

THREE PHASE INDUCTION MOTOR

SUPER LINE Q SERIES

Multi-purpose energy saving for all requirements

1/4~10HP (63~132Fr.)



SF- QR 1HP 4P



SF- QRV 3HP 4P



SF- QRB 3HP 4P

15~75HP (160~225Fr.)



SF- Q 15HP 4P



SF- QV 20HP



SF- Q 50HP 4P

- Motor efficiency class IE1 conformed with IEC 60034-30-1
- Same installation based on IEC standard
- Compatible with distribution control devices
- High corrosion resistance
- Degrees of protection : IP44 & IP55
- Thermal class : 130(B) & 155(F)

Efficiency class label



MOTOR EFFICIENCY CLASS IE1

ENERGY SAVING FOR A GREEN WORLD

THREE PHASE INDUCTION MOTOR

What's New

Advance efficiency for energy saving

Efficiency is higher than non IE1 motor, Advanced energy saving is possible with three phase Q-Series.



MITSUBISHI
ELECTRIC

THREE PHASE INDUCTION MOTOR



3 HP (2.2 kW)	4	POLE	TYPE	SF-QR
Hz	50	50	50	FRAME 100L
V	220	380	415	RATING S1
A	8.7	5.0	4.9	TH. CLASS 155 (F)
min ⁻¹	1420	1420	1440	AMB TEMP 40°C
P.F.	0.84	0.84	0.78	BEARING 6206ZZ
RATED EFF. 79.7%	79.7%	79.7%	79.7%	IP55 IC411
EFF. CLASS. IE1	IE1	IE1	IE1	SERIAL
STD. IEC 60034-1	IEC 60034-30-1			

MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO.,LTD.

NMD04N469-03

Sample name plate model : SF-QR 3HP(2.2kW) 4P IP55

*The efficiency values and IE code are specified on nameplate.

Corrosion resistance

Steel part of Q-series motor has changed under coat painting by electric process EDP (Electro Deposited Paint). which renowned for its superior corrosion resistance, rust protection, uniformed coating film and long life used.



Old : under coat by dipping

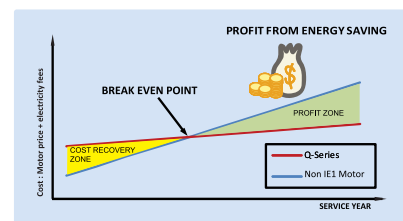
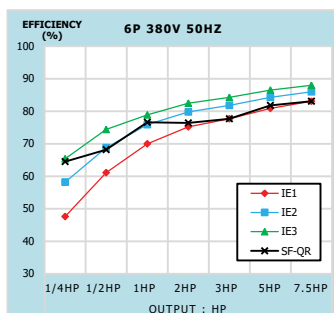
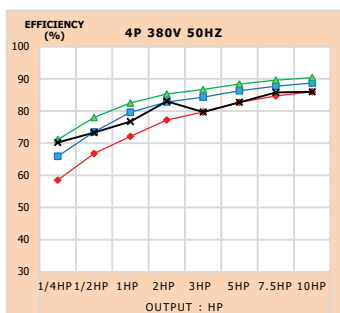
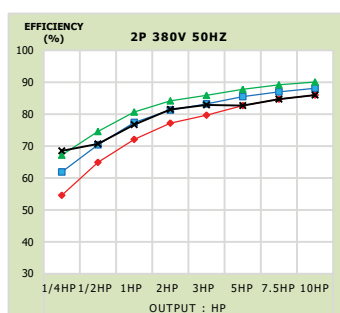


New : under coat by EDP

By salt spray test 192Hr

Hidden profit from energy saving

The investment cost of motor doesn't refer to only price, but including the variable electricity fees. Three phase Q-Series can help to reach a break even point quicker by advance energy saving performance, to consume less electricity fees.



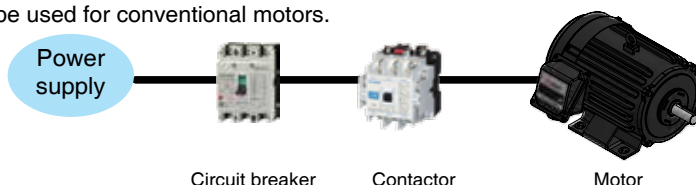
Feature and Benefits

Efficiency class guarantee

The optimized electrical design and the material with low generation loss are used for core that make MITSUBISHI ELECTRIC AUTOMATION (THAILAND) guarantee "IE1" efficiency class on three phase motor.

Compatibility with distribution control devices

Since the motors are designed for combined use with Mitsubishi's distribution control devices. The devices with equivalent specifications can be used for conventional motors.



Compact Size and Light Weight

Size and weight reductions have been achieved by 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.

Full Lineup

We have produced variety types of motors, ranged from 1/4 HP to 75 HP, thus providing a full lineup of motors ideal for any application.

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.

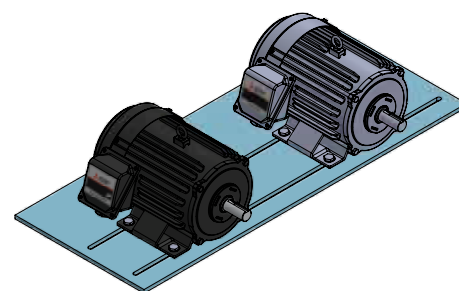
Safety: All the rotating parts and the "live" areas are made sure that it cannot be accidentally touched directly.

Smooth Acceleration: The low moment of inertia of the rotor combined with the motor's high acceleration torque, contributes to smooth starting and stopping.

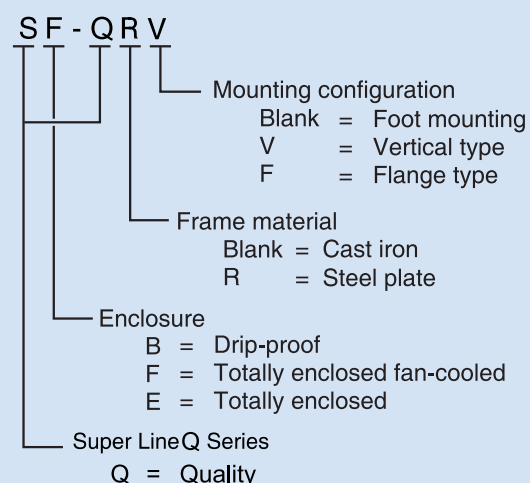
Low Noise and Vibration Levels: This feature has been achieved due to our highly individualized electrical design, the ample rigidity and the precise machining of the motor frames and brackets, and the exact balancing of the rotor.

Installation

Q-series models can completely replace the J-series. (Installation base according to IEC standard)



