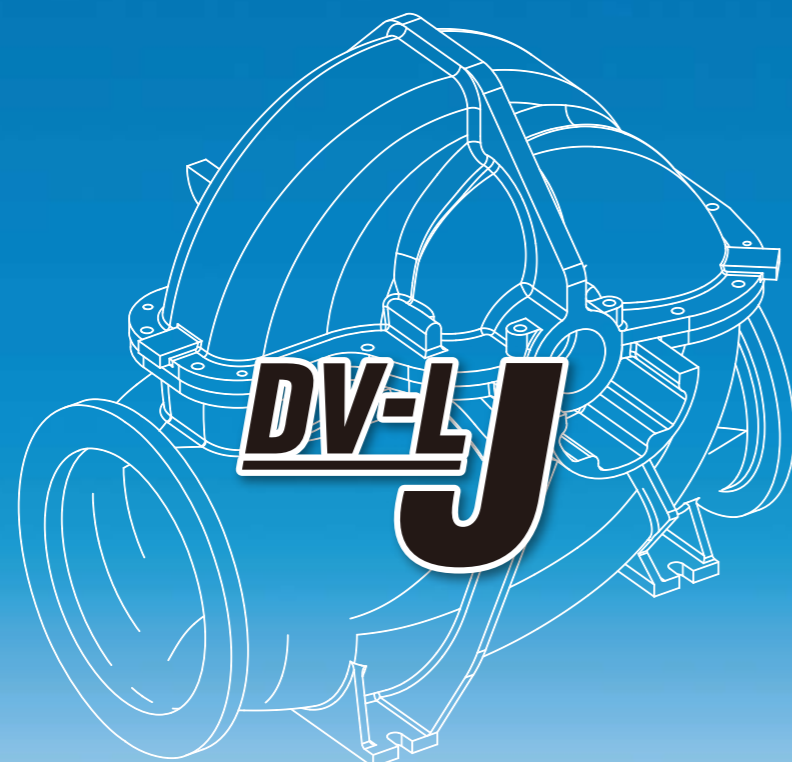




# KUBOTA

## Double suction volute pump

### DV-L type J series



## KUBOTA Corporation

### DOMESTIC OFFICES AND OVERSEAS OFFICE

#### Tokyo Office

1-3, Nihombashi-Muromachi 3-chome, Chuo-ku, Tokyo,  
103-8310, JAPAN  
Phone: Tokyo (03) 3245-3444  
Facsimile: (03) 3245-3454

#### Overseas Offices:

##### Kubota Corporation Bangkok Office

25th Floor, Serm-Mit Tower, 159 Sukhumvit 21 Road,  
Wattana, Bangkok 10110, Thailand  
Phone: +66-2260-6590  
Facsimile: +66-2260-6589

##### Kubota Corporation Malaysia Branch Office

903, 9th Floor, Amcorp Tower, Amcorp Trade Center,  
No.18, Jalan Persiaran Barat 46050 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia  
Phone: +60-3-7954-2334  
Facsimile: +60-3-7954-1335

##### Kubota Corporation Dubai Office

Office No.002, G+3 Office Bldg,  
Plot No. S10122A1 Jebel Ali Free Zone South  
PO. Box 17440, Dubai, UAE  
Phone: +971-4-8857033  
Facsimile: +971-4-8857032

#### Hirakata Plant

1-1-1, Nakamiya-Oike, Hirakata-city,  
Osaka 573-8573, Japan  
Phone: 072-890-2228  
Facsimile: 072-840-1413

##### Kubota Corporation Cairo Liaison Office

15, Aboul Feda St. Flat No.18 (5th Floor),  
Zamalek, Cairo, Egypt  
Phone: +20-2-2736-0283  
Facsimile: +20-2-2735-0340

##### Kubota Corporation London Office

7 Sutilz Elsinore House  
77 Fulham Palace Road, W6. 8JA, London  
Phone: +44(0) 20-8741-5262  
Facsimile: +44(0) 20-8563-1616

##### Kubota Corporation Philippine Branch Office

2nd Floor Kubota Building  
155 Panay Avenue, South Triangle,  
Quezon City Philippines Contact No.410-2428  
Phone: +63-2410-2428  
Facsimile: +63-2410-2428

■ E-Mail: [pump@kubota.co.jp](mailto:pump@kubota.co.jp)

■ <http://www.kubota.co.jp/english>



# KUBOTA Double suction volute pump DV-L type J series

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

The double suction volute pump DV-LJ is the latest pump series developed by KUBOTA, following an extensive feedback from major customers. As an advanced pump, the DV-LJ provides a total reliability and better cost-performance.

