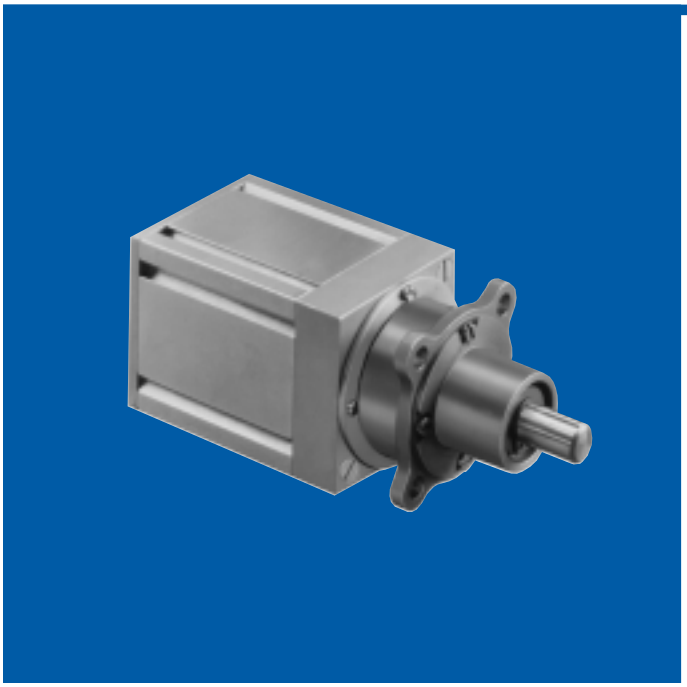
NB-15 WITH 1¼" GEAR TRAIN

Brushless DC Gearmotors

AN-1530



torque rating: Up to 1,250 oz. in. maximum continuous torque

weight: 12 to 18 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 nitrided stainless steel. Options: length, smaller diameter, flats, pinions, gears, holes (through or tapped), threaded ends and tapers. Type of steel used may change depending upon variation selected

backlash: Varies with reduction but average backlash is less than 3°

gear inertia: 4.2 x 10^{-6} oz. in. $sec.^2$ @ input max

bearings: .250" dia. shaft uses double-shielded, life-lubricated ball bearings for –55°C to +85°C operation. A .313" dia. shaft uses needle bearings. Special lubricants available for temperature extremes

cables/leads: 8 lead wires (MIL-W-16878/4) 18" minimum covered with shielding per QQ-B-575

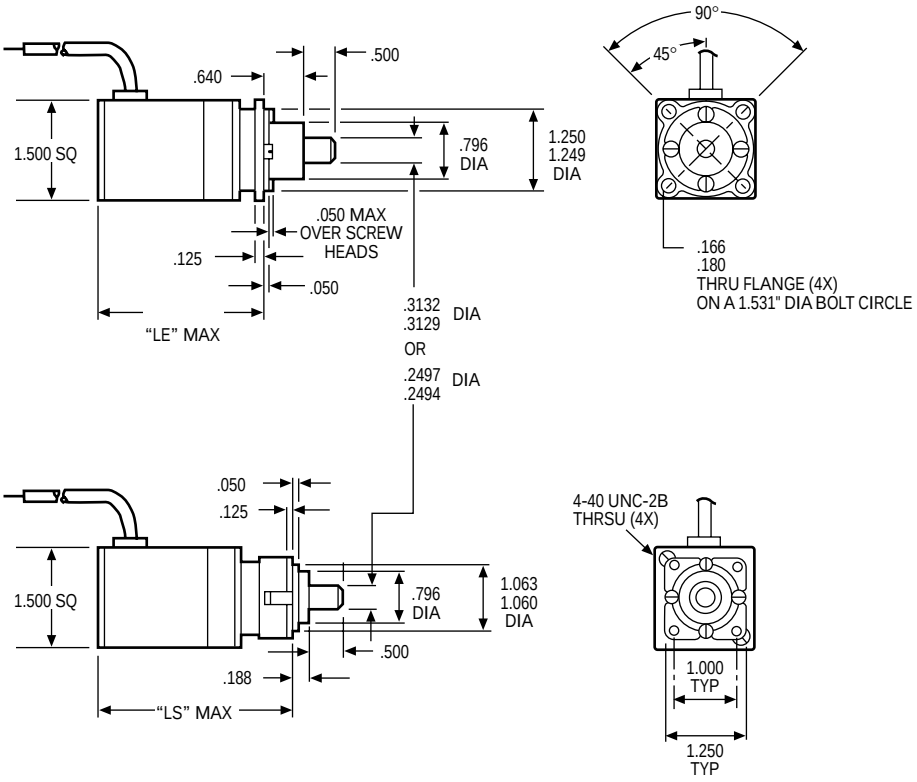
mounting flange: Die-cast aluminum

marking: Per MIL-STD-130

options available:

- RFI filters to meet MIL-I-6181, MIL-I-26600 or MIL-STD-461

Dimensions



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

Standard Part Numbers and Data

SPEED REDUCTION RATIO	MAXIMUM CONTINUOUS TORQUE (oz. in.)	TORQUE MULTIPLIER RATIO	STANDARD PART NUMBER PREFIX*				EARED FLANGE dim. LE (in.)	SQUARE FLANGE dim. LS (in.)
			EARED FLANGE		SQUARE FLANGE			
			.313" shaft	.250" shaft	.313" shaft	.250" shaft		
18.78:1	20	12.0	559A211	559A251	559A231	559A271	2.672	3.116
27.94:1	29	17.0	559A212	559A252	559A232	559A272		
81.37:1	70	41.0	559A213	559A253	559A233	559A273		
121.10:1	105	62.0	559A214	559A254	559A234	559A274	2.810	3.251
147.70:1	128	75.0	559A215	559A255	559A235	559A275		
352.60:1	247	145.0	559A216	559A256	559A236	559A276		
524.60:1	366	215.0	559A217	559A257	559A237	559A277		
639.90:1	445	262.0	559A218	559A258	559A238	559A278	3.080	3.520
780.60:1	544	320.0	559A219	559A259	559A239	559A279		
1,528.00:1	850	500.0	559A220	559A260	559A240	559A280		
2,273.00:1	1,250	740.0	559A221	559A261	559A241	559A281		
3,382.00:1	1,250	1,100	559A222	559A262	559A242	559A282	3.450	3.890
4,126.00:1	1,250	1,350	559A223	559A263	559A243	559A283		
6,621.00:1	1,250	1,730	559A224	559A264	559A244	559A284		
9,851.00:1	1,250	2,580	559A225	559A265	559A245	559A285		
12,016.00:1	1,250	3,150	559A226	559A266	559A246	559A286	3.580	4.025
17,879.00:1	1,250	4,700	559A227	559A267	559A247	559A287		
21,808.00:1	1,250	5,700	559A228	559A268	559A248	559A288		

**.250" dia. shaft units limited to 600 oz. in. maximum continuous duty torque. Use .313" dia. shaft if torque requirements exceed this value
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; Momentary Stall Torque = 5 x Max Cont. Torque (2,000 oz. in. max)
Minimum Gearbox Efficiency = Torque Multiplier Ratio divided by Speed Reduction Ratio x 100

*When You Order

Each of the basic motor windings (bottom chart) can be used with any of the gear ratios listed above. To order, state the gear train standard part number prefix, plus a motor winding dash number. EXAMPLE: 559A102-1 is an 18.78:1 NB gearmotor with a "-1" winding, 27 volts, 14,000 rpm, 7.00 oz. in. torque, etc.

Winding Characteristics

VOLTAGE (VDC)	SPEED no load (rpm)	TORQUE		CURRENT			CONSTANTS		MOTOR WINDING DASH NUMBERS*
		max rated (oz. in.)	theoretical stall (oz. in.)	max no load (amps)	max rated load (amps)	theoretical stall (amps)	K_T (oz. in./ amp)	R (ohms)	
27	12,500-15,500	8.5	60.0	.35	4.40	5.0	2.75	1.23	-1
27	9,000-11,000	8.5	48.0	.30	3.40	5.0	3.76	2.13	-2

Note: Alternative windings (voltage, speed) available.

Motor Characteristics

See Bulletin AN-1500

Lead Wire Designation

See Bulletin AN-1500

Commutation and Connection Diagrams

See Bulletin AN-1500

Motor Coil Connections

See Bulletin AN-1500