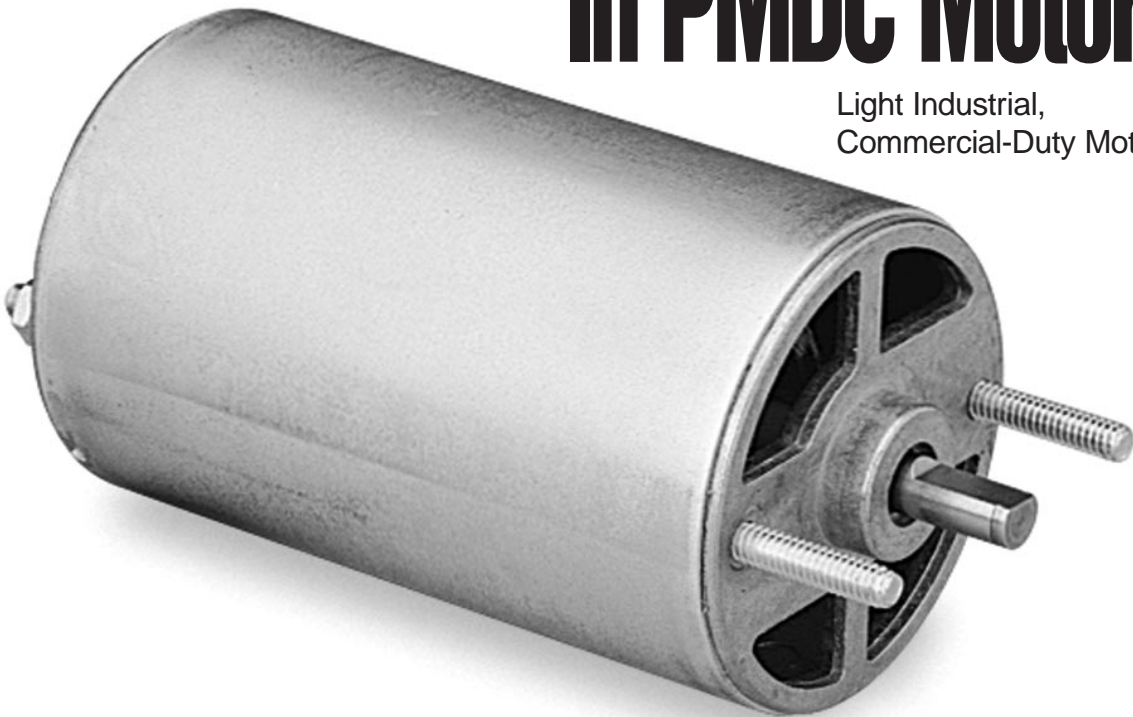




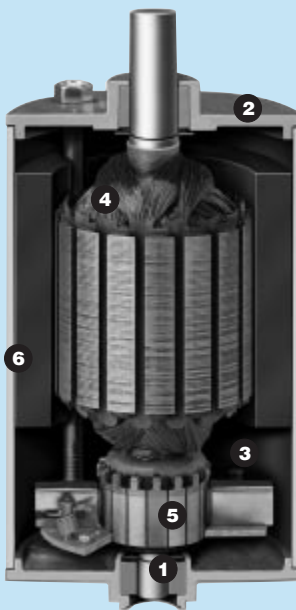
ELECTRIC MOTORS  
GEARMOTORS AND DRIVES

# Tru-Torq Motors: Maximum Value In PMDC Motors

Light Industrial,  
Commercial-Duty Motors



## TYPICAL TRU-TORQ PMDC MOTOR FEATURES



- ❶ **Self-aligning sleeve bearings** of sintered bronze, with wide temperature range oil impregnation for quiet operation and long life. Ball bearing designs optional.
- ❷ **Zinc alloy endplates** are high-pressure cast for rigidity and reduced cost.
- ❸ **Internal brushes are standard** for lower cost. A wide range of brush grades and sizes are available to match application voltages and life expectations. Cartridge-type brush holders also available.
- ❹ **UL recognized insulation system.** Copper magnet wire is varnish-impregnated, yielding a vibration-resistant winding with environmental protection.
- ❺ **Molded commutator** of silver-bearing copper with high temperature, fusion welded tang connections for reduced cost. Epoxy reinforcement available for vibration resistance and enhanced reliability.
- ❻ **Zinc-plated steel frame** for extra corrosion resistance. Unpainted endcaps are standard. Painted frame and endcaps available. Ceramic magnets are bonded to the frame with high-strength, single component epoxy, for structural integrity and performance.

Wide variety of mountings available, including customer-specific custom designs. Motor-mounted gearheads, brakes, tachometers, and encoders available.



