

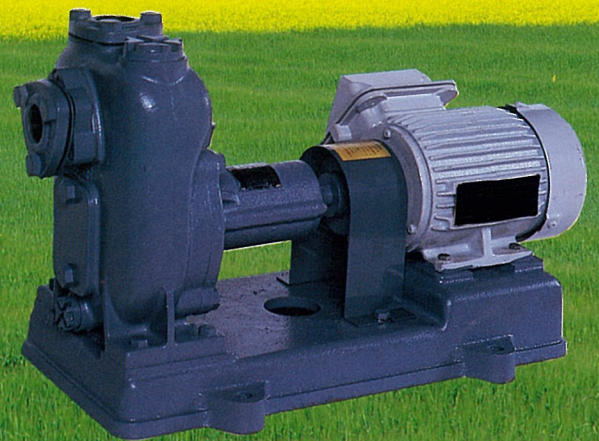


**EBARA**

CF2101UE

# **EBARA SELF PRIMING VOLUTE PUMPS**

MODEL SQ



Semi-open impeller



Enclosed impeller



## Semi-open impeller type

### Application

- Building drainage.
- Agriculture water supply.
- Miscellaneous water supply and drainage.

### Features

- (1) No priming is required except for initial use.
- (2) Special designed casing provides very quick priming.
- (3) Water mixed with a little sand or mud can be pumped up due to semi-open impeller design.
- (4) Grease lubrication ensures long life of mechanical seal.

## Enclosed impeller type

### Application

- Water supply
- Agriculture
- Sprinkling

### Features

- (1) No priming is required except for initial use.
- (2) Special designed casing provides very quick priming.
- (3) High efficiency is achieved due to enclosed impeller.
- (4) No need of lubrication due to sealed ball bearing.

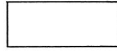
## SPECIFICATIONS & ACCESSORIES

	Semi-open impeller type		Enclosed impeller type	
	Standard	Optional	Standard	Optional
Liquid	Turbid water Muddy or sandy water		Fresh water or equivalent	
Temperature	0 ~ 40°C (32 ~ 104°F)		0 ~ 40°C (32 ~ 104°F)	
Re. NPSH	Below 5m (at 20°C)		Below 5m (at 20°C)	
Synchronous speed	1500min <sup>-1</sup> /50Hz 1800min <sup>-1</sup> /60Hz		1500min <sup>-1</sup> /50Hz 1800min <sup>-1</sup> /60Hz	
Installation	Indoors		Indoors	
Material				
Casing	Cast iron		Cast iron	
Impeller	Cast iron	Bronze	Cast iron	Bronze
Shaft	Carbon steel	403 stainless steel	403 stainless steel	
Flange	Standard for model SQ		JIS 10kgf/cm <sup>2</sup> GR.F.	
Construction				
Nozzle position	End suction, top discharge		End suction, top discharge	
Impeller type	Semi-open		Enclosed	
Stuffing box	Mechanical seal		Mechanical seal	
Bearing	Sealed ball bearing		Sealed ball bearing	
Accessories	[Bare shaft pump] Priming funnel . . . . . 1  Companion flanges (with bolts) . . . . . 2 set [With motor] Common base . . . . . 1 Coupling . . . . . 1 set Coupling guard . . . . . 1	Strainer Anchor bolts Automatic air vent valve Pressure gauge Compound gauge Vacuum gauge Gate valve Check valve	[Bare shaft pump] Priming funnel . . . . . 1  [With motor] Common base . . . . . 1 Coupling . . . . . 1 set Coupling guard . . . . . 1	Strainer Companion flange (with bolts) Anchor bolts Automatic air vent valve Pressure gauge Compound gauge Vacuum gauge Gate valve Check valve

