



Horizontal Double Suction Volute Pump

Type CN

**Bore Size : 200~1000mm
(8~40 ins)**

APPLICATIONS

Buildings

- Water supply
- Drainage
- Water circulation
- Fire fighting
- Air conditioning

Irrigation

- Water supply
- Drainage

Waterworks

- Water intake
- Booster
- Water supply

Industrial use

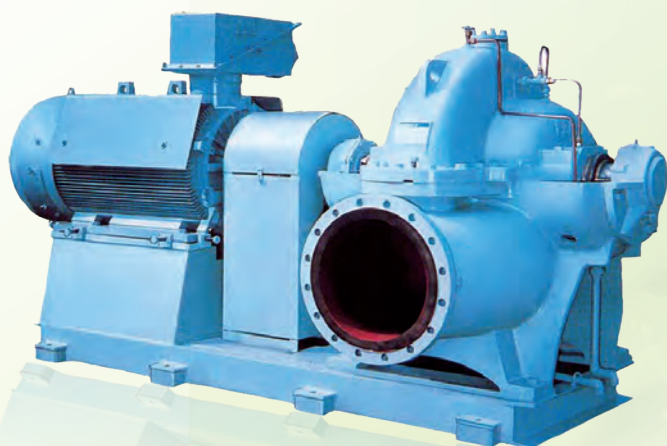
- Water intake
- Booster
- Circulation
- Drainage
- Sea water desalination
- Chemical
- Refinery

Pipe line

- Water & crude oil transfer

FEATURES

- Split case design permits easy disassembly, that is, inspection is simplified. It is not necessary to disturb pump alignment and suction & discharge piping when parts replacement is necessary.
- Double suction with advanced design of suction performance ensures high suction lifts even with large capacities.
- High operating efficiency over a wider range of capacities reduce operation cost.
- Pump operation with low noise, smaller pressure pulsation ensure comfortable environment.
- Variable combinations of materials permit wide application.
- Proven hydraulic design enhance operating life of pumps.



SELECTION CHART

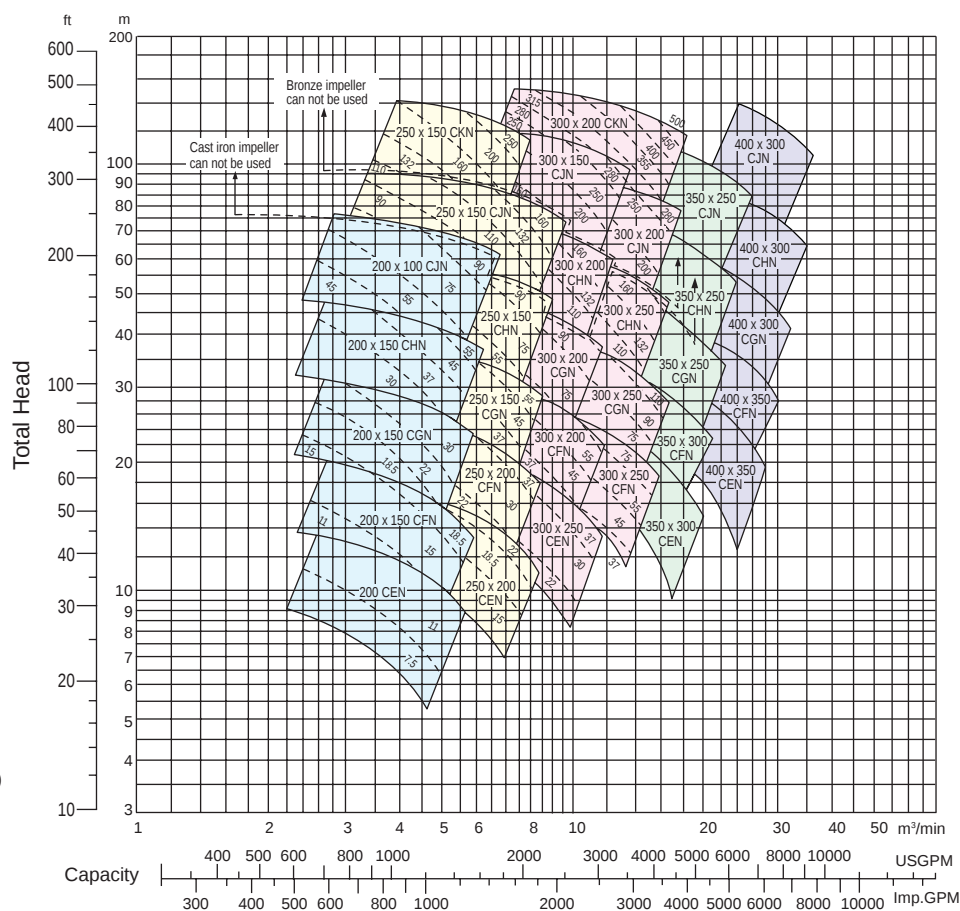
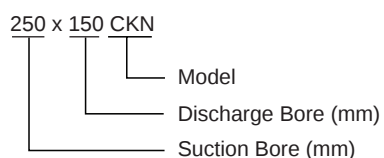
Bore 200 ~ 500mm

