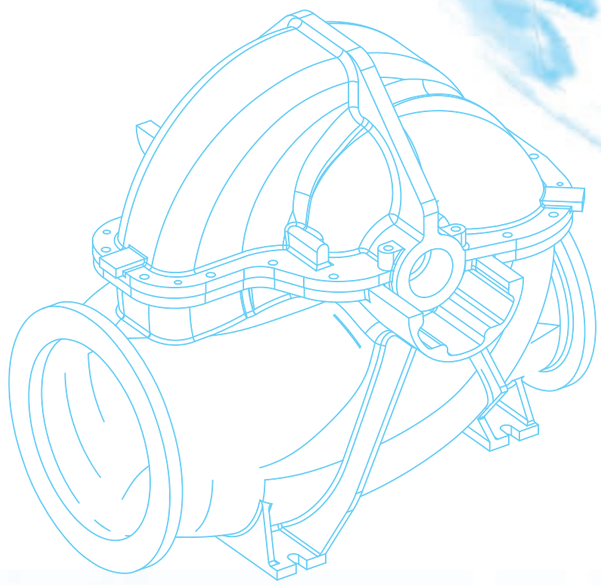
Kubota



KUBOTA
Double suction volute pump

DV-L type JC series

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CS 4070
2010.10.1 KES.EVS

KUBOTA Double suction volute pump

DV-L type JC series

The double suction volute pump with higher efficiency and enhanced suction performance.

Double suction volute pump DV-LJC has been developed by Kubota Sanlian Pump using the state-of-the-art hydraulic analysis. It achieves both high suction performance and high efficiency, enabling stable and economical operation for a long time. Suitable pump can be selected from wide range of line-up. It can be used for various applications.

Features

1 High efficiency

High efficiency has been achieved using the state-of-the-art hydraulic analysis. This new design features energy saving and CO_2 reduction.

2 Wide operation range

High efficiency is maintained in wide operating range.
It provides advantage in cost saving in long-time operation

3 High suction performance

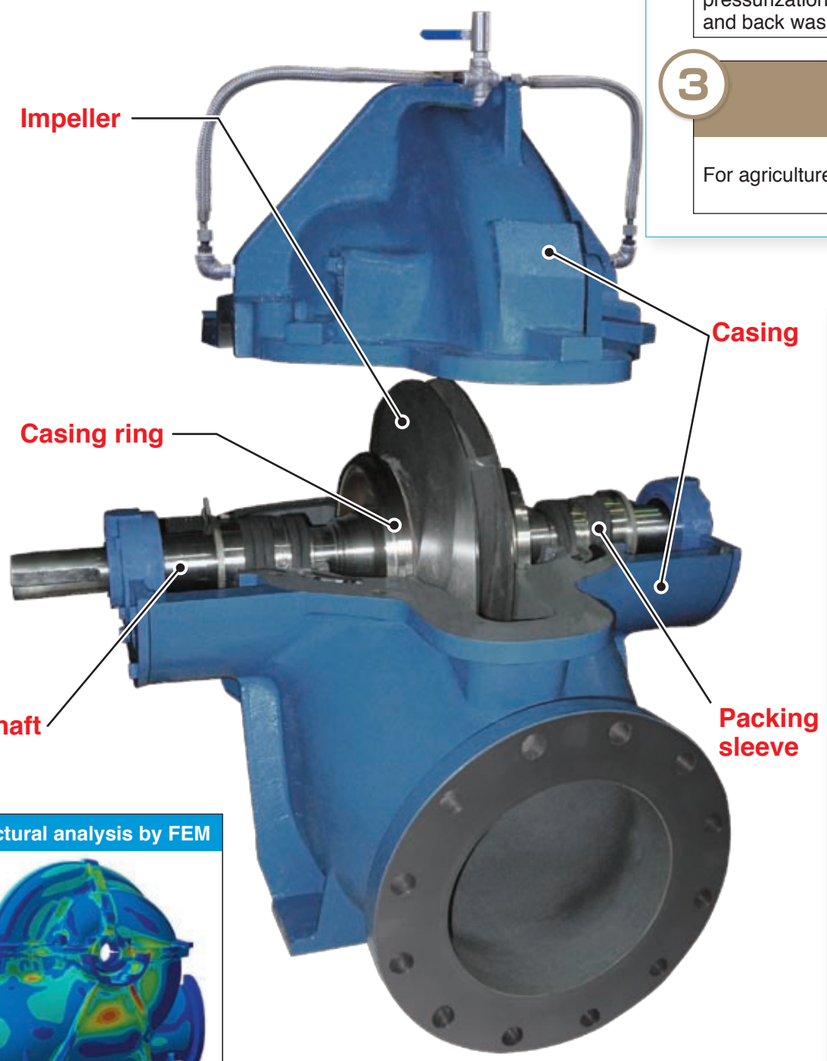
Improvement of suction performance reduces harmful cavitation to the minimum. Stable operation even at lower water level can be achievable.

4 High durability and reliability

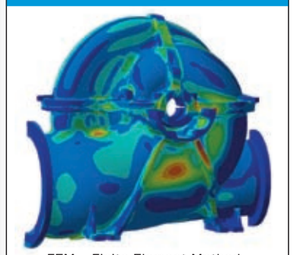
Its standard material, stainless steel, for impeller and shaft offers better durability and reliability. This pump also achieves high durability and reliability through optimum design using the FEM structural analysis.

5 Light weight and compact

We have pursued maximum reduction in weight and size. Installation space is minimized and handling of the pump is much easier.



Structural analysis by FEM



FEM··· Finite Element Method

Application

1 City

For water intake, water conveyance, pressurization, water distribution, front and back wash etc.

2 Industry

For water supply,
cooling water circulation etc.

3 Irrigation

For agriculture, drainage etc.

4 Building, air-conditioning

For water supply, fire-extinguish, etc.

