EN ISO 9905

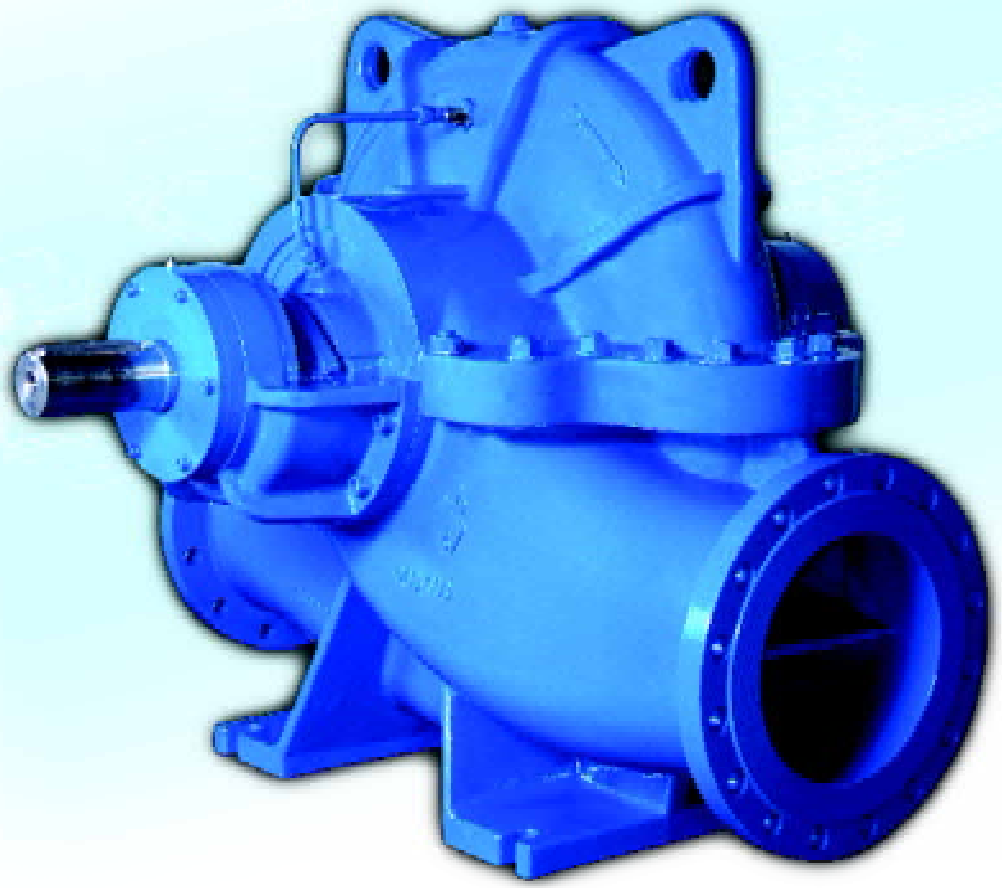
Standart

SDS

Double Suction Split Case

Centrifugal Pumps

ATEX



SDS 01 04-10 EN

Handled Liquids

SDS type pumps are suitable for clean or slightly contaminated liquids with low viscosity.

Technical Data

Discharge Nozzle Range — DN 65 up to DN 400 mm
Capacities — up to 3500 m3/h
Heads — up to 180 m
Speed — up to 2900 rpm
Operating Temperature — 20 °C up to 80 °C*
Casing Pressure (Pmax) — 16 bar (25 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.

Design Features

• Suction and discharge flanges are on the same axis at the bottom casing. Split case design permits easy disassembly of the rotor group for maintenance or repair without distorting pump alignment and suction and discharge piping.

• Flanges are conforming to ISO 7005-2 / PN 16 or PN 25.

• Impeller is of double suction. This feature increases pump suction performance in addition it provides the balance of hydraulic axial forces.

• All impellers are balanced statically and dynamically according to ISO 1940 class 6.3.

Applications

- Water supply
- Irrigation
- Drainage
- Water circulation
- Fire fighting
- Industrial applications
- Power stations
- Water treatment plants

Bearings

• Pump shaft is supported by grease-lubricated rolling bearings on both sides.

• Depending on customer requirement ‘‘Life-time grease-lubricated’’ rolling bearings are available.

Shaft Seal

• Different soft packing and mechanical seal types are available.

