SKM-E
MULTISTAGE PUMPS (END SUCTION)

Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange	DN 40 up to DN 150 mm
Capacity	up to 400 m³/h
Head	up to 450 m
Speed	up to 2900 rpm
Operating Temperature	-10 °C up to 110 °C (140 °C*)
Casing Pressure (Pmax)	25 bar (63) bar *

(Pmax : Suction Pressure + Shut off Head)

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

- Direction of rotation is always counter clockwise viewed from driver end.That's why these pumps can not be accouppled with diesel engines.
- Axial thrust is balanced by impeller balancing holes system.
- All impellers are balanced and dynamically according to ISO 1940 class 6.3.
- Bearings of SKM-E type pumps are grease lubricated. Sleeve bearing used in the suction side is lubricated by the pumping liquid.

Design Features

- Horizontal ring section, multistage, centrifugal pumps with closed impellers and diffusers in end suction design.
- Suction nozzle flanges confrom to EN 1902 - 2 / PN16 and discharge nozzle flanges confrom to EN 1902 - 2 / PN 40 (PN 63)
- 7 models from DN 40 up to DN 150 discharge flange diameter.

Shaft Sealing

- In standard production soft packing is applied up to 110 ˚C. Between 110 ˚C and 140 ˚C soft packing may also applied together with the stuffing box cooling.
- Pumps with mechanical seal can also be manufactured upon request.

