

# ZWEA SERIES (IE2)

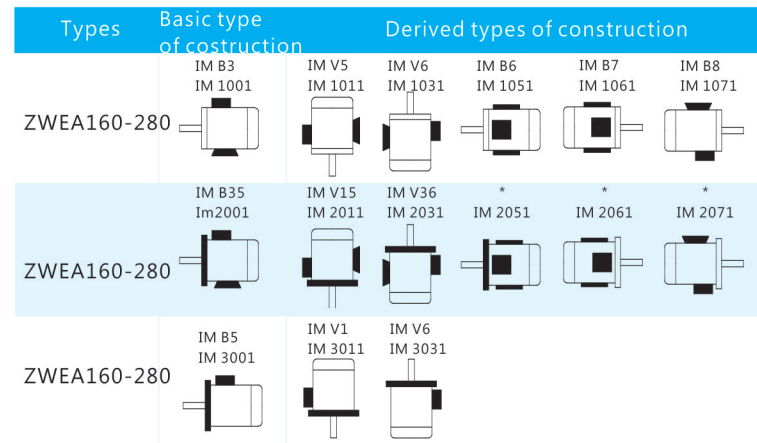
HIGH EFFICIENCY WITH INCREASED  
POWER ASYNCHRONOUS  
ALUMINUM MOTORS



ZWEA series motors are high efficiency aluminum motor with increased power. ZWEA motors give the equipment manufacturer and end user higher output with smaller frame size compared to IEC standard motors. The efficiency indicators are in line with IE2.

- IP55 protection, class F-class insulation, B-level Temperature rise, S1 duty;
- Rated voltage 400V, Rated frequency 50 Hz;
- Operation conditions: ambient temperature: -20°C ~ 40°C ;
- Aaltitude <= 1000M

## MOUNTING ARRANGEMENTS



basic types of construction may be used in all derived types of construction  
(\* )not-defined mounting by IEC 60034-7

1) for the types of construction IM V6, IM B6, IM B8 inquiry is necessary.

