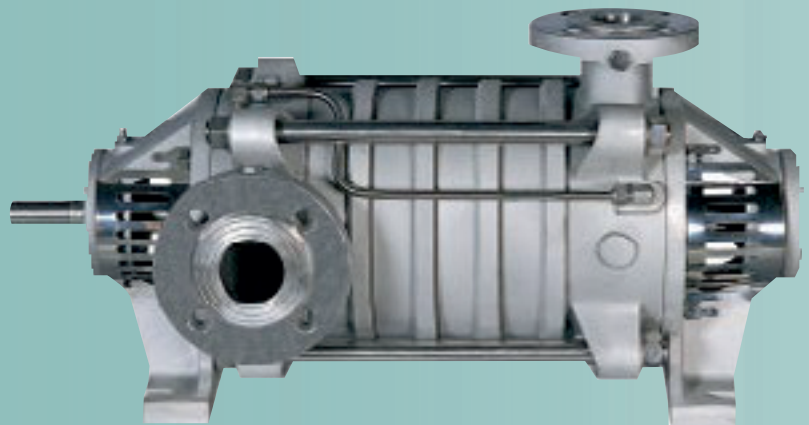
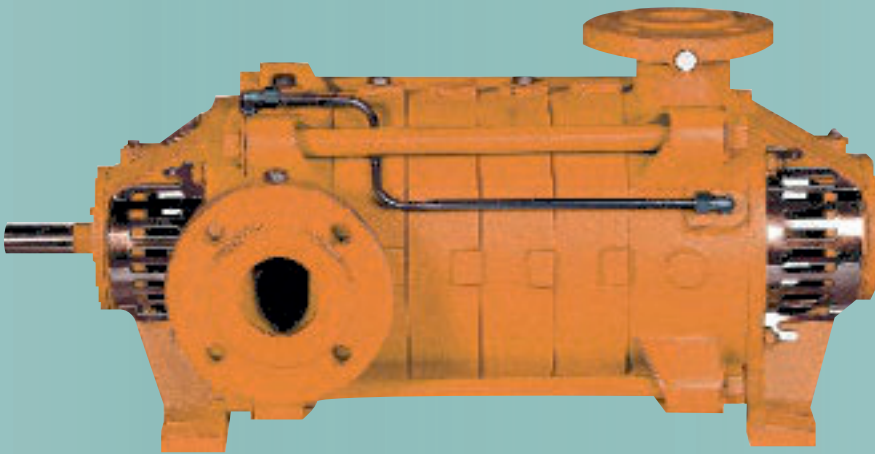


LayneBowler

Multistage Centrifugal Pumps



SKM

Handled Liquids :

SKM Type pump are suitable for clean or slightly contaminated liquids with low viscosity.

Technical Data

Discharge Nozzle Range	DN 32 up to 200 mm
Capacities	up to 700 m ³ /h
Heads	up to 400 m
Speed	1450 - 2900 rpm
Operating Temperature	-10 °C up to 110 °C (140 °C)*
Casing Pressure (Pmax)	30 bar (50 bar) *
(Pmax : Suction Pressure + Shut off Head)	

(*) The material of pumps differ according to the type of pumped liquid , operating temperature and pressure. Contact our company for detailed information.

Applications

- General water supply
- Municipal water supply
- Pressurized water supply
- Boosters systems
- Boiler feed water and condensate
- Heating and air conditioning
- Irrigation , sprinkler
- Circulation
- Industry
- Fire - fighting systems
- Power plants.

Design Feature

- Horizontal ring section multistage centrifugal pumps with closed impellers and diffusers.
- 9 models from DN 32 to DN 200.

- Suction nozzle flanges are according to DIN 2533 / PN 16 and discharge nozzle flanges are according to DIN 2535 / PN 40 (DIN 2546 / PN 64).
- In standart production suction flange is placed on the right side and close to the coupling and discharge flange is at the other end and at top. Suction and discharge nozzle can be turned in multiples of 90°.
- Axial thrust is balanced by back wear rings / balancing holes system.
- Pump impellers are statically and dynamically balanced according to ISO 1940 class 6.3.

Bearings

- Pump shaft is supported by grease lubricated rolling bearings. Pumps with oil lubricated bearings are produced on special request.

Shaft seal

- In standart production soft packed stuffing boxes are used for temperatures up to 110 °C. For temperatures above 110 °C up to 140 °C cooled soft packed stuffing boxes are used. Depending on customer requirement mechanical seals are applicable.

Rotation

- In standard production coupling is on the suction side and direction of rotation is clockwise viewed from driver end. Pump driven from the discharge side can be manufactured on special request. In this case direction of rotation is counter clockwise viewed from the driver end.