Pump Designation

SKM-E 100 / 6

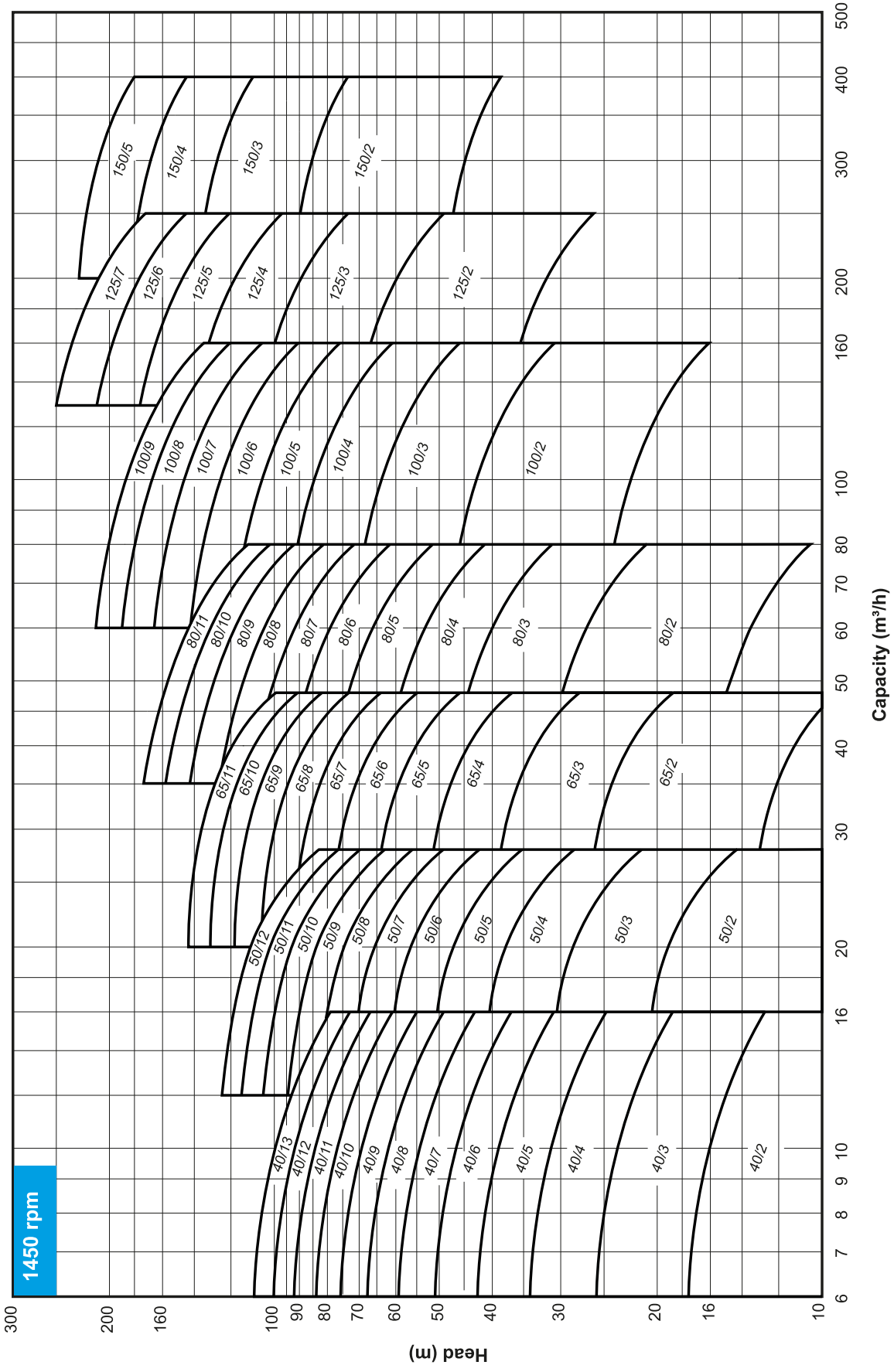
Pump Type

Discharge Nozzle (DN-mm)

Number of Stages

Standart

08.2014
Rev. 0


1450 rpm
Head (m)
Capacity (m³/h)
300
200
160
100
90
80
70
60
50
40
30
20
16
10
6
7
8
9
10
16
20
30
40
50
60
70
80
100
160
200
300
400
500
150/5
150/4
150/3
150/2
125/7
125/6
125/5
125/4
125/3
125/2
100/9
100/8
100/7
100/6
100/5
100/4
100/3
100/2
80/11
80/10
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40/13
40/12
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Field Chart

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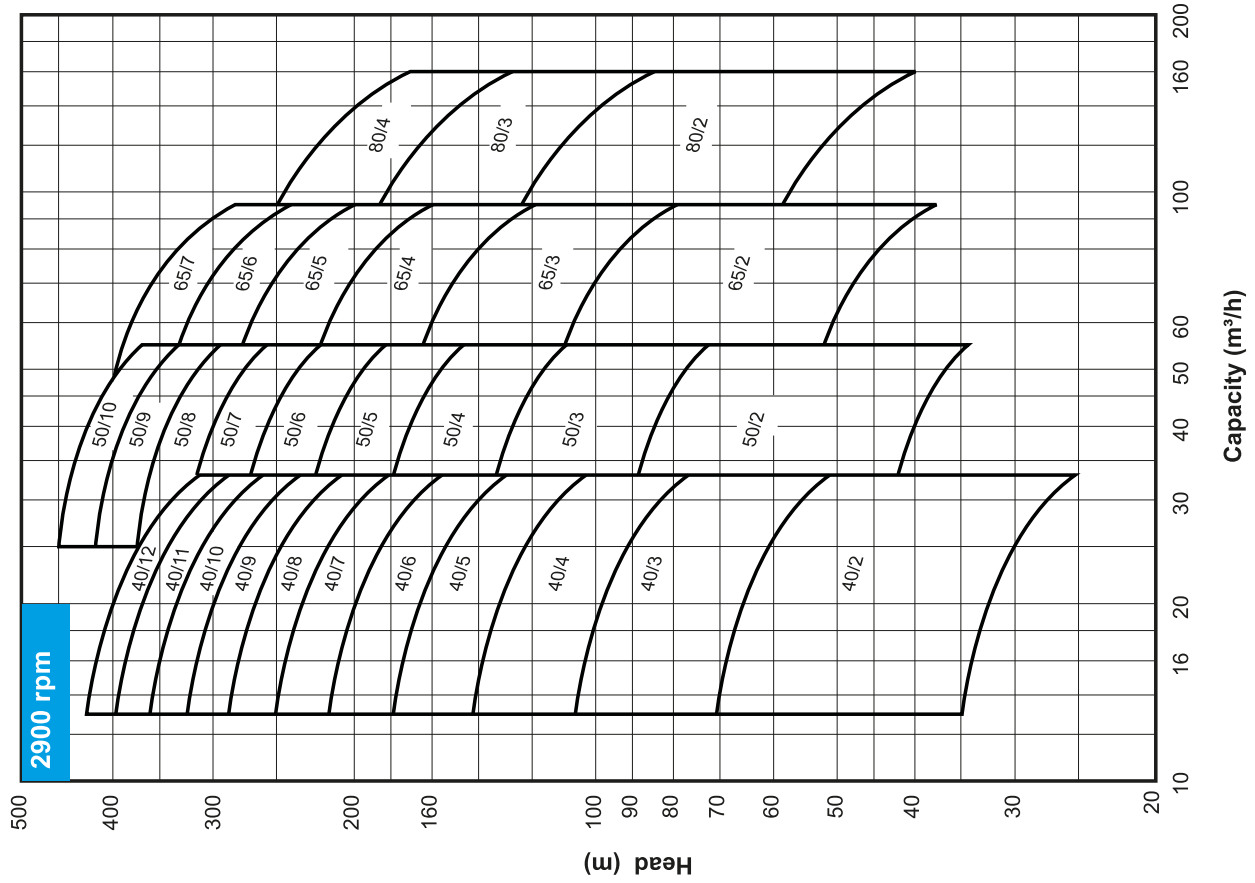

