

Introduction

Motorelli Electric motors are designed and manufactured to meet and exceed the most stringent requirements of the South African market.

The motors comply with the following standards.

- International Electrotechnical Commission - IEC 34 and IEC 72.
- The requirements of European CE marking.
- SABS 1804 Parts 1 and 2.

The motors will operate in ambient temperatures ranging from - 20°C to 40°C. They feature insulation class F as standard (can be increased to H) and are designed to operate with a class B (80°C) temperature rise.

The standard degree of protection is IP55 but higher levels of protection are available on request.

Degrees of protection (IEC 60034 - 5)

Designation	First numeral	Second numeral
	Protection against contact and ingress of foreign bodies. Protection against hazardous "Live" parts and moving mechanical parts.	Protection against water
	5. Ingress of dust is not totally prevented, but dust shall not interfere with the satisfactory operation of equipment. A probe of 1 mm diameter shall not penetrate the enclosure.	5. Water projected in jets against the enclosure from any direction will have no harmful effects.
	6. No ingress of dust	6. Water projected in power jets shall have no harmful effects
IP55	Dust protected	Jetting water
IP56	Dust protected	Powerful jetting
IP65	Dust tight	Jetting water
IP66	Dust tight	Powerful jetting

The cooling method is Totally Enclosed Fan Cooled (TEFC)

The motors are rated for continuous duty - S1

All Motorelli motors are designed for high efficiency and low temperature rise giving a long economical service life.

The motors have high quality SKF or NSK bearings. In general the bearings have C3 clearance. See page 12 for bearing lubrication information and service periods.

Thermistors are fitted as standard from frame size 160 and larger.

Stringent quality procedures are observed from first design to the finished product in accordance with ISO9001 documented quality systems.

Performance Data

2 poles - 50Hz 3000 rpm synchronous speed

Motor type	kW	Full load speed (rpm)	INL 400V (amps)	IFL 230V (amps)	IFL 400V (amps)	IFL 525V (amps)	Efficiency			Power Factor			IST IFL	Full load torque (Nm)	TST	TPU	TM	M of I J (kgm ²)	Noise level 1m dB(A)	Weight (kg)
							100% FL	75% FL	50% FL	100% FL	75% FL	50% FL			TFL	TFL	TFL			
1R801-2	0.75	2840	0.9	3.0	1.7	1.3	75.0	74.3	71.5	0.85	0.81	0.67	5.5	2.5	2.2	2.0	2.5	0.0008	61	17
1R802-2	1.1	2845	1.2	4.2	2.4	1.8	78.5	78.2	75.3	0.84	0.79	0.67	5.5	3.7	2.2	2.1	2.6	0.0009	63	18
1R90S-2	1.5	2850	1.4	5.6	3.2	2.4	79.7	79.5	77	0.85	0.81	0.71	6.0	5.0	2.7	2.5	3.2	0.0012	65	23
1R90L-2	2.2	2850	2	7.8	4.5	3.4	82.1	82.2	80.2	0.86	0.81	0.72	6.1	7.4	2.9	2.5	3.1	0.0014	69	26
1R100L-2	3	2860	2.2	10.3	5.9	4.5	83.3	83.5	82.1	0.88	0.85	0.75	6.9	10.0	2.9	2.5	3	0.0039	72	33
1R112M1-2	4	2870	2.4	13.0	7.5	5.7	84.9	85.5	84.5	0.91	0.88	0.81	6.7	13.3	2.5	2.3	3.1	0.0055	74	42
1R112M2-2	5.5	2890	3.3	17.6	10.1	7.7	87.1	86.9	86.3	0.9	0.88	0.81	7.4	18.2	2.6	2.4	2.8	0.007	78	46
1R132S1-2	5.5	2900	3.7	18.0	10.3	7.9	87.2	87.1	85.3	0.88	0.84	0.76	7.5	18.1	2.5	2.2	2.8	0.0111	83	60
1R132S2-2	7.5	2915	4.5	24.0	13.8	10.5	88.2	87.7	85.1	0.89	0.87	0.78	7.6	24.6	2.4	1.9	3	0.0140	83	66
1R132M-2	10	2915	5.9	31.4	18.1	13.8	88.8	88.7	88	0.9	0.88	0.81	7.2	32.8	2.4	2.2	2.9	0.028	83	78
1R160M1-2	11	2930	6	34.5	19.8	15.1	89	89.5	88.1	0.9	0.88	0.82	7.3	35.9	2.3	2	2.6	0.039	83	110
1R160M2-2	15	2930	7.6	46.2	26.6	20.3	90.1	88.9	84.4	0.904	0.89	0.84	7.2	48.9	2.3	2	2.6	0.044	83	120
1R160L-2	18.5	2935	8.1	56.5	32.5	24.7	90.4	90.5	86.5	0.91	0.89	0.83	7.3	60.2	2.2	1.8	2.7	0.057	84	140
1R180M-2	22	2940	11	67.8	39.0	29.7	90.5	90.5	86.8	0.9	0.87	0.82	7	71.5	2.4	1.7	3	0.077	84	170
1R200L1-2	30	2950	16.5	91.4	52.6	40.1	91.5	91	88	0.9	0.88	0.82	7.7	97.1	2.0	1.7	3	0.125	86	239
1R200L2-2	37	2955	18.5	111.8	64.3	49.0	92.3	92	90.5	0.9	0.86	0.79	7	119.6	2.3	1.8	3	0.14	87	268
1R225M-2	45	2960	22	134.1	77.1	58.7	92.6	91.9	89.5	0.91	0.88	0.85	7.6	145.2	2.4	2	2.8	0.25	89	340
1R250M1-2	55	2965	27.9	164.9	94.8	72.2	93.03	92.4	90.5	0.9	0.88	0.83	7.9	177.2	2.2	1.9	2.7	0.32	90	406
1R250M2-2	75	2965	35	220.1	126.6	96.4	94	93.8	92.8	0.91	0.89	0.84	6.8	241.6	2.2	1.8	3	0.412	90	471
1R280M1-2	90	2970	38	263.8	151.7	115.6	94.1	93.9	91	0.91	0.89	0.87	7.2	289.4	2.2	1.8	3	0.678	90	565
1R280M2-2	110	2970	43	321.8	185.0	141.0	94.3	94	92.9	0.91	0.9	0.88	6.8	353.7	2.6	2	3.1	0.86	90	605
1R315M1-2	132	2980	56	381.1	219.2	167.0	94.5	94.3	93.1	0.92	0.91	0.9	7.1	423.0	2.3	1.9	2.8	1.55	92	995
1R315M2-2	160	2980	63	457.6	263.1	200.5	95.4	95	93.2	0.92	0.91	0.88	7.4	512.8	2.5	1.8	2.7	1.75	92	1110
1R315M3-2	185	2980	65	529.1	304.2	231.8	95.4	95	93.3	0.92	0.91	0.88	7.3	592.9	2.6	1.8	2.8	1.9	92	1200
1R315L2-2	200	2980	70	572.0	328.9	250.6	95.4	95	93.6	0.92	0.91	0.88	7.3	640.9	2.7	2	3	2.05	93	1250
1R355L1-2	220	2983	99	629.2	361.8	275.7	95.4	95	93.6	0.92	0.91	0.88	7.2	704.3	1.8	1.5	2.5	2.7	93	1450
1R355L2-2	250	2985	108	714.3	410.7	312.9	95.5	95.2	93.7	0.92	0.91	0.89	7.1	799.8	1.8	1.5	2.6	3.56	94	1600
1R355L3-2	280	2985	115	800.0	460.0	350.5	95.5	95.4	93.7	0.92	0.91	0.9	7	895.8	1.7	1.5	2.6	3.85	95	1680
1R355L4-2	315	2985	120	899.0	517.0	393.9	95.6	95.4	93.8	0.92	0.91	0.89	6.3	1006.1	1.7	1.5	2.6	4.12	95	1750

INL = no load current IFL = full load current IST = locked rotor current TST = locked rotor torque TPU = pull up torque TM = maximum torque TFL = full load torque