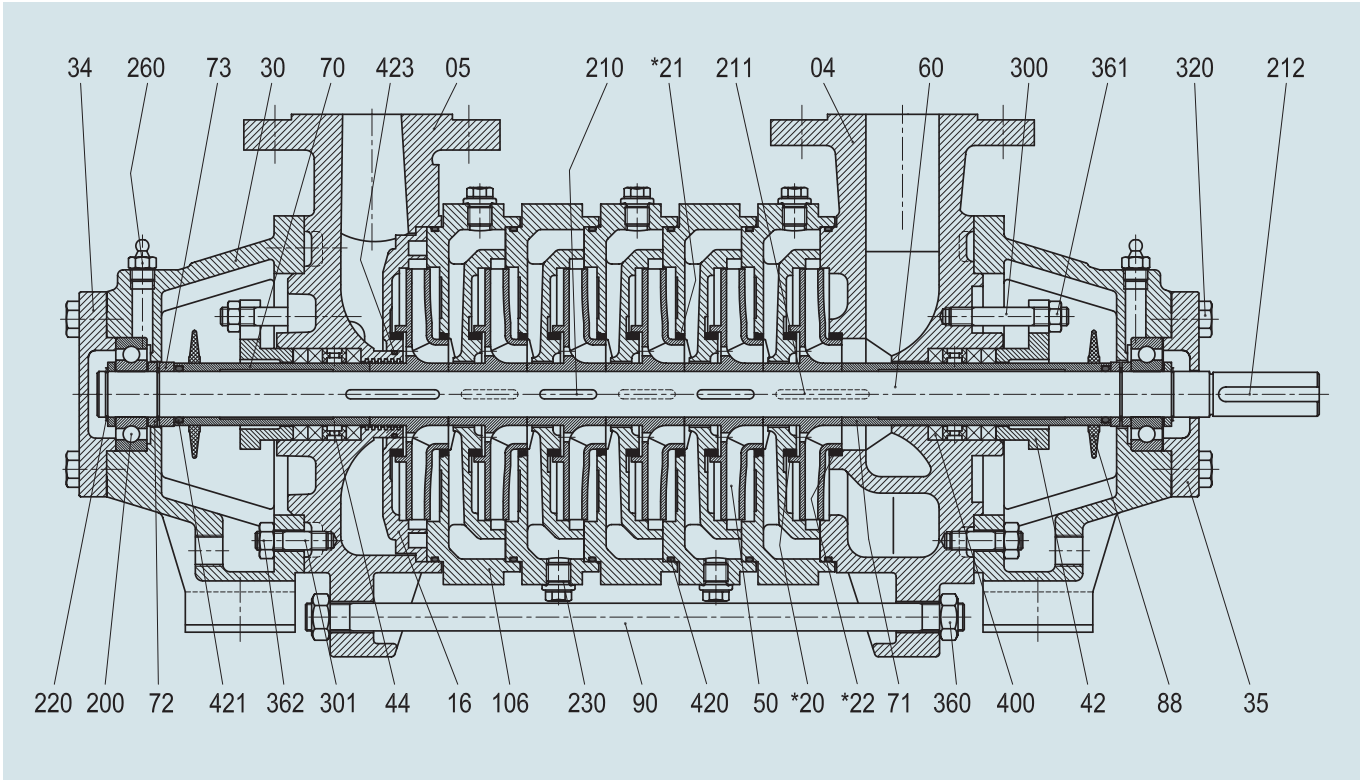
Pump Designation

SKM 100 / 6

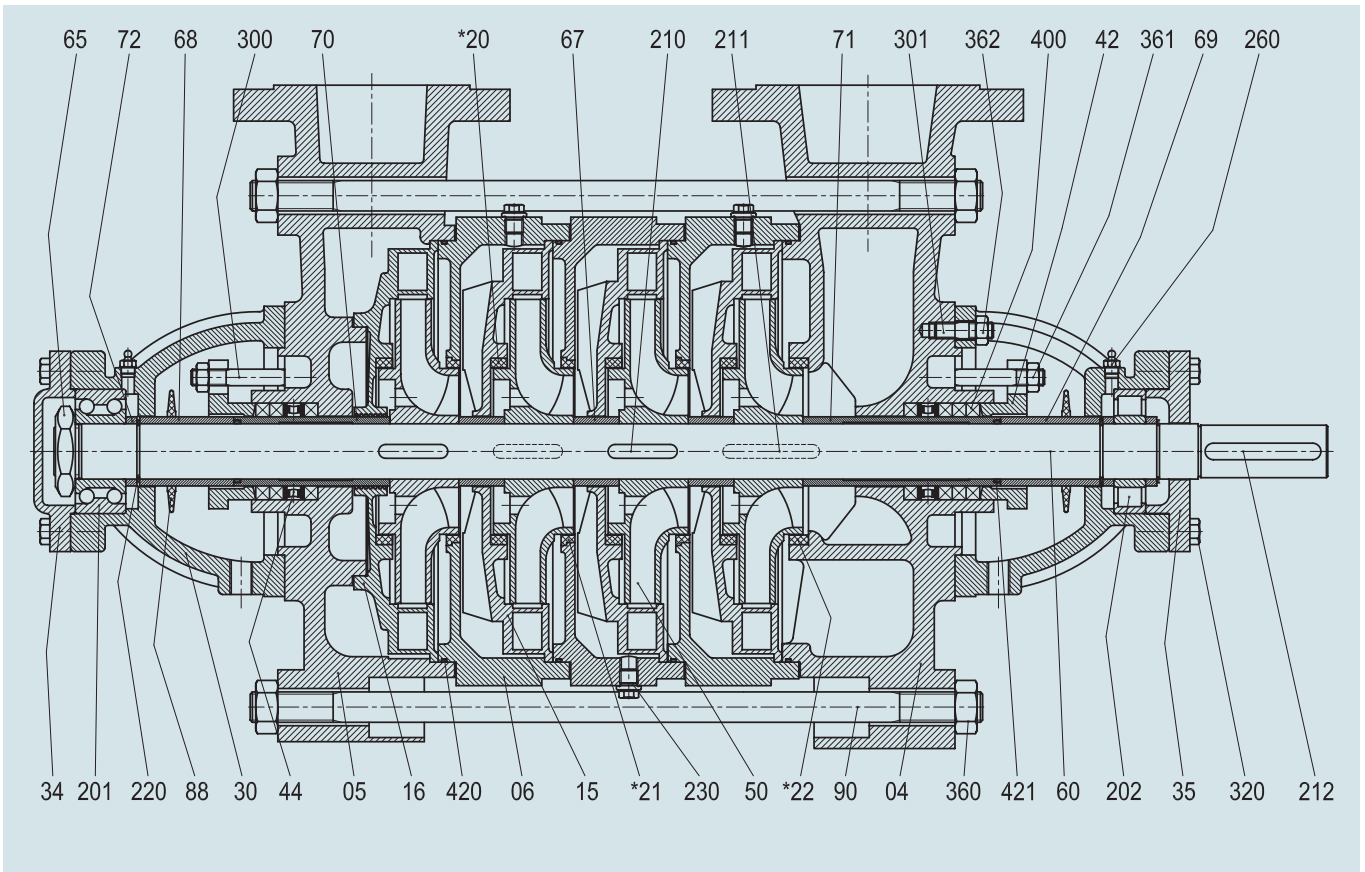
Pump type
 Discharge nozzle (DN)