4 Pole

50Hz

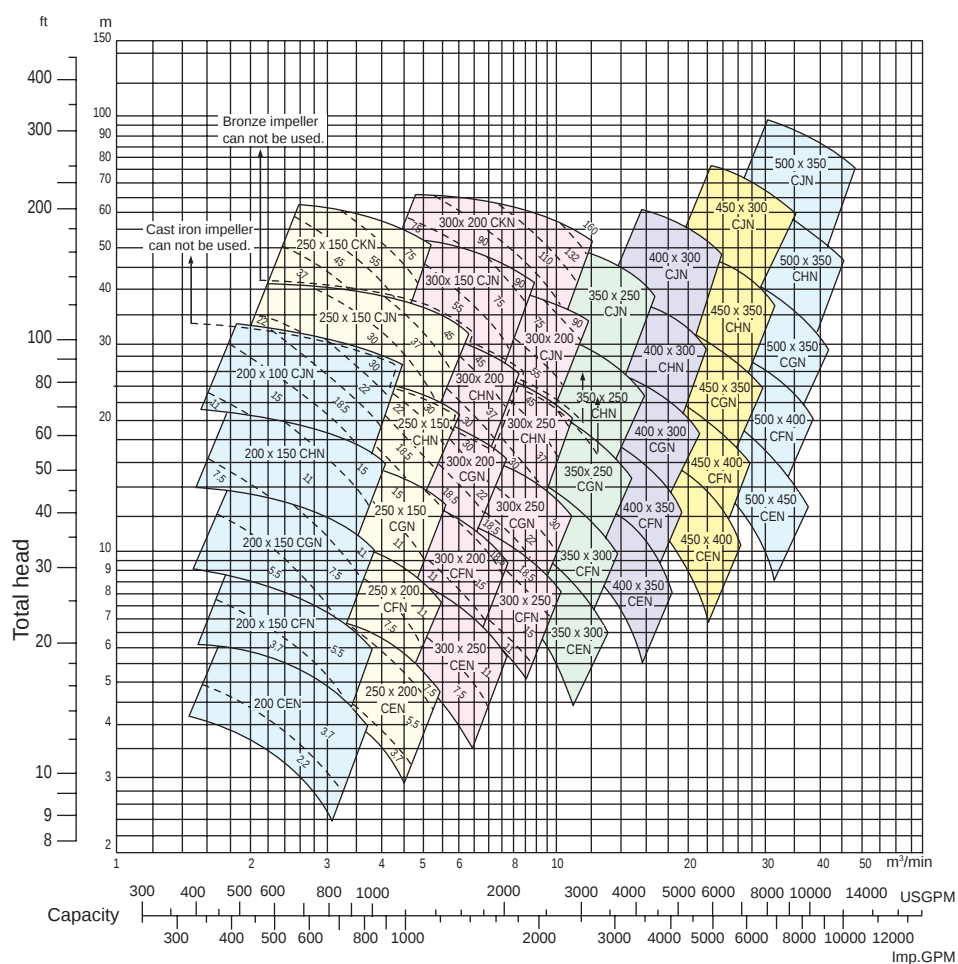
[Synchronous speed: 1500min⁻¹]

Symbols:



