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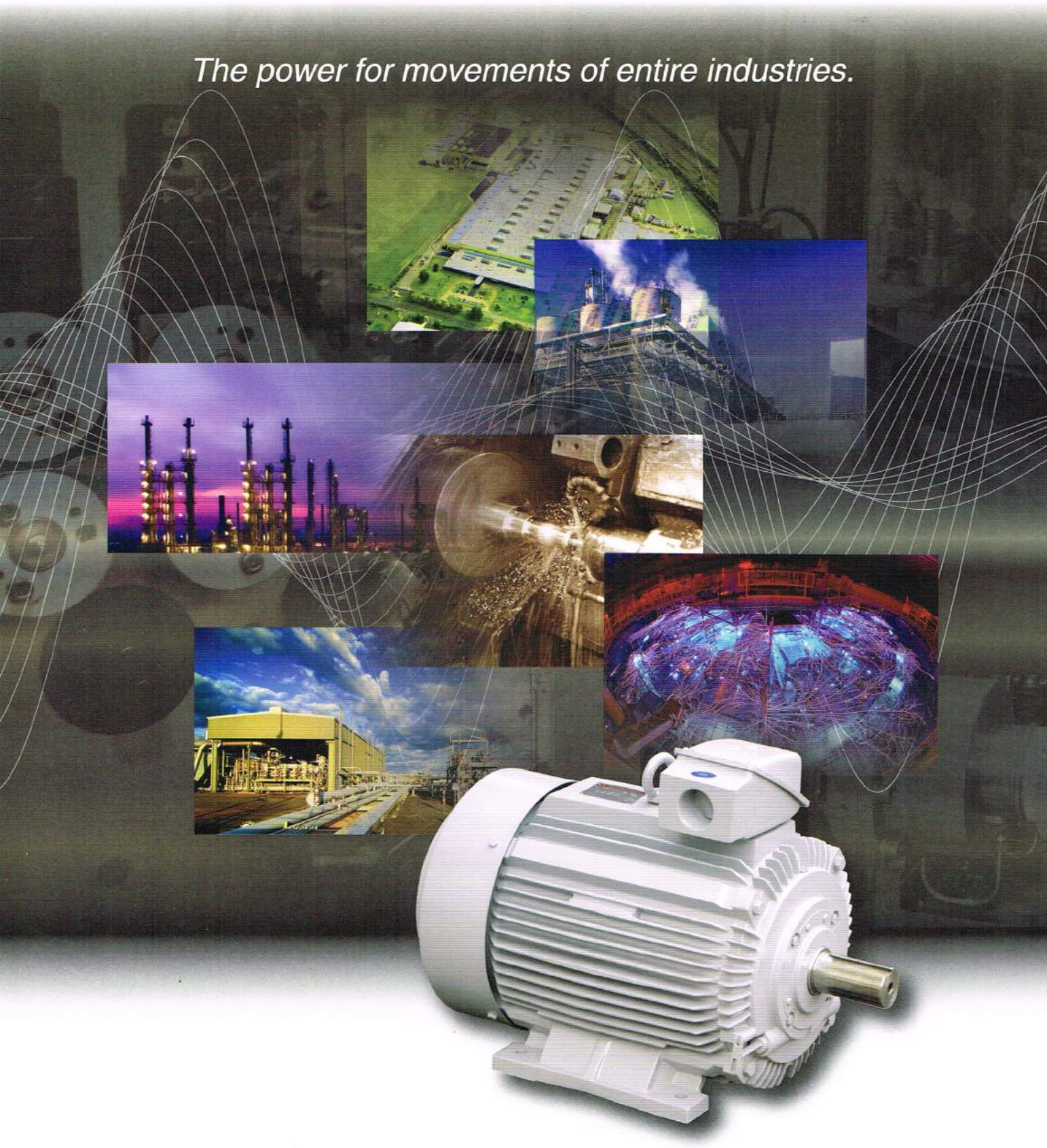
Find the *Mitsubishi SF-JRV* at our website: ***Click HERE***

Changes for the Better

MITSUBISHI ELECTRIC

INDUCTION MOTOR

The power for movements of entire industries.



MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO., LTD.

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Management policy

Product first

With the world rapidly changing and advancing, Mitsubishi Electric Automation (Thailand) Co., Ltd. focus on developing new products and production system as well as quality service to support our customers in their quest for success.

Best quality

MEATH adheres to a "Total System" concept, which includes non-stop development in product design and production in order to provide customers with only the highest quality products.

Global company

MEATH is always looking to expand and enter new markets around the world. At the same time, to best succeed in these endeavors, our attention is on innovation to operate as a truly Global Business.

Environmental management

MEATH realizes the importance of protecting our environment and preserving natural resources. Therefore, we concentrate on using minimum materials while achieving maximum results to best satisfy all demands.

Tomorrow is better than today

Our aim is develop the best relations with society, consumers, shareholders and personnel and work to ensure that for all "Tomorrow is better than today"

Introduction

The induction motor is named as the "Mother of Industry" because all manufacturing is dependent on them. With technology provide by Mitsubishi Electric Japan, MEATH can provide our clients with the highest quality motors which could be ideal for any application.



Automatic winding machine

Features and benefits

Compact size and light weight

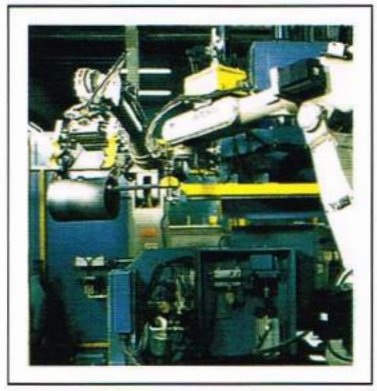
Size and weight reduction has been achieved by the use of steel plate frame and aluminium brackets in the small capacity motors.

Highly reliable insulation systems

Class B and F insulation systems are characterized by superior resistance to heat, humidity and chemicals for top notch reliability.

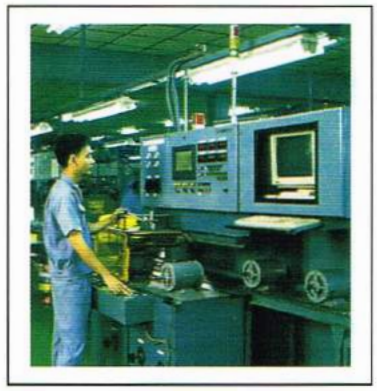
Superlative characteristics and high reliability

Based on experience and technology accumulated over many years, along with an exacting quality control system, each motor is ensured to exhibit only the finest characteristics.



Fin welding robot

Safety	:	All the rotating parts and the live areas are made sure that it cannot be accidentally touched directly.
Smooth acceleration	:	The low moment of inertia of the rotor combined with the motor's high acceleration torque, contributes to smooth starting and stopping.
Low noise and vibration level	:	This feature has been achieved due to our highly individualized electrical design, the ample rigidity and the precise machining of the motor frames and brackets, and the exact balance of rotor.



Final inspection & testing equipment

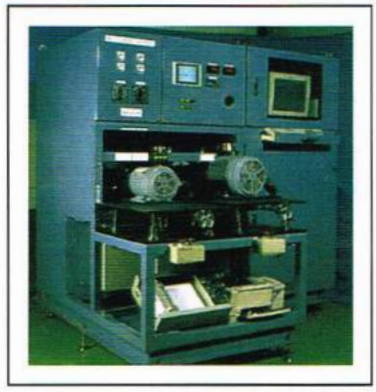
Full lineup

We have produced variety types of motors, thus providing a full lineup of motors ideal for any application.

The company's range of motors includes:

SUPER LINE K series, single phase induction motors up to 10HP
SUPER LINE J series, three phase induction motors up to 125HP

Standard motors are classified as IP55 with class F insulation. All motors are released until they have passed the most stringent quality assurance testing. Mitsubishi motors are renowned for their steel frames tailored to suit each motor's specifications and tasks, especially the electric induction motors.



NT measuring equipment

Significance of type designations

SP-KR

- R — Frame material: Blank = Cast iron; R = Steel plate
- P — Starting type: P = Split phase start; C = Capacitor start; CL = Capacitor start and run; I = Repulsion start
- K — SUPER LINE K series

SF-JRV

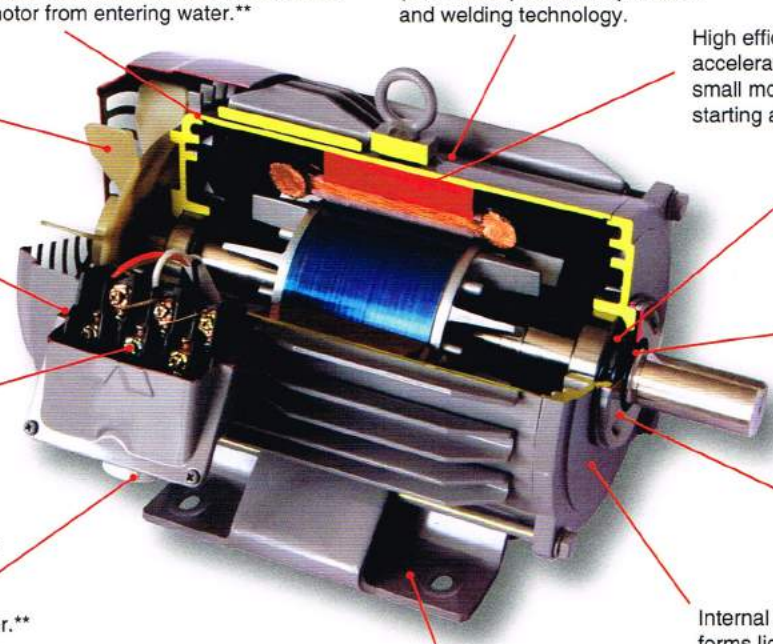
- V — Mounting configuration: Blank = Foot mounting; V = Vertical type; F = Flange type
- R — Frame material: Blank = Cast iron; R = Steel plate
- F — Enclosure: B = Drip-proof; F = Totally enclosed fan-cooled; E = Totally enclosed
- J — SUPER LINE J series

Degrees of protection

IP20
IP22
IP44
IP55

- IP — International protection (code letters)
- 5 — Water protection: 0 = No protection; 2 = Protection against obliquely falling water droplets (drip-proof); 4 = Protection against splashing (splash-proof); 5 = Protection against water jets (hose-proof)
- 5 — Solid body protection: 2 = Protection against medium-size foreign bodies; 4 = Protection against granular foreign bodies; 5 = Protection against dust deposits

Motor section



Glue seal between frame and bracket at both sides help prevent motor from entering water.**

Steel frame (63~132Fr) and fins (100~132Fr) based on precision and welding technology.

High efficiency design focused on high acceleration torque and rotor of rather small moment of inertia enables smooth starting and stopping.

Silent resin cooling fan with efficient cooling capability (SF 132Fr or less).

Grease at both bearing housings will trap dust that gets into motor.**

Rubber gasket to protect terminal box from entering water.**

Fringer will shake off entering water to prevent motor.**

Easy wiring through terminal block connection with lead wires (IP55: 63~132Fr, IP22 100~132Fr)

End cover will prevent high impact water and protect rubber seal.**

Cable gland has an internal PF screw to securely connect to wire hose from power source and prevent from entering water.**

Internal honeycomb structure forms light and rigid bracket made of aluminium die casting (80~132Fr)

Cold press formed strong support made of thick steel strip (132Fr or less)

Remarks: ** Available in IP55 model only.

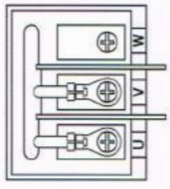
SINGLE PHASE INDUCTION MOTOR

Standard specifications

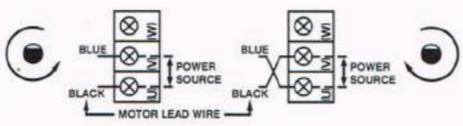
<table>
<tr><th colspan="2">Item</th><th>Specifications</th></tr>
<tr><td colspan="2">Voltage and frequency</td><td>220~230V 50Hz, 220V 60Hz</td></tr>
<tr><td colspan="2">Starting method, enclosure construction and degrees of protection</td><td>
<table>
<tr><th>Starting method</th><th>Model name</th><th>Frame No.</th><th>Enclosure construction</th><th>Degrees of protection</th></tr>
<tr><td>Split phase start</td><td>SP-KR</td><td>A71 ~ 80M</td><td>Open-protected</td><td>IP20</td></tr>
<tr><td>Capacitor start</td><td>SC-KR</td><td>A71 ~ 80M</td><td>Open-protected</td><td>IP20</td></tr>
<tr><td>Capacitor start and run</td><td>SCL-KR</td><td>90S ~ 132ML</td><td>Drip-proof</td><td>IP22</td></tr>
<tr><td>Repulsion start</td><td>SI-K</td><td>100</td><td>Totally enclosed</td><td>IP44</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Frame material</td><td>SP-KR, SC-KR, SCL-KR : Steel plate
SI-K : Cast iron</td></tr>
<tr><td colspan="2">Thermal class</td><td>SP-KR, SC-KR, SI-K : Class E
SCL-KR 90S ~ 112M : Class B
132S ~ 132ML : Class F</td></tr>
<tr><td rowspan="4">Circumstance conditions</td><td>Ambient temperature</td><td>-20 ~ +40°C</td></tr>
<tr><td>Ambient humidity</td><td>85% RH or less (for open-protected & drip-proof stucture)
95% RH or less (for totally enclosed structure)</td></tr>
<tr><td>Altitude</td><td>1,000m above sea level or less</td></tr>
<tr><td>Environment</td><td>No bursting / erosive gas or vapor</td></tr>
<tr><td colspan="2">Coating color</td><td>Munsell N5.5 (gray)</td></tr>
<tr><td colspan="2">Conformed standard</td><td>JIS C 4203 (for SP-KR, SC-KR), JEC-2137-2000 (for SCL-KR, SI-K)</td></tr>
</table>

Connection

Terminal block: For SP-KR, SC-KR

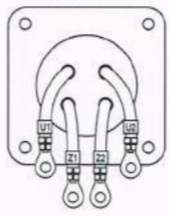


Connection diagram

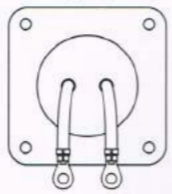


Lead wire: For SCL-KR, SI-K

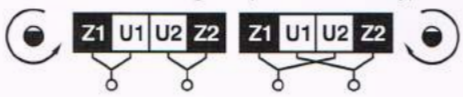
SCL-KR



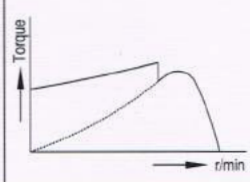
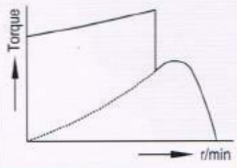
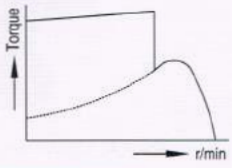
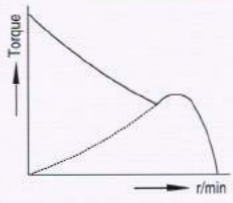
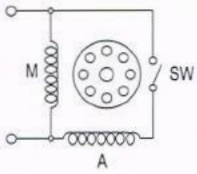
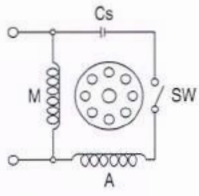
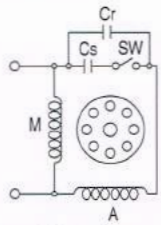
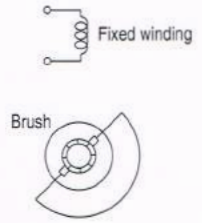
SI-K



Connection diagram (for SCL-KR only)



Characteristics and performance

Item	Motor type			
	Split phase start	Capacitor start	Capacitor start and run	Repulsion start
Appearance				
Characteristic curve				
Connection	 M : Main coil A : Auxiliary coil SW : Centrifugal switch	 M : Main coil A : Auxiliary coil SW : Centrifugal switch Cs : Starting capacitor	 M : Main coil A : Auxiliary coil SW : Centrifugal switch Cs : Starting capacitor Cr : Running capacitor	
Application	Drilling machine Blower	Conveyer Pump	Conveyer Compressor	Compressor Agricultural machine

Item	SP-KR			SC-KR			SCL-KR							SI-K		
Output (HP)	1/4	1/3	1/2	1/4	1/3	1/2	1	1.5	2	3	5	7.5	10	1/2	1	1 3/4
Frame No.	A71	B71	80M	A71	B71	80M	90S	90L	100L	112M	132S	132M	132ML	100	100	100
No. of poles	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Thermal class	E	E	E	E	E	E	B	B	B	B	F	F	F	E	E	E
Power supply	1 phase 220V 50Hz															
Full load current (A)	2.8	3.1	4.8	2.6	3.1	4.3	5.2	7.9	10.4	15.1	23	34	44.5	3.5	7.6	12
Full load speed (r/min)	1450	1440	1440	1450	1450	1430	1430	1440	1450	1450	1430	1450	1450	1455	1460	1450
Starting current (A)	20	26.5	34	11	13.5	18.5	32	44	55	95	107	162	215	12.5	25	40
Starting torque (%)	300	290	200	360	302	273	286	244	203	238	232	193	198	615	480	380
Break down torque (%)	310	270	293	280	262	390	250	290	239	260	174	195	187	478	290	250
Power supply	1 phase 220V 50Hz															
Full load current (A)	2.4	2.8	4.6	2.3	2.8	3.6	4.6	7.1	9.4	13.4	23	33.5	40	3.0	5.9	10.3
Full load speed (r/min)	1740	1730	1730	1740	1740	1720	1720	1720	1740	1740	1720	1700	1740	1750	1750	1740
Starting current (A)	19.5	26	34	10.3	13.3	19.3	32	45	54	73	102	171	208	13.5	27	40
Starting torque (%)	288	232	161	370	303	251	310	285	260	374	174	203	200	670	548	350
Break down torque (%)	299	227	251	283	229	327	265	225	245	202	165	210	170	435	265	227
Net weight (kg)	6.6	7.5	11	6.8	7.6	11.4	15.2	18.6	23.4	32.8	45.8	60	68.2	26.4	32	36.6