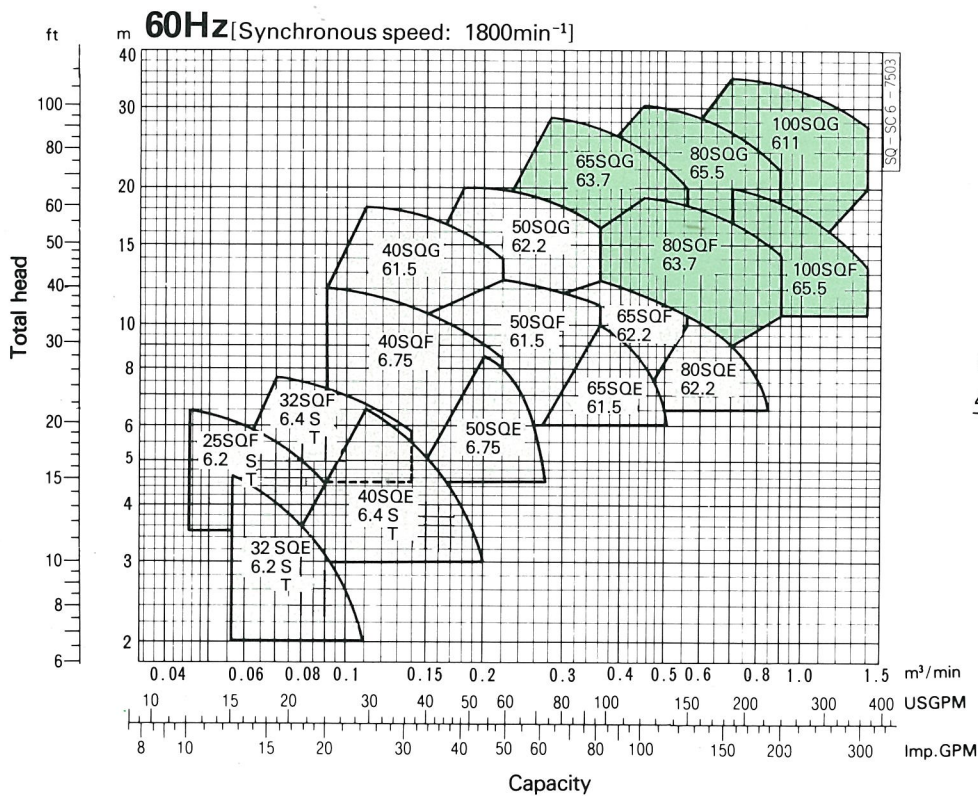
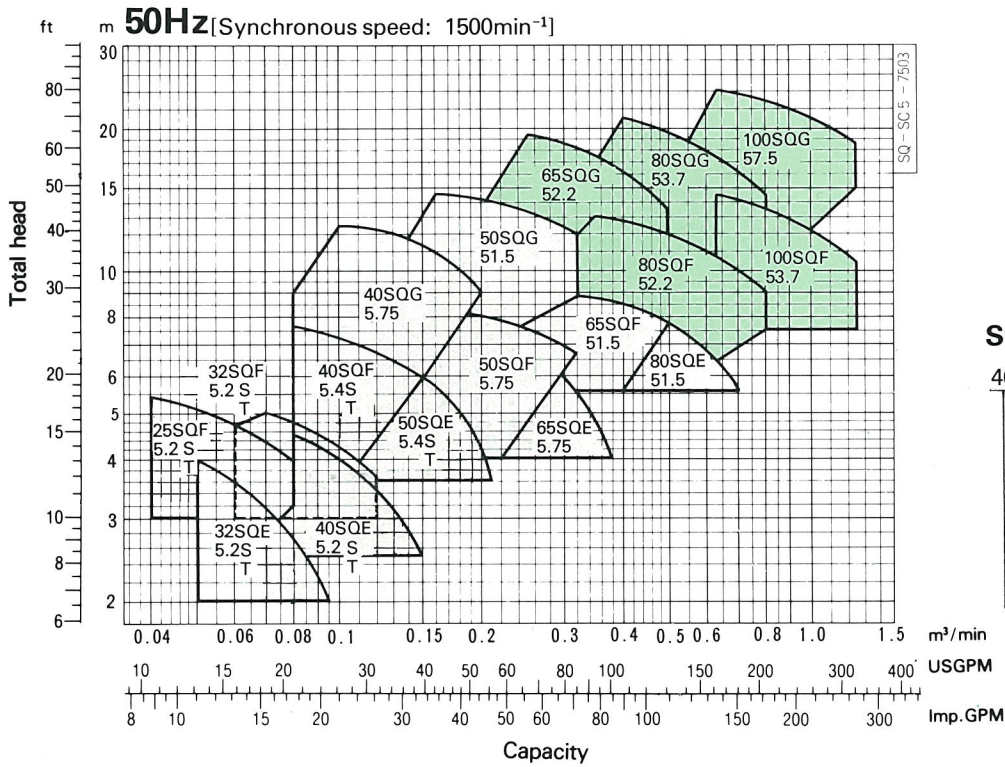
# SELECTION CHARTS



