



LEESON...Your Complete Source For Quality DC Motors And More



LEESON electric motors are manufactured in the United States and are stocked in more than 35 warehouses across the United States, Canada and Europe. LEESON is a subsidiary of Regal-Beloit Corporation, a world leader in the manufacture of power transmission equipment.

Today's LEESON offers one of the industry's broadest and most accessible ranges of AC and DC commercial and industrial electric motors, gearmotors, and drives.

LEESON Permanent Magnet Direct Current (PMDC) motors are available for thyristor input through 2,2kW. Low-voltage motors for battery, generated DC, or solar power are available through 6,0kW. All are manufactured to LEESON's precise standards, which include certification to the International Standards Organization (ISO) 9001 Quality System Standard. Product support is provided worldwide, through a network of Authorized Service Centers.

Where a custom motor is the answer, no one can match LEESON's flexibility in custom motor design, manufacturing and delivery. LEESON manufacturing operations are certified to ISO 9000 international quality standards, your assurance of consistent-quality product.

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Thyristor-Rated and Low Voltage Permanent Magnet DC Motors

Thyristor Rated Motors — 90 & 180 VDC

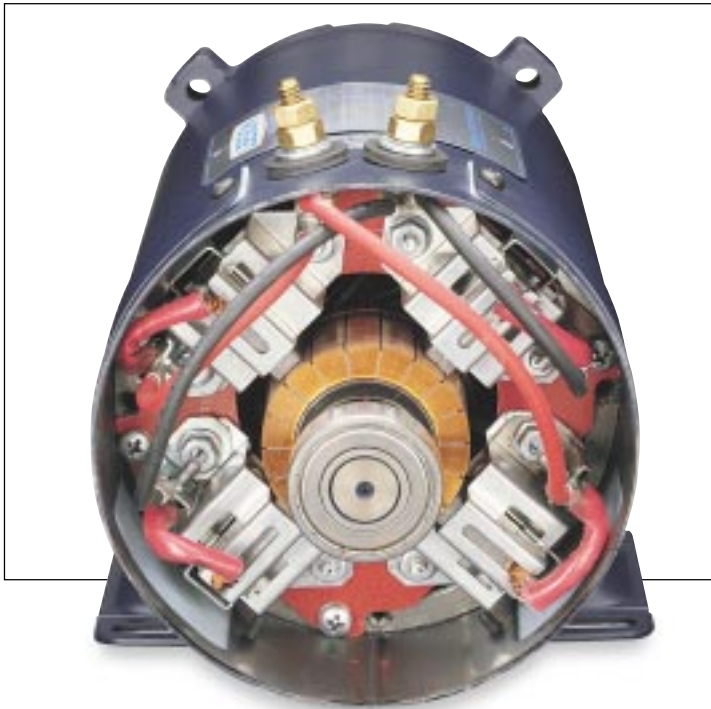
LEESON thyristor rated permanent magnet DC motors are available in sizes ranging from 12,5W through 2,2kW. These motors are designed to withstand the additional heating produced by the pulsating direct current power output of unfiltered or filtered thyristor adjustable speed controls. They may also be used with PWM-type DC drives.



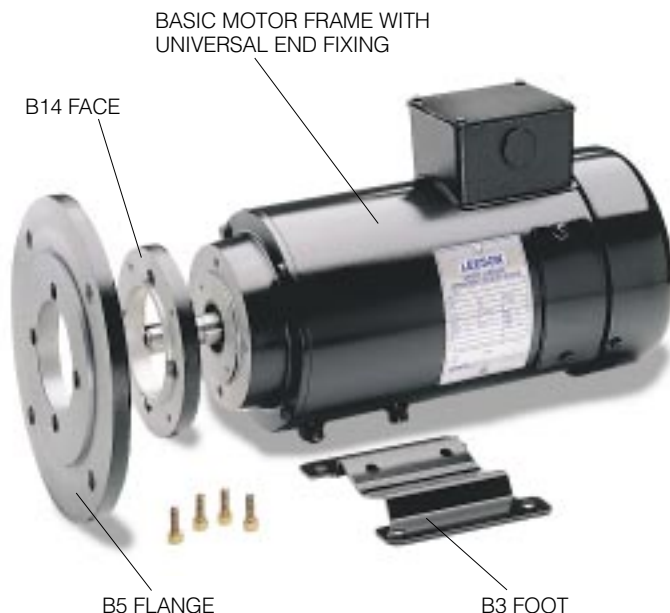
Low Voltage Motors — 12, 24, 36 or higher VDC

LEESON low voltage DC motors are available from 15W through 6,0kW. These motors are high torque, continuous S1 or S3 periodic-duty products suitable for a wide variety of applications ranging from pumps to propulsion. The motors operate on battery power or generated "pure" DC power.