SP-KR SPLIT PHASE START TYPE

OPEN-PROTECTED TYPE, IP 20 DEGREES OF PROTECTION



SP-KR 1/4HP 4P A71

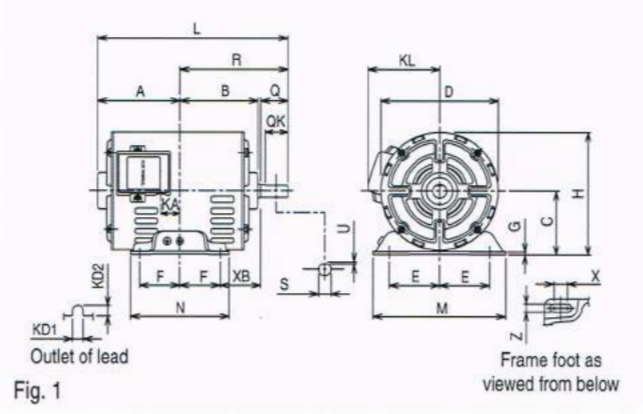


Fig. 1

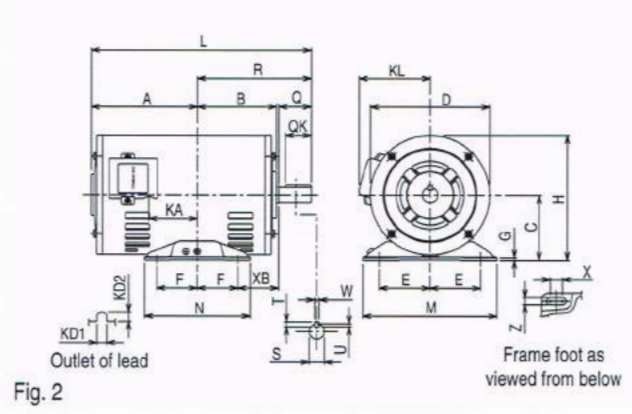


Fig. 2

Dimensions (mm)

Model	Frame No.	Output HP (kW)	Pole	Fig.	Motor																
					A	B	C*	D	E	F	G	H	KA	KD1	KD2	KL	L	M	N	X	XB	Z
SP-KR	A71	1/4(0.2)	4	1	92	87	71	131.2	56	45	3.2	136.6	21.3	12	12	82	212	148	110	15	45	9
	B71	1/3(0.25)	4		101	87	71	131.2	56	45	3.2	136.6	30.3	12	12	82	221	148	110	15	45	9
	80M	1/2(0.4)	4	2	125	97	80	146.6	62.5	50	3.2	153.3	44.5	12	12	92	265	165	130	10	50	10

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Output HP (kW)	Pole	Fig.	Shaft end							Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
					Q	QK	R	S	T	U	W	Drive end	Opposite			
SP-KR	A71	1/4(0.2)	4	1	30	27	120	14 h6	-	1	-	6202ZZ	6201ZZ	6.6	245 x 200 x 184	7.0
	B71	1/3(0.25)	4		30	27	120	14 h6	-	1	-	6202ZZ	6201ZZ	7.5	255 x 200 x 184	8.0
	80M	1/2(0.4)	4 *	2	40	28	140	16 j6	5	3	5	6203ZZ	6202ZZ	11	300 x 200 x 184	12

SC-KR CAPACITOR START TYPE

OPEN-PROTECTED TYPE, IP 20 DEGREES OF PROTECTION



SC-KR 1/2HP 4P 80M

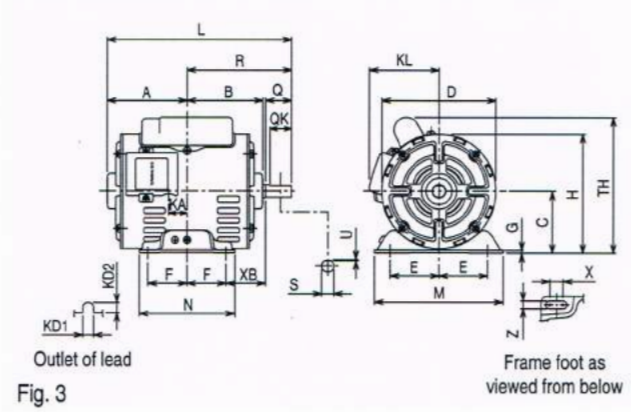


Fig. 3

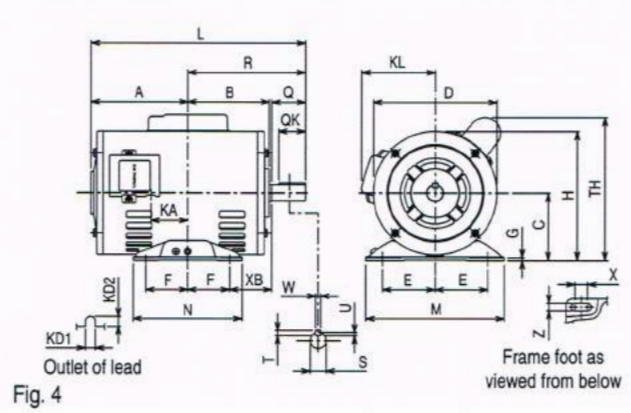


Fig. 4

Dimensions (mm)

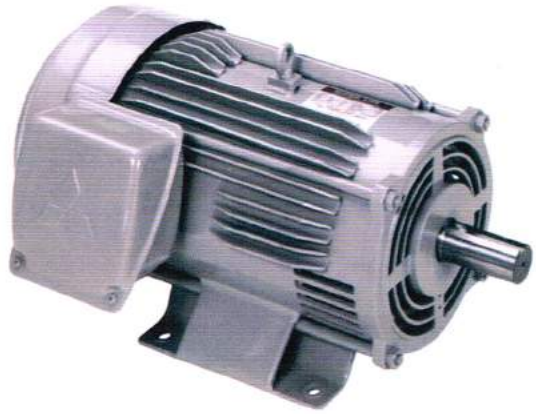
Model	Frame No.	Output HP (kW)	Pole	Fig.	Motor																	
					A	B	C*	D	E	F	G	H	KA	KD1	KD2	KL	L	M	N	X	XB	TH	Z
SC-KR	A71	1/4(0.2)	4	3	92	87	71	131.2	56	45	3.2	136.6	21.3	12	12	82	212	148	110	15	45	170	9
	B71	1/3(0.25)	4		101	87	71	131.2	56	45	3.2	136.6	30.3	12	12	82	221	148	110	15	45	167	9
	80M	1/2(0.4)	4	4	125	97	80	146.6	62.5	50	3.2	153.3	44.5	12	12	92	265	165	130	10	50	173	10

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Output HP (kW)	Pole	Fig.	Shaft end							Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
					Q	QK	R	S	T	U	W	Drive end	Opposite			
SC-KR	A71	1/4(0.2)	4	3	30	27	120	14 h6	-	1	-	6202ZZ	6201ZZ	6.8	245 x 200 x 184	7.5
	B71	1/3(0.25)	4		30	27	120	14 h6	-	1	-	6202ZZ	6201ZZ	7.6	255 x 200 x 184	8.2
	80M	1/2(0.4)	4	4	40	28	140	16 j6	5	3	5	6203ZZ	6202ZZ	11.4	300 x 200 x 184	12

SCL-KR CAPACITOR START AND RUN TYPE

DRIP-PROOF TYPE, IP 22 DEGREES OF PROTECTION



SCL-KR 10HP 4P 132ML

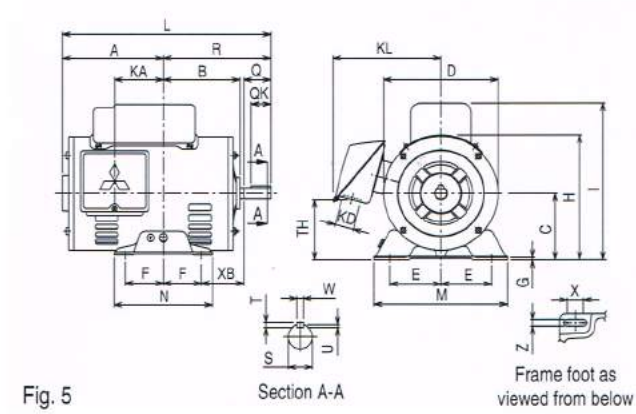


Fig. 5

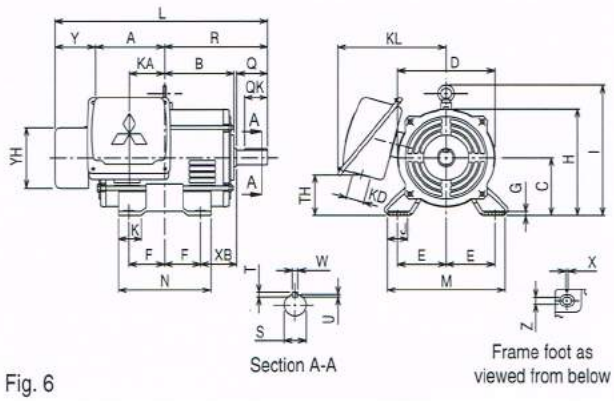


Fig. 6

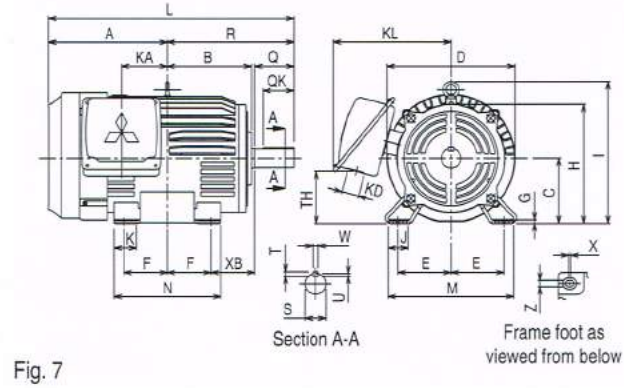


Fig. 7

Dimensions (mm)

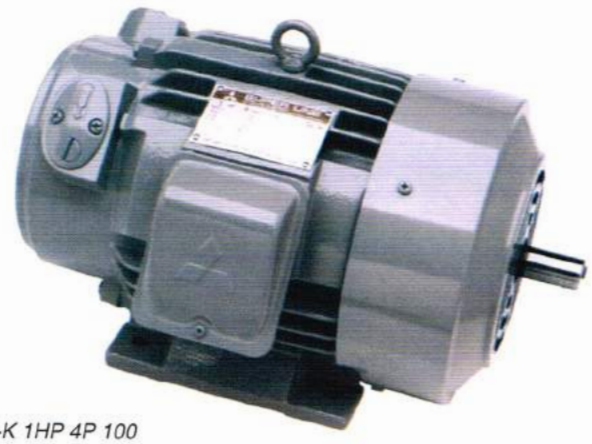
Model	Frame No.	Output HP (kW)	Pole	Fig.	Motor																						
					A	B	C*	D	E	F	G	H	I	J	K	KA	KD	KL	L	M	N	XB	TH	Y	YH	X	Z
SCL-KR	90S	1(0.75)	4	5	132	103	90	165.7	70	50	3.2	173	220	-	-	68	27	157	278	175	125	56	81	-	-	10	10
	90L	1.5(1.1)	4		120	115	90	165.7	70	62.5	4	173	220	-	-	55	27	157	313	175	150	56	81	-	-	15	9
	100L	2(1.5)	4	6	118	128	100	168	80	70	6.5	184	-	40	45	65	35	201	400	200	180	63	64	89	118	4	12
	112M	3(2.2)	4		125	135	112	190	95	70	6.5	207	254	40	45	69	35	211	414	230	180	70	79	89	118	4	12
	132S	5(3.7)	4	7	223	152	132	266	108	70	6.5	242	289	40	45	75	27	215	462	256	180	89	117	-	-	4	12
	132M	7.5(5.5)	4		242	171	132	266	108	89	6.5	242	289	40	45	94	35	240	500	256	218	89	106	-	-	4	12
	132ML	10(7.5)	4		270	171	132	266	108	89	6.5	242	289	40	45	122	35	240	528	256	218	89	106	-	-	4	12

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Output HP (kW)	Pole	Fig.	Shaft end							Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
					Q	QK	R	S	T	U	W	Drive end	Opposite			
SCL-KR	90S	1(0.75)	4	5	40	28	146	19 j6	6	3.5	6	6204ZZ	6202ZZ	15	368 x 280 x 250	16
	90L	1.5(1.1)	4		50	40	168.5	24 j6	7	4	8	6205ZZ	6203ZZ	18.6	390 x 280 x 250	18.2
	100L	2(1.5)	4	6	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	24.5	437 x 355 x 300	25.4
	112M	3(2.2)	4		60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	32.8	504 x 411 x 327	39
	132S	5(3.7)	4	7	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	45.8	552 x 438 x 359	53
	132M	7.5(5.5)	4		80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	60.0	602 x 475 x 369	68
	132ML	10(7.5)	4		80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	68.2	630 x 475 x 369	76

SI-K REPULSION START TYPE

TOTALLY ENCLOSED TYPE, IP 44 DEGREES OF PROTECTION



SI-K 1HP 4P 100

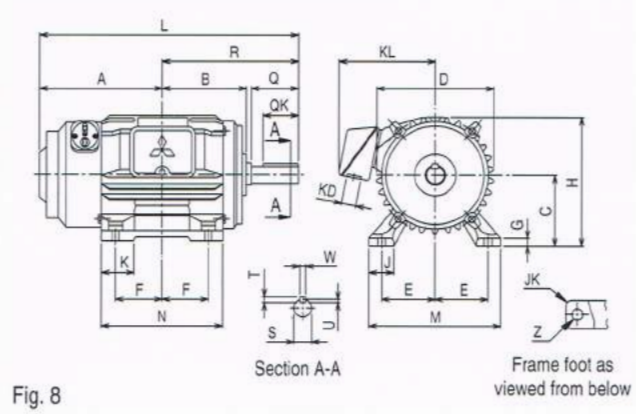


Fig. 8

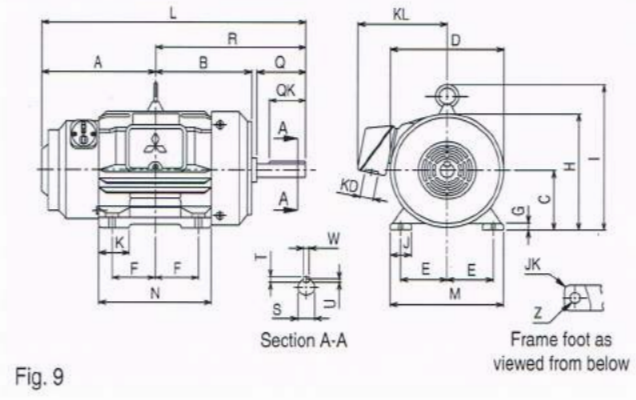


Fig. 9

Dimensions (mm)

Model	Frame No.	Output HP (kW)	Pole	Fig.	Motor																	
					A	B	C*	D	E	F	G	H	I	J	JK	K	KD	KL	L	M	N	Z
SI-K	100	1/2(0.4)	4	8	170.5	128	100	208	80	70	12	204	-	40	3	40	27	161	343.5	200	175	12
	100	1 (0.75)	4	9	170.5	168.5	100	212	80	70	12	206	237.5	40	3	40	27	161	383.5	200	175	12
	100	1 3/4 (1.3)	4		185.5	168.5	100	212	80	70	12	206	237.5	40	3	40	27	161	398.5	200	175	12

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

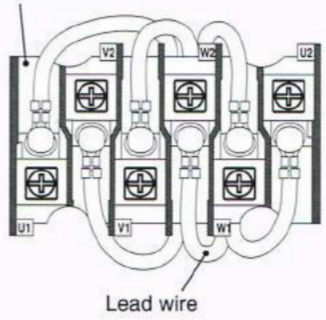
Model	Frame No.	Output HP (kW)	Pole	Fig.	Shaft end							Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
					Q	QK	R	S	T	U	W	Drive end	Opposite			
SI-K	100	1/2(0.4)	4	8	40	28	173	16 j6	5	3	5	6205ZZ	6203ZZ	26.4	395 x 309 x 258	28.2
	100	1 (0.75)	4	9	40	36	213	22 j6	7	4	8	6205ZZ	6203ZZ	32.0	424 x 309 x 258	34
	100	1 3/4 (1.3)	4		40	36	213	24 j6	7	4	8	6206ZZ	6204ZZ	36.6	522 x 372 x 320	43.6

