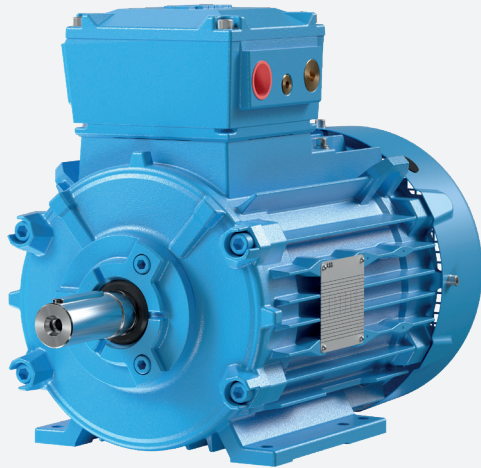


IEC LOW VOLTAGE MOTORS

IE2 and IE3 low voltage flameproof motors, frame sizes 80-132

Redesigned for enhanced safety and flexibility



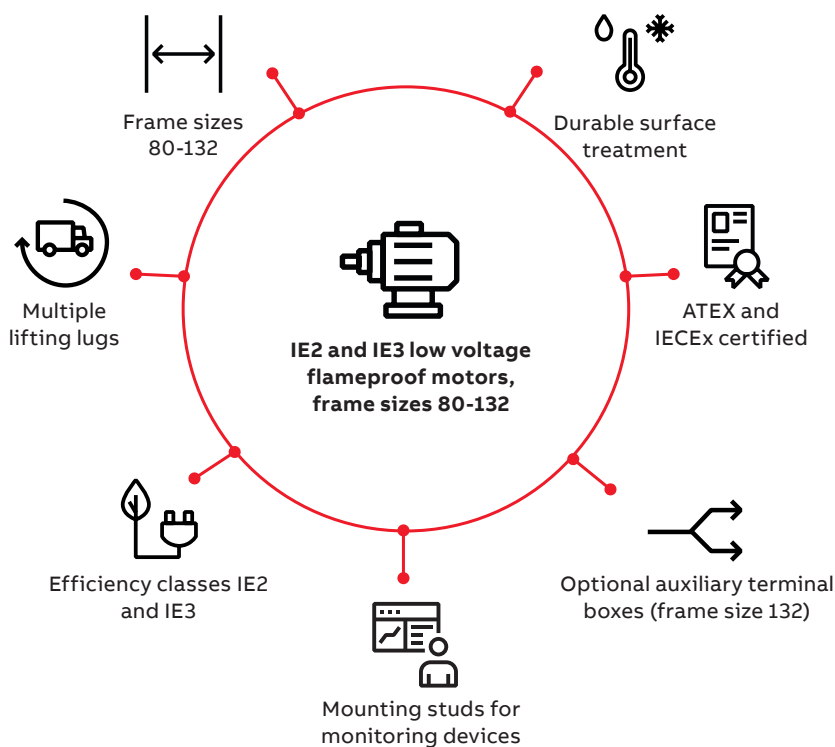
We have redesigned our IE2 and IE3 low voltage flameproof motors in frame sizes 80-132 to meet market needs. These small size motors now have improved safety features and provide more options for installation and different applications.

01 Flameproof motor, type M3JP frame size 132

Safer design

ABB IE2 and IE3 low voltage flameproof motors are designed for safe use in applications with potentially explosive atmospheres. The new motors, in frame sizes 80-132, now have lifting lugs with several mounting positions for safe

lifting, handling and installation. Multiple lifting lugs are now standard on all sizes of ABB IE2 and IE3 low voltage flameproof motor. The new motors replace existing products in frame sizes 80-132.



Flexible

These small size flameproof motors are designed for flexibility and use in different applications. They include mounting options for SPM nipples and Pt100 bearing sensors to enable condition monitoring. In addition, optional terminal boxes for auxiliaries can be fitted to frame sizes down to 132. This enhances safety in applications where sensors or anti-condensation heaters are needed, because the auxiliary terminal box keeps the auxiliary connections separate from the motor supply connections.