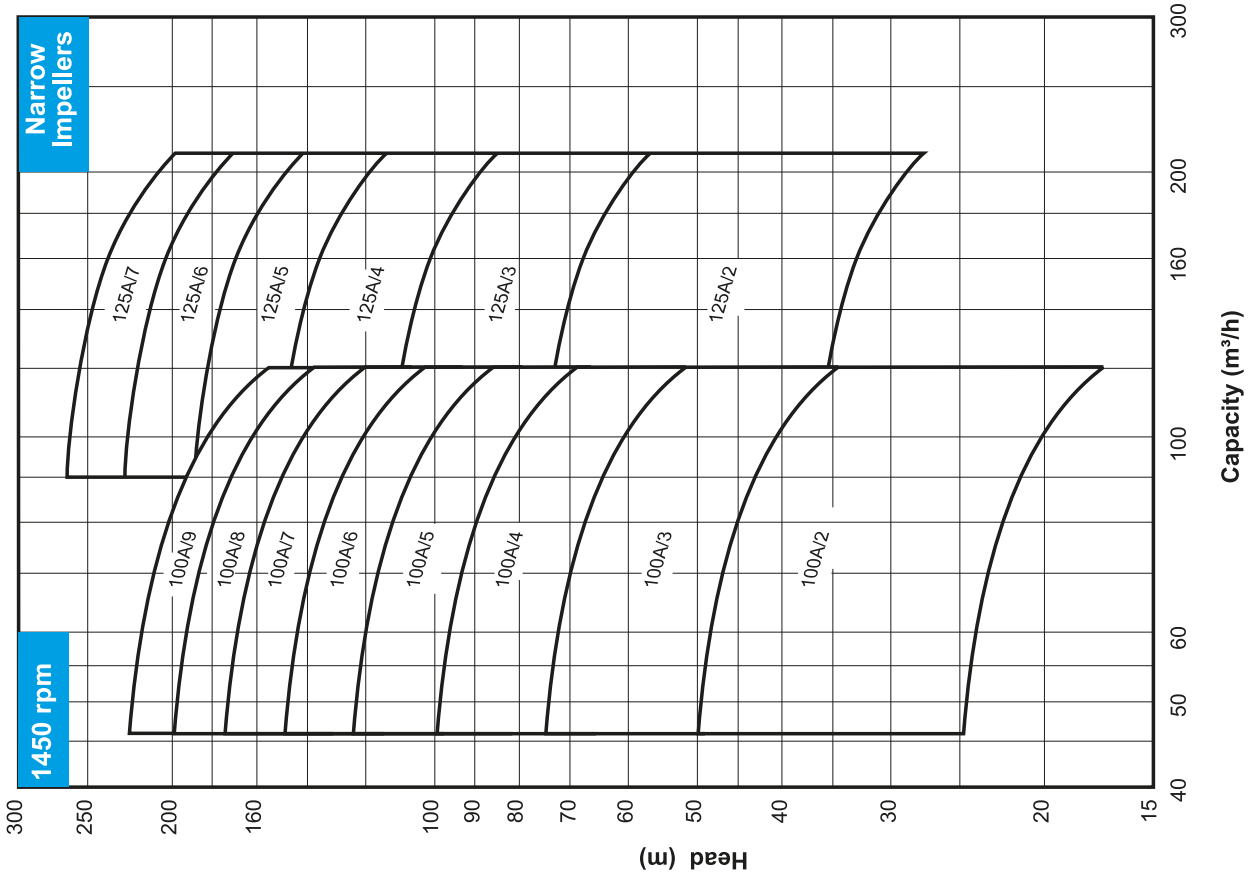

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Sectional Drawings