The DV-LJ series is available in rich line-up and can be useful in various applications.

### Features

#### 1 High efficiency

Higher efficiency has been achieved using the latest hydraulic analysis. This unique design provides power saving and CO<sub>2</sub> reduction.

#### 2 Enhanced suction performance

DV-LJ is operated with enhanced suction performance. Stable operation is made possible, even at lower water level.

#### 3 Easy maintenance

Easily replaceable string-shaped rubber gasket is employed for the upper and lower seal face, and the shaft seal water piping is incorporated into the casing. Maintenance time is shorter since a number of parts have been reduced.

#### 4 Increased durability and reliability

This pump has been developed through optimum design using the FEM structural analysis. Furthermore, standard stainless steel impeller and shaft offers better durability and better corrosion protection.

#### 5 Light weight and compact

Achieved reduction in weight and size by full model change. Thus installation space is saved and easy to handle.

### 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.

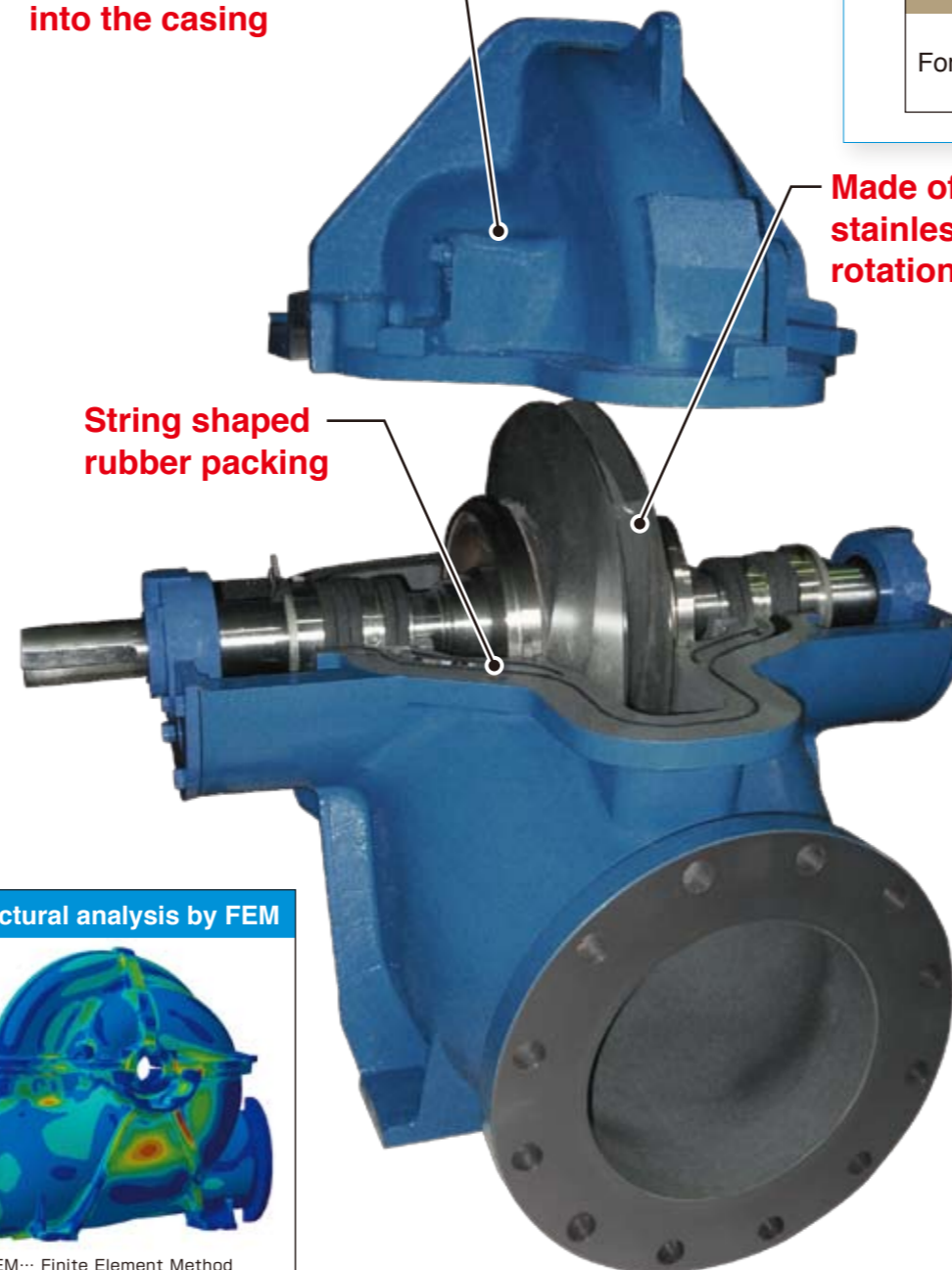
#### 4 Building, air-conditioning

For water supply, fire-extinguish, etc.