6 Pole

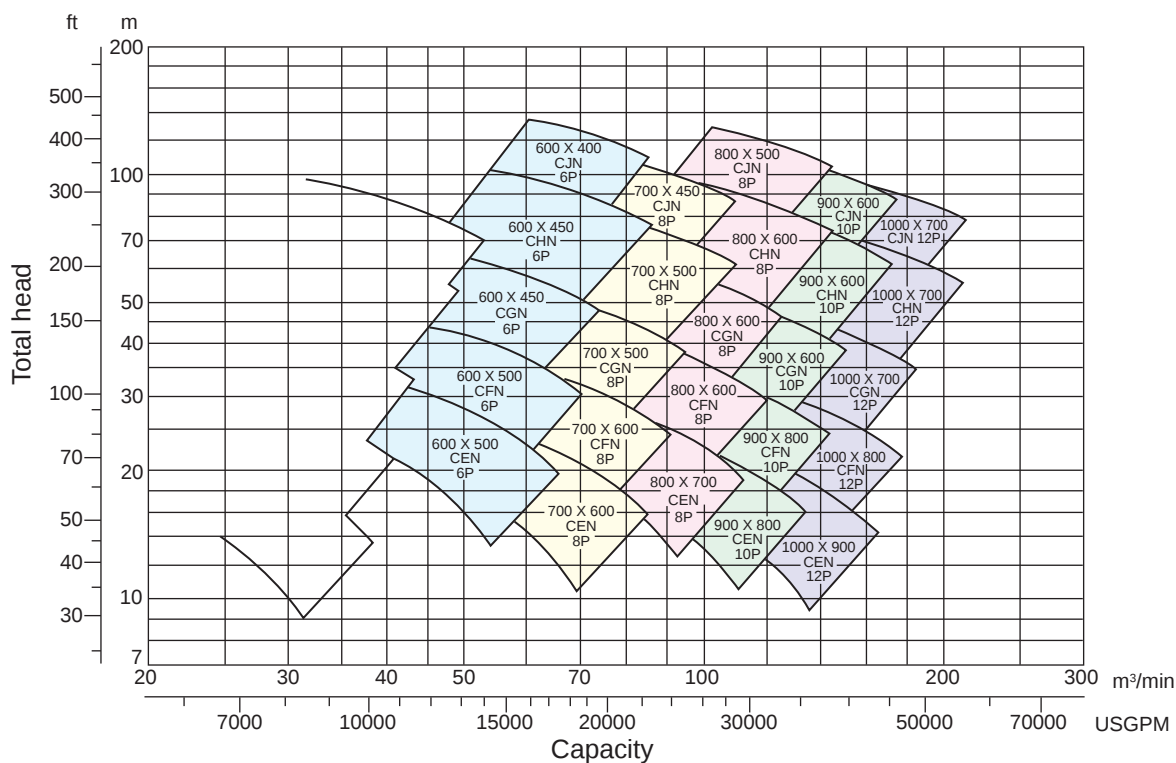
50Hz

[Synchronous speed: 1000min⁻¹]

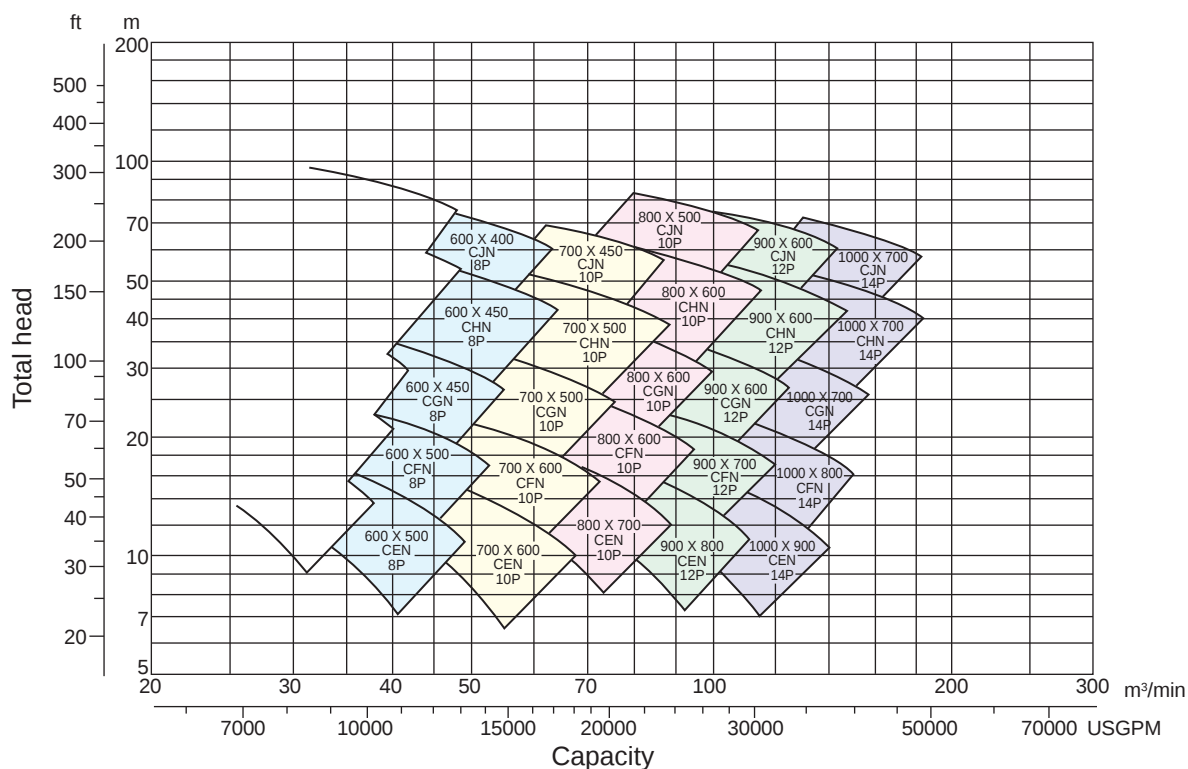
SELECTION CHART

Bore 600 ~ 1000 mm (50Hz)

High speed



Low speed



Pump Speed (50Hz)

Motor Pole	6P	8P	10P	12P	14P
Speed(min-1)	990	740	593	493	423

(NOTE) ◦ Pump rating not in the chart are also available.