IEC and NEMA frame DC motors from LEESON feature oversized brushes, accessible without disassembly of the motor. Integral constant pressure springs and bi-directional brush holders help ensure long service before maintenance — up to four times that of other DC motors. Four brushes are used in larger horsepower low voltage motors.



IEC & NEMA Frame Permanent Magnet DC Motor Features—

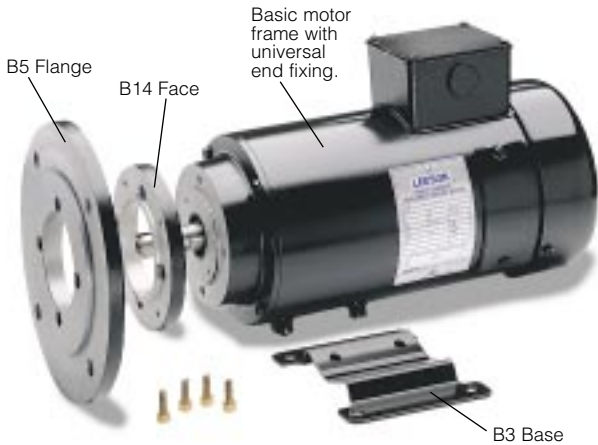
- Designed and manufactured to IEC 34-1 and NEMA MG1 (USA) mechanical and electrical standards.
- Available in IP 54, 44 and 23 enclosures with IEC B3, B5, B14 mounting provisions. Also available in NEMA (USA) footed, face and flange mountings as well as a wide variety of special and custom mountings.
- Thyristor motors in frames 71 through 112 have provisions for mounting a variety of B5 and B14 flange or faces and B3 bases. Tachometer mounting provisions are also standard on each motor with adaptor packages for a variety of tachometers.
- IEC motors utilize metric fasteners. NEMA frame motors have imperial fasteners.
- Recognized by Underwriters Laboratories (USA) component approval program, file number E57948, guide number PRGY2, and by Canadian Standards Association, file number LR33543.
- Full-fact metal rating plate lists a permanent record of motor data. Thyristor motors have dual kW ratings listing 1,05 and 1,40 form factor output capability and full load DC amperage for each kW rating.
- Steel frames with rugged high-pressure cast 380 alloy aluminum machined endshields, with steel bearing seat inserts (IEC 71 and larger) for precision alignment and bearing life, accurate brush tracking and maximum motor life.
- Ceramic permanent magnet field, ferrite type, operate cooler and more efficiently than do wound field motors. Four pole designs used in larger ratings. Designed for ambient temperature range of -20°C to 40°C.
- IEC frame motors have a terminal board in a cast, gasketed terminal housing. Larger low voltage motors have machined studs for connections. Smaller motors have high temperature leads.
- Precision dynamically balanced armatures for quiet, smooth operation.
- Class F & H insulation materials used throughout with fusion welded, molded commutators for dimensional stability.
- Oversized brushes, accessible without disassembly of the motor, with integral constant pressure springs and bi-directional brush holders assure longer service before maintenance — up to four times that of other DC motors. Four brushes are used in larger low voltage motors.
- Reversible by interchanging armature connections and capable of dynamic braking for faster stopping.
- Sealed or shielded, permanently lubricated, selected electric motor grade ball bearings are used for quiet operation and long life.

MODULAR DESIGN CONCEPT

LEESON's larger horsepower thyristor rated motors, in IEC frames 71 through 100, utilize a unique modular mounting design. The basic frame is fitted with a universal end fixing and also has provisions to accept a rigid foot.

The basic frame can be field-adapted for use as a B3 footed motor, B5 or B14 flange or face mounted motor or a combination such as B3 foot with B5 flange.

The universal end fixing of the frame will accept the IEC 71, 80, 90, 100 or 112 frame B5 flange or B14 face adapter packages.



METRIC FRAME FLANGE AND FACE KITS (FRAMES 71-112)

An advantage of LEESON'S modular design concept is the possible use of a different diameter B5 flange or B14 face than is normally assigned to a motor by IEC dimensional standards. This flexibility makes it possible to accommodate a wide variety of gear reducers, pumps and similar close coupled motor mounted loads.