Technical data for Ex db and Ex db eb IIB/IIC T4 Gb

Flame proof IE2 cast iron motors

IP 55 - IC 411 - Insulation class F, temperature rise class B

IE2 efficiency class according to IEC 60034-30-1; 2014

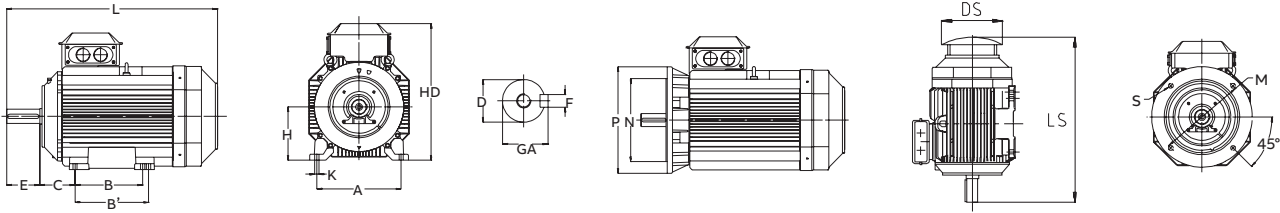
Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2 - 1; 2014			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure level L _{PA} dB
				Full load 100 %	3/4 load 75 %	1/2 load 50 %		I _N A	I _S I _N	T _N Nm	T _I T _N	T _b T _N			
3000 r/min = 2 poles			400V 50 Hz			CENELEC - design									
0.75	M3JP/KP 80MB 2	3GJP/KP 081320--J	2895	79.9	78.8	74.7	0.74	1.80	7.7	2.4	4.2	4.2	0.0009	45	57
1.1	M3JP/KP 80MC 2	3GJP/KP 081330--J	2870	81.8	81.7	79.0	0.80	2.5	7.5	3.6	3.7	4.6	0.00101	47	60
1.5	M3JP/KP 90SLB 2	3GJP/KP 091020--J	2900	82.2	82.9	81.3	0.89	2.9	7.5	4.9	2.5	2.6	0.00254	55	69
2.2	M3JP/KP 90SLC 2	3GJP/KP 091030--J	2885	83.9	86.1	85.0	0.88	4.2	6.8	7.2	1.9	2.5	0.0028	56	64
3	M3JP/KP 100LB 2	3GJP/KP 101520--J	2925	84.6	84.3	82.0	0.87	5.8	9.1	9.7	3.1	3.5	0.0053	68	68
4	M3JP/KP 112MC 2	3GJP/KP 111330--J	2851	86.7	89.2	90.8	0.93	7.1	6.8	13.4	2.4	3.1	0.0139	84	70
5.5	M3JP/KP 132SMB 2	3GJP/KP 131220--J	2865	87.0	87.6	87.0	0.86	10.0	7.0	18.3	2.6	2.7	0.0128	102	70
7.5	M3JP/KP 132SMC 2	3GJP/KP 131230--J	2890	88.1	88.3	87.4	0.88	13.7	7.3	24.9	2.6	3.6	0.0136	104	70
1500 r/min = 4 poles			400V 50 Hz			CENELEC - design									
0.55	M3JP/KP 80MA 4	3GJP/KP 082310--J	1447	80.7	79.5	75.7	0.68	1.45	6.4	3.6	3.3	4.3	0.00287	49	50
0.75	M3JP/KP 80MD 4	3GJP/KP 082340--J	1430	79.6	79.6	76.6	0.73	1.82	5.3	5.0	2.7	3.2	0.00287	40	50
1.1	M3JP/KP 90SLB 4	3GJP/KP 092020--J	1435	83.0	83.5	81.8	0.80	2.4	6.5	7.3	2.4	3.4	0.0044	55	50
1.5	M3JP/KP 90SLD 4	3GJP/KP 092040--J	1430	83.7	84.5	83.2	0.82	3.0	6.3	10.0	2.7	3.4	0.0053	58	56
2.2	M3JP/KP 100LC 4	3GJP/KP 102530--J	1450	85.2	84.4	82.6	0.78	4.6	7.7	14.5	2.7	4.1	0.0095	69	56
3	M3JP/KP 100LD 4	3GJP/KP 102540--J	1450	86.2	86.3	84.7	0.79	6.1	7.7	19.8	2.9	3.4	0.011	72	58
4	M3JP/KP 112MC 4	3GJP/KP 112330--J	1445	87.0	88.0	87.7	0.77	8.6	6.9	26.4	2.9	3.7	0.0188	81	59
5.5	M3JP/KP 132SMB 4	3GJP/KP 132220--J	1460	88.5	89.3	88.4	0.80	10.8	6.7	36.0	2.2	3.2	0.0296	107	67