: Enclosed impeller type



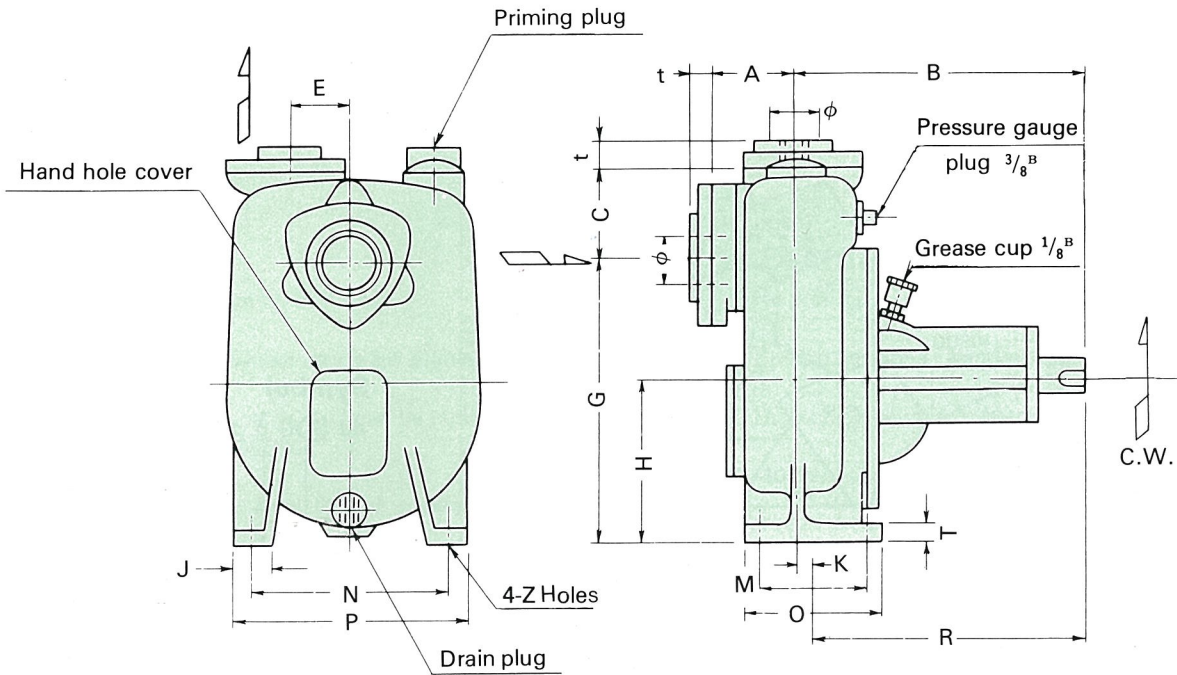
: Semi-open impeller type



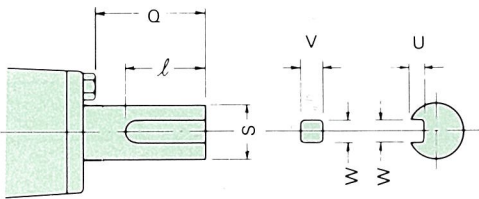


# DIMENSIONS

## Semi-open impeller type, Bare shaft pump

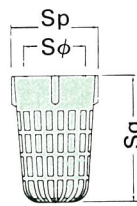


### Shaft

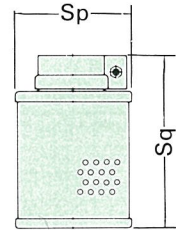


### Strainer

25 ~ 50φ



65, 80φ



Unit: mm

Size	Sφ	Sp	Sq
25	PT-1	44	75
32	PT-1-1/4	54	80
40	PT-1-1/2	63	105
50	PT-2	75	110
65	—	102	190
80	—	122	195

