xx	Z27x	Z25x	Z5xx	Z3xx
Remark	Rubber bellow seal for pressure up to 12 bar. Rotating ring / stationary seat: Carbon (A), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4)	Balanced mechanical seal for pressure up to 40 or 80 bar. Rotating ring / stationary seat: Carbon (A or B), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4), FFKM (K)	Balanced mechanical seal with covered spring for pressure up to 25 or 50 bar. Rotating ring / stationary seat: Carbon (A or B), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4), FFKM (K)	Balanced mechanical seal for pressure up to 250 bar. Rotating ring / stationary seat: Carbon (A or B), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4), FFKM (K)	Balanced or unbalanced mechanical seal with quench as secondary seal. Rotating ring / stationary seat: Carbon (A or B), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4), FFKM (K)	Double acting unbalanced or balanced mechanical seal. Rotating ring / stationary seat: Carbon (A or B), Silicon carbide (Q), Tungsten carbide (U) Elastomer: NBR (P), FKM (V), EPDM (E), HNBR (X4), FFKM (K)
For seal versions with different seal on suction and discharge side 2 seal codes will be used.						

Other types of seals are available on request.

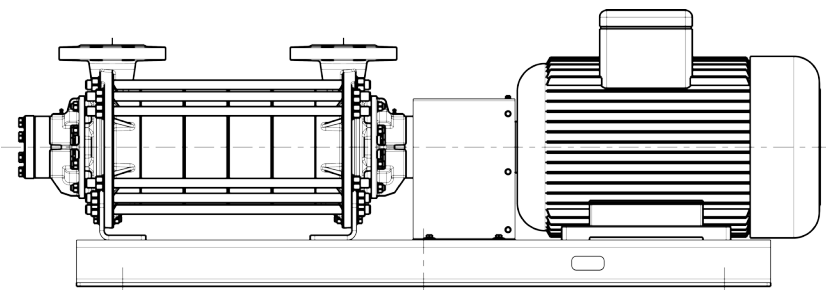
Characteristic curve SKP



Characteristic curve SKP

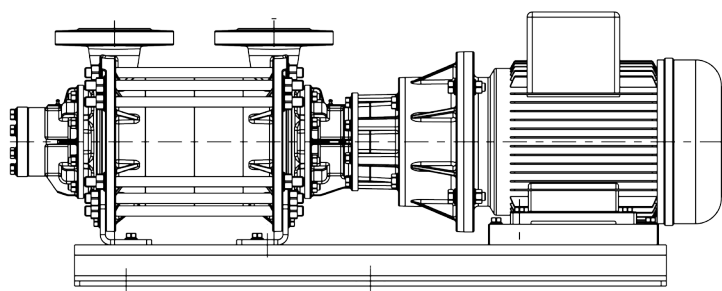
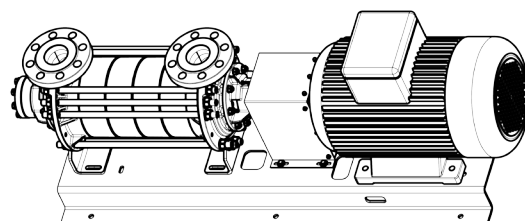
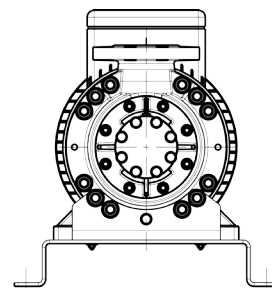
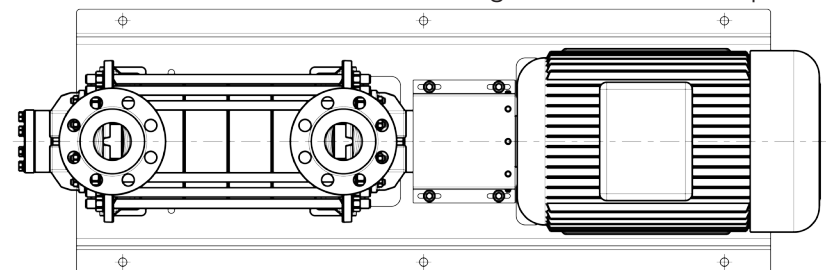