Specification scope

- Suction bore : Φ200～Φ700
- Capacity : 3.2m³/min～108m³/min
- Total head : 8m～180m
- Number of poles : 4P, 6P, 8P (See the selection table.)

Standard Material

Parts name	Material／Eq. JIS grade
Casing	Gray iron casting／FC250
Impeller	Stainless steel casting／SCS13
Shaft	Stainless steel／SUS403
Casing ring	Stainless steel／SUS304
Packing sleeve	Stainless steel／SUS304

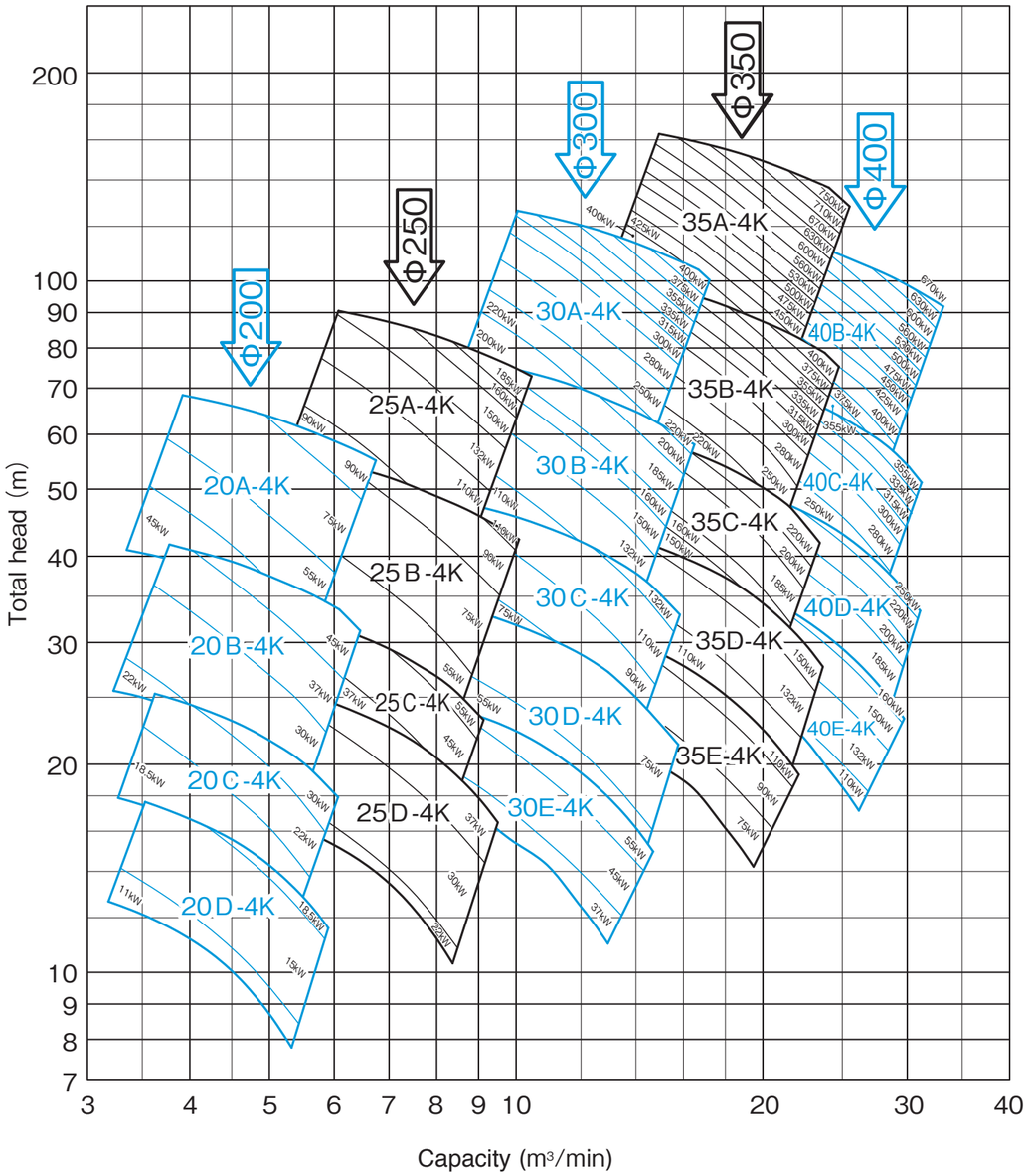
Pump specification

	Standard	Optional
Liquid	Fresh water, river water, industrial water	Sea water
Liquid temperature	0°C to 80°C	
Suction pressure	Max, 0.1MPa	
Flange	ISO	JIS
Bearing	Ball bearing	
Bearing lubrication	Grease	
Shaft seal	Gland packing	Mechanical seal
Sleeve	Only gland packing section	
Painting	Water contact part:Epoxy resin painting Water non-contact part:Epoxy resin painting	
Driving machine Note 1)	Electric motor (totally-enclosed-fan-cooled type)	
Rotating direction	Clockwise (viewed from drive machine)	Counterclockwise
Suction, discharge direction	horizontal-horizontal	
Accessory	Common base, foundation bolt coupling, coupling cover	Primming detector, pressure gauge

Note 1) Contact us for driving machine other than electric motor.