7.5	M3JP/KP 132SMC 4	3GJP/KP 132230--J	1450	88.8	89.6	89.5	0.81	14.5	7.2	49.4	2.5	3.5	0.0327	110	64
1000 r/min = 6 poles			400V 50 Hz			CENELEC - design									
0.37	M3JP/KP 80MA 6	3GJP/KP 083310--J	925	67.6	66.5	60.9	0.69	1.09	4.1	3.8	2.4	2.5	0.00187	44	47
0.55	M3JP/KP 80MB 6	3GJP/KP 083320--J	920	73.1	74.2	71.9	0.71	1.51	3.8	5.7	1.8	2.2	0.00239	46	47
0.75	M3JP/KP 90SLC 6	3GJP/KP 093030--J	960	76.3	74.7	69.5	0.58	2.3	4.5	7.4	2.4	3.1	0.00491	56	44
1.1	M3JP/KP 90SLE 6	3GJP/KP 093050--J	930	78.1	78.6	76.5	0.66	3.0	4.0	11.2	1.9	2.3	0.006	59	44
1.5	M3JP/KP 100L 6	3GJP/KP 103500--J	950	81.3	82.1	80.7	0.69	3.7	4.3	15.0	1.5	2.7	0.00873	67	49
2.2	M3JP/KP 112MC 6	3GJP/KP 113330--J	950	84.2	85.8	85.7	0.71	5.1	4.0	21.7	1.3	2.0	0.0196	82	66
3	M3JP/KP 132SMB 6	3GJP/KP 133220--J	975	85.1	84.0	81.0	0.63	8.0	5.5	29.4	1.8	2.9	0.0299	106	57
4	M3JP/KP 132SMC 6	3GJP/KP 133230--J	960	84.6	85.1	83.6	0.68	10.0	4.6	39.7	1.5	2.2	0.0299	106	57
5.5	M3JP/KP 132SMF 6	3GJP/KP 133260--J	965	86.0	86.5	85.4	0.71	12.9	5.1	54.4	2.0	2.3	0.0436	121	57
5.5	M3JP/KP 132SMH 6	3GJP/KP 133280--K	966	89.6	90.4	90.2	0.73	12.1	5.0	54.1	1.8	2.7	0.0654	118	57
750 r/min = 8 poles			400V 50 Hz			CENELEC - design									
0.18	M3JP/KP 80MA 8	3GJP/KP 084310--J	700	54.3	50.4	42.2	0.61	0.78	3.2	2.5	2.1	2.8	0.00187	45	45
0.25	M3JP/KP 80MB 8	3GJP/KP 084320--J	680	58.8	58.6	50.3	0.65	0.94	3.1	3.5	1.9	2.6	0.00239	46	50
0.37	M3JP/KP 90SLB 8	3GJP/KP 094020--J	705	64.6	62.2	54.9	0.54	1.47	2.8	5.0	1.9	2.5	0.00444	55	50
0.55	M3JP/KP 90SLC 8	3GJP/KP 094030--J	655	61.7	65.5	65.1	0.67	1.92	2.6	8.0	1.4	1.9	0.00491	56	53
0.75	M3JP/KP 100LA 8	3GJP/KP 104510--J	710	72.8	71.1	65.6	0.60	2.5	3.7	10.1	1.8	2.6	0.0072	64	46
1.1	M3JP/KP 100LB 8	3GJP/KP 104520--J	695	74.8	75.3	73.3	0.66	3.1	3.6	15.1	1.6	2.3	0.00871	67	53
1.5	M3JP/KP 112MC 8	3GJP/KP 114330--J	710	79.6	81.2	80.8	0.65	4.1	3.6	19.9	1.3	2.0	0.0196	81	55
2.2	M3JP/KP 132SMA 8	3GJP/KP 134210--J	715	77.6	77.4	74.7	0.63	6.5	4.7	29.2	1.6	2.8	0.0299	106	56
3	M3JP/KP 132SMB 8	3GJP/KP 134220--J	715	80.0	79.8	76.8	0.63	8.5	4.7	39.7	1.7	2.8	0.0361	113	58