# CUSTOM DC MOTORS

SCR RATED

**NEW!**

## SCR RATED MOTORS

SUB-FHP FRAMES 2.25", 2.50", 3.00", & 3.13"

90 or 180 VOLTS, 1.3 to 1.4 FORM FACTOR

HP	Rated Torque (oz-in)	RPM	Amperage 90V	TENV Frame & Type (inches dia.)
1/60	10	1750	0.25	2.25 A
1/40	10	2500	0.35	2.25 B
1/35	15	1750	0.34	2.25 B
	17	1750	0.36	2.50 A
1/30	15	2500	0.48	2.25 B
	20	1750	0.42	2.25 B
	21	1750	0.44	2.50 B
1/25	17	2500	0.52	2.50 A
	25	1750	0.50	2.50 C
	25	1750	0.50	3.00 A
1/20	25	1750	0.50	3.13 A
	20	2500	0.59	2.25 B
	21	2500	0.62	2.50 C
1/17	28	1750	0.54	3.00 B
	28	1750	0.54	3.13 B
	25	2500	0.71	2.50 C
1/15	25	2500	0.71	3.00 A
	25	1750	0.71	3.13 A
	34	1750	0.64	3.00 C
1/12	34	1750	0.64	3.13 C
	28	2500	0.77	3.00 B
	28	2500	0.77	3.13 B
1/10	40	1750	0.73	3.00 D
	40	1750	0.73	3.13 D
	40	2500	1.04	3.00 D
	40	2500	1.04	3.13 D



2.50" Frame

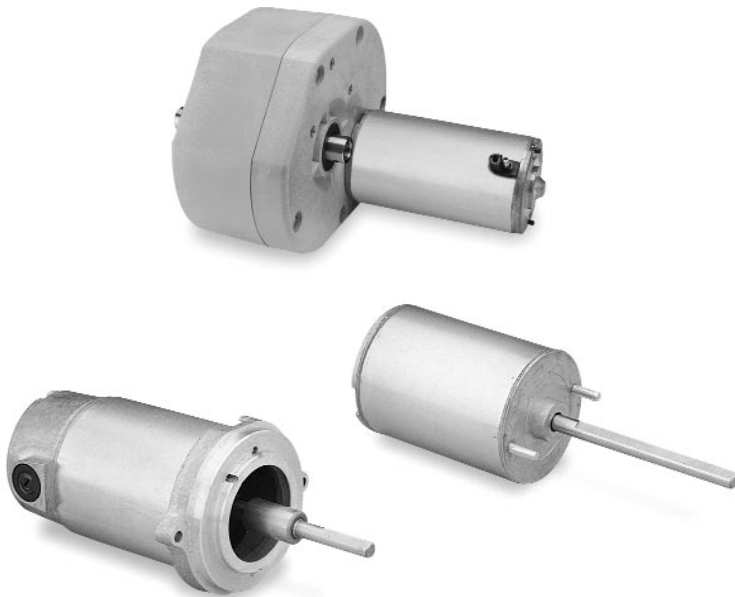


3.00" Frame



3.13" Frame

For dimensions and drawings, see back cover.



TYPICAL TRU-TORQ CUSTOM MOTORS

### General Specifications:

The ratings listed are typical designs in continuous and periodic intermittent duty rated motors. Various additional speeds, voltages and duty ratings are possible.

### Electrical Options:

- SCR ratings include 90 or 180V and 115 or 220V (half-wave)
- Filtered and pulse width modulated (PWM) motor ratings also available
- Reversible
- Thermal protection
- Cartridge-type brush holders

### Mechanical Options:

- Ball bearing design
- Special shafts
- Custom mounting configurations
- Worm-type and parallel shaft speed reducers also available
- Custom finish/painted
- Metric thru-bolts & shafts
- Vented housing
- Dynamically balanced armature

### Engineering Services:

LEESON's application engineering staff is available, at no additional cost, to assist in developing the motor design best suited for applications.

**NEW!**

**CUSTOM DC MOTORS**  
LOW VOLTAGE

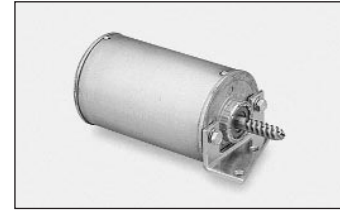


**LOW VOLTAGE MOTORS**

SUB-FHP FRAMES 2.25", 2.50", 3.00", & 3.13"

12, 24 & 36 VOLTS, 1.0 FORM FACTOR

HP	Rated Torque (oz-in)	RPM	Amperage 12V	TENV Frame & Type (inches dia.)
1/50	10	1800	1.91	2.25 A
1/40	10	2400	2.55	2.25 B
1/30	18	1800	3.12	2.25 B
	20	1800	3.41	2.50 A
1/25	18	2400	4.16	2.25 B
	23	1800	3.75	2.25 B
	24	1800	3.92	2.50 B
	25	1800	4.08	3.00 A
	25	1800	4.08	3.13 A
1/20	20	2400	4.55	2.50 A
	28	1800	4.44	2.50 C
1/17	23	2400	5.00	2.25 B
	24	2400	5.22	2.50 B
	25	2400	5.44	3.00 A
	32	1800	4.93	3.00 B
	25	2400	5.44	3.13 A
	32	1800	4.93	3.13 B
1/15	28	2400	5.92	2.50 C
	32	2400	6.57	3.00 B
	38	1800	5.62	3.00 C
	32	2400	6.57	3.13 B
	38	1800	5.62	3.13 C
1/12	38	2400	7.50	3.00 C
	48	1800	6.83	3.00 D
	38	2400	7.50	3.13 C
	48	1800	6.83	3.13 D
1/10	48	2400	9.10	3.00 D
	48	2400	9.10	3.13 D



2.25" Frame



2.50" Frame



3.00" Frame

For dimensions and drawings, see back cover.