 Number of stages

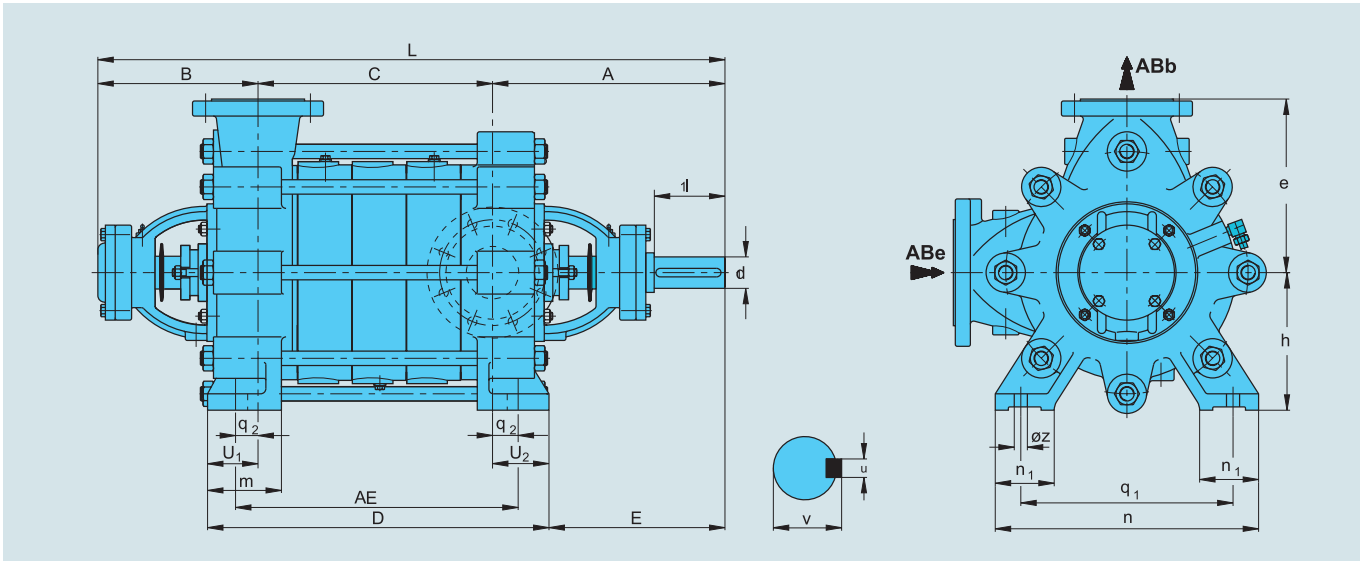


SKM 32 up to 65



SKM 80 up to 200





" C " according to the number of stages (mm)

