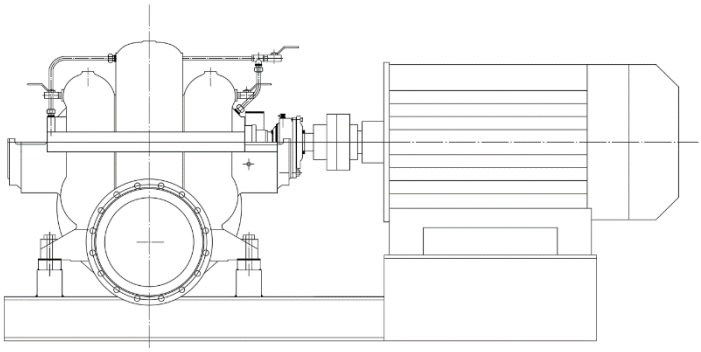
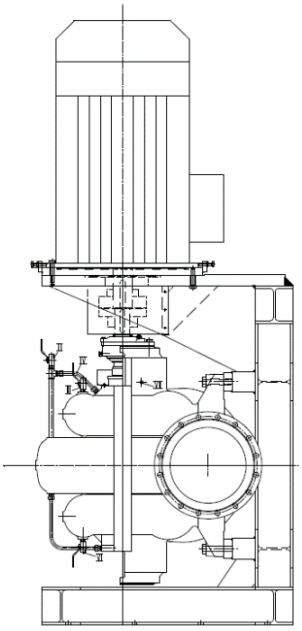
GEM Pump

(Green Engineering and Management Co.,Ltd)



HORIZONTOL TYPE



VERTICAL TYPE

CATALOGUE

DOUBLE SUCTION

SPLIT CASING

CENTRIFUGAL PUMPS

BUREAU VERITAS

ISO 9001:2015

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1. General

GMH type pump is a new generation of high performance single-stage double-suction centrifugal split pumps. They are mainly used in delivering liquids of the water plant, airconditioner circulation water, heating pipe network system, building water supply, irrigation and drainage of pump stations, power plants, industrial water supply system, fire protection, ships industry and mine. It is a new substitute of SH, S, SA, SLA and SAP.

2. Main performance parameters

- Pump outlet diameter — DN: 80 ~ 900 mm.
- Capacity — Q: 22 ~ 16236 m^3/h
- Head — H: 7 ~ 300m
- Temperature — -20℃ ~ 200℃
- Solid parameter — ≤ 80 mg/L
- Permissible pressure — ≤ 5 Mpa

3. Description of Pump Type

For example：GMH 250-450A-L（R）-J

GMH：advanced type split centrifugal pump

250：pump outlet diameter

450：standard impeller diameter

A： Changed outer diameter of impeller (the max diameter without mark)