Significance of type designations



Characteristics and performance

SF-QR 1/4~10HP 2P, 4P (63~132Fr.) IP44, IP55 SF-QR 1/4~7.5HP 6P (71~132Fr.) IP44, IP55

SF-QRV 1/4~10HP 2P, 4P (63~132Fr.) IP55 SF-QRV 1/4~7.5HP 6P (71~132Fr.) IP55

Type	Pole	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load				Torque(%)		Is (A)	Inertia J (kg·m²)	
		HP	kW				I (A)	Eff(%)	PF	I (A)	Eff (%)	PF	I (A)	Eff (%)	PF	Speed (min ⁻¹)	Torque (kg·m)	Tm			Ts
LT	2P	1/4	0.2	63M	50	220	0.83	62.4	0.51	0.92	67.5	0.63	1.00	68.5	0.73	2850	0.068	341	272	5.4	0.0005
						380	0.48	62.4	0.51	0.53	67.5	0.63	0.60	68.5	0.73	2850	0.068	341	272	3.1	
						415	0.53	57.6	0.45	0.56	64.6	0.57	0.61	68.3	0.67	2880	0.068	427	332	3.4	
		1/2	0.4	71M	50	220	1.30	69.4	0.58	1.54	71.7	0.71	1.80	70.7	0.81	2830	0.138	332	287	10.0	0.0008
						380	0.75	69.4	0.58	0.89	71.7	0.71	1.05	70.7	0.81	2830	0.138	332	287	5.8	
						415	0.81	68.3	0.50	0.89	72.9	0.65	1.00	73.6	0.75	2860	0.136	415	355	6.2	
		1	0.75	80M	50	220	2.1	74.7	0.62	2.5	77.0	0.75	3.00	76.7	0.83	2830	0.258	403	376	21.3	0.0014
						380	1.2	74.7	0.62	1.5	77.0	0.75	1.75	76.7	0.83	2830	0.258	403	376	12.3	
						415	1.4	70.3	0.52	1.6	75.0	0.66	1.77	75.7	0.76	2850	0.256	490	454	13.2	
		2	1.5	90L	50	220	3.4	81.2	0.71	4.4	82.4	0.82	5.5	81.5	0.86	2870	0.509	365	285	41.5	0.0025
						380	2.0	81.2	0.71	2.5	82.4	0.82	3.2	81.5	0.86	2870	0.509	365	285	23.9	
						415	2.1	80.3	0.61	2.6	82.5	0.74	3.1	82.6	0.81	2900	0.504	444	344	25.8	
		3	2.2	90L	50	220	4.5	84.2	0.76	6.1	84.2	0.85	7.8	82.9	0.89	2850	0.752	359	279	61.7	0.0035
						380	2.6	84.2	0.76	3.5	84.2	0.85	4.5	82.9	0.89	2850	0.752	359	279	35.6	
						415	2.6	83.4	0.69	3.4	84.7	0.80	4.3	84.6	0.85	2880	0.744	457	383	38.5	
		5	3.7	112M	50	220	7.3	83.4	0.79	9.9	83.9	0.87	12.8	82.7	0.90	2890	1.25	334	186	84.0	0.0073
						380	4.2	83.4	0.79	5.7	83.9	0.87	7.4	82.7	0.90	2890	1.25	334	186	48.5	
						415	4.4	82.3	0.71	5.6	83.8	0.82	7.0	83.2	0.86	2920	1.23	403	227	52.9	
		7.5	5.5	132S	50	220	11.6	83.1	0.74	15.4	84.4	0.82	19.7	84.7	0.86	2885	1.86	330	252	128	0.012
						380	6.7	83.1	0.74	8.9	84.4	0.82	11.4	84.7	0.86	2885	1.86	330	252	73.6	
						415	7.6	80.3	0.62	9.4	82.9	0.73	11.3	84.7	0.80	2910	1.84	397	303	80.4	
		10	7.5	132S	50	220	14.2	86.3	0.80	19.6	86.5	0.87	25.5	86.0	0.89	2890	2.53	350	284	185	0.017
						380	8.2	86.3	0.80	11.3	86.5	0.87	14.7	86.0	0.89	2890	2.53	350	284	107	
						415	8.6	85.3	0.70	11.1	86.7	0.81	14.0	86.0	0.85	2910	2.51	422	341	117	
	4P	1/4	0.2	63M	50	220	0.92	62.3	0.45	0.99	67.1	0.58	1.10	70.2	0.67	1430	0.136	329	290	5.1	0.0010
						380	0.53	62.3	0.45	0.57	67.1	0.58	0.65	70.2	0.67	1430	0.136	329	290	2.9	
						415	0.61	55.1	0.40	0.64	62.2	0.51	0.69	67.4	0.60	1440	0.135	403	358	3.2	
		1/2	0.4	71M	50	220	1.47	67.7	0.51	1.66	71.0	0.65	2.00	73.3	0.73	1400	0.278	327	306	10.1	0.0015
						380	0.85	67.7	0.51	0.96	71.0	0.65	1.14	73.3	0.73	1400	0.278	327	306	5.8	
						415	0.99	61.9	0.44	1.07	67.5	0.57	1.18	72.0	0.66	1420	0.274	400	373	6.3	
		1	0.75	80M	50	220	2.1	76.4	0.62	2.5	76.7	0.75	3.20	76.7	0.81	1400	0.522	325	321	18.9	0.0027
						380	1.2	76.4	0.62	1.5	76.7	0.75	1.85	76.7	0.81	1400	0.522	325	321	10.9	
						415	1.3	73.6	0.51	1.5	76.2	0.66	1.80	78.0	0.74	1410	0.518	405	397	11.8	
		2	1.5	90L	50	220	4.0	81.5	0.61	4.8	82.5	0.74	6.1	83.0	0.79	1430	1.02	386	312	44.0	0.0075
						380	2.3	81.5	0.61	2.8	82.5	0.74	3.5	83.0	0.79	1430	1.02	386	312	25.4	
						415	2.5	79.2	0.53	2.9	81.6	0.67	3.5	83.5	0.72	1440	1.01	474	379	28.4	
		3	2.2	100L	50	220	5.2	79.8	0.68	6.8	79.7	0.79	8.7	79.7	0.84	1420	1.51	284	233	57.3	0.0082
						380	3.0	79.8	0.68	3.9	79.7	0.79	5.0	79.7	0.84	1420	1.51	284	233	33.1	
						415	3.4	77.0	0.58	4.0	79.2	0.71	4.9	79.7	0.78	1440	1.49	288	303	35.9	
		5	3.7	112M	50	220	8.6	82.9	0.67	10.9	83.4	0.79	14.0	83.1	0.84	1430	2.52	372	294	109	0.0150
						380	5.0	82.9	0.67	6.3	83.4	0.79	8.1	83.1	0.84	1430	2.52	372	294	63.1	
						415	5.6	79.9	0.57	6.6	82.1	0.70	8.0	83.2	0.77	1450	2.48	451	355	67.8	
		7.5	5.5	132S	50	220	12.8	83.0	0.68	16.3	83.8	0.79	20.2	84.7	0.84	1450	3.69	358	306	163	0.0325
						380	7.4	83.0	0.68	9.4	83.8	0.79	11.7	84.7	0.84	1450	3.69	358	306	94.3	
						415	8.4	80.0	0.57	9.9	82.7	0.70	11.6	84.7	0.77	1460	3.67	434	380	102	
		10	7.5	132M	50	220	16.1	84.4	0.71	21.3	84.9	0.81	26.8	86.0	0.85	1450	5.04	339	312	219	0.0401
						380	9.3	84.4	0.71	12.3	84.9	0.81	15.5	86.0	0.85	1450	5.04	339	312	127	
						415	10.2	82.5	0.61	12.4	84.4	0.74	15.0	86.2	0.80	1460	5.00	438	393	138	
6P	1/4	0.2	71M	50	220	1.00	60.0	0.43	1.09	64.3	0.55	1.23	64.5	0.65	920	0.212	272	245	4.5	0.0015	
					380	0.58	60.0	0.43	0.63	64.3	0.55	0.71	64.5	0.65	920	0.212	272	245	2.6		
					415	0.64	56.2	0.38	0.67	62.2	0.49	0.74	63.5	0.58	930	0.209	339	307	2.9		
	1/2	0.4	80M	50	220	1.70	66.2	0.46	1.89	69.2	0.59	2.23	68.2	0.69	920	0.423	279	257	9.3	0.0027	
					380	0.98	66.2	0.46	1.09	69.2	0.59	1.28	68.2	0.69	920	0.423	279	257	5.4		
					415	1.10	62.8	0.40	1.19	67.5	0.51	1.30	69.0	0.61	930	0.419	354	328	5.9		
	1	0.75	90L	50	220	3.1	73.1	0.43	3.4	76.3	0.56	4.0	76.6	0.64	960	0.761	337	278	22.6	0.0075	
					380	1.8	73.1	0.43	2.0	76.3	0.56	2.3	76.6	0.64	960	0.761	337	278	13.1		
					415	1.9	70.6	0.38	2.1	74.9	0.49	2.3	76.3	0.59	965	0.757	451	351	14.4		
	2	1.5	100L	50	220	5.5	75.6	0.48	6.2	77.3	0.61	7.4	76.4	0.69	940	1.55	319	254	40.0	0.0083	
					380	3.2	75.6	0.48	3.6	77.3	0.61	4.3	76.4	0.69	940	1.55	319	254	23.1		
					415	3.8	71.1	0.39	4.0	75.3	0.52	4.5	76.1	0.61	940	1.55	398	325	25.3		
3	2.2	112M	50	220	6.5	77.6	0.55	8.0	78.7	0.68	9.7	77.7	0.76	940	2.28	294	250	56.8	0.016		
				380	3.8	77.6	0.55	4.6	78.7	0.68	5.6	77.7	0.76	940	2.28	294	250	32.8			
				415	4.1	76.8	0.48	4.7	79.9	0.61	5.4	79.0	0.70	950	2.25	365	277	34.4			
5	3.7	132S	50	220	9.1	83.3	0.64	11.6	83.6	0.75	14.5	81.8	0.80	950	3.79	276	215	83.3	0.033		
				380	5.3	83.3	0.64	6.7	83.6	0.75	8.4	81.8	0.80	950	3.79	276	215	48.1			
				415	5.8	80.8	0.54	6.9	82.9	0.67	8.3	81.5	0.74	960	3.75	333	259	52.5			
7.5	5.5	132M	50	220	13.6	83.9	0.63	17.0	84.7	0.74	21.3	83.1	0.80	950	5.64	292	226	131	0.045		
				380	7.8	83.9	0.63	9.8	84.7	0.74	12.3	83.1	0.80	950	5.64	292	226	75.7			
				415	8.8	81.1	0.53	10.5	83.5	0.65	12.3	83.1	0.73	950	5.64	352	272	82.7			

HT	2P	5	3.7	112M	50	380	4.3	83.0	0.79	5.8	83.5	0.86	7.5	82.7	0.90	2890	1.25	341	203	53.6	0.0073
		415	4.5	81.4	0.70	5.7	83.2	0.81	7.1	83.2	0.86	2910	1.24	410	243	57.7					
		7.5	5.5	132S	50	380	6.7	83.2	0.75	8.9	84.1	0.83	11.4	84.7	0.86	2900	1.85	327	236	73.3	0.012
		415	7.6	79.6	0.63	9.2	82.6	0.75	11.2	84.7	0.80	2910	1.84	393	283	80.0					
		10	7.5	132S	50	380	8.4	85.9	0.79	11.5	86.5	0.86	14.8	86.0	0.89	2900	2.52	365	296	109	0.017
		415	8.9	84.8	0.69	11.4	86.6	0.79	14.2	86.0	0.85	2920	2.50	438	355	119					
	4P	5	3.7	112M	50	380	5.0	81.3	0.69	6.4	81.7	0.80	8.1	82.7	0.84	1440	2.50	351	273	61.9	0.0150
		415	5.7	78.0	0.57	6.7	80.6	0.70	8.0	82.7	0.78	1450	2.48	431	323	67.7					
		7.5	5.5	132S	50	380	7.5	82.9	0.67	9.4	84.2	0.78	11.7	85.8	0.84	1450	3.69	356	328	95.4	0.0325
		415	8.5	80.0	0.56	10.0	82.8	0.69	11.7	85.											