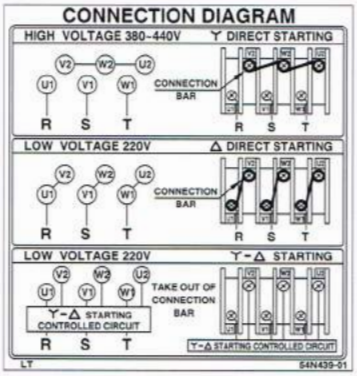
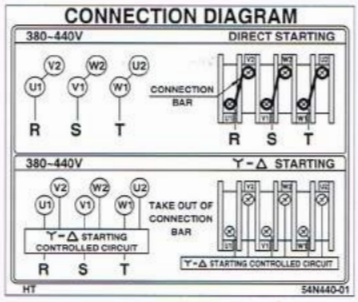
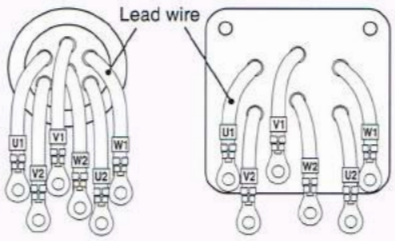
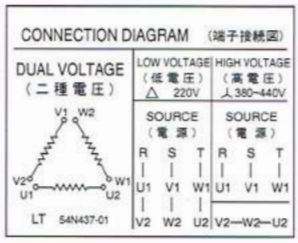
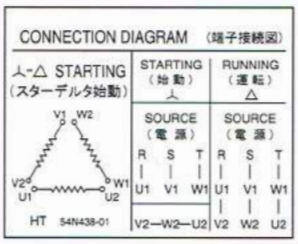
THREE PHASE INDUCTION MOTOR

Standard specifications

<table>
<tr><th>Item</th><th>Specifications</th></tr>
<tr><td>Voltage and frequency</td><td>LT: 10HP and below = 220/380~415V 50Hz, 220/440V 60Hz
HT: 5HP and above = 380~415V 50Hz, 380~440V 60Hz (suitable for Y - Δ starting)</td></tr>
<tr><td>Enclosure construction and degrees of protection</td><td>
<table>
<tr><th rowspan="2">Degrees of protection</th><th rowspan="2">Enclosure construction</th><th colspan="3">Model Name</th><th rowspan="2">Frame No.</th></tr>
<tr><th>Horizontal</th><th>Vertical</th><th>Flange*</th></tr>
<tr><td>IP55</td><td>Totally enclosed fan-cooled</td><td>SF-JR
SF-J
SF-J</td><td>SF-JRV
SF-JV
-</td><td>SF-JRF
SF-JF
-</td><td>63M ~ 132M
160M ~ 180L
200L ~ 250M</td></tr>
<tr><td>IP44</td><td>Totally enclosed fan-cooled</td><td>SF-JR</td><td>-</td><td>-</td><td>63M ~ 90L</td></tr>
<tr><td>IP22</td><td>Drip-proof</td><td>SB-JR</td><td>SB-JRV</td><td>-</td><td>80M ~ 132M</td></tr>
</table>
* Standard vertical-type motor can be used for indoor flange type.
</td></tr>
<tr><td>Frame material</td><td>63M ~ 132M : Steel plate
160M ~ 250M : Cast iron</td></tr>
<tr><td>Power transmission system</td><td>Direct-coupled and belt driven, for up to 10HP 2-pole motor and all model 4-pole & 6-pole motor.
Direct-coupled, for 2-pole motor with 15HP and above.</td></tr>
<tr><td>Direction of rotation</td><td>Counterclockwise (CCW) viewed from shaft-end side.</td></tr>
<tr><td>Thermal class</td><td>IP22 and IP44 : 90L and below Class B
100L and above Class F
IP55 : All models Class F</td></tr>
<tr><td rowspan="4">Circumstance conditions</td><td>Ambient temperature</td><td>-20 ~ +40°C</td></tr>
<tr><td>Ambient humidity</td><td>85% RH or less (for drip-proof stucture)
95% RH or less (for totally enclosed structure)</td></tr>
<tr><td>Altitude</td><td>1,000m above sea level or less</td></tr>
<tr><td>Environment</td><td>No bursting / erosive gas or vapor</td></tr>
<tr><td>Connection type</td><td>
<table>
<tr><th>Degrees of protection</th><th>Frame No.</th><th>No. of leads</th><th>Connection type</th></tr>
<tr><td rowspan="2">IP55</td><td>63M ~ 132M</td><td>6</td><td>Terminal block</td></tr>
<tr><td>160M ~ 250M</td><td>6</td><td>Lead wire (also suitable for Y - Δ starting)</td></tr>
<tr><td>IP44</td><td>63M ~ 90L</td><td>6</td><td>Lead wire</td></tr>
<tr><td rowspan="2">IP22</td><td>80M ~ 90L</td><td>6</td><td>Lead wire</td></tr>
<tr><td>100L ~ 132M</td><td>6</td><td>Terminal block</td></tr>
</table>
</td></tr>
<tr><td>Coating color</td><td>Munsell N5.5 (gray)</td></tr>
<tr><td>Conformed standard</td><td>IEC 60034-1, JIS C 4210 (for horizontal type), JEC-2137-2000 (for vertical type)</td></tr>
</table>

Connection

<table>
<tr><th rowspan="2">Construction of lead wires</th><th colspan="2">Connection diagram</th></tr>
<tr><th>LT</th><th>HT *</th></tr>
<tr>
<td>Terminal block


Lead wire</td>
<td>
</td>
<td>
</td>
</tr>
<tr>
<td>Lead wire
IP 44: 63M ~ 71M
IP 22:
IP 44: 80M ~ 90L
IP 55: 160M ~ 250M

</td>
<td>
</td>
<td>
</td>
</tr>
</table>

* HT can be used only with motors 5HP and above.

Characteristics and performance

SB-JR(V) IP22 80M~90L (Thermal Class: B), 100L~132M (Thermal Class: F),
SF-JR(V) IP55 63M~132M (Thermal Class: F), SF-J IP55 160M~225S (Thermal Class: F),
SF-JV IP55 160M~180L (Thermal Class: F)

2-POLE

Type	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load					Torque(%)		Is (A)	Inertia GD² (kg·m²)
	HP	kW				(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	Speed (r/min)	Torque (kg·m)	Tm	Ts		
LT	1/4	0.2	63M	50	220	0.77	0.57	0.60	0.85	0.67	0.69	0.94	0.74	0.75	2810	0.069	305	274	5.05	0.0019
					380	0.44	0.57	0.60	0.50	0.67	0.69	0.54	0.74	0.75	2810	0.069	305	274	2.92	
					415	0.50	0.54	0.52	0.54	0.62	0.62	0.56	0.73	0.68	2840	0.069	346	325	3.09	
				60	220	0.64	0.61	0.67	0.77	0.67	0.76	0.91	0.71	0.81	3360	0.058	292	230	4.73	
					440	0.41	0.56	0.58	0.46	0.63	0.68	0.51	0.68	0.76	3380	0.058	393	309	3.15	
	1/2	0.4	71M	50	220	1.12	0.77	0.61	1.40	0.78	0.72	1.68	0.80	0.78	2830	0.138	295	268	7.79	0.0033
					380	0.65	0.77	0.61	0.81	0.78	0.72	0.97	0.80	0.78	2830	0.138	295	268	4.50	
					415	0.73	0.72	0.53	0.84	0.78	0.64	0.97	0.80	0.72	2860	0.136	358	326	5.00	
				60	220	1.00	0.62	0.84	1.29	0.77	0.79	1.60	0.78	0.84	3420	0.114	274	254	7.62	
					440	0.62	0.71	0.60	0.75	0.74	0.71	0.87	0.77	0.78	3440	0.113	375	348	5.10	
	1	0.75	80M	50	220	1.94	0.81	0.63	2.67	0.72	0.77	3.01	0.76	0.86	2830	0.258	321	291	16.3	0.0056
					380	1.12	0.81	0.63	1.54	0.72	0.77	1.75	0.76	0.86	2830	0.258	321	294	9.4	
					415	1.41	0.66	0.56	1.58	0.71	0.70	1.75	0.74	0.81	2860	0.255	388	352	10.3	
				60	220	1.79	0.75	0.73	2.29	0.77	0.84	2.81	0.78	0.90	3400	0.215	290	266	15.6	
					440	1.16	0.67	0.63	1.35	0.71	0.77	1.55	0.74	0.86	3430	0.213	399	368	10.4	
	2	1.5	90L	50	220	3.33	0.80	0.74	4.25	0.84	0.83	5.32	0.84	0.88	2860	0.51	322	312	39.7	0.0100
					380	1.93	0.80	0.74	2.46	0.84	0.83	3.08	0.84	0.88	2860	0.51	322	312	22.9	
					415	2.03	0.78	0.66	2.47	0.81	0.78	2.99	0.83	0.84	2870	0.51	386	374	25.0	
				60	220	3.06	0.80	0.80	4.07	0.83	0.87	5.18	0.84	0.90	3440	0.42	283	258	34.5	
					440	1.78	0.78	0.71	2.22	0.82	0.81	2.72	0.84	0.86	3450	0.42	383	348	23.1	
	3	2.2	90L	50	220	4.48	0.82	0.79	5.90	0.84	0.87	7.51	0.85	0.90	2850	0.75	323	345	62.0	0.0138
					380	2.60	0.82	0.79	3.42	0.84	0.87	4.35	0.85	0.90	2850	0.75	323	345	35.8	
					415	2.66	0.80	0.72	3.34	0.84	0.82	4.13	0.85	0.87	2870	0.75	386	415	39.1	
				60	220	4.23	0.86	0.79	5.75	0.85	0.89	7.43	0.85	0.91	3430	0.62	277	276	53.3	
					440	2.38	0.80	0.76	3.06	0.83	0.85	3.82	0.85	0.89	3460	0.62	375	375	35.6	
	5	3.7	112M	50	220	7.13	0.86	0.79	9.56	0.88	0.87	12.3	0.88	0.90	2890	1.25	287	213	90.8	0.029
					380	4.13	0.86	0.79	5.53	0.88	0.87	7.12	0.88	0.90	2890	1.25	287	213	52.4	
					415	4.36	0.84	0.70	5.50	0.88	0.80	6.84	0.88	0.86	2910	1.24	342	256	57.3	
				60	220	6.63	0.86	0.85	9.25	0.87	0.90	12.2	0.87	0.92	3470	1.04	249	166	77.0	
					440	3.74	0.84	0.77	4.90	0.86	0.86	6.21	0.88	0.89	3490	1.03	335	224	51.4	
	7.5	5.5	132S	50	220	11.5	0.85	0.74	15.0	0.88	0.82	19.1	0.88	0.86	2900	1.85	264	201	120	0.046
					380	6.65	0.85	0.74	8.69	0.88	0.82	11.0	0.88	0.86	2900	1.85	264	201	69.4	
					415	7.70	0.83	0.60	9.32	0.86	0.72	11.3	0.87	0.78	2910	1.84	311	241	75.7	
				60	220	9.93	0.88	0.83	13.8	0.89	0.88	18.0	0.89	0.90	3480	1.54	231	163	129	
					440	5.90	0.85	0.72	7.59	0.88	0.81	9.51	0.89	0.85	3500	1.53	309	220	68.2	
	10	7.5	132S	50	220	13.6	0.90	0.80	18.7	0.91	0.87	24.4	0.91	0.89	2910	2.51	274	227	173	0.066
					380	7.89	0.90	0.80	10.8	0.91	0.87	14.1	0.91	0.89	2910	2.51	274	227	99.8	
					415	8.23	0.89	0.71	10.7	0.91	0.80	13.5	0.91	0.85	2920	2.50	326	273	109	
				60	220	12.8	0.88	0.87	18.2	0.90	0.90	24.0	0.90	0.91	3490	2.09	234	180	147	
					440	7.07	0.87	0.80	9.52	0.90	0.86	12.2	0.91	0.89	3510	2.08	316	244	98.5	
HT	5	3.7	112M	50	380	4.13	0.86	0.79	5.53	0.88	0.87	7.12	0.88	0.90	2890	1.25	287	213	52.4	0.029
					415	4.36	0.84	0.70	5.50	0.88	0.80	6.84	0.88	0.86	2910	1.24	342	256	57.3	
				60	380	3.83	0.86	0.85	5.34	0.87	0.90	7.01	0.87	0.92	3470	1.04	249	166	44.5	
					440	3.74	0.84	0.77	4.90	0.86	0.86	6.21	0.88	0.89	3490	1.03	335	224	51.4	
	7.5	5.5	132S	50	380	6.65	0.85	0.74	8.69	0.88	0.82	11.0	0.88	0.86	2900	1.85	264	201	69.4	0.046
					415	7.70	0.83	0.60	9.32	0.86	0.72	11.3	0.87	0.78	2910	1.84	311	241	75.7	
				60	380	5.73	0.88	0.83	7.97	0.89	0.88	10.4	0.89	0.90	3480	1.54	231	163	74.5	
					440	5.90	0.85	0.72	7.59	0.88	0.81	9.51	0.89	0.85	3500	1.53	309	220	68.2	
	10	7.5	132S	50	380	7.89	0.90	0.80	10.8	0.91	0.87	14.1	0.91	0.89	2900	2.51	274	227	99.8	0.066
					415	8.23	0.89	0.71	10.7	0.91	0.80	13.5	0.91	0.85	2920	2.50	326	273	109	
				60	380	7.4	0.88	0.87	10.5	0.90	0.90	13.9	0.90	0.91	3480	2.09	234	180	84.8	
					440	7.07	0.87	0.80	9.52	0.90	0.86	12.2	0.91	0.89	3510	2.08	316	244	98.5	
	15	11	160M	50	380	11.7	0.89	0.80	15.8	0.90	0.88	20.3	0.90	0.91	2910	3.68	292	229	143	0.143
					415	12.5	0.86	0.71	15.9	0.88	0.82	19.8	0.89	0.87	2920	3.67	345	275	156	
				60	380	10.8	0.90	0.86	15.1	0.90	0.92	19.9	0.90	0.93	3490	3.07	250	173	119	
					440	10.5	0.88	0.78	13.9	0.90	0.87	17.7	0.91	0.90	3510	3.05	336	234	138	
	20	15	160M	50	380	15.3	0.93	0.80	21.0	0.94	0.87	27.1	0.93	0.90	2910	5.02	304	226	200	0.176
					415	16.2	0.91	0.71	20.9	0.92	0.81	26.2	0.93	0.86	2920	5.00	361	271	219	
				60	380	14.2	0.92	0.87	20.2	0.92	0.92	26.6	0.92	0.93	3490	4.19	265	183	167	
					440	13.6	0.92	0.79	18.3	0.93	0.87	23.5	0.93	0.90	3510	4.16	356	247	193	
	25	18.5	160L	50	380	18.2	0.92	0.84	25.2	0.93	0.90	32.8	0.92	0.93	2910	6.19	330	257	263	0.23
					415	18.3	0.90	0.78	24.3	0.92	0.86	30.9	0.93	0.90	2930	6.15	393	309	287	
				60	380	17.4	0.91	0.89	24.7	0.92	0.93	32.5	0.92	0.94	3490	5.16	279	195	219	
					440	16.2	0.90	0.83	22.1	0.92	0.90	28.5	0.93	0.92	3510	5.13	376	262	254	
	30	22	180M	50	380	21.5	0.91	0.85	30.2	0.92	0.90	39.6	0.92	0.92	2910	7.36	278	201	279	0.36
					415	21.5	0.91	0.79	28.9	0.92	0.86	37.1	0.93	0.89	2930	7.31	332	241	305	
				60	380	20.9	0.90	0.89	29.8	0.92	0.92	39.5	0.91	0.93	3490	6.14	237	167	239	
					440	19.3	0.90	0.83	26.5	0.92	0.89	34.3	0.92	0.91	3510	6.10	320	226	277	
	40	30	180L	50	380	29.4	0.91	0.85	41.4	0.92	0.90	54.5	0.91	0.92	2920	10.0	266	224	391	0.46
					415	29.1	0.90	0.80	39.4	0.92	0.87	50.7	0.92	0.89	2940	9.90	318	269	427	
				60	380	28.5	0.90	0.89	40.8	0.91	0.92	53.6	0.91	0.93	3490	8.40	228	189	346	
					440	26.1	0.89	0.84	36.1	0.91	0.90	46.9	0.92	0.91	3520	8.30	307	255	402	
	50	37	200L	50	380	37.9	0.92	0.81	52.2	0.93	0.87	68.0	0.93	0.89	2920	12.3	243	155	416	0.69
					415	40.3	0.89	0.72	52.2	0.90	0.82	65.7	0.91	0.86	2940	12.3	287	186	454	
				60	380	35.1	0.89	0.90	50.3	0.91	0.92	66.8	0.91	0.92	3510	10.3	205	139	361	
					440	33.5	0.90	0.81	45.6	0.92	0.87	58.8	0.93	0.89	3530	10.2	274	187	418	
	60	45	200L	50	380	45.8	0.92	0.81	63.2	0.93	0.87	82.3	0.93	0.89	2920	15.0	250	154	538	0.78
					415	49.4	0.88	0.72	63.7	0.90	0.82	80.1	0.91	0.86	2940	14.9	295	185	587	
				60	380	41.8	0.91	0.90	60.3	0.92	0.92	80.2	0.93	0.92	3510	12.5	215	140	464	
					440	40.4	0.90	0.81	55.0	0.92	0.88	70.9	0.94	0.89	3530	12.4	288	189	537	
	75	55	225S	50	380	56.3	0.92	0.81	77.2	0.92	0.88	99.9	0.93	0.90	2930	18.2	288	162	667	1.05
					415	61.0	0.87	0.72	78.2	0.91	0.81	97.6	0.91	0.86	2940	18.2	341	193	729	
				60	380	51.9	0.91	0.89	74.0	0.92	0.92	97.7	0.92	0.93	3520	15.2	248	143	594	
					440	49.9	0.89	0.81	67.5	0.62	0.88	86.5	0.93	0.90	3540	15.1	332	193	688	

SF-JR IP44 63M~90L (Thermal Class: B), SF-JR(V) IP55 63M~132M (Thermal Class: F), SF-J IP55 160M~250M (Thermal Class: F), SF-JV IP55 160M~180L (Thermal Class: F)

