WONDER Since 1988

In Synchronization with the Future

ISO14001 ISO9001 ISO45001 RoHS SASO

SSWE Series

Three Phase Super Premium Efficiency Asynchronous Cast Iron Motors

IE4

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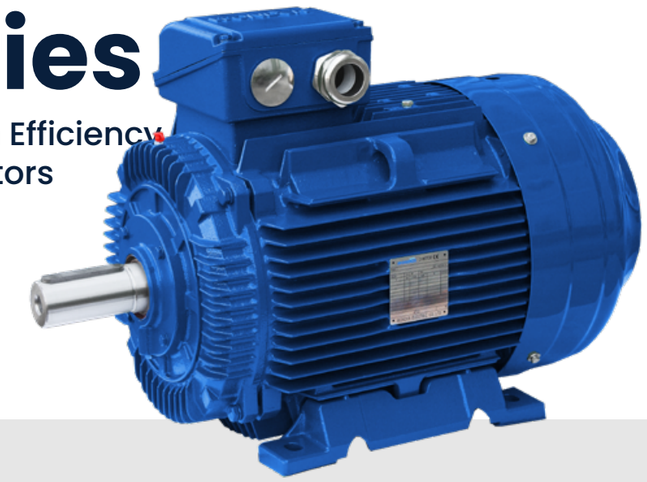
Three Phase Super Premium Efficiency Asynchronous Cast Iron Motors



General Information:

SSWE Series three phase asynchronous induction motors are super premium efficiency motors with cast iron housing. The efficiency indicators are in line with IE4.

Wonder three phase asynchronous motors are widely applied in general machinery and industries such as pumps & water treatment, road machinery, petroleum, chemical & metallurgy, cement and papermaking.

Technical Characteristics:

- IP55 protection, class F insulation, B-level temperature rise, S1 duty;
- Rated voltage 400V;
- Rated frequency 50Hz;
- Operation ambient temperature: -20°C~40°C;
- Operation altitude ≤1000m.
- Y-connection for motors up to 3kW, △-connection for 4kW and above.
- Cooling method: IC411/IC416.

Mounting Arrangements:

Types	Basic Type of Construction	Derived Types of Construction				
SSWE 160-355	IM B3 IM 1001	IM V5 IM 1011	IM V6 IM 1031	IM B6 IM 1051	IM B7 IM 1061	IM B8 IM 1071
SSWE 160-355	IM B35 IM 2001	IM V15 IM 2011	IM V36 IM 2031	* IM 2051	* IM 2061	* IM 2071
SSWE 160-355	IM B5 IM 3001	IM V1 IM 3011	IM V3 IM 3031			

Basic types of construction may be used in all derived types of construction.
1) "*" means not-defined mounting by IEC 60034-7.
2) for the types of construction IM V6, IM B6, IM B8 inquiry is necessary.

Technical Specifications (1/2)