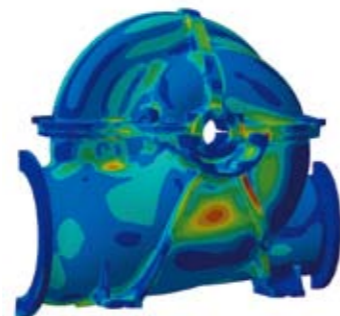
Incorporated shaft seal water piping into the casing

Made of stainless steel rotation body

String shaped rubber packing



#### Structural analysis by FEM



FEM... Finite Element Method

### Specification scope

- Suction bore :  $\Phi 200 \sim \Phi 700$
- Capacity :  $3.2 \text{ m}^3/\text{min} \sim 108 \text{ m}^3/\text{min}$
- Total head :  $8 \text{ m} \sim 180 \text{ m}$
- 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

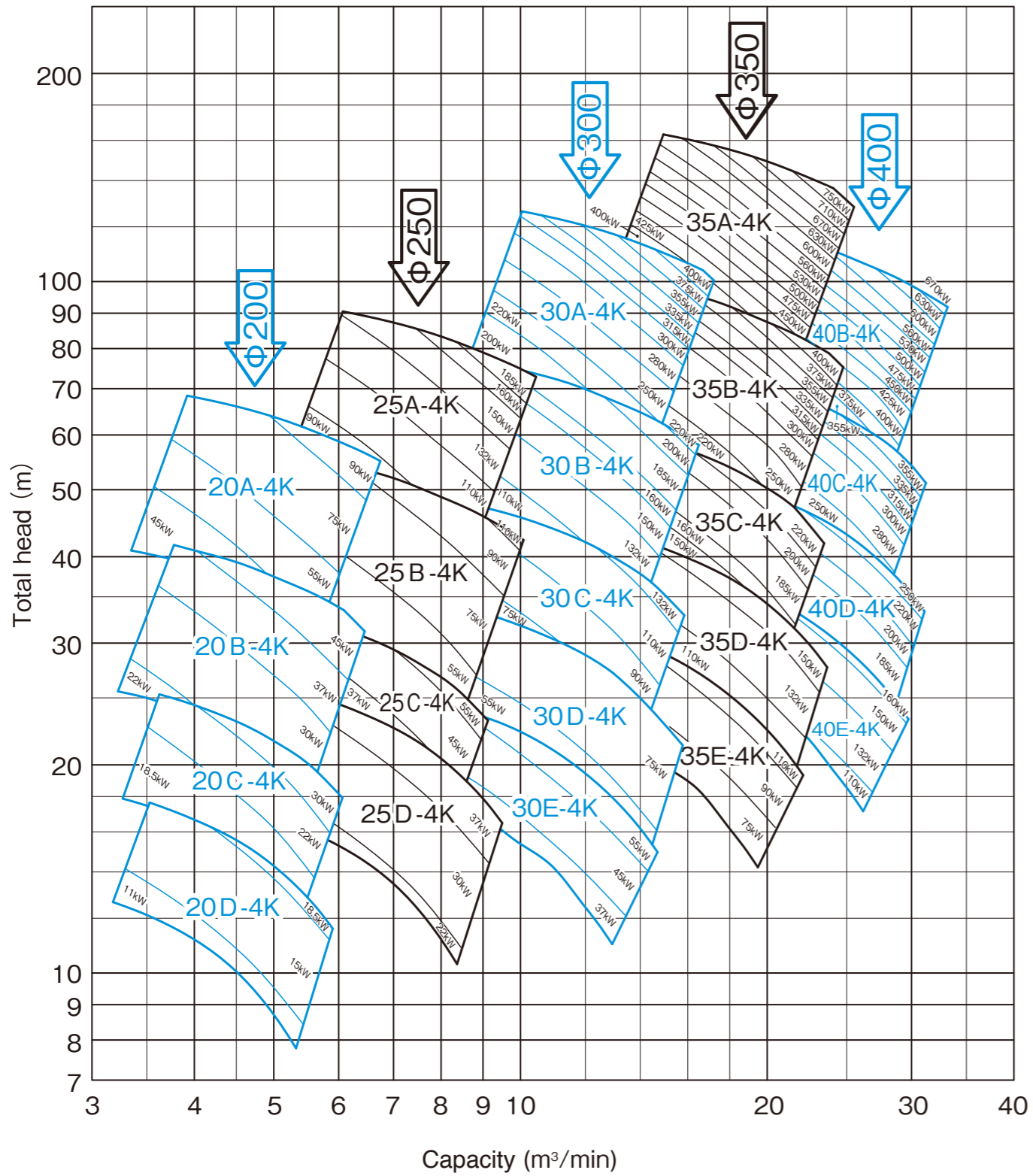
	Standard	Optional
Liquid	Fresh water, river water, industrial water	Sea water
Liquid temperature	0°C to 80°C	
Suction pressure	Max. 0.1MPa	
Flange	Suction side: JIS 10K Discharge side: JIS 10, 16, 20K	Suction side: ISO PN10 Discharge side: ISO PN10, 16, 25
Bearing	Ball bearing	
Bearing lubrication	Grease <sup>Note 1)</sup>	
Shaft seal	Gland packing	Mechanical seal
Sleeve	Only gland packing section	
Painting	Water contact part: Epoxy resin painting for water service Water non-contact part: Epoxy resin painting	
Finish color	E69-60L (Munsell 10B 6/6 or equivalent)	Specified color
Driving machine <sup>Note 2)</sup>	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	Priming detector, pressure gauge