Characteristics and performance

SF-Q 15~75HP 2P, 4P (160~225Fr.) IP55,

SF-Q 10~60HP 6P (160~225Fr.) IP55

SF-QV 15~40HP 2P, 4P (160~180Fr.) IP55,

SF-QV 10~30HP 6P (160~180Fr.) IP55

Type	Pole	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load					Torque(%)		Is (A)	Inertia J (kg·m²)
		HP	kW				I (A)	Eff(%)	PF	I (A)	Eff(%)	PF	I (A)	Eff (%)	PF	Speed (min ⁻¹)	Torque (kg·m)	Tm	Ts		
LT	2P	15	11	160M	50	220	21.0	89.1	0.77	28.6	89.4	0.85	38.3	87.6	0.86	2915	3.67	317	226	241	0.036
						380	12.1	89.2	0.77	16.5	89.5	0.85	22.1	87.6	0.86	2915	3.67	322	232	141	
						415	12.7	88.0	0.69	16.3	89.3	0.79	21.0	87.9	0.83	2930	3.65	386	279	154	
		20	15	160M	50	220	28.1	90.7	0.77	38.4	90.7	0.85	51.4	88.7	0.87	2910	5.02	334	244	340	0.044
						380	16.2	90.8	0.77	22.2	90.8	0.85	29.7	88.7	0.87	2910	5.02	341	252	199	
						415	17.2	89.2	0.68	22.1	90.3	0.79	28.4	89.1	0.82	2930	4.98	410	303	218	
		25	18.5	160L	50	220	32.0	91.8	0.83	45.0	91.8	0.88	61.1	90.1	0.88	2915	6.18	359	273	436	0.056
						380	18.5	91.9	0.83	26.0	91.8	0.88	35.3	90.1	0.88	2915	6.18	362	280	255	
						415	18.3	91.6	0.77	24.8	92.1	0.85	32.9	90.8	0.86	2935	6.14	434	336	279	
	30	22	180M	50	220	38.3	90.7	0.83	54.0	91.0	0.88	74.0	89.9	0.87	2920	7.33	308	199	451	0.088	
					380	22.2	90.8	0.83	31.3	91.1	0.88	42.7	89.9	0.87	2920	7.33	311	204	265		
					415	22.1	90.4	0.77	29.8	91.3	0.84	39.6	90.2	0.86	2940	7.28	373	245	290		
	40	30	180L	50	220	52.6	91.8	0.81	73.9	92.1	0.87	99.4	90.7	0.88	2925	9.98	350	238	705	0.111	
					380	30.3	92.0	0.82	42.5	92.2	0.87	57.4	90.7	0.88	2925	9.98	355	247	412		
					415	31.1	91.2	0.74	41.4	92.0	0.82	54.2	91.0	0.85	2945	9.92	426	296	450		
	50	37	200L	50	220	65.5	91.8	0.81	90.3	92.6	0.87	122	91.6	0.87	2965	12.15	362	260	921	0.193	
					380	37.8	91.9	0.81	52.3	92.6	0.87	70.3	91.6	0.87	2965	12.15	367	264	551		
					415	38.8	91.0	0.73	51.5	92.3	0.81	66.7	91.8	0.84	2970	12.13	439	316	601		
	60	45	200L	50	220	77.6	92.4	0.82	108.9	92.8	0.88	147	91.7	0.88	2960	14.80	356	261	1086	0.218	
					380	44.9	92.4	0.82	63.0	92.8	0.88	85.0	91.7	0.88	2960	14.80	358	287	639		
					415	45.9	91.8	0.74	60.9	92.9	0.83	80.3	92.3	0.84	2970	14.75	428	343	697		
	75	55	225S	50	220	94.7	92.5	0.82	133.3	92.7	0.88	181	92.1	0.87	2950	18.15	314	229	1159	0.282	
					380	54.7	92.5	0.83	77.1	92.8	0.88	105	92.1	0.87	2950	18.15	313	235	685		
					415	53.5	92.4	0.77	72.8	93.2	0.85	96.8	92.1	0.86	2965	18.06	375	281	748		
	4P	15	11	160M	50	220	22.1	89.4	0.73	29.5	89.4	0.82	39.0	87.6	0.84	1455	7.36	321	292	256	0.072
						380	12.7	89.6	0.73	17.0	89.6	0.82	22.5	87.6	0.85	1455	7.36	328	305	150	
						415	13.8	87.9	0.63	17.2	89.1	0.75	21.7	87.7	0.80	1465	7.31	394	366	164	
		20	15	160L	50	220	29.3	90.8	0.74	39.2	90.9	0.83	52.1	89.0	0.85	1455	10.04	355	349	384	0.103
						380	16.9	91.0	0.74	22.6	91.0	0.83	30.1	89.0	0.85	1455	10.04	359	354	225	
						415	18.0	89.8	0.64	22.6	90.8	0.76	28.8	89.5	0.81	1465	9.97	431	425	246	
		25	18.5	180M	50	220	40.4	89.9	0.67	51.5	91.3	0.77	66.1	89.9	0.82	1475	12.21	373	301	499	0.175
						380	23.1	90.1	0.67	29.6	91.4	0.78	38.2	89.9	0.82	1475	12.21	385	315	299	
						415	27.0	86.9	0.55	32.2	89.5	0.67	39.2	89.3	0.74	1480	12.17	460	376	326	
	30	22	180M	50	220	44.5	90.8	0.71	58.4	91.7	0.81	76.6	90.2	0.84	1475	14.52	362	287	567	0.200	
					380	25.5	91.0	0.72	33.7	91.8	0.81	44.2	90.2	0.84	1475	14.52	372	296	340		
					415	28.6	88.7	0.60	35.1	90.6	0.72	43.9	90.0	0.77	1480	14.47	446	354	371		
40	30	180L	50	220	57.0	92.0	0.75	76.6	92.2	0.84	102	90.7	0.85	1465	19.93	337	269	702	0.252		
				380	32.7	92.1	0.76	44.2	92.3	0.84	58.9	90.7	0.85	1470	19.87	344	276	418			
				415	35.1	90.8	0.65	44.5	91.9	0.77	57.0	90.7	0.81	1475	19.80	412	329	457			
50	37	200L	50	220	69.4	91.7	0.76	94.5	92.0	0.84	126.4	91.2	0.84	1470	24.50	305	204	754	0.390		
				380	40.0	91.9	0.77	54.5	92.2	0.84	73.0	91.2	0.84	1470	24.50	308	210	441			
				415	42.5	90.7	0.67	54.2	91.9	0.77	70.0	91.2	0.81	1475	24.42	368	251	482			
60	45	200L	50	220	84.3	91.9	0.76	114.6	92.2	0.84	152.9	91.7	0.84	1470	29.80	319	209	930	0.449		
				380	48.6	92.0	0.76	66.1	92.4	0.84	88.3	91.7	0.84	1470	29.80	316	217	546			
				415	52.5	90.6	0.66	66.6	91.8	0.77	85.5	91.7	0.80	1475	29.70	345	260	596			
75	55	225S	50	220	108.6	92.5	0.72	142.7	93.2	0.81	187.1	92.2	0.84	1480	36.17	391	248	1230	0.702		
				380	62.7	92.6	0.72	82.4	93.4	0.81	108	92.2	0.84	1480	36.17	371	249	722			
				415	69.1	90.6	0.61	84.7	92.3	0.73	106.3	92.1	0.78	1480	36.17	443	298	789			
6P	10	7.5	160M	50	220	17.3	87.3	0.65	22.3	87.6	0.75	29.1	84.7	0.80	965	7.57	260	230	148	0.097	
					380	10.0	87.4	0.65	12.9	87.7	0.76	16.8	84.7	0.80	965	7.57	262	237	86.4		
					415	10.9	85.0	0.56	13.2	86.7	0.68	16.4	85.2	0.75	970	7.53	315	285	94.4		
	15	11	160L	50	220	24.4	89.1	0.66	32.0	88.9	0.76	42.1	86.4	0.79	960	11.15	257	245	214	0.130	
					380	14.1	89.2	0.66	18.5	89.0	0.76	24.3	86.4	0.79	960	11.15	260	251	126		
					415	15.4	87.1	0.57	18.8	88.3	0.69	23.6	86.4	0.75	970	11.04	316	302	138		
	20	15	180M	50	220	34.2	89.6	0.64	43.0	90.4	0.76	56.3	89.0	0.79	975	14.98	308	281	359	0.283	
					380	19.5	89.9	0.65	25.2	90.5	0.75	32.5	89.0	0.79	975	14.98	314	286	210		
					415	21.6	87.6	0.55	26.0	89.4	0.67	32.1	88.3	0.74	980	14.90	380	342	230		
25	18.5	180L	50	220	40.7	90.2	0.66	52.7	90.5	0.76	68.4	88.6	0.80	975	18.47	300	262	431	0.321		
				380	23.5	90.3	0.66	30.4	90.6	0.77	39.5	88.6	0.80	975	18.47	306	267	253			
				415	25.6	88.4	0.57	31.1	90.0	0.69	38.7	88.9	0.75	980	18.38	366	319	276			
30	22	180L	50	220	44.8	90.7	0.71	59.9	90.5	0.80	79.8	89.2	0.81	970	22.08	266	240	461	0.359		
				380	25.8	90.8	0.71	34.5	90.7	0.80	46.1	89.2	0.81	970	22.08	271	246	271			
				415	27.2	89.6	0.63	34.3	90.5	0.74	43.9	89.2	0.78	975	21.96	324	295	295			
40	30	200L	50	220	60.5	90.4	0.72	80.0	90.9	0.81	106	90.2	0.83	975	29.95	303	265	681	0.524		
				380	34.7	90.5	0.73	46.1	91.0	0.81	61.1	90.2	0.83	975	29.95	310	271	398			
				415	38.3	88.4	0.62	47.2	90.1	0.74	59.5	90.2	0.78	980	29.80	372	325	435			
50	37	200L	50	220	72.5	91.1	0.74	96.6	91.5	0.82	129	90.8	0.83	975	36.94	308	265	841	0.644		
				380	41.8	91.2	0.74	55.8	91.5	0.83	74.3	90.8	0.83	975	36.94	313	276	496			
				415	45.4	89.4	0.63	56.5	90.8	0.75	71.7	90.8	0.79	980	36.75	376	331	541			
60	45	225S	50	220	83.4	92.3	0.77	114.9	92.3	0.84	155	91.4	0.84	980	44.70	273	215	850	0.972		
				380	47.9	92.4	0.77	66.2	92.4	0.84	89.4	91.4	0.84	980	44.70	271	223	506			
				415	51.5	90.9	0.67	66.0	91.9	0.77	85.5	91.4	0.80	985	44.47	325	267	553			