Performance Data

4 Poles - 50Hz 1500 rpm synchronous speed

Motor type	kW	Full load speed (rpm)	INL 400V (amps)	IFL 230V (amps)	IFL 400V (amps)	IFL 525V (amps)	Efficiency			Power Factor			IST IFL	Full load torque (Nm)	TST	TPU	TM	M of I J (kgm2)	Noise level 1m dB(A)	Weight (kg)
							100% FL	75% FL	50% FL	100% FL	75% FL	50% FL			TFL	TFL	TFL			
1R801-4	0.55	1410	1.0	2.5	1.5	1.1	72.6	72.5	70.1	0.75	0.67	0.55	4.6	3.7	2.4	2.1	2.7	0.002	54	17
1R802-4	0.75	1420	1.3	3.4	2.0	1.5	72.6	72.9	69.5	0.76	0.66	0.54	4.4	5.0	2.2	2.0	2.7	0.002	57	18
1R90S-4	1.1	1410	1.8	4.6	2.6	2.0	76.4	76.6	75	0.79	0.68	0.55	4.3	7.5	2.2	2.0	3	0.0021	61	22
1R90L-4	1.5	1410	2.0	6.0	3.5	2.6	79.1	79	78.5	0.79	0.71	0.58	4.7	10.2	2.5	2.2	3	0.003	61	26
1R100L1-4	2.2	1415	2.7	8.3	4.8	3.6	81.0	80.8	79.5	0.82	0.73	0.59	5.3	14.8	2.5	2.3	2.9	0.0067	61	33
1R100L2-4	3	1420	3.3	11.1	6.4	4.9	82.9	82.7	81.5	0.82	0.75	0.63	5.7	20.2	2.4	2.2	3	0.007	63	37
1R112M-4	4	1440	4.1	14.2	8.1	6.2	84.4	83.9	81.7	0.84	0.77	0.69	5.7	26.5	2.7	2.2	3.1	0.0095	67	45
1R112M2-4	5.5	1440	4.4	19.1	11.0	8.4	85.9	85.6	84.4	0.84	0.77	0.65	6.9	36.5	2.58	2.3	2.78	0.018	68	50
1R132S-4	5.5	1450	5.4	19.0	10.9	8.3	86.4	86.6	85.6	0.84	0.77	0.65	6.8	36.2	2.3	2.1	3.1	0.0215	68	63
1R132M1-4	7.5	1450	6.1	24.5	14.1	10.7	88.3	88.7	88.3	0.87	0.82	0.72	7.2	49.4	2.6	2.2	3.1	0.0302	68	75
1R132M2-4	10	1455	7.9	33.0	19.0	14.4	88.5	88.6	88	0.86	0.81	0.75	7	65.6	2.2	1.9	2.8	0.063	70	84
1R160M-4	11	1460	8.3	36.3	20.9	15.9	88.5	88.6	88	0.86	0.82	0.76	7.1	72.0	2.1	1.9	2.6	0.075	72	115
1R160M/L-4	15	1460	11.1	48.9	28.1	21.4	89.5	89.8	88.5	0.86	0.83	0.74	7.6	98.1	2.3	2	2.6	0.093	72	132
1R180M-4	18.5	1465	12.5	58.0	33.3	25.4	90	90.5	89	0.89	0.86	0.78	7	120.6	2.3	1.9	3.2	0.14	73	175
1R180L-4	22	1470	14.7	68.2	39.2	29.9	91	91	89.3	0.89	0.87	0.8	7.3	142.9	2.2	1.8	3	0.159	73	190
1R200L-4	30	1475	17.5	92.0	52.9	40.3	92	92.2	91.2	0.89	0.87	0.8	7.6	194.2	2	1.9	2.8	0.265	75	264
1R225S-4	37	1475	22.1	113.3	65.2	49.6	92.1	92.2	91.3	0.89	0.86	0.79	7	239.6	2.2	1.7	2.8	0.404	78	310
1R225M-4	45	1475	24.5	136.8	78.6	59.9	92.8	92.5	91.4	0.89	0.86	0.79	7.5	291.4	2.2	1.8	2.8	0.47	79	340
1R250M1-4	55	1480	32.1	166.6	95.8	73.0	93.1	93.1	92.3	0.89	0.86	0.8	7.2	354.9	2.2	1.8	2.5	0.67	81	390
1R250M2-4	75	1480	36.2	228.6	131.4	100.1	93.6	93.5	92.6	0.88	0.86	0.8	7.1	484.0	2.2	1.7	2.7	0.88	81	490
1R280M1-4	90	1485	43.6	269.2	154.8	117.9	94.3	94	93	0.89	0.87	0.81	7.1	578.8	2.6	1.7	3	1.46	82	606
1R280M2-4	110	1480	52.4	328.0	188.6	143.7	94.6	94.7	94.2	0.89	0.88	0.83	6.2	709.8	2.4	2.2	2.8	2.68	83	703
1R315M1-4	132	1485	64.8	391.5	225.1	171.5	95.1	95	94.3	0.89	0.87	0.82	6.3	848.9	2.2	1.9	2.6	3.3	84	1020
1R315M2-4	160	1489	79.2	473.5	272.3	207.5	95.3	95	94.5	0.89	0.86	0.81	6	1026.2	2	1.8	2.6	3.79	85	1110
1R315M3-4	185	1489	84	547.5	314.8	239.9	95.3	95.1	94.3	0.89	0.86	0.81	6	1186.5	2	1.8	2.6	4	86	1190
1R315L2-4	200	1489	86	591.3	340.0	259.0	95.4	95.2	94.4	0.89	0.86	0.81	6.2	1282.7	2.2	1.9	2.7	4.5	86	1220
1R355L1-4	220	1490	96	650.4	374.0	284.9	95.4	95.2	94.3	0.89	0.87	0.82	6.3	1410.1	2.1	1.8	2.7	5	88	1580
1R355L2-4	250	1490	104	730.9	420.3	320.2	95.4	95.2	94.2	0.9	0.87	0.83	6.5	1602.3	2.1	1.8	2.8	5.67	88	1700
1R355L3-4	280	1490	120	817.8	470.2	358.3	95.5	95.4	94.2	0.9	0.87	0.83	6.3	1794.6	2.1	1.7	2.8	6.02	89	1790
1R355L4-4	315	1490	136	900.0	517.5	394.3	95.5	95.4	94.3	0.92	0.89	0.84	6	2019.0	2.1	1.7	2.8	6.66	89	1890

INL = no load current IFL = full load current IST = locked rotor current TST = locked rotor torque TPU = pull up torque TM = maximum torque TFL = full load torque