Pump Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14
32	71	114	157	200	243	286	329	372	415	458	501	544	587	630
40	78	133	188	243	298	353	408	463	518	573	628	683	738	
50	90	152	214	276	338	400	462	524	586	648	710	772		
65	107	178	249	320	391	462	533	604	675	746	817			
80	112	195	278	361	444	527	610	693	776	859				
100	133	233	333	433	533	633	733	833						
125	165	280	395	510	625	740	855							
150	218	363	508	653	798									
200	267	437	607											

Maximum no. of stages depending on shaft material

Pump Type	AISI 420		AISI 304 / 316	
	1450 rpm	2900 rpm	1450 rpm	2900 rpm
32	14	13	14	13
40	13	12	13	7
50	12	10	12	7
65	11	7	11	5
80	10	4	10	3
100	8	-	6	-
125	7	-	4	-
150	5	-	3	-
200	3	-	3	-

Pump Type	Dimensions (mm)																	Shaft End				Weight (kg)		
	ABe	ABb	A	B	EA	D	L	E	e	h	m	n	n1	q1	q2	øz	u1	u2	d1	l1	v	u	G1	g
32	40	32	241	165	C+170	C+200	C+406	145	152	132	60	192	55	136	85	15	104	96	24	60	27	8	44	6
40	50	40	238	165	C+180	C+208	C+403	134	175	160	60	232	55	175	90	15	104	104	24	60	27	8	58	9.5
50	65	50	254	175	C+190	C+222	C+429	145	190	160	60	256	60	200	95	15	113	109	28	65	31	8	89	13
65	80	65	271	195	C+182	C+245	C+466	150	215	180	60	294	60	240	91	15	124	121	32	65	35	10	92	20
80	100	80	321	250	C+84	C+124	C+571	259	265	210	85	410	90	340	42	15	62	62	38	80	41.4	10	128	26
100	125	100	389	285	C+96	C+140	C+674	319	300	250	90	450	90	370	48	15	70	70	42	110	45.2	12	177	42
125	150	125	412	300	C+110	C+160	C+712	332	375	300	112	572	105	450	55	20	80	80	48	110	51.6	14	330	75
150	200	150	486	360	C+130	C+208	C+846	381	425	350	130	655	110	550	65	26	103	105	55	110	61.9	16	580	120
200	250	200	515	385	C+130	C+210	C+900	410	500	400	130	650	100	550	65	27	105	105	70	140	74.5	20	920	200

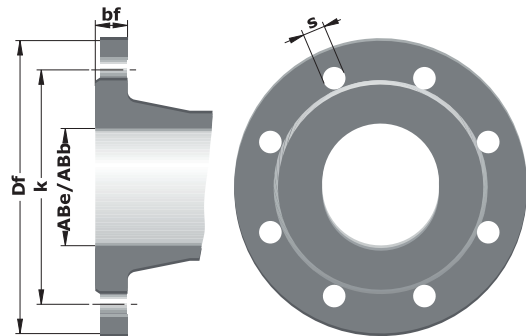
NOTE : Right reserved to change without notice.