SPECIFICATIONS

Bore 200 ~ 500mm

		200ø ~ 300ø	350ø ~ 500ø
Liquid	Name	Fresh water, industrial water, river water.	
	Temperature	Below 80°C (176°F), 81 ~ 120° (177~248°F) (option)	
Max. positive suction pressure		2kgf/cm ² G {0.196MPa} for all models other than two specified in Note 1 below.	
		Positive suction pressure ≤ Maximum allowable pressure - Shut off pressure	(Option)
Installation		Indoors, outdoors	
Construction	Shaft seal	Packing (option), Mechanical seal	
	Bearing	Ball Bearing	
	Lubrication	Grease (Note 2), Oil bath (option)	
Material	Casing	Cast iron or ductile cast iron	Cast iron or ductile cast iron
	Impeller	Cast iron, bronze or stainless steel SCS13/SCS14	Bronze or stainless steel SCS13/SCS14
	Shaft	Carbon steel or chromium molybdenum steel	Carbon steel or chromium molybdenum steel
	Shaft sleeve	Bronze	304 stainless steel
	Casing ring	Bronze	Bronze
	Gland packing	Carbonized fiber	Carbonized fiber
Flange	Suction	JIS 16K R.F.	JIS 10K R.F. or JIS 20K R.F.
	Discharge	JIS 10K R.F. or JIS 20K R.F.	JIS 10K R.F. or JIS 20K R.F.
Accessories		(Standard) Common base, anchor bolts, shaft coupling coupling guard, air vent piping, drain piping gland sealing water piping tools for pump disassembly	(Option) Pressure gauge, priming detector, standard valve Pressure switch, bearing temp. detector

Note 1. Standard 350x250 CHN and 450x300 CJN models are in-flux types.

Note 2. For 400x300 CHN and 400x300 CJN models only, grease bearing cannot be provided when operating with 4 pole motor.

Bore 600 ~ 1000mm

STANDARD		OPTIONAL	
Liquid temperature	Below 80°C (176°F)	81~120°C (177~248°F)	
Shaft seal	Gland packing	Mechanical seal	
Direction of rotation	CW (viewed from driver)	CCW	
Flange	JIS 10K/ JIS 20K	Other standard available upon request	
Suc./Disch. direction	Side-side	Other direction such as bottom suction available upon request	
Drive method	Motor direct drive	Diesel engine drive, turbine drive through gear, etc.	
Accessories	Common base, foundation bolts, shaft coupling, air vent piping, self sealing water piping, drain piping	Pump base, pressure gauge, compound gauge, vacuum gauge, priming detector, solenoid valve for priming line, pressure switch, bearing thermometer, bearing dial thermometer with an alarm contact, tools, companion flange, etc.	
	Fresh water/River water/Industries	Sea water	Hydrocarbon
Casing	Cast Iron	Low Alloy Cast Iron/ Ni-resist D2/316S.S.	Cast Iron
Impeller	Cast Iron/Bronze/Stainless steel	316S.S.	410S.S
Shaft	Carbon Steel/4140 Steel	316S.S.	Carbon Steel/4140 Steel
Packing sleeve	304S.S.	316S.S.	420S.S.
Casing ring	Cast Iron/Bronze/Stainless steel	316S.S.	403S.S.

(NOTE) • Other materials such as Nickel aluminium bronze, Duplex Stainless steel, Monel, Alloy 20, etc. can also be applied.

• Selection of material requires careful study of the properties of the liquid handled and of the operating conditions, etc.

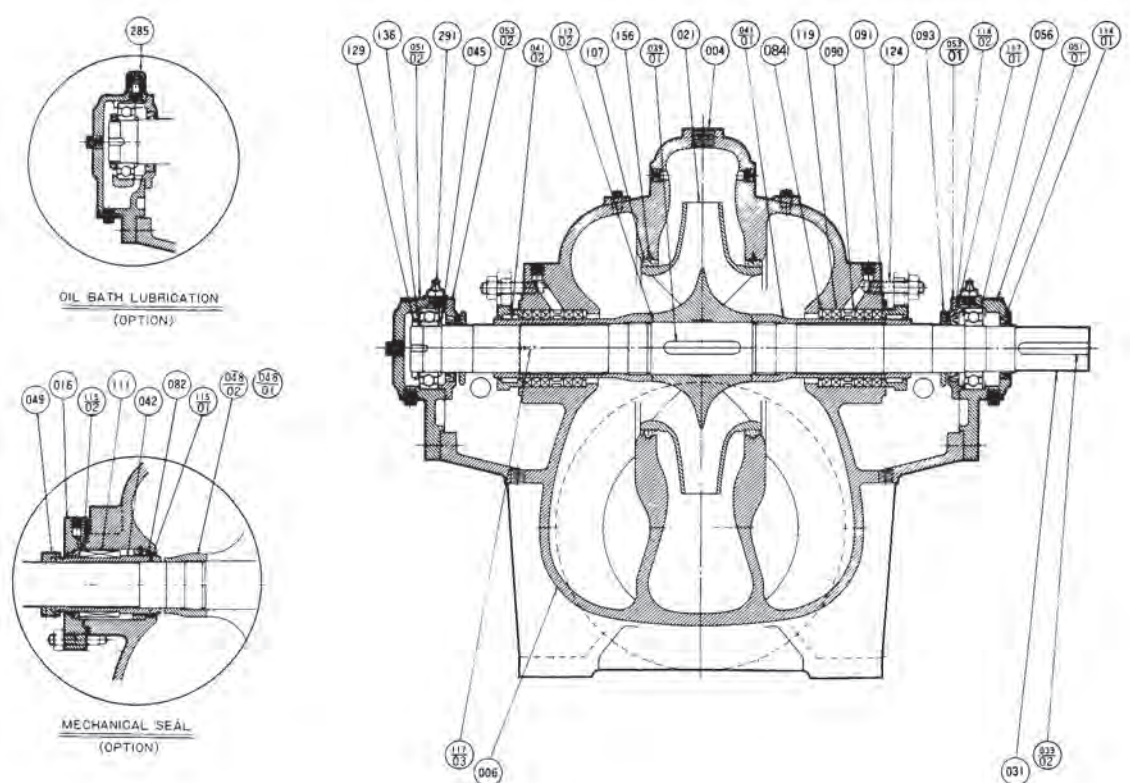
For specific details, please consult our factory.