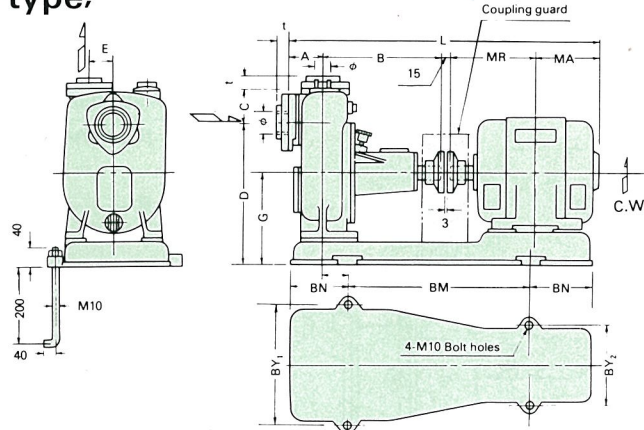
Unit: mm

Size	Model	Pump															Companion flange		Shaft							Ball bearing	Mechanical seal	Weight (Mass) kg
		A	B	C	G	E	H	J	K	M	N	O	P	R	T	Z	φ	t	Q	S	U	V	W	ℓ				
25	25SQF	60	215	60	175	25	90	40	10	60	160	90	180	205	12	10	PT-1	15	38	18	3	5	5	28	6304ZZ	EH-140-20	16	
32	32SQE	60	215	60	175	25	90	40	10	60	160	90	180	205	12	10	PT-1-1/4	15	38	18	3	5	5	28	6304ZZ	EH-140-20	16	
	32SQF	60	220	60	200	35	115	40	10	60	150	90	180	210	15	12	PT-1-1/4	18	38	18	3	5	5	28	6304ZZ	EH-140-20	18	
40	40SQE	60	220	60	200	35	115	40	10	60	150	90	180	210	15	12	PT-1-1/2	18	38	18	3	5	5	28	6304ZZ	EH-140-20	18	
	40SQF	70	225	55	235	45	135	40	-10	90	200	120	230	235	15	12	PT-1-1/2	18	38	18	3	5	5	28	6304ZZ	EH-140-20	24	
	40SQG	70	243	65	285	60	160	50	17	100	240	130	270	226	15	12	PT-1-1/2	18	38	24	4	7	7	36	6305ZZ	EH-140-25	35	
50	50SQE	70	225	55	235	45	135	40	-10	90	200	120	230	235	15	12	PT-2	18	38	18	3	5	5	28	6304ZZ	EH-140-20	24	
	50SQF	70	250	70	235	50	135	40	15	90	200	120	230	235	15	12	PT-2	18	38	24	4	7	7	36	6305ZZ	EH-140-25	30	
	50SQG	70	253	75	285	50	160	50	27	100	240	130	270	226	15	12	PT-2	18	38	24	4	7	7	36	6305ZZ	EH-140-25	37	
65	65SQE	70	250	70	235	50	135	40	15	90	200	120	230	235	15	12	PT-2-1/2	18	38	24	4	7	7	36	6305ZZ	EH-140-25	30	
	65SQF	90	255	85	245	60	135	40	20	90	200	120	230	235	15	12	PT-2-1/2	24	38	24	4	7	7	36	6305ZZ	EH-140-25	37	
80	80SQE	90	255	85	245	60	135	40	20	90	200	120	230	235	15	12	PT-3	24	38	24	4	7	7	36	6305ZZ	EH-140-25	37	



# DIMENSIONS

## Semi-open impeller type, with motor



**Strainer**

Size	S $\phi$	Sp	Sq
25	PT-1	44	75
32	PT-1-1/4	54	80
40	PT-1-1/2	63	105
50	PT-2	75	110
65	—	102	190
80	—	122	195