Characteristics and performance

SF-Q 15~75HP 2P, 4P (160~225Fr.) IP55,

SF-Q 10~60HP 6P (160~225Fr.) IP55

SF-QV 15~40HP 2P, 4P (160~180Fr.) IP55,

SF-QV 10~30HP 6P (160~180Fr.) IP55

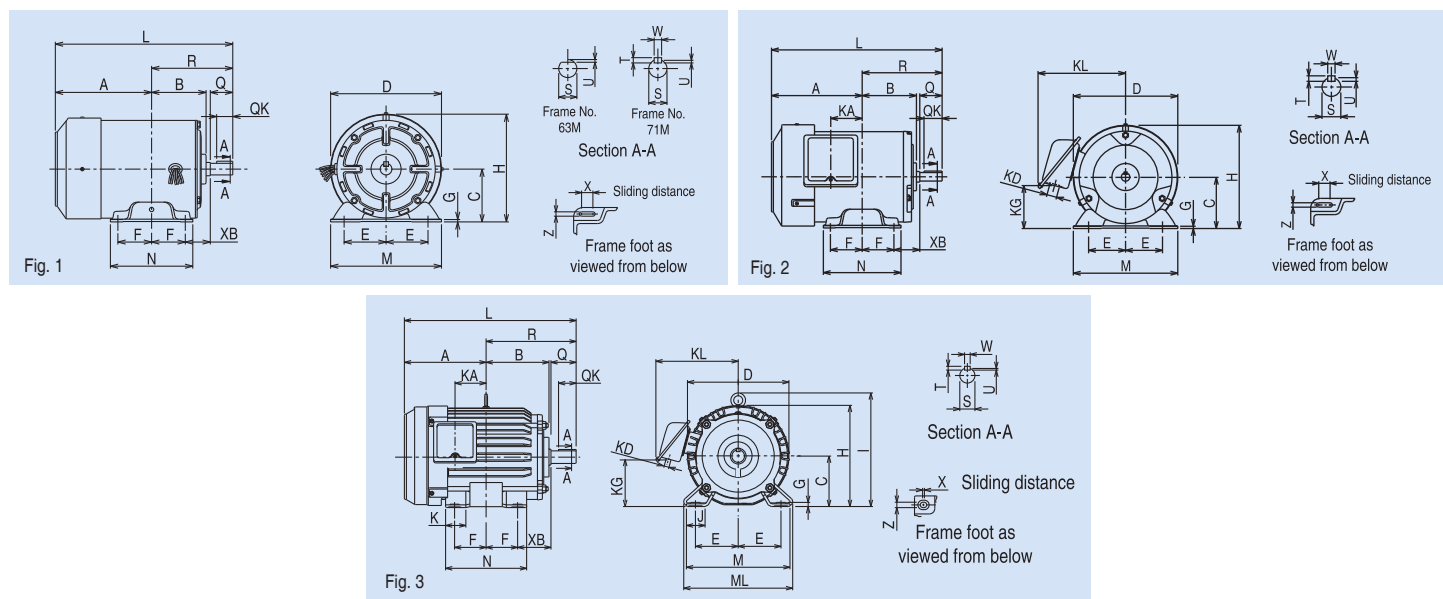
Type	Pole	Rated power		Frame No.	Hz	Volt	50% Load			75% Load			100% Load						Torque(%)		Is (A)	Inertia J (kg·m²)
		HP	kW				I (A)	Eff(%)	PF	I (A)	Eff(%)	PF	I (A)	Eff (%)	PF	Speed (min ⁻¹)	Torque (kg·m)	Tm	Ts			
HT	2P	15	11	160M	50	380 415	12.1 12.7	89.0 87.8	0.78 0.69	16.4 16.3	89.4 89.2	0.85 0.79	22.1 21.0	87.6 87.9	0.87 0.83	2915 2930	3.67 3.65	318 382	233 279	140 153	0.036	
		20	15	160M	50	380 415	15.9 16.8	90.5 89.3	0.79 0.70	22.0 21.6	90.4 90.4	0.86 0.80	29.5 28.1	88.7 89.1	0.87 0.83	2910 2930	5.02 4.98	323 388	242 291	194 212	0.044	
		25	18.5	160L	50	380 415	18.6 18.7	91.9 91.4	0.82 0.75	26.1 25.0	91.9 92.0	0.88 0.84	35.3 33.1	90.1 90.8	0.88 0.86	2915 2935	6.18 6.14	363 435	283 340	260 284	0.056	
		30	22	180M	50	380 415	23.0 23.6	91.4 90.7	0.80 0.72	31.7 30.7	91.8 91.8	0.86 0.81	42.7 40.2	90.2 91.0	0.87 0.84	2930 2945	7.31 7.27	332 398	214 257	286 312	0.088	
		40	30	180L	50	380 415	29.8 29.9	92.4 91.8	0.83 0.76	42.1 40.5	92.4 92.4	0.88 0.84	57.1 53.5	90.7 91.2	0.88 0.86	2925 2945	9.98 9.92	332 398	223 267	392 428	0.111	
		50	37	200L	50	380 415	37.3 38.0	92.0 91.2	0.82 0.74	51.8 50.5	92.7 92.5	0.88 0.83	69.9 66.3	91.6 91.8	0.88 0.85	2960 2970	12.17 12.13	351 420	265 317	531 580	0.193	
		60	45	200L	50	380 415	45.3 47.0	92.3 91.1	0.82 0.73	63.1 62.0	92.9 92.4	0.87 0.82	84.6 81.1	91.9 91.7	0.88 0.84	2960 2970	14.80 14.75	355 425	268 320	657 718	0.218	
		75	55	225S	50	380 415	55.7 56.9	92.0 91.3	0.81 0.74	77.4 75.1	92.7 92.6	0.87 0.83	104.4 98.6	92.1 92.1	0.87 0.84	2955 2970	18.12 18.03	367 439	273 327	812 887	0.282	
	4P	15	11	160M	50	380 415	13.1 14.5	89.3 87.3	0.71 0.60	17.2 17.7	89.5 88.8	0.81 0.73	22.7 22.1	87.6 87.9	0.84 0.79	1455 1465	7.36 7.31	329 395	301 361	150 164	0.072	
		20	15	160L	50	380 415	17.4 19.0	90.7 89.3	0.72 0.62	23.0 23.4	90.9 90.6	0.82 0.74	30.1 29.3	89.2 89.5	0.85 0.80	1455 1465	10.04 9.97	367 440	359 431	231 253	0.103	
		25	18.5	180M	50	380 415	22.0 25.1	90.0 87.8	0.71 0.59	28.8 30.2	91.1 89.9	0.80 0.71	37.6 37.4	89.9 89.8	0.83 0.77	1470 1480	12.25 12.17	355 425	285 341	281 307	0.175	
		30	22	180M	50	380 415	25.3 28.2	90.7 88.8	0.73 0.61	33.8 34.8	91.4 90.6	0.81 0.73	44.2 43.7	90.2 90.0	0.84 0.78	1470 1475	14.57 14.52	350 419	282 337	327 358	0.200	
		40	30	180L	50	380 415	32.0 33.6	91.7 90.9	0.78 0.68	43.9 43.5	91.8 91.7	0.85 0.79	58.9 56.2	90.7 90.7	0.85 0.82	1465 1470	19.93 19.87	311 373	254 305	395 432	0.252	
		50	37	200L	50	380 415	41.4 45.7	91.9 90.2	0.74 0.62	55.5 56.8	92.4 91.6	0.82 0.74	73.6 72.0	91.2 91.2	0.84 0.78	1475 1480	24.42 24.34	309 370	213 256	452 494	0.390	
		60	45	200L	50	380 415	48.4 52.5	91.9 90.6	0.77 0.66	66.0 66.7	92.2 91.8	0.84 0.77	88.3 85.9	91.7 91.7	0.84 0.79	1470 1475	29.80 29.70	301 360	210 251	539 589	0.449	
		75	55	225S	50	380 415	60.0 64.4	92.7 91.3	0.75 0.65	80.5 80.9	93.3 92.7	0.83 0.76	106.8 103.3	92.2 92.2	0.85 0.80	1475 1480	36.30 36.17	335 401	228 273	672 733	0.702	
	6P	10	7.5	160M	50	380 415	10.3 11.7	86.7 83.4	0.64 0.54	13.2 13.8	87.1 85.7	0.74 0.66	17.1 17.0	84.7 84.7	0.79 0.73	965 970	7.57 7.53	272 327	243 292	89.5 97.8	0.097	
		15	11	160L	50	380 415	14.2 15.7	88.4 76.3	0.67 0.56	18.5 19.0	88.4 87.8	0.77 0.69	24.3 23.8	86.4 86.4	0.79 0.75	960 970	11.15 11.04	270 325	256 309	129 141	0.130	
		20	15	180M	50	380 415	19.7 21.8	89.4 87.2	0.65 0.55	25.2 26.1	90.2 89.2	0.75 0.67	32.5 32.1	88.5 88.3	0.79 0.74	975 980	14.98 14.90	319 382	268 321	210 229	0.283	
		25	18.5	180L	50	380 415	22.5 24.2	90.3 88.9	0.69 0.60	29.6 29.9	90.5 90.1	0.79 0.72	39.0 37.8	88.6 88.9	0.81 0.77	975 980	18.47 18.38	294 353	253 303	245 267	0.321	
		30	22	180L	50	380 415	25.2 26.7	91.0 90.0	0.73 0.64	34.2 33.8	90.7 90.7	0.81 0.75	45.8 43.5	89.2 89.2	0.82 0.79	970 975	22.08 21.96	266 320	233 280	264 288	0.359	
		40	30	200L	50	380 415	34.2 37.3	90.9 89.2	0.73 0.63	45.9 46.3	91.1 90.6	0.82 0.75	61.1 59.0	90.2 90.2	0.83 0.78	975 980	29.95 29.80	297 356	253 303	380 415	0.524	
		50	37	200L	50	380 415	43.2 47.9	91.0 89.0	0.72 0.60	56.9 58.9	91.5 90.6	0.81 0.72	75.1 74.0	90.8 90.8	0.82 0.77	975 980	36.94 36.75	323 387	282 338	508 555	0.644	
		60	45	225S	50	380 415	47.7 51.3	92.4 90.9	0.78 0.67	65.8 65.9	92.3 91.8	0.84 0.78	89.1 85.5	91.4 91.4	0.84 0.80	980 985	44.70 44.47	272 326	222 265	509 556	0.972	

SF-QR 1/4HP~10HP HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP44 DEGREES OF PROTECTION



SF-QR 1/2HP 4P 71M IP44



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
SF-QR	63M	1/4(0.2)	1/4(0.2)	-	1	113	77	63	127	50	40	2.3	129	-	-	-	216	135	-	100	12	40	7	-	-	-	-
	71M	1/2(0.4)	1/2(0.4)	1/4(0.2)		118	87	71	148	56	45	3.2	147	-	-	-	238	148	-	110	18	45	7	-	-	-	-
	80M	1(0.75)	1(0.75)	1/2(0.4)	2	122	95	80	162	62.5	50	3.2	165	-	-	-	262	160	-	125	15	50	9	39.5	63	27	145
	90L	2(1.5), 3(2.2)	2(1.5)	1(0.75)		143	114	90	184	70	62.5	4	186	-	-	-	311.5	175	-	150	15	56	9	53	76	27	158
	100L	-	3(2.2)	2(1.5)	3	173	128	100	207	80	70	6.5	204	230	40	45	366	200	212	180	4	63	12	65	88	27	169
	112M	5(3.7)	5(3.7)	3(2.2)		181	135	112	228	95	70	6.5	225	253	40	45	381	230	242	180	4	70	12	69	103	27	180
	132S	7.5(5.5), 10(7.5)	7.5(5.5)	5(3.7)		211.5	152	132	266	108	70	6.5	265	288	40	45	450.5	256	268	180	4	89	12	75	120	27	197
	132M	-	10(7.5)	7.5(5.5)		230.5	171	132	266	108	89	6.5	265	288	40	45	488.5	256	268	218	4	89	12	94	120	27	197

* The perpendicular variation of tolerance for the shaft center is $\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$

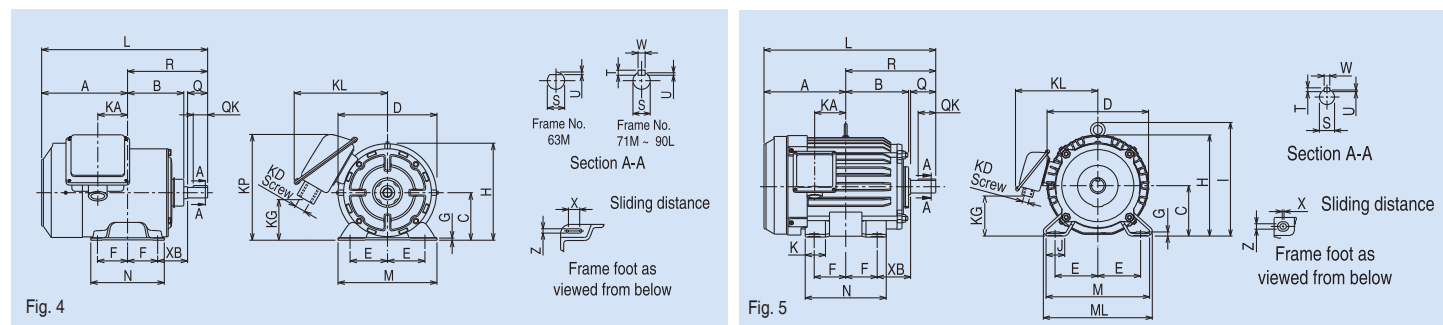
Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimension (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF-QR	63M	23	-	103	11 h6	-	1	-	6201ZZ	6201ZZ	5	5.5	-	245 x 165 x 170	5.5	6	-
	71M	30	25	120	14 j6	5	3	5	6202ZZ	6201ZZ	7	8	7.3	270 x 200 x 185	7.5	8.5	7.8
	80M	40	32	140	19 j6	6	3.5	6	6204ZZ	6203ZZ	10.5	11.5	11	315 x 270 x 206	11	12	11.5
	90L	50	40	168.5	24 j6	7	4	8	6205ZZ	6204ZZ	16.5, 20	19	19	368 x 280 x 226	17, 20.5	19.5	19.5
	100L	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	-	24	25	430 x 355 x 300	-	25	26
	112M	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	31	33.1	35	439 x 345 x 290	36.5	38.6	40.5
	132S	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	43, 51	46.8	46	529 x 384 x 303	50.5, 58.5	56.1	53.5
	132M	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	-	59.3	57.5	529 x 384 x 303	-	66.8	65

SF-QR 1/4HP~10HP HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QR 3HP 4P 100L



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-QR	63M	1/4(0.2)	1/4(0.2)	-	4	121.4	73.6	63	127	50	40	2.3	129	-	-	-	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	148	56	45	3.2	147	-	-	-	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	162	62.5	50	3.2	165	-	-	-	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	184	70	62.5	4	186	-	-	-	311.5	175	-	150	15	56	9	53	59	PF3/4	158	-
	100L	-	3(2.2)	2(1.5)	5	173	131	100	207	80	70	6.5	204	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	225	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 $\begin{smallmatrix} 0 \\ .5 \end{smallmatrix}$ ** This dimension is for model which $KP > H$ only.

