

**SUB-FHP MOTORS**

**General Specifications:**

Precision subfractional horsepower DC permanent magnet motors designed for use with full wave non-filtered SCR controls for adjustable speed applications requiring dynamic braking and constant torque throughout the speed range.



31/34 Frame

**Mechanical Features:**

Compact space saving designs. Ball bearings. Long-life brushes for demanding applications. Brushes easily replaced without disassembly of the motor. Standard mounted conduit box on 31 and 34 frame models simplifies connections.



24 Frame

**Electrical Features:**

Continuous duty with full wave un-filtered rectified SCR (thyristor) controls. Linear speed torque characteristics throughout the speed range. High starting torques. Reversible rotation from a simple two lead connection.

**SCR RATED (90 & 180 V) • TENV • SQUARE FLANGE OR C FACE**

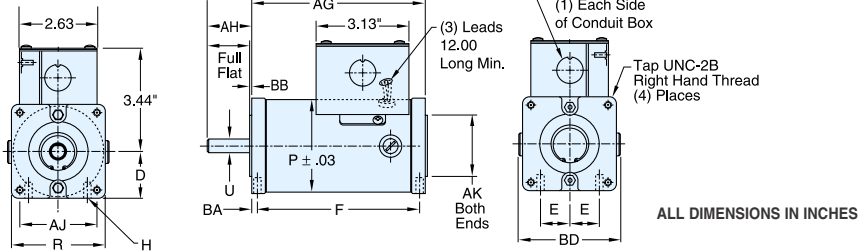
HP	Full Load RPM	Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC
1/25	3500	24AS	M1110014 <sup>ⓑ</sup>	\$158	S	3	90	115	0.5
	1750	24CS	M1110003 <sup>ⓑ</sup>	164	S	3	90	115	0.5
	1750	31AS	M1120064	164	S	5	180	230	0.3
1/15	3500	24CS	M1110015 <sup>ⓑ</sup>	169	S	2	90	115	0.7
	1750	31BS	M1120013	175	S	5	90	115	0.8
	1750	31BS	M1120039	175	S	7	180	230	0.4
1/10	3500	31BS	M1120060	175	S	5	90	115	1.3
	1750	31CS	M1120014	208	S	7	90	115	1.1
	1750	31CS	M1120041	208	S	7	180	230	0.6
1/8	3500	31CS	M1120059	208	S	6	90	115	1.5
	1750	31ES	M1120027	225	S	7	90	115	1.3
	1750	31ES	M1120045	225	S	7	180	230	0.7
	1750	34D42CZ	M1130053	234	S	8	90	115	1.4
	1750	34D42CZ	M1130118	234	S	7	180	230	0.7
1/6	3500	31ES	M1120058	225	S	9	90	115	1.9
	1750	31GS	M1120042	228	S	9	90	115	1.8
	1750	31GS	M1120043	228	S	11	180	230	0.9
	1750	34E56C	M1130054	239	S	11	90	115	1.7
	1750	34E56C	M1130119	239	S	11	180	230	0.9
1/4	3500	31GS	M1120062	238	S	9	90	115	2.6
	1750	34G56C	M1130055**	246	S	13	90	115	2.7
	1750	34G56C	M1130120**	246	S	13	180	230	1.3

<sup>ⓑ</sup> 24 frame motors have provisions for an optional conduit box catalog number M1760000, see page 150.  
\*\* These motors are totally enclosed fan cooled.

**24 & 31 FRAME SQUARE FLANGE MOUNT**

Note: Optional conduit box not included on 24 frame models.

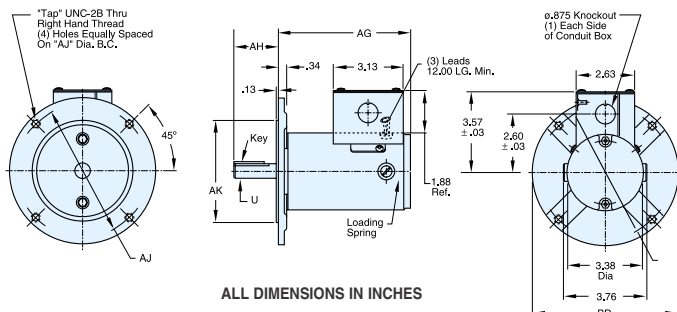
Conduit box dimensions shown here are for 31 frame only.



Frame & Type	AG	P	BD	U	AH	AH-BB	AJ	TAP	R	AK	BB	D	BA	E	F	H	
24	AS	4.08	2.38	2.75	.312	1.5	1.00	1.73	8-32	2.47	.997	.03	1.23	.125	.625	3.83	8-32
	CS	4.94	2.38	2.75	.312	1.5	1.00	1.73	8-32	2.47	.997	.03	1.23	.125	.625	4.92	8-32
31	AS	5.39	3.07	3.45	.5000	1.5	1.00	2.63	1/4-20	3.16	1.97	.07	1.57	.235	1.000	4.92	1/4-20
	BS	5.39	3.07	3.45	.5000	1.5	1.00	2.63	1/4-20	3.16	1.97	.07	1.57	.235	1.000	5.42	1/4-20
31	CS**	5.89	3.07	3.45	.5000	1.5	1.00	2.63	1/4-20	3.16	1.97	.07	1.57	.235	1.000	5.42	1/4-20
	ES**	6.89	3.07	3.45	.5000	1.5	1.00	2.63	1/4-20	3.16	1.97	.07	1.57	.235	1.000	6.42	1/4-20
31	GS	7.89	3.07	3.45	.5000	1.5	1.00	2.63	1/4-20	3.16	1.97	.07	1.57	.235	1.000	7.42	1/4-20

\*\*Catalog numbers M1120041 & M1120044 have an 'AG' & 'F' dimension that is .5" longer than stated in table.

**34-FRAME, NEMA C FACE, LESS BASE**



**42C FACE MOUNT**

Frame	AG	P	U	AH	AH-BB	KEY	AJ	TAP	AK	BD
34D42C	6.43	3.38	.500	1.38	1.25	.13 SQ	3.750	1/4-20	3.00	4.25

**56C FACE MOUNT**

Frame	AG	P*	U	AH	AH-BB	KEY	AJ	TAP	AK	BD
34E56C	6.87	3.38	.625	2.06	1.93	.19 SQ	5.875	3/8-16	4.50	6.50
34G56C	8.59	3.38	.625	2.06	1.93	.19 SQ	5.875	3/8-16	4.50	6.50

\*For 1/4 HP 34 frame TEFC designs. Fan cover diameter is 3.88".