L： vertical mount

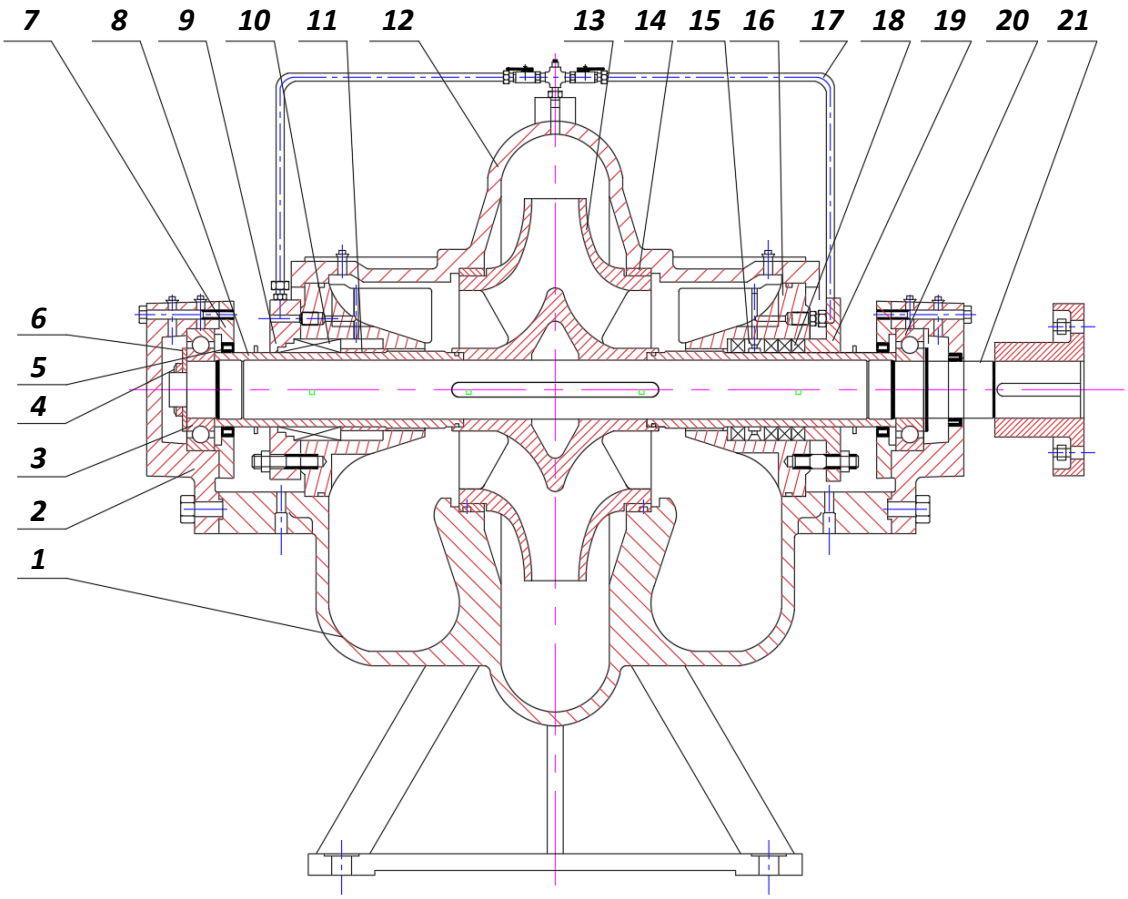
R： heating water

J： Pump speed changed（Maintain the speed without mark）

4. Structure Feature

1. Type GMH pumps work stably with less noise and vibration, may be properly work at raising speed due to short spacing between both side supports, thus they can be widely used.
2. The pipelines arrangement of type GMH pump looks simple and beautiful due to inlet and outlet at the same line.
3. The same rotor of type GMH pumps can be operated in reverse direction to avoid damage to the pumps by water hammer.
4. Unique design of high temperatare form: using middle support, thickening the pump casing, using cooling seals and oil lubrication bearing, make GMH pump suitable for working at 200 ^{0}C , especially for suppling heating net system.
5. Type GMH pump can be vertically or horizontally mounted acoording to different working condition, with mechanical seals or packing seals.
6. With industrial design, the outline of GMH is clear and beatitiful in line with modern aesthetics.
7. The efficiency of GMH pumps are 2%~3% higher than the same type pumps due to adopting advanced hydraulic model and thus reduce the operating costs significantly.
8. The NPSHr of type GMH pumps are 1-3 meters lower than the same type split pumps which reduced the foundation costs and extend the using life.
9. Choosing import brand bearing, and other parts material chosen by customer, make the pump suitable for any operation condition and reduce the maintenance cost significantly.
10. It is not necessary to adjust mechanical seals, so it is very easy and simple to replace them.
11. It is rapid and simple to assemble and dismount the rotor parts due to using elastic prestress assembling.
12. It is unnecessary to make adjustment to any clearance when assembling.

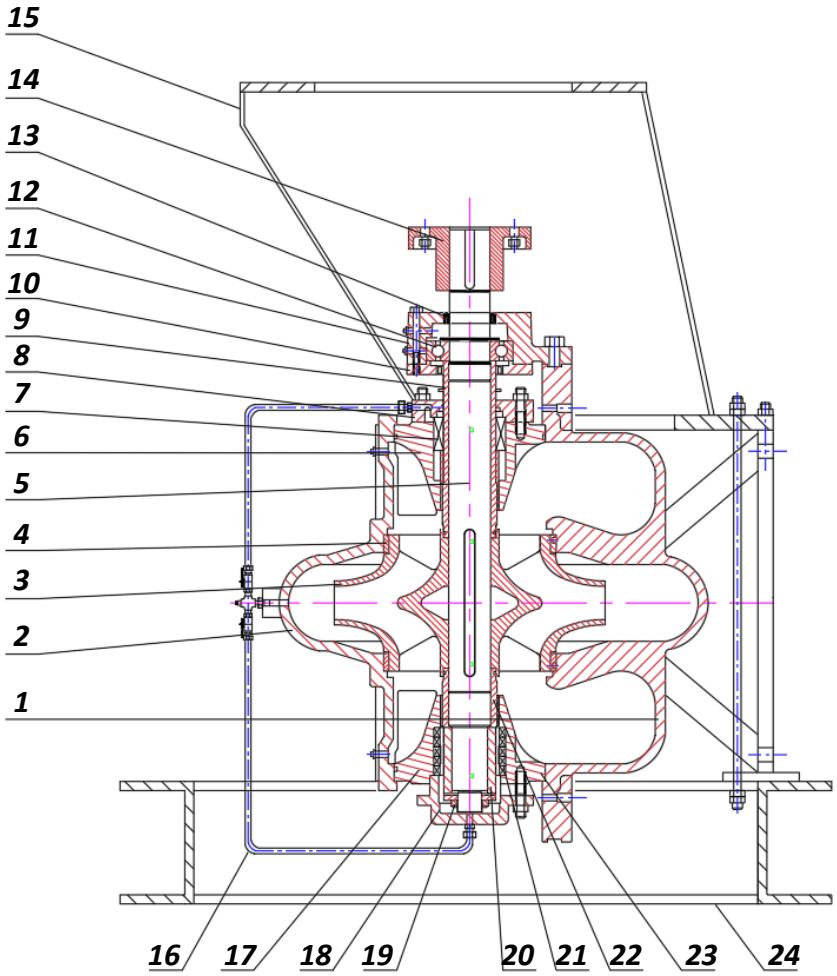
5. Horizontal type sectional drawing



Item	Part Name
1	Casing
2	Bearing support
3	Deep groove ball bearing
4	Lock nut
5	Skeleton oil seal
6	Bearing ring
7	Bearing cover
8	Shaft sleeve
9	Mechanical seal cover
10	Mechanical seal
11	Seal bushing