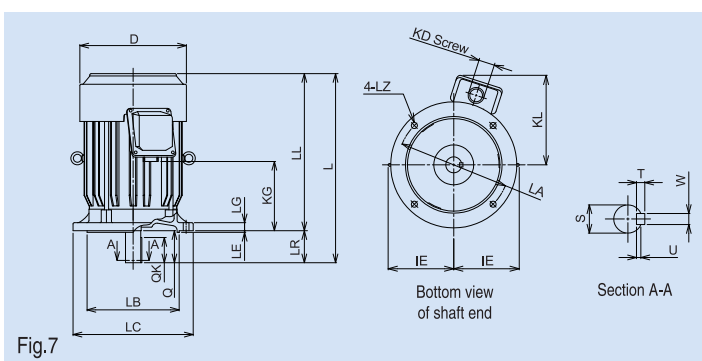
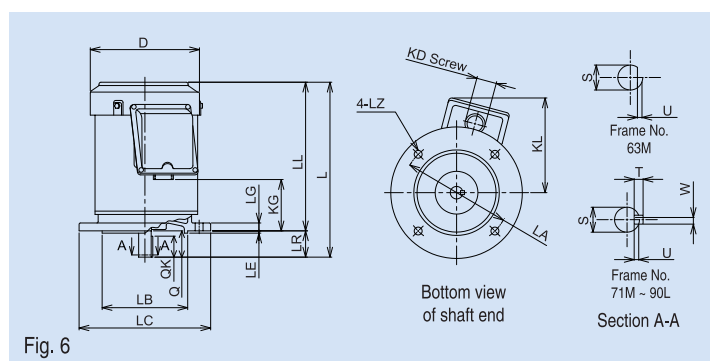
Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimension (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF-QR	63M	23	-	103	11 h6	-	1	-	6201ZZ	6201ZZ	5	5.5	-	272 x 226 x 222	5.5	6	-
	71M	30	25	120	14 j6	5	3	5	6202ZZ	6201ZZ	7	8	7.3	275 x 256 x 180	7.5	8.5	7.8
	80M	40	32	140	19 j6	6	3.5	6	6204ZZ	6203ZZ	10.5	11.5	11	315 x 270 x 206	11	12	11.5
	90L	50	40	168.5	24 j6	7	4	8	6205ZZ	6204ZZ	16.5, 20	19	19	368 x 280 x 206	17, 20.5	19.5	19.5
	100L	60	45	193	28 j6	7	4	8	6206ZZ	6205ZZ	-	24	25	456 x 355 x 300	-	25	26
	112M	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	31	33.1	35	469 x 375 x 320	36.5	38.6	40.5
	132S	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	43, 51	46.8	46	559 x 414 x 333	50.5, 58.5	56.1	53.5
	132M	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	-	59.3	57.5	559 x 414 x 333	-	66.8	65

SF-QRV 1/4HP~10HP VERTICAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QRV 3HP 4P 100L



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-QRV	FF130	63M	1/4(0.2)	1/4(0.2)	-	6	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)		162	-	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)		184	-	165	130 j6	200	3.5	12	288.5	12	338.5	PF3/4	133	156
	FF215	100L	-	3(2.2)	2(1.5)	7	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)		228	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

Model	Flange No.	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)			Approximate packing dimension (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-QRV	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	8.4	8.7	9	318 x 256 x 180	8.9	9.2	9.5
	FF165	80M	40	40	32	19 j6	6	3.5	6	6204ZZ	6203ZZ	12.5	14	13	368 x 280 x 226	13	14.5	13.5
	FF165	90L	50	50	40	24 j6	7	4	8	6205ZZ	6204ZZ	19, 23	22	21.5	425 x 280 x 226	19.8, 23.8	22.8	22.3
	FF215	100L	60	60	45	28 j6	7	4	8	6206ZZ	6205ZZ	-	28	29.5	456 x 355 x 300	-	29.5	31
	FF215	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	37	39	41	481 x 375 x 352	44	46	48
	FF265	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	53, 60.5	56	56.5	581 x 433 x 382	61, 68.5	64	64.5
	FF265	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	-	68	66	581 x 433 x 382	-	76	74

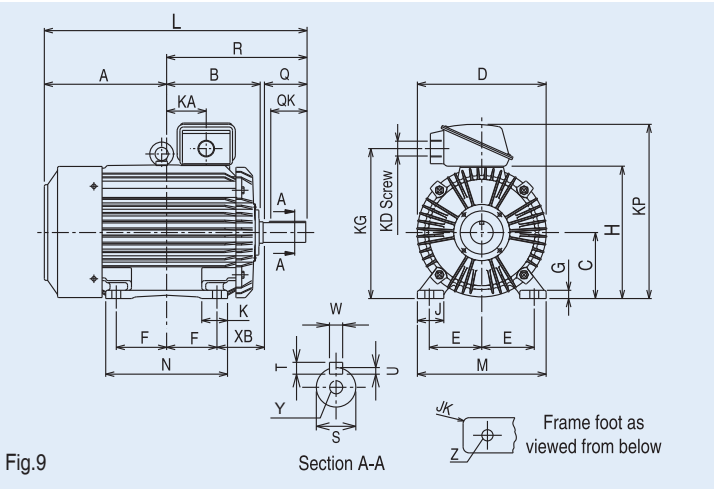
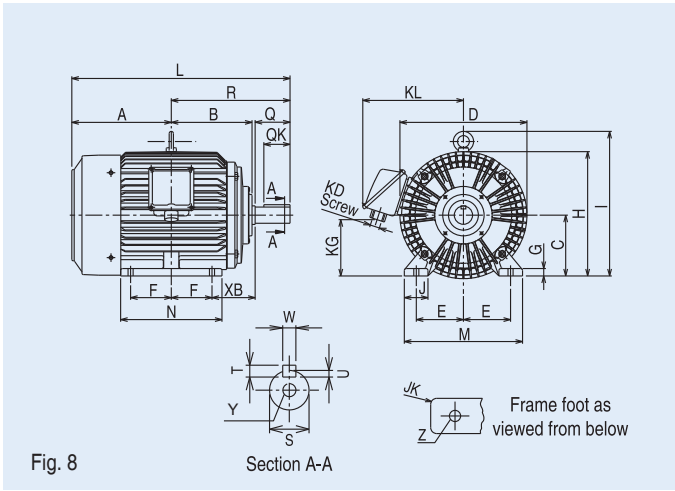
SF-Q 15HP~75HP(160M~225S) HORIZONTAL TYPE
TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-Q 15HP 4P 160M



SF-Q 50HP 4P 200L



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- Q	160M	15(11), 20(15)	15(11)	10(7.5)	8	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)	9	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

* The perpendicular variation of tolerance for the shaft center is 0 -0.5

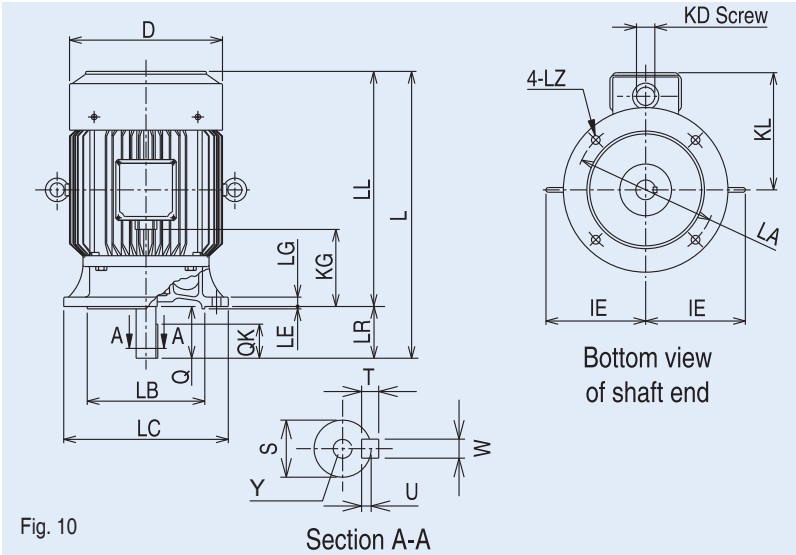
Model	Frame No.	Shaft end							Shaft Tapping (MxPitchxD)	Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W		Y	Drive end	Opposite	2-Pole	4-Pole	6-Pole	2-Pole	4-Pole	6-Pole
SF- Q	160M	110	90	323	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	105, 115	110	107	731 x 547 x 494	126, 136	131	128
	160L	110	90	345	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	145	136	135	731 x 547 x 494	166	157	156
	180M	110	90	351.5	48 k6	9	5.5	14	M16 x 2.0 x 36	6311ZZ	6310ZZ	189	193, 213	202	796 x 595 x 548	213	217, 237	226
	180L	110	90	370.5	55 m6	10	6	16	M20 x 2.5 x 42	(6312ZZC3) 6312ZZ	6310ZZ	220	231	221, 235	796 x 595 x 548	244	255	245, 259
	200L	(110) 140	(90) 110	(395.5) 425.5	(55 m6) 60 m6	(10) 11	(6) 7	(16) 18	M20 x 2.5 x 42	(6312ZZC3) 6313ZZ	(6311ZZC3) 6311ZZ	303, 326	287, 311	297, 343	910 x 522 x 691	330, 353	314, 338	324, 370
	225S	(110) 140	(90) 110	(402) 432	(55 m6) 65 m6	(10) 11	(6) 7	(16) 18	M20 x 2.5 x 42	(6312ZZC3) 6315ZZ	(6312ZZC3) 6312ZZ	340	356	372	924 x 579 x 774	370	386	402

() is dimension for 2-pole motors.