Performance Data

6 poles - 50Hz 1000 rpm synchronous speed

Motor type	kW	Full load speed (rpm)	INL 400V (amps)	IFL 230V (amps)	IFL 400V (amps)	IFL 525V (amps)	Efficiency			Power Factor			IST IFL	Full load torque (Nm)	TST	TPU	TM	M of I J (kgm2)	Noise level 1m dB(A)	Weight (kg)
							100% FL	75% FL	50% FL	100% FL	75% FL	50% FL			TFL	TFL	TFL			
1R801-6	0.37	915	0.9	2.1	1.2	0.9	63.5	63.2	55.5	0.71	0.63	0.52	3.2	3.9	1.8	1.6	2	0.0023	46	17
1R802-6	0.55	915	1.1	2.8	1.6	1.2	69.2	70	65.2	0.72	0.62	0.52	3.3	5.7	2.0	1.8	2.2	0.003	50	20
1R90S-6	0.75	920	1.5	3.7	2.1	1.6	71.8	71.6	67.8	0.71	0.64	0.53	3.6	7.8	2.3	1.9	2.6	0.003	53	23
1R90L-6	1.1	925	2	5.2	3.0	2.3	73.1	73.5	70.4	0.73	0.65	0.52	3.6	11.4	2.1	2.1	2.5	0.0035	59	26
1R100L-6	1.5	925	2.5	6.6	3.8	2.9	76.2	75.8	72.4	0.75	0.66	0.54	4.3	15.5	2.3	2.1	2.7	0.0069	62	32
1R112M-6	2.2	935	2.9	9.0	5.2	4.0	79.3	78.7	75.9	0.77	0.74	0.6	4.4	22.5	2.2	1.7	2.5	0.014	65	42
1R132S-6	3	960	4.1	11.9	6.8	5.2	82.4	82.5	80.1	0.77	0.7	0.57	5.8	29.8	2.1	1.7	2.8	0.029	66	59
1R132M1-6	4	960	5.1	15.6	9.0	6.8	83.6	83.9	82.4	0.77	0.7	0.57	6.4	39.8	2.1	1.7	2.7	0.036	66	68
1R132M2-6	5.5	960	7.2	20.6	11.8	9.0	85	85.3	83.3	0.79	0.74	0.58	6.5	54.7	2	1.7	2.5	0.045	67	80
1R160M-6	7.5	965	7.5	27.2	15.6	11.9	87.7	88	87	0.79	0.74	0.67	5.4	74.2	2	1.7	2.3	0.088	71	102
1R160L-6	11	970	10.1	38.9	22.4	17.0	88.8	89.1	87.5	0.8	0.75	0.67	5.5	108.3	2	1.7	2.3	0.115	72	126
1R180L-6	15	970	13.5	51.4	29.6	22.5	89.3	89.4	88	0.82	0.77	0.68	6.7	147.7	2.1	1.7	2.5	0.207	72	185
1R200L1-6	18.5	975	14.7	60.8	34.9	26.6	91	91	90.4	0.84	0.8	0.7	6.2	181.2	2	1.7	2.6	0.315	73	238
1R200L2-6	22	975	16.5	72.0	41.4	31.5	91.3	91.5	91	0.84	0.82	0.72	6.5	215.5	2	1.8	2.5	0.36	73	243
1R225M-6	30	980	18	96.3	55.4	42.2	92	92	91.3	0.85	0.83	0.74	6.4	292.3	2	1.7	2.5	0.545	71	309
1R250M1-6	37	980	23.7	117.3	67.4	51.4	92.1	92	91.4	0.86	0.83	0.75	6.7	360.6	2	1.7	2.6	0.834	76	369
1R250M2-6	45	980	26	140.4	80.7	61.5	92.5	92.4	91.5	0.87	0.84	0.76	6.7	438.5	2.1	1.8	2.8	0.95	76	385
1R280S-6	45	980	26.1	140.4	80.7	61.5	92.5	92.4	91.5	0.87	0.84	0.76	6.7	438.5	2.1	1.8	2.9	1.39	76	518
1R280M1-6	55	980	29	168.7	97.0	73.9	93	93	92.2	0.88	0.86	0.81	6.3	536.0	2.1	1.6	2.5	1.65	76	565
1R280M2-6	75	980	47.8	223.5	128.5	97.9	93.6	93.6	92.1	0.9	0.86	0.8	6.8	730.9	2.2	1.9	2.9	3.21	79	665
1R315M1-6	90	985	50	277.7	159.7	121.7	94.6	94.2	93	0.86	0.84	0.8	6.2	872.6	2	1.8	2.4	4.3	80	930
1R315M2-6	110	990	55.2	335.5	192.9	147.0	94.6	94.5	93.2	0.87	0.85	0.8	6.7	1061.1	2	1.8	2.8	5.45	82	1010
1R315M3-6	132	990	69	402.2	231.3	176.2	94.7	94.5	93.8	0.87	0.85	0.81	6.8	1273.3	2	1.8	2.9	6.12	82	1140
1R355L1-6	160	992	81	479.4	275.7	210.0	95.2	94.9	93	0.88	0.87	0.82	6.5	1540.3	1.9	1.7	2.5	8.85	85	1520
1R355L2-6	185	992	86	552.0	317.4	241.8	95.6	95.3	94	0.88	0.87	0.83	6.3	1781.0	1.8	1.5	2.4	9.2	85	1570
1R355L3-6	200	992	91.5	587.0	337.5	257.2	96.1	95.8	94.2	0.89	0.87	0.81	6.3	1925.4	2	1.6	2.5	9.55	85	1630
1R355L4-6	220	992		645.0	370.9	282.6	96.2	95.8	94.2	0.89	0.87	0.81	6.3	2117.9	1.9	1.5	2.4	10	87	1750
1R355L5-6	250	992	104	724.1	416.4	317.2	96.3	95.9	94.3	0.9	0.88	0.84	6	2406.8	1.9	1.5	2.4	10.6	87	1880

INL = no load current IFL = full load current IST = locked rotor current TST = locked rotor torque TPU = pull up torque TM = maximum torque TFL = full load torque

Performance Data

8 poles - 50Hz 750 rpm synchronous speed

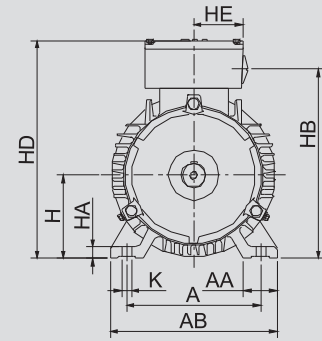
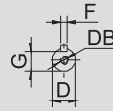
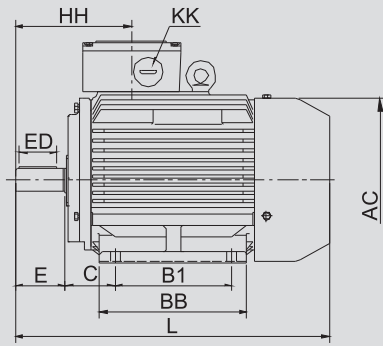
Motor type	kW	Full load speed (rpm)	INL 400V (amps)	IFL 230V (amps)	IFL 400V (amps)	IFL 525V (amps)	Efficiency			Power Factor			IST IFL	Full load torque (Nm)	TST	TPU	TM	M of I J (kgm2)	Noise level 1m dB(A)	Weight (kg)
							100% FL	75% FL	50% FL	100% FL	75% FL	50% FL			TFL	TFL	TFL			
1R801-8	0.18	680	0.7	1.2	0.7	0.5	58.6	54	45	0.62	0.55	0.46	3.2	2.5	2.1	2	2.4	0.002	50	17
1R802-8	0.25	690	0.9	1.7	1.0	0.7	60.6	55.2	45.1	0.61	0.55	0.47	3.3	3.5	2	2	2.2	0.003	50	19
1R90S-8	0.37	700	1.1	2.3	1.3	1.0	65.1	64.9	56.2	0.61	0.53	0.44	3.6	5.0	1.9	1.9	2.5	0.004	53	23
1R90L-8	0.55	700	1.7	3.4	1.9	1.5	68.5	67.1	59.3	0.6	0.51	0.42	3.5	7.5	1.9	1.9	2.3	0.004	54	25
1R100L1-8	0.75	700	2	4.0	2.3	1.8	70.6	70.2	62.5	0.66	0.57	0.46	4	10.2	2.1	1.9	2.4	0.008	56	33
1R100L2-8	1.1	700	2.5	5.5	3.2	2.4	72.9	72.1	68.8	0.69	0.59	0.47	3.7	15.0	2.2	1.8	2.4	0.01	56	38
1R112M1-8	1.5	703	3	7.1	4.1	3.1	76.7	76.8	73.7	0.69	0.6	0.5	4.2	20.4	2.2	1.8	2.6	0.017	58	50
1R112M2-8	2.2	703	3.6	10.1	5.8	4.4	77.3	76.9	73.6	0.71	0.62	0.51	4.5	29.9	2	1.8	2.6	0.018	58	55
1R132S-8	2.2	705	3.9	9.6	5.5	4.2	79.8	79.4	77.5	0.72	0.63	0.51	4.7	29.8	2.1	1.9	2.5	0.03	59	58
1R132M1-8	3	705	4.4	12.4	7.2	5.5	80.7	80.5	79.5	0.75	0.67	0.55	4.6	40.6	2.1	2	2.6	0.04	59	68
1R132M2-8	4	706	5.8	16.3	9.3	7.1	81.3	81.1	79.8	0.76	0.69	0.57	4.6	54.1	2.0	1.8	2.4	0.04	60	74
1R160M1-8	4	710	6	16.6	9.5	7.3	81.8	81.5	80.3	0.74	0.66	0.55	4.5	53.8	2.1	1.9	2.7	0.075	61	113
1R160M2-8	5.5	715	7.7	21.4	12.3	9.4	86.2	85.8	84.6	0.75	0.67	0.55	5	73.5	2.3	2	2.8	0.093	62	123
1R160L-8	7.5	720	9.5	28.5	16.4	12.5	86.9	86.7	84.9	0.76	0.69	0.55	6	99.5	2.2	1.8	2.6	0.125	62	150
1R180L-8	11	730	14	41.2	23.7	18.0	87.1	86.9	85.2	0.77	0.7	0.56	5.5	143.9	2.2	1.8	2.5	0.202	63	178
1R200L-8	15	730	17	54.7	31.5	24.0	89.4	89.1	88.2	0.77	0.72	0.59	5.8	196.2	2.1	1.8	2.8	0.338	64	233
1R225S-8	18.5	731	20	67.8	39.0	29.7	90.1	89.5	88.8	0.76	0.73	0.65	6.3	241.7	2.1	1.8	2.5	0.49	65	283
1R225M2-8	22	734	23	78.2	45.0	34.3	90.5	90.2	88.7	0.78	0.74	0.63	6.2	286.2	2.1	1.9	2.5	0.54	66	323
1R250M1-8	30	735	29	102.6	59.0	45.0	90.6	90.4	88.6	0.81	0.76	0.65	5.9	389.8	2.3	2	2.8	0.83	68	400
1R250M2-8	37	735	34	126.0	72.5	55.2	91	90.9	90	0.81	0.77	0.69	6	480.7	2	1.8	2.6	0.95	70	420
1R280M1-8	45	740	40	151.0	86.9	66.2	91.2	90.7	89.5	0.82	0.76	0.64	6.4	580.7	1.9	1.7	2.5	1.65	70	566
1R280M2-8	55	740	48	183.0	105.2	80.2	92	91.6	90.5	0.82	0.77	0.67	6.9	709.8	2.3	2	2.8	3.65	72	678
1R315M1-8	75	741	50	243.9	140.2	106.9	93	93.1	92	0.83	0.8	0.72	7	966.6	2	1.8	2.4	5.58	73	970
1R315M2-8	90	741	67	293.4	168.7	128.5	93.9	94	92.3	0.82	0.76	0.69	6.7	1159.9	2.4	2	2.8	6.37	74	1060
1R315M3-8	110	741	90	357.5	205.6	156.6	94.2	94.1	92.5	0.82	0.8	0.72	6.4	1417.7	2.4	2	2.5	7.23	75	1170
1R355M/L1-8	132	741	105	414.4	238.3	181.5	95.2	94.9	93.6	0.84	0.81	0.72	5.8	1701.2	1.7	1.3	2.3	10.54	75	1560
1R355L2-8	160	743	120	501.7	288.5	219.8	95.3	95.1	94.2	0.84	0.82	0.75	5.5	2056.5	1.5	1.2	2.3	11.72	76	1650
1R355L3-8	185	743	130	579.5	333.2	253.9	95.4	95.3	94.4	0.84	0.83	0.75	5.8	2377.9	1.5	1.2	2.3	12.05	77	1800
1R355L4-8	200	743	140	611.3	351.5	267.8	95.5	95.5	94.6	0.86	0.84	0.78	6	2570.7	1.3	1.2	3.3	12.85	77	1940