Selection chart (Suction bore 200 to 400)

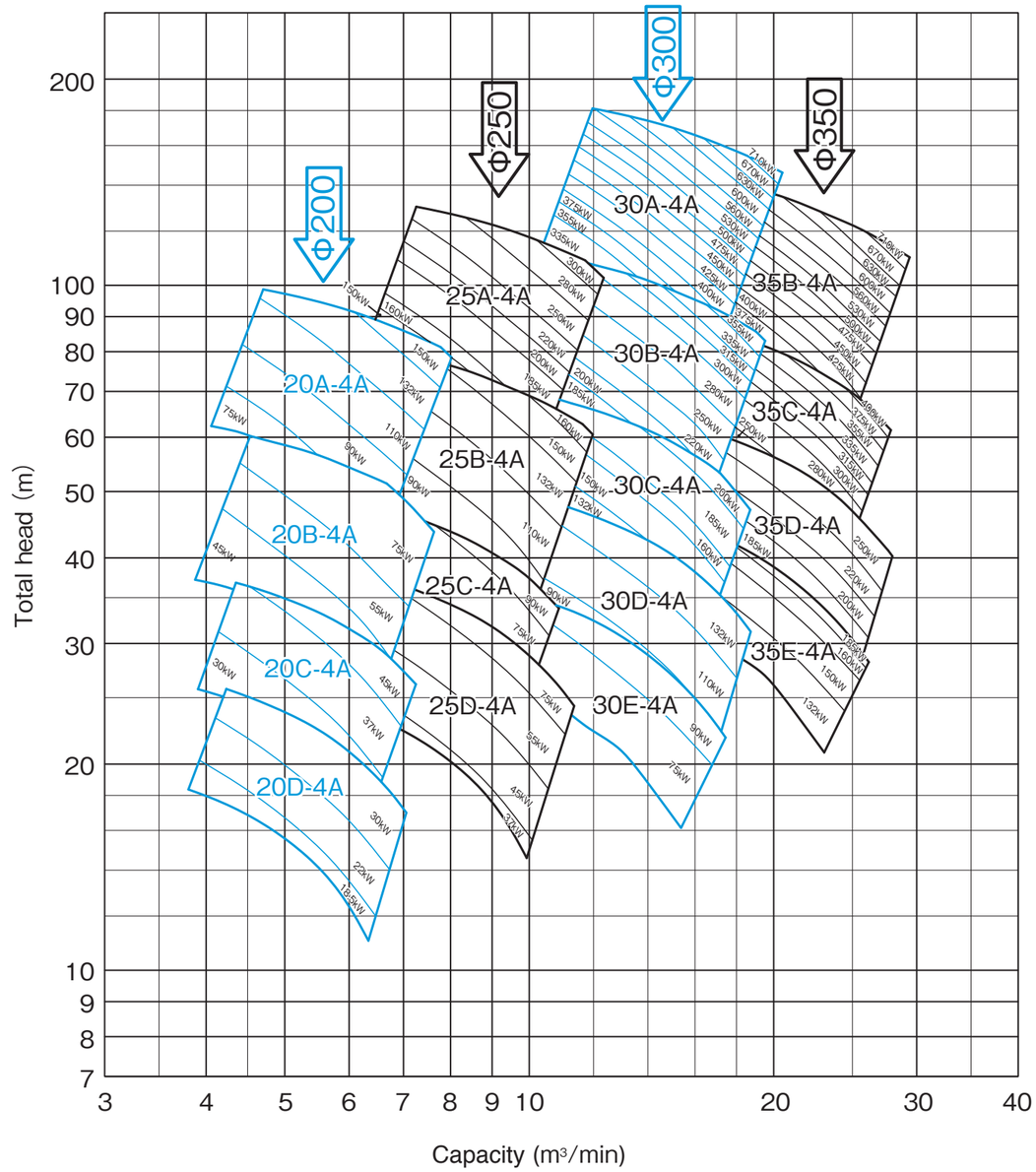
50Hz × 4P（Speed 1500min^{-1}）



Description of symbol

20A-4A
- Frame No.
- Number of poles (P)
- Frequency K:50Hz, A:60Hz

60Hz × 4P（Speed 1800min^{-1}）

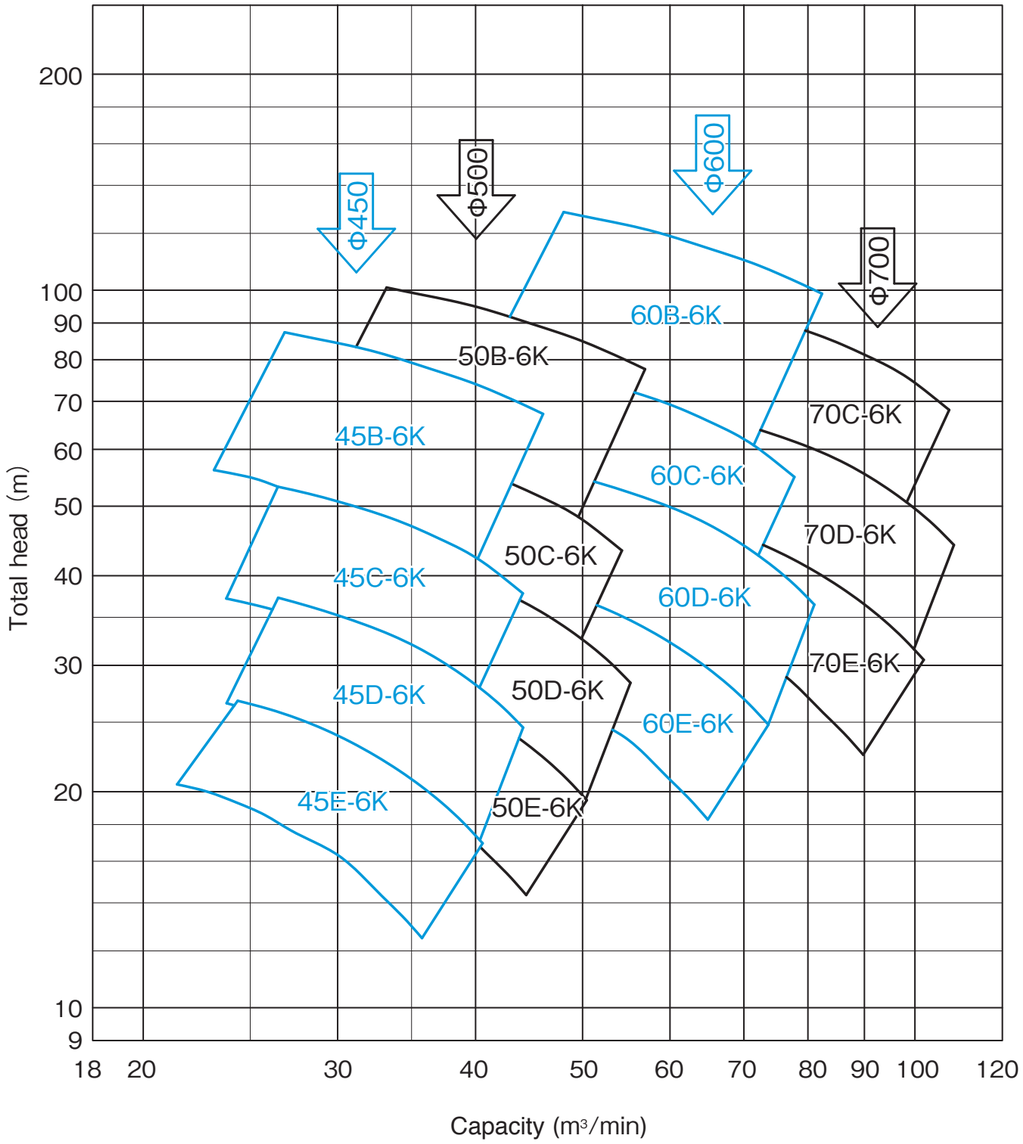


Description of symbol

20A-4A
- Frame No.
- Number of poles (P)
- Frequency K:50Hz, A:60Hz

Selection chart (Suction bore 450 to 700)