SF-QV 15HP~40HP(160M~180L) VERTICAL TYPE
TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QV 30HP 4P 180L



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- QV	FF300	160M	15(11), 20(15)	15(11)	10(7.5)	10	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

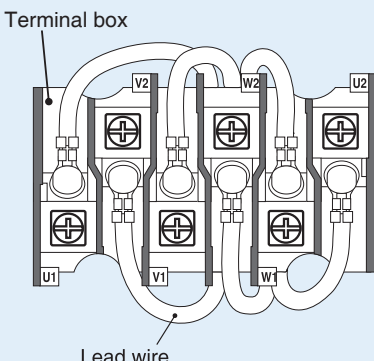
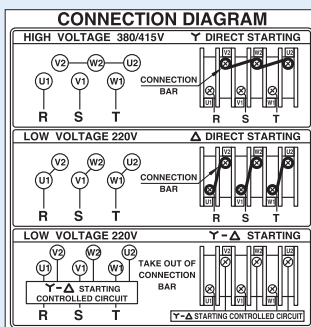
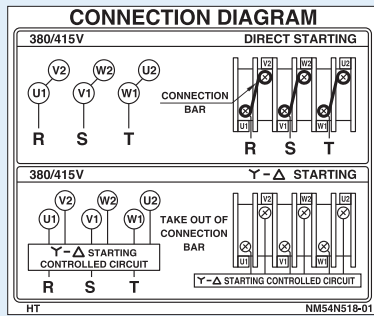
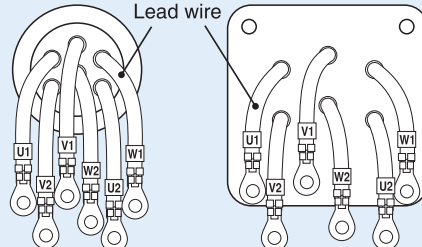
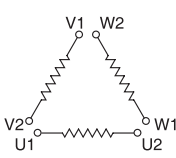
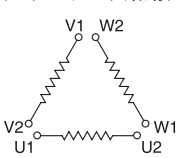
Model	Frame No.	Shaft end							Shaft Tapping (MxPitchxD)	Bearing No.		Approximate weight (kg)			Approximate packing dimensions (LxWxH)	Packing weight (kg)		
		Q	QK	R	S	T	U	W	Y	Drive end	Opposite	2-Pole	4-Pole	6-Pole		2-Pole	4-Pole	6-Pole
SF- QV	160M	110	90	323	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	110, 120	113	110	766 x 546 x 557	134, 144	137	134
	160L	110	90	345	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	150	141	140	766 x 546 x 557	174	165	164
	180M	110	90	351.5	48 k6	9	5.5	14	M16 x 2.0 x 36	6311ZZ	6310ZZ	194	198, 218	207	836 x 596 x 610	221	225, 245	234
	180L	110	90	370.5	55 m6	10	6	16	M20 x 2.5 x 42	(6312ZZC3) 6312ZZ	6310ZZ	225	236	226, 240	836 x 596 x 610	252	263	253, 267

() is dimension for 2-pole motors.

Standard Specifications

Item		Specifications													
Voltage and frequency		LT (Low Voltage) : 220/380/415V 50Hz HT (High Voltage) : 380/415V 50Hz													
Enclosure construction and degrees of protection		Degrees of protection	Enclosure construction	Model name	Pole	Output HP(kW)									
		IP44, IP55	Totally enclosed fan-cooled	Horizontal type SF-QR	2	1/4(0.2)	1/2(0.4)	1(0.75)	2(1.5)	3(2.2)	5(3.7)	7.5(5.5)	10(7.5)		
					4	●	●	●	●	●	●	●	●		
					6	●	●	●	●	●	●	●	—		
		IP55		Vertical type SF-QV	2	●	●	●	●	●	●	●	●		
					4	●	●	●	●	●	●	●	●		
					6	●	●	●	●	●	●	●	—		
		Degrees of protection	Enclosure construction	Model name	Pole	Output HP(kW)									
		IP55	Totally enclosed fan-cooled	Horizontal type SF-Q	2	10(7.5)	15(11)	20(15)	25(18.5)	30(22)	40(30)	50(37)	60(45)	75(55)	
					4	—	●	●	●	●	●	●	●	●	
					6	●	●	●	●	●	●	●	●	—	
				Vertical type SF-QV	2	—	●	●	●	●	●	—	—	—	
					4	—	●	●	●	●	●	—	—	—	
					6	●	●	●	●	●	—	—	—	—	
* Standard vertical type motor can be used for indoor flange type															
Method of cooling		IC411													
Rating		S1 (continuous)													
Frame material		63M ~ 132M : Steel plate 160M ~ 225S : Cast iron													
Power transmission system		Direct-coupled, Belt driven													
Direction of rotation		Counterclockwise (CCW) viewed from shaft end side.													
Thermal class		IP44 : 63M ~ 90L 130(B), 100L ~ 132M 155(F) IP55 : 63M ~ 225S 155(F)													
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													
Connection type		Degrees of protection	Frame No.	Output HP (kW)				No. of leads	Connection type						
		IP44	63M ~ 90L	1/4(0.2kW) ~ 2(1.5kW)				6	Lead wire						
			100L ~ 132M	3(2.2kW) ~ 10(7.5kW)					Terminal box						
		IP55	63M ~ 225S	1/4(0.2kW) ~ 75(55kW)											
Coating color		Munsell N1.5 (Black)													
Conformed standard		IEC 60034-1, IEC 60034-30-1													
Advantage		For 160M up -Shaft end with tapping -For 4P reinforced insulation for inverter operation													

Connection

Construction of lead wires	Connection diagram																																					
Terminal box  Lead wire	LT : 220/380/415V 50Hz 	* HT : 380/415V 50Hz 																																				
Lead wire IP 44: 63M ~ 71M IP44 : 80M ~ 90L IP55 : 160M ~ 225S 	CONNECTION DIAGRAM (端子接続図) DUAL VOLTAGE (二種電圧)  LT NM54N753-01 LOW VOLTAGE (低電圧) △ 220V SOURCE (電源) <table><tr><td>R</td><td>S</td><td>T</td></tr><tr><td>U1</td><td>V1</td><td>W1</td></tr><tr><td>V2</td><td>W2</td><td>U2</td></tr></table> HT 54N438-02 HIGH VOLTAGE (高電圧) △ 380~415V SOURCE (電源) <table><tr><td>R</td><td>S</td><td>T</td></tr><tr><td>U1</td><td>V1</td><td>W1</td></tr><tr><td>V2—W2—U2</td><td></td><td></td></tr></table>	R	S	T	U1	V1	W1	V2	W2	U2	R	S	T	U1	V1	W1	V2—W2—U2			CONNECTION DIAGRAM (端子接続図) Y-△ STARTING (スターデルタ始動)  HT 54N438-02 STARTING (始動) △ SOURCE (電源) <table><tr><td>R</td><td>S</td><td>T</td></tr><tr><td>U1</td><td>V1</td><td>W1</td></tr><tr><td>V2—W2—U2</td><td></td><td></td></tr></table> RUNNING (運転) △ SOURCE (電源) <table><tr><td>R</td><td>S</td><td>T</td></tr><tr><td>U1</td><td>V1</td><td>W1</td></tr><tr><td>V2</td><td>W2</td><td>U2</td></tr></table>	R	S	T	U1	V1	W1	V2—W2—U2			R	S	T	U1	V1	W1	V2	W2	U2
R	S	T																																				
U1	V1	W1																																				
V2	W2	U2																																				
R	S	T																																				
U1	V1	W1																																				
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R	S	T																																				
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V2—W2—U2																																						
R	S	T																																				
U1	V1	W1																																				
V2	W2	U2																																				

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

THREE PHASE INDUCTION MOTOR WITH ELECTROMAGNETIC BRAKE

Feature and benefits

Safety brake

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

High efficiency and high torque

Accumulated techniques and CAE (Computer Aided Engineering) analysis that we found steel frame pass through magnetic field then can energize high power and save energy of motor.

Powerful and smooth speed

Due to high efficiency design focused on high acceleration torque and die-cast rotor of rather small moment of inertia, enables smooth starting and stopping.

Low vibration and low noise

Our high technology equipment, the ample rigidity, precise machining of each part and exact balancing of electrical design which makes MEATH motor have low vibration and low noise.

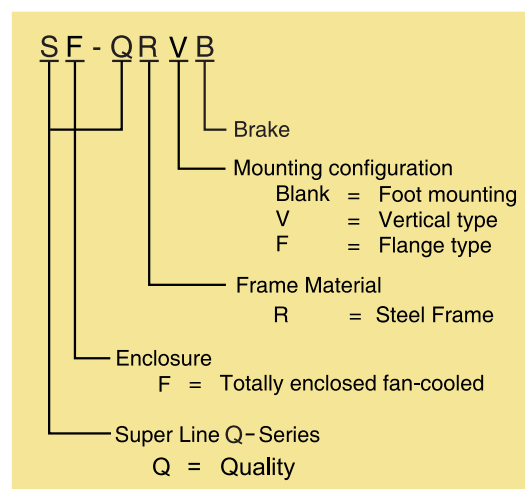
IP55 degrees of protection

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

Efficiency class guarantee

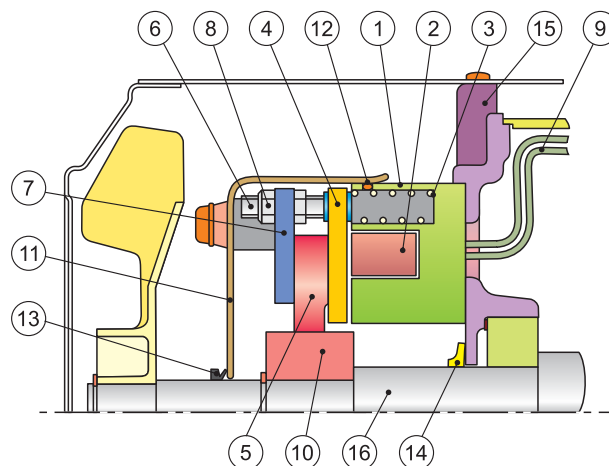
The optimized electrical design and the material with low generation loss are used for core that make MITSUBISHI ELECTRIC AUTOMATION (THAILAND) guarantee "IE1" efficiency class on three phase motor.

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.

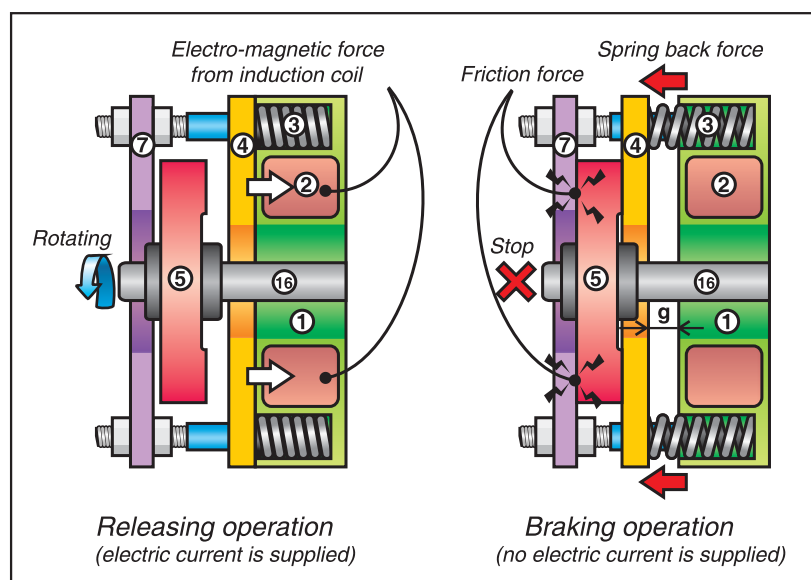
Brake operation

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.