Note 1) Equivalent to grease of class 2 for JIS K2220 roller bearing.

Note 2) Contact us for driving machine other than electric motor.

Note 3) Contact us for any specification other than the above.

### 50Hz × 4P (Speed 1500min<sup>-1</sup>)

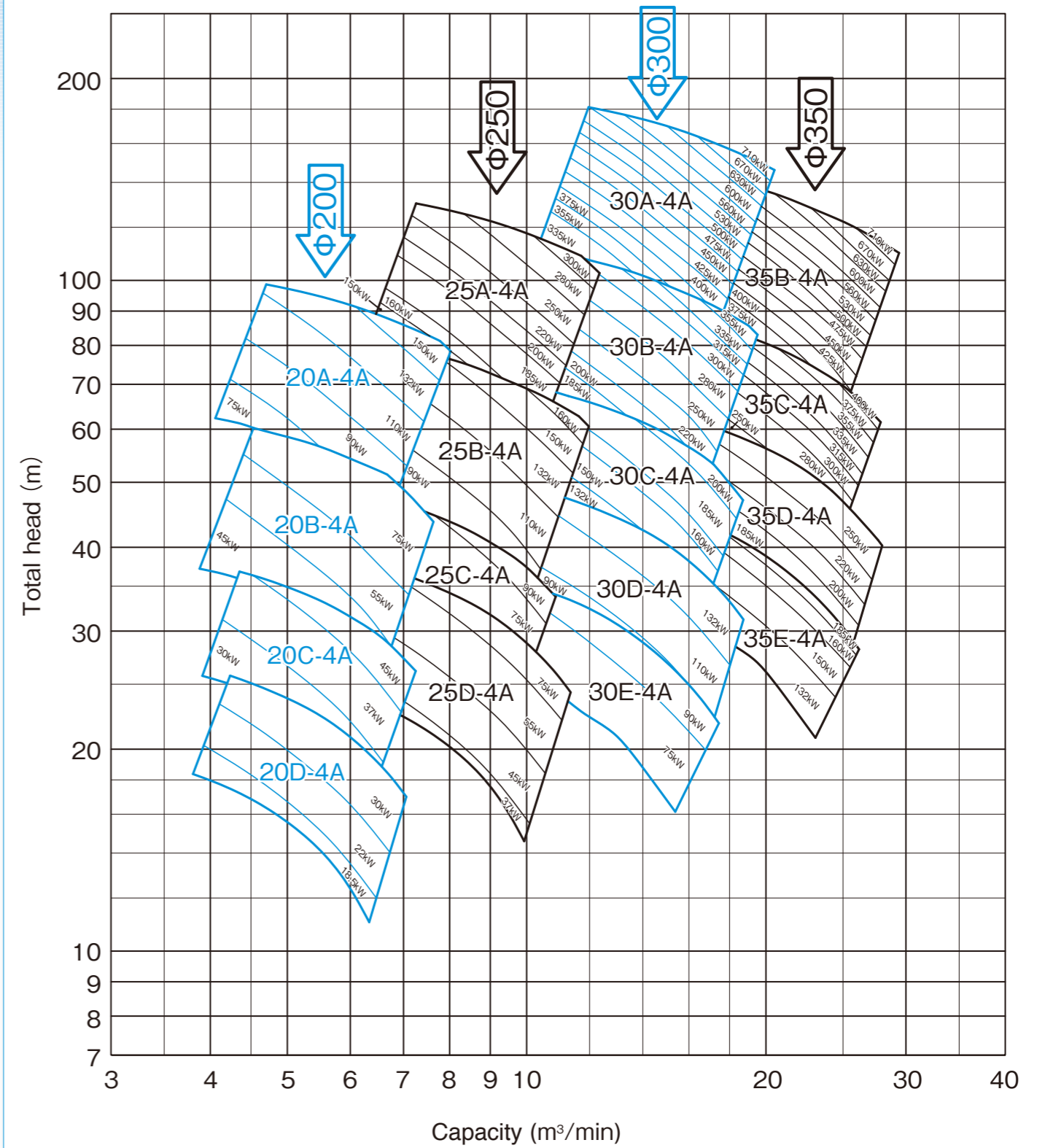


