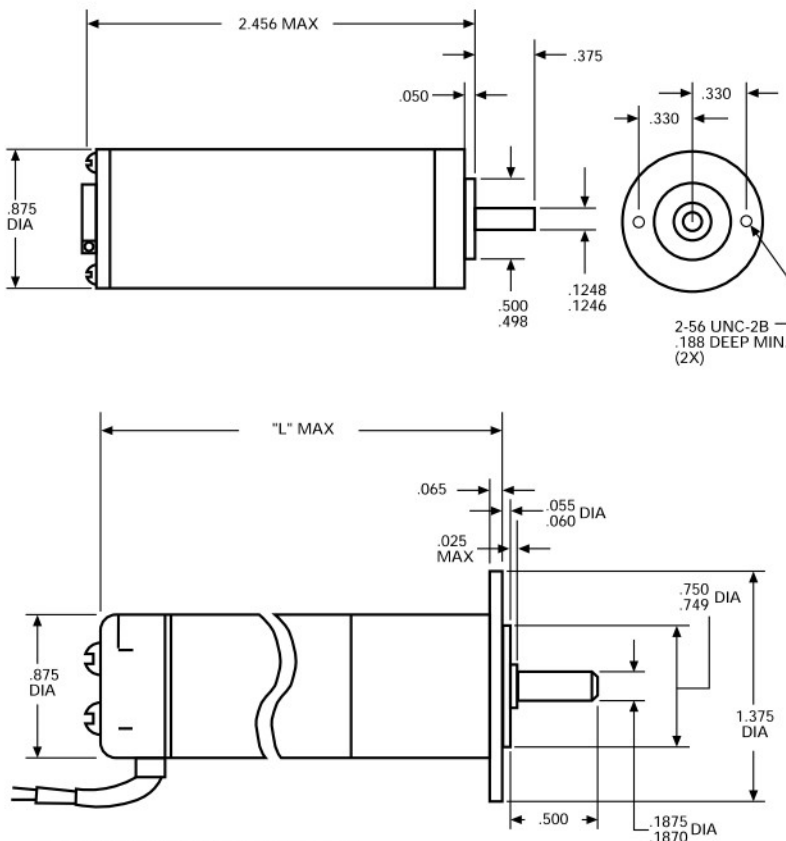


SS MOTORS

DC Rare Earth Permanent Magnet Motors



Dimensions



SS Rare Earth Motor

power rating: .019 hp (14.2 W)

voltage: 24 VDC

weight: 4 ounces

armature: Dynamically balanced, varnish impregnated

inertia: 7.1×10^{-5} oz. in. sec.²

electrical time constant: 0.25 millisecond max

mechanical time constant: 15.0 milliseconds max

typical no load torque: 0.6 oz. in.

shaft: Precision-ground, through-hardened (RC 40-50) 420 stainless steel

magnets: Rare earth

bearings: Ball bearings are double shielded, life-lubricated

cables/leads: 8" #26 AWG 2 leads

housing: Corrosion-resistant steel

winding temperature rise: 7.5°C per watt w/8.00" x 8.00" x .25" aluminum heat sink

winding insulation rating: 180°C

options available:

- Gear train
- Enclosed with shielded leads

SS Rare Earth Gear motor

torque rating: Up to 300 oz. in. maximum continuous torque

weight: 7 to 9 ounces depending on ratio

gears: Planetary gearing system. All gears are heat treated for consistently reliable performance and long life

shaft: Precision-ground No. 416 stainless steel

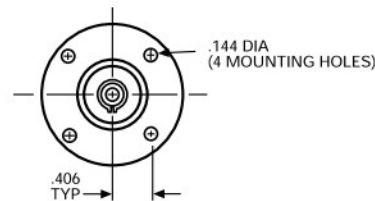
backlash: Varies with reduction but average unit will have less than 3°

gear inertia: 1.8×10^{-6} oz. in. sec.² @ input max

bearings: Output shaft uses double-shielded life-lubricated ball bearings. Special lubricants available for temperature extremes

mounting flange: No. 303 stainless steel per ASTM A582

gear train housing: Stress-proof steel



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E-1430

SS Rare Earth Motor Standard Part Numbers and Data

VOLTAGE (VDC)	SPEED ±150 no load (rpm)	TORQUE		CURRENT			CONSTANTS		STANDARD PART NUMBER*
		max rated (oz. in.)	** theoretical stall (oz. in.)	max no load (amps)	max rated load (amps)	** nominal stall (amps)	K _T (oz. in./ amp)	R (ohms)	
24	25,100	.80	23.5	.55	1.25	18.2	1.34	1.36	457A100-1

**Because of brush drop and field distortion, current and torque indicated will not always be attainable

SS Rare Earth Gearmotor Standard Part Numbers and Data

SPEED REDUCTION RATIO	MAXIMUM CONTINUOUS TORQUE** (oz. in.)	TORQUE MULTIPLIER RATIO	"L" MAX	STANDARD PART NUMBER PREFIX*
3.82:1	1.0	3.1	3.173	459A100
5.77:1	1.5	4.6		459A101
14.58:1	3.0	9.3	3.391	459A102
22.03:1	4.5	14.0		459A103
33.28:1	7.0	21.0		459A104
55.66:1	10.0	28.0		459A105
84.11:1	14.0	43.0	3.560	459A106
127.1:1	21.0	65.0		459A107
192:1	30.0	93.0		459A108
321:1	45.0	130.0		459A109
485:1	70.0	200.0	3.729	459A110
733:1	100.0	300.0		459A111
1,108:1	150.0	450.0		459A112
1,853:1	200.0	600.0		459A113
2,799:1	300.0	900.0	3.898	459A114
4,230:1	300.0	1,400		459A115
6,391:1	300.0	2,100		459A116
10,689:1	300.0	2,800		459A117
16,150:1	300.0	4,200	4.067	459A118
24,403:1	300.0	6,400		459A119
36,873:1	300.0	9,700		459A120

**Max Cont. Torque: The values in this column are based upon gear train strength and capability for 1,000 hrs. minimum life. Max rated torque of motor selected x torque multiplier ratio must not exceed maximum continuous torque of gearbox

Max Intermittent Torque = 2 x Max Cont. Torque

Minimum Gearbox Efficiency = Torque Multiplier Ratio divided by Speed Reduction Ratio x 100

*When You Order

The basic motor armature windings can be used with any of the gear ratios listed above. To order, state the gear train standard part number prefix, plus a motor armature winding dash number. EXAMPLE: 459A100-1 is a 3.82:1 SS gear train with a "-1" armature winding, 24 volts, 25,100 rpm, 0.80 oz. in. torque, etc.