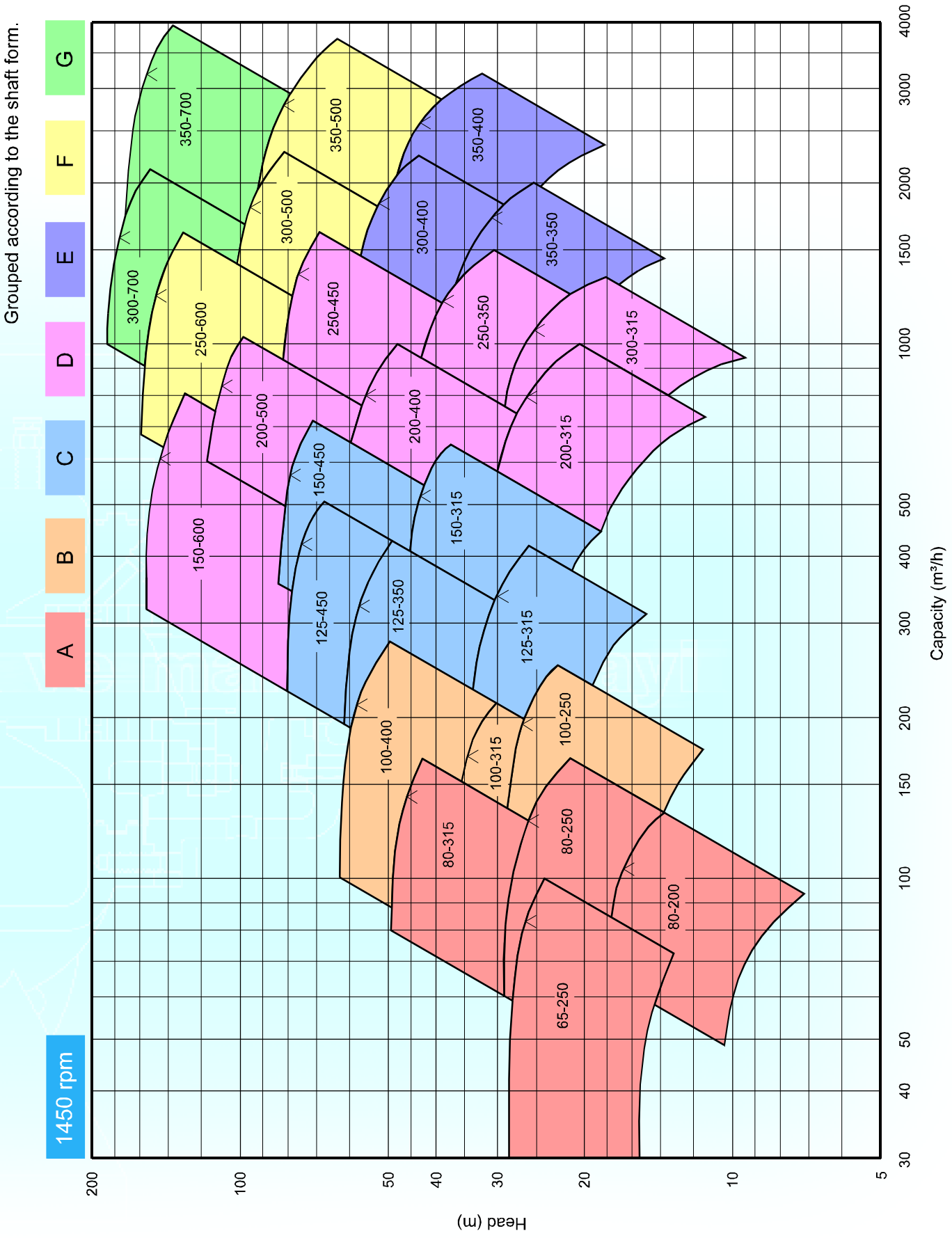
Rotation

• In standard construction the direction of rotation of pump is clockwise when it is looked from the motor side. In this case, suction flange is at right and discharge flange is at left. Upon request the direction of rotation can be reversed, and when this is done the position of the suction and discharge flanges are also reversed.