INL = no load current IFL = full load current IST = locked rotor current TST = locked rotor torque TPU = pull up torque TM = maximum torque TFL = full load torque

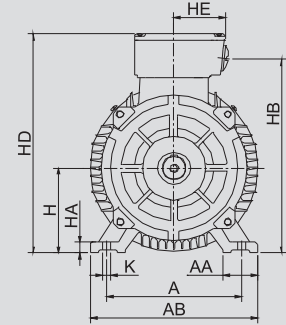
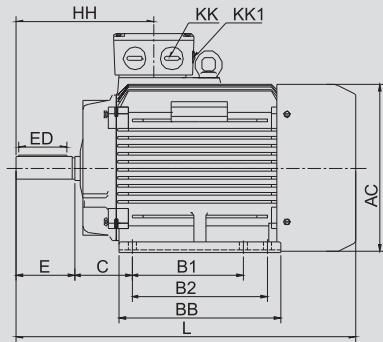
Cast Iron Motors

Dimensions foot mount B3

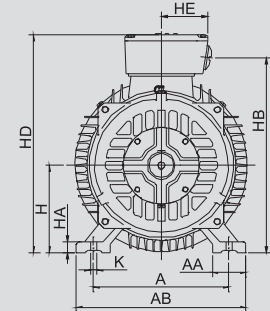
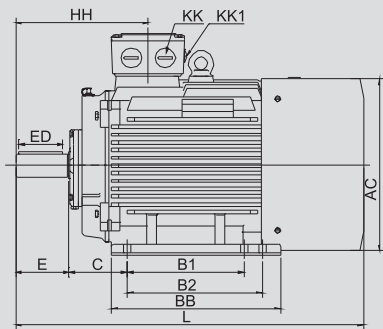
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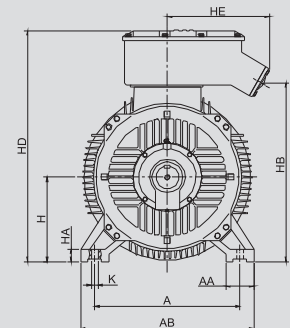
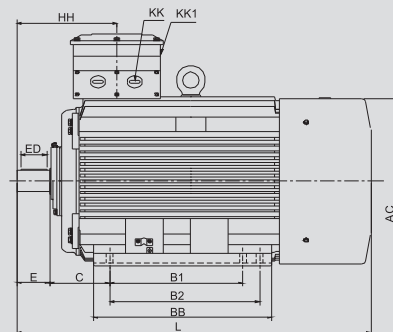
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1R180-315



1R355



Cast Iron Motors

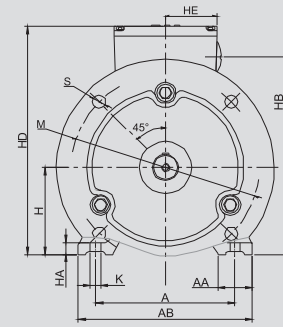
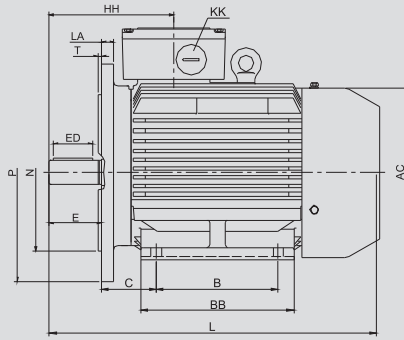
Dimensions foot mount B3