Unit: mm

### 50Hz

Model	Output kW	Phase	Pump								Companion Flange		Motor				Common base				Total weight (Mass) kg
			A	B	C	D	E	F	G	L	$\phi$	t	Frame No.	Type	MA	MR	BM	BN	BY <sub>1</sub>	BY <sub>2</sub>	
25SQFM	0.2	S	60	215	60	225	25	42	140	508	1	15	71	D.P.	98	120	300	100	234	234	33
	0.2	T	60	215	60	225	25	53	140	505	1	15	63	T.E.	112	103	250	100	234	234	33
32SQEM	0.2	S	60	215	60	225	25	42	140	508	1-1/4	15	71	D.P.	98	120	300	100	234	234	33
	0.2	T	60	215	60	225	25	53	140	505	1-1/4	15	63	T.E.	112	103	250	100	234	234	33
32SQFM	0.2	S	60	220	60	250	35	40	165	513	1-1/4	18	71	D.P.	98	120	300	100	234	234	40
	0.2	T	60	220	60	250	35	44	165	510	1-1/4	18	63	T.E.	112	103	270	100	234	234	37
40SQEM	0.2	S	60	220	60	250	35	40	165	513	1-1/2	18	71	D.P.	98	120	300	100	234	234	40
	0.2	T	60	220	60	250	35	44	165	510	1-1/2	18	63	T.E.	112	103	270	100	234	234	37
40SQFM	0.4	S	70	225	55	290	45	19	190	582	1-1/2	18	80	D.P.	132	140	360	100	284	234	46
	0.4	T	70	225	55	285	45	10	185	545	1-1/2	18	71	T.E.	115	120	330	100	284	234	49
40SQGM	0.75	T	70	243	65	340	60	27	215	593	1-1/2	18	80	T.E.	125	140	360	100	344	234	72
50SQEM	0.4	S	70	225	55	290	45	19	190	582	2	18	80	D.P.	132	140	360	100	284	234	53
	0.4	T	70	225	55	285	45	10	185	545	2	18	71	T.E.	115	120	330	100	284	234	49
50SQFM	0.75	T	70	250	70	290	50	35	190	600	2	18	80	T.E.	125	140	360	100	284	234	65
50SQGM	1.5	T	70	253	75	340	50	57	215	656.5	2	18	90L	T.E.	150	168.5	360	120	344	234	82
65SQEM	0.75	T	70	250	70	290	50	35	190	600	2-1/2	18	80	T.E.	125	140	360	100	284	234	65
65SQFM	1.5	T	89	255	85	300	60	60	190	677.5	2-1/2	24	90L	T.E.	150	168.5	360	120	284	234	80
80SQEM	1.5	T	89	255	85	380	60	60	190	677.5	3	24	90L	T.E.	150	168.5	360	120	284	234	80

Unit: mm

### 60Hz

Model	Output kW	Phase	Pump								Companion Flange		Motor				Common base				Total weight (Mass) kg
			A	B	C	D	E	F	G	L	$\phi$	t	Frame No.	Type	MA	MR	BM	BN	BY <sub>1</sub>	BY <sub>2</sub>	
25SQFM	0.2	S	60	215	60	225	25	42	140	508	1	15	71	D.P.	98	120	300	100	234	234	33
	0.2	T	60	215	60	225	25	53	140	505	1	15	63	T.E.	112	103	250	100	234	234	33
32SQEM	0.2	S	60	215	60	225	25	42	140	508	1-1/4	15	71	D.P.	98	120	300	100	234	234	33
	0.2	T	60	215	60	225	25	53	140	505	1-1/4	15	63	T.E.	112	103	250	100	234	234	33
32SQFM	0.4	S	60	220	60	250	35	42	140	513	1-1/4	18	80	D.P.	132	140	300	100	234	234	41
	0.4	T	60	220	60	250	35	40	165	510	1-1/4	18	71	T.E.	115	120	300	100	234	234	41
40SQEM	0.4	S	60	220	60	250	35	42	140	567	1-1/2	18	80	D.P.	132	140	300	100	234	234	41
	0.4	T	60	220	60	250	35	40	165	530	1-1/2	18	71	T.E.	115	120	300	100	234	234	41
40SQFM	0.75	T	70	225	55	290	45	10	190	575	1-1/2	18	80	T.E.	125	140	360	100	284	234	59
40SQGM	1.5	T	70	243	65	340	60	47	215	646.5	1-1/2	18	90L	T.E.	150	168.5	360	120	344	234	80
50SQEM	0.75	T	70	225	55	290	45	10	190	575	2	18	80	T.E.	125	140	360	100	284	234	59
50SQFM	1.5	T	70	250	70	290	50	55	190	635.5	2	18	90L	T.E.	150	168.5	360	120	284	234	73
50SQGM	2.2	T	70	253	75	350	50	57	225	686	2	18	100L	T.E.	165	183	390	120	344	264	77
65SQEM	1.5	T	70	250	70	290	50	55	190	653.5	2-1/2	18	90L	T.E.	150	168.5	360	120	284	234	73
65SQFM	2.2	T	89	255	85	310	60	57	200	707	2-1/2	24	100L	T.E.	165	183	390	120	284	284	75
80SQEM	2.2	T	89	255	85	310	60	57	200	707	3	24	100L	T.E.	165	183	390	120	284	284	75