B5 FLANGE KITS

IEC Frame	Catalog Number	Bulk Pack (10) Catalog Number	BD Flange Dia. (mm)	AK Register (mm)	BF Hole (mm)	AJ Bolt Circle (mm)
71	175106	175160	160	110	9	130
80	175108	175161	200	130	12	165
90S/90L	175108	175161	200	130	12	165
100L/112M	175137	175162	250	180	15	215

B14 FACE KITS

IEC Frame	Catalog Number	Bulk Pack (10) Catalog Number	BD Flange Dia. (mm)	AK Register (mm)	BF Hole (mm)	AJ Bolt Circle (mm)
71	175107	175163	105	70	6	85
80	175109	175164	120	80	6	100
90S/90L	175129	175165	140	95	6	115
100L/112M	175130	175166	160	110	6	130

METRIC (IEC) FRAME THYRISTOR RATED 180V_C • TEFC MODULAR DESIGN

kW	HP	Full Load RPM	IEC Frame	Catalog Number	App. Wgt. (Kg.)	F.L. Amps DC	C Dim. (mm)
0,25	1/3	1800	71	098014	10,4	1,7	287
0,37	1/2	3000	71	098016	9,1	2,5	274
		1800	71	098015	10,9	2,5	299
0,55	3/4	3000	71	098017	10,4	3,6	299
		1800	80	108369	15,4	3,5	372
0,75	1	3000	80	108372	20,4	4,9	372
		1800	80	108370	21,8	4,6	435
1,1	1 1/2	3000	80	108373	20,0	7,1	385
		1800	80	108371	22,7	7,0	435
		1800	90L	118007	29,0	7,0	482
1,5	2	3000	90L	118009	32,7	8,6	469
		1800	90L	118008	32,7	9,5	520
2,2	3	3000	90L	118010	37,2	14,0	495
		1800	112M	118014	37,2	14,0	498

IMPORTANT: These round body motors require either a B3 rigid base, B14 face or B5 flange kit. Catalog number 118014 comes complete with IEC 112 B14 face and B3 foot; shaft diameter is 24mm.

For dimensions, see drawings G, H, I or J on page 33.

C Control input is 230 volts AC.

METRIC (IEC) FRAME LOW VOLTAGE 24V • TEFC • MODULAR DESIGN

kW	HP	Full Load RPM	IEC Frame	Catalog Number	App. Wgt. (Kg.)	F.L. Amps DC	C Dim. (mm)
0,06	1/12	3000	56	M1110025^	3,2	3,3	152
		1800	56	M1110026^	3,2	3,4	177
0,18	1/4	3000	63	M1130206*	5,9	11,0	197
		3000	63	M1130296^	5,9	11,0	197
		1800	63	M1130207*	5,9	10,0	222
		1800	63	M1130297^	5,9	10,0	222
		1800	71	098065	9,1	11,0	274
0,37	1/2	3000	71	098066	10,0	20,0	286
		1800	71	098067	10,9	20,0	312
0,75	1	3000	80	108456+	15,0	40,0	359
		1800	80	108455+	20,0	39,0	372
1,1	1 1/2	3000	80	108457+	21,8	65,0	397
1,5	2	3000	80	108458+	23,1	78,0	435

IMPORTANT: These round body motors (IEC71 and 80) require either B14 face, B5 flange or B3 foot. See listings below.

For dimensions, see drawings E, F, G, H or I on page 33.

* Dedicated B5 Flange
 ^ Dedicated B14 Face
 + Studs at 12:00



B3

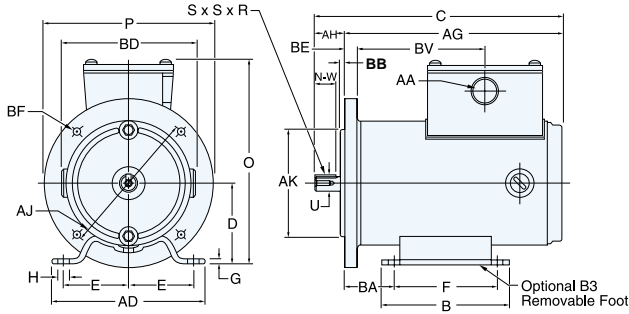
B3 FOOT MOUNTING

All motors are stocked with provisions to accommodate B3 foot mountings.

IEC Frame	Catalog No.	Bulk Pack (10) Catalog No.
56	175142	175167
63	175143	175168
71	175144	175169
80	175145	175170
90	175146	175171