FRAME	A	AA	AB	AC	B1	B2	BB	C	D	DB	E	ED	F	G	H	HA	HB	HD	HE	HH	K	KK	L
1R80M	125	34	160	156	100	—	130	50	19	M6x16	40	30	6	15.5	80	10	195	225	59	112	10	1-M20x1.5	296
1R90S	140	36	180	176	100	—	140	56	24	M8x19	50	40	8	20	90	12	205	245	59	125	10	1-M20x1.5	318
1R90L	140	36	180	176	125	—	165	56	24	M8x19	50	40	8	20	90	12	205	245	59	125	10	1-M20x1.5	343
1R100L	160	40	200	200	140	—	176	63	28	M10x22	60	45	8	24	100	14	228	270	59	143	12	1-M20x1.5	380
1R112M	190	45	226	220	140	—	180	70	28	M10x22	60	45	8	24	112	13	265	310	59	154	12	1-M25x1.5	400
1R132S	216	55	262	260	140	—	186	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	470
1R132M	216	55	262	260	178	—	224	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	510
1R132S/M	216	55	262	260	140	178	224	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	510
1R160M	254	65	320	330	210	—	260	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	625
1R160L	254	65	320	330	254	—	304	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	670
1R160M/L	254	65	320	330	210	254	304	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	670
1R180M	279	70	355	380	241	—	311	121	48	M16X36	110	90	14	42.5	180	22	405	455	120	270	15	2-M32X1.5	700
1R180L	279	70	355	380	279	—	349	121	48	M16X36	110	90	14	42.5	180	22	405	455	120	270	15	2-M32X1.5	740
1R180M/L	279	70	355	380	241	279	349	121	48	M16X36	110	90	14	42.5	180	22	405	455	120	270	15	2-M32X1.5	740
1R200L	318	70	388	420	305	—	369	133	55	M20X42	110	90	16	49	200	25	445	510	165.5	296	19	2-M32X1.5	770
1R225M-2	356	75	431	470	311	—	393	149	55	M20X42	110	90	16	49	225	28	507	560	165.5	299	19	2-M32X1.5	845
1R225S/M-2	356	75	431	470	286	311	393	149	55	M20X42	110	90	16	49	225	28	507	560	165.5	299	19	2-M32X1.5	845
1R225S-4,6,8	356	75	431	470	286	—	368	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	810
1R225M-4,6,8	356	75	431	470	311	—	393	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	845
1R225S/M-4,6,8	356	75	431	470	286	311	393	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	845
1R250S/M-2	406	80	490	510	311	349	445	168	60	M20X42	140	110	18	53	250	30	560	615	185	347	24	2-M40X1.5	920
1R250S/M-4,6,8	406	80	490	510	311	349	445	168	70	M20X42	140	110	20	62.5	250	30	560	615	185	347	24	2-M40X1.5	920
1R280S/M-2	457	90	542	580	368	419	536	190	65	M20X42	140	110	18	58	280	35	600	670	185	356	24	2-M63X1.5	1040
1R280S/M-4,6,8	457	90	542	580	368	419	536	190	80	M20X42	170	140	22	71	280	35	600	670	185	356	24	2-M63X1.5	1070
1R315S/M1,2-2	508	120	628	645	406	457	680	216	65	M20x42	140	110	18	58	315	45	755	848	275	400	28	2-M63X1.5	1300
1R315S/M3-2	508	120	628	645	406	457	680	216	70	M20x42	140	110	20	62.5	315	45	755	848	275	400	28	2-M63X1.5	1300
1R315M/L2-2	508	120	628	645	457	508	680	216	70	M20x42	140	110	20	62.5	315	45	755	848	275	400	28	2-M63X1.5	1300
1R315S/M1,2-4	508	120	628	645	406	457	680	216	85	M20x42	170	140	22	76	315	45	755	848	275	430	28	2-M63X1.5	1300
1R315S/M3-4	508	120	628	645	457	508	680	216	90	M20x42	170	140	25	81	315	45	755	848	276	430	28	2-M63X1.5	1330
1R315M/L2-4	508	120	628	645	457	508	680	216	90	M20x42	170	140	25	81	315	45	755	848	275	430	28	2-M63X1.5	1330
1R315S/M-6,8	508	120	628	645	457	508	680	216	85	M20x42	170	140	22	76	315	45	755	848	276	430	28	2-M63X1.5	1330
1R355M/L-2	610	150	740	720	560	630	750	254	90	M24x50	140	110	25	81	355	55	765	980	447	419	28	2-M63X1.5	1540
1R355M/L-4,6,8	610	150	740	720	560	630	750	254	100	M24x50	210	160	28	90	355	55	765	980	447	419	28	2-M63X1.5	1540

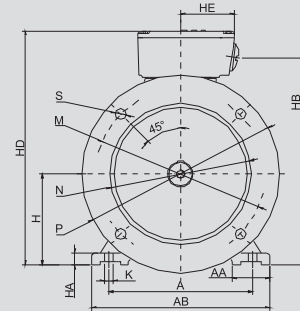
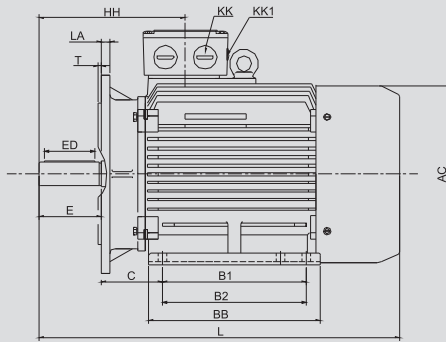
Cast Iron Motors

Dimensions foot-flange mount B35

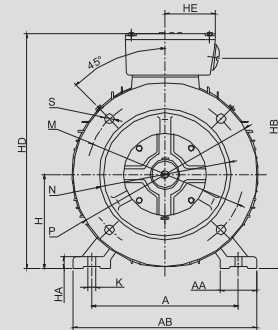
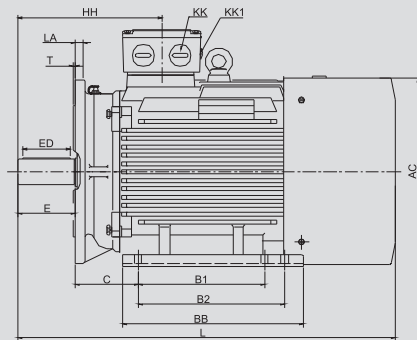
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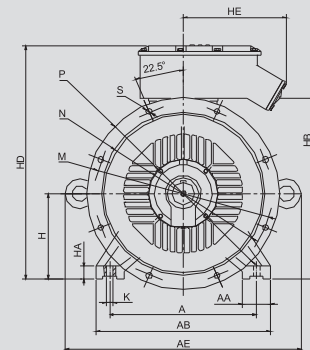
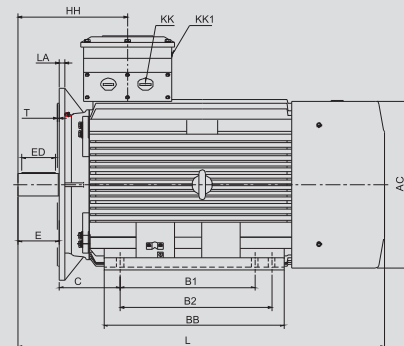
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1R180-315