Item	Part Name
12	Casing cover
13	Impeller
14	Impeller ring
15	Seal cage
16	Seal housing
17	Water sealing pipe
18	Gland packing
19	Packing gland
20	Bearing liner
21	Shaft

6. Vertical type sectional drawing

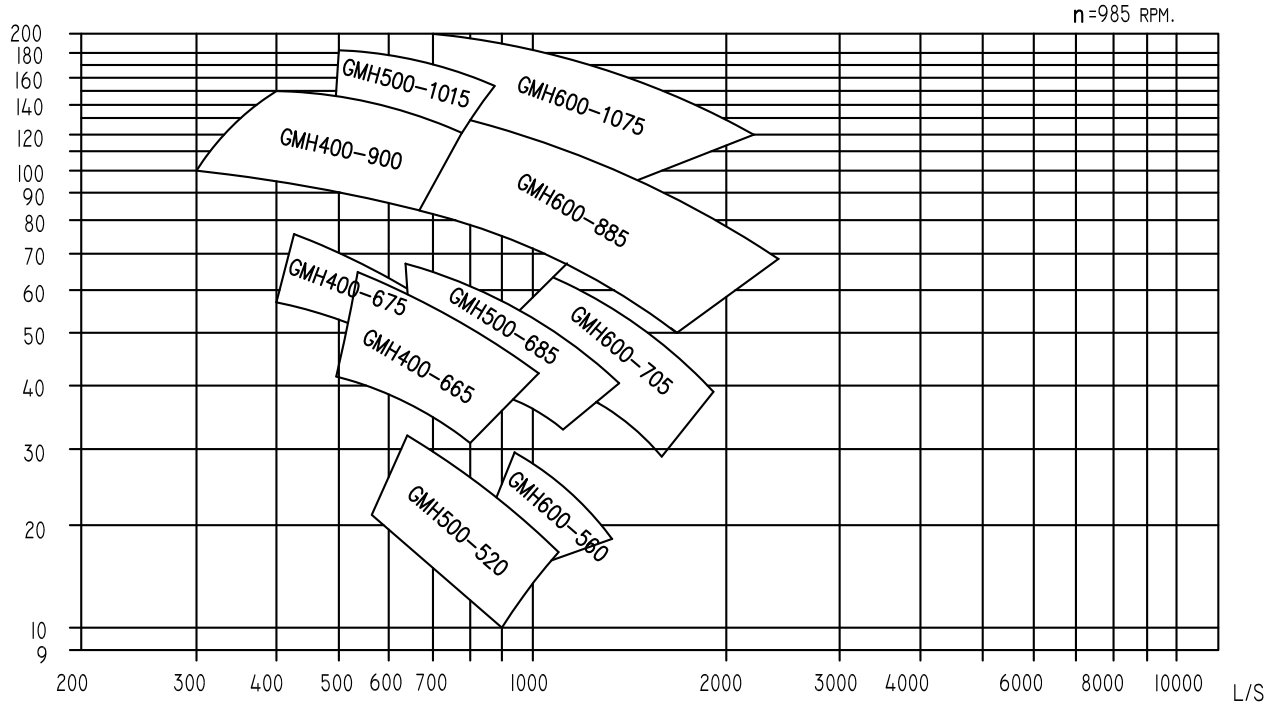


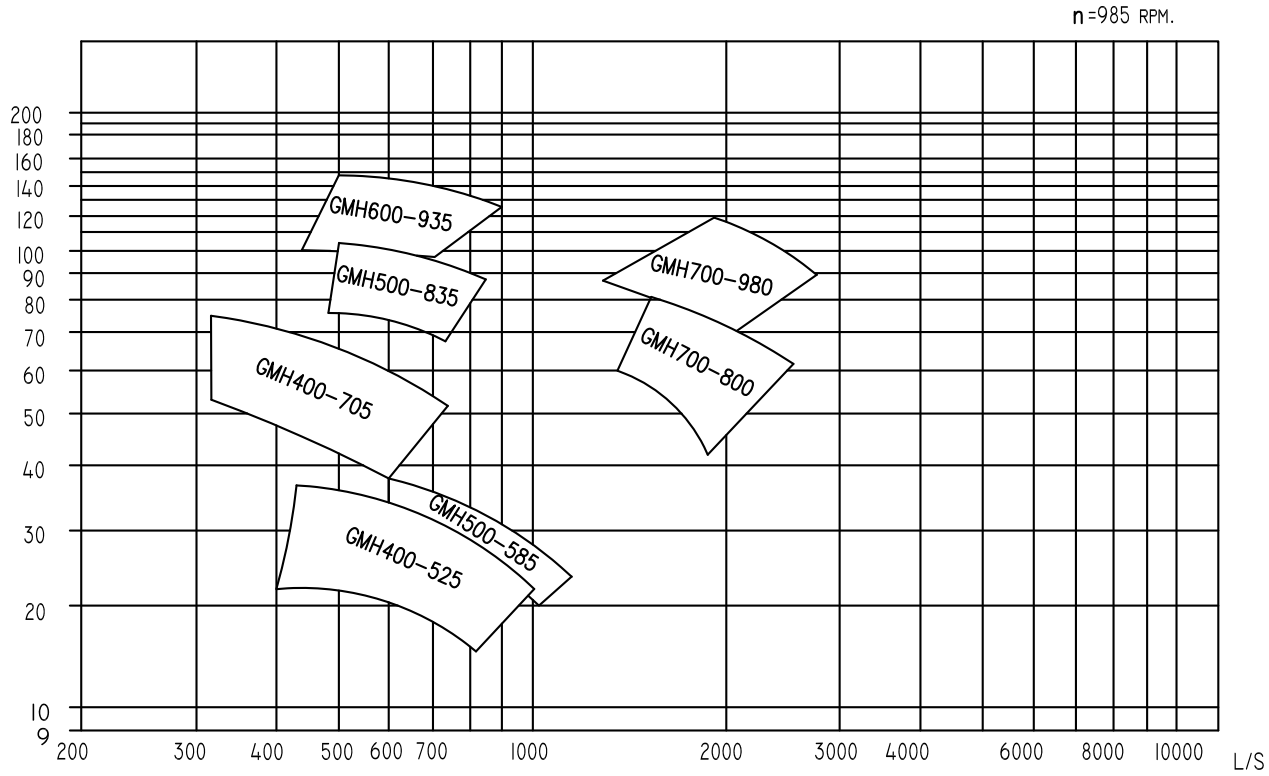
Item	Part Name
1	Casing
2	Casing cover
3	Impeller
4	Wearing ring
5	Shaft
6	Seal housing
7	Packing seals or mechanical
8	Packing gland or mechanical
9	Shaft Sleeve
10	Bearing cover
11	Bearing support
12	Bearing