• Other specifications can be available, if required.

SECTIONAL VIEW

CN (200~500mm)

Bore 200~300mm



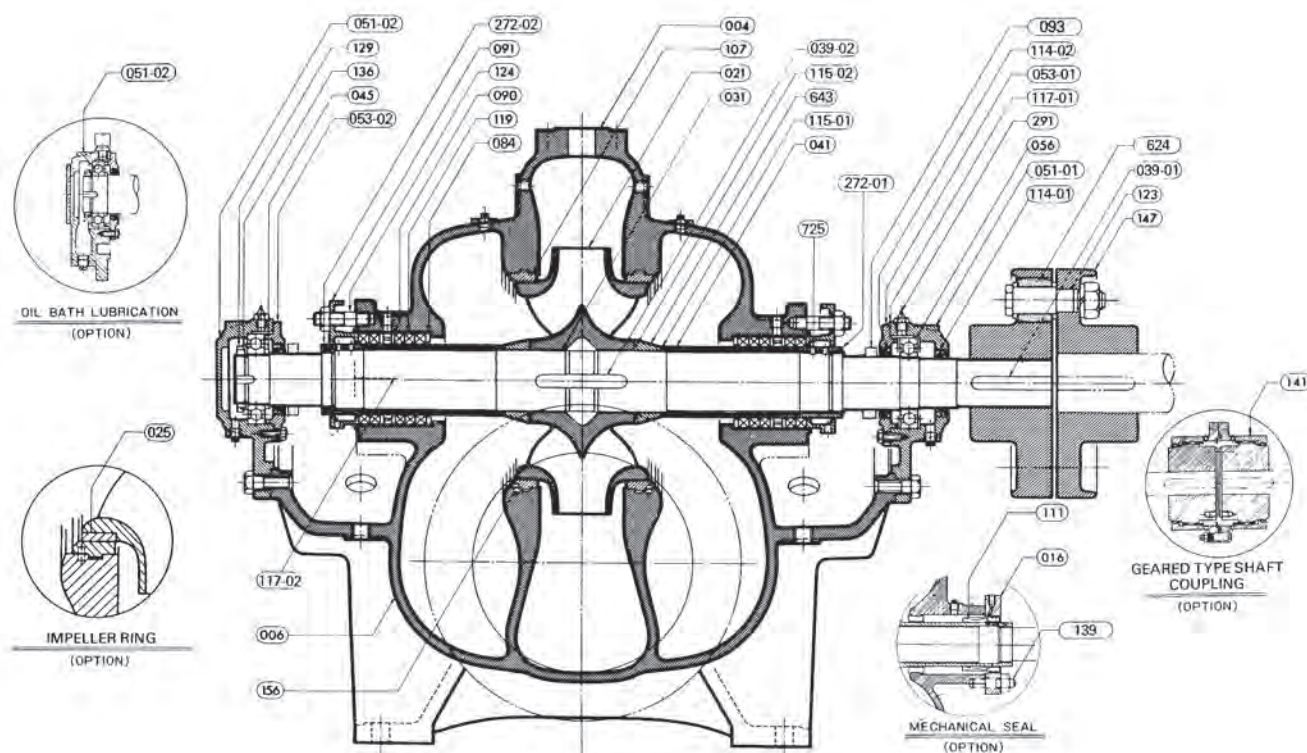
No.	Part Name	Qty	Material
004	Casing Upper Half	1	Cast Iron or Ductile Cast Iron
006	Casing Lower Half	1	Cast Iron or Ductile Cast Iron
021	Impeller	1	Cast Iron or Bronze or Stainless Steel Casing
031	Shaft	1	Carbon Steel or Cr-Mo Steel
039-01	Key	1	Carbon Steel
039-02	Key	1	Carbon Steel
041-01	Packing Sleeve	1	Bronze
041-02	Packing Sleeve	1	Bronze
045	Adjust Ring	1	Roller Steel
051-01	Bearing Housing	1	Cast Iron
051-02	Bearing Housing	1	Cast Iron
053-01	Bearing Cover	1	Cast Iron
053-02	Bearing Cover	1	Cast Iron
056	Ball Bearing	2	-
084	Packing Plate	2	Roller Steel
090	Lantern Ring	2	304 Stainless Steel
091	Gland	2	Bronze
093	Deflector	2	N.B.R or 304 Stainless Steel
107	Casing Ring	2	Bronze
114-01	Oil Seal	1	-
114-02	Oil Seal	2	-