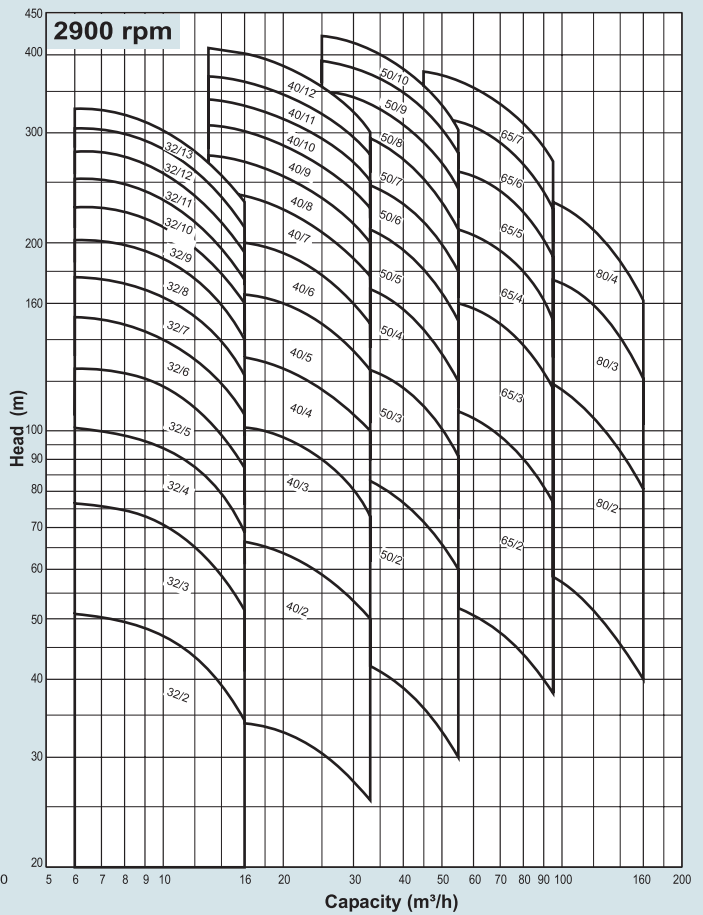
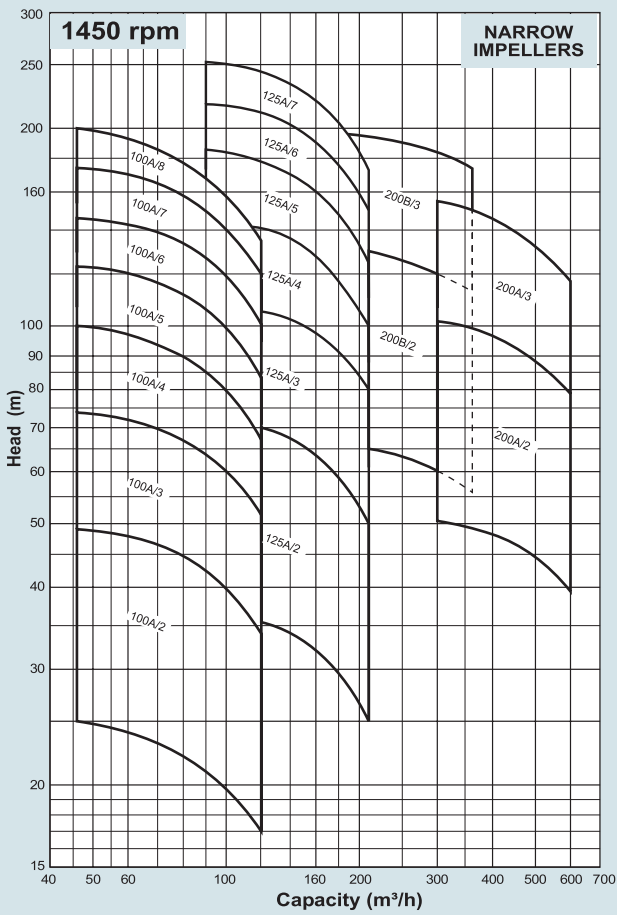
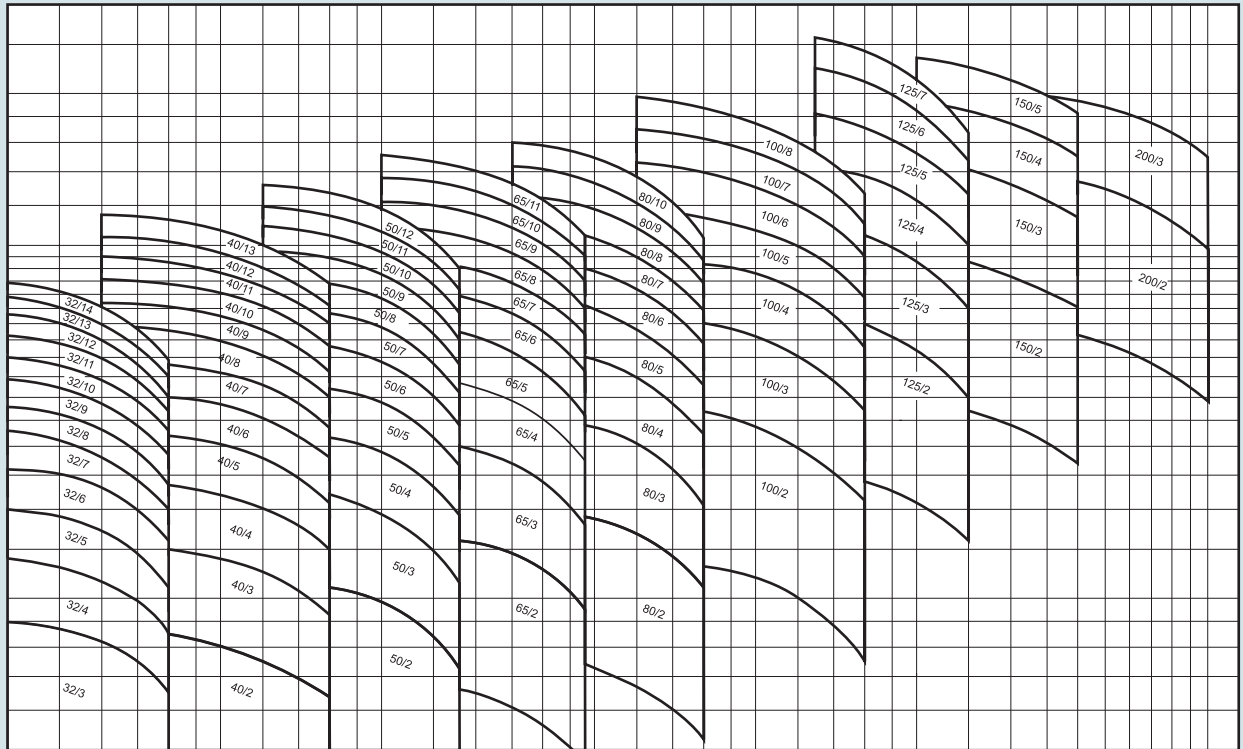
Pump Weight = G1 + (n x g) (n : number of stages)