**Description of symbol**

**20A-4A**

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

### 60Hz × 4P (Speed 1800min<sup>-1</sup>)

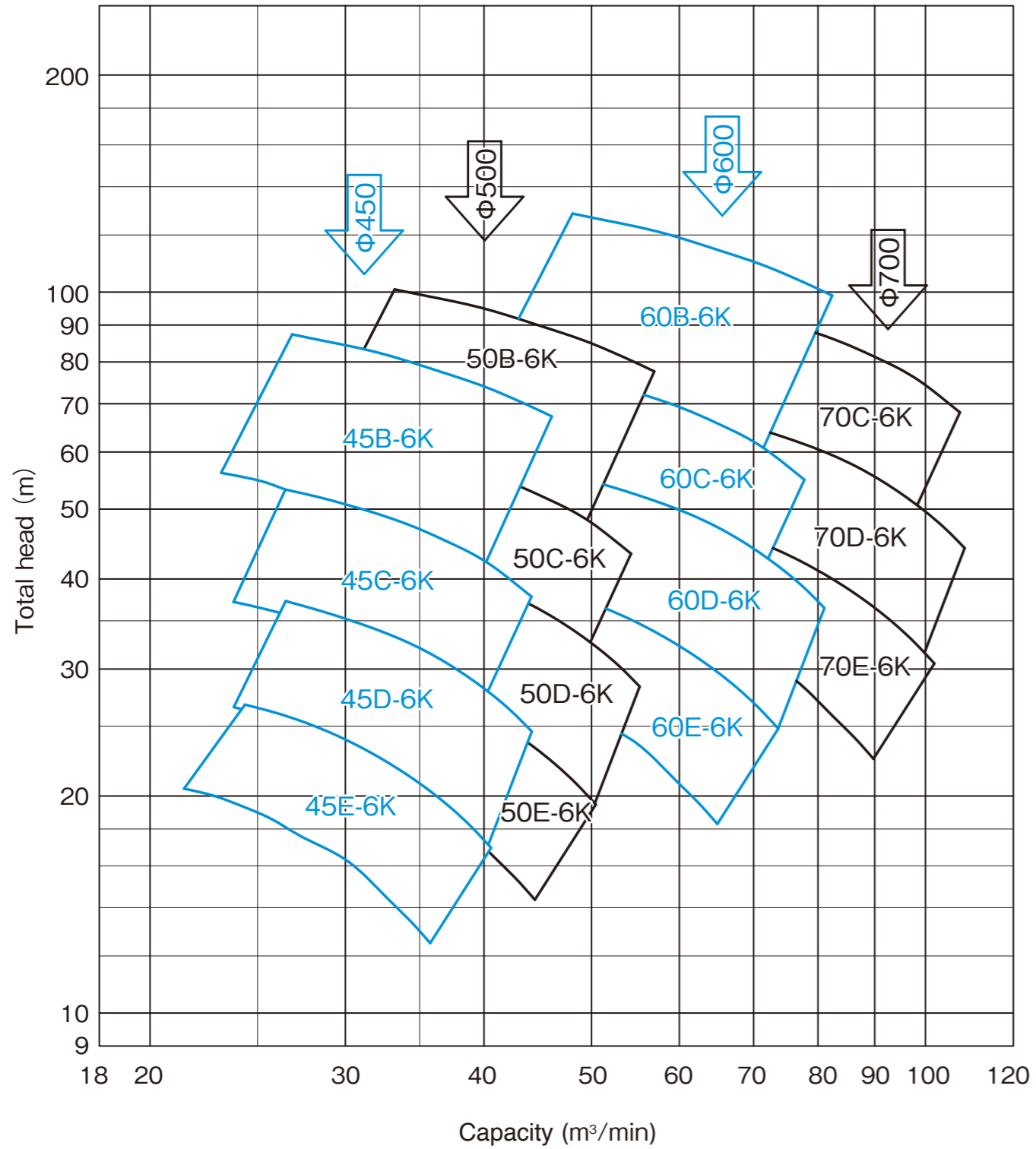


**Description of symbol**

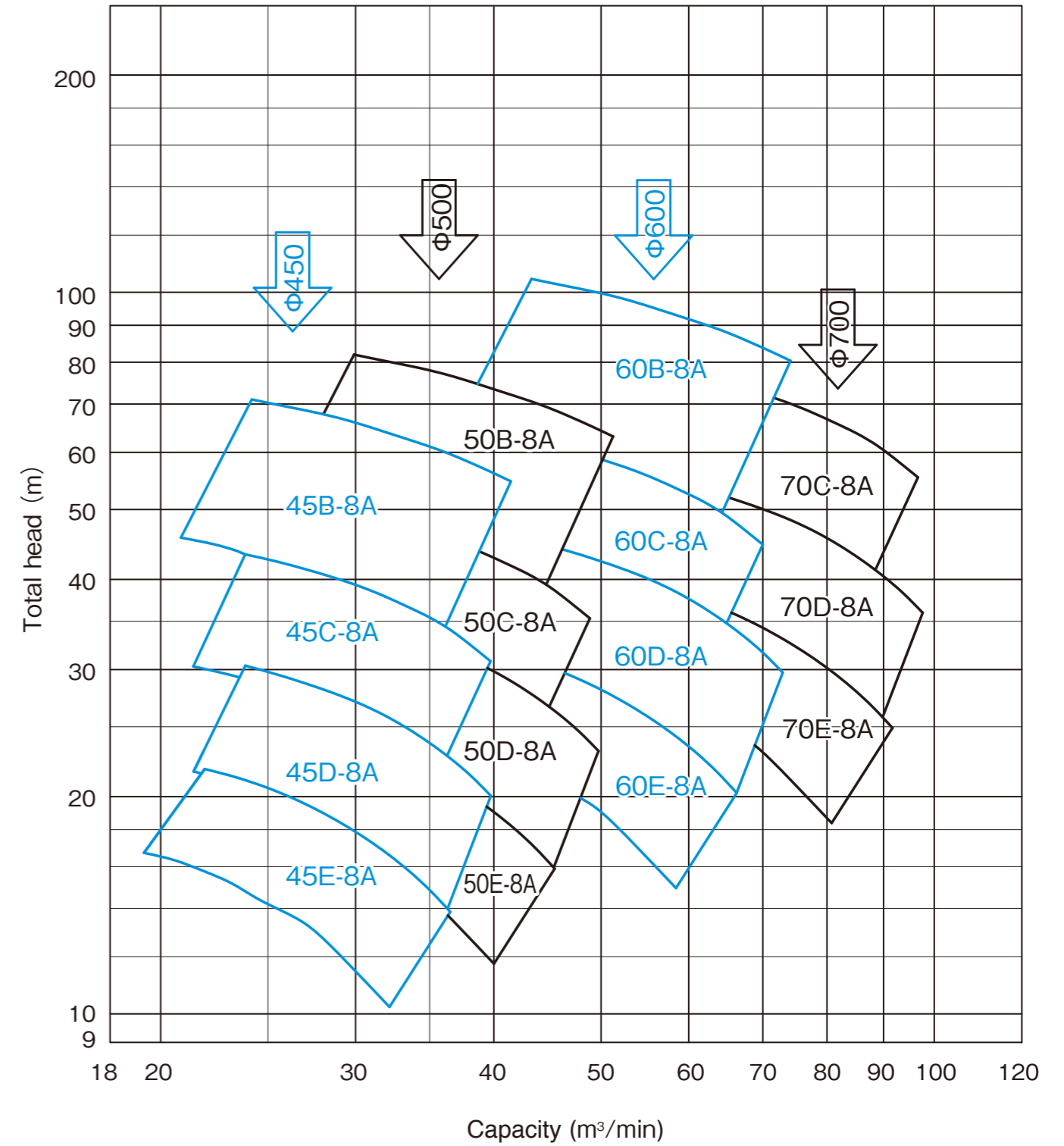