50Hz × 6P（Speed 1000min^{-1}）

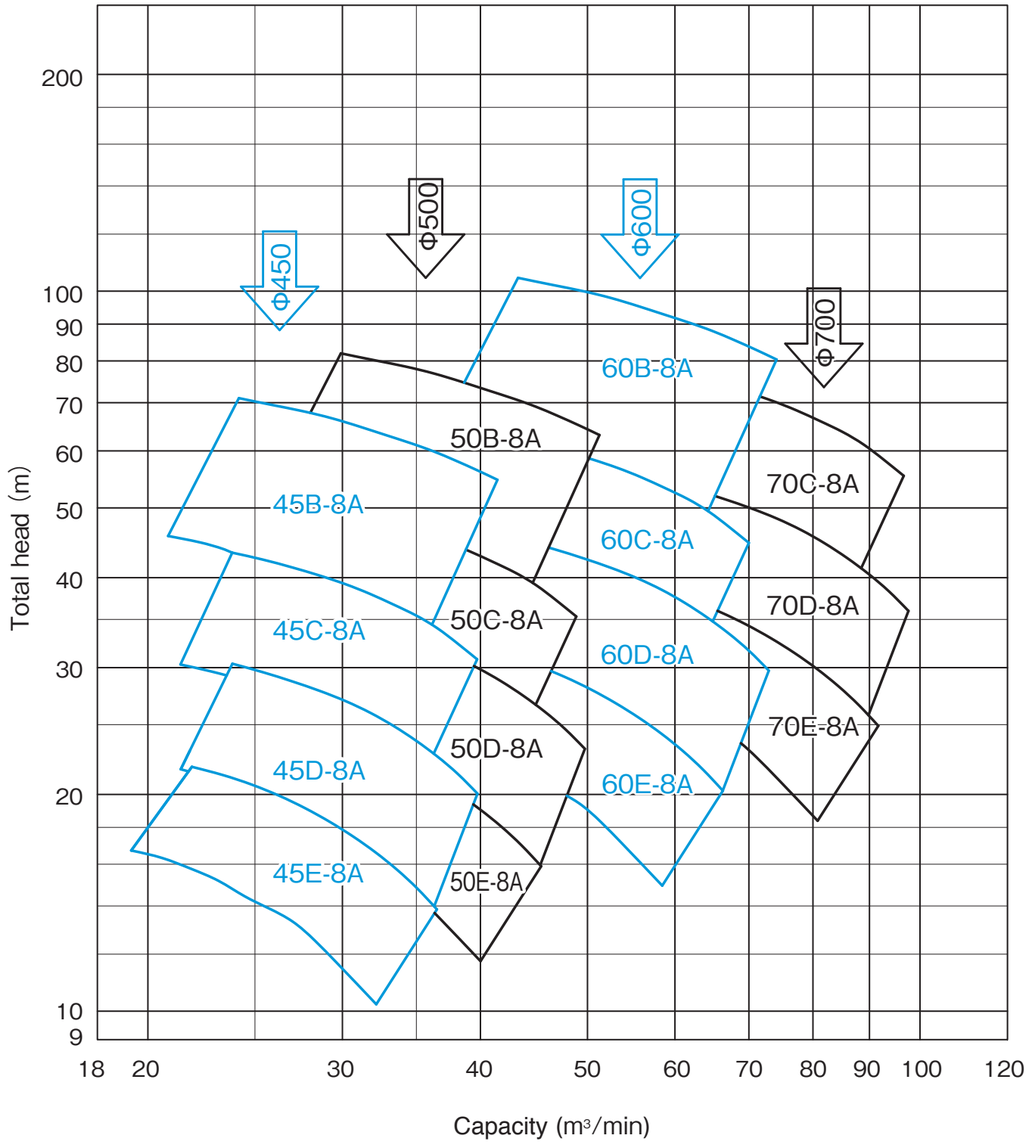


Description of symbol

20A-4A

Frame No.
Number of poles (P)
Frequency K:50Hz, A:60Hz

60Hz × 8P（Speed 900min^{-1}）



Description of symbol

20A-4A

Frame No.
Number of poles (P)
Frequency K:50Hz, A:60Hz

Outline dimension（Suction bore 200 to 400）

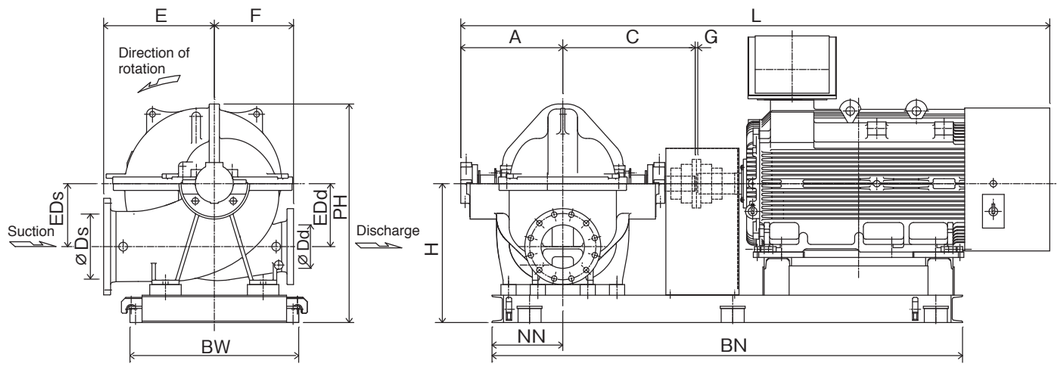
Motor output	Motor voltage
~150kW	400V
160kW ~	3000V

50Hz Frame No. 20A~40E

Unit(mm)

Frame No.	Motor output (kW)	Pole	Ds	Dd	A	C	E	F	EDs	EDd	H	PH	G	L	BN	BW	NN	Mass (kg)
20A-4K	45	4	200	125	400	530	385	335	230	260	480	799	4	1734	1440	614	250	760
	55	4	200	125	400	530	385	335	230	260	480	799	4	1747	1440	614	250	830
	75	4	200	125	400	530	385	335	230	260	480	799	4	1866	1480	634	250	920
	90	4	200	125	400	530	385	335	230	260	480	799	4	1866	1520	634	250	950
20B-4K	22	4	200	125	385	500	335	280	215	215	465	726	3	1560	1300	534	250	570
	30	4	200	125	385	500	335	280	215	215	465	726	4	1599	1340	534	250	600
	37,45	4	200	125	385	500	335	280	215	215	465	726	4	1689	1410	534	250	670
20C-4K	18.5,22	4	200	150	360	465	315	280	200	200	450	673	3	1500	1270	534	250	490
	30	4	200	150	360	465	315	280	200	200	450	673	4	1539	1310	534	250	520
20D-4K	11	4	200	150	355	450	310	280	190	190	440	647	3	1433	1210	534	250	360
	15	4	200	150	355	450	310	280	190	190	440	647	3	1433	1250	534	250	380
	18.5	4	200	150	355	450	310	280	190	190	440	647	3	1480	1250	534	250	440
25A-4K	90	4	250	150	450	595	505	380	265	300	565	938	4	1981	1610	714	280	1210
	110	4	250	150	450	595	505	380	265	300	565	938	10	2131	1690	714	280	1290
	132	4	250	150	450	595	505	380	265	300	565	938	10	2131	1740	714	280	1360
	150,160	4	250	150	450	595	505	380	265	300	565	938	10	2221	1760	714	280	1650
	185	4	250	150	450	595	505	380	265	300	615	988	10	2472	1830	714	290	1860
25B-4K	55	4	250	150	420	550	390	310	250	250	500	803	4	1787	1480	594	270	850
	75	4	250	150	420	550	390	310	250	250	500	803	4	1906	1520	584	270	940
	90	4	250	150	420	550	390	310	250	250	500	803	4	1906	1560	584	270	970
	110	4	250	150	420	550	390	310	250	250	500	803	10	2056	1630	654	270	1050
25C-4K	37,45	4	250	150	400	515	360	310	230	230	480	736	4	1719	1440	594	270	710
	55	4	250	150	400	515	360	310	230	230	480	736	4	1732	1440	594	270	780
25D-4K	22	4	250	200	375	490	355	310	220	220	470	711	3	1540	1310	594	270	560
	30	4	250	200	375	490	355	310	220	220	470	711	4	1579	1350	594	270	600
	37	4	250	200	375	490	355	310	220	220	470	711	4	1669	1420	594	270	660
30A-4K	200~250	4	300	200	530	690	600	450	310	350	710	1170	10	2647	1960	852	330	2530
	280~400	4	300	200	530	690	600	450	310	350	710	1170	12	2854	2280	852	340	3130