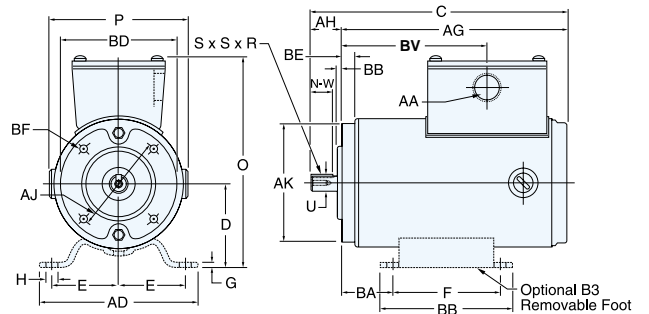
E

METRIC FRAMES - 56/63 B5



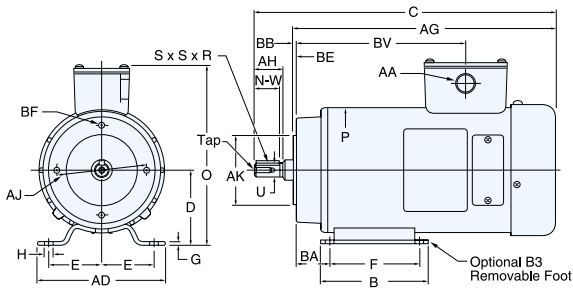
F

METRIC FRAMES - 56/63 B14



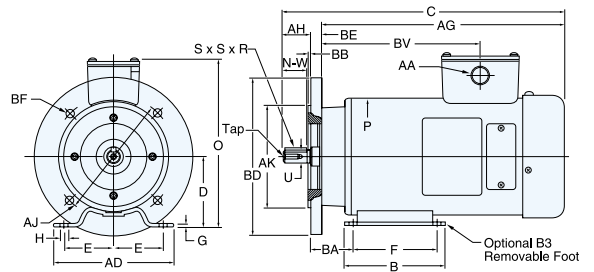
G

METRIC FRAMES - 71/80/90 B3



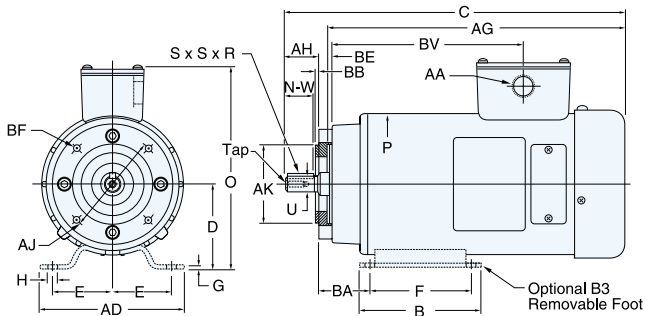
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METRIC FRAMES - 71/80/90 B5



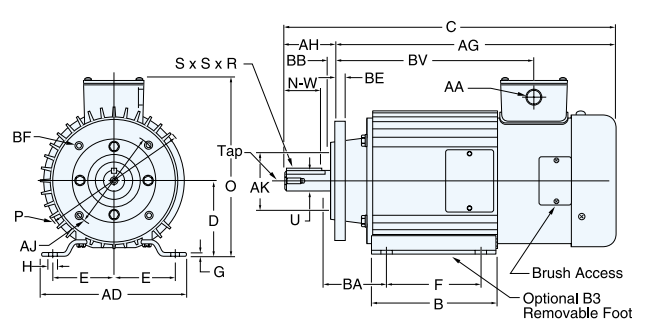
I

METRIC FRAMES - 71/80/90 B14



J

METRIC FRAMES - 100 B14



METRIC (IEC) FRAMES (mm)

IEC Frame	Mounting							Shaft					B14 Face/B5 Flange**								General							
	2E	AD	F	B	BA	D	G	H	U	AH	N-W	S	R	TAP	* AJ	**	* AK	**	* BD	**	* BF	**	* BB	**	P	O	BE	AA
56	90	106	71	90	36	56	3	6	9	20	16	3	15	M3	65	100	50	80	80	120	M5	7	2,5	2,5	96	139	9	11,0
63	100	116	80	96	40	63	3	7	11	23	19	4	18	M4	75	115	60	95	90	140	M5	9	2,5	3,0	96	146	9	11,0
71	112	128	90	106	45	71	3	7	14	30	26	5	25	M5	85	130	70	110	105	160	M6	9	2,5	3,5	124	179	12	13,5
80	125	156	100	127	50	80	3	10	19	40	33	6	32	M6	100	165	80	130	120	200	M6	12	3,0	3,5	143	204	12	16,0
90S	140	174	100	152	56	90	3	10	24	50	36	8	35	M8	115	165	95	130	140	200	M8	12	3,0	3,5	166	233	12	16,0
90L	140	174	125	152	56	90	3	10	24	50	36	8	35	M8	115	165	95	130	140	200	M8	12	3,0	3,5	166	233	12	16,0
100L	160	196	140	170	63	100	3	12	28	60	41	8	40	M10	130	215	110	180	160	250	M8	15	3,5	3,5	193	243	12	16,0

For C dimension, see motor selection charts.