1. Motors are in accordance with EBARA standards.

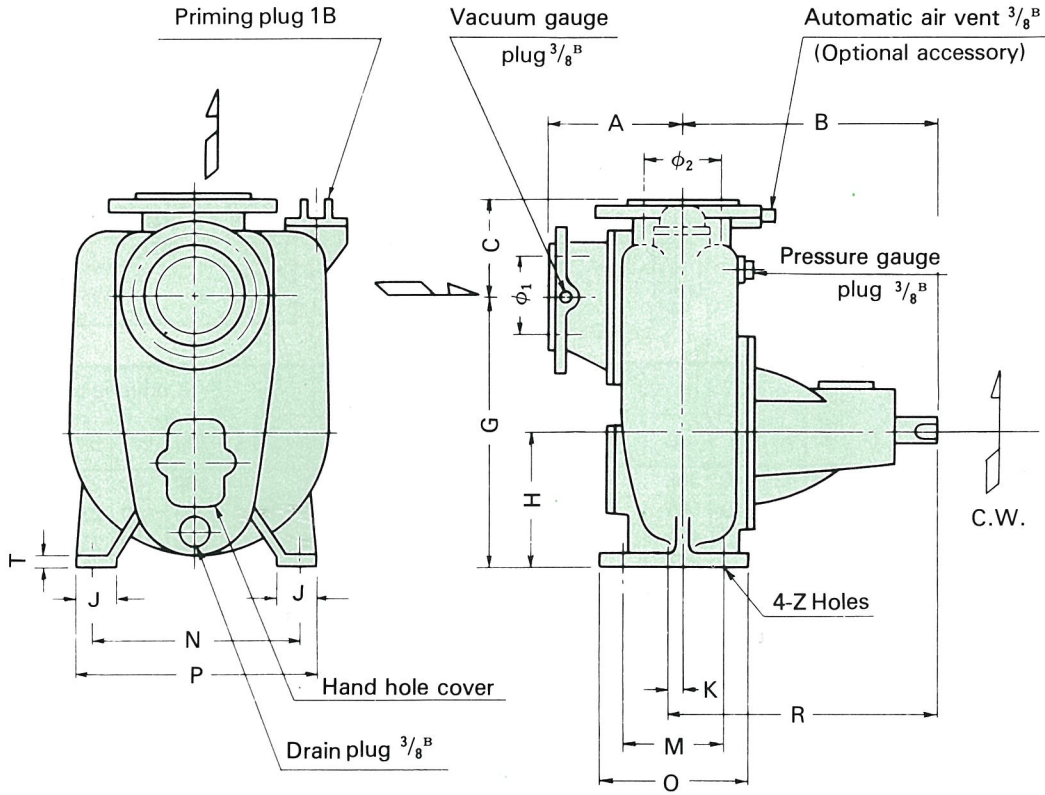
2. Motor spec. S: Single phase induction motor  
T: Three phase induction motor

DP: Open drip proof  
TE: Totally enclosed fan cooled

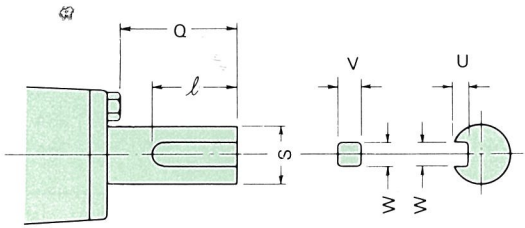


# DIMENSIONS

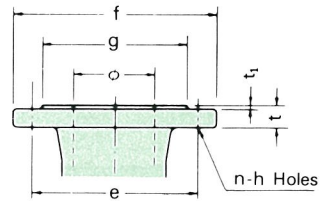
## Enclosed impeller type, Bare shaft pump