30B-4K	110	4	300	200	480	625	510	365	290	290	590	957	10	2191	1760	714	320	1340
	132	4	300	200	480	625	510	365	290	290	590	957	10	2191	1810	714	320	1410
	150,160	4	300	200	480	625	510	365	290	290	590	957	10	2281	1810	714	320	1690
	185~220	4	300	200	480	625	510	365	290	290	590	957	10	2532	1870	714	320	2010
30C-4K	75	4	300	200	445	585	425	365	270	270	570	878	4	1966	1600	714	320	1040
	90	4	300	200	445	585	425	365	270	270	570	878	4	1966	1640	714	320	1070
	110	4	300	200	445	585	425	365	270	270	570	878	10	2116	1720	714	320	1140
	132	4	300	200	445	585	425	365	270	270	570	878	10	2116	1770	714	320	1220
30D-4K	55	4	300	250	435	565	410	365	260	260	560	843	4	1817	1540	694	320	890
	75	4	300	250	435	565	410	365	260	260	560	843	4	1936	1580	714	320	980
30E-4K	37,45	4	300	250	415	530	390	365	245	245	545	810	4	1749	1500	694	310	780
	55	4	300	250	415	530	390	365	245	245	545	810	4	1762	1500	694	310	850
35A-4K	400	4	350	200	590	750	650	510	355	400	805	1311	12	2974	2400	922	370	3580
	425~630	4	350	200	590	750	650	510	355	400	855	1361	12	3242	2720	922	380	4560
	670~750	4	350	200	590	750	650	510	355	400	855	1361	14	3404	2850	934	380	5220
35B-4K	220,250	4	350	200	560	720	565	415	335	335	735	1161	10	2707	2030	774	360	2490
	280~400	4	350	200	560	720	565	415	335	335	735	1161	12	2914	2340	792	370	3090
35C-4K	150,160	4	350	200	510	655	520	415	310	310	710	1068	10	2341	1920	774	360	1830
	185~220	4	350	200	510	655	520	415	310	310	710	1068	10	2592	1960	774	360	2130
35D-4K	110	4	350	250	480	620	450	415	295	295	595	920	10	2186	1780	774	350	1240
	132	4	350	250	480	620	450	415	295	295	645	970	10	2186	1870	774	360	1340
	150	4	350	250	480	620	450	415	295	295	645	970	10	2276	1870	774	360	1480
35E-4K	75	4	350	250	460	590	435	415	280	280	580	880	4	1986	1640	774	350	1060
	90	4	350	250	460	590	435	415	280	280	580	880	4	1986	1680	774	350	1090
	110	4	350	250	460	590	435	415	280	280	580	880	10	2136	1750	774	350	1160
40B-4K	355~400	4	400	250	570	730	610	455	365	365	815	1276	12	2934	2400	852	400	3370
	425~630	4	400	250	570	730	610	455	365	365	865	1326	12	3202	2730	822	410	4340
	670	4	400	250	570	730	610	455	365	365	865	1326	14	3364	2860	934	410	5020
40C-4K	250	4	400	250	530	675	565	455	340	340	740	1130	10	2632	2010	834	390	2330
	280~355	4	400	250	530	675	565	455	340	340	790	1180	12	2839	2350	852	400	2890
40D-4K	185~250	4	400	300	510	645	555	455	320	320	720	1074	10	2582	1980	834	390	2140
40E-4K	110	4	400	300	480	610	475	455	310	310	660	989	10	2176	1820	834	380	1290
	132	4	400	300	480	610	475	455	310	310	660	989	10	2176	1880	834	380	1370
	150,160	4	400	300	480	610	475	455	310	310	660	989	10	2266	1880	834	380	1650