Item	Part Name
13	Framework oil seal
14	Coupling
15	Motor stool
16	Water sealing pipe
17	Guide bearing seal housing
18	Guide bearing gland
19	Lock nut
20	Shaft sleeve
21	Guide bearing
22	Shaft sleeve
23	O-ring
24	Base

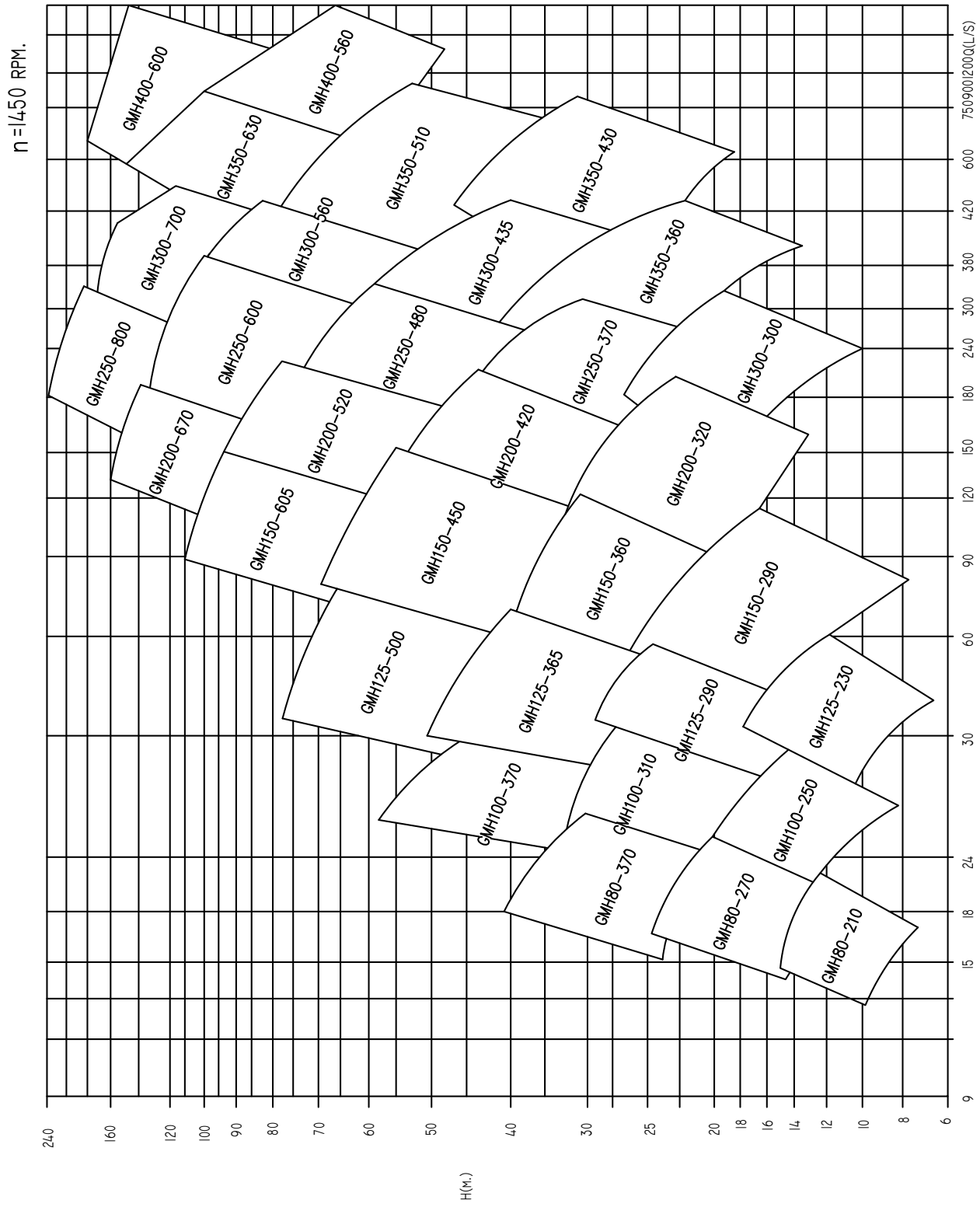
7. Selection diagram

(Selection diagram I)