Rated Output		IEC Frame	Rated Speed	Full Load Current	Effciency η%			Power Factor cosφ			Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Sound LP	Moment of Inertia	Weight
					% of Full Load											
kW	HP		r/m	I_n(A)	100	75	50	100	75	50	I_L/I_n	T_L/T_n	T_b/T_n	dB(A)	J(kgm^2)	kg
				400V												
3000r/m (2 Pole) 50Hz																
11	15	160M	2945	19.50	92.6	92.5	91.0	0.88	0.83	0.72	7.8	2.2	3.7	69	0.066	132
15	20	160M	2945	26.40	93.3	93.1	92.0	0.88	0.83	0.72	8.2	2.2	3.8	69	0.068	150
18.5	20	160L	2945	32.00	93.7	93.5	92.0	0.89	0.84	0.72	8.1	2.2	3.8	69	0.076	175
22	30	180M/L	2955	38.40	94.0	93.8	92.5	0.88	0.83	0.72	8.0	2.5	3.2	70	0.173	220
30	40	200L1	2970	51.50	94.5	94.1	92.8	0.89	0.84	0.74	8.0	2.6	3.2	73	0.193	285
37	50	200L2	2980	63.30	94.8	94.6	93.0	0.90	0.85	0.74	7.8	2.8	3.5	73	0.203	315
45	60	225M	2980	75.9	95.0	94.8	93.0	0.89	0.86	0.74	8.9	2.5	3.5	75	0.411	357
55	75	250S/M	2980	93.6	95.3	95.1	94.1	0.89	0.85	0.73	8.2	2.3	3.5	78	0.435	518
75	100	280S	2980	127.0	95.6	95.2	94.3	0.90	0.86	0.75	7.8	2.3	3.2	79	0.743	590
90	125	280M	2980	151.0	95.8	95.5	94.8	0.90	0.86	0.76	7.6	2.5	3.2	79	0.823	685
110	150	315S	2980	184.0	96.0	95.8	95	0.90	0.85	0.76	7.6	2.3	3.6	80	1.64	1078
132	175	315M	2980	220.0	96.2	96.0	95	0.90	0.87	0.76	7.7	2.3	3.5	80	1.78	1138
160	215	315M/L	2980	266	96.3	96.1	95.1	0.90	0.87	0.76	7.6	2.4	3.5	82	1.97	1278
200	270	315M/L	2980	332	96.5	96.3	95.4	0.90	0.87	0.76	8.1	2.3	3.3	83	2.31	1419
250	335	355M/L	2980	415	96.5	96.2	95.3	0.90	0.87	0.76	8.2	2.3	3.5	83	3.9	1914
315	420	355M/L	2980	524	96.5	96.2	95.3	0.90	0.87	0.77	8.9	2.8	3.8	83	4.01	2132
1500r/m (4 Pole) 50Hz																
11	15	160M	1475	20.5	93.3	93.1	92.2	0.83	0.77	0.67	8.8	3.3	3.4	60	0.108	147
15	20	160L	1475	27.8	93.9	93.8	92.9	0.83	0.79	0.70	9.0	3.6	3.8	60	0.109	171
18.5	25	180M/L	1475	34.2	94.2	94.0	93.0	0.83	0.76	0.68	7.9	2.3	3.8	65	0.159	137
22	30	180L	1475	40.5	94.5	94.3	93.3	0.83	0.76	0.68	8.5	2.3	3.7	65	0.193	153
30	40	200L1	1480	54.3	94.9	94.7	93.7	0.84	0.78	0.69	7.3	1.9	3.7	68	0.311	319
37	50	225S	1480	66	95.2	95.0	94.0	0.85	0.79	0.70	7.8	2.4	3.2	68	0.612	393
45	60	225M	1480	80.1	95.4	95.1	94.1	0.85	0.79	0.70	8.3	2.7	3.2	68	0.679	406
55	75	250S/M	1485	97.6	95.7	95.6	94.8	0.85	0.79	0.70	8.3	2.4	3.0	69	0.841	517
75	100	280S	1485	131	96.0	96.0	95.2	0.86	0.79	0.70	7.9	2.1	2.9	70	1.53	656
90	125	280M	1485	157	96.1	96.0	95.0	0.86	0.79	0.70	7.8	2.2	3.0	70	1.77	720
110	150	315S	1490	185	96.2	96.1	95.1	0.89	0.81	0.71	7.3	2.1	3.1	74	4.01	1128
132	175	315M	1490	222	96.4	96.2	95.3	0.89	0.81	0.69	7.7	2.0	3.0	74	3.74	1199
160	215	315M/L	1490	269	96.6	96.4	95.5	0.89	0.81	0.69	7.7	2.3	3.2	74	7.56	1367
200	270	315M/L	1490	335	96.7	96.5	95.6	0.89	0.82	0.69	7.9	2.1	3.0	74	5.16	1351
250	335	355M/L	1490	419	96.7	96.5	95.5	0.89	0.86	0.73	8.0	2.1	2.8	80	8.06	2025
315	420	355M/L	1490	528	96.7	96.5	95.5	0.89	0.88	0.73	8.0	2.4	3.0	80	8.76	2420