Flange dimensions

Pump Type	Suction (PN 16)						Discharge (PN 40)					
	ABe	Df	k	s	n	bf	ABb	Df	k	s	n	bf
32	40	150	110	18	4	18	32	140	100	18	4	20
40	50	165	125	18	4	20	40	150	110	18	4	20
50	65	185	145	18	4	20	50	165	125	18	4	22
65	80	200	160	18	8	22	65	185	145	18	8	24
80	100	220	180	18	8	24	80	200	160	18	8	26
100	125	250	210	18	8	26	100	235	190	23	8	28
125	150	285	240	23	8	26	125	270	220	27	8	30
150	200	340	295	23	12	30	150	300	250	27	8	34
200	250	405	355	27	12	32	200	375	320	30	12	40

" n " number of holes





Bearing Types

1450 rpm

Pump Type	No. of stages	Bearing Type	
		Suction	Discharge
32	2....14	6305	6305
40	2....13	6305	6305
50	2....12	6306	6306
65	2....11	6307	6307
80	2....10	NU 308	3308
100	2....8	NU 309	3309
125	2....7	NU 310	3310
150	2....5	NU 312	3312
200	2....3	NU 315	2x7315

2900 rpm

Pump Type	No. of stages	Bearing Type		No. of stages	Bearing Type	
		Suction	Discharge		Suction	Discharge
32	2....9	6305	6305	10....13	NU 305	6405
40	2....6	6305	6305	7....12	NU 305	6405
50	2....5	6306	6306	6....10	NU 306	6406
65	2....4	6307	6307	5....7	NU 307	6407
80	2....4	NU 308	3308	-	-	-

Material Options

Parts List	0.6025	0.7040	1.0619	1.4308	1.4408	2.1050.01	1.4021	1.4301	1.4401	1.4138	2.1090.01	2.1096.01
Suction casing	●	○	○	○	○	○						
Discharge casing	●	○	○	○	○	○						
Stage casing	●	○	○	○	○	○						
Diffuser	●	○	○	○	○	○						
Impeller	●	○	○	○	○	○						
Shaft							●	○	○			
Bearing housing	●	○	○	○	○	○						
Wear ring (Casing)	○	○								○	○	
Interstage sleeve						○	●	○	○		○	○
Spacer sleeve						○	●	○	○		○	○
Shaft protecting sleeve						○	●	○	○		○	○
Mechanical seal (*)	DIN 24960 / EN 12756											

● Standard manufacturing

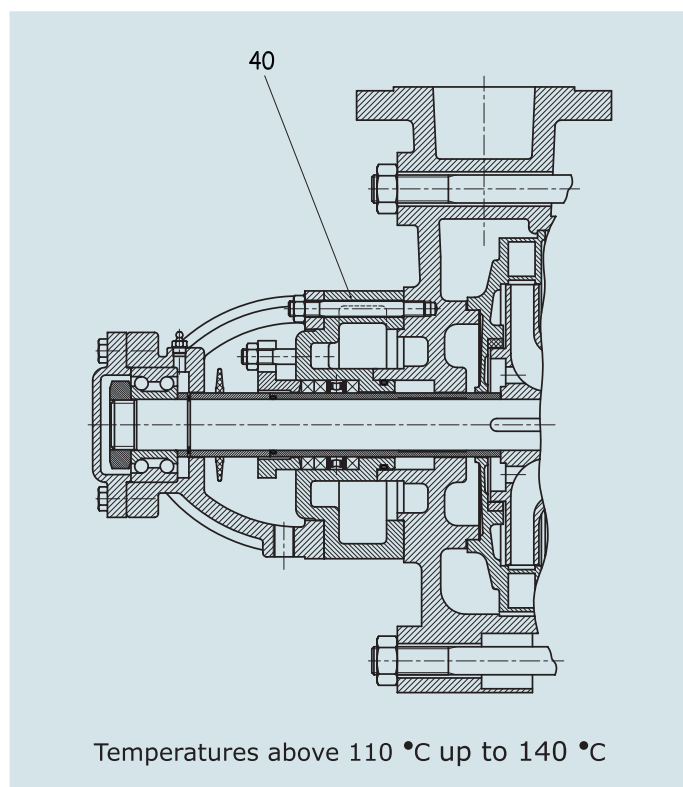
○ Optional

(*) **Optional** : Depending on customer requirement or request different types and brands of mechanical seals are applicable.