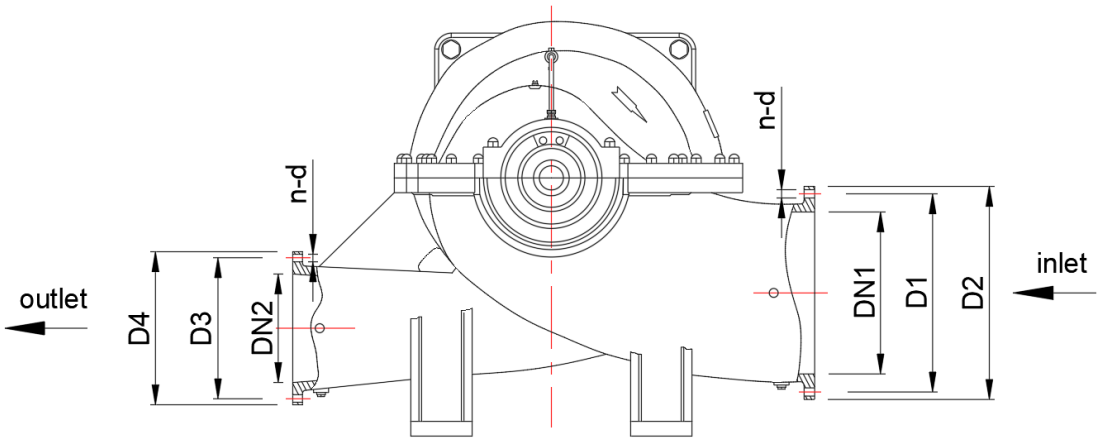




(Selection diagram II)

