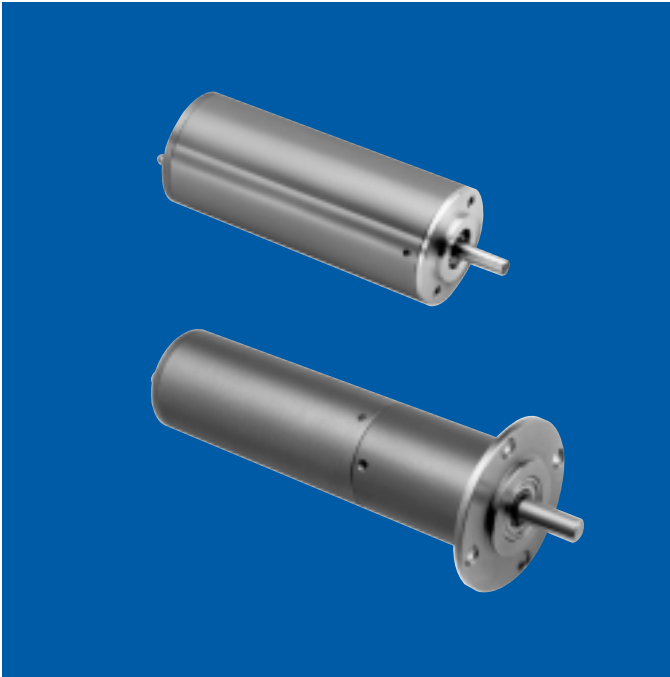


SS MOTORS

DC Rare Earth Permanent Magnet Motors

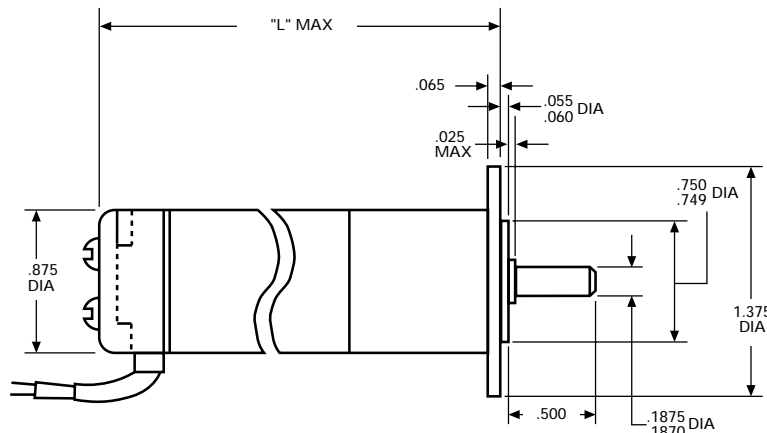
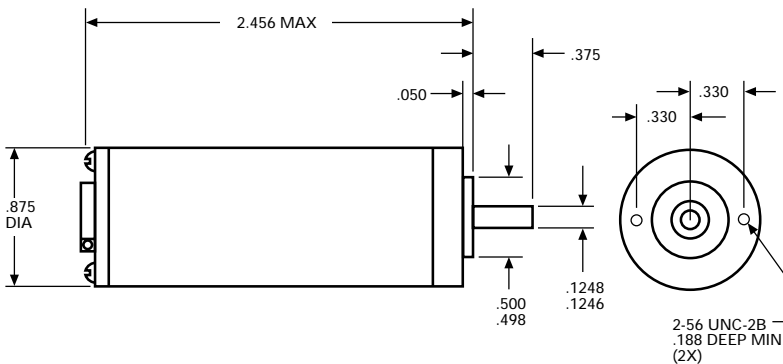
E-1430



SS Rare Earth Motor

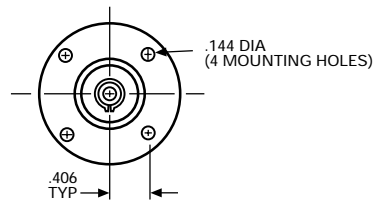
- power rating: .019 hp (14.2 W)
- voltage: 24 VDC
- weight: 4 ounces
- armature: Dynamically balanced, varnish impregnated
- inertia: 7.1×10^{-5} oz. in. sec.²
- electrical time constant: 0.25 millisecond max
- mechanical time constant: 15.0 milliseconds max
- typical no load torque: 0.6 oz. in.
- shaft: 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

Dimensions



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



ROTATION (VIEWED FROM SHAFT END)
 CCW - POSITIVE VOLTAGE TO (RED), NEGATIVE VOLTAGE TO (BLACK)
 CW - REVERSE POLARITY

NOTE: Consult factory prior to preparing spec control prints. Dimensions are for reference only

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.