No.	Part Name	Qty	Material
117-01	Sheet Gasket	2	Press Board
117-02	Sheet Gasket	2	Asbestos
117-03	Sheet Gasket	2	Press Board or Asbestos
119	Gland Packing	10	Carbonized or Asbestos
124	Gland Bolt	4	Brass
129	Bearing Nut	1	Roller Steel
136	Bearing Washer	1	Roller Steel
156	Dowel Pin	2	304 Stainless Steel
291	Grease Nipple	2	Brass
016	Mech. Seal Cover	2	304 Stainless Steel
042	Mech. Seal Sleeve	2	304 Stainless Steel
048-01	Impeller Nut	1	420 Stainless Steel
048-02	Impeller Nut	1	420 Stainless Steel
049	Sleeve Retainer	2	304 Stainless Steel
082	Throat Bushing	2	Cast Iron
111	Mechanical Seal	2	-
115-01	O-Ring	2	Viton
115-02	O-Ring	2	Viton
285	Air Breather	2	Polycarbonate

SECTIONAL VIEW

CN (200~500mm)

Bore 350~500mm



No.	Part Name	Qty	Material
004	Casing Upper Half	1	Cast Iron or Ductile Cast Iron
006	Casing Lower Half	1	Cast Iron or Ductile Cast Iron
021	Impeller	1	Bronze or 304 Stainless Steel
031	Shaft	1	Carbon Steel or Cr-Mo Steel
039-01	Key	1	Carbon Steel
039-02	Key	1	Carbon Steel
041	Packing Sleeve	2	304 Stainless Steel
045	Adjust Ring	2	Roller Steel
051-01	Bearing Housing In Board	1	Cast Iron
051-02	Bearing Housing Out Board	1	Cast Iron
053-01	Bearing Cover	1	Cast Iron
053-02	Bearing Cover	1	Cast Iron
056	Ball Bearing	2	-
084	Packing Plate	2	304 Stainless Steel
090	Lantern Ring	2	304 Stainless Steel
091	Gland	2	Bronze
093	Deflector	2	Rolled Steel or 304 Stainless Steel
107	Casing Ring	2	Bronze
114-01	Oil Seal	1	N.B.R.
114-02	Oil Seal	2	N.B.R.

No.	Part Name	Qty	Material
115-01	O-Ring	2	N.B.R.
115-02	O-Ring	2	N.B.R.
117-01	Sheet Gasket	2	Press Board
117-02	Sheet Gasket	1	Asbestos
119	Gland Packing	10	Carbonized or Fiber
123	Coupling Bolt	1 set	Roller Steel
124	Gland Bolt	4	Brass
129	Bearing Nut	1	Roller Steel
136	Bearing Washer	1	Roller Steel
147	Flexible Flanged Shaft Coupling	1 set	Cast Iron
156	Dowel Pin	2	316 Stainless Steel
272-01	Sleeve Nut	1	Bronze
272-02	Sleeve Nut	1	Bronze
291	Grease Nipple	2	Brass
624	Rubber Bush For Coupling Bolt	1 set	N.B.R.
634	Sleeve Head	2	Bronze or 304 Stainless Steel
725	Set Screw	4	316 Stainless Steel

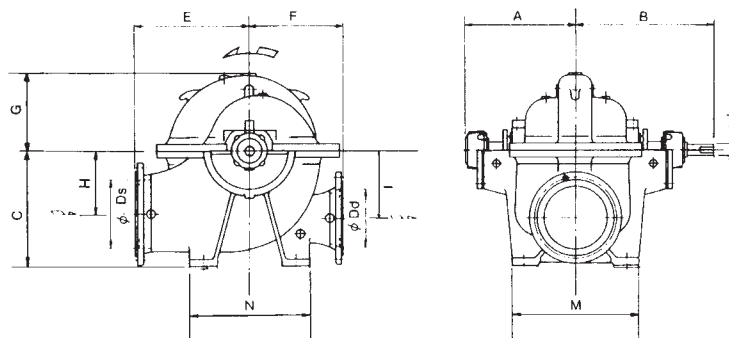
141	Geared Type Shaft Coupling	2	Bronze / 304 Stainless Steel
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025	Impeller Ring	2	Bronze / 304 Stainless Steel
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016	Mech. Seal Cover	2	304 Stainless Steel
111	Mech. Seal	2 set	-
139	Mech. Seal Cover Bolt	8	304 Stainless Steel