Note 1) Dimensions of electric motor and base related dimensions depend on output and model of electric motor. Note 2) This table shows one example for mounting totally-enclosed-fan-cooled electric motor.
Note 3) These described weights are total of pump, electric motor and standard accessories. Note 4) All dimensions and weights are reference only not to be use for construction.



Motor output	Motor voltage
~150kW	440V
160kW~	3300V

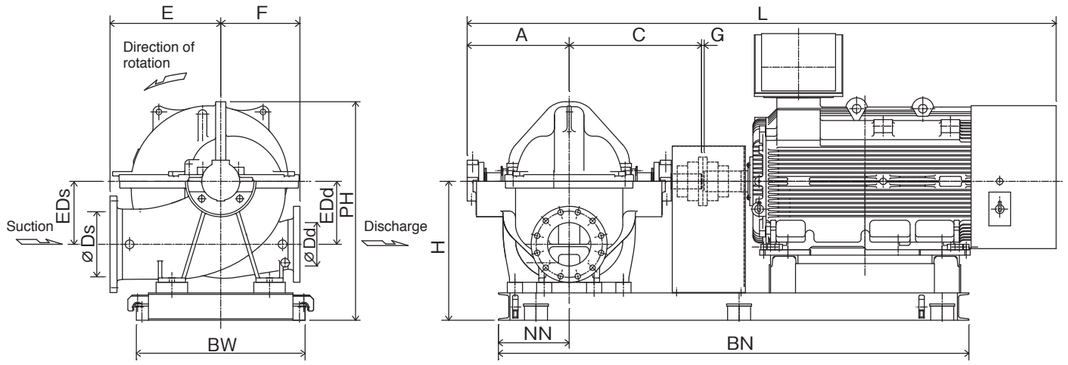
60Hz Frame No. 20A~35E

Unit(mm)