Technical Specifications (2/2)

Rated Output		IEC Frame	Rated Speed	Full Load Current	Effciency η%			Power Factor cosφ			Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Sound LP	Moment of Inertia	Weight
					% of Full Load											
kW	HP		r/m	400V	100	75	50	100	75	50	I_L/I_n	T_L/T_n	T_b/T_n	dB(A)	J(kgm²)	kg
1000r/m (6 Pole) 50Hz																
7.5	10	160M	970	15.8	91.3	91.0	90.2	0.75	0.69	0.60	7.0	2.5	2.8	56	0.1	138
11	15	160L	975	22.9	92.3	92.2	91.1	0.75	0.67	0.59	7.0	3.0	3.1	56	0.16	162
15	20	180L	980	29.9	92.9	92.7	90.7	0.78	0.70	0.61	8.5	3.0	3.4	59	0.37	239
18.5	25	200L1	980	35.7	93.4	93.0	92.1	0.80	0.73	0.64	7.4	2.8	2.9	59	0.38	280
22	30	200L2	980	42.4	93.7	93.4	92.9	0.82	0.73	0.63	7.0	2.5	2.6	59	0.44	300
30	40	225M	985	56.1	94.2	93.9	93.3	0.84	0.76	0.63	7.0	2.2	2.3	59	0.73	359
37	50	250S/M	980	67.3	94.5	94.0	93.5	0.84	0.76	0.66	8.0	2.8	3.4	60	0.11	500
45	60	280S	980	81.6	94.8	94.8	93.4	0.84	0.78	0.68	8.0	2.8	3.3	60	1.75	586
55	75	280M	980	99.4	95.1	94.9	93.6	0.84	0.79	0.71	7.0	2.0	3.2	68	1.99	631
75	100	315S	980	137	95.4	95.3	94.3	0.83	0.78	0.73	7.0	2.0	2.6	69	3.68	1170
90	125	315M	990	162	95.6	95.6	94.7	0.84	0.80	0.72	7.0	2.0	2.6	70	4.95	1197
110	150	315M/L	990	200	95.8	95.4	94.5	0.83	0.8	0.74	7.0	2.0	2.6	70	5.76	1420
132	175	315M/L	990	239	96	95.6	94.8	0.83	0.81	0.75	7.0	2.0	2.6	70	5.79	1420
160	215	355M/L	990	279	96.2	96	94.9	0.86	0.83	0.78	7.0	2.3	2.5	70	9.96	1980
200	270	355M/L	995	353	96.3	96.3	96	0.85	0.82	0.80	7.3	2.0	2.4	70	11.5	2033
250	335	355M/L	995	440	96.5	96.6	96.2	0.85	0.83	0.81	7.0	2.0	2.4	75	12.6	2234