4-POLE

Type	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load					Torque(%)		Is (A)	Inertia GD² (kg·m²)
	HP	kW				(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	Speed (r/min)	Torque (kg·m)	Tm	Ts		
LT	1/4	0.2	63M	50	220	0.91	0.60	0.48	1.00	0.67	0.59	1.11	0.69	0.68	1430	0.140	257	330	5.11	0.0040
					380	0.53	0.60	0.48	0.58	0.67	0.59	0.64	0.69	0.68	1430	0.140	257	330	2.95	
					415	0.61	0.55	0.42	0.64	0.63	0.52	0.68	0.68	0.60	1440	0.140	309	399	3.27	
				60	220	0.73	0.66	0.54	0.84	0.71	0.66	0.97	0.73	0.74	1730	0.110	232	284	4.56	
					440	0.50	0.58	0.46	0.53	0.65	0.56	0.59	0.69	0.65	1750	0.110	310	378	3.01	
	1/2	0.4	71M	50	220	1.52	0.63	0.55	1.70	0.70	0.66	1.97	0.73	0.74	1410	0.280	286	336	10.2	0.0061
					380	0.88	0.63	0.55	0.98	0.70	0.66	1.13	0.73	0.74	1410	0.280	286	336	5.91	
					415	1.01	0.58	0.47	1.08	0.67	0.58	1.18	0.71	0.66	1430	0.270	344	413	6.50	
				60	220	1.22	0.72	0.60	1.44	0.77	0.72	1.71	0.78	0.79	1700	0.230	266	295	9.49	
					440	0.79	0.66	0.50	0.87	0.73	0.62	0.98	0.75	0.71	1730	0.230	354	392	6.36	
	1	0.75	80M	50	220	2.19	0.74	0.61	2.61	0.77	0.73	3.14	0.78	0.80	1400	0.520	275	317	18.1	0.0109
					380	1.26	0.74	0.61	1.51	0.78	0.73	1.81	0.78	0.80	1400	0.520	275	317	10.5	
					415	1.44	0.70	0.52	1.62	0.75	0.65	1.86	0.76	0.74	1410	0.520	328	380	11.3	
				60	220	1.84	0.77	0.69	2.32	0.80	0.80	2.91	0.80	0.85	1700	0.430	237	263	15.6	
					440	1.20	0.70	0.58	1.40	0.75	0.70	1.65	0.76	0.78	1720	0.420	322	355	10.5	
	2	1.5	90L	50	220	3.90	0.79	0.64	4.66	0.84	0.76	5.64	0.85	0.82	1430	1.02	316	297	41.2	0.030
					380	2.25	0.79	0.64	2.69	0.84	0.76	3.26	0.85	0.82	1430	1.02	316	297	23.8	
					415	2.41	0.75	0.58	2.80	0.80	0.70	3.29	0.82	0.78	1440	1.01	378	359	26.0	
				60	220	3.64	0.76	0.71	4.55	0.80	0.81	5.40	0.85	0.86	1710	0.85	273	247	38.5	
					440	2.11	0.76	0.61	2.50	0.81	0.73	2.98	0.83	0.80	1730	0.84	367	332	25.7	
	3	2.2	100L	50	220	5.47	0.80	0.66	6.84	0.82	0.78	8.52	0.83	0.82	1420	1.51	268	251	48.1	0.026
					380	3.16	0.80	0.66	3.95	0.82	0.78	4.92	0.83	0.82	1420	1.51	268	251	27.8	
					415	3.54	0.75	0.58	4.11	0.80	0.70	4.83	0.81	0.78	1430	1.50	320	299	30.4	
				60	220	4.65	0.81	0.76	6.20	0.84	0.82	8.16	0.82	0.86	1710	1.25	232	209	44.9	
					440	3.15	0.75	0.61	3.73	0.80	0.73	4.45	0.81	0.80	1730	1.24	311	281	52.0	
	5	3.7	112M	50	220	8.35	0.85	0.68	10.7	0.86	0.79	13.5	0.86	0.83	1420	2.54	289	266	80.0	0.056
					380	4.82	0.85	0.68	6.20	0.86	0.79	7.81	0.86	0.83	1420	2.54	289	266	46.2	
					415	5.17	0.84	0.60	6.24	0.85	0.73	7.61	0.85	0.79	1430	2.52	344	316	50.5	
				60	220	7.54	0.84	0.77	10.1	0.86	0.84	13.2	0.85	0.87	1710	2.11	247	223	75.0	
					440	4.56	0.81	0.66	5.55	0.87	0.75	6.94	0.86	0.81	1730	2.08	335	298	50.1	
	7.5	5.5	132S	50	220	11.2	0.83	0.77	15.5	0.85	0.82	20.0	0.86	0.84	1430	3.75	238	203	102	0.091
					380	6.49	0.83	0.77	8.94	0.85	0.82	11.6	0.86	0.84	1430	3.75	238	203	58.9	
					415	6.94	0.80	0.69	8.63	0.86	0.77	10.9	0.86	0.81	1440	3.72	288	245	64.8	
				60	220	10.3	0.83	0.84	14.5	0.85	0.87	19.3	0.85	0.88	1720	3.11	190	172	85.9	
					440	6.10	0.79	0.75	7.95	0.83	0.82	10.1	0.85	0.85	1740	3.08	266	236	58.4	
	10	7.5	132M	50	220	15.1	0.84	0.78	20.4	0.88	0.82	27.0	0.88	0.83	1430	5.11	261	223	153	0.133
					380	8.73	0.84	0.78	11.8	0.88	0.82	15.4	0.88	0.83	1430	5.11	261	223	88.6	
					415	8.95	0.84	0.69	11.6	0.86	0.78	14.5	0.88	0.81	1440	5.07	316	269	97.4	
				60	220	13.8	0.85	0.84	19.4	0.87	0.87	25.5	0.88	0.88	1720	4.25	208	189	129	
					440	8.02	0.82	0.75	10.4	0.87	0.82	13.2	0.88	0.85	1740	4.20	291	259	87.8	
HT	5	3.7	112M	50	380	4.82	0.85	0.68	6.20	0.86	0.79	7.81	0.86	0.83	1420	2.54	289	266	46.2	0.056
					415	5.17	0.84	0.60	6.24	0.85	0.73	7.61	0.85	0.79	1430	2.52	344	316	50.5	
				60	380	4.35	0.84	0.77	5.83	0.86	0.84	7.62	0.85	0.87	1710	2.11	247	223	43.3	
					440	4.56	0.81	0.66	5.55	0.87	0.75	6.94	0.86	0.81	1730	2.08	335	298	50.1	
	7.5	5.5	132S	50	380	6.49	0.83	0.77	8.94	0.85	0.82	11.6	0.86	0.84	1430	3.75	238	203	58.9	0.091
					415	6.94	0.80	0.69	8.63	0.86	0.77	10.9	0.86	0.81	1440	3.72	288	245	64.8	
				60	380	5.96	0.83	0.84	8.40	0.85	0.87	11.1	0.85	0.88	1720	3.11	190	172	49.6	
					440	6.10	0.79	0.75	7.95	0.83	0.82	10.1	0.85	0.85	1740	3.08	266	236	58.4	
	10	7.5	132M	50	380	8.50	0.85	0.79	11.7	0.88	0.83	15.4	0.88	0.84	1430	5.11	238	204	84.7	0.133
					415	8.80	0.85	0.70	11.5	0.86	0.79	14.4	0.88	0.82	1440	5.07	288	246	93.1	
				60	380	7.81	0.85	0.86	11.2	0.87	0.87	14.6	0.88	0.89	1720	4.25	190	173	71.3	
					440	8.02	0.81	0.76	10.4	0.86	0.83	13.2	0.86	0.86	1740	4.20	265	236	83.9	
	15	11	160M	50	380	12.8	0.90	0.73	16.9	0.91	0.81	21.7	0.91	0.85	1430	7.49	245	239	140	0.26
					415	13.4	0.88	0.65	16.8	0.90	0.76	20.7	0.90	0.82	1440	7.44	290	287	153	
				60	380	11.3	0.90	0.82	15.8	0.91	0.87	20.8	0.90	0.89	1720	6.23	212	207	119	
					440	11.3	0.89	0.72	14.7	0.91	0.81	18.7	0.91	0.85	1740	6.16	285	283	139	
	20	15	160L	50	380	16.9	0.91	0.75	22.4	0.92	0.83	28.7	0.91	0.87	1450	10.08	306	298	219	0.40
					415	17.6	0.89	0.66	22.2	0.91	0.78	27.6	0.91	0.84	1460	10.01	364	358	239	
				60	380	15.3	0.91	0.82	21.2	0.92	0.88	27.7	0.91	0.90	1740	8.40	259	268	190	
					440	15.1	0.90	0.73	19.8	0.91	0.82	24.9	0.92	0.86	1760	8.30	349	363	222	
	25	18.5	180M	50	380	20.5	0.90	0.76	27.4	0.91	0.85	35.1	0.91	0.89	1460	12.34	280	300	255	0.63
					415	22.0	0.87	0.67	27.4	0.89	0.80	33.6	0.90	0.86	1470	12.26	337	365	278	
				60	380	18.6	0.90	0.84	25.9	0.91	0.89	34.0	0.91	0.91	1750	10.30	250	247	210	
					440	18.4	0.89	0.74	23.8	0.91	0.84	30.5	0.91	0.88	1760	10.24	340	338	244	
	30	22	180M	50	380	23.8	0.89	0.79	32.3	0.91	0.86	41.7	0.91	0.89	1460	14.68	263	267	281	0.71
					415	24.9	0.88	0.70	31.8	0.90	0.80	39.8	0.90	0.86	1470	14.58	320	324	307	
				60	380	22.0	0.90	0.85	31.0	0.91	0.89	40.8	0.91	0.91	1750	12.24	225	236	243	
					440	21.3	0.89	0.77	28.4	0.90	0.85	36.2	0.91	0.88	1760	12.18	304	320	282	
	40	30	180L	50	380	32.0	0.91	0.78	43.1	0.92	0.86	56.1	0.92	0.89	1460	20.01	267	332	444	0.99
					415	32.9	0.89	0.71	42.7	0.90	0.81	53.8	0.91	0.86	1470	19.88	318	396	485	
				60	380	29.3	0.90	0.86	41.1	0.91	0.91	54.8	0.91	0.92	1750	16.70	230	288	374	
					440	27.7	0.90	0.79	37.3	0.92	0.86	48.0	0.92	0.89	1760	16.60	308	386	433	
	50	37	200L	50	380	38.8	0.91	0.79	52.1	0.92	0.88	66.9	0.92	0.91	1450	24.85	289	291	567	1.52
					415	40.0	0.89	0.72	50.5	0.91	0.84	63.7	0.92	0.88	1460	24.68	345	347	619	
				60	380	35.1	0.92	0.87	49.7	0.92	0.92	65.9	0.92	0.93	1750	20.59	350	273	499	
					440	34.4	0.91	0.78	45.5	0.93	0.86	58.3	0.93	0.90	1770	20.36	335	368	578	
	60	45	200L	50	380	46.0	0.92	0.80	63.4	0.93	0.87	82.4	0.93	0.89	1450	30.23	270	296	650	1.77
					415	49.3	0.90	0.71	63.0	0.92	0.81	79.1	0.92	0.86	1460	30.02	322	353	710	
				60	380	41.9	0.93	0.88	60.2	0.93	0.91	79.9	0.93	0.92	1750	25.05	235	253	572	
					440	40.9	0.92	0.79	54.2	0.93	0.86	70.4	0.93	0.89	1770	24.76	315	339	662	
	75	55	225S	50	380	56.4	0.93	0.79	77.6	0.94	0.86	101	0.93	0.89	1460	36.69	274	197	710	2.48
					415	59.9	0.90	0.71	77.5	0.91	0.81	97.5	0.91	0.86	1470	36.44	325	236	775	
				60	380	51.5	0.93	0.87	73.7	0.94	0.91	97.9	0.93	0.92	1760	30.44	234	152	592	
					440	49.5	0.93	0.79	67.2	0.94	0.86	86.6	0.94	0.89	1770	30.27	315	205	685	
	100	75	250S	50	380	80.0	92.7	77.9	108	93.4	85.6	139.0	93.3	88.6	1470	49.34	276	273	956	4.36
					415	88.0	90.9	66.1	111	92.4	77.3	137.0	92.7	82.9	1470	49.24	324	328	1040	
				60	380	72.0	92.2	86.1	103	93.0	90.4	135.0	92.8	91.6	1760	41.18	244	224	853	
					440	70.0	91.4	77.1	94	92.8	85.3	120.0	93.1	88.7	1770	40.98	324	304	988	
	125	93	250M	50	380	100.0	93.4	76.8	134	94.0	84.7	173.0	93.7	87.8	1470	61.77	264	234	1190	4.88
					415	113.0	91.3	63.8	140	92.8	75.4	172.0	93.0	81.3	1470	61.57	308	281	1299	
				60	380	90.0	93.7	85.9	127	94.1	90.2	167.0	93.6	91.2	1760	51.68	232	199	1063	
					440	87.0	93.0	76.3	117	94.0	84.7	148.0	94.1	88.1	1770	51.27	308	270	1234	

SB-JR(V) IP22 80M~90L (Thermal Class: B), 100L~132M (Thermal Class: F)
SF-JR(V) IP55 63M~132M (Thermal Class: F), SF-J IP55 160M~225S (Thermal Class: F)
SF-JV IP55 160M~180L (Thermal Class: F)