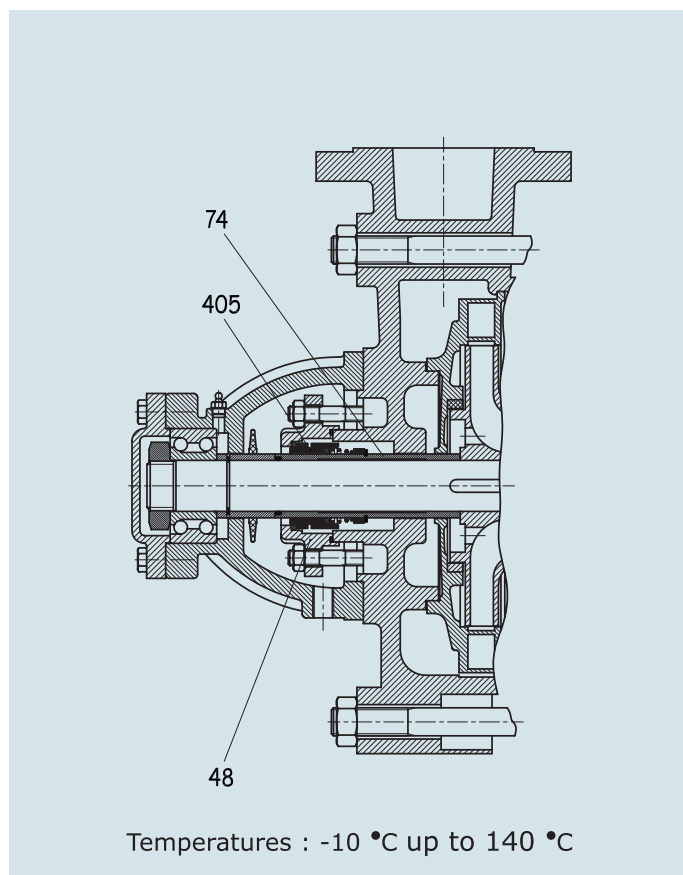
Material Equivalents

Description	DIN 17007	EN-DIN	ASTM
Cast iron	0.6025	GJL-250 (GG 25)	A 48 Class 40-B
Nodular cast iron	0.7040	GJS-400-15 (GGG 40)	A 536 Gr. 60-40-18
Cast steel	1.0619	GP240GH (GS-C 25)	A 216 Gr. WCB
Chrome nickel cast steel	1.4308	G-X6 Cr Ni 18.9	A 351-75 Grade CF8
Chrome nickel molybdenum cast steel	1.4408	G-X6 Cr Ni Mo 18.10	A 351-75 Grade CF8M
Chrome molybdenum cast steel	1.4138	G-X120 Cr Mo 29.2	-
Cast bronze	2.1050.01	G-Cu Sn 10	B 584 C 90700
Cast bronze	2.1090.01	G-Cu Sn 7 Zn Pb	B 584 C 93200
Cast bronze	2.1096.01	G-Cu Sn 5 Zn Pb	B 584 C 83600
Chrome steel	1.4021	X20 Cr 13	A 276 Type 420
Chrome nickel steel	1.4301	X5 Cr Ni 18.9	A 276 Type 304
Chrome nickel molybdenum steel	1.4401	X5 Cr Ni Mo 18.10	A 276 Type 316