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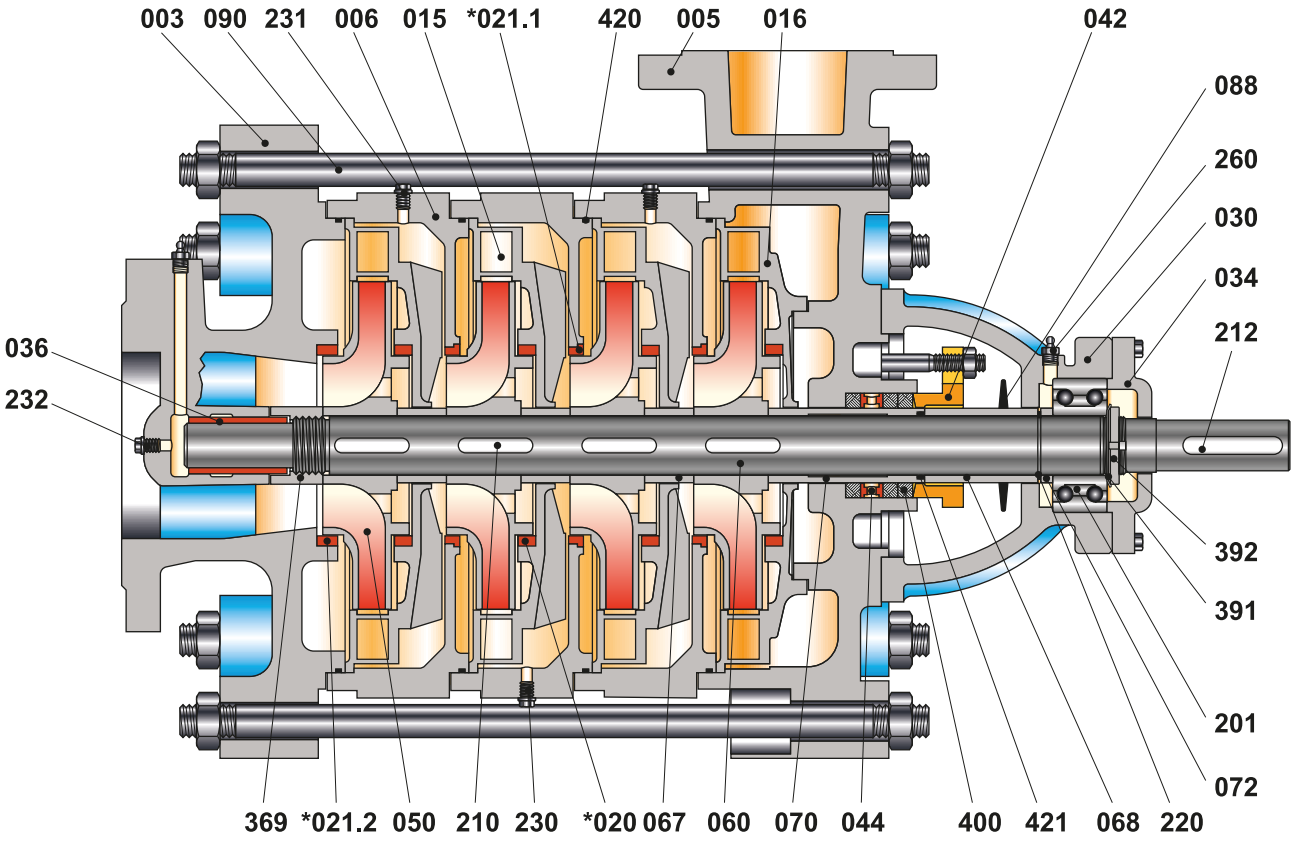
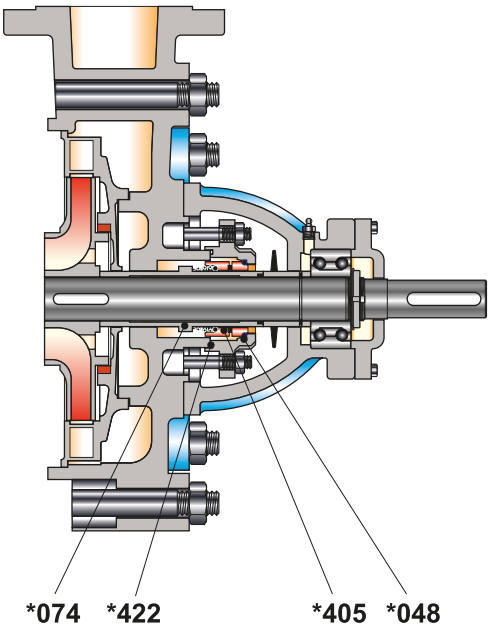