Dimensional drawings



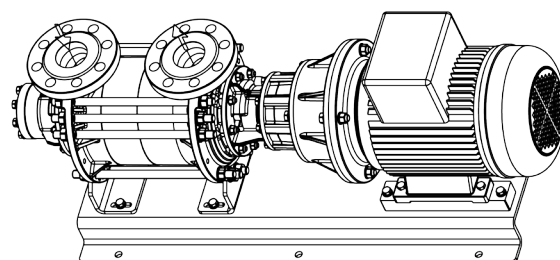
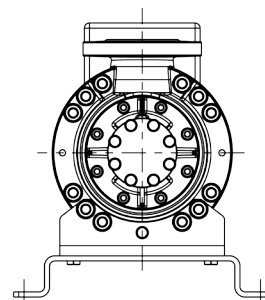
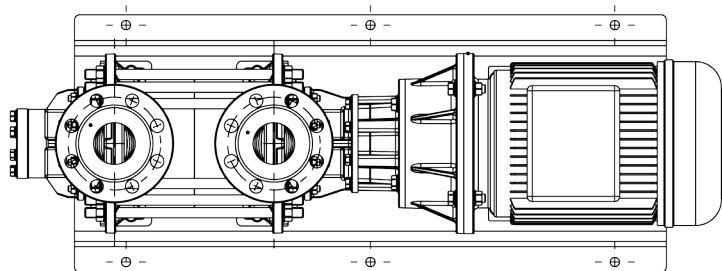
SKP

Horizontal pump with 2 antifriction bearings mounted on base plate



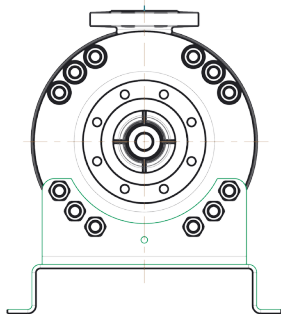
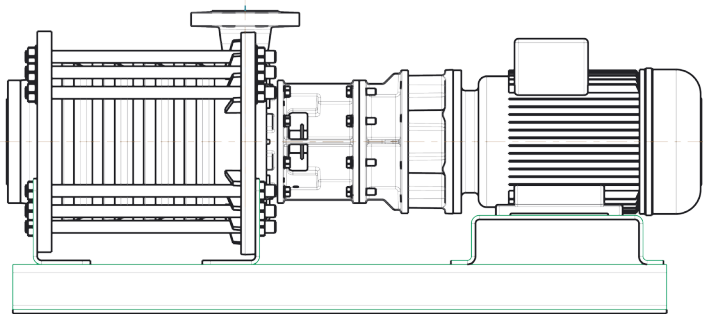
SKPA

Horizontal pump with 2 anti-friction bearings execution lantern mounted on base plate



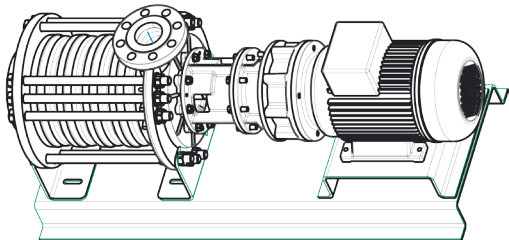
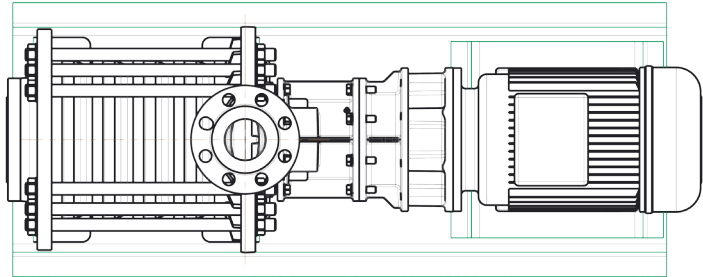
Individual project based dimensional drawings are available on request .