Pump Designation

SDS 200- 500

Pump type
Discharge nozzle (DN)
Nominal impeller diameter (mm)


Grouped according to the shaft form.
A
B
C
D
E
F
G
1450 rpm
Head (m)
200
100
50
40
30
20
10
5
Capacity (m³/h)
30
40
50
100
150
200
300
400
500
1000
1500
2000
3000
4000
80-315
80-250
80-200
65-250
100-400
100-315
100-250
125-450
125-350
125-315
150-600
150-450
150-315
200-500
200-400
200-315
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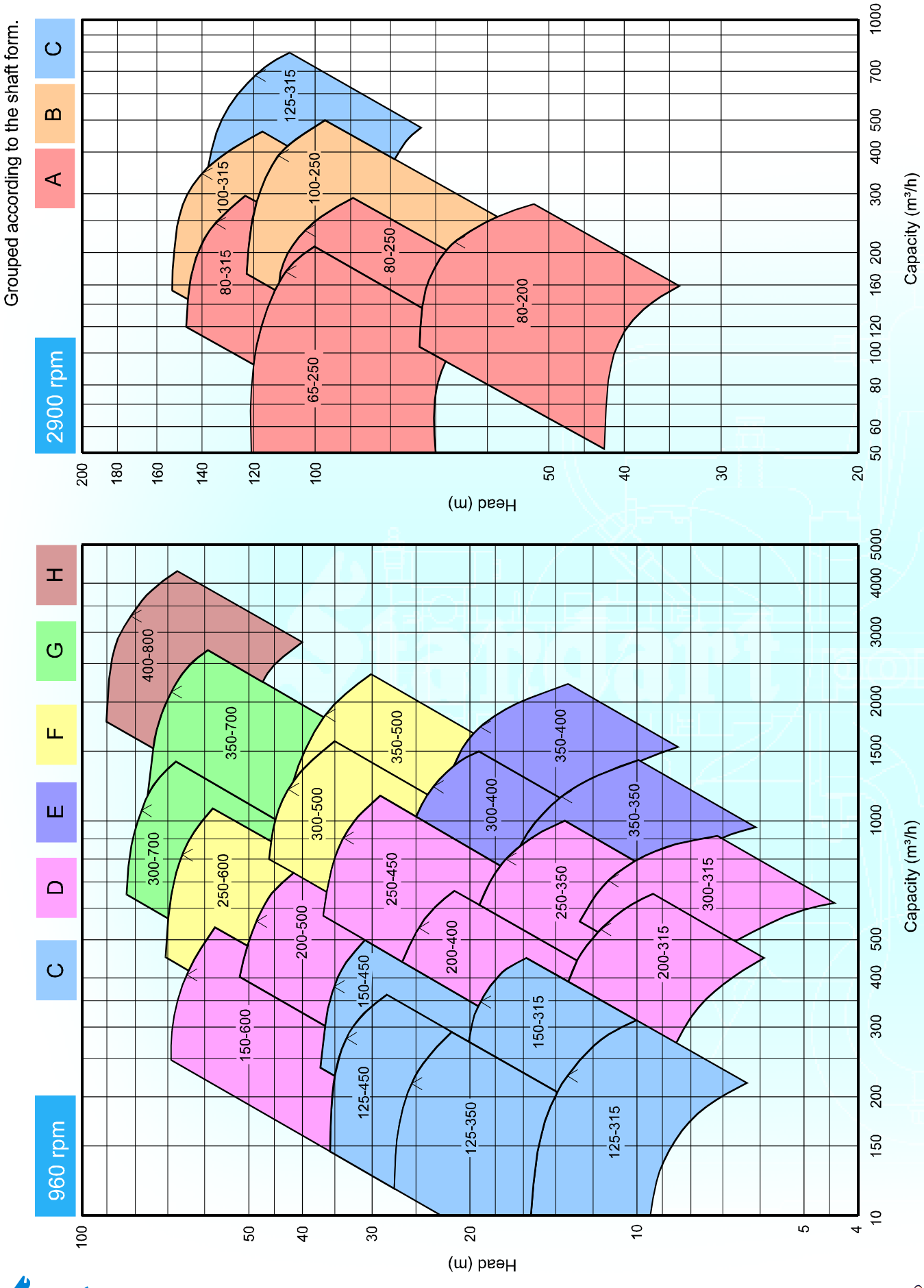
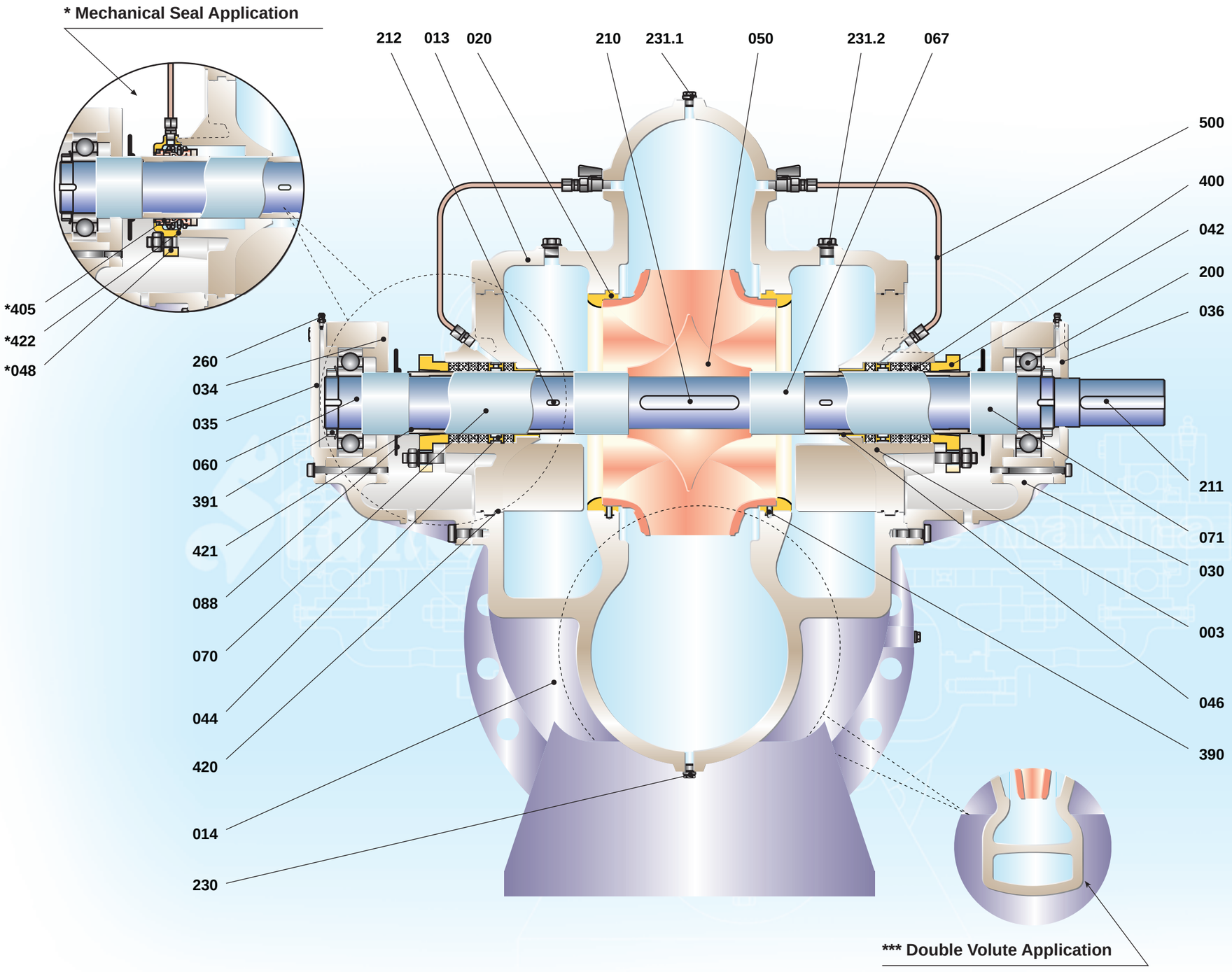
350-350