Frame No.	Motor output (kW)	Pole	Ds	Dd	A	C	E	F	EDs	EDd	H	PH	G	L	BN	BW	NN	Mass (kg)
20A-4A	75	4	200	125	400	530	385	335	230	260	480	799	4	1866	1480	634	250	920
	90	4	200	125	400	530	385	335	230	260	480	799	4	1866	1520	634	250	950
	110	4	200	125	400	530	385	335	230	260	480	799	10	2016	1590	654	250	1030
	132	4	200	125	400	530	385	335	230	260	480	799	10	2016	1650	654	250	1100
	150	4	200	125	400	530	385	335	230	260	480	799	10	2106	1650	654	250	1240
20B-4A	45	4	200	125	385	500	335	280	215	215	465	726	4	1689	1410	534	250	670
	55	4	200	125	385	500	335	280	215	215	465	726	4	1702	1410	534	250	750
	75	4	200	125	385	500	335	280	215	215	465	726	4	1821	1450	584	250	840
20C-4A	30	4	200	150	360	465	315	280	200	200	450	673	4	1539	1310	534	250	520
	37,45	4	200	150	360	465	315	280	200	200	450	673	4	1629	1370	534	250	590
20D-4A	18.5,22	4	200	150	355	450	310	280	190	190	440	647	3	1480	1250	534	250	440
	30	4	200	150	355	450	310	280	190	190	440	647	4	1519	1290	534	250	490
25A-4A	150~185	4	250	150	450	595	505	380	265	300	615	988	10	2221	1800	714	290	1680
	200~280	4	250	150	450	595	505	380	265	300	615	988	10	2472	1830	714	290	2040
	300	4	250	150	450	595	505	380	265	300	615	988	12	2679	2110	752	290	2360
25B-4A	90	4	250	150	420	550	390	310	250	250	500	803	4	1906	1560	584	270	970
	110	4	250	150	420	550	390	310	250	250	500	803	10	2056	1630	654	270	1050
	132	4	250	150	420	550	390	310	250	250	500	803	10	2056	1690	654	270	1120
	150,160	4	250	150	420	550	390	310	250	250	550	853	10	2146	1720	654	280	1400
25C-4A	75	4	250	150	400	515	360	310	230	230	480	736	4	1851	1480	584	270	870
	90	4	250	150	400	515	360	310	230	230	480	736	4	1851	1520	584	270	900
25D-4A	37,45	4	250	200	375	490	355	310	220	220	470	711	4	1669	1420	594	270	670
	55	4	250	200	375	490	355	310	220	220	470	711	4	1682	1420	594	270	740
	75	4	250	200	375	490	355	310	220	220	470	711	4	1801	1460	584	270	830
30A-4A	335~450	4	300	200	530	690	600	450	310	350	710	1170	12	2854	2300	852	340	3150
	475~710	4	300	200	530	690	600	450	310	350	710	1170	12	3122	2570	822	340	4070
30B-4A	185	4	300	200	480	625	510	365	290	290	590	957	10	2281	1810	714	320	1690
	200~280	4	300	200	480	625	510	365	290	290	590	957	10	2532	1870	714	320	2070
	300~355	4	300	200	480	625	510	365	290	290	640	1007	12	2739	2180	752	330	2470
30C-4A	132	4	300	200	445	585	425	365	270	270	570	878	10	2116	1770	714	320	1220
	150~185	4	300	200	445	585	425	365	270	270	570	878	10	2206	1790	714	320	1510
	200	4	300	200	445	585	425	365	270	270	620	928	10	2457	1860	714	330	1720
30D-4A	90	4	300	250	435	565	410	365	260	260	560	843	4	1936	1620	714	320	1020
	110	4	300	250	435	565	410	365	260	260	560	843	10	2086	1700	714	320	1090
	132	4	300	250	435	565	410	365	260	260	560	843	10	2086	1750	714	320	1170
30E-4A	75	4	300	250	415	530	390	365	245	245	545	810	4	1881	1540	714	310	940
	90	4	300	250	415	530	390	365	245	245	545	810	4	1881	1580	714	310	970
35B-4A	375~450	4	350	200	560	720	565	415	335	335	735	1161	12	2914	2370	792	370	3120
	475~710	4	350	200	560	720	565	415	335	335	735	1161	12	3182	2630	822	370	4040
35C-4A	250,280	4	350	200	510	655	520	415	310	310	710	1068	10	2592	1960	774	360	2190
	300~400	4	350	200	510	655	520	415	310	310	710	1068	12	2799	2300	792	370	2720
35D-4A	185	4	350	250	480	620	450	415	295	295	645	970	10	2276	1870	774	360	1620
	200~250	4	350	250	480	620	450	415	295	295	645	970	10	2527	1930	774	360	1940
35E-4A	132	4	350	250	460	590	435	415	280	280	580	880	10	2136	1800	774	350	1240
	150~185	4	350	250	460	590	435	415	280	280	630	930	10	2226	1840	774	360	1550

Note 1) Dimensions of electric motor and base related dimensions depend on output and model of electric motor. Note 2) This table shows one example for mounting totally-enclosed-fan-cooled electric motor.
Note 3) These described weights are total of pump, electric motor and standard accessories. Note 4) All dimensions and weights are reference only not to be use for construction.

Outline dimension（Suction bore 450 to 700）



Motor output	Motor voltage
~150kW	400V
160kW~	3000V

50Hz Frame No. 45B~70E

Unit (mm)

Frame No.	Motor output (kW)	Poles	Ds	Dd	A	C	E	F	EDs	EDd	H	PH	G	L	BN	BW	NN	Mass (kg)
45B-6K	670	6	450	300	675	835	760	580	470	470	970	1550	14	3574	3050	1074	500	6020
45C-6K	375	6	450	300	635	795	705	580	440	440	940	1434	12	3332	2880	1052	500	4280
45D-6K	250	6	450	350	615	760	610	580	415	415	865	1313	12	3009	2530	1052	490	3220
45E-6K	160	6	450	400	565	700	595	580	395	395	795	1208	10	2441	2090	1034	480	2050
50B-6K	950	6	500	300	770	950	825	625	505	505	1055	1683	14	4119	3480	1128	520	8100
50C-6K	530	6	500	300	700	860	760	625	470	470	1020	1554	14	3624	3100	1124	520	5860
50D-6K	335	6	500	400	645	805	740	625	445	445	995	1476	12	3352	2910	1102	520	4240
50E-6K	220	6	500	400	600	745	710	625	425	425	925	1369	12	2979	2530	1102	510	3170
60B-6K	1700	6	600	350	875	1095	935	700	570	570	1220	1938	16	5141	4340	1328	590	12110
60C-6K	950	6	600	350	815	1005	860	700	525	525	1125	1730	14	4219	3590	1268	580	8430
60D-6K	630	6	600	450	735	895	840	650	505	505	1105	1654	14	3694	3190	1254	580	6240
60E-6K	400	6	600	450	680	840	800	650	480	480	1080	1581	12	3422	3010	1232	580	4660
70C-6K	1600	6	700	400	910	1130	965	780	585	585	1285	1964	16	4791	4050	1426	640	12600
70D-6K	1000	6	700	500	845	1025	930	725	555	555	1205	1814	14	4269	3670	1388	640	8710
70E-6K	670	6	700	500	765	945	890	725	530	530	1180	1742	14	3774	3300	1374	640	6640