### Shaft

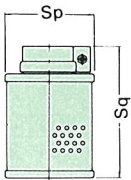


### Flange



Unit: mm

### Strainer



Unit: mm		
Size	Sp	Sq
65	102	190
80	122	195
100	182	195

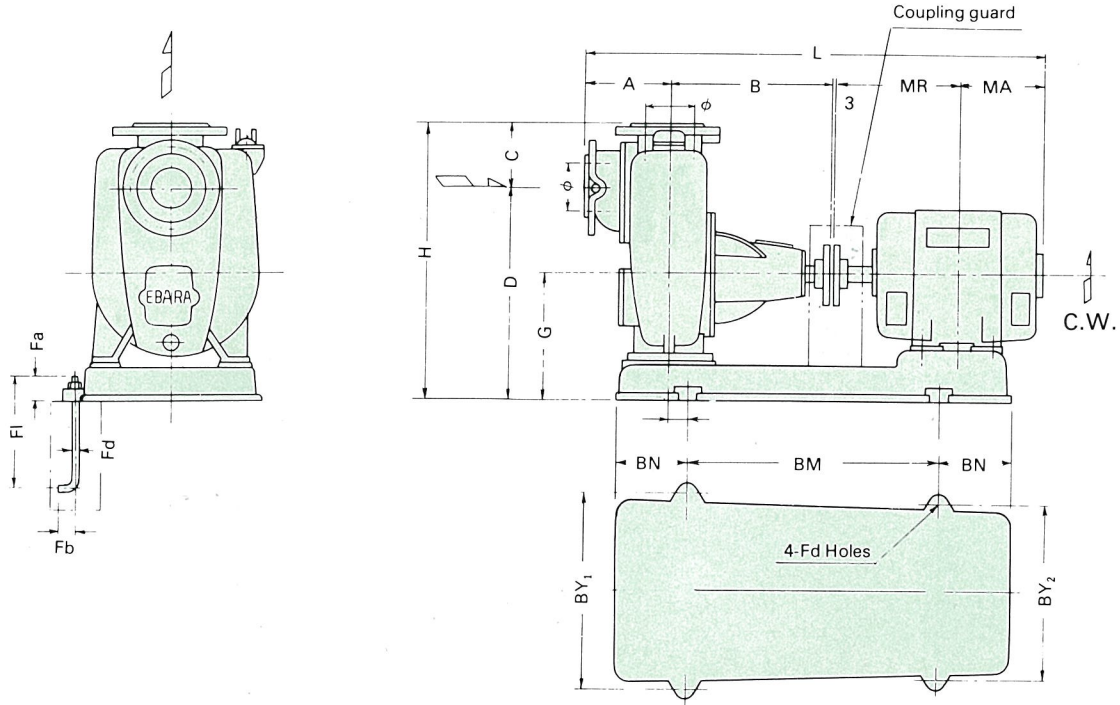
Model	$\phi_1$	$\phi_2$	g	e	f	t	$t_1$	n	h
65SQG	65	80	120	140	175	18	2	4	15
80SQF	80	100	130	150	185	18	2	8	15
80SQG	80	80	130	150	185	18	2	8	15
100SQF	100	100	150	175	210	20	2	8	15
100SQG	100	125	150	175	210	20	2	8	15

Size $\phi$	Model	Pump														Shaft						Ball bearing	Mechanical seal	Weight (Mass) kg
		A	B	C	G	H	J	K	M	N	O	P	R	T	Z	Q	S	U	V	W	$\varrho$			
65	65SQG	135	290	115	305	170	60	10	120	260	160	300	300	18	15	59	28	4	7	7	40	6306ZZ	EA-104-30	53
80	80SQF	160	300	135	325	170	50	0	120	260	160	300	300	18	15	59	28	4	7	7	40	6306ZZ	EA-104-30	58.5
	80SQG	145	290	120	300	170	60	10	120	260	160	300	300	18	15	59	28	4	7	7	40	6306ZZ	EA-104-30	53
100	100SQF	160	300	145	315	170	50	0	120	260	160	300	300	18	15	59	28	4	7	7	40	6306ZZ	EA-104-30	60
	100SQG	170	342	155	425	220	70	15	160	300	200	340	357	18	15	76	32	4.5	8	10	64	6307ZZ	EA-104-30	91