Grouped according to the shaft form.
A
B
C
2900 rpm
125-315
100-315
100-250
80-315
80-250
80-200
65-250
Head (m)
Capacity (m³/h)
960 rpm
C
D
E
F
G
H
400-800
350-700
350-500
350-400
300-700
300-500
300-400
350-350
250-600
250-450
250-350
300-315
200-500
200-400
200-315
150-600
150-450
150-315
125-450
125-350
125-315
Head (m)
Capacity (m³/h)

Sectional Drawing



Part List

003	Stuffing box
013	Volute casing (top half)
014	Volute casing (bottom half)
020	Wear ring
030	Bearing bracket
034	Bearing cover (inboard)
035	Bearing cover (outboard)
035	Bearing cover (coupling)
042	Stuffing box gland
044	Lantern ring
046	Stuffing box ring**
048	Mechanical seal cover*
050	Impeller
060	Pump shaft
067	Spacer sleeve
070	Shaft protecting sleeve
071	Shaft protecting sleeve
088	Thrower
200	Ball bearing
210	Impeller key
211	Coupling key
212	Spacer key
230	Drain plug
231.1	Air plug
231.2	Air plug
260	Grease Nipple
390	Pin
391	Shaft nut & Lock washer
400	Stuffing box packing
405	Mechanical seal*
420	O-Ring
421	O-Ring
422	O-Ring*
500	Flushing pipe

*(*) Alternative Application*

*(**) Optional Application*

*(***) Double volute desing is applied to:*

SDS 200-500 , 250-600 , 300-500
300-700 , 350-500 , 350-700

Material Options

Parts List	0.6025	0.7040	1.0619	1.4308	1.4408	1.4409	1.4517	1.4469	2.1050.01	2.0975.01	1.4021	1.4301	1.4306	1.4401	1.4404	1.4462
Volute casing	●	○	○	○	○	○	○	○	○							
Impeller	●	○	○	○	○	○	○	○	○	○						
Shaft											●	○	○	○	○	○
Bearing housing	●	○														
Wear ring (Casing)	○	○	○	○	○	○	○	○	●	○						
Shaft protecting sleeve											●	○	○	○	○	○
Mechanical seal (*)	*EN 12756 / DIN 24960*															

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

● Standard manufacturing

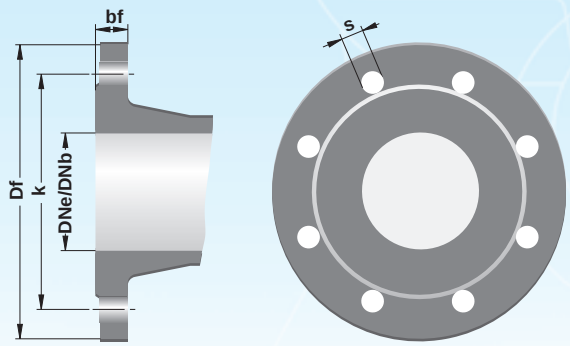
○ Optional

Material Equivalents

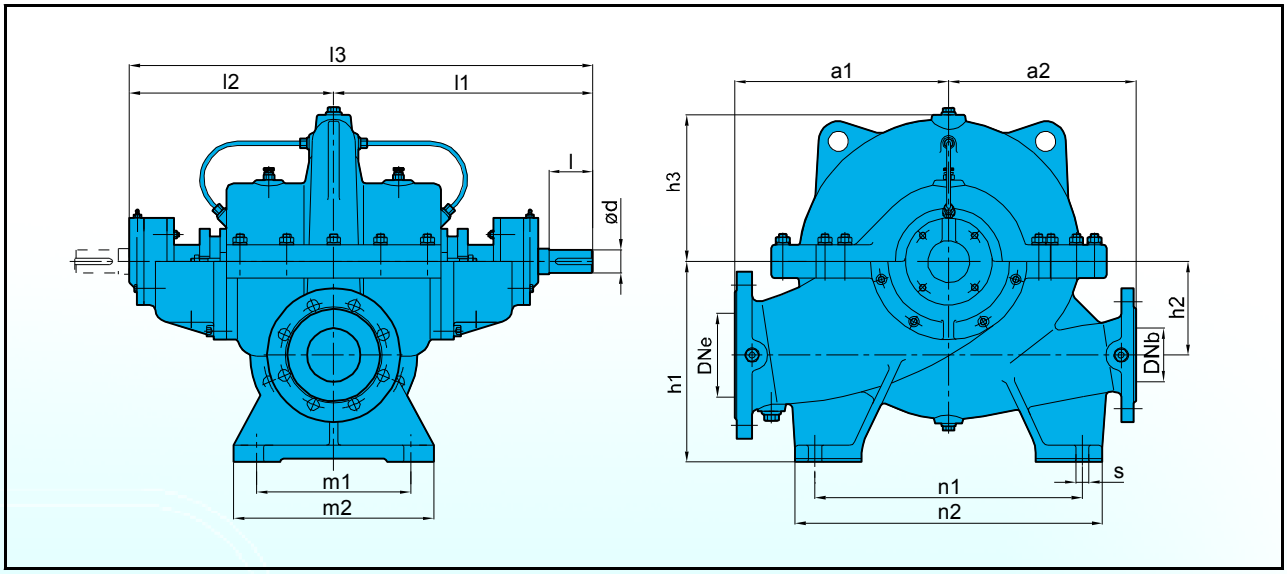
Description	DIN 17007	EN-DIN	ASTM
Cast iron	0.6025	GJL-250 (GG 25)	A 48 Class 40-B
Nodular cast iron	0.7040	GJS-400-15 (GGG 40)	A 536 Gr. 60-40-18
Cast steel	1.0619	GP240GH (GS-C 25)	A 216 Gr. WCB
Chrome nickel cast steel	1.4308	G-X5 Cr Ni 19-10	A 351/743/744 Gr. CF8
Chrome nickel molybdenum cast steel	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-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)
Cast bronze	2.1050.01	G-Cu Sn 10	B 584 C 90700
Cast bronze	2.0975.01	G-Cu Al 10 Ni	B 584 C 95800
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 (32205)