## ZWEA HIGH EFFICIENCY WITH INCREASED POWER ALUMINUM MOTORS

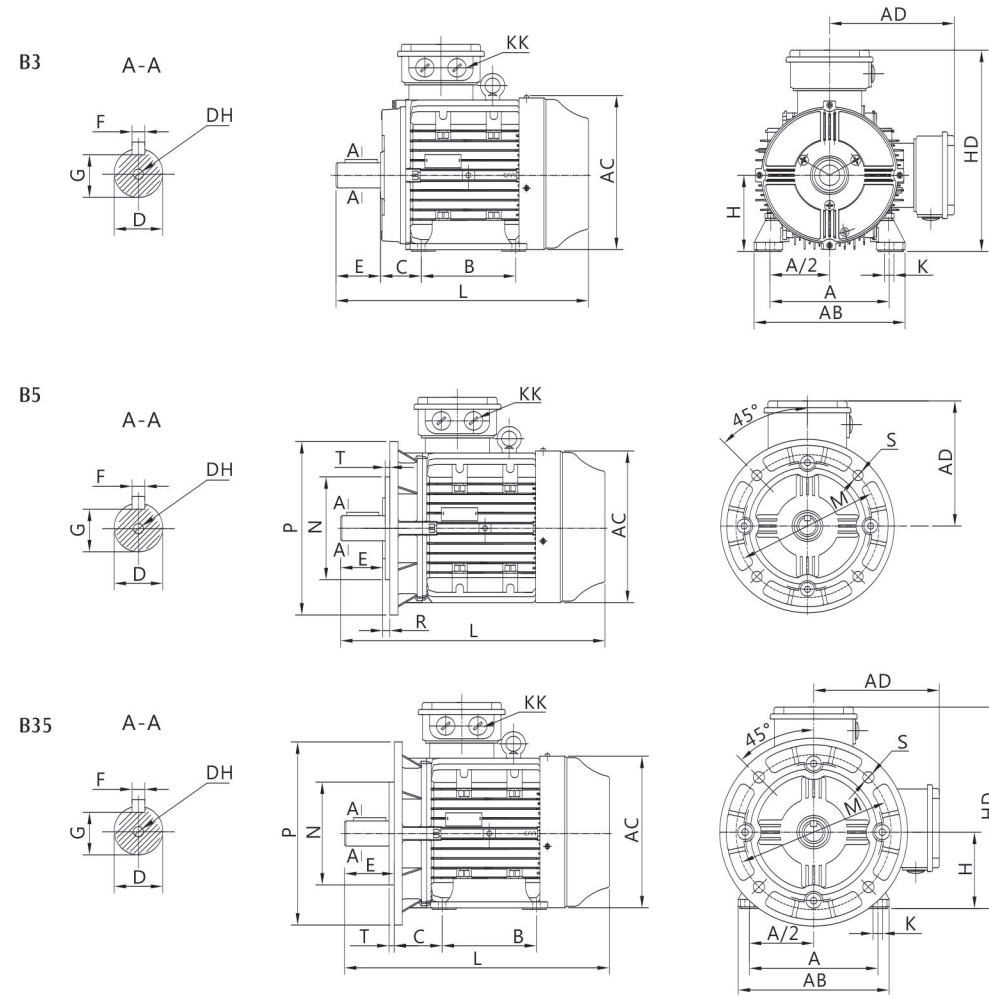
IE2

Output		IEC Frame	Rated speed	Full load current I <sub>n</sub> (A)	Efficiency η %			Power factor cosφ			Locked rotor current I <sub>L</sub> /I <sub>n</sub>	Locked rotor torque T <sub>L</sub> /T <sub>n</sub>	Break-down torque T <sub>b</sub> /T <sub>n</sub>	Sound LP dB(A)	Moment of inertia J(kg·m <sup>2</sup> )	Weight (kg)
kW	HP	(rpm)	400V		100	75	50	100	75	50						
3000 min <sup>-1</sup> (2poles) 50Hz																
1.1	1.5	80M1	2840	2.31	80.0	80.0	78.2	0.86	0.80	0.58	6.7	3.9	4.0	60	0.00098	11
1.5	2	80M2	2930	2.27	81.5	81.3	79.3	0.86	0.71	0.68	7.0	4.0	4.1	60	0.002	13
2.2	3	90S	2890	2.91	83.5	82.5	81.0	0.89	0.81	0.74	6.7	2.2	2.7	59	0.003	15
3	4	90L	2890	4.20	85.0	84.6	83.3	0.89	0.88	0.81	7.0	2.4	2.7	63	0.004	18
4	5.5	100L	2915	5.64	86.2	86.1	84.7	0.89	0.84	0.75	9.0	3.0	3.4	63	0.005	22
5.5	7.5	112M	2895	7.41	87.5	87.5	86.7	0.89	0.80	0.72	7.8	2.5	3.2	68	0.013	27
7.5	10	132S1	2930	10.0	88.5	88.3	87.5	0.90	0.85	0.78	7.5	2.0	3.1	68	0.023	39
9.2	12.5	132S2	2930	13.5	89.0	89.1	88.2	0.90	0.86	0.80	8.5	2.3	3.3	68	0.027	43
11	15	132M	2930	16.4	89.8	89.7	89.1	0.90	0.86	0.79	8.2	2.3	3.0	71	0.035	44
15	20	160M1	2940	19.5	90.5	90.5	89.6	0.90	0.87	0.80	8.2	2.3	3.0	68	0.056	101
18.5	25	160M2	2940	26.7	91.2	91.2	90.1	0.89	0.82	0.80	8.1	2.2	3.1	68	0.064	87
22	30	160L	2940	32.4	91.6	92.0	91.0	0.90	0.86	0.83	9.0	2.7	3.3	72	0.075	100
30	40	180M	2950	38.3	92.2	92.3	91.7	0.90	0.88	0.85	8.9	2.4	3.4	72	0.105	115
1500 min <sup>-1</sup> (4 poles) 50Hz																
0.75	1	80M1	1365	1.85	80.2	79.8	76.3	0.73	0.68	0.52	6.5	3.5	3.8	47	0.0036	13
1.1	1.5	80M2	1390	1.86	81.8	81.6	80.0	0.71	0.69	0.57	7.2	4.0	4.1	49	0.004	14