**20A-4A**

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

### 50Hz x 6P (Speed 1000min<sup>-1</sup>)



### 60Hz x 8P (Speed 900min<sup>-1</sup>)



**Description of symbol**

**20A-4A**

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

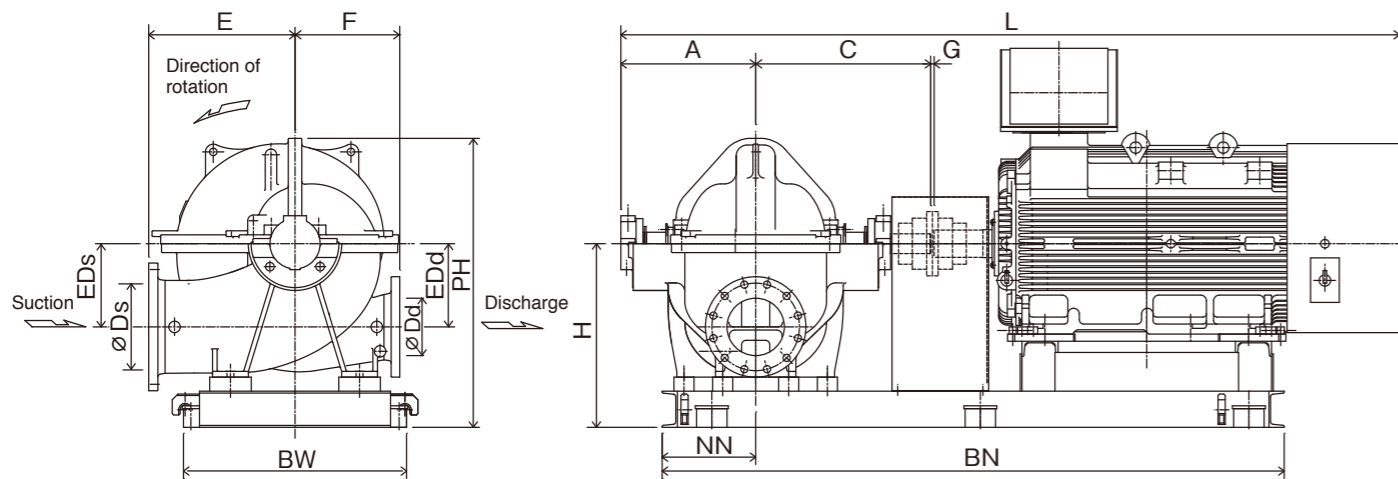
**Description of symbol**

**20A-4A**

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



## Outline dimension (Suction bore 450 to 700)



### 50Hz Frame No. 45B~70E

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

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

Unit(mm)