1R355



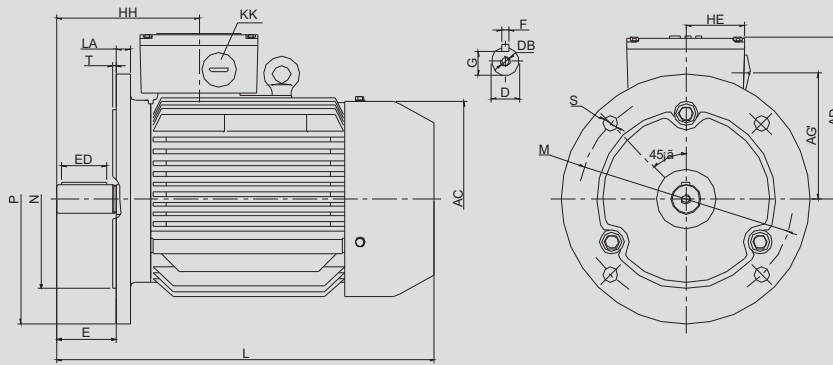
Cast Iron Motors

1R Dimensions Foot mount B35 IM2001

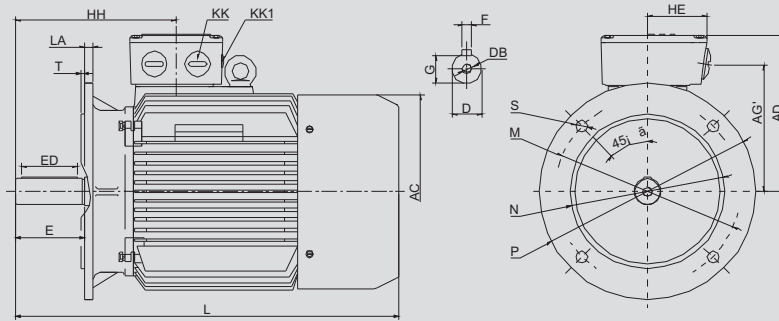
FRAME	A	AA	AB	AC	B1	B2	BB	C	D	DB	E	ED	F	G	H	HA	HB	HD	HE	HH	K	KK	L	LA	M	N	P	S	T
1R80M	125	34	160	156	100	—	130	50	19	M6x16	40	30	6	15.5	80	10	195	225	59	112	10	1-M20x1.5	296	12	165	130	200	12	3.5
1R90S	140	36	180	176	100	—	140	56	24	M8x19	50	40	8	20	90	12	205	245	59	125	10	1-M20x1.5	318	12	165	130	200	12	3.5
1R90L	140	36	180	176	125	—	165	56	24	M8x19	50	40	8	20	90	12	205	245	59	125	10	1-M20x1.5	343	12	165	130	200	12	3.5
1R100L	160	40	200	200	140	—	176	63	28	M10x22	60	45	8	24	100	14	228	270	59	143	12	1-M20x1.5	380	14	215	180	250	15	4
1R112M	190	45	226	220	140	—	180	70	28	M10x22	60	45	8	24	112	13	265	310	59	154	12	1-M25x1.5	400	14	215	180	250	15	4
1R132S	216	55	262	260	140	—	186	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	470	14	265	230	300	15	4
1R132M	216	55	262	260	178	—	224	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	510	14	265	230	300	15	4
1R132S/M	216	55	262	260	140	178	224	89	38	M12x28	80	63	10	33	132	18	305	350	59	179	12	2-M25x1.5	510	15	265	230	300	15	4
1R160M	254	65	320	330	210	—	260	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	625	15	300	250	350	19	5
1R160L	254	65	320	330	254	—	304	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	670	15	300	250	350	19	5
1R160M/L	254	65	320	330	210	254	304	108	42	M16x36	110	90	12	37	160	20	370	420	120	262	15	2-M25x1.5	670	15	300	250	350	19	5
1R180M	279	70	355	380	241	—	311	121	48	M16X36	110	90	14	42.5	180	22	405	455	120	270	15	2-M32X1.5	700	15	300	250	350	19	5
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1R180M/L	279	70	355	380	241	279	349	121	48	M16X36	110	90	14	42.5	180	22	405	455	120	270	15	2-M32X1.5	740	15	300	250	350	19	5
1R200L	318	70	388	420	305	—	369	133	55	M20X42	110	90	16	49	200	25	445	510	165.5	296	19	2-M32X1.5	770	18	350	300	400	19	5
1R225M-2	356	75	431	470	311	—	393	149	55	M20X42	110	90	16	49	225	28	507	560	165.5	299	19	2-M32X1.5	845	20	400	350	450	19	5
1R225S/M-2	356	75	431	470	286	311	393	149	55	M20X42	110	90	16	49	225	28	507	560	165.5	299	19	2-M32X1.5	845	20	400	350	450	19	5
1R225S-4,6,8	356	75	431	470	286	—	368	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	810	20	400	350	450	19	5
1R225M-4,6,8	356	75	431	470	311	—	393	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	845	20	400	350	450	19	5
1R225S/M-4,6,8	356	75	431	470	286	311	393	149	60	M20X42	140	110	18	53	225	28	507	560	165.5	329	19	2-M32X1.5	845	20	400	350	450	19	5
1R250S/M-2	406	80	490	510	311	349	445	168	60	M20X42	140	110	18	53	250	30	560	615	185	347	24	2-M40X1.5	920	22	500	450	550	19	5
1R250S/M-4,6,8	406	80	490	510	311	349	445	168	70	M20X42	140	110	20	62.5	250	30	560	615	185	347	24	2-M40X1.5	920	22	500	450	550	19	5
1R280S/M-2	457	90	542	580	368	419	536	190	65	M20X42	140	110	18	58	280	35	600	670	185	356	24	2-M63X1.5	1040	22	500	450	550	19	5
1R280S/M-4,6,8	457	90	542	580	368	419	536	190	80	M20X42	170	140	22	71	280	35	600	670	185	356	24	2-M63X1.5	1070	22	500	450	550	19	5
1R315S/M1,2-2	508	120	628	645	406	457	680	216	65	M20x42	140	110	18	58	315	45	755	848	275	400	28	2-M63X1.5	1300	22	600	550	660	24	6
1R315S/M3-2	508	120	628	645	406	457	680	216	70	M20x42	140	110	20	62.5	315	45	755	848	275	400	28	2-M63X1.5	1300	22	600	550	660	24	6
1R315M/L2-2	508	120	628	645	457	508	680	216	70	M20x42	140	110	20	62.5	315	45	755	848	275	400	28	2-M63X1.5	1300	22	600	550	660	24	6
1R315S/M1,2,4	508	120	628	645	406	457	680	216	85	M20x42	170	140	22	76	315	45	755	848	275	430	28	2-M63X1.5	1300	22	600	550	660	24	6
1R315S/M3-4	508	120	628	645	457	508	680	216	90	M20x42	170	140	25	81	315	45	755	848	276	430	28	2-M63X1.5	1330	22	600	550	660	24	6
1R315M/L2-4	508	120	628	645	457	508	680	216	90	M20x42	170	140	25	81	315	45	755	848	275	430	28	2-M63X1.5	1330	22	600	550	660	24	6
1R315S/M-6,8	508	120	628	645	457	508	680	216	85	M20x42	170	140	22	76	315	45	755	848	276	430	28	2-M63X1.5	1330	22	600	550	660	24	6
1R355M/L-2	610	150	740	720	560	630	750	254	90	M24x50	140	110	25	81	355	55	765	980	447	419	28	2-M63X1.5	1540	24	740	680	800	24	6
1R355M/L-4,6,8	610	150	740	720	560	630	750	254	100	M24x50	210	160	28	90	355	55	765	980	447	419	28	2-M63X1.5	1540	24	740	680	800	24	6