Characteristics and performance

LT (220/380/415V 50Hz) SF-QRB / SF-QRFB / SF-QRVB 1/4HP ~ 10HP

Pole	Frame No.	Output		Brake Type	100% Load											
		220V 50Hz				380V 50Hz				415V 50Hz						
		HP	kW		I(A)	Eff(%)	PF	Speed (min ⁻¹)	I(A)	Eff(%)	PF	Speed (min ⁻¹)	I(A)	Eff(%)	PF	Speed (min ⁻¹)
4	63M	1/4	0.2	TB-2	1.10	70.2	0.67	1430	0.65	70.2	0.67	1430	0.69	67.4	0.60	1440
	71M	1/2	0.4	TB-A0.4	2.00	73.3	0.73	1400	1.14	73.3	0.73	1400	1.18	72.0	0.66	1420
	80M	1	0.75	TB-A0.75	3.20	76.7	0.81	1400	1.85	76.7	0.81	1400	1.80	78.0	0.74	1410
	90L	2	1.5	TB-A1.5	6.1	83.0	0.79	1430	3.5	83.0	0.79	1430	3.5	83.5	0.72	1440
	100L	3	2.2	TB-A2.2	8.7	79.7	0.84	1420	5.0	79.7	0.84	1420	4.9	79.7	0.78	1440
	112M	5	3.7	TB-A3.7	14.0	83.1	0.84	1430	8.1	83.1	0.84	1430	8.0	83.2	0.77	1450
	132S	7.5	5.5	TB-A7.5	20.2	84.7	0.84	1450	11.7	84.7	0.84	1450	11.6	84.7	0.77	1460
	132M	10	7.5	TB-A7.5	26.8	86.0	0.85	1450	15.5	86.0	0.85	1450	15.0	86.2	0.80	1460
6	71M	1/4	0.2	TB-A0.4	1.23	64.5	0.65	920	0.71	64.5	0.65	920	0.74	63.5	0.58	930
	80M	1/2	0.4	TB-A0.75	2.23	68.2	0.69	920	1.28	68.2	0.69	920	1.30	69.0	0.61	930
	90L	1	0.75	TB-A1.5	4.0	76.6	0.64	960	2.3	76.6	0.64	960	2.3	76.3	0.59	965
	100L	2	1.5	TB-A2.2	7.4	76.4	0.69	940	4.3	76.4	0.69	940	4.5	76.1	0.61	940
	112M	3	2.2	TB-A3.7	9.7	77.7	0.76	940	5.6	77.7	0.76	940	5.4	79.0	0.70	950
	132S	5	3.7	TB-A7.5	14.5	81.8	0.80	950	8.4	81.8	0.80	950	8.3	81.5	0.74	960
	132M	7.5	5.5	TB-A7.5	21.3	83.1	0.80	950	12.3	83.1	0.80	950	12.3	83.1	0.73	950

NOTE : Characteristic and performance data in this table is applied on motor only, when doesn't equip with brake set.

Brake Characteristic

Brake type	Rated damping torque (N·m)	Allowable damping equivalent (kJ/min)	Electromagnetic characteristic (20°C)		Electromagnetic stroke		Brake motor inertia * J (kg·m ²)	
			Input (W)	Current (DC A)	Initial (mm)	Adjustable limit (mm)	4 pole	6 pole
TB-2	2	2.3	23	0.18	0.15	0.4	0.0010	
TB-A0.4	4	2.9	26	0.19	0.15	0.4	0.0015	
TB-A0.75	7.5	3.2	40	0.24	0.15	0.5	0.0028	
TB-A1.5	15	5.1	38	0.3	0.2	0.5	0.0078	
TB-A2.2	22	7.2	43	0.34	0.2	0.5	0.0088	0.0089
TB-A3.7	37	10.1	55	0.44	0.2	0.55	0.0161	0.0171
TB-A7.5	132S	75	250/17**	2.0/0.55**	0.25	1.2	0.0341	0.0346
	132M						0.0417	0.0466

* Brake motor inertia includes motor driven shaft inertia and brake inertia

** The first number is the transient value in stat time, the second number is at steady state

SF-QRB 1/4HP~10HP HONRIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QRB 3HP 4P 100L

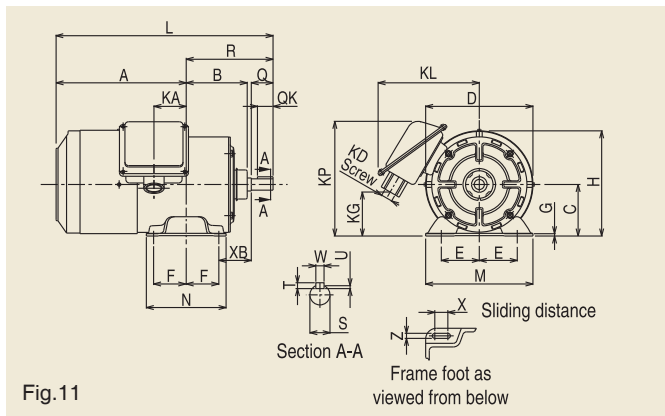


Fig.11

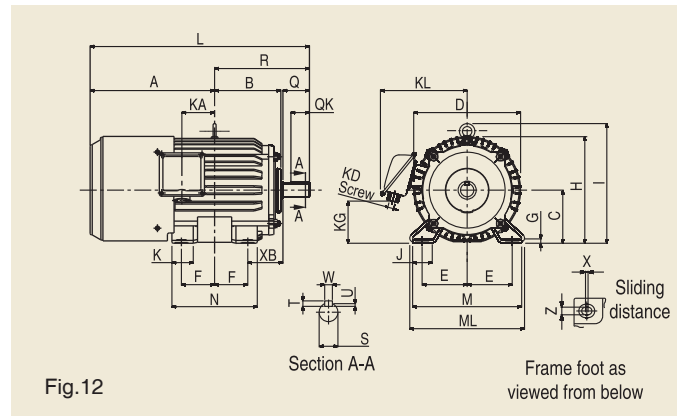


Fig.12

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-QRB	63M	1/4(0.2)	-	TB-2	11	173	73.6	63	127.6	50	40	2.3	126.9	-	-	-	276	135	-	100	12	40	7
	71M	1/2(0.4)	1/4(0.2)	TB-A0.4		178.5	83	71	149.2	56	45	3.2	145.6	-	-	-	298.5	148	-	110	18	45	7
	80M	1(0.75)	1/2(0.4)	TB-A0.75		191	98	80	163.2	62.5	50	3.2	161.6	-	-	-	331	160	-	125	15	50	9
	90L	2(1.5)	1(0.75)	TB-A1.5		218.5	117	90	185.2	70	62.5	4	182.6	-	-	-	387	175	-	150	15	56	9
	100L	3(2.2)	2(1.5)	TB-A2.2	12	250	131	100	205	80	70	6.5	203.5	230	40	45	443	200	212	180	4	63	12
	112M	5(3.7)	3(2.2)	TB-A3.7		262	138	112	223.8	95	70	6.5	226	253	40	45	462	230	242	180	4	70	12
	132S	7.5(5.5)	5(3.7)	TB-A7.5		287.5	155	132	263.8	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-A7.5		306.5	174	132	263.8	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 ± 0.5

Model	Frame No.	Terminal box					Shaft end							Bearing No.		Approx. weight (kg)		Approx. packing dimension (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-QRB	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	32	33	579 x 435 x 347	40	41
	112M	69	74	PF 3/4	203	-	60	45	200	28 j6	7	4	8	6207ZZ	6206ZZ	42	45	579 x 435 x 347	50	53
	132S	75	84	PF 1	242	-	80	63	239	38 k6	8	5	10	6308ZZ	6207ZZ	65	60	650 x 450 x 370	74	69
	132M	94	84	PF 1	242	-	80	63	258	38 k6	8	5	10	6308ZZ	6207ZZ	73	72	650 x 450 x 370	82	81

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

SF-QRFB 1/4HP~10HP FLANGE TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QRFB 7.5HP 4P 132S

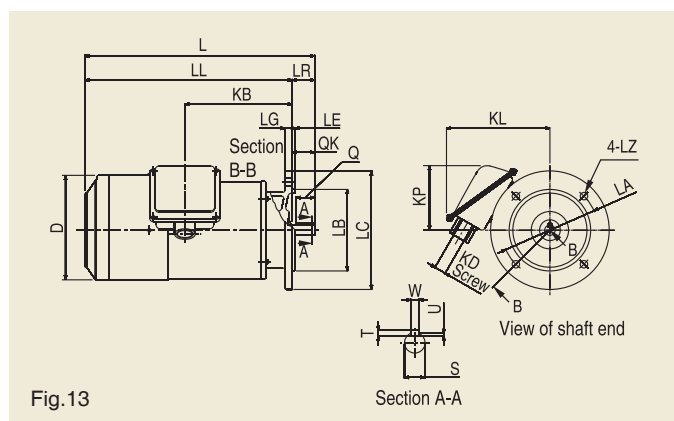


Fig. 13

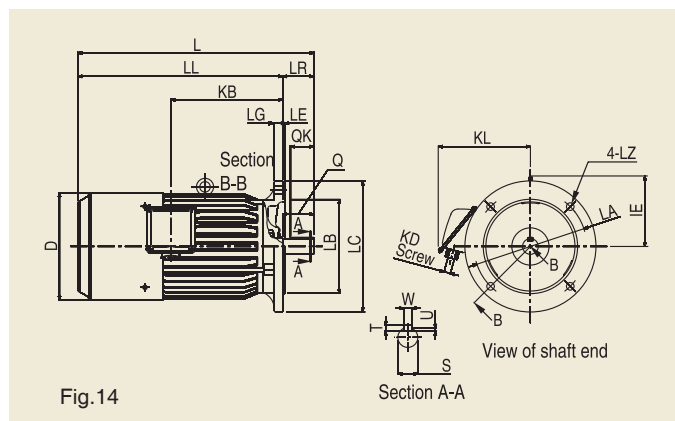


Fig. 14

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-QRFB	63M	1/4(0.2)	-	TB-2	13	127.6	-	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-A0.4		149.2	-	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-A0.75		163.2	-	165	130 j6	200	3.5	12	295	12	335	143.5	PF 3/4	167	-
	90L	2(1.5)	1(0.75)	TB-A1.5		185.2	-	165	130 j6	200	3.5	12	364	12	414	198.5	PF 3/4	180	-
	100L	3(2.2)	2(1.5)	TB-A2.2	14	205	130	215	180 j6	250	4	16	398	14.5	458	213	PF 3/4	192	-
	112M	5(3.7)	3(2.2)	TB-A3.7		223.8	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-A7.5		263.8	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-A7.5		263.8	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 dimension (LxWxH)	Packing weight (kg)	
		LR	Q	QK	S	T	U	W	Drive end	Opposite	4-Pole	6-Pole		4-Pole	6-Pole
SF-QRFB	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	36	37	650 x 450 x 370	45	46
	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	46	49	650 x 450 x 370	55	58
	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	73	68	650 x 450 x 370	82	77
	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	81	80	650 x 450 x 370	90	89