1.5	2	90S	1435	2.51	83.2	83.2	81.5	0.76	0.70	0.61	7.2	3.0	3.1	51	0.005	16
2.2	3	90L	1430	3.36	84.7	83.2	82.8	0.76	0.71	0.63	7.8	3.2	3.5	51	0.006	19
3	4	100L1	1440	4.68	85.9	86.0	84.7	0.79	0.75	0.65	7.8	3.3	3.5	51	0.008	24
4	5.5	100L2	1430	6.30	87.0	86.7	85.0	0.79	0.75	0.66	8.5	4.0	4.1	55	0.009	27
5.5	7.5	112M	1445	8.10	88.0	88.1	87.3	0.81	0.78	0.71	7.3	2.7	2.8	55	0.018	32
7.5	10	132S	1460	11.0	89.0	88.6	87.2	0.81	0.78	0.72	8.9	3.3	3.4	57	0.037	46
9.2	12.5	132M	1460	14.9	89.6	89.4	88.9	0.81	0.79	0.70	8.0	3.0	3.1	57	0.048	58
11	15	132M	1460	18.0	90.0	90.1	89.8	0.82	0.80	0.75	8.5	3.0	3.1	63	0.075	51
15	20	160M	1470	20.3	91.0	90.8	90.4	0.86	0.83	0.73	7.4	2.2	2.5	63	0.106	96
18.5	25	160L	1470	27.5	91.5	91.3	90.6	0.86	0.81	0.75	8.8	3.0	3.1	64	0.114	112
22	30	180M	1470	33.4	91.8	91.8	91.5	0.87	0.84	0.77	8.1	2.2	3.0	64	0.167	147
30	40	180L	1470	39.5	92.5	92.3	91.7	0.87	0.82	0.77	8.1	2.3	3.1	73	0.188	162
1000 min <sup>-1</sup> (6 poles) 50Hz																
1.1	1.5	90S	945	2.89	78.5	78.2	75.3	0.70	0.61	0.53	4.2	2.0	2.4	45	0.005	14
1.5	2	90L	945	2.83	80.2	79.1	77.2	0.70	0.63	0.50	4.7	2.2	2.6	47	0.006	16
2.2	3	100L	930	3.66	82.2	82.0	79.7	0.72	0.63	0.56	4.5	2.0	2.2	47	0.009	21
3	4	112M	950	4.87	83.6	83.3	82.1	0.78	0.71	0.62	6.0	2.5	2.6	50	0.015	26
4	5.5	132S	970	6.88	85.0	84.5	82.2	0.74	0.66	0.58	7.5	3.0	3.2	50	0.003	32
5.5	7.5	132M1	970	9.03	86.4	86.4	85.6	0.74	0.69	0.58	8.1	3.4	3.5	53	0.04	43
7.5	10	132M2	970	12.1	87.8	87.6	86.9	0.75	0.72	0.59	7.8	3.1	3.1	55	0.05	51
11	15	160M	970	22.9	89.0	89.1	88.5	0.78	0.75	0.65	6.9	2.3	3.0	55	0.16	92
15	20	160L	970	22.4	89.7	89.4	88.1	0.79	0.74	0.65	6.0	2.0	2.6	57	0.23	98
18.5	25	180L	980	29.9	90.4	90.4	89.6	0.80	0.74	0.66	9.1	3.1	3.2	59	0.36	133

High efficiency motors IEC60034-30, IE2 code  
Efficiency testing method IEC 60034-2-1;2007