Dimensional drawings

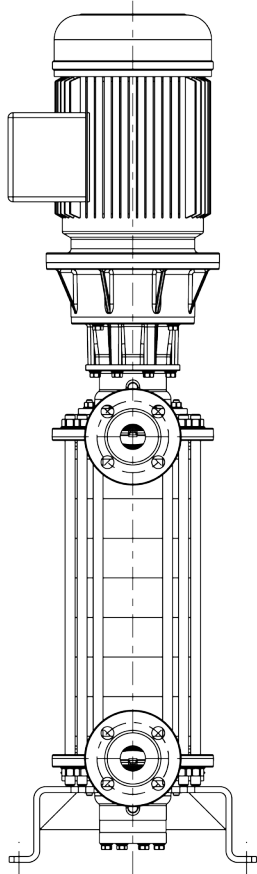


SKPA

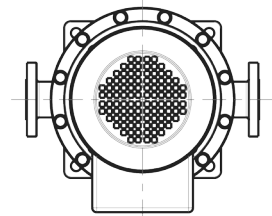
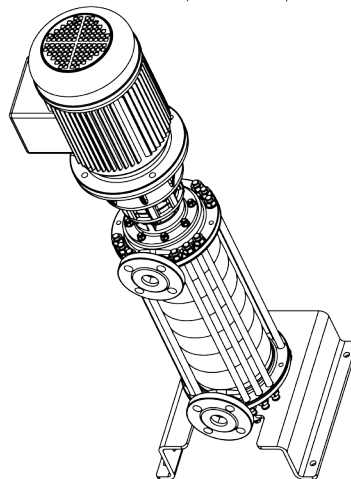
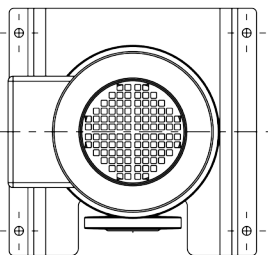
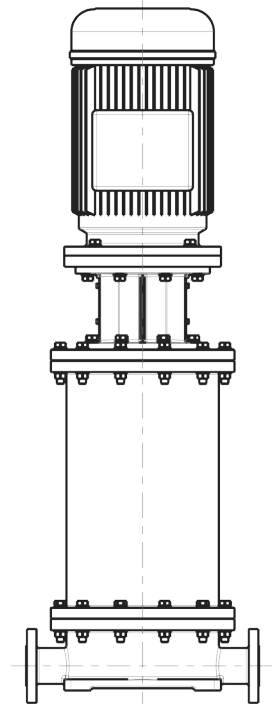
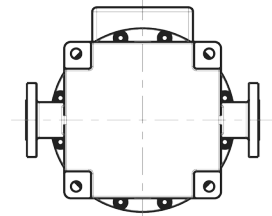
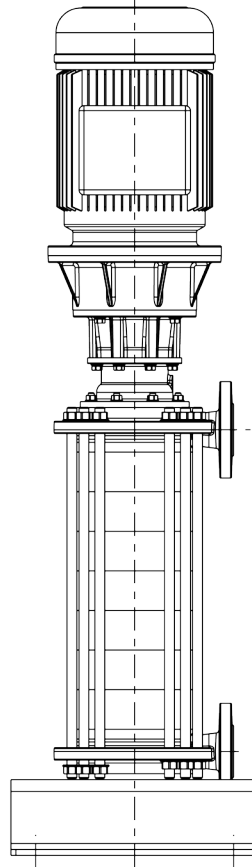
Horizontal pump with 1 anti-friction and 1 sliding bearing, Intern execution on base plate



Dimensional drawings



SKPAV
Vertical pump in
lantern execution.

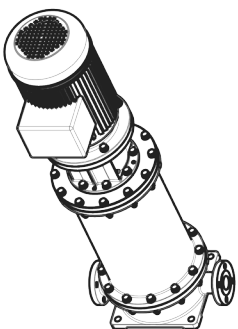
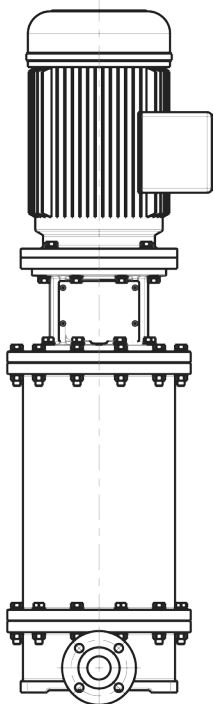


Individual project based dimensional drawings are available on request .