OUTLINE DRAWING

Bare shaft pumps



Suction bore 200 ~ 300mm

Unit : mm

Model	Pump													Weight [Mass] kg
	(bore)		A	B	C	E	F	G	H	I	M	N	Ød	
	Ds	Dd												
200 x 200 CEN	200	200	378	475	375	350	280	221	190	190	430	400	38	260
200 x 150CFN	200	150	378	475	375	350	280	222	190	190	430	400	38	270
200 x 150CGN	200	150	378	475	375	350	280	242	200	210	430	400	38	300
200 x 150CHN	200	150	398	505	375	370	290	265	200	230	430	400	48	340
200 x 100CJN	200	100	443	560	425	400	330	306	200	270	480	450	55	430
250 x 200CEN	250	200	378	475	425	390	310	242	210	210	480	450	38	340
250 x 200 CFN	250	200	398	505	425	390	310	246	210	210	480	450	48	360
250 x 150CGN	250	150	398	505	425	390	310	273	220	240	480	450	48	400
250 x 150CHN	250	150	443	560	425	410	320	297	220	260	480	450	55	480
250 x 150CJN	250	150	471	600	475	460	350	341	220	300	550	520	65	580
250 x 150CKN	250	150	488	630	500	500	430	401	290	345	550	520	75	740
300 x 250CEN	300	250	408	515	475	440	350	269	235	235	550	520	48	420
300 x 200CFN	300	200	443	560	475	440	350	276	235	235	550	520	55	470
300 x 200CGN	300	200	448	565	475	440	350	298	250	270	550	520	55	500
300 x 200CHN	300	200	471	600	475	460	360	329	250	290	550	520	65	600
300 x 150CJN	300	150	488	630	500	510	400	380	250	335	550	520	75	750
300 x 250CFN	300	250	448	565	475	490	400	302	250	260	550	520	55	540
300 x 250CGN	300	250	471	600	475	490	400	310	250	260	550	520	65	610
300 x 250CHN	300	250	471	600	500	490	400	335	275	295	550	520	65	800
300 x 200 CJN	300	200	488	630	500	520	410	375	275	320	550	520	75	980
300 x 200CKN	300	200	520	680	560	550	470	430	290	380	620	700	85	1100

Suction bore 350 ~ 500mm

Unit : mm

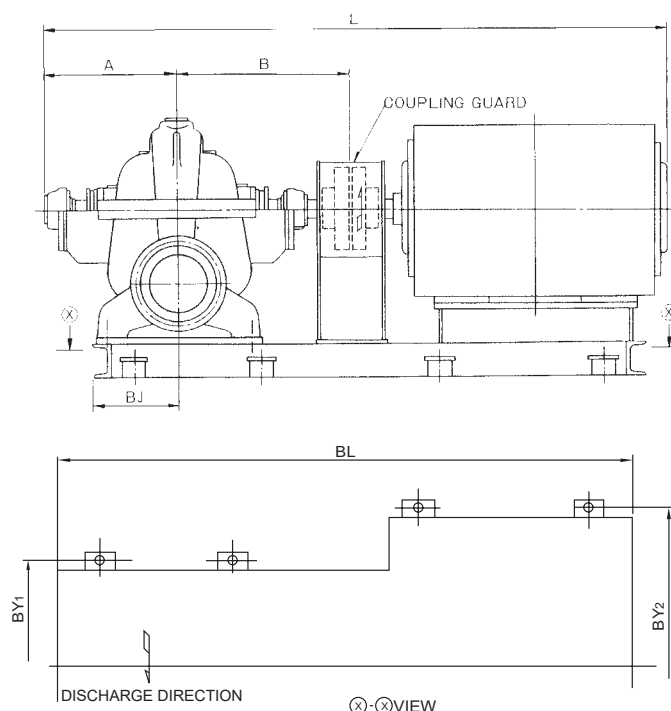
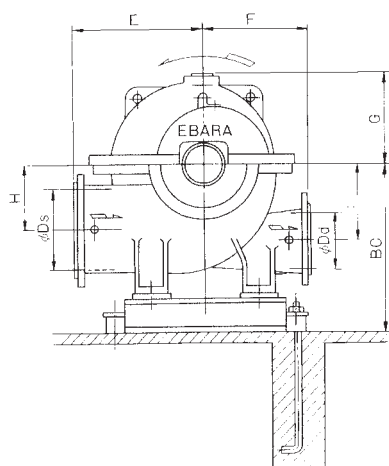
Model	Pump													Weight [Mass] kg
	(bore)		A	B	C	E	F	G	H	I	M	N	Ød	
	Ds	Dd												
350 x 300CEN	340	300	548	710	580	550	420	375	290	320	600	700	55	640
350 x 300CFN	340	300	552	730	560	550	420	375	290	310	600	700	65	690
350 x 250CGN	340	250	558	750	560	550	450	390	280	330	600	700	75	840
350 x 250CHN	340	250	563	750	615	650	470	440	280	375	700	700	85	1100
350 x 250CJN	340	250	563	750	690	650	500	490	380	450	700	700	85	1440
400 x 350CEN	400	340	602	775	650	620	470	415	325	360	700	800	65	870
400 x 350CFN	400	340	608	800	630	620	470	420	325	360	700	800	75	940
400 x 300CGN	400	300	613	800	630	620	510	435	315	380	700	800	85	1170
400 x 300CHN	400	300	637	850	710	730	530	485	315	440	800	800	105	1580
400 x 300CJN	400	300	637	850	775	730	560	545	430	505	800	800	105	2210
450 x 400CEN	450	400	632	800	690	690	550	460	365	390	800	860	65	1100
450 x 400CFN	450	400	638	825	690	690	550	365	460	390	800	860	75	1160
450 x 350CGN	450	340	643	825	690	690	550	485	355	415	800	860	85	1270
450 x 350CHN	450	340	650	850	775	800	600	545	355	475	900	800	95	1780
450 x 300CJN	450	300	650	850	875	820	630	610	480	570	900	860	95	2180
500 x 450CEN	500	450	683	875	775	750	600	510	410	440	900	920	75	1410
500 x 400CFN	500	400	688	875	775	750	600	515	410	450	900	920	85	1480
500 x 350CGN	500	340	695	900	775	750	600	535	395	470	900	920	95	1810
500 x 350CHN	500	340	716	925	825	900	640	600	395	530	1000	920	115	2340
500 x 350CJN	500	340	716	925	925	920	710	675	535	635	1000	920	115	3200