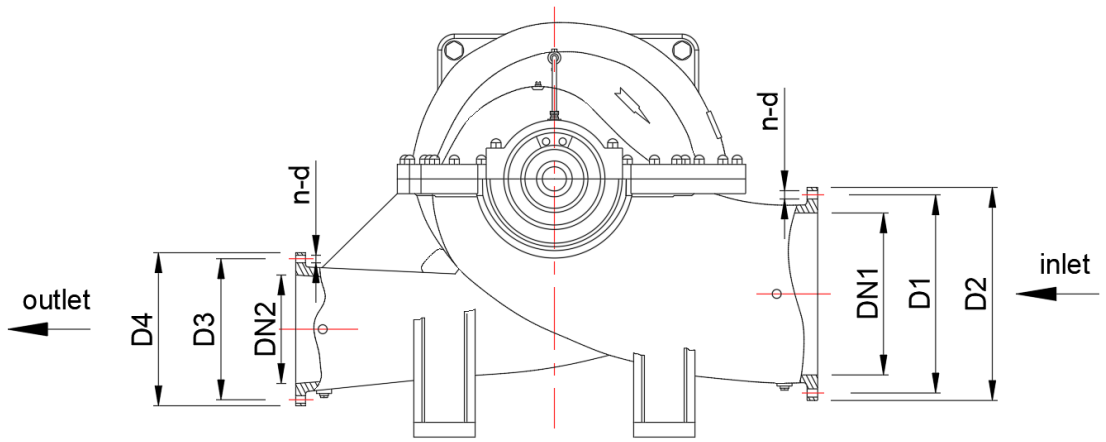


8. Connection flange Dimension



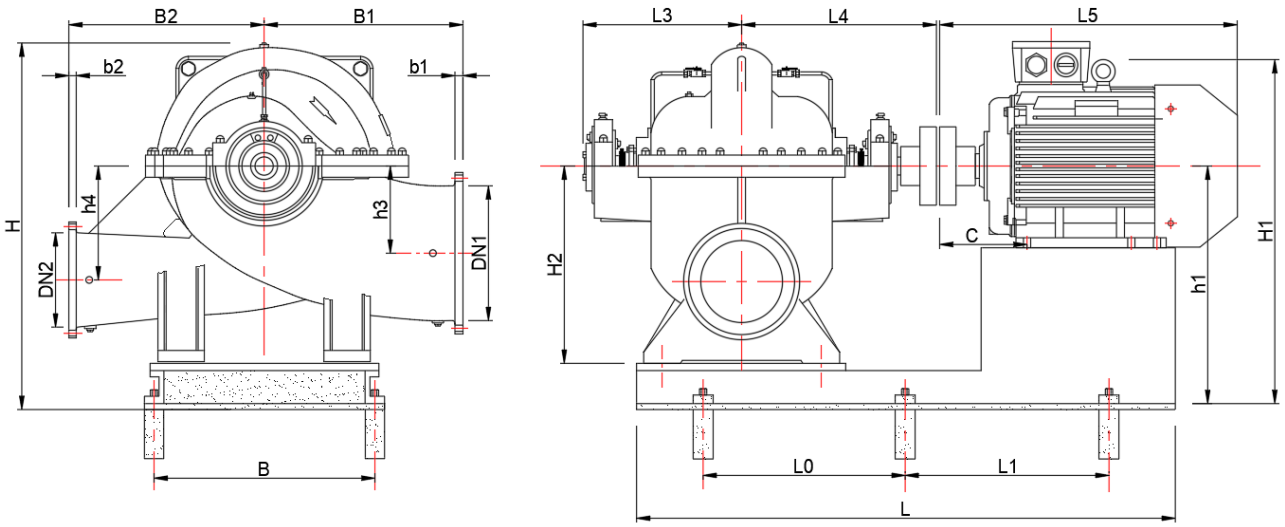
Pump type	ID	Inlet flange size			OD	Outlet flange size		
	DN1	D1	D2	n-d	DN2	D3	D4	n-d
80-210	125	210	279	8-Φ18	80	160	210	8-Φ18
80-270	125	210	279	8-Φ18	80	160	210	8-Φ18
80-370	125	210	270	8-Φ18	80	160	185	8-Φ18
100-250	150	240	318	8-Φ23	100	180	254	8-Φ18
100-310	150	240	300	8-Φ23	100	180	230	8-Φ18
100-370	150	240	318	8-Φ23	100	180	254	8-Φ18
125-230	200	295	365	12-Φ23	125	210	275	8-Φ18
125-290	200	295	365	12-Φ23	125	210	272	8-Φ18
125-365	200	295	365	12-Φ23	125	210	275	8-Φ18
125-500	200	295	381	12-Φ23	125	210	279	8-Φ18
150-290	200	295	365	12-Φ23	150	240	300	8-Φ23
150-360	200	295	360	12-Φ23	150	240	300	8-Φ23
150-450	200	295	365	12-Φ23	150	240	300	8-Φ23
150-605	200	310	365	12-Φ25	150	250	300	8-Φ25
200-320	250	355	425	12-Φ23	200	295	365	12-Φ23
200-420	250	355	425	12-Φ23	200	295	356	12-Φ23
200-520	250	355	445	12-Φ26	200	295	318	12-Φ22
200-670	250	370	430	12-Φ30	200	310	365	12-Φ26
250-370	300	410	470	12-Φ26	250	355	445	12-Φ26
250-480	300	410	485	12-Φ26	250	355	425	12-Φ26
250-600	300	410	485	12-Φ26	250	355	445	12-Φ26
300-300	350	460	550	16-Φ22	300	400	485	12-Φ22
300-435	400	525	580	16-Φ30	300	410	460	12-Φ26
300-560	400	525	580	16-Φ30	300	410	460	12-Φ26
300-700	400	550	610	16-Φ36	300	430	485	12-Φ30
350-360	400	525	597	16-Φ30	350	470	533	12-Φ26
350-430	450	585	649	16-Φ30	350	470	533	16-Φ26
400-560	500	585	705	20-Φ34	400	525	580	16-Φ30
400-600	500	620	670	20-Φ31	400	525	580	16-Φ30
400-665	500	650	715	20-Φ36	400	525	580	16-Φ30

Connection flange Dimension



Pump type	ID	Inlet flange size			OD	Outlet flange size		
	DN1	D1	D2	n-d	DN2	D3	D4	n-d
400-675	500	660	730	20-Φ37	400	550	620	16-Φ31
400-705	500	660	730	20-Φ37	400	550	620	16-Φ31
400-900	500	660	730	20-Φ41	400	550	620	16-Φ34
400-935	500	686	775	24-Φ35	400	572	650	20-Φ34
500-520	600	770	840	20-Φ34	500	650	715	20-Φ34
500-585	600	725	780	20-Φ30	500	620	670	20-Φ27
500-650	600	725	780	20-Φ30	500	620	670	20-Φ27
500-685	600	725	780	20-Φ30	500	620	670	20-Φ27
500-710	600	725	780	20-Φ30	500	620	670	20-Φ27
500-800	600	770	840	20-Φ34	500	650	715	20-Φ34
500-835	600	770	840	20-Φ34	500	650	715	20-Φ34
500-860	600	725	780	20-Φ30	500	650	705	20-Φ34
500-870	600	770	840	20-Φ34	500	650	715	20-Φ34
500-1015	600	770	845	20-Φ39	500	660	730	20-Φ36
500-1050	600	770	845	20-Φ39	500	660	730	20-Φ36
600-560	700	840	910	24-Φ36	600	770	840	20-Φ36
600-600	700	840	910	24-Φ36	600	770	840	20-Φ36
600-630	700	840	910	24-Φ36	600	770	840	20-Φ36
600-705	700	840	910	24-Φ36	600	770	840	20-Φ36
600-710	700	840	895	24-Φ30	600	725	780	20-Φ36
600-860	700	840	910	24-Φ36	600	770	840	20-Φ36
600-885	700	840	910	24-Φ37	600	770	840	20-Φ36
600-1075	700	875	910	24-Φ39	700	770	845	20-Φ39
700-600	800	950	1025	24-Φ34	700	840	910	24-Φ36
700-710	800	950	1025	24-Φ34	700	840	910	24-Φ36
700-800	800	950	1025	24-Φ34	700	840	910	24-Φ36
700-980	800	950	1025	24-Φ34	700	840	910	24-Φ36
800-800	900	1050	1125	28-Φ34	800	950	1025	24-Φ34
800-900	900	1050	1125	28-Φ34	800	950	1025	24-Φ34

