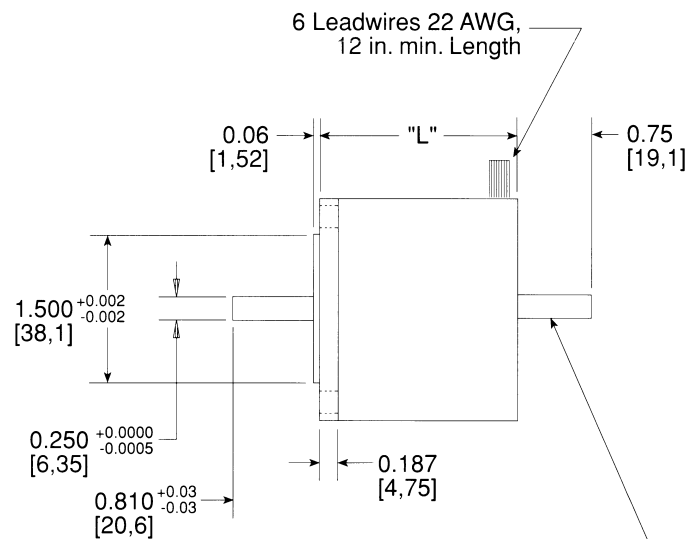
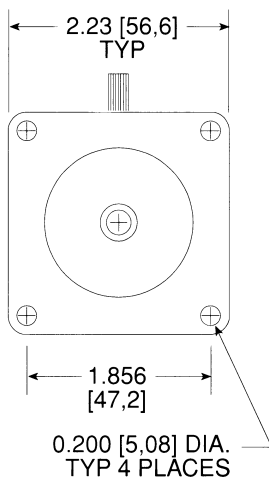


SIZE 23 BASIC MOTOR MODELS AND SPECIFICATIONS

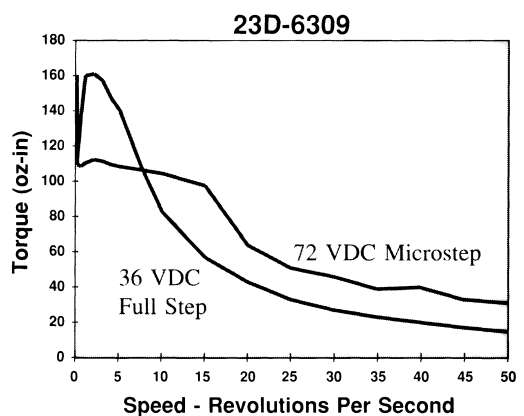
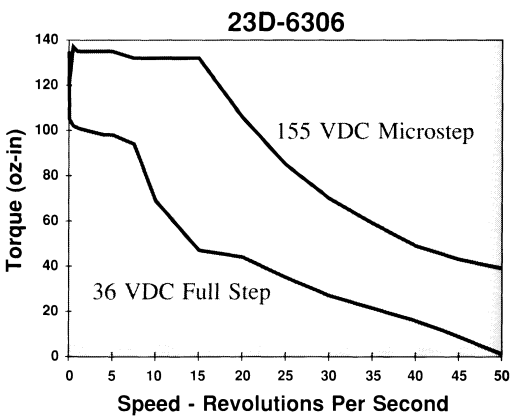
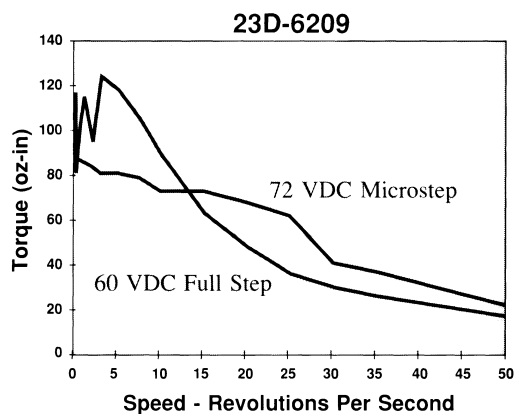
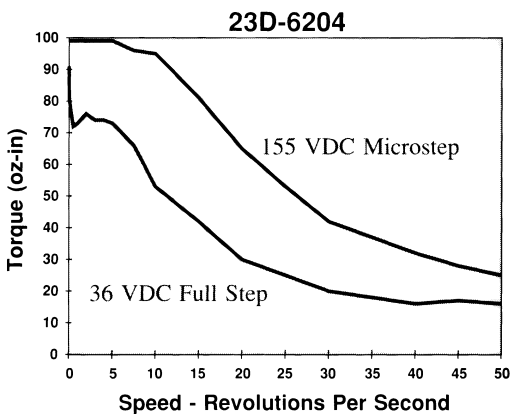
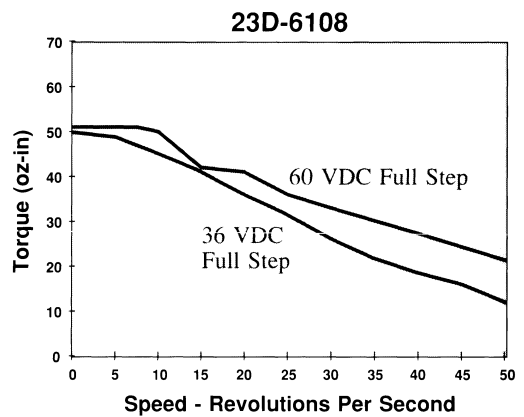
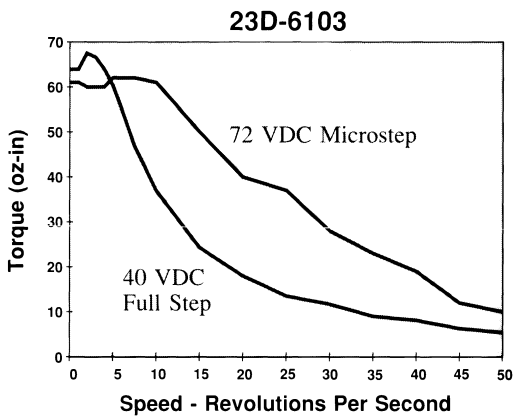
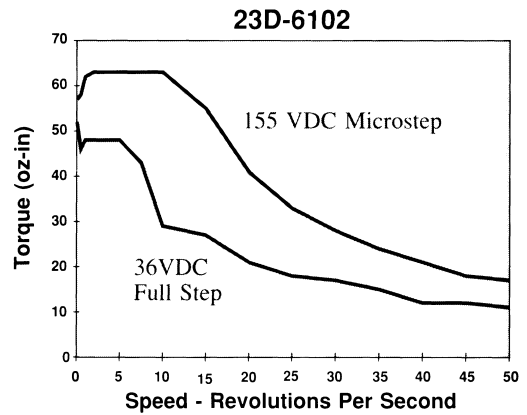
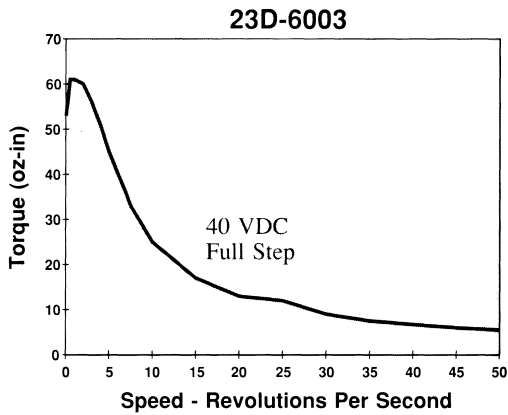
| BASIC MODELS | STATIC TORQUE oz-in (N-m) | RATED CURRENT (AMPS) | RATED VOLTAGE (VDC) | RESISTANCE PER PHASE (OHMS) | INDUCTANCE PER PHASE (mH) | ROTOR INERTIA oz-in ² (Kg-cm ²) | "L" in (mm) | WEIGHT lbs (Kg) |
|--------------|------------------------------|-------------------------|------------------------|-----------------------------------|---------------------------------|---|----------------|--------------------|
| 23D-6003A | 45 (.31) | 1.20 | 6.00 | 5.00 | 5.00 | 0.36 (.06) | 1.50 (38) | 1.00 (.45) |