Part List

Part No	Part Name	Part No	Part Name
003	Suction Casing	*074	Mechanical Seal Sleeve
005	Discharge Casing	088	Thrower
006	Stage Casing	090	Tiebolt
015	Diffuser	201	Double Row Ball Bearing
016	Last Stage Diffuser	210	Impeller Key
*020	Wear Ring (diffuser)	212	Coupling Key
*021.1	Wear Ring (stage casing)	220	Retaining Ring
*021.2	Wear Ring (suction casing)	230	Drain Plug
030	Bearing Housing	231	Filling Plug
034	Bearing Cover	232	Plug
036	Sleeve Bearing	260	Grease Nipple
042	Stuffing Box Gland	369	Shaft Nut
044	Lantern Ring	391	Lock Washer
*048	Mechanical Seal Cover	392	Shaft Nut
050	Impeller	400	Soft Packing
060	Shaft	*405	Mechanical Seal
067	Interstage Sleeve	420	O-Ring
068	Spacer Sleeve (discharge side)	421	O-Ring
070	Shaft Protecting Sleeve	*422	O-Ring
072	Spacer Sleeve (discharge side)		

* Optional

Mechanical Seal Application



Standart

Technical Data

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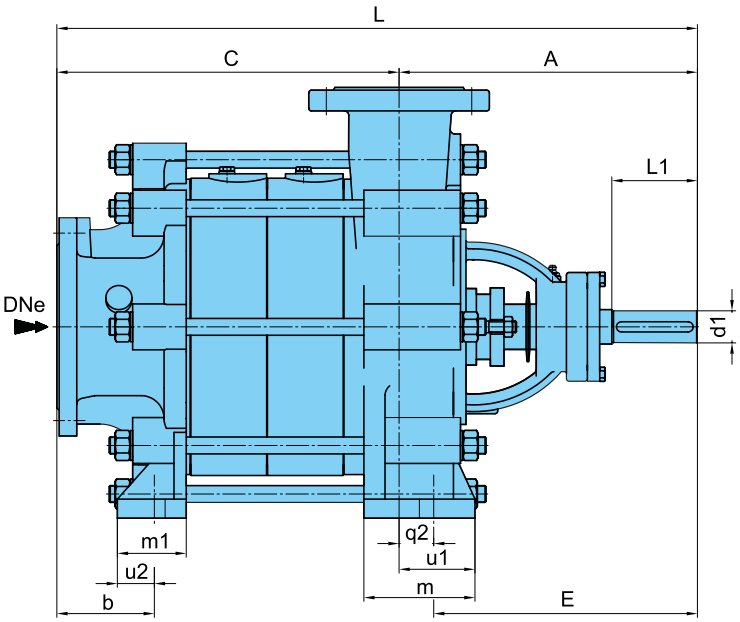
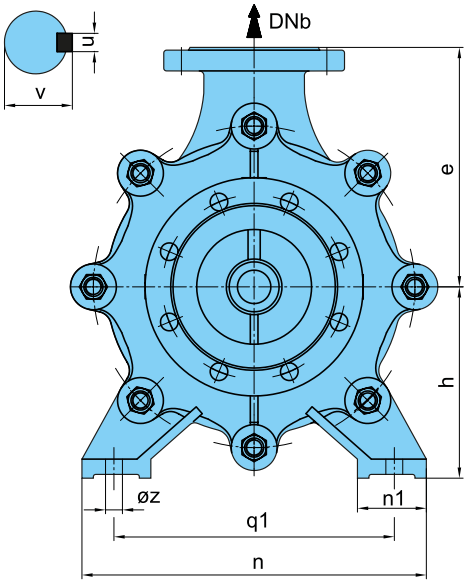