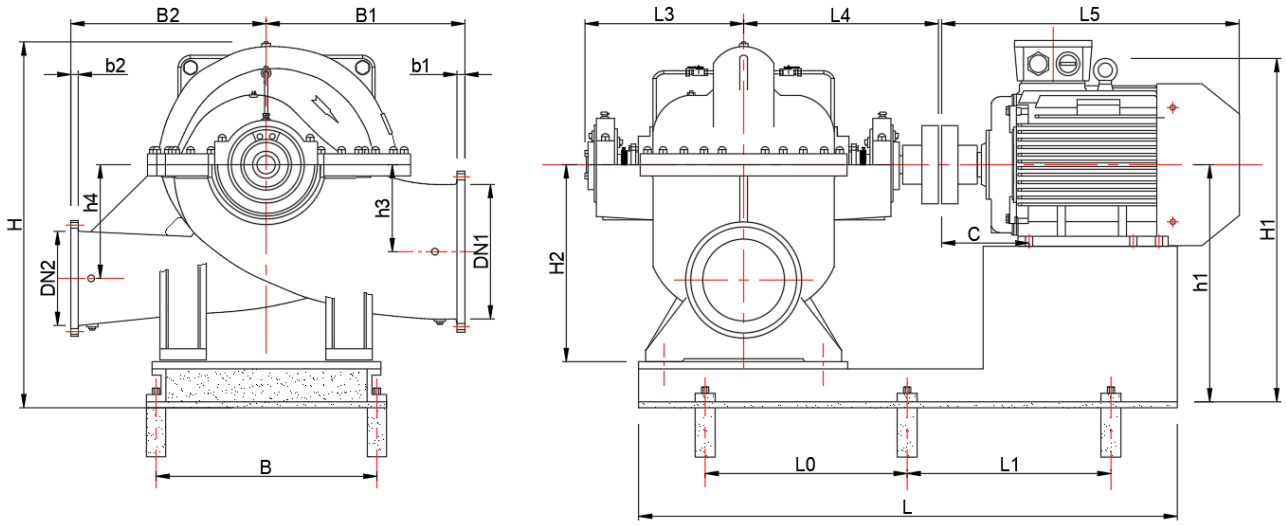
9. Outline Drawings



Unit : mm.

Pump type	flange size				pump size								weight (kg)
	DN1	DN2	b1	b2	B1	B2	L4	H≤	L3	H2	h3	h4	
80-210	125	80	35	29	300	300	443	600	344	315	140	140	310
80-270													320
80-370					330	330							340
100-250	150	100	37	32	330	330	443	760	344	355	170	170	350
100-310			42										370
100-375			37		370	370							400
125-230	200	125	41	35	370	370	517.5	830	366	400	200	200	410
125-290													460
125-365													500
125-500					450	450							550
150-290	200	150	41	36.5	400	400	517.5	850	365	400	200	200	570
150-360													590
150-450				37	450	450	592						720
150-605				36.5	600	600			421		300	300	1070
200-320	250	200	48	41	450	500	592	1240	421	500	240	240	750
200-420					500								850
200-520					600		655		464	560	300	300	1390
200-670					650	550				600	350	350	1630
250-370	300	250	51	48	500	500	650	1275	464	600	300	300	1100
250-480					550	550	731		516				1370
250-600					650					630	350	350	2000
300-300	350	300	54	51	550	500	650	1430	464	630	300	300	1040
300-435	400		57		650	550	731		516	670	360	360	1490
300-560					700	650	810		595	710	350	350	2350
300-700					750					750	400	400	2788

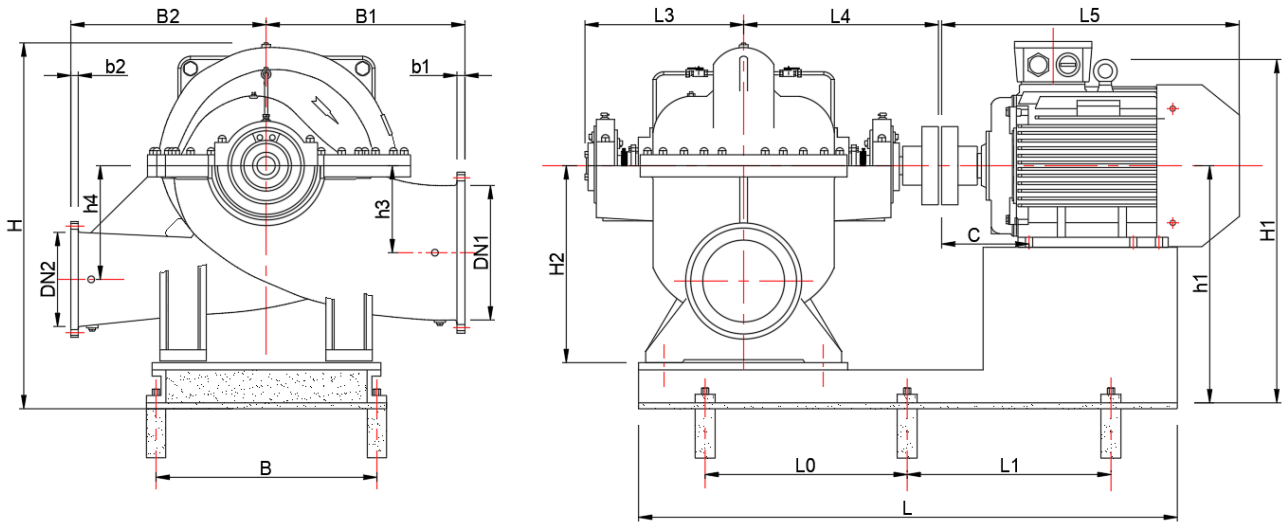
Outline Drawings



Unit : mm.