Motor output	Motor voltage
~150kW	440V
160kW~	3300V

60Hz Frame No. 45B~70E

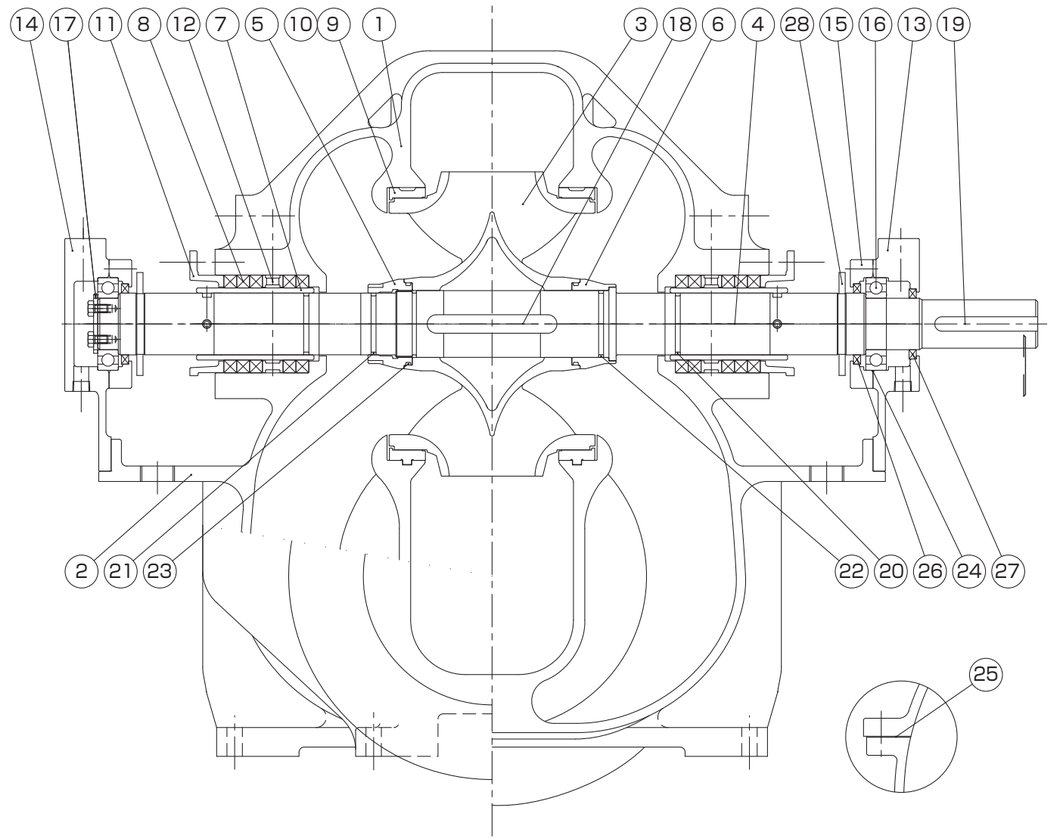
Unit (mm)

Frame No.	Motor output (kW)	Poles	Ds	Dd	A	C	E	F	EDs	EDd	H	PH	G	L	BN	BW	NN	Mass (kg)
45B-8A	475	8	450	300	675	835	760	580	470	470	970	1550	14	3574	3050	1074	500	5550
45C-8A	280	8	450	300	635	795	705	580	440	440	940	1434	12	3332	2850	1052	490	4260
45D-8A	185	8	450	350	615	760	610	580	415	415	865	1313	12	3009	2530	1052	490	3050
45E-8A	132	8	450	400	565	700	595	580	395	395	795	1208	10	2692	2130	1034	480	2330
50B-8A	670	8	500	300	770	950	825	625	505	505	1055	1683	14	3924	3280	1128	520	7770
50C-8A	375	8	500	300	700	860	760	625	470	470	1020	1554	12	3462	2970	1102	520	4780
50D-8A	250	8	500	400	645	805	740	625	445	445	945	1426	12	3084	2590	1102	510	3370
50E-8A	160	8	500	400	600	745	710	625	425	425	925	1369	10	2772	2250	1102	510	2750
60B-8A	1300	8	600	350	875	1095	935	700	570	570	1220	1938	16	4721	3970	1306	590	11930
60C-8A	710	8	600	350	815	1005	860	700	525	525	1125	1730	14	4024	3390	1268	580	8090
60D-8A	475	8	600	450	735	895	840	650	505	505	1105	1654	14	3694	3190	1254	580	5870
60E-8A	300	8	600	450	680	840	800	650	480	480	1030	1531	12	3422	2970	1232	570	4600
70C-8A	1200	8	700	400	910	1130	965	780	585	585	1285	1964	16	4641	3900	1426	640	11390
70D-8A	750	8	700	500	845	1025	930	725	555	555	1205	1814	14	4139	3540	1388	640	8150
70E-8A	500	8	700	500	765	945	890	725	530	530	1180	1742	14	3774	3300	1374	640	6270

Note 1) Dimensions of electric motor and base related dimensions depend on output and model of electric motor. Note 2) This table shows one example for mounting totally-enclosed-fan-cooled electric motor.
Note 3) These described weights are total of pump, electric motor and standard accessories. Note 4) All dimensions and weights are reference only not to be use for construction.

Construction drawing

Suction bore 200～700（Frame No. 20A～70E）



No.	Parts name
①	Upper casing
②	Lower casing
③	Impeller
④	Shaft
⑤	Impeller nut
⑥	Impeller set ring
⑦	Packing sleeve
⑧	Gland packing
⑨	Casing ring（1）
⑩	Casing ring（2）

No.	Parts name
⑪	Gland
⑫	Lantern ring
⑬	Bearing support（1）
⑭	Bearing support（2）
⑮	Bearing cover
⑯	Ball bearing
⑰	Bearing collar
⑱	Key(for Impeller)
⑲	Key(for Coupling)
⑳	O-ring(1)

No.	Parts name
㉑	O-ring(2)
㉒	O-ring(3)
㉓	O-ring(4)
㉔	O-ring(5)
㉕	Sheet packing
㉖	Dust seal(1)
㉗	Dust seal(2)
㉘	Deflector