Cast Iron Motors

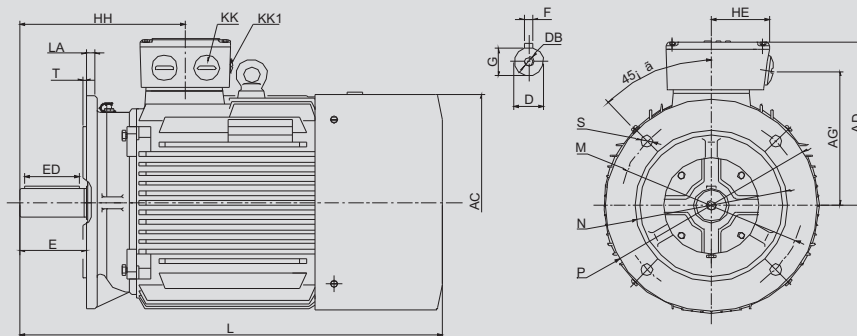
1R80-112



1R132-160



1R180-315



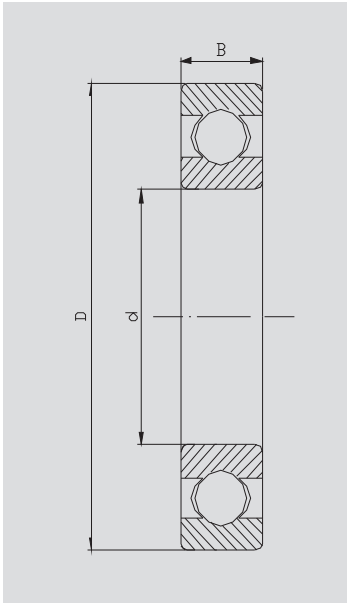
Cast Iron Motors

1R Dimensions Foot mount B5 IM3001

FRAME	AD	AG	D	DB	E	ED	F	G	H	HA	HE	HH	K	KK	L	LA	M	N	P	S	T
1R80M	145	115	19	M6x16	40	30	6	15.5	80	10	59	112	10	1-M20x1.5	296	12	165	130	200	12	3.5
1R90S	155	115	24	M8x19	50	40	8	20	90	12	59	125	10	1-M20x1.5	318	12	165	130	200	12	3.5
1R90L	155	115	24	M8x19	50	40	8	20	90	12	59	125	10	1-M20x1.5	343	12	165	130	200	12	3.5
1R100L	170	128	28	M10x22	60	45	8	24	100	14	59	143	12	1-M20x1.5	380	14	215	180	250	15	4
1R112M	198	153	28	M10x22	60	45	8	24	112	13	59	154	12	1-M25x1.5	400	14	215	180	250	15	4
1R132S	218	173	38	M12x28	80	63	10	33	132	18	59	179	12	2-M25x1.5	470	14	265	230	300	15	4
1R132M	218	173	38	M12x28	80	63	10	33	132	18	59	179	12	2-M25x1.5	510	14	265	230	300	15	4
1R160M	260	210	42	M16x36	110	90	12	37	160	20	120	262	15	2-M25x1.5	625	15	300	250	350	19	5
1R160L	260	210	42	M16x36	110	90	12	37	160	20	120	262	15	2-M25x1.5	670	15	300	250	350	19	5
1R180M	275	225	48	M16x36	110	90	14	42.5	180	22	120	270	15	2-M32x1.5	700	18	300	250	350	19	5
1R180L	275	225	48	M16x36	110	90	14	42.5	180	22	120	270	15	2-M32x1.5	740	18	300	250	350	19	5
1R200L	310	245	55	M20x42	110	90	16	49	200	25	165.5	296	19	2-M32x1.5	770	18	350	300	400	19	5
1R225S-4,6,8	335	282	60	M20x42	140	110	18	53	225	28	165.5	329	19	2-M32x1.5	810	20	400	350	450	19	5
1R225M-2	335	282	55	M20x42	110	90	16	49	225	28	165.5	299	19	2-M32x1.5	845	20	400	350	450	19	5
1R225M-4,6,8	335	282	60	M20x42	140	110	18	53	225	28	165.5	329	19	2-M32x1.5	845	20	400	350	450	19	5
1R250M-2	365	310	60	M20x42	140	110	18	53	250	30	185	347	24	2-M40x1.5	920	22	500	450	550	19	5
1R250M-4,6,8	365	310	70	M20x42	140	110	20	62.5	250	30	185	347	24	2-M40x1.5	920	22	500	450	550	19	5
1R280S-2	390	320	65	M20x42	140	110	18	58	280	35	185	356	24	2-M63x1.5	980	22	500	450	550	19	5
1R280M-2	390	320	65	M20x42	140	110	18	58	280	35	185	356	24	2-M63x1.5	1010	22	500	450	550	19	5
1R280S-4,6,8	390	320	80	M20x42	170	140	22	71	280	35	185	356	24	2-M63x1.5	1040	22	500	450	550	19	5
1R280M-4,6,8	390	320	80	M20x42	170	140	22	71	280	35	185	356	24	2-M63x1.5	1070	22	500	450	550	19	5

1R Dimensions Bearing

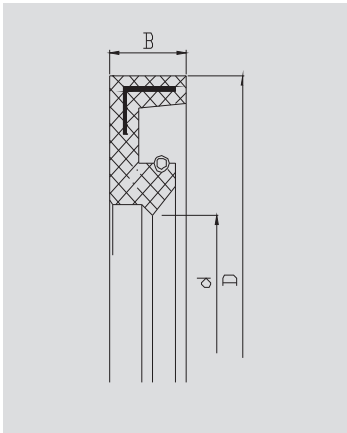
Bearing Data



FRAME	DE	d	D	B	NDE	d	D	B
1R80	6204ZZCM	20	47	14	6204ZZCM	20	47	14
1R90	6205ZZCM	25	52	15	6205ZZCM	25	52	15
1R100	6206ZZCM	30	62	16	6206ZZCM	30	62	16
1R112	6206ZZCM	30	62	16	6206ZZCM	30	62	16
1R132	6208ZZCM	40	80	18	6208ZZCM	40	80	18
1R160-2	6209C3	45	85	19	6209C3	45	85	19
1R160-4,6,8	6309C3	45	100	25	6209C3	45	85	19
1R180-2	6211C3	55	100	21	6211C3	55	100	21
1R180-4,6,8	6311C3	55	120	29	6211C3	55	100	21
1R200L-2	6212C3	60	110	22	6212C3	60	110	22
1R200L-4,6,8	6312C3	60	130	31	6212C3	60	110	22
1R225-2	6312C3	60	130	31	6312C3	60	130	31
1R225-4,6,8	6313C3	65	140	33	6312C3	60	130	31
1R250-2	6313C3	65	140	33	6313C3	65	140	33
1R250-4,6,8	6315C3	75	160	37	6313C3	65	140	33
1R280-2	6314C3	70	150	35	6314C3	70	150	35
1R280-4,6,8	6317C3	85	180	41	6314C3	70	150	35
1R315-2	6317C3	85	180	41	6317C3	85	180	41
1R315-4,6,8	6319C3	95	200	45	6319C3	95	200	45
1R355-2	6319C3	95	200	45	6319C3	95	200	45
1R355-4,6,8	N322C3	110	240	50	6322C3	110	240	50

1R Dimensions Oil Seals

Oil Seal Data



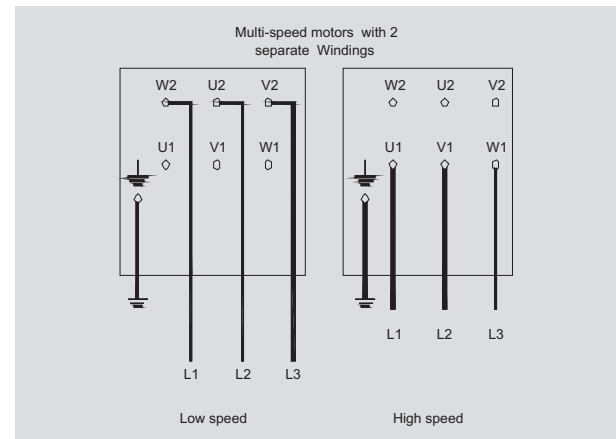
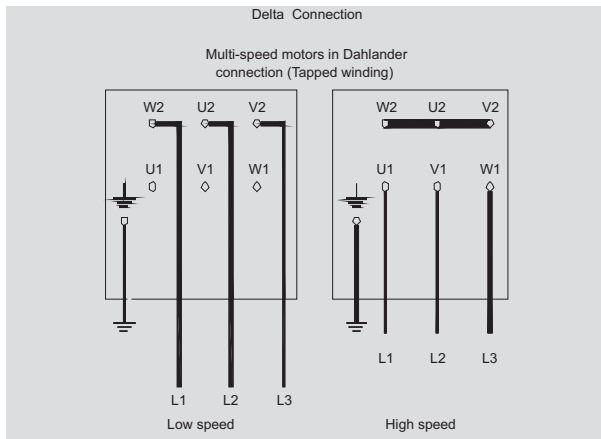
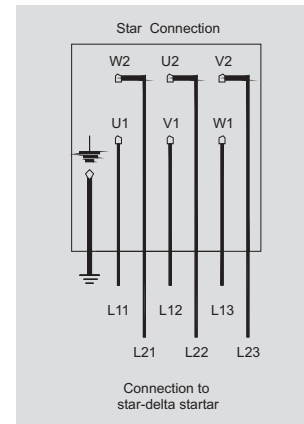
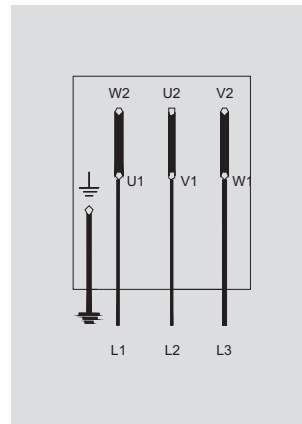
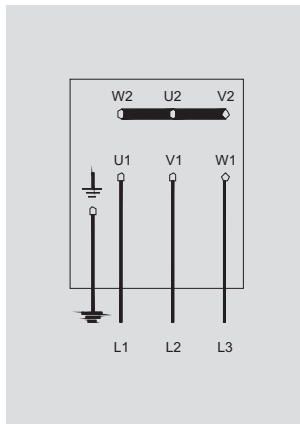
FRAME	DE			NDE		
	d	D	B	d	D	B
1R80	20	35	5	20	35	5
1R90	25	40	5	25	40	5
1R100	30	52	7	30	52	7
1R112	30	52	7	30	52	7
1R132	40	55	8	40	55	8
1R160	45	65	8	45	65	8
1R180	55	72	8	55	72	8
1R200	60	80	8	60	80	8
1R225-2	60	80	8	60	80	8
1R225	65	85	10	60	80	8
1R250-2	65	85	10	65	85	10
1R250-4,6,8	75	100	12	65	85	10
1R280-2	70	90	10	70	90	10
1R280-4,6,8	85	110	12	70	90	10
1R315-2	85	110	12	85	110	12
1R315-4,6,8	95	120	12	95	120	12
1R355-2	95	120	12	95	120	12
1R355-4,6,8	110	140	12	110	140	12