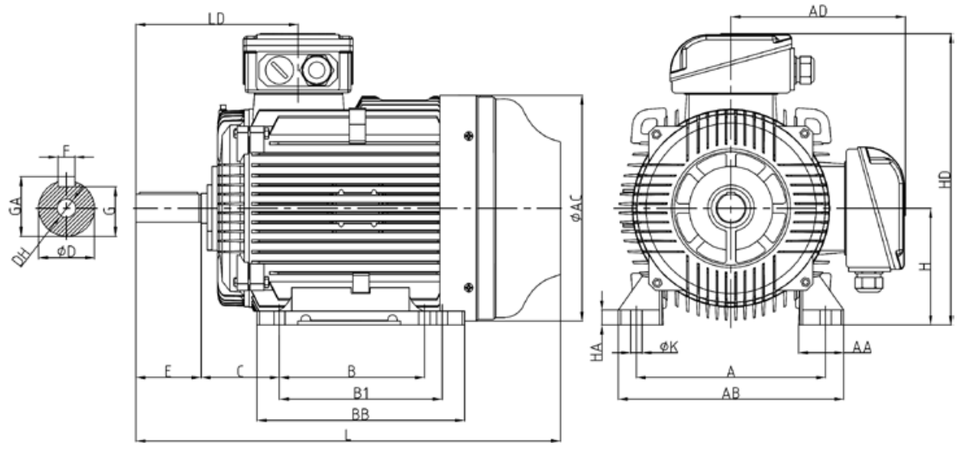
Bearings

Frame Size	Driving End		Non-driving End	
	2 Pole	4-6 Pole	2 Pole	4-6 Pole
160	6209 2Z/C3	6210 2Z/C3	6211 2Z/C3	6212 2Z/C3
180	6211/C3	6311/C3	6211/C3	6211/C3
200	6212/C3	6312/C3	6212/C3	6212/C4
225	6312/C3	6313/C3	6312/C3	6312/C4
250	6313/C3	6314/C3	6313/C3	6313/C4
280	6314/C3	6317/C3	6314/C3	6314/C4
315	6317/C3	Nu319	6317C3/7317B(V1)	6319C3/7319B(V1)
355	6319/C3	Nu322	6319C3/7319B(V1)	6322/7322B(V1)

Terminal Box

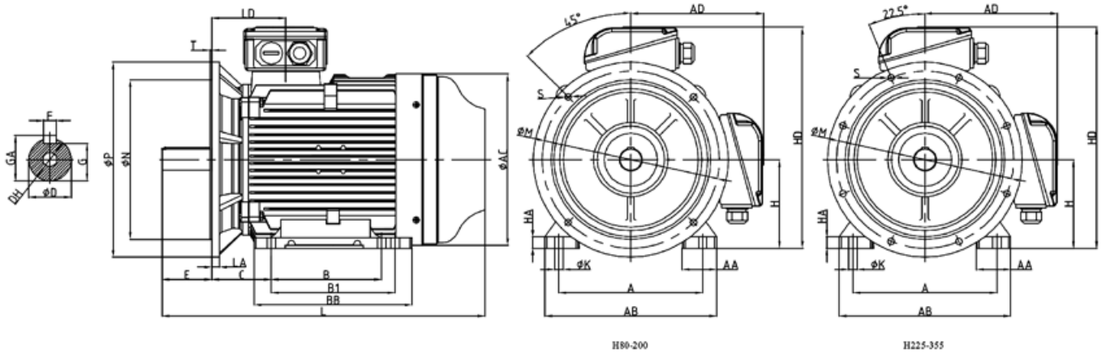
Frame Size	Thread of Cable Gland（mm）	Overal Dimensions（mm）
160~180	2×M32×1.5	170×180×77
200~225	2×M50×1.5	226×240×139
250~280	2×M63×1.5	235×250×124.4
315	2×M63×1.5	300×320×153.3
355	2×M63×1.5	350×380×192.5