6-POLE

Type	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load					Torque(%)		Is (A)	Inertia GD² (kg·m²)
	HP	kW				(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	Speed (r/min)	Torque (kg·m)	Tm	Ts		
LT	1/4	0.2	71M	50	220	0.92	0.62	0.46	1.01	0.67	0.58	1.14	0.69	0.67	920	0.21	247	277	4.50	0.0061
					380	0.53	0.62	0.46	0.58	0.68	0.58	0.66	0.69	0.67	920	0.21	247	277	2.60	
					415	0.59	0.59	0.40	0.63	0.65	0.51	0.68	0.68	0.60	930	0.21	296	333	2.81	
				60	220	0.81	0.64	0.51	0.91	0.69	0.63	1.06	0.70	0.71	1100	0.18	213	235	4.16	
					440	0.51	0.58	0.44	0.55	0.65	0.55	0.60	0.68	0.64	1120	0.17	291	319	2.76	
	1/2	0.4	80M	50	220	1.80	0.65	0.45	1.97	0.70	0.57	2.20	0.71	0.67	920	0.42	265	282	9.28	0.0109
					380	1.04	0.65	0.45	1.14	0.70	0.57	1.27	0.71	0.67	920	0.42	265	282	5.36	
					415	1.11	0.61	0.41	1.18	0.69	0.51	1.28	0.71	0.61	930	0.42	301	322	5.70	
				60	220	1.48	0.70	0.51	1.67	0.75	0.63	1.94	0.75	0.72	1100	0.35	233	234	4.86	
					440	0.96	0.63	0.44	1.03	0.70	0.55	1.13	0.73	0.64	1110	0.35	300	301	5.49	
	1	0.75	90L	50	220	2.79	0.71	0.50	3.15	0.76	0.62	3.60	0.78	0.70	940	0.78	252	278	18.5	0.030
					380	1.61	0.71	0.50	1.82	0.76	0.62	2.08	0.78	0.70	940	0.78	252	278	10.7	
					415	1.75	0.68	0.44	1.91	0.74	0.55	2.12	0.77	0.64	950	0.77	302	335	11.6	
				60	220	2.44	0.73	0.55	2.85	0.78	0.66	3.38	0.79	0.74	1130	0.65	215	226	15.4	
					440	1.55	0.68	0.47	1.70	0.74	0.59	1.92	0.77	0.67	1150	0.64	294	306	10.3	
	2	1.5	100L	50	220	4.52	0.78	0.56	5.40	0.81	0.68	6.55	0.81	0.74	930	1.57	244	245	35.5	0.033
					380	2.61	0.78	0.56	3.12	0.81	0.68	3.78	0.81	0.74	930	1.57	244	245	20.5	
					415	2.79	0.77	0.48	3.17	0.82	0.60	3.69	0.84	0.67	940	1.55	291	292	22.4	
				60	220	3.93	0.80	0.63	4.92	0.82	0.73	6.19	0.82	0.78	1110	1.32	206	198	28.8	
					440	2.46	0.76	0.53	2.86	0.81	0.64	3.38	0.82	0.71	1120	1.30	280	264	19.8	
	3	2.2	112M	50	220	6.61	0.82	0.53	7.74	0.85	0.66	9.21	0.84	0.75	940	2.28	266	261	53.7	0.064
					380	3.82	0.82	0.53	4.47	0.85	0.66	5.32	0.84	0.75	940	2.28	266	261	31.0	
					415	4.14	0.82	0.45	4.63	0.84	0.59	5.29	0.85	0.68	950	2.26	315	313	33.7	
				60	220	5.65	0.85	0.60	6.98	0.85	0.73	8.64	0.85	0.79	1120	1.91	227	197	45.9	
					440	3.51	0.81	0.51	4.03	0.84	0.64	4.70	0.85	0.72	1140	1.88	303	266	30.5	
	5	3.7	132S	50	220	9.34	0.84	0.62	11.5	0.86	0.74	14.0	0.86	0.81	940	3.83	230	206	86.1	0.131
					380	5.39	0.84	0.62	6.64	0.86	0.74	8.08	0.86	0.81	940	3.83	230	206	49.7	
					415	5.87	0.83	0.53	6.83	0.86	0.66	8.05	0.85	0.75	950	3.79	273	248	51.7	
				60	220	7.98	0.87	0.70	10.5	0.88	0.79	13.3	0.88	0.83	1130	3.19	195	159	68.2	
					440	4.93	0.85	0.58	5.96	0.87	0.70	7.21	0.87	0.77	1150	3.13	262	215	45.6	
	7.5	5.5	132M	50	220	14.1	0.85	0.60	17.3	0.87	0.72	21.3	0.87	0.78	950	5.64	234	246	135	0.181
					380	8.14	0.86	0.60	10.0	0.87	0.72	12.3	0.87	0.78	950	5.64	234	246	77.8	
					415	9.12	0.82	0.51	10.6	0.85	0.63	12.5	0.86	0.71	960	5.58	279	293	85.0	
				60	220	11.8	0.87	0.70	15.4	0.89	0.79	19.7	0.89	0.82	1140	4.70	204	195	111	
					440	7.26	0.85	0.59	8.7	0.89	0.70	10.5	0.89	0.77	1150	4.66	273	266	74.2	
HT	5	3.7	132S	50	380	5.39	0.84	0.62	6.64	0.86	0.74	8.08	0.86	0.81	940	3.83	237	212	50.5	0.131
					415	5.93	0.83	0.52	6.89	0.86	0.65	8.05	0.85	0.75	950	3.79	280	255	52.5	
				60	380	4.61	0.87	0.70	6.06	0.88	0.79	7.68	0.88	0.83	1130	3.19	200	164	40.0	
					440	4.93	0.85	0.58	5.96	0.87	0.70	7.21	0.87	0.77	1150	3.13	269	221	46.3	
	7.5	5.5	132M	50	380	8.14	0.86	0.60	10.0	0.87	0.72	12.3	0.87	0.78	950	5.64	234	246	77.8	0.181
					415	9.12	0.82	0.51	10.6	0.85	0.63	12.5	0.86	0.71	960	5.58	279	293	85.0	
				60	380	6.83	0.87	0.70	8.89	0.89	0.79	11.4	0.89	0.82	1140	4.7	204	195	64.1	
					440	7.26	0.85	0.59	8.7	0.89	0.70	10.5	0.89	0.77	1150	4.46	273	266	74.2	
	10	7.5	160M	50	380	10.5	0.86	0.63	13.1	0.88	0.74	16.1	0.88	0.80	950	7.69	208	212	85.5	0.37
					415	11.1	0.85	0.55	13.4	0.87	0.67	16.1	0.88	0.74	960	7.61	245	256	93.4	
				60	380	8.71	0.90	0.73	11.8	0.91	0.80	15.4	0.89	0.83	1130	6.46	181	184	73.6	
					440	8.97	0.87	0.63	11.2	0.89	0.74	14.0	0.89	0.79	1150	6.35	243	251	85.3	
	15	11	160L	50	380	14.3	0.89	0.66	18.4	0.90	0.76	23.3	0.90	0.80	960	11.2	204	218	125	0.51
					415	15.8	0.86	0.56	19.2	0.88	0.68	23.0	0.89	0.75	970	11.0	243	260	137	
				60	380	12.6	0.88	0.75	17.0	0.90	0.82	22.2	0.90	0.84	1140	9.4	185	183	109	
					440	12.9	0.89	0.63	16.2	0.90	0.74	20.1	0.91	0.79	1160	9.2	248	241	127	
	20	15	180M	50	380	19.7	0.90	0.64	24.9	0.92	0.75	31.0	0.91	0.80	960	15.2	267	277	209	1.05
					415	21.8	0.88	0.55	26.0	0.89	0.68	31.0	0.90	0.75	970	15.1	316	334	228	
				60	380	17.1	0.92	0.72	22.8	0.93	0.81	29.5	0.92	0.84	1150	12.7	228	234	180	
					440	17.7	0.91	0.61	21.9	0.92	0.73	26.8	0.92	0.79	1170	12.5	306	320	208	
	25	18.5	180L	50	380	21.7	0.90	0.72	28.8	0.90	0.81	37.1	0.90	0.84	960	18.8	213	240	218	1.27
					415	22.3	0.90	0.64	28.2	0.91	0.75	35.2	0.91	0.80	970	18.6	254	290	238	
				60	380	19.9	0.91	0.78	27.6	0.91	0.84	36.5	0.90	0.86	1150	15.7	184	208	191	
					440	19.5	0.91	0.68	25.3	0.92	0.78	32.1	0.92	0.82	1170	15.4	249	284	221	
	30	22	180L	50	380	25.4	0.91	0.72	33.8	0.92	0.81	43.5	0.90	0.85	960	22.3	234	259	276	1.43
					415	26.7	0.90	0.64	33.5	0.91	0.75	41.7	0.91	0.81	970	22.1	279	312	301	
				60	380	23.4	0.92	0.78	32.4	0.91	0.85	42.9	0.90	0.87	1150	18.6	195	210	240	
					440	23.0	0.92	0.68	29.9	0.93	0.78	37.8	0.92	0.83	1170	18.3	264	287	278	
	40	30	200L	50	380	34.5	0.93	0.71	45.9	0.93	0.80	59.1	0.92	0.84	960	30.4	224	256	347	2.11
					415	44.0	0.80	0.60	52.4	0.83	0.72	58.0	0.90	0.80	970	30.1	295	347	402	
				60	380	30.6	0.91	0.82	43.1	0.91	0.87	57.3	0.90	0.88	1150	25.4	188	223	304	
					440	30.5	0.91	0.71	39.9	0.92	0.80	50.8	0.92	0.84	1170	25.0	253	304	352	
	50	37	200L	50	380	43.4	0.92	0.70	57.0	0.94	0.79	73.0	0.92	0.83	960	37.5	251	307	451	2.60
					415	49.1	0.87	0.61	60.0	0.88	0.73	73.0	0.89	0.79	970	37.2	296	370	493	
				60	380	38.2	0.92	0.80	53.1	0.92	0.86	70.0	0.91	0.88	1150	31.3	214	252	390	
					440	38.4	0.92	0.69	49.6	0.94	0.78	62.6	0.93	0.83	1170	30.8	288	344	452	
	60	45	225S	50	380	49.4	0.95	0.73	66.6	0.95	0.81	86.1	0.93	0.85	960	45.7	248	265	548	3.86
					415	55.1	0.89	0.64	68.8	0.91	0.75	85.2	0.91	0.81	975	45.0	292	321	599	
				60	380	44.1	0.92	0.84	62.7	0.93	0.88	83.5	0.91	0.90	1160	37.8	212	246	492	
					440	43.4	0.93	0.73	57.7	0.94	0.82	73.8	0.93	0.86	1170	37.5	285	332	569	

SB-JR(V) IP22 80M~90L (Thermal Class: B), 100L~132M (Thermal Class: F) **4-POLE**

Type	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load					Torque(%)		Is (A)	Inertia GD^2 ($kg \cdot m^2$)
	HP	kW				(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	(A)	Eff(%)	PF(%)	Speed (r/min)	Torque (kg·m)	Tm	Ts		
LT	1	0.75	80M	50	220	2.19	0.74	0.61	2.61	0.77	0.73	3.14	0.78	0.80	1400	0.520	275	317	18.1	0.0109
					380	1.26	0.74	0.61	1.51	0.78	0.73	1.81	0.78	0.80	1400	0.520	275	317	10.5	
					415	1.44	0.70	0.52	1.62	0.75	0.65	1.86	0.76	0.74	1410	0.520	328	380	11.3	
				60	220	1.84	0.77	0.69	2.32	0.80	0.80	2.91	0.80	0.85	1700	0.430	237	263	15.6	
					440	1.20	0.70	0.58	1.40	0.75	0.70	1.65	0.76	0.78	1720	0.420	322	355	10.5	
	2	1.5	90L	50	220	3.90	0.79	0.64	4.66	0.84	0.76	5.64	0.85	0.82	1430	1.02	316	297	41.2	0.030
					380	2.25	0.79	0.64	2.69	0.84	0.76	3.26	0.85	0.82	1430	1.02	316	297	23.8	
					415	2.41	0.75	0.58	2.80	0.80	0.70	3.29	0.82	0.78	1440	1.01	378	359	26.0	
				60	220	3.64	0.76	0.71	4.55	0.80	0.81	5.40	0.85	0.86	1710	0.85	273	247	38.5	
					440	2.11	0.76	0.61	2.50	0.81	0.73	2.98	0.83	0.80	1730	0.84	367	332	25.7	
	3	2.2	100L	50	220	5.47	0.80	0.66	6.84	0.82	0.78	4.92	1.43	0.82	1420	1.51	268	251	48.1	0.026
					380	3.16	0.80	0.66	3.95	0.82	0.78	4.92	0.83	0.82	1420	1.51	268	251	27.8	
					415	3.54	0.75	0.58	4.11	0.80	0.70	4.83	0.81	0.78	1430	1.50	320	299	30.4	
				60	220	4.65	0.81	0.76	6.20	0.84	0.82	8.16	0.82	0.86	1710	1.25	232	209	44.9	
					440	3.15	0.75	0.61	3.73	0.80	0.73	4.45	0.81	0.80	1730	1.24	311	281	52.0	
	5	3.7	112M	50	220	8.35	0.85	0.68	10.7	0.86	0.79	13.5	0.86	0.83	1420	2.54	289	266	80.0	0.056
					380	4.82	0.85	0.68	6.20	0.86	0.79	7.81	0.86	0.83	1420	2.54	289	266	46.2	
					415	5.17	0.84	0.60	6.24	0.85	0.73	7.61	0.85	0.79	1430	2.52	344	316	50.5	
				60	220	7.54	0.84	0.77	10.1	0.86	0.84	13.2	0.85	0.87	1710	2.11	247	223	75.0	
					440	4.56	0.81	0.66	5.55	0.87	0.75	6.94	0.86	0.81	1730	2.08	335	298	50.1	
	7.5	5.5	132S	50	220	12.3	0.87	0.67	15.9	0.88	0.78	19.9	0.88	0.83	1430	3.75	242	226	118	0.091
					380	7.11	0.87	0.67	9.16	0.88	0.78	11.5	0.88	0.83	1430	3.75	242	226	68	
					415	7.99	0.85	0.57	9.63	0.87	0.69	11.6	0.87	0.76	1440	3.72	286	272	75	
				60	220	10.6	0.88	0.77	14.4	0.89	0.84	18.8	0.88	0.87	1720	3.11	208	190	99.6	
					440	6.31	0.87	0.66	7.96	0.89	0.77	9.89	0.89	0.82	1730	3.10	280	256	66.5	
	10	7.5	132M	50	220	16.7	0.87	0.68	20.8	0.90	0.79	26.1	0.89	0.84	1440	5.07	279	304	177	0.133
					380	9.62	0.87	0.68	12.1	0.90	0.79	15.1	0.89	0.84	1440	5.07	279	304	102	
					415	10.4	0.86	0.58	12.5	0.89	0.71	15.1	0.89	0.78	1450	5.04	332	362	111	
				60	220	14.5	0.89	0.76	19.4	0.90	0.85	24.9	0.91	0.87	1730	4.22	231	236	95	
					440	8.86	0.87	0.64	11.0	0.89	0.76	13.4	0.90	0.82	1740	4.20	310	316	102	
HT	5	3.7	112M	50	380	4.82	0.85	0.68	6.20	0.86	0.79	7.81	0.86	0.83	1420	2.54	289	266	46.2	0.056
					415	5.17	0.84	0.60	6.24	0.85	0.73	7.61	0.85	0.79	1430	2.52	344	316	50.5	
				60	380	4.35	0.84	0.77	5.83	0.86	0.84	7.62	0.85	0.87	1710	2.11	247	223	43.3	
					440	4.56	0.81	0.66	5.55	0.87	0.75	6.94	0.86	0.81	1730	2.08	335	298	50.1	
	7.5	5.5	132S	50	380	7.11	0.87	0.67	9.16	0.88	0.78	11.5	0.88	0.83	1430	3.75	247	231	69	0.091
					415	7.99	0.85	0.57	9.63	0.87	0.69	11.6	0.87	0.76	1440	3.72	292	278	76	
				60	380	6.12	0.89	0.77	8.31	0.90	0.84	10.9	0.89	0.87	1720	3.11	212	194	58	
					440	6.31	0.87	0.66	7.96	0.89	0.77	9.89	0.89	0.82	1730	3.10	285	261	67	
	10	7.5	132M	50	380	9.62	0.87	0.68	12.1	0.90	0.79	15.1	0.89	0.84	1440	5.07	279	304	102	0.133
					415	10.4	0.86	0.58	12.5	0.89	0.71	15.1	0.89	0.78	1450	5.04	332	362	111	
				60	380	8.37	0.89	0.76	11.2	0.90	0.85	14.4	0.91	0.87	1730	4.22	231	236	95	
					440	8.86	0.87	0.64	11.0	0.89	0.76	13.4	0.90	0.82	1740	4.20	210	316	102	

SB-JR 80M~132M HORIZONTAL TYPE

DRIP-PROOF TYPE, IP 22 DEGREES OF PROTECTION



SB-JR 1HP 4P 80M

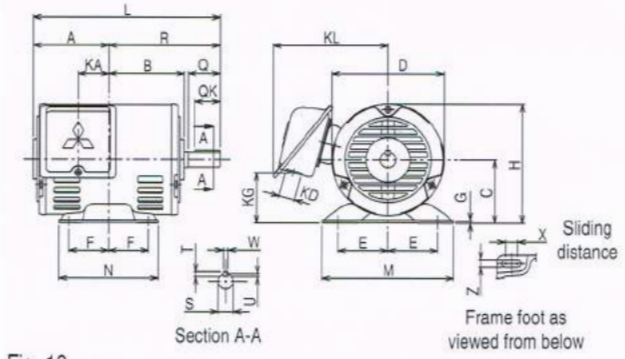


Fig. 10

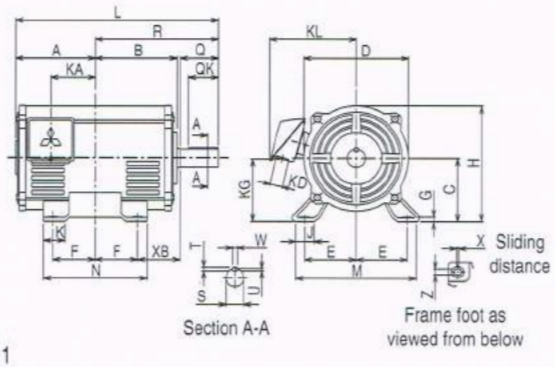


Fig. 11

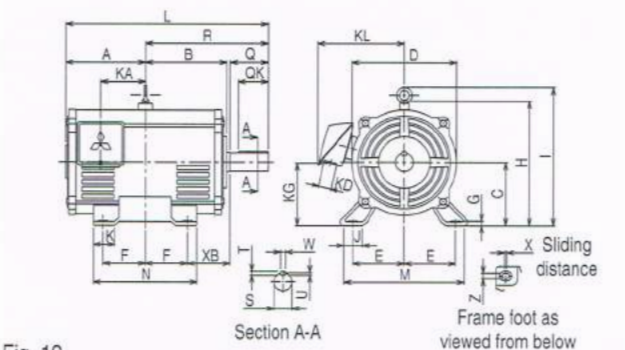


Fig. 12

Dimensions (mm)

Model	Frame No.	Output HP (kW)			Fig.	Motor																		Terminal box			
		2-Pole	4-Pole	6-Pole		A	B	C*	D	E	F	G	H	I	J	K	L	M	ML	N	X	XB	Z	KA	KG	KD	KL
SB-JR	80M	1(0.75)	1(0.75)	1/2(0.4)	10	95	95	80	141	62.5	50	3.2	150.5	-	-	-	235	160	-	125	15	50	9	39.5	63	27	144
	90L	2(1.5), 3(2.2)	2(1.5)	1(0.75)		112.5	112.5	90	168	70	62.5	4	174	-	-	-	281	175	-	150	15	56	9	53	76	27	157
	100L	-	3(2.2)	2(1.5)	11	130	128	100	168	80	70	6.5	184	-	40	45	323	200	212	180	4	63	12	65	86	27	157
	112M	5(3.7)	5(3.7)	3(2.2)	12	136	135	112	190	95	70	6.5	220	254	40	45	336	230	242	180	4	70	12	69	101	27	168
	132S	7.5(5.5), 10(7.5)	7.5(5.5)	5(3.7)		153	152	132	220	108	70	6.5	255	289	40	45	392	256	268	180	4	89	12	75	118	27	185
	132M	-	10(7.5)	7.5(5.5)		172	171	132	220	108	89	6.5	255	289	40	45	430	256	268	218	4	89	12	94	118	27	185

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SB-JR	80M	40	32	140	19 j6	6	3.5	6	6204ZZ	6203ZZ	9	11	11	295 x 270 x 206	10	12	12
	90L	50	40	168.5	24 j6	7	4	8	6205ZZ	6204ZZ	16, 16	16	16	350 x 280 x 350	17	17	17
	100L	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	-	22	24	409 x 355 x 300	-	23	25
	112M	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	27	30	31	477 x 399 x 315	31	34	35
	132S	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	38, 42	40	41	526 x 403 x 347	42, 46	44	45
	132M	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	-	51	52	526 x 403 x 347	-	55	56

SB-JRV 80M~132M VERTICAL TYPE

DRIP-PROOF TYPE, IP 22 DEGREES OF PROTECTION



SB-JRV 10HP 4P 132M

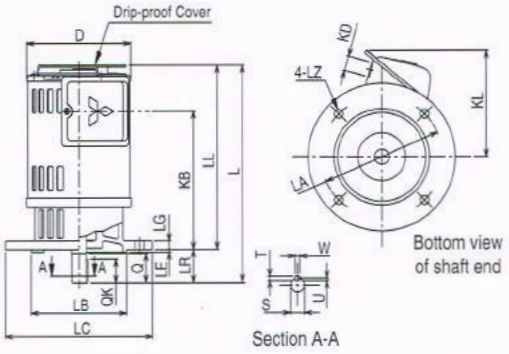


Fig. 13

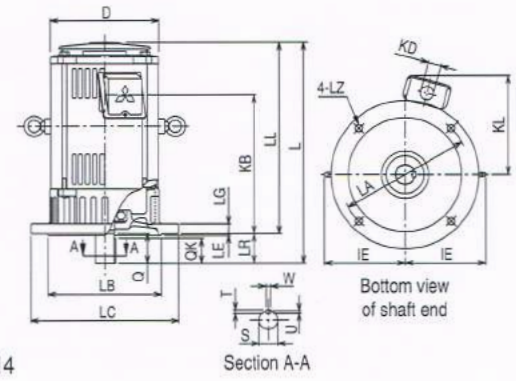


Fig. 14

Dimensions (mm)

Model	Flange No.	Frame No.	Output HP (kW)			Fig.	Motor										Terminal box		
			2-Pole	4-Pole	6-Pole		D	IE	LA	LB	LC	LE	LG	LL*	LZ	L*	KB	KD	KL
SB-JRV	FF165	80M	1(0.75)	1(0.75)	1/2(0.4)	13	141	-	165	130 j6	200	3.5	12	234(227)	12	274(267)	171.5	27	145
	FF165	90L	2(1.5), 3(2.2)	2(1.5)	1(0.75)		168	-	165	130 j6	200	3.5	12	270(261)	12	320(311)	201.5	27	158
	FF215	100L	-	3(2.2)	2(1.5)	14	168	-	215	180 j6	250	4	16	320(300)	14.5	380(360)	237	27	155
	FF215	112M	5(3.7)	5(3.7)	3(2.2)		190	141.5	215	180 j6	250	4	16	352(329)	14.5	412(389)	263	27	166
	FF265	132S	7.5(5.5), 10(7.5)	7.5(5.5)	5(3.7)		220	156.5	265	230 j6	300	4	20	393(369)	14.5	473(449)	292	27	181
	FF265	132M	-	10(7.5)	7.5(5.5)		220	156.5	265	230 j6	300	4	20	431(407)	14.5	511(487)	330	27	181

* ( ) is dimension of vertical type without drip-proof cover.