Bearing Grease

FRAME	BEARING DE	BEARING GREASE (g)	BEARING NDE	BEARING GREASE (g)	REGREASING PERIODS HOURS
180-2	6211C3	21	6211C3	21	4000
180-4/6/8	6311C3	30	6211C3	21	10000
200-2	6212C3	23	6212C3	30	3500
200-4/6/8	6312C3	40	6212C3	30	8500
225-2	6312C3	40	6312C3	40	3000
225-4/6/8	6313C3	50	6312C3	40	6000
250-2	6313C3	50	6313C3	50	2000
250-4/6/8	6314C3	55	6313C3	50	5000
280-2	6314C3	55	6314C3	55	1200
280-4/6/8	6317C3	85	6314C3	55	4000
315-2	6317C3	85	6317C3	85	1200
315-4/6/8/10	6319C3	110	6317C3	85	2000
355-2	6319C3	110	6319C3	110	1200
355-4/6/8/10	NU322C3	125	6319C3	110	1400

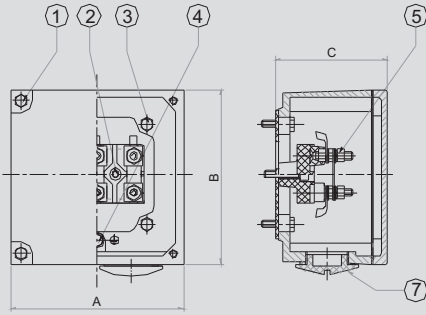
Connection Diagrams

Three Phase motors with cage rotor

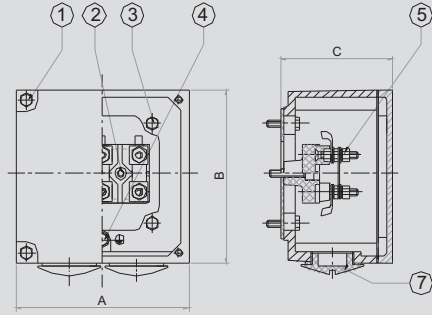


1R Series Terminal Box Information

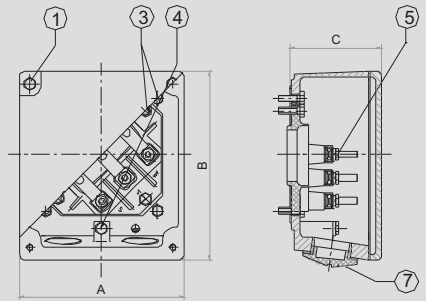
1R80-112



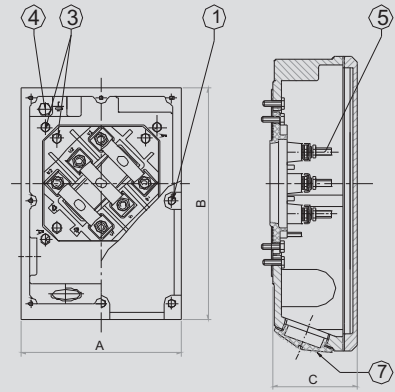
1R132



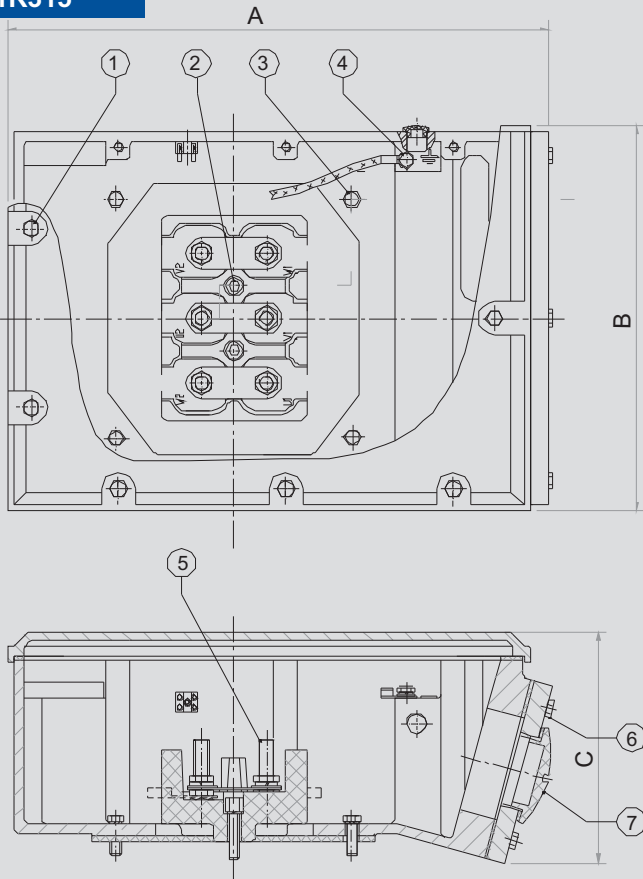
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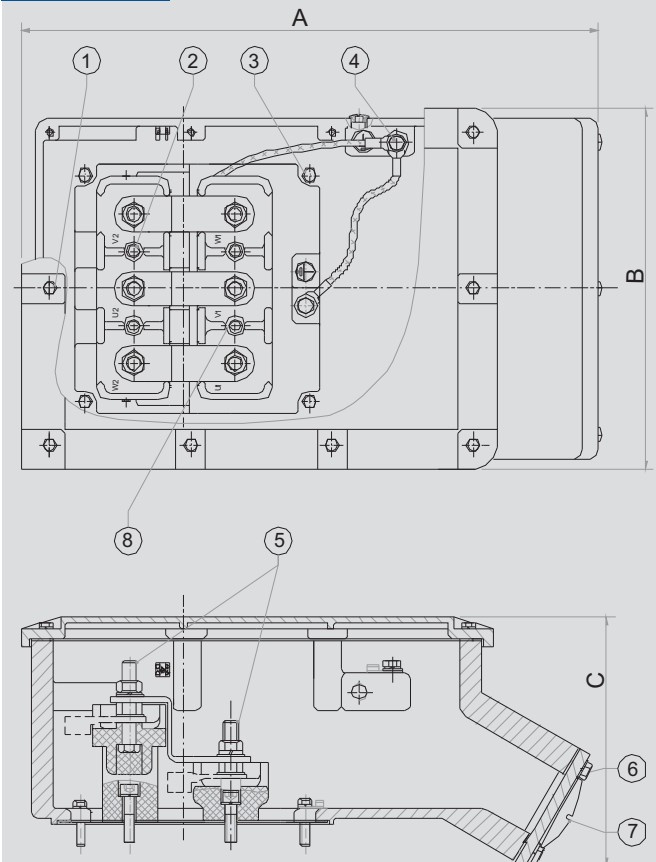
1R200-280



1R315



1R355



1R Series Terminal Box Information

TYPE	A	B	C	1	2	3	4	5	6	7	8
1R80-90	118	118	61	M5X16	M5X25	M5X20	M5X12	M5	—	1-M20X1.5	—
1R100	118	118	61	M5X16	M5X25	M5X20	M5X12	M5	—	1-M20X1.5	—
1R112	118	118	77	M5X16	M5X25	M5X20	M5X12	M5	—	1-M25X1.5	—
1R132	118	118	77	M5X16	M5X25	M5X20	M5X12	M5	—	2-M25X1.5	—
1R160	150	171	84	M6X16	—	M6X20	M6X16	M6	—	2-M25X1.5	—
1R180	150	171	84	M6X16	—	M6X20	M6X16	M6	—	2-M32X1.5	—
1R200-225	190	285	105	M6X16	—	M8X25	M8X20	M8	—	2-M32X1.5	—
1R250	218	314	114	M6X25	—	M8X25	M10X20	M10	—	2-M40X1.5	—
1R280	218	314	114	M6X25	—	M8X25	M10X20	M10	—	2-M63X1.5	—
1R315	317	469	178	M8X25	M10X50	M10X25	M10X25	M12	M8X30	2-M63X1.5	—
1R355	389	610	284	M8X30	M12X60	M12X40	M10X20	M16	M10X40	2-M63X1.5	M12X40