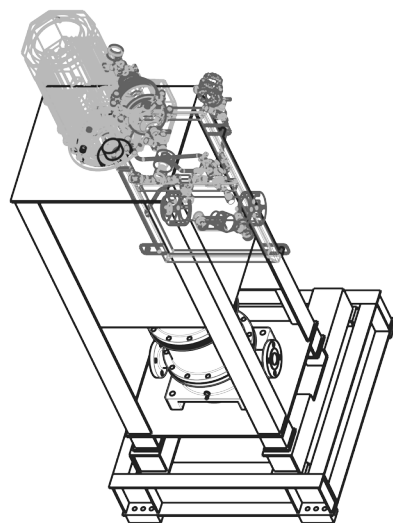
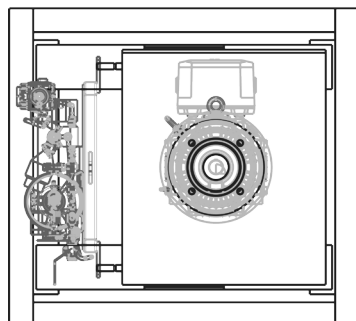
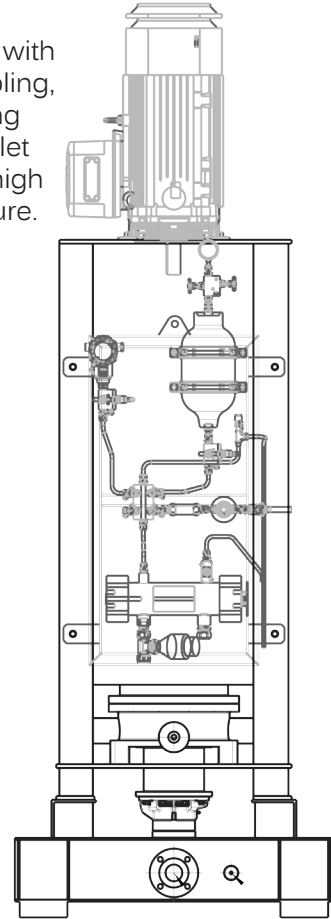
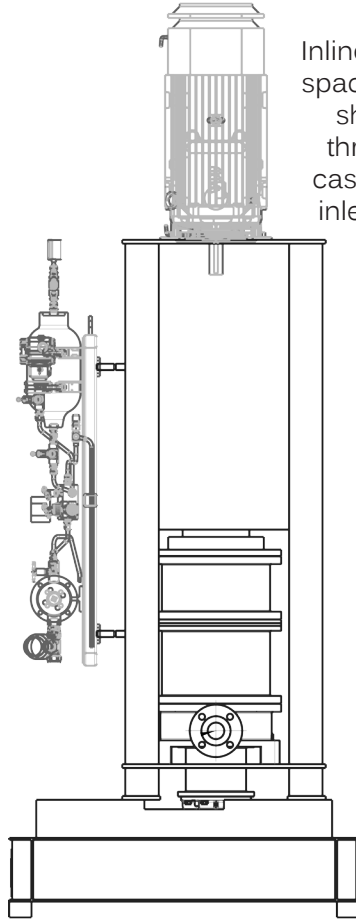
Multi stage pumps Series SKP

Dimensional drawings

SKPDAI
Pump with double casing, sliding bearing at inlet side in lantern execution.

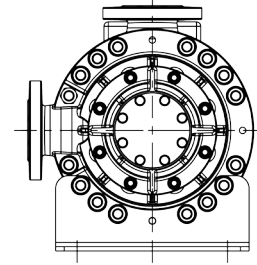
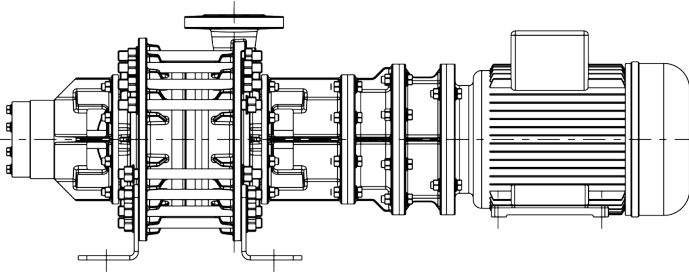


SKPDI
Inline pump with spacer coupling, shaft going through inlet casing for high inlet pressure.