B3 Mounting and Overall Dimensions-SSWE Series



Frame Size	Poles	Mounting and Overall Dimensions (mm)																				
		A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2~8	254	210	/	108	42	110	12	37.0	160	15	M16×36	45.0	64	315	314	241	20	401	260	256	630
160L	2	254	254	/	108	42	110	12	37.0	160	15	M16×36	45.0	64	315	314	241	20	401	304	256	674
160L	4~8	254	254	/	108	42	110	12	37.0	160	15	M16×36	45.0	64	315	314	241	20	401	304	256	674
180M/L	2~4	279	241	279	121	48	110	14	42.5	180	15	M16×36	51.5	68	351	355	262	22	442	349	271	722
180L/M	4~8	279	241	279	121	48	110	14	42.5	180	15	M16×36	51.5	68	351	355	262	22	442	349	271	752
200L	2	279	305	/	133	55	110	16	49.0	200	19	M20×42	59.0	70	388	397	344	25	544	369	296	804
200L	4~8	279	305	/	133	55	110	16	49.0	200	19	M20×42	59.0	70	388	397	344	25	544	369	296	804
225S	4~8	318	286	/	149	60	140	18	53.0	225	19	M20×42	64.0	79	430	445	368	29	593	361	329	852
225M	2	356	311	/	149	55	110	16	49.0	225	19	M20×42	59.0	79	430	445	368	29	593	386	299	846
	4~8	356	311	/	149	60	140	18	53.0	225	19	M20×42	64.0	79	430	445	368	29	593	386	329	877
250S/M	2	406	311	349	168	60	140	18	53.0	250	24	M20×42	64.0	97	484	484	374	32	624	445	348	911
	4~8	406	311	349	168	65	140	18	58.0	250	24	M20×42	69.0	97	484	484	374	32	624	445	348	911
280S	2	457	368	/	190	65	140	18	58.0	280	24	M20×42	69.0	85	542	546	403	35	683	485	357	965
	4~8	457	368	/	190	75	140	20	67.5	280	24	M20×42	79.5	85	542	546	403	35	683	485	357	965
280M	2	457	419	/	190	65	140	18	58.0	280	24	M20×42	69.0	85	542	546	403	35	683	536	357	1016
	4~8	457	419	/	190	75	140	20	67.5	280	24	M20×42	79.5	85	542	546	403	35	683	536	357	1016
315S	2	508	406	/	216	65	140	18	58.0	315	28	M20×46	69.0	120	628	620	493	45	808	570	397	1201
	4~8	508	406	/	216	80	170	22	71.0	315	28	M20×46	85.0	120	628	620	493	45	808	570	427	1231
315M/L	2	508	457	508	216	65	140	18	58.0	315	28	M20×46	69.0	120	628	620	493	45	808	680	397	1311
	4~8	508	457	508	216	80	170	22	71.0	315	28	M20×46	85.0	120	628	620	493	45	808	680	427	1341
355M/L	2	610	560	254	254	75	140	20	67.5	355	28	M20×46	79.5	120	726	698	593	45	948	750	425	1501
	4~8	610	560	254	254	95	170	25	86.0	355	28	M24×56	100.0	116	726	698	593	52	948	750	455	1531