Technical data for Ex db and Ex db eb, IIB/IIC T4 Gb Flame proof IE3 cast iron motors

IP 55 - IC 411 - Insulation class F, temperature rise class B
IE3 efficiency class according to IEC 60034-30-1; 2014

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2 - 1; 2014			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure level L _{PA} dB
				Full load 100 %	3/4 load 75 %	1/2 load 50 %		I _N A	I _S I _N	T _N Nm	T _I T _N	T _b T _N			
3000 r/min = 2 poles			400V 50 Hz			CENELEC - design									
0.75	M3JP/KP 80MD 2	3GJP/KP 081340...K	2872	82.1	82.5	80.9	0.87	1.51	6.2	2.4	2.9	3.4	0.0012	48	57
1.1	M3JP/KP 80MG 2	3GJP/KP 081370...K	2862	84.2	85.1	84.3	0.87	2.1	6.3	3.7	3.0	3.5	0.0014	49	60
1.5	M3JP/KP 90SLB 2	3GJP/KP 091020...K	2892	86.4	87.4	86.7	0.89	2.7	7.3	4.8	2.0	3.2	0.0031	60	69
2.2	M3JP/KP 90LC 2	3GJP/KP 091530...K	2900	87.6	88.3	87.4	0.89	4.0	9.1	7.3	3.4	4.1	0.0044	63	64
3	M3JP/KP 100LKA 2	3GJP/KP 101810...K	2907	89.0	89.4	88.5	0.89	5.4	8.8	9.9	3.3	4.3	0.0086	80	68
4	M3JP/KP 112MG 2	3GJP/KP 111370...K	2882	88.4	89.9	90.5	0.93	7.0	8.1	13.3	2.8	4.1	0.0132	85	70
5.5	M3JP/KP 132SMF 2	3GJP/KP 131260...K	2902	89,2	89,8	89,5	0,90	9,7	7,3	18,2	2,7	4,2	0,0218	124	67
7.5	M3JP/KP 132SMG 2	3GJP/KP 131270...K	2907	91.3	92.1	92.1	0.90	13.2	8.1	24.7	3.2	4.7	0.0218	124	70
1500 r/min = 4 poles			400V 50 Hz			CENELEC - design									
0.55	M3JP/KP 80MLD 4	3GJP/KP 082440...K	1439	82.9	84.2	83.5	0.81	1.18	6.3	3.6	2.7	3.3	0.0028	49	45
0.75	M3JP/KP 80MLG 4	3GJP/KP 082470...K	1445	84.1	85.0	83.8	0.79	1.62	6.9	5.0	3.1	3.8	0.0033	50	57
1.1	M3JP/KP 90SLC 4	3GJP/KP 092030...K	1444	87.1	87.5	86.4	0.79	2.3	7.2	7.3	2.7	3.7	0.0067	61	56
1.5	M3JP/KP 90LD 4	3GJP/KP 092540...K	1442	87.1	88.1	87.6	0.78	3.1	7.8	10.0	3.4	4.5	0.0072	62	56
2.2	M3JP/KP 100LKA 4	3GJP/KP 102810...K	1452	89.4	90.3	90.2	0.83	4.2	7.4	14.5	2.2	3.9	0.0146	79	56
3	M3JP/KP 100LKB 4	3GJP/KP 102820...K	1452	89.4	90.5	90.5	0.83	5.8	7.5	19.7	2.3	4.0	0.0146	79	58
4	M3JP/KP 112MG 4	3GJP/KP 112370...K	1454	88.6	89.1	88.6	0.75	8.7	6.9	26.3	3.1	3.3	0.0176	81	59
5.5	M3JP/KP 132SMF 4	3GJP/KP 132260...K	1462	90.7	91.6	91.6	0.81	10.8	7.3	35.9	2.4	3.4	0.0401	119	67
7.5	M3JP/KP 132SMG 4	3GJP/KP 132270...K	1457	90.4	91.5	91.7	0.81	14.8	7.3	49.1	2.4	3.4	0.0401	119	64
1000 r/min = 6 poles			400V 50 Hz			CENELEC - design									
0.25	M3JP/KP 80MA 6	3GJP/KP 083310...K	937	73.3	72.2	67.6	0.64	0.76	2.6	2.5	1.4	2.0	0.0019	44	47
0.37	M3JP/KP 80MD 6	3GJP/KP 083340...K	930	77.9	78.6	76.7	0.72	0.95	3.3	3.8	1.5	2.0	0.0028	47	47
0.55	M3JP/KP 80MLG 6	3GJP/KP 083470...K	937	80.4	81.0	79.5	0.63	1.56	4.4	5.6	1.9	2.2	0.0044	51	47
0.75	M3JP/KP 90SLD 6	3GJP/KP 093040...K	940	78.9	80.3	79.2	0.75	1.80	4.4	7.6	2.1	2.8	0.0056	58	44
1.1	M3JP/KP 90LF 6	3GJP/KP 093560...K	944	81.0	81.7	80.1	0.75	2.6	4.7	11.1	2.1	2.8	0.0068	61	44
1.5	M3JP/KP 100LE 6	3GJP/KP 103550...K	960	82.5	82.5	80.1	0.68	3.8	5.4	14.9	2.7	3.4	0.012	74	49
2.2	M3JP/KP 112MJ 6	3GJP/KP 113390...K	962	84.3	85.5	84.7	0.68	5.3	4.2	21.8	1.4	2.3	0.0196	82	66
3	M3JP/KP 132SMD 6	3GJP/KP 133240...K	977	88.5	88.8	87.5	0.69	6.9	5.9	29.0	1.4	2.8	0.0416	121	57
4	M3JP/KP 132SMG 6	3GJP/KP 133270...K	974	89.4	89.9	89.3	0.69	9.3	5.6	38.7	2.2	2.8	0.0416	121	57
5.5	M3JP/KP 132SMH 6	3GJP/KP 133280...K	966	89.6	90.4	90.2	0.73	12.1	5.0	54.1	1.8	2.7	0.0654	118	57