Pump type	flange size				pump size								weight (kg)
	DN1	DN2	b1	b2	B1	B2	L4	H≤	L3	H2	h3	h4	
350-360	400	350	57	54	650	550	731	1450	516	670	350	350	1430
350-430			60.5	54	750	650	810		596	750	400	400	2120
350-510			57	51	700	650	810						2302
350-575			32	30	900	700	956		720	900	475	475	2860
350-630			38	36	740	670	860		660	775	460	460	2893
350-690			38	36	900	750	956		720	900	475	475	3030
400-525	500	400	42	38	750	700	998	1650	747	900	475	475	2640
400-560							865		685	820	460	460	2973
400-600					800		905		690	850	490	490	3220
400-665					1000	750	998		747	1000	525	525	3520
400-675					900	800	985		660	900	450	450	3220
400-705							956		720				3410
400-900			52	48	1000	1000	1030		736	960	550	550	
400-935			44	40	1050		956		720	1000			
500-520	600	500	48	42	850	850	975	2000	770	900	475		3350
500-585					1100	800	1098		847	1100	550	550	4840
500-650					850		1065		850	920	495	495	3800
500-685					1100		1098		847	1100	575	575	4730
500-710					1050	850	1035		835	1000	550	550	4900
500-800					1000	900	1125		850	1050	600	600	5800
500-835					1150	1100	1166		872	1100	575	575	5250
500-860					1050	950	1160		870		650	650	7690
500-870					1200	900	1166		872	1200	700	700	5500
500-1015						1100					725	725	6050
500-1050					1250						700	700	6250

Outline Drawings



Unit : mm.

Pump type	flange size				pump size								weight (kg)
	DN1	DN2	b1	b2	B1	B2	L4	H≤	L3	H2	h3	h4	
600-560	700	600	54	48	1100	900	1030	2090	835	1100	610	610	5330
600-600					1200		1098		847	1200	675	675	5390
600-630					1000	1000	1010		790	1050	545	545	4886
600-705					1150		1098		847	1100	575	575	5170
600-710					1000	1100	1130		880	1050	545	545	5030
600-860					1100	1200	1225		950	1100	580	580	7755
600-885					1300	1100	1280		926	1300	750	750	6160
600-1075					1250	1200							6380
700-600	800	700	58	54	1300	800	1250	2430	1040	1150	600	600	6670
700-710					1200	1150	1310		1080	1170	620	620	8793
700-800					1250	1250	1390		1110	1200	650	650	10000
700-980					1300	1300	1365		1011	1500	850	850	8470
800-800	900	800	62	58	1400	950			1130	1380	770	770	9400
800-900						1125				1360			11000
800-990						1300			1220	1370	760	760	12900
900-970	1000	900	50	46	1600	1300	1780	2915	1470	1650	975	975	12237
900-1030													12320
900-1050													13036
1000-1170	1200	1000	50	46	1800	1300	1780	3195	1575	1820	1040	1040	17600

10. Material

Part	Material	Standards		
		ASTM	DIN	JISS
Pump casing	Gray iron casing	A-Gr 30	GG 20	FC 200
		A-Gr 35	GG 25	FC 250
		A-Gr 40,45	GG 30	FC 300
		A-Gr 50	GG 35	FC 350
		A-Gr 55,60	GG 40	
Impeller	Stainless steel	A-TYPE 329	1.4460	SUS 304
		A-TYPE 410	1.4006	SUS 316
		A-TYPE 420	1.4021	SUS 329
		A-TYPE CF8	1.4028	SUS 410
		A-TYPE CF8M	1.4308	SUS 420
			1.4408	SCS 13
			1.4409	SCS 14
	Bronze	B 61 Alloy 4A	2.1050.01/G CuSN10	H5111 Gr BC2
		B 62 Alloy 4A	2.1052.01/G CuSn12	H5120 CAC406
		B 584-90500	2.1086.01/G CuSn10Zn	
		B - C90700		
Shaft	Stainless steel	A-TYPE 316	1.4401	SUS 304
		A-TYPE 329	1.4460	SUS 316
		A-TYPE 403	1.4000	SUS 329
		A-TYPE 410	1.4006	SUS 410
		A-TYPE 416	1.4005	SUS 420
		A-TYPE 420	1.4021	SCS 13
		A-TYPE 431	1.4028	SCS 14
			1.4057	
Wear ring	Stainless steel	A-TYPE 316	1.4401	SUS 304
		A-TYPE 329	1.4460	SUS 316
		A-TYPE 403	1.4000	SUS 329
		A-TYPE 410	1.4006	SUS 410
		A-TYPE 416	1.4005	SUS 420
		A-TYPE 420	1.4021	SCS 13
		A-TYPE 431	1.4028	SCS 14
		A-TYPE CF8	1.4308	
		A-TYPE CF8M	1.4408	

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