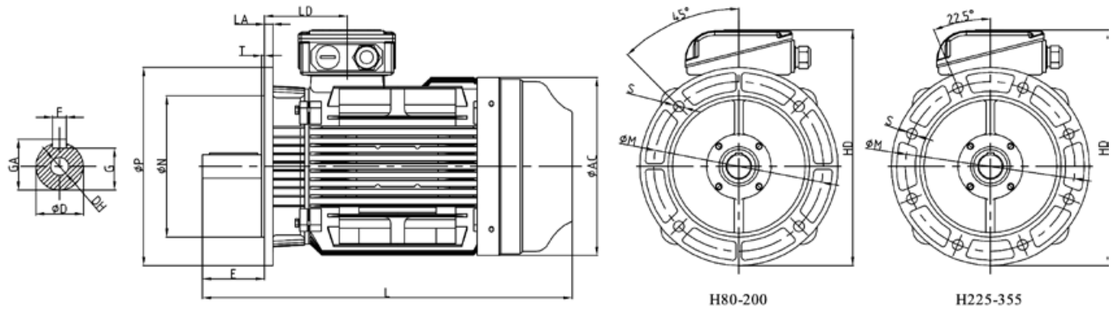
B35 Mounting and Overall Dimensions



Frame Size	Poles	Mounting and Overall Dimensions (mm)																								
		A	B	B1	C	D	E	F	G	H	K	M	N	P	S	T	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2~8	254	210	/	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	M16×36	45	64	315	314	241	20	401	260	256	630
160L	2	254	254	/	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	M16×36	45	64	315	314	241	20	401	304	256	674
160L	4~8	254	254	/	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	M16×36	45	64	315	314	241	20	401	304	256	674
180M/L	2~4	279	241	279	121	48	110	14	42.5	180	15	300	250	350	4-Φ19	5	M16×36	51.5	68	351	355	262	22	442	349	271	722
180L/M	4~8	279	241	279	121	48	110	14	42.5	180	15	300	250	350	4-Φ19	5	M16×36	51.5	68	351	355	262	22	442	349	271	752
200L	2	318	305	/	133	55	110	16	49	200	19	350	300	400	4-Φ19	5	M20×42	59	70	388	397	344	25	544	369	296	804
200L	4~8	318	305	/	133	55	110	16	49	200	19	350	300	400	4-Φ19	5	M20×42	59	70	388	397	344	25	544	369	296	804
225S	4~8	356	286	/	149	60	140	18	53	225	19	400	350	450	8-Φ19	5	M20×42	64	79	430	445	368	29	593	361	329	852
225M	2	356	311	/	149	55	110	16	49	225	19	400	350	450	8-Φ19	5	M20×42	59	79	430	445	368	29	593	386	299	846
	4~8	356	311	/	149	60	140	18	53	225	19	400	350	450	8-Φ19	5	M20×42	59	79	430	445	368	29	593	386	329	877
250S/M	2	406	311	349	168	60	140	18	53	250	24	500	450	550	8-Φ9	5	M20×42	64	97	484	484	374	32	624	445	348	911
	4~8	406	311	349	168	65	140	18	58	250	24	500	450	550	8-Φ19	5	M20×42	64	97	484	484	374	32	624	445	348	911
280S	2	457	368	/	190	65	140	18	58	280	24	500	450	550	8-Φ19	5	M20×42	69	85	542	546	403	35	683	485	357	965
	4~8	457	368	/	190	75	140	20	67.5	280	24	500	450	550	8-Φ19	5	M20×42	79.5	85	542	546	403	35	683	485	357	965
280M	2	457	419	/	190	65	140	18	58	280	24	500	450	550	8-Φ9	5	M20×42	69	85	542	546	403	35	683	536	357	1016
	4~8	457	419	/	190	75	140	20	67.5	280	24	500	450	550	8-Φ19	5	M20×42	79.5	85	542	546	403	35	683	536	357	1016
315S	2	508	406	/	216	65	140	18	58	315	28	600	550	660	8-Φ24	6	M20×46	69	120	628	620	493	45	808	570	397	1201
	4~8	508	406	/	216	80	170	22	71	315	28	600	550	660	8-Φ24	6	M20×46	85	120	628	620	493	45	808	570	427	1231
315M/L	2	508	457	508	216	65	140	18	58	315	28	600	550	660	8-Φ24	6	M20×46	69	120	628	620	493	45	808	680	397	1311
	4~8	508	457	508	216	80	170	22	71	315	28	600	550	660	8-Φ24	6	M20×46	85	120	628	620	493	45	808	680	425	1341
355M/L	2	610	500	254	254	75	140	20	67.5	355	28	740	680	800	8-Φ24	6	M20×46	79.5	120	726	698	593	52	948	750	425	1501
	4~8	610	560	254	254	95	170	25	86	355	28	740	680	800	8-Φ24	6	M20×46	100	116	726	698	593	52	948	750	455	1531