Stuffing Box Cooling Application



Mechanical Seal Application



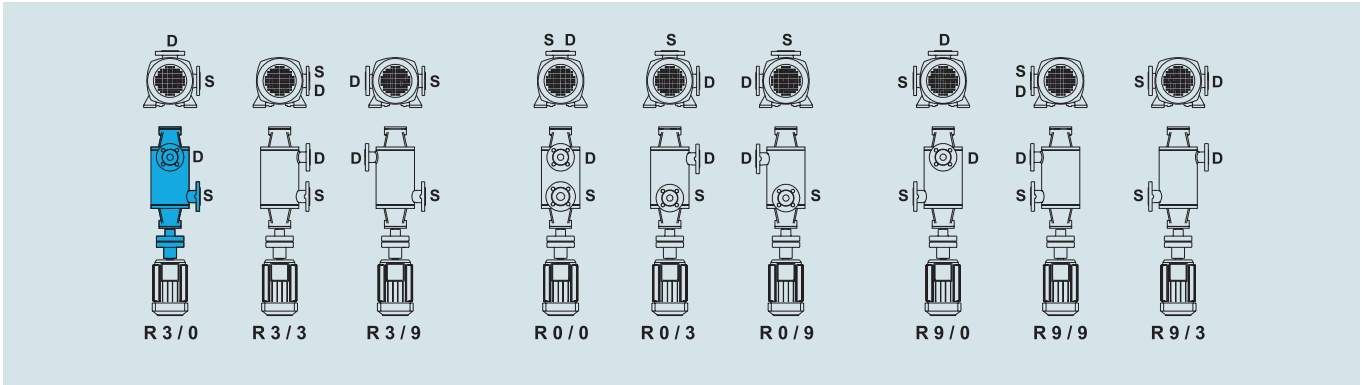
Parts List

Part No	Part Name
04	Suction Casing
05	Discharge Casing
06	Stage Casing
15	Diffuser
16	Final Stage Diffuser
*20	Wear Ring (Stage Casing)
*21	Wear Ring (Stage Casing)
*22	Wear Ring (Suction Casing)
30	Bearing Housing
34	Bearing End Cover
35	Bearing Cover (Coupling Side)
40	Stuffing Box Cooling Chamber
42	Stuffing Box Gland
44	Lantern Ring
48	Mechanical Seal Cover
50	Impeller
60	Shaft
65	Shaft End Nut
67	Interstage Sleeve
68	Spacer Sleeve (Discharge Side)
69	Spacer Sleeve (Suction Side)
70	Shaft Protecting Sleeve (Discharge Side)
71	Shaft Protecting Sleeve (Suction Side)
72	Spacer Sleeve (Discharge Side)
73	Spacer Sleeve
74	Mechanical Seal Sleeve
88	Thrower
90	Tiebolt
106	Stage Casing
200	Ball Bearing
201	Angular Contact Ball Bearing (Discharge Side)
202	Cylindrical Roller Bearing (Suction Side)
210	Impeller Key
211	First Stage Key
212	Coupling Key
220	Retaining Ring
230	Plug
260	Grease Nipple
300	Stuffing Box Stud
301	Stud
320	Hex.Head Bolt
360	Hex.Nut
361	Hex.Nut
362	Hex.Nut
400	Stuffing Box Packing
*405	Mechanical Seal
420	O-Ring
421	O-Ring
423	O-Ring

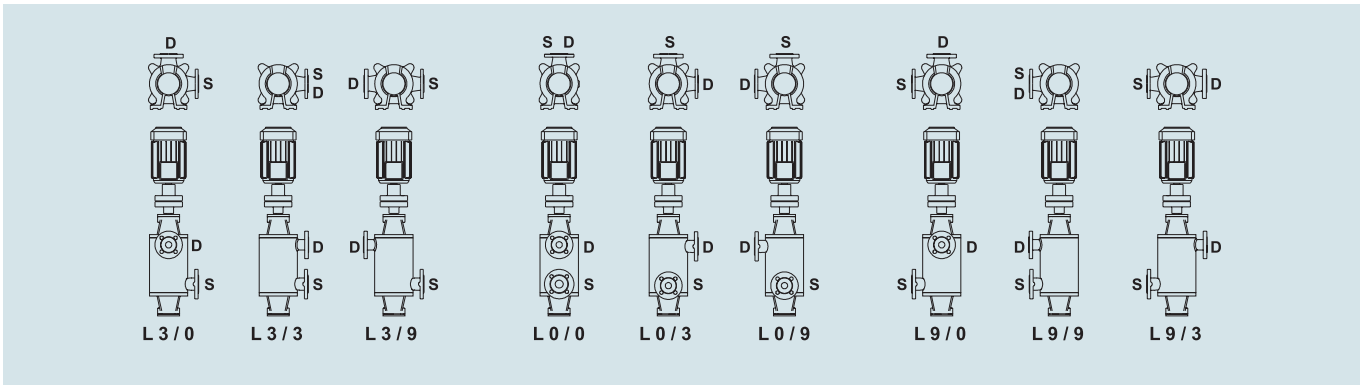
(*) Optional

Flange positions

Clockwise rotation viewed from driver (Suction flange is on the motor side) :



Counter clockwise rotation viewed from driver (Discharge flange is on the motor side) :



Explanation :

X X X



Sense of rotation viewed from driver
R : Right
L : Left

Attention :

- In standard production coupling is on the suction side and direction of rotation is clockwise viewed from driver end (R 3 / 0).
- Flanges in parallel on the same direction are only possible with 3 or more stages for sizes from 32 to 125.

LayneBowler

TASTE THE ENGINEERING

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