Dimensions



Foot-mounted motors, IM B3

Flange-mounted motors, IM B5

Protective roof

Motor size	Poles	IM B3 (IM 1001), IM 1002										IM B5 (IM3001), IM 3002							
		D	GA	F	E	L max	A	B	B'	C	HD	K	H	M	N	P	S	DS	LS
80 JP	2-8	19	21.5	6	40	409	125	100	112	50	296	10	80	165	130	200	12	165	444
80 KP	2-8	19	21.5	6	40	409	125	100	112	50	250	10	80	165	130	200	12	165	444
90 JP	2-8	24	27	8	50	440	140	100	125	56	315	10	90	165	130	200	12	190	475
90 KP	2-8	24	27	8	50	440	140	100	125	56	269	10	90	165	130	200	12	190	475
100 JP	2-8	28	31	8	60	499	160	140	160	63	343	12	100	215	180	250	14.5	205	534
100 KP	2-8	28	31	8	60	499	160	140	160	63	297	12	100	215	180	250	14.5	205	534
112 JP	2-8	28	31	8	60	485	190	140		70	355	12	112	215	180	250	14.5	225	526
112 KP	2-8	28	31	8	60	485	190	140		70	309	12	112	215	180	250	14.5	225	526
IE2 132 JP	2-8	38	41	10	80	531	216	140	178	89	392	12	132	265	230	300	14.5	280	582
IE2 132 KP	2-8	38	41	10	80	531	216	140	178	89	346	12	132	265	230	300	14.5	280	582
IE3 132 JP	2-8	38	41	10	80	576	216	140	178	89	392	12	132	265	230	300	14.5	280	627
IE3 132 KP	2-8	38	41	10	80	576	216	140	178	89	346	12	132	265	230	300	14.5	280	627



Reliable

ABB IE2 and IE3 low voltage flameproof motors have an advanced surface treatment that resists even tough offshore conditions, and the reduced number of cooling ribs improves the reliability of the surface treatment even further. The motors have a strong frame with integrated feet for rigidity and to ensure vibration-free operation with foot mounted applications. There are also cast shrouds on the bolts which provide additional mechanical safety and protection.



Certified

The motors are ATEX and IECEx certified, and certification will be further extended to include other local certificates. They are designed to meet global safety requirements in industries like chemicals, oil and gas, and mining, and they have an increased thermal margin for a wider ignition temperature safety margin. They are also certified for use with variable speed drives (VSDs).



A complete IE3 low voltage range

With the addition of these new products, ABB now offers a complete range of IE3 low voltage complete motors. This includes IE3 flameproof motors (Ex d) from frame sizes 80-450 (0.55-950 kW), as well as IE3 ranges of standard, increased safety (Ex ec) and dust ignition protection (Ex t) motors.