R=0 distance from flange to shaft shoulder

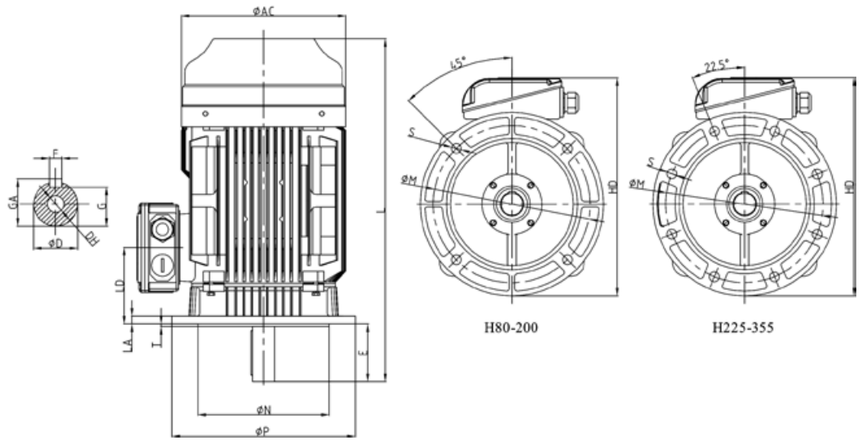
B5 Mounting and Overall Dimensions



Frame Size	Poles	Mounting and Overall Dimensions (mm)													
		D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
160M	2~8	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	256	630
160L	2	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	256	674
160L	4~8	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	271	674
180M	2~4	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	442	15	271	722
180L	4~8	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	442	15	296	752
200L	2	55	110	16	49	350	300	400	4-Φ19	5	M20×42	59	397	544	17	296	804
200L	4~8	55	140	16	49	350	300	400	4-Φ19	5	M20×42	59	397	5444	17	329	804
225S	4~8	60	110	18	53	400	350	450	8-Φ19	5	M20×42	64	445	593	20	329	852
225M	2	55	140	16	49	400	350	450	8-Φ19	5	M20×42	59	445	593	20	299	846
	4~8	60	140	18	53	400	350	450	8-Φ19	5	M20×42	64	445	593	20	329	877
250S/M	2	60	140	18	53	500	450	550	8-Φ19	5	M20×42	64	484	624	22	348	911
	4~8	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	484	624	22	348	911
280S	2	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	546	683	22	357	965
	4~8	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	683	22	357	965
280M	2	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	546	683	22	357	1016
	4~8	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	683	22	357	1016
315S	2	65	140	18	58	600	550	660	8-Φ24	6	M20×46	69	620	808	22	397	1201
	4~8	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	808	22	427	1231
315M/L	2	65	140	18	58	600	550	660	8-Φ24	6	M20×46	69	620	808	22	397	1311
	4~8	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	808	22	427	1341
355M/L	2	75	140	20	67.5	740	680	800	8-Φ24	6	M20×46	79.5	698	948	25	425	1501
	4~8	95	170	25	86	740	680	800	8-Φ24	6	M24×56	100	698	948	25	455	1531

R=0 distance from flange to shaft shoulder

V1 Mounting and Overall Dimensions



H80-200

H225-355

Frame Size	Poles	Mounting and Overall Dimensions (mm)															
		D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
160M	2~8	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	256	630
160L	2	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	256	674
160L	4~8	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	401	15	256	674
180M	2~4	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	442	15	271	722
180L	4~8	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	442	15	271	752
200L	2	55	110	16	49	350	300	400	4-Φ19	5	M20×42	59	397	544	17	296	804
200L	4~8	55	110	16	49	350	300	400	4-Φ19	5	M20×42	59	397	544	17	296	804
225S	4~8	60	140	18	53	400	350	450	8-Φ19	5	M20×42	64	445	593	20	329	852
225M	2	545	110	16	49	400	350	450	8-Φ19	5	M20×42	59	445	593	20	299	846
	4~8	60	140	18	53	400	350	450	8-Φ19	5	M20×42	64	445	593	20	329	877
250S/M	2	60	140	18	53	500	450	550	8-Φ19	5	M20×42	64	484	624	22	348	911
	4~8	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	484	624	22	348	911
280S	2	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	546	683	22	357	965
	4~8	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	683	22	357	965
280M	2	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	546	683	22	357	1016
	4~8	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	683	22	357	1016
315S	2	65	140	18	58	600	550	660	8-Φ24	6	M20×46	69	620	808	22	397	1201
	4~8	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	808	22	427	1231
315M/L	2	65	140	18	58	600	550	660	8-Φ24	6	M20×46	69	620	808	22	397	1311
	4~8	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	808	22	427	1341
355M/L	2	75	140	20	67.5	740	680	800	8-Φ24	6	M20×46	79.5	698	948	25	425	1501
	4~8	95	170	25	86	740	680	800	8-Φ24	6	M20×46	100	698	948	25	455	1351

R=0 distance from flange to shaft shoulder

WONDER
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