Flange Dimensions

DNe/DNb	Suction & Discharge (PN 16)					Suction & Discharge (PN 25)				
	Df	k	s	n	bf	Df	k	s	n	bf
65	185	145	19	4	20	185	145	19	8	24
80	200	160	19	8	22	200	160	19	8	26
100	220	180	19	8	24	235	190	23	8	28
125	250	210	19	8	26	270	220	28	8	30
150	285	240	23	8	26	300	250	28	8	34
200	340	295	23	12	30	360	310	28	12	34
250	405	355	28	12	32	425	370	31	12	36
300	460	410	28	12	32	485	430	31	16	40
350	520	470	28	16	36	555	490	34	16	44
400	580	525	31	16	38	620	550	37	16	48
500	715	650	34	20	42	730	660	37	20	52



"n" number of holes



Pump Type	Dimensions (mm)																			Weight (kg)
	PNe	PNb	DNe	DNb	ød	l	l1	l2	l3	a1	a2	h1	h2	h3	n1	n2	m1	m2	s	
65-250	16	16	100	65	35	80	400	310	710	320	280	300	140	200	400	460	230	300	20	165
80-200	16	16	125	80	35	80	400	310	710	320	280	300	140	200	400	460	230	300	20	165
80-250														200						175
80-315										360	300			260						197
100-250	16	16	150	100	42	90	450	350	800	360	310	355	170	235	400	480	280	340	20	220
100-315														250						230
100-400										420	370			300	460	540				290
125-315	16	16	200	125	55	120	555	420	975	420	370	400	200	280	460	540	320	380	22	330
125-350										470	450			300	540	660				380
125-450										500				350		640				410
150-315	16	16	200	150	55	120	555	420	975	470	400	400	200	310	540	640	320	380	22	395
150-450										500	450			365						430
150-600	25	25	250	150	65	130	645	500	1145	550	500	560	300	445	540	640	360	420	22	800
200-315	16	16	250	200	65	130	645	500	1145	500	450	500	240	315	540	640	360	420	22	570
200-400														360						575
200-500										550	500	560	300	380	620	720				700
250-350	16	16	300	250	65	130	645	500	1145	600	500	600	300	390	620	720	360	420	22	682
250-450														415						780
250-600	25	25			80	170	720	540	1260	650	550			430		710	415	485	26	1190
300-315	16	16	350	300	65	130	645	500	1145	600	500	630	300	400	620	700	360	420	22	700
300-400			400		75	140	770	615	1385	700	550	710	350	450	720	800	420	520	26	1125
300-500					80	170	755	585	1340		750	710		425	700					1500
300-700	25	25	400	300	100	180	865	675	1540	750	800	710	350	470	720	880	420	520	26	1650
350-350	16	16	400	350	75	140	770	615	1385	700	550	670	350	450	720	800	420	520	26	1100
350-400			500					615	1385	800	600	800	380	500	800	960	500	600		1400
350-500					80	170	755	585	1340				400	435	740	900				1435
350-700	25	25	500	350	100	180	865	675	1540	850	750	850	450	525	720	880	500	600	26	2000
400-800	16	16	600	400	105	220	1035	810	1845	900	900	880	450	565	950	1120	630	740	26	3400

Note: Dimensions may differ in cast steel and cast bronze pumps. Contact our company for details.

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