Model	Flange No.	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
			LR	Q	QK	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SB-JRV	FF165	80M	40	40	32	19 j6	6	3.5	6	6204ZZ	6203ZZ	12	14	14	305 x 260 x 235	14	16	16
	FF165	90L	50	50	40	24 j6	7	4	8	6205ZZ	6204ZZ	19, 19	19	19	370 x 280 x 235	21, 21	21	21
	FF215	100L	60	60	45	28 j6	7	4	8	6206ZZ	6205ZZ	-	28	30	430 x 340 x 330	-	30	32
	FF215	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	37	40	41	390 x 387 x 354	41	44	45
	FF265	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	52, 56	54	55	569 x 427 x 384	59, 63	61	62
	FF265	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	-	67	68	607 x 427 x 384	-	74	75

SF-JR 63M~90L HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP 44 DEGREES OF PROTECTION



SF-JR 1HP 4P 80M

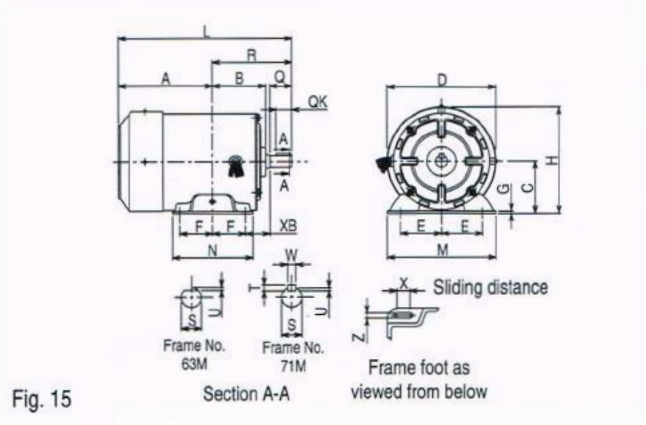


Fig. 15

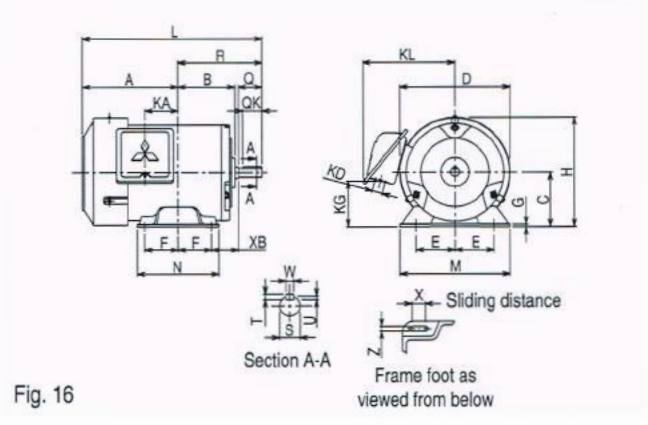


Fig. 16

Dimensions (mm)

Model	Frame No.	Output HP (kW)	Pole	Fig.	Motor														Terminal box			
					A	B	C*	D	E	F	G	H	L	M	N	X	XB	Z	KA	KG	KD	KL
SF-JR	63M	1/4(0.2)	4	15	113	77	63	127	50	40	2.3	127	216	135	100	12	40	7	-	-	-	-
	71M	1/2(0.4)			118	87	71	148	56	45	3.2	145	238	148	110	18	45	7	-	-	-	-
	80M	1(0.75)		16	122	95	80	166	62.5	50	3.2	166	262	160	125	15	50	9	39.5	63	27	145
	90L	2(1.5)			143	114	90	188	70	62.5	4	187	311.5	175	150	15	56	9	53	76	27	158

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
		Q	QK	R	S	T	U	W	Drive end	Opposite			
SF-JR	63M	23	-	103	11 h6	-	1	-	6201ZZ	6201ZZ	5.6	245 x 165 x 170	6
	71M	30	25	120	14 j6	5	3	5	6202ZZ	6201ZZ	8.2	270 x 200 x 185	8.6
	80M	40	32	140	19 j6	6	3.5	6	6204ZZ	6203ZZ	11	315 x 270 x 206	11.7
	90L	50	40	168.5	24 j6	7	4	8	6205ZZ	6204ZZ	20	368 x 280 x 226	20

SF-JR 63M~132M HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP 55 DEGREES OF PROTECTION



SF-JR 3HP 4P 100L

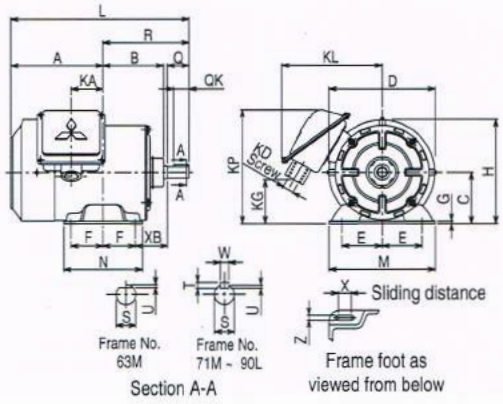


Fig. 17

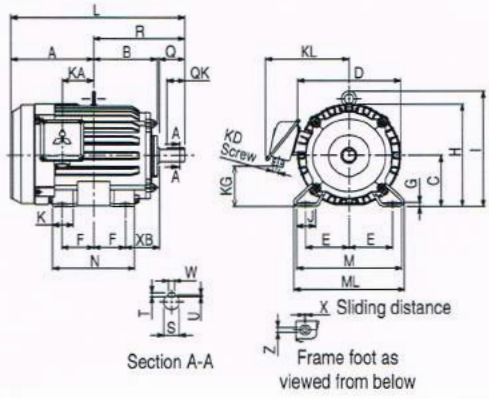


Fig. 18

Dimensions (mm)

Model	Frame No.	Output HP (kW)			Fig.	Motor																		Terminal box				
		2-Pole	4-Pole	6-Pole		A	B	C*	D	E	F	G	H	I	J	K	L	M	ML	N	X	XB	Z	KA	KG	KD	KL	KP**
SF-JR	63M	1/4(0.2)	1/4(0.2)	-	17	121.4	73.6	63	130	50	40	2.3	126.3	-	-	-	224.4	135	-	100	12	40	7	38.4	75	PF1/2	130	162
	71M	1/2(0.4)	1/2(0.4)	1/4(0.2)		128.5	83	71	147.6	56	45	3.2	144.8	-	-	-	248.5	148	-	110	18	45	7	44.5	67	PF1/2	140	161
	80M	1(0.75)	1(0.75)	1/2(0.4)		122	98	80	161.6	62.5	50	3.2	165.4	-	-	-	262	160	-	125	15	50	9	39.5	38	PF3/4	145	-
	90L	2(1.5), 3(2.2)	2(1.5)	1(0.75)		143	117	90	183.6	70	62.5	4	186.3	-	-	-	311.5	175	-	150	15	56	9	53	59	PF3/4	158	-
	100L	-	3(2.2)	2(1.5)	18	173	131	100	207	80	70	6.5	203.5	230	40	45	366	200	212	180	4	63	12	65	64	PF3/4	170	-
	112M	5(3.7)	5(3.7)	3(2.2)		181	138	112	228	95	70	6.5	226	253	40	45	381	230	242	180	4	70	12	69	87	PF3/4	182	-
	132S	7.5(5.5), 10(7.5)	7.5(5.5)	5(3.7)		211.5	155	132	266	108	70	6.5	265	288	40	45	450.5	256	268	180	4	89	12	75	96	PF1	210	-
	132M	-	10(7.5)	7.5(5.5)		230.5	174	132	266	108	89	6.5	265	288	40	45	488.5	256	268	218	4	89	12	94	96	PF1	210	-

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

** This dimension is for model which KP > H only.

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF-JR	63M	23	-	103	11 h6	-	1	-	6201ZZ	6201ZZ	5.3	5.6	-	245 x 221 x 193	5.7	6	-
	71M	30	25	120	14 j6	5	3	5	6202ZZ	6201ZZ	7	8.2	8	275 x 256 x 180	7.4	8.6	8.4
	80M	40	32	140	19 j6	6	3.5	6	6204ZZ	6203ZZ	10.5	11	11	315 x 270 x 206	11.2	11.7	11.7
	90L	50	40	168.5	24 j6	7	4	8	6205ZZ	6204ZZ	17, 20.5	20	19.5	368 x 280 x 226	17.7, 21.2	20.7	20.2
	100L	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	-	24	26	430 x 355 x 300	-	25	27
	112M	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	33	36	37	477 x 399 x 315	40	42	44
	132S	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	47, 55	48	50	579 x 435 x 347	55, 63	56	58
	132M	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	-	58	61	579 x 435 x 347	-	66	69

SF-J 160M~250M HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP 55 DEGREES OF PROTECTION



SF-J 75HP 4P 225S

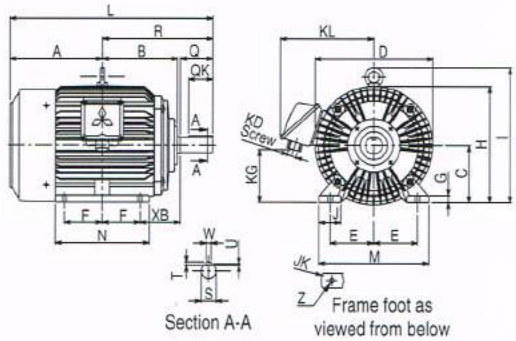


Fig. 19

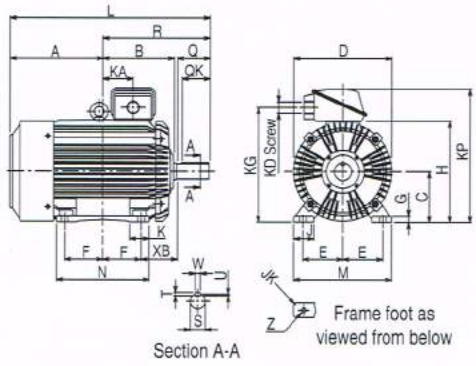


Fig. 20

Dimensions (mm)

Model	Frame No.	Output HP (kW)			Fig.	Motor																Terminal box				
		2-Pole	4-Pole	6-Pole		A	B	C*	D	E	F	G	H	I	J	JK	K	L	M	N	XB	Z	KA	KG	KD	KL	KP
SF-J	160M	15(11), 20(15)	15(11)	10(7.5)	19	252	207	160	324	127	105	20	322	373	55	R6	-	575	310	260	108	15	-	127	PF1 1/4	271	-
	160L	25(18.5)	20(15)	15(11)		274	229	160	324	127	127	20	322	373	55	R6	-	619	310	304	108	15	-	127	PF1 1/4	271	-
	180M	30(22)	25(18.5), 30(22)	20(15)		294.5	239	180	376	139.5	120.5	22	367	427	70	R6	-	646	350	300	121	15	-	151	PF1 1/2	295	-
	180L	40(30)	40(30)	25(18.5), 30(22)		313.5	258	180	376	139.5	139.5	22	367	427	70	R6	-	684	350	338	121	15	-	151	PF1 1/2	295	-
	200L	50(37), 60(45)	50(37), 60(45)	40(30), 50(37)	20	370.5	281	200	410	159	152.5	25	405	-	80	R6	78	(766) 796	390	369	133	18.5	120	476	PF2	-	550
	225S	75(55)	75(55)	60(45)		380	287.5	225	459	178	143	28	457	-	80	R8	82	(782) 812	430	350	149	18.5	120	528	PF2	-	602
	250S	-	100(75)	-		417.5	318.7	250	495	203	155.5	30	498	-	80	R8	95	881	486	387	168	24	136.5	560	PF2 1/2	-	643
	250M	-	125(93)	-		436.5	337.7	250	495	203	174.5	30	498	-	80	R8	95	919	486	425	168	24	155.5	560	PF2 1/2	-	643

* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF-J	160M	110	90	323	42 k6	8	5	12	6309ZZ	6308ZZ	105, 115	107	107	743 x 601 x 494	126, 136	128	128
	160L	110	90	345	42 k6	8	5	12	6309ZZ	6308ZZ	145	135	135	787 x 601 x 494	166	156	156
	180M	110	90	351.5	48 k6	9	5.5	14	6311ZZ	6310ZZ	190	185, 195	195	814 x 651 x 548	214	209, 219	219
	180L	110	90	370.5	55 m6	10	6	16	6312ZZ	6310ZZ	220	230	220, 235	852 x 651 x 548	244	254	244, 259
	200L	(110) 140	(90) 110	(395.5) 425.5	(55 m6) 60 m6	(10) 11	(6) 7	(16) 18	(6312ZZC3) 6313ZZ	(6311ZZC3) 6311ZZ	280, 195	285, 310	295, 340	964 x 542 x 691	307, 222	312, 337	322, 367
	225S	(110) 140	(90) 110	(402) 432	(55 m6) 65 m6	(10) 11	(6) 7	(16) 18	(6312ZZC3) 6315ZZ	(6312ZZC3) 6312ZZ	315	345	370	980 x 591 x 774	345	375	400
	250S	140	110	463.5	75 m6	12	7.5	20	6318	6315ZZ	-	490	-	1030 x 607 x 824	-	505	-
	250M	140	110	482.5	75 m6	12	7.5	20	6318	6315ZZ	-	519	-	1030 x 607 x 824	-	534	-

( ) is dimension for 2-pole motors.