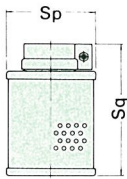
Unit: mm

# DIMENSIONS

## Enclosed impeller type, with motor



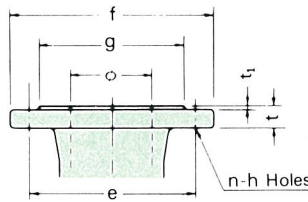
### Strainer



Unit: mm

Size	Sp	Sq
65	102	190
80	122	195
100	182	195

### Flange



Unit: mm

Model	$\phi_1$	$\phi_2$	g	e	f	t	$t_1$	n	h
65SQG	65	80	120	140	175	18	2	4	15
80SQF	80	100	130	150	185	18	2	8	15
80SQG	80	80	130	150	185	18	2	8	15
100SQF	100	100	150	175	210	20	2	8	15
100SQG	100	125	150	175	210	20	2	8	15

### 50Hz

Unit: mm

Size $\phi$	Model	Output kW	Pump								Motor				Common base				Anchor bolt				Total weight (Mass) kg
			A	B	C	D	F	G	H	L	Frame No.	Type	MA	MR	BM	BN	BY <sub>1</sub>	BY <sub>2</sub>	Fd	Fl	Fa	Fb	
65	65SQGM	2.2	135	290	115	370	30	235	485	776	100L	T.E.	165	183	430	140	364	294	M12	200	40	40	109
80	80SQFM	2.2	160	300	135	390	40	235	525	811	100L	T.E.	165	183	430	140	364	294	M10	200	40	40	111
	80SQGM	3.7	145	290	120	365	30	235	485	807	112M	T.E.	175	200	440	140	364	304	M10	200	40	40	123
100	100SQFM	3.7	160	300	145	380	40	235	525	838	112M	T.E.	175	200	440	140	364	304	M10	200	40	40	130
	100SQGM	7.5	175	342	155	500	25	295	655	1003	132M	T.E.	225	258	550	160	410	350	M12	250	55	50	197

### 60Hz

Unit: mm

Size $\phi$	Model	Output kW	Pump								Motor				Common base				Anchor bolt				Total weight (Mass) kg
			A	B	C	D	F	G	H	L	Frame No.	Type	MA	MR	BM	BN	BY <sub>1</sub>	BY <sub>2</sub>	Fd	Fl	Fa	Fb	
65	65SQGM	3.7	135	290	115	370	30	235	485	803	112M	T.E.	175	200	440	140	364	304	M10	200	40	40	123
80	80SQFM	3.7	160	300	135	390	40	235	525	838	112M	T.E.	175	200	440	140	364	304	M10	200	40	40	128
	80SQGM	5.5	145	290	120	365	30	235	485	882	132S	T.E.	205	239	480	140	364	324	M10	200	40	40	151
100	100SQFM	5.5	160	300	145	380	40	235	525	855	132S	T.E.	205	239	480	140	364	324	M10	200	40	40	157
	100SQGM	11	175	342	155	500	45	295	655	1098	160M	T.E.	255	323	650	180	410	410	M12	250	55	50	232

Note 1. Motors are in accordance with EBARA standards.

Note 2. Motor specifications, three phase induction motor, totally enclosed fan cooled.



#### CONVERSION OF SI UNIT

1kgf/cm<sup>2</sup> = 0.0980665 MPa

\* All specifications subject to change without notice.  
In this catalog, the particulars in { } are in accordance with the International System of Units (SI) and given for reference only.

## CAUTION

- Do not attempt to operate, inspect or service this pump before you have read and understood manual of pump.
- Wiring and grounding work must NOT be performed by unqualified persons. It is extremely dangerous for unqualified persons to perform such work. The user should install electrical leakage breakers and overload safety devices to prevent electric shock and fire.



## EBARA CORPORATION

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