TYPICAL TRU-TORQ CUSTOM MOTORS

**General Specifications:**

The ratings listed are typical designs in continuous and periodic intermittent duty rated motors. Various additional speeds, voltages and duty ratings are possible.

**Electrical Options:**

- Low voltage ratings 12 through 72V
- Reversible
- Thermal protection
- Cartridge-type brush holders

**Mechanical Options:**

- Ball bearing design
- Special shafts
- Worm-type and parallel shaft speed reducers also available
- Custom mounting configurations
- Custom finish/painted
- Metric thru-bolts & shafts
- Vented housing
- Dynamically balanced armature

**Engineering Services:**

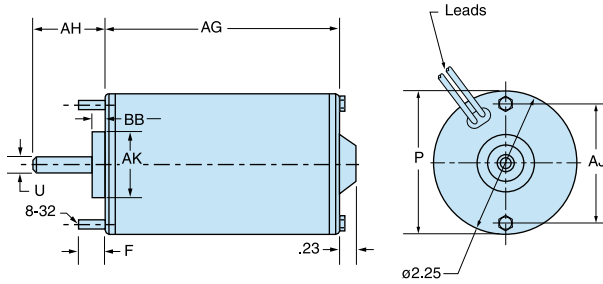
LEESON's application engineering staff is available, at no additional cost, to assist in developing the motor design best suited for applications.



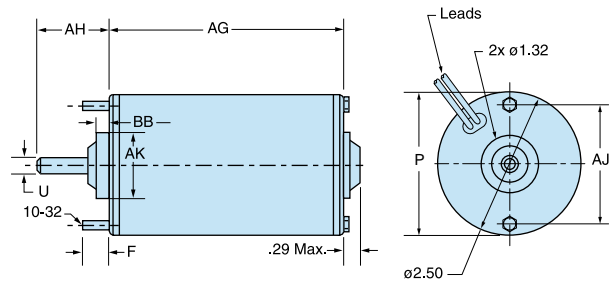
# DIMENSIONS

## TRU-TORQ DC MOTORS

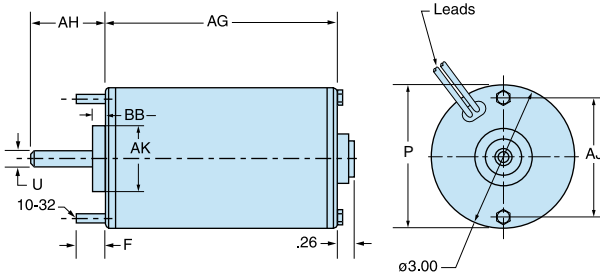
### DC 2.25" FRAME



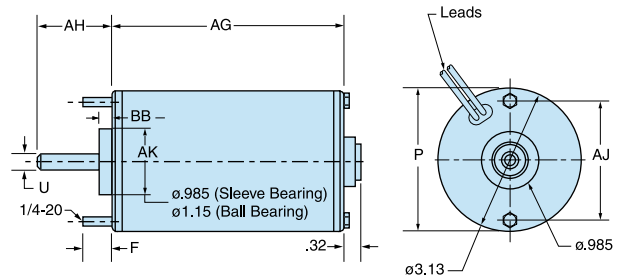
### DC 2.50" FRAME



### DC 3.00" FRAME



### DC 3.13" FRAME



### TRU-TORQ CUSTOM DC MOTORS (Inches)

Frame & Type	AG	P	U	AH	AJ	TAP	AK	BB	F
2.25"	A	3.00	2.25	.25	1.50	1.75	8-32	.987	.25
	B	3.67	2.25	.25	1.50	1.75	8-32	.987	.25
2.50"	A	3.34	2.50	.31	1.50	2.00	10-32	1.02	.42
	B	3.68	2.50	.31	1.50	2.00	10-32	1.02	.42
	C	4.41	2.50	.31	1.50	2.00	10-32	1.02	.42
3.00"	A	3.78	3.00	.375	1.50	2.42	10-32	1.15	.25
	B	4.33	3.00	.375	1.50	2.42	10-32	1.15	.25
	C	4.78	3.00	.375	1.50	2.42	10-32	1.15	.25
	D	5.68	3.00	.375	1.50	2.42	10-32	1.15	.25
3.13"	A	3.64	3.13	.375	1.50	2.50	1/4-20	.985	.36
	B	4.85	3.13	.375	1.50	2.50	1/4-20	.985	.36
	C	5.11	3.13	.375	1.50	2.50	1/4-20	.985	.36
	D	5.60	3.13	.375	1.50	2.50	1/4-20	.985	.36

These dimensions are the usual maximum shaft diameter and shaft length available. For greater length or shaft dimensions, please contact LEESON.

**For information on a wide variety of DC motors and gearmotors, stock and custom, please request LEESON Bulletins 1600 and 1800.**

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