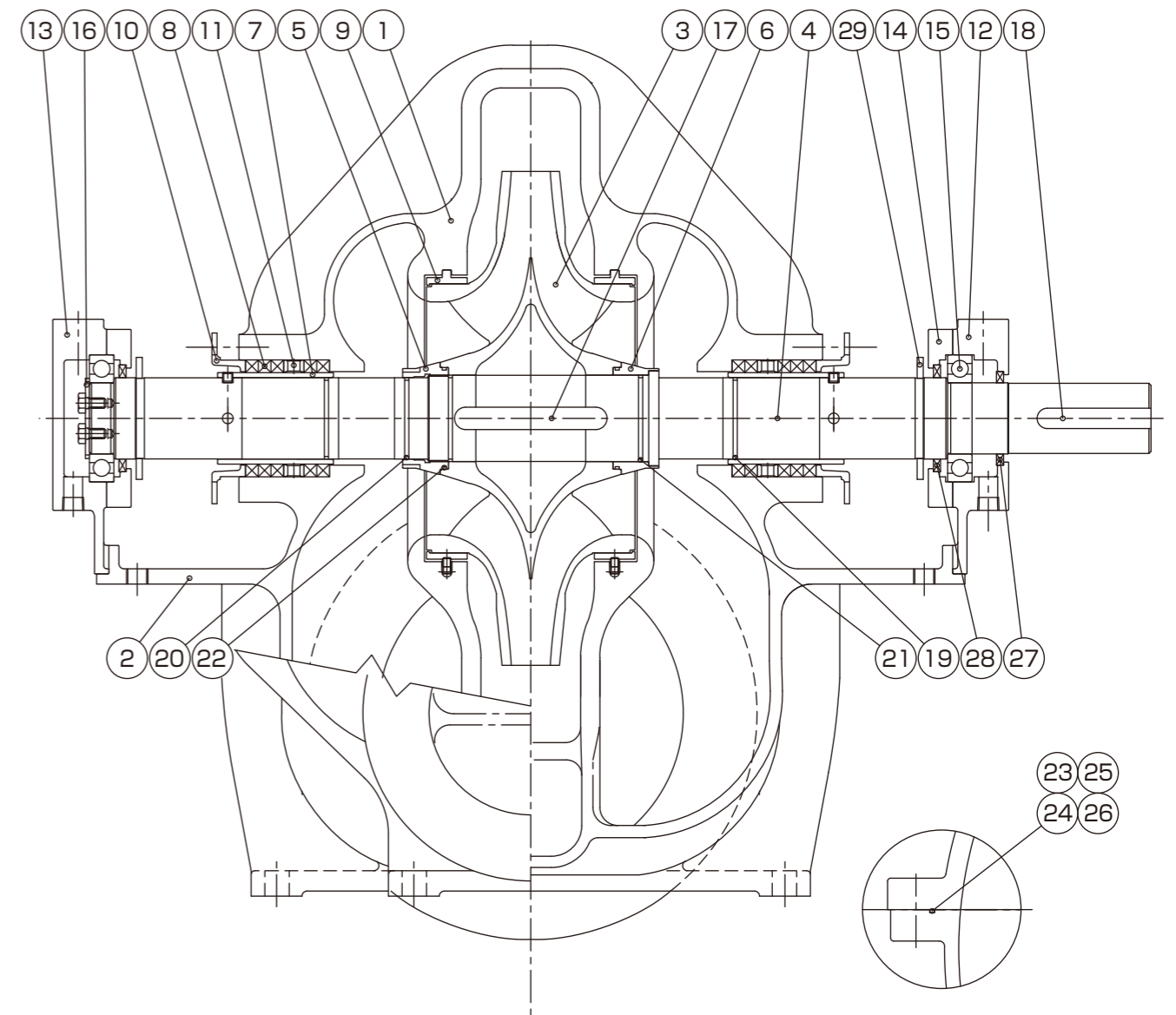
### 60Hz Frame No. 45B~70E

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
⑩	Gland

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

No.	Parts name
㉑	O-ring (3)
㉒	O-ring (4)
㉓	String shaped rubber packing (1)
㉔	String shaped rubber packing (2)
㉕	String shaped rubber packing (3)
㉖	String shaped rubber packing (4)
㉗	Dust seal (1)
㉘	Dust seal (2)
㉙	Deflector