SF-QRVB 1/4HP~10HP VERTICAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



SF-QRVB 1/2HP 4P 71M

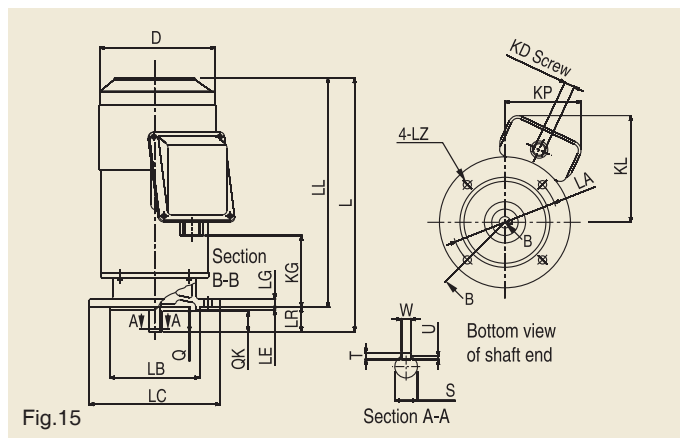


Fig. 15

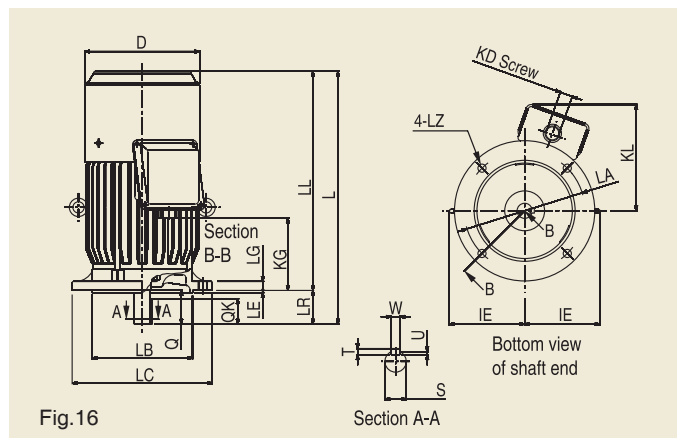


Fig. 16

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	KG	KD	KL	KP*
SF-QRVB	63M	1/4(0.2)	-	TB-2	15	127.6	-	130	110 j6	160	3.5	10	259.5	10	282.5	42	PF 1/2	144	133
	71M	1/2(0.4)	1/4(0.2)	TB-A0.4		149.2	-	130	110 j6	160	3.5	10	279	10	309	62	PF 1/2	159	120
	80M	1(0.75)	1/2(0.4)	TB-A0.75		163.2	-	165	130 j6	200	3.5	12	295	12	335	61	PF 3/4	163	-
	90L	2(1.5)	1(0.75)	TB-A1.5		185.2	-	165	130 j6	200	3.5	12	364	12	414	116	PF 3/4	176	-
	100L	3(2.2)	2(1.5)	TB-A2.2	16	205	130	215	180 j6	250	4	16	398	14.5	458	130	PF 3/4	189	-
	112M	5(3.7)	3(2.2)	TB-A3.7		223.8	141	215	180 j6	250	4	16	432	14.5	492	156	PF 3/4	199	-
	132S	7.5(5.5)	5(3.7)	TB-A7.5		263.8	156	265	230 j6	300	4	20	468.5	14.5	548.5	156	PF 1	238	-
	132M	10(7.5)	7.5(5.5)	TB-A7.5		263.8	156	265	230 j6	300	4	20	506.5	14.5	586.5	194	PF 1	238	-

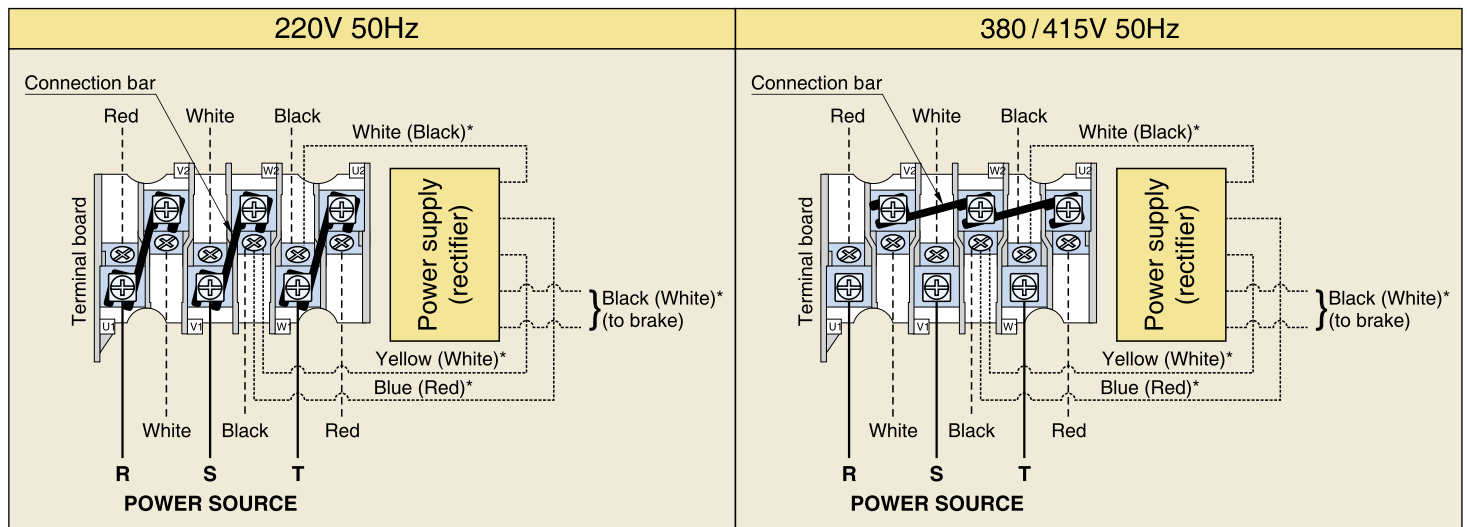
* This dimension is for model which KP > LC/2 only.

Model	Frame No.	Shaft end							Bearing No.		Approximate weight (kg)		Approximate packing dimension (LxWxH)	Packing weight (kg)	
		LR	Q	QK	S	T	U	W	Drive end	Opposite	4-Pole	6-Pole		4-Pole	6-Pole
SF-QRVB	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	36	37	650 x 450 x 370	45	46
	112M	60	60	45	28 j6	7	4	8	6207ZZ	6206ZZ	46	49	650 x 450 x 370	55	58
	132S	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	73	68	650 x 450 x 370	82	77
	132M	80	80	63	38 k6	8	5	10	6308ZZ	6207ZZ	81	80	650 x 450 x 370	90	89

Standard Specifications

Item			Specifications		
Motor	Voltage and frequency		LT: 220/380 /415V 50Hz		
	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-QRB	SF-QRFB	SF-QRVB
	Frame No.		63M~132M		
	Output HP (kW)	4 pole	1/4(0.2)~10(7.5)		
		6 pole	1/4(0.2)~7.5(5.5)		
	Frame material		Steel plate		
	Thermal class		155 (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 N1.5 (Black)			
Conformed standard		IEC 60034-1, IEC 60034-30-1			
Brake	Damping system		Non-excited damping type (spring damping type)		
	Damping torque		2~75 N·m (150%)		
	Voltage and frequency		AC 220V 50Hz (brake with rectifier)		
	Thermal class		155 (F)		
	Mechanical life		More than 1 million operations		
	Conformed standard		TES 1111		

Connection



- Motor's lead wire
 Rectifier's lead wire
 _____ Power source's lead wire

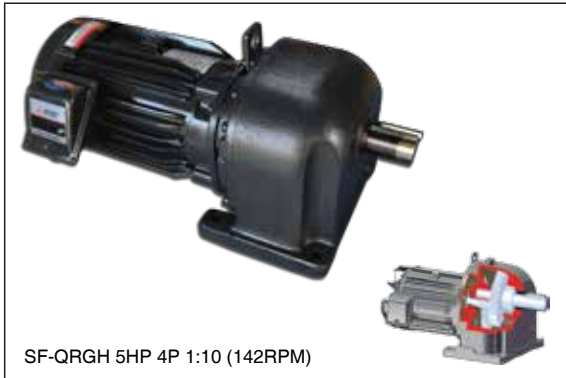
* Color of rectifier's lead wire in () is for 132S, 132M motor.

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

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

Special motor

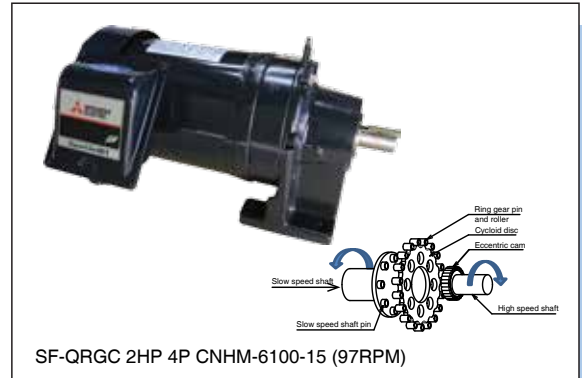
MEATH is also the manufacturer of special purpose motors for specific applications. The following are some of the special motors we have designed and are now manufacturing.



SF-QRGH 5HP 4P 1:10 (142RPM)

Gear motor-Helical

High performance cooling structure of steel motor frame integrated with RGC.(Round-bar Gear cutting : gear cutting after heat treatment) technology and precision cutting, make the product to be compact and lightweight, suitable for install with limited space machine.



SF-QRGC 2HP 4P CNHM-6100-15 (97RPM)

Gear motor-Cyclo Drive

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



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



SB-JRF 7.5kW 4P- double shaft

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.



SF-THO 100HP(75kW) 4P 380V

Import motor

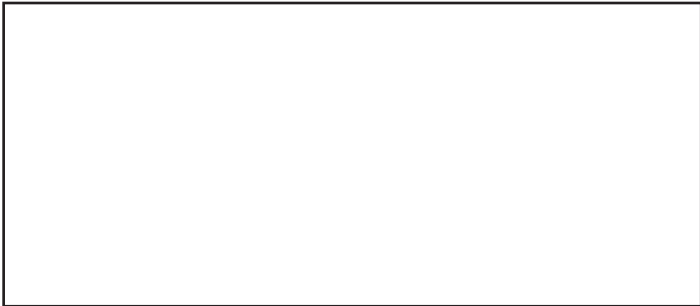
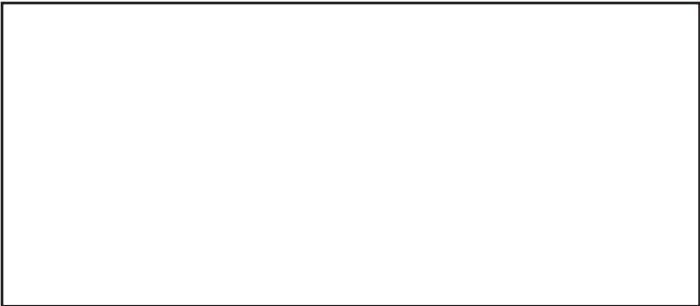
Imported motors output since 100HP (75kW) and up for heavy duty work and supports all requirements.



SE-QRV 2HP 4P 200V

Special design

MEATH can design special motors both electrical design and mechanical design for specific user according to the needs of a variety of customers, such as 200V, OPP, Inverter, V3, V5 etc.



MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO., LTD.