SF-JRV 63M~132M & **SF-JV** 160M~180L VERTICAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP 55 DEGREES OF PROTECTION



SF-JRV 10HP 4P 132M

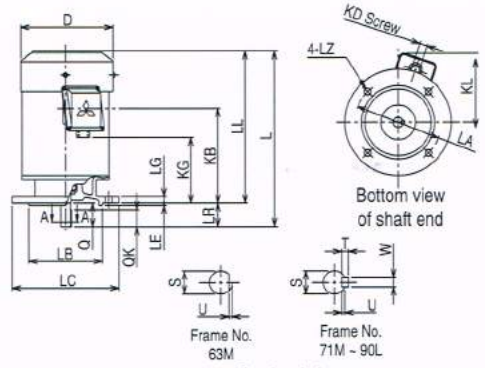


Fig. 21

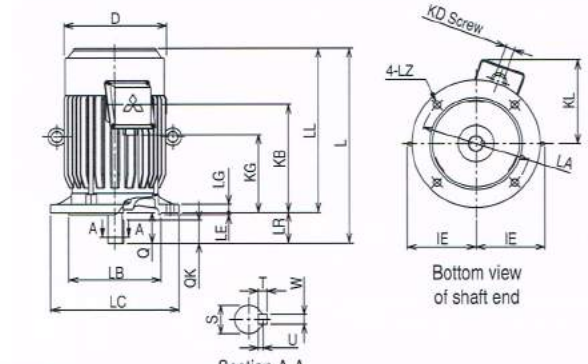


Fig. 22

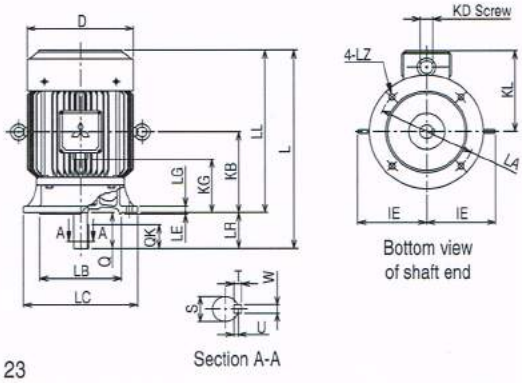


Fig. 23

Dimensions (mm)

Model	Flange No.	Frame No.	Output HP (kW)			Fig.	Motor										Terminal box		
			2-Pole	4-Pole	6-Pole		D	IE	LA	LB	LC	LE	LG	LL	LZ	L	KD	KG	KL
SF-JRV	FF130	63M	1/4(0.2)	1/4(0.2)	-	21	127	-	130	110 j6	160	3.5	10	208	10	231	PF1/2	58	125
	FF130	71M	1/2(0.4)	1/2(0.4)	1/4(0.2)		148	-	130	110 j6	160	3.5	10	229	10	259	PF1/2	80	138
	FF165	80M	1(0.75)	1(0.75)	1/2(0.4)		166	-	165	130 j6	200	3.5	12	226	12	266	PF3/4	78	144
	FF165	90L	2(1.5), 3(2.2)	2(1.5)	1(0.75)		186.3	-	165	130 j6	200	3.5	12	288.5	12	338.5	PF3/4	133	156
	FF215	100L	-	3(2.2)	2(1.5)	22	207	130	215	180 j6	250	4	16	321	14.5	381	PF3/4	148	169
	FF215	112M	5(3.7)	5(3.7)	3(2.2)		230	141	215	180 j6	250	4	16	351	14.5	411	PF3/4	174	180
	FF265	132S	7.5(5.5), 10(7.5)	7.5(5.5)	5(3.7)		266	156	265	230 j6	300	4	20	392.5	14.5	472.5	PF1	173	213
	FF265	132M	-	10(7.5)	7.5(5.5)		266	156	265	230 j6	300	4	20	430.5	14.5	510.5	PF1	211	213
SF-JV	FF300	160M	15(11), 20(15)	15(11)	10(7.5)	23	324	213	300	250 j6	350	5	20	500	18.5	610	PF1 1/4	147	259
	FF300	160L	25(18.5)	20(15)	15(11)		324	213	300	250 j6	350	5	20	544	18.5	654	PF1 1/4	169	259
	FF350	180M	30(22)	25(18.5), 30(22)	20(15)		376	247	350	300 j6	400	5	20	576	18.5	686	PF1 1/2	176	284
	FF350	180L	40(30)	40(30)	25(18.5), 30(22)		376	247	350	300 j6	400	5	20	614	18.5	724	PF1 1/2	195	284

Model	Flange No.	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
			LR	Q	QK	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF-JRV	FF130	63M	23	23	-	11 h6	-	1	-	6201ZZ	6201ZZ	6.5	6.6	-	318 x 256 x 180	6.8	6.9	-
	FF130	71M	30	30	25	14 j6	5	3	5	6202ZZ	6201ZZ	8.0	9.2	9.0	318 x 256 x 180	8.4	9.8	9.4
	FF165	80M	40	40	32	19 j6	6	3.5	6	6204ZZ	6203ZZ	13	14	14	368 x 280 x 226	13.5	14.5	14.5
	FF165	90L	50	50	40	24 j6	7	4	8	6205ZZ	6204ZZ	19.5, 23	22.5	21.5	425 x 280 x 226	19.8, 23.8	23	22.5
	FF215	100L	60	60	45	28 j6	7	4	8	6206ZZ	6205ZZ	-	28	29	456 x 355 x 300	-	29.5	31.5
	FF215	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	37	40	42	507 x 401 x 357	44	47	49
	FF265	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	55, 63	56	58	569 x 459 x 386	63, 71	64	66
	FF265	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	-	66	68	637 x 459 x 386	-	74	76
SF-JV	FF300	160M	110	110	90	42 k6	8	5	12	6309ZZ	6308ZZ	110, 120	110	110	778 x 602 x 557	134, 144	134	134
	FF300	160L	110	110	90	42 k6	8	5	12	6309ZZ	6308ZZ	150	140	140	822 x 602 x 557	174	164	164
	FF350	180M	110	110	90	48 k6	9	5.5	14	6311ZZ	6310ZZ	195	190, 200	200	854 x 652 x 610	222	217, 227	227
	FF350	180L	110	110	90	55 m6	10	6	16	6312ZZ	6310ZZ	225	235	225, 240	892 x 652 x 610	252	262	252, 267

BRAKE MOTOR

Standard specifications

Item			Specification		
Motor	Voltage and frequency		LT: 220/380~415V 50Hz, 220/440V 60Hz (direct starting)		
	Enclosure construction		Totally enclosed fan cooled type		
	Degrees of protection		IP55		
	Method of cooling		IC411		
	Rating		S1 (continuous)		
	Model	Construction	Horizontal	Flange	Vertical
		Type	SF-JRB	SF-JRFB	SF-JRVB
	Frame No.		63M~132M		63M~112M
	Output HP (kW)	4 pole	1/4(0.2)~10(7.5)		1/4(0.2)~5(3.7)
		6 pole	1/4(0.2)~7.5(5.5) (71M~132M)		1/4(0.2)~3(2.2) (71M~112M)
	Frame material		Steel plate		
	Thermal class		F		
	Terminal		6 lead wires with terminal block		
	Direction of rotation		Counterclockwise (CCW), viewed from shaft-end side		
	Circumstance conditions	Ambient temperature	-20 ~ +40 °C		
		Ambient humidity	95% RH or less		
		Altitude	1,000m above sea level or less		
		Environment	No bursting/erosive gas or vapor		
	Coating color		Munsell N5.5 (gray)		
	Conformed standard		IEC 60034-1, JEC-2137-2000		
Brake	Damping system		Non-excited damping type (spring damping type)		
	Damping torque		2~75 N m (150%)		
	Voltage and frequency		AC 220V 50Hz, 220V 60Hz (brake with rectifier)		
	Thermal class		F		
	Mechanical life		More than 1 million operations		
	Conformed standard		TES 1111		

Brake characteristics

Brake type		Rated damping torque (N·m)	Allowable damping equivalent (kJ/min)	Electromagnetic characteristic (20°C)		Electromagnetic stroke		Brake motor GD^2 * ($kg·m^2$)	
				Input (W)	Current (DC A)	Initial (mm)	Adjustable limit (mm)	4 pole	6 pole
TB-2		2	2.3	23	0.19	0.15	0.4	0.0041	
TB-4		4	2.9	26	0.20	0.15	0.4	0.0063	
TB-7.5		7.5	3.2	40	0.26	0.15	0.5	0.0110	
TB-15		15	5.1	38	0.33	0.2	0.5	0.0310	
TB-22		22	7.2	43	0.37	0.2	0.5	0.0280	0.0340
TB-37		37	10.1	55	0.50	0.2	0.55	0.0590	0.0680
TB-75	132S	75	11.1	250/17**	2.2/0.55**	0.25	1.2	0.0960	0.1400
	132M							0.1400	0.1900

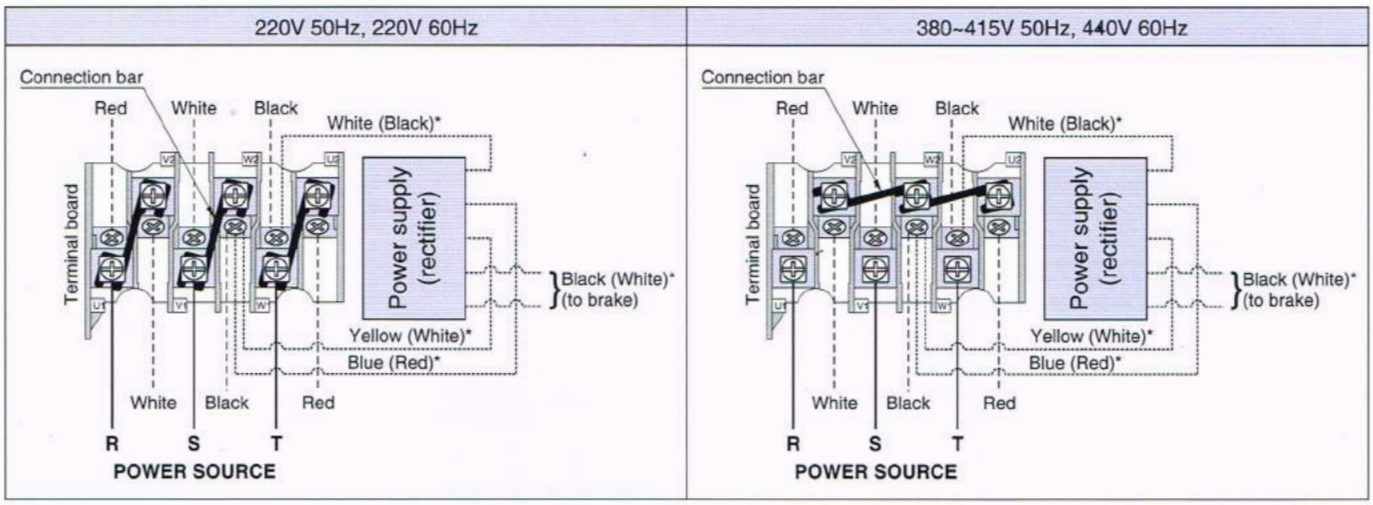
* Brake motor GD^2 includes motor driven shaft GD^2 and brake GD^2
** The first number is the impulse value, the second number is at steady state

Characteristics and performance

LT (220/380~415V 50Hz, 220/440V 60Hz) SF-JRB / SF-JRFB 63M~132M SF-JRVB 63M~112M

Pole	Frame No.	Output		Brake type	Full load current (A) / Full load revolution (r/min)				
		HP	kW		220V 50Hz	380V 50Hz	415V 50Hz	220V 60Hz	440V 60Hz
4	63M	1/4	0.2	TB-2	1.11 / 1430	0.64 / 1430	0.69 / 1440	0.97 / 1730	0.61 / 1750
	71M	1/2	0.4	TB-4	2 / 1410	1.15 / 1410	1.2 / 1430	1.8 / 1700	1 / 1730
	80M	1	0.75	TB-7.5	3.3 / 1400	1.9 / 1400	1.95 / 1410	3 / 1700	1.7 / 1720
	90L	2	1.5	TB-15	5.9 / 1430	3.4 / 1430	3.4 / 1440	5.5 / 1710	3.1 / 1730
	100L	3	2.2	TB-22	8.7 / 1420	5 / 1420	4.9 / 1430	8.5 / 1710	4.6 / 1730
	112M	5	3.7	TB-37	13.7 / 1420	7.9 / 1420	7.7 / 1430	13.5 / 1710	7.2 / 1730
	132S	7.5	5.5	TB-75	20.4 / 1430	11.8 / 1430	11.1 / 1440	19.9 / 1720	10.3 / 1740
	132M	10	7.5	TB-75	27 / 1430	15.4 / 1430	14.6 / 1440	26 / 1720	13.5 / 1740
6	71M	1/4	0.2	TB-4	1.21 / 920	0.7 / 920	0.7 / 930	1.12 / 1100	0.65 / 1120
	80M	1/2	0.4	TB-7.5	2.25 / 920	1.3 / 920	1.3 / 930	2.1 / 1100	1.2 / 1110
	90L	1	0.75	TB-15	3.6 / 940	2.1 / 940	2.2 / 950	3.5 / 1130	2 / 1150
	100L	2	1.5	TB-22	6.6 / 930	3.8 / 930	3.7 / 940	6.2 / 1110	3.4 / 1120
	112M	3	2.2	TB-37	9.5 / 940	5.5 / 940	5.4 / 950	9 / 1120	5.1 / 1140
	132S	5	3.7	TB-75	15.2 / 940	8.8 / 940	8.4 / 950	14.2 / 1130	7.8 / 1150
	132M	7.5	5.5	TB-75	22 / 950	12.8 / 950	13 / 960	21 / 1140	11.5 / 1150

Connection



---------- Motor's lead wire

..... Rectifier's lead wire

——— Power source's lead wire

* Color of rectifier's lead wire in ( ) is for 132S, 132M motor.

Note: 1. Y-Δ starting is not allowable.

2. The difference of these 2 cases of connection is only at connection bar position.

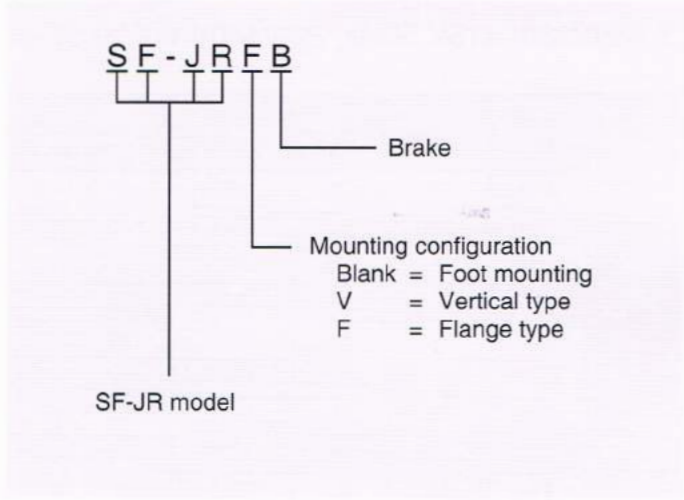
Feature and benefits

Low noise level
The noise level when braking operation is proceeded is not over 75dB

Safety brake
Brake rated damping torque is about 150% of motor rated torque, enhance braking performance

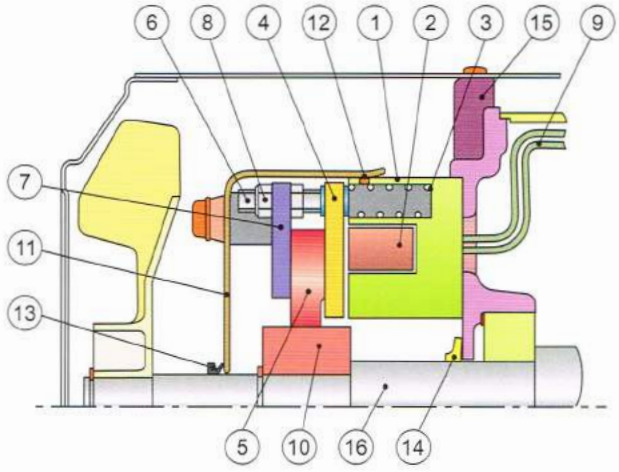
IP55 degrees of protection
Dust and water jet proof structure of both motor and brake body is excellent for operation at outdoor or dusty site.

Significance of type designations



Brake Structure

1	Fixed core	9	Brake lead wire
2	Coil	10	Hub
3	Braking spring	11	Brake cover
4	Armature	12	O-ring
5	Disc (lining)	13	V-ring
6	Stopper bolt	14	Fringer
7	Brake plate	15	Motor bracket
8	Nut (for adjustment)	16	Motor shaft

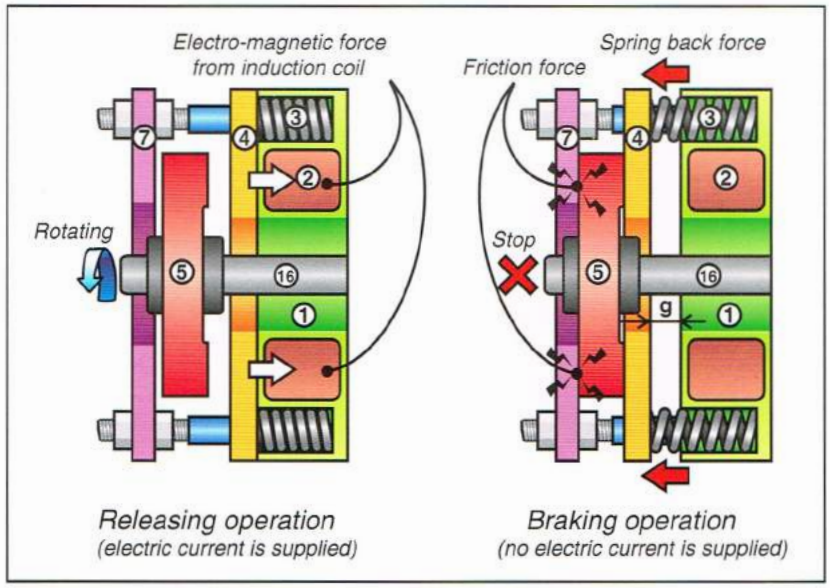


The brake's fixed core (1) and coil (2) are relative to the armature (4) fixed with installation screws to the bracket (15) on the motor's counter-load side. Braking spring (3) is mounted on the fixed core (1). The disc (5) is installed on the motor shaft (16) via the hub (10). Stopping bolt (6) fixes the brake plate (7) with the nut (8) that is used to adjust the gap (g) between the armature (4) and fixed core (1). The brake cover (11) is fixed to the brake plate (7) with the screw to protect brake body from water. O-ring (12) between brake cover (11) and fixed core (1) prevent dripping water from seeping inside the brake. V-ring (13) and fringer (14) those rotate with shaft shake the water dripping off before seeping inside the brake and motor.

Brake operation

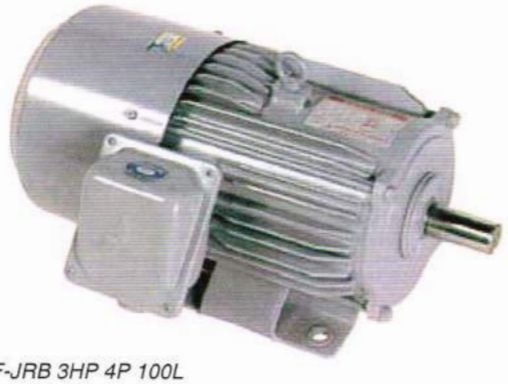
RELEASING OPERATION
When electric current is supplied to the coil(2), the electro-magnetic force is occurred. This effects the armature(4) overcomes pressing force of braking spring(3) so the armature(4) is attracted to the fixed core(1). The gap(g) is disappeared and a clearance is formed between the armature(4) and disc(5), freeing the disc(5) and releasing the brake. In this state, the motor shaft(16) can be rotated.