"C" according to the number of stages (mm)

Pump Type	2	3	4	5	6	7	8	9	10	11	12	13
40	187	242	297	352	407	462	517	572	627	682	737	792
50	212	274	336	398	460	522	584	646	708	770	832	
65	247	318	389	460	531	602	673	744	815	886		
80	280	363	446	529	612	695	778	861	944	1027		
100	347	447	547	647	747	847	947	1047				
125	364	479	594	709	824	939						
150	437	582	727	872								

Maximum number of stages according to Shaft material

Pump Type	1.4462 / 1.4021		1.4301 / 1.4401	
	1450 rpm	2900 rpm	1450 rpm	2900 rpm
40	13	12	13	7
50	12	10	12	7
65	11	7	11	5
80	11	4	11	3
100	9	N/A	6	N/A
125	7	N/A	4	N/A
150	5	N/A	3	N/A

Bearing Type

Pump Type	Bearing Type
40	6305
50	6306
65	6307
80	3308
100	3309
125	3310
150	3312

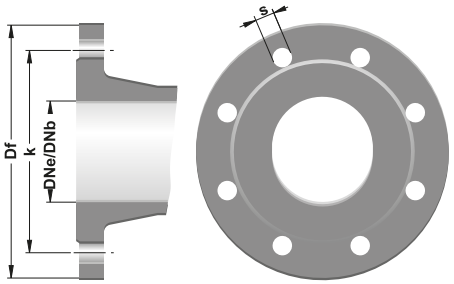
PUMP TYPE	DIMENSIONS (mm)																	Shaft				Weight (kg)	
	DNe	DNb	A	b	L	E	e	h	m	m1	n	n1	q1	q2	øz	u1	u2	d1	l1	v	u	G	g
40	65	40	237	23	C+237	147	175	160	60	75	232	55	175	90	15	109	20	24	60	27	8	54	9.5
50	80	50	258	23	C+259	160	190	160	60	85	256	60	200	98	15	115	20	28	65	31	8	82	13
65	100	65	275	38	C+275	170	215	180	60	85	294	60	240	121	15	125	25	32	65	35	10	85	20
80	125	80	331	75	C+331	289	265	210	85	85	410	90	340	42	15	62	25	38	80	41	10	113	26
100	150	100	397	105	C+397	349	300	250	90	90	450	90	370	48	15	70	30	42	110	45	12	150	42
125	200	125	410	70	C+410	355	375	300	110	112	572	105	450	55	23	80	30	48	110	51.5	14	264	75
150	200	150	475	60	C+475	410	425	350	130	135	655	110	550	65	23	103	30	55	110	59	16	455	120

Pump weight = G1 + (s x g) (s : number of stage)

Flange Dimensions

DNe / DNb	Suction (PN 16)				Discharge (PN 40)			
	Df	k	s	n	Df	k	s	n
40	150	110	19	4	150	110	19	4
50	165	125	19	4	165	125	19	4
65	185	145	19	4	185	145	19	8
80	200	160	19	8	200	160	19	8
100	220	180	19	8	235	190	23	8
125	250	210	19	8	270	220	28	8
150	285	240	23	8	300	250	28	8
200	340	295	23	12	375	320	31	12