*All specifications are subject to change without notice.

In this catalogue the particulars in [] are in accordance with the International System of Units (SI) and given for reference only.

DIMENSION

Bore 600~1000 mm



UNIT: mm

Model	Ds	Dd	A	B	E	F	G	H	I	L	BC	BL	BY1	BY2	BJ
600 x 500CEN	600	500	798	975	900	650	600	500	545	3150	1155	3000	1130	-	570
600 x 500CFN	600	500	820	1030	900	650	605	500	530	3500	1155	3300	1130	-	570
600 x 450CGN	600	450	821	1030	900	650	635	475	560	3700	1130	3500	1130	-	570
600 x 450CHN	600	450	907	1120	1050	750	710	500	630	4100	1230	3850	1230	-	570
600 x 400CJN	600	400	924	1180	1050	830	810	650	750	4600	1350	4300	1330	-	570
700 x 600CEN	700	600	890	1090	1000	750	715	600	630	3650	1290	3400	1230	-	620
700 x 600CFN	700	600	916	1120	1000	750	715	600	630	3900	1290	3600	1230	-	620
700 x 500CGN	700	500	982	1220	1000	750	750	580	670	4100	1290	3800	1230	-	620
700 x 500CHN	700	500	1039	1280	1200	850	845	600	750	4600	1380	4250	1330	-	620
700 x 450CJN	700	450	1045	1320	1200	970	960	775	900	4850	1565	4500	1540	-	620
800 x 700CEN	800	700	961	1150	1120	850	780	650	710	3950	1410	3750	1330	-	720
800 x 600CFN	800	600	1047	1280	1120	850	785	650	690	4300	1410	4000	1330	-	720
800 x 600CGN	800	600	1044	1280	1120	850	820	630	730	4650	1410	4400	1330	-	720
800 x 600CHN	800	600	1085	1360	1320	920	925	630	825	4850	1605	4550	1540	-	720
800 x 500CJN	800	500	1127	1450	1320	1050	1060	850	1000	5950	1735	5650	1740	-	720
900 x 800CEN	900	800	1122	1360	1250	950	885	750	800	4450	1605	4200	1540	-	820
900 x 700CFN	900	700	1169	1400	1250	950	890	750	775	4650	1605	4350	1540	-	820
900 x 600CGN	900	600	1150	1400	1250	950	935	730	850	4950	1605	4650	1540	-	820
900 x 600CHN	900	600	1217	1500	1500	1050	1050	730	950	6050	1735	5800	1740	-	820
900 x 600CJN	900	600	1245	1550	1500	1200	1200	975	1150	6250	1935	5900	1940	2340	820
1000 x 900CEN	1000	900	1269	1500	1450	1100	1000	850	925	4800	1785	4500	1740	-	870
1000 x 800CFN	1000	800	1280	1550	1450	1100	1010	850	900	5150	1785	4800	1740	-	870
1000 x 700CGN	1000	700	1267	1550	1450	1100	1060	825	950	5200	1785	4850	1740	-	870
1000 x 700CHN	1000	700	1335	1650	1700	1150	1190	825	1090	6300	1885	6000	1940	-	870
1000 x 700CJN	1000	700	1380	1750	1700	1350	1360	1120	1280	6600	2085	6200	2140	-	870

(NOTES) • Dimensions L and BL may differ depending on motor type and output.
• Dimensions are approximate and not to be used for construction purposes.

* Dimensional details are provided for reference only.

* All specifications are subject to change without prior notice.



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