BRAKING OPERATION
When the electric current to the coil(2) is shut off, there is not electromagnetic force. The armature(4) is released and pressed back by force of braking spring(3). The armature(4) presses the disc(5) against brake plate(7) surface and braking are applied with frictional torque. In this manner, when the fixed core(1) is in the non-excited state, the brake is always applied.



SF-JRB 63M~132M

HORIZONTAL TYPE BRAKE MOTOR



SF-JRB 3HP 4P 100L

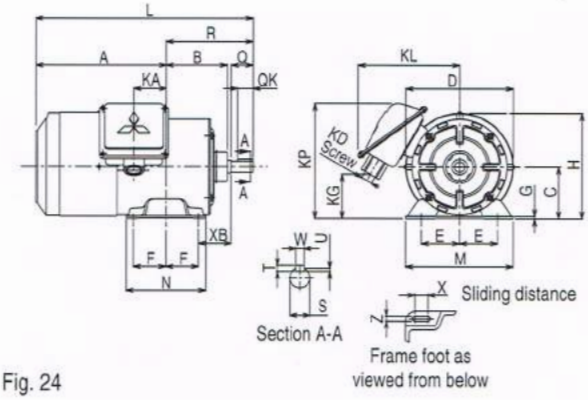


Fig. 24

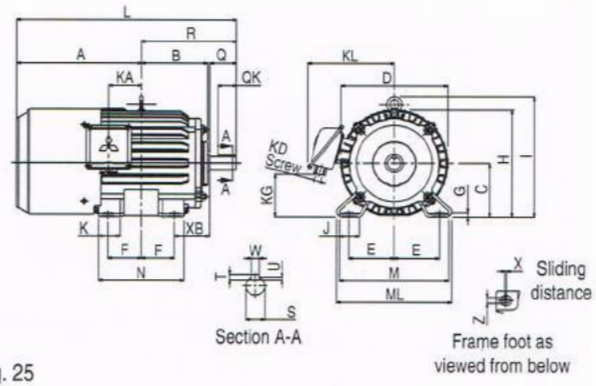


Fig. 25

Dimensions (mm)

Model	Frame No.	Output HP (kW)		Brake type	Fig.	Motor																	
		4-Pole	6-Pole			A	B	C*	D	E	F	G	H	I	J	K	L	M	ML	N	X	XB	Z
SF-JRB	63M	1/4(0.2)	-	TB-2	24	173	73.6	63	128	50	40	2.3	126.9	-	-	-	276	135	-	100	12	40	7
	71M	1/2(0.4)	1/4(0.2)	TB-4		178.5	83	71	150	56	45	3.2	145.6	-	-	-	298.5	148	-	110	18	45	7
	80M	1(0.75)	1/2(0.4)	TB-7.5		191	98	80	168	62.5	50	3.2	161.6	-	-	-	331	160	-	125	15	50	9
	90L	2(1.5)	1(0.75)	TB-15		218.5	117	90	189	70	62.5	4	182.6	-	-	-	387	175	-	150	15	56	9
	100L	3(2.2)	2(1.5)	TB-22	25	250	131	100	213	80	70	6.5	203.5	230	40	45	443	200	212	180	4	63	12
	112M	5(3.7)	3(2.2)	TB-37		262	138	112	232	95	70	6.5	226	253	40	45	462	230	242	180	4	70	12
	132S	7.5(5.5)	5(3.7)	TB-75		287.5	155	132	272	108	70	6.5	265	288	40	45	526.5	256	268	180	4	89	12
	132M	10(7.5)	7.5(5.5)	TB-75		306.5	174	132	272	108	89	6.5	265	288	40	45	564.5	256	268	218	4	89	12

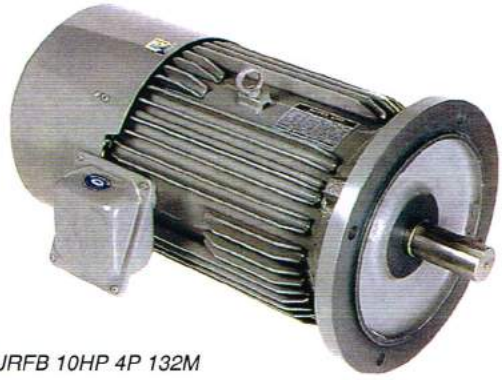
* The perpendicular variation of tolerance for the shaft center is $^{0}_{-0.5}$

Model	Frame No.	Terminal box					Shaft end							Bearing No.		Approx. weight (kg)		Approximate packing dimensions (LxWxH)	Packing weight (kg)	
		KA	KG	KD	KL	KP**	Q	QK	R	S	T	U	W	Drive end	Opposite	4-Pole	6-Pole		4-Pole	6-Pole
SF-JRB	63M	38.4	69	PF 1/2	153	175	23	20	103	11 h6	4	2.5	4	6201ZZ	6201ZZ	8	-	315 x 270 x 206	8.7	-
	71M	44.5	53	PF 1/2	165	168	30	25	120	14 j6	5	3	5	6202ZZ	6202ZZ	11	11	315 x 270 x 206	11.7	11.7
	80M	39.5	32	PF 3/4	167	-	40	32	140	19 j6	6	3.5	6	6204ZZ	6204ZZ	15	15	368 x 280 x 226	16	16
	90L	53	46	PF 3/4	180	-	50	40	168.5	24 j6	7	4	8	6205ZZ	6205ZZ	25	24	430 x 355 x 300	26	25
	100L	65	59	PF 3/4	192	-	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	31	33	579 x 435 x 347	39	41
	112M	69	74	PF 3/4	203	-	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	43	45	579 x 435 x 347	51	53
	132S	75	84	PF 1	242	-	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	58	60	650 x 450 x 370	67	69
	132M	94	84	PF 1	242	-	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	69	72	650 x 450 x 370	78	81

** This dimension is for model which KP > H only.

SF-JRFB 63M~132M

FLANGE TYPE BRAKE MOTOR



SF-JRFB 10HP 4P 132M

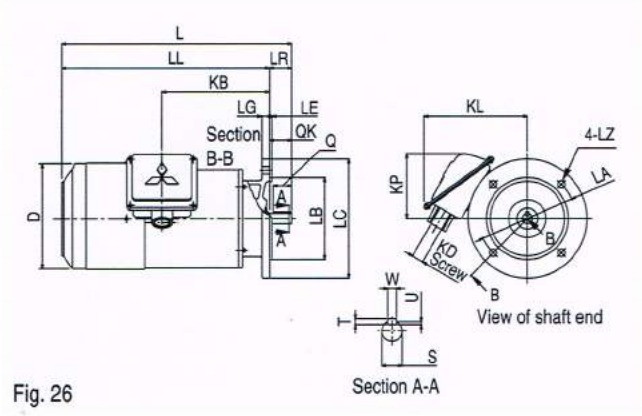


Fig. 26

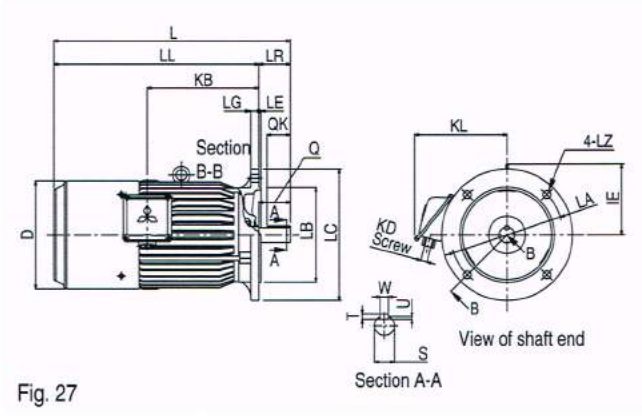


Fig. 27

Dimensions (mm)

Model	Frame No.	Output HP (kW)		Brake type	Fig.	Motor										Terminal box			
		4-Pole	6-Pole			D	IE	LA	LB	LC	LE	LG	LL	LZ	L	KB	KD	KL	KP*
SF-JRFB	63M	1/4(0.2)	-	TB-2	26	128	-	130	110 j6	160	3.5	10	259.5	10	282.5	125	PF 1/2	153	112
	71M	1/2(0.4)	1/4(0.2)	TB-4		150	-	130	110 j6	160	3.5	10	279	10	309	145	PF 1/2	165	97
	80M	1(0.75)	1/2(0.4)	TB-7.5		168	-	165	130 j6	200	3.5	12	295	12	335	143.5	PF 3/4	167	-
	90L	2(1.5)	1(0.75)	TB-15		189	-	165	130 j6	200	3.5	12	364	12	414	198.5	PF 3/4	180	-
	100L	3(2.2)	2(1.5)	TB-22	27	213	130	215	180 j6	250	4	16	398	14.5	458	213	PF 3/4	192	-
	112M	5(3.7)	3(2.2)	TB-37		232	141	215	180 j6	250	4	16	432	14.5	492	239	PF 3/4	203	-
	132S	7.5(5.5)	5(3.7)	TB-75		272	156	265	230 j6	300	4	20	468.5	14.5	548.5	256	PF 1	242	-
	132M	10(7.5)	7.5(5.5)	TB-75		272	156	265	230 j6	300	4	20	506.5	14.5	586.5	294	PF 1	242	-

* This dimension is for model which KP > LC/2 only.

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)		Approximate packing dimensions (LxWxH)	Packing weight (kg)	
		LR	Q	QK	S	T	U	W	Drive end	Opposite	4-Pole	6-Pole		4-Pole	6-Pole
SF-JRFB	63M	23	23	20	11 h6	4	2.5	4	6201ZZ	6201ZZ	9	-	368 x 280 x 226	10	-
	71M	30	30	25	14 j6	5	3	5	6202ZZ	6202ZZ	12	12	368 x 280 x 226	13	13
	80M	40	40	32	19 j6	6	3.5	6	6204ZZ	6204ZZ	18	18	425 x 280 x 226	19	19
	90L	50	50	40	24 j6	7	4	8	6205ZZ	6205ZZ	27	26	507 x 401 x 357	34	33
	100L	60	60	45	28 j6	7	4	8	6206ZZ	6205ZZ	35	37	650 x 450 x 370	44	46
	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	47	49	650 x 450 x 370	56	58
	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	66	68	650 x 450 x 370	75	77
	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	77	80	650 x 450 x 370	86	89

SF-JRVB 63M~112M

VERTICAL TYPE BRAKE MOTOR



SF-JRVB 1/2HP 4P 71M

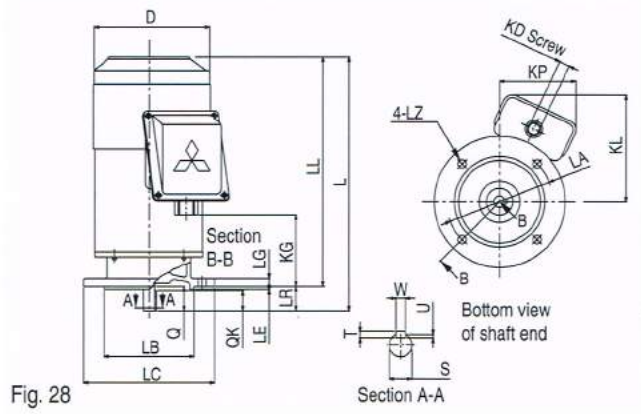


Fig. 28

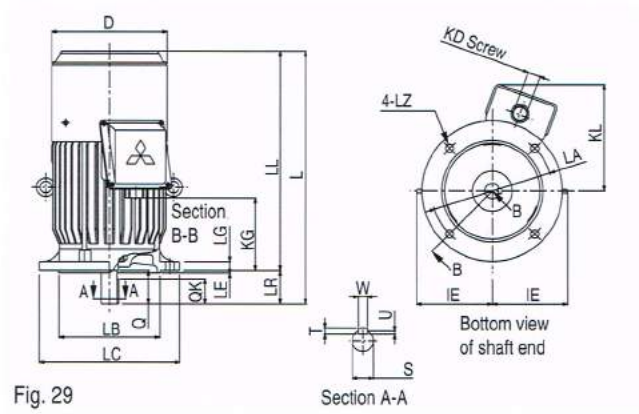


Fig. 29

Dimensions (mm)

Model	Frame No.	Output HP (kW)		Brake type	Fig.	Motor										Terminal box			
		4-Pole	6-Pole			D	IE	LA	LB	LC	LE	LG	LL	LZ	L	KD	KG	KL	KP*
SF-JRVB	63M	1/4(0.2)	-	TB-2	28	128	-	130	110 j6	160	3.5	10	259.5	10	282.5	PF 1/2	42	144	133
	71M	1/2(0.4)	1/4(0.2)	TB-4		150	-	130	110 j6	160	3.5	10	279	10	309	PF 1/2	62	159	120
	80M	1(0.75)	1/2(0.4)	TB-7.5		168	-	165	130 j6	200	3.5	12	295	12	335	PF 3/4	61	163	-
	90L	2(1.5)	1(0.75)	TB-15		189	-	165	130 j6	200	3.5	12	364	12	414	PF 3/4	116	176	-
	100L	3(2.2)	2(1.5)	TB-22	29	213	130	215	180 j6	250	4	16	398	14.5	458	PF 3/4	130	189	-
	112M	5(3.7)	3(2.2)	TB-37		232	141	215	180 j6	250	4	16	432	14.5	492	PF 3/4	156	199	-

* This dimension is for model which KP > LC/2 only.

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)		Approximate packing dimensions (LxWxH)	Packing weight (kg)	
		LR	Q	QK	S	T	U	W	Drive end	Opposite	4-Pole	6-Pole		4-Pole	6-Pole
SF-JRVB	63M	23	23	20	11 h6	4	2.5	4	6201ZZ	6201ZZ	9	-	368 x 280 x 226	10	-
	71M	30	30	25	14 j6	5	3	5	6202ZZ	6202ZZ	12	12	368 x 280 x 226	13	13
	80M	40	40	32	19 j6	6	3.5	6	6204ZZ	6204ZZ	18	18	425 x 280 x 226	19	19
	90L	50	50	40	24 j6	7	4	8	6205ZZ	6205ZZ	27	26	507 x 401 x 357	34	33
	100L	60	60	45	28 j6	7	4	8	6206ZZ	6205ZZ	35	37	650 x 450 x 370	44	46
	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	47	49	650 x 450 x 370	56	58

Maintenance

Proper maintenance will greatly affect the motor life.

Inspection and maintenance schedule

- Motors which are only used occasionally, such as emergency motors, conveyors, etc., require daily attention since long periods of non-use may cause the insulation resistance drop ; however, frequently disassembly, cleaning and inspection are not required.
- Motors which are used continuously, such as pumps, fans, etc,. must be disassembled, cleaned and inspected frequently.
- Recording of daily inspection, monthly inspections and disassembly inspections is helpful for future maintenance.
- Refer to Table 1 for disassembly and inspection intervals.

Table 1 Disassembly and inspection intervals

Installation site	Infrequently used	Continously used
Dusty environment	Every 1 - 2 years	Yearly
Clean environment	Every 2 - 3 years	Every 1 - 3 years

Daily inspection

- *Noise* — Magnetic noise, mechanical noise, abrasion noise and abnormal bearing noise can be easily heard by listening to the motor with sounding rod.
- *Bad smell* — Overheating of motor due to overloading or blocked ventilation can be easily known by the smell of scorched varnish.
- *Appearance* — Check for oil leaks or blocked ventilation paths. Using your hand to judge the temperature of the bearings and frame is dangerous, so always use a thermometer such as an alcohol thermometer.

Monthly inspection

- *Grease* — Replace and resupply grease in accordance with maintenance plan.
- *Measurement of insulation resistance* — Check to see whether or not the insulation resistance is greater than the specified value.
- *Surface painting* — Rust will form easily if the paint is peeled. Always repair the paint.

Inspection and cleaning during disassembly

- *Bearings* — Clean the bearing and housing, etc., and then replace the grease.
- *Coil and insulation* — Check for looseness of the binding twine of the coil and for the other troubles and clean if necessary.
- *Other parts* — Remove the dust form the other parts. Repair or replace the damaged parts if occurred.
- *Paint* — Repaint the motor if possible even if the paint is not peeling.

Special motor

MEATH is also the manufacturer of special purpose motors for specific applications. The following are some of the special motors we have designed and are now manufacturing.



(SP-KS 200W 4P)

Vibration protected motor

Supporting rubbers are installed on both ends of the motor to prevent motors from high vibration. Suitable for OA machine or all sorts of application which requires high accuracy.



(SL-KRF 100W, 200W 4P)

Home pump motor

Single phase capacitor run motor with flange bracket is equipped with home pumps.



(SL-KR 210W 4P)

Fan motor

Single phase capacitor run motor with double-shaft construction for installation with sirocco fan. The motor is mounted in fan unit of air-conditioner.



SB-JRF 7.5kW 4P

Elevator motor

Flange type motor with drip-proof enclosure and double shaft construction. One side is tapered to install with gear and the other side to install with encoder.



(SE-JF 1.5kW 2P V-3)

Spindle motor

For applications which requires extremely low vibration, such as spindling, each part of motor should be balanced carefully. MEATH also provided motors with low vibration degree of V-3



CHHM5-6135-29

Gear motor

Cyclo drive speed reducer assembled to MEATH IP55 standard motor is able to absorb 500% shock load without damage.

MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO., LTD.

MEATH-M-0708-C
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