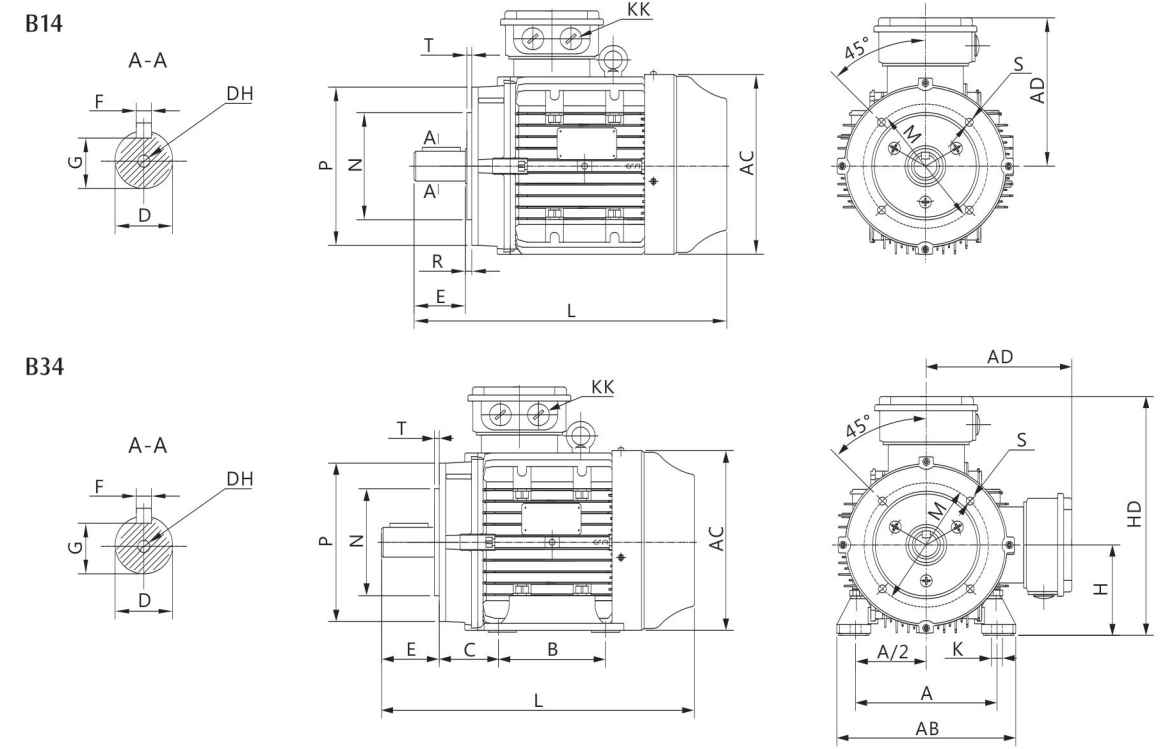


SWEA ZWEA MOUNTING AND OVERALL DIMENSIONS



Frame size	Mounting dimensions(mm)														Overall dimensions(mm)									
	A	A/2	B	C	D	DH	E	F	G	H	K	KK	M	N	P	R	S	T	AB	AC	AD	HD	L	SWEA
80M1-2.4	125	62.5	100	50	19	M6x16	40	6	15.5	80	4-φ10	M20x1.5	165	130	200	0	4-φ12	3.5	165	160	150	230	315	315
80M2-2	125	62.5	100	50	19	M6x16	40	6	15.5	80	4-φ10	M20x1.5	165	130	200	0	4-φ12	3.5	165	160	150	230	315	350
80M2-4	125	62.5	100	50	19	M6x16	40	6	15.5	80	4-φ10	M20x1.5	165	130	200	0	4-φ12	3.5	165	160	150	230	350	350
90S	140	70	100	56	24	M8x20	50	8	20	90	4-φ10	M25x1.5	165	130	200	0	4-φ12	3.5	190	185	160	250	345	345
90L	140	70	125	56	24	M8x20	50	8	20	90	4-φ10	M25x1.5	165	130	200	0	4-φ12	3.5	190	185	160	250	360	360
100L-2,L1-4,100L-6	160	80	140	63	28	M10x22	60	8	24	100	4-φ12	M25x1.5	215	180	250	0	4-φ15	4	210	205	175	275	390	390
100L2-4	160	80	140	63	28	M10x22	60	8	24	100	4-φ12	M25x1.5	215	180	250	0	4-φ15	4	210	205	175	275	435	435
112M	190	95	140	70	28	M10x22	60	8	24	112	4-φ12	M25x1.5	215	180	250	0	4-φ15	4	240	230	185	300	400	400
132S1-2,s-4,132S2-2	216	108	140	89	38	M12x28	80	10	33	132	4-φ12	M32x1.5	265	230	300	0	4-φ15	4	275	265	200	345	445	495
132S2-6	216	108	140	89	38	M12x28	80	10	33	132	4-φ12	M32x1.5	265	230	300	0	4-φ15	4	275	265	200	345	445	445
132M-4,132M2-6	216	108	178	89	38	M12x28	80	10	33	132	4-φ12	M32x1.5	265	230	300	0	4-φ15	4	275	265	200	345	485	535
132M1-6	216	108	178	89	38	M12x28	80	10	33	132	4-φ12	M32x1.5	265	230	300	0	4-φ15	4	275	265	200	345	485	485
160M	254	127	210	108	42	M16x36	110	12	37	160	4-φ15	M40x1.5	300	250	350	0	4-φ19	5	315	315	245	405	615	615
160L	254	127	254	108	42	M16x36	110	12	37	160	4-φ15	M40x1.5	300	250	350	0	4-φ19	5	315	315	245	405	660	660
180M	279	139.5	241	121	48	M16x36	110	14	42.5	180	4-φ15	M40x1.5	300	250	350	0	4-φ19	5	350	355	265	445	690	690
180L	279	139.5	279	121	48	M16x36	110	14	42.5	180	4-φ15	M40x1.5	300	250	350	0	4-φ19	5	350	355	265	445	730	730