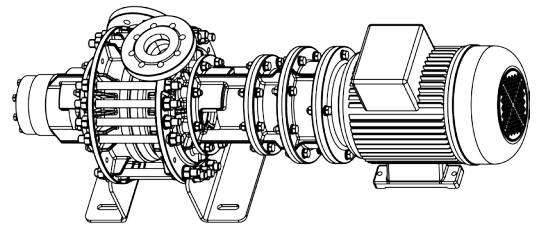
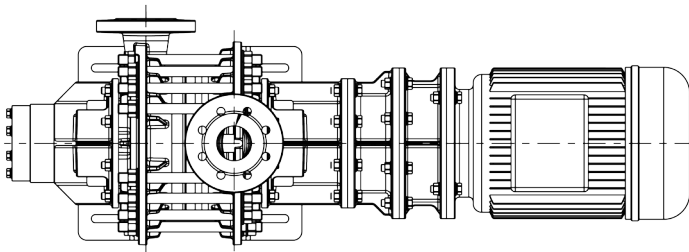


Individual project based dimensional drawings are available on request .

Examples for special executions



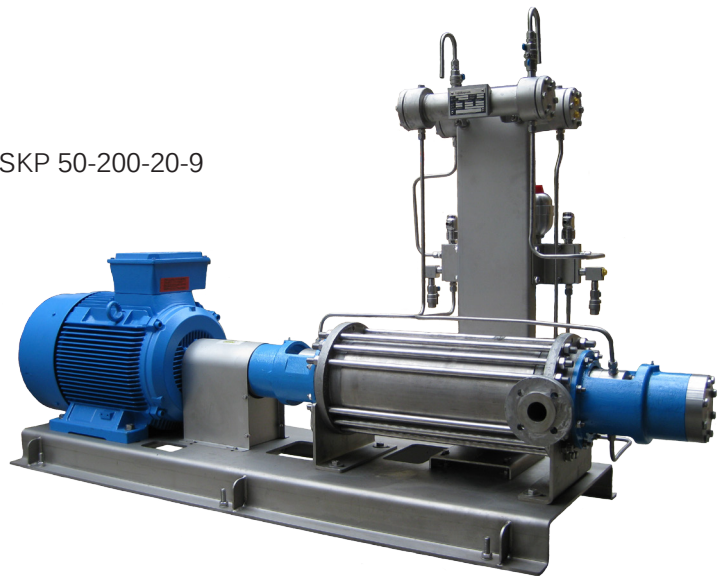
SKPA with suction connection sideward



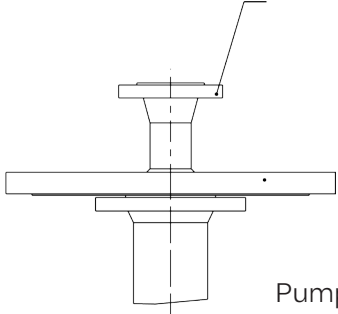
SKPAV 80-200-80-7



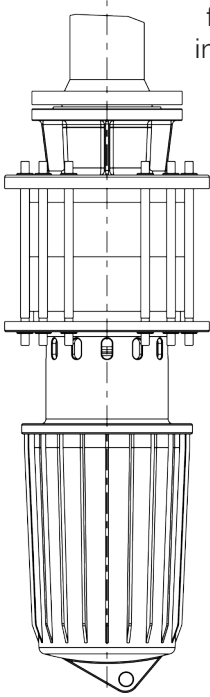
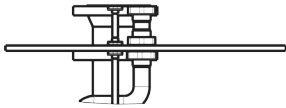
SKP 50-200-20-9



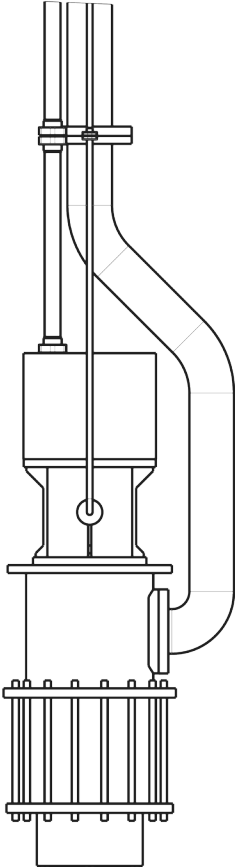
Examples for special executions



SKPT
Pump with submersible electric motor on bottom for the mounting into tanks or wells.



SKPT
Pump with hydraulic motor on top side in protective casing for mounting into tanks or wells.



Multi stage pumps
Series SKP

Specifications subject to change without notice



Edition 02/2017