" n " number of holes



Standart

Technical Data

SKM-E

Material Options

Part List	0.6025	0.7040	1.0619	1.4308	1.4309	1.4408	1.4409	1.4500	1.4517	1.4469	1.4317	2.1050.01	2.0975.01	1.0503	1.4021	1.4301	1.4306	1.4401	1.4404	1.4462	Tungsten Carbide
Suction Casing	●	○		○	○	○	○	○	○	○	○	○									
Discharge Casing	●	○		○	○	○	○	○	○	○	○	○									
Stage Casing	●	○		○	○	○	○	○	○	○	○	○									
Diffuser	●	○	○	○	○	○	○	○	○	○	○	○	○								
Impeller	●	○	○	○	○	○	○	○	○	○	○	○	○								
Shaft															●	○	○	○	○	○	
Bearing Housing	●	○																			
Wear Ring (casing)	○	○	○	○	○	○	○	○	○	○	○	○									
Spacer Sleeve												○		●	○	○	○	○	○	○	
Shaft Pro. Sleeve												○		●	○	○	○	○	○	○	
Interstage Sleeve												○		●	○	○	○	○	○	○	
Sleeve Bearing												●									○
Mechanical Seal (*)	EN 12756 / DIN 24960																				

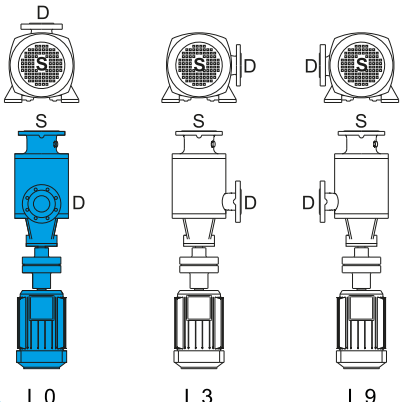
(*) Optional :Depending on customer requirement or request different types and brands of mechanical seals are applicable.

● Standart manufacturing
○ Optional

Material Equivalent

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-X5 Cr Ni 19-10	A 351/743/744 Gr. CF8
Chrome nickel cast steel (low carbon)	1.4309	G-X2 Cr Ni 19-11	A 351/743/744 Gr. CF3
Chrome nickel molybdenum cast steel	1.4408	G-X5 Cr Ni Mo 19-11-2	A 351/743/744 Gr. CF8M
Chrome nickel molybdenum cast steel (low carbon)	1.4409	G-X2 Cr Ni Mo 19-11-2	A 351/743/744 CF3M
Austenitic cast steel	1.4500	G-X7 Cr Ni Mo Cu Nb 25-20	A 351/743/744 (CN7M)
Austenitic-ferritic cast steel (duplex)	1.4517	G-X2 Cr Ni Mo Cu N 25-6-3-3	A 890 Gr. 1B (CD4MCuN)
Austenitic-ferritic cast steel (super duplex)	1.4469	G-X2 Cr Ni Mo N 26-7-4	A 890 Gr. 5A (CE3MN)
Martenzitic Stainless Cast Steel	1.4317	G-X4 Cr Ni 13-4	A 351/743/744 (CA6NM)
Cast bronze (tin alloy)	2.1050.01	G-Cu Sn 10	B 584 C 90700
Cast bronze (nickel alloy)	2.0975.01	G-Cu Al 10 Ni	B 148 C 95800
Carbon steel	1.0503	C 45	A 29/108/576 1045
Chrome steel	1.4021	X20 Cr 13	A 276 Type 420
Chrome nickel steel	1.4301	X5 Cr Ni 18-10	A 276 Type 304
Chrome nickel steel (low carbon)	1.4306	X2 Cr Ni 19-11	A 276 Type 304L
Chrome nickel molybdenum steel	1.4401	X5 Cr Ni Mo 17-12-2	A 276 Type 316
Chrome nickel molybdenum steel (low carbon)	1.4404	X2 Cr Ni Mo 17-12-2	A 276 Type 316 L
Duplex (austenitic-ferritic) steel	1.4462	X2 Cr Ni Mo N 22-5-3	A 276 S 31803

Flange Positions



L 0 L 3 L 9

Standart

Direction of rotation is counter clockwise viewed from driver end.

Explanation :

L 3

Discharge Flange (D) Discharge flange positions.

Direction of Rotation (L) L : Left (Viewed from drive end)