SWEA ZWEA MOUNTING AND OVERALL DIMENSIONS



Frame size	Mounting dimensions(mm)														Overall dimensions(mm)									
	A	A/2	B	C	D	DH	E	F	G	H	K	KK	M	N	P	R	S	T	AB	AC	AD	HD	L	SWEA
80M1-2.4	125	62.5	100	50	19	M6X16	40	6	15.5	80	4-φ10	M20X1.5	100	80	120	0	4-M6	3	165	160	150	230	315	315
80M2-2	125	62.5	100	50	19	M6X16	40	6	15.5	80	4-φ10	M20X1.5	100	80	120	0	4-M6	3	165	160	150	230	315	350
80M2-4	125	62.5	100	50	19	M6X16	40	6	15.5	80	4-φ10	M20X1.5	100	80	120	0	4-M6	3	165	160	150	230	350	350
90S	140	70	100	56	24	M8X20	50	8	20	90	4-φ10	M25X1.5	115	95	140	0	4-M8	3	190	185	160	250	345	345
90L	140	70	125	56	24	M8X20	50	8	20	90	4-φ10	M25X1.5	115	95	140	0	4-M8	3	190	185	160	250	360	360
100L-2,L1-4,100L-6	160	80	140	63	28	M10X22	60	8	24	100	4-φ12	M25X1.5	130	110	160	0	4-M8	3.5	210	205	175	275	390	390
100L2-4	160	80	140	63	28	M10X22	60	8	24	100	4-φ12	M25X1.5	130	110	160	0	4-M8	3.5	210	205	175	275	435	435
112M	190	95	140	70	28	M10X22	60	8	24	112	4-φ12	M25X1.5	130	110	160	0	4-M8	3.5	240	230	185	300	400	400
132S-6	216	108	140	89	38	M12X28	80	10	33	132	4-φ12	M32X1.5	165	130	200	0	4-M10	4	275	265	200	345	445	495
132S2-2,S-4	216	108	140	89	38	M12X28	80	10	33	132	4-φ12	M32X1.6	165	130	200	0	4-M10	4	275	265	200	345	445	445
132M-4,132M2-6	216	108	178	89	38	M12X28	80	10	33	132	4-φ12	M32X1.7	165	130	200	0	4-M10	4	275	265	200	345	485	535
132M1-6	216	108	178	89	38	M12X28	80	10	33	132	4-φ12	M32X1.8	165	130	200	0	4-M10	4	275	265	200	345	485	485

BEARINGS

Frame Size	Driving End		Non-driving End	
	2P	4-8P	2P	4-8P
ZWEA80	6204-2Z/C3	6204-2Z/C3	6203-2Z/C3	6203-2Z/C3
ZWEA90	6205-2Z/C3	6205-2Z/C3	6204-2Z/C3	6204-2Z/C3
ZWEA100	6306-2Z/C3	6306-2Z/C3	6205-2Z/C3	6205-2Z/C3
ZWEA112	6306-2Z/C3	6306-2Z/C3	6205-2Z/C3	6205-2Z/C3
ZWEA132	6208-2Z/C3	6208-2Z/C3	6206-2Z/C3	6206-2Z/C3
ZWEA160	6209-2Z/C3	6209-2Z/C3	6209-2Z/C3	6209-2Z/C3
ZWEA180	6211/C3	6311/C3	6211/C3	6211/C3