| 23D-6008A | 45 (.31) | 0.50 | 10.00 | 20.00 | 20.00 | 0.36 (.06) | 1.50 (38) | 1.00 (.45) |
| 23D-6102A | 60 (.42) | 1.00 | 5.00 | 5.00 | 8.00 | 0.63 (.11) | 2.00 (51) | 1.00 (.45) |
| 23D-6103A | 60 (.42) | 2.00 | 3.00 | 1.60 | 2.00 | .63 (.11) | 2.00 (51) | 1.00 (.45) |
| 23D-6108A | 60 (.42) | 3.80 | 1.25 | 0.33 | 0.40 | 0.63 (.11) | 2.00 (51) | 1.00 (.45) |
| 23H-501A | 80 (.56) | 1.20 | 6.00 | 5.00 | 8.00 | 0.66 (.12) | 2.25 (57) | 1.25 (.57) |
| 23H-531A | 80 (.56) | 3.90 | 1.90 | 0.50 | 0.60 | 0.66 (.12) | 2.25 (57) | 1.25 (.57) |
| 23D-6204A | 100 (.71) | 1.80 | 4.70 | 2.60 | 5.00 | 1.29 (.23) | 3.25 (83) | 2.00 (.91) |
| 23D-6209A | 100 (.71) | 4.70 | 1.70 | 0.37 | 0.60 | 1.29 (.23) | 3.25 (83) | 2.00 (.91) |
| 23D-6306A | 150 (1.05) | 2.90 | 3.40 | 1.16 | 2.90 | 1.75 (.32) | 4.00 (102) | 3.00 (1.36) |
| 23D-6309A | 150 (1.05) | 4.60 | 2.20 | 0.48 | 0.90 | 1.75 (.32) | 4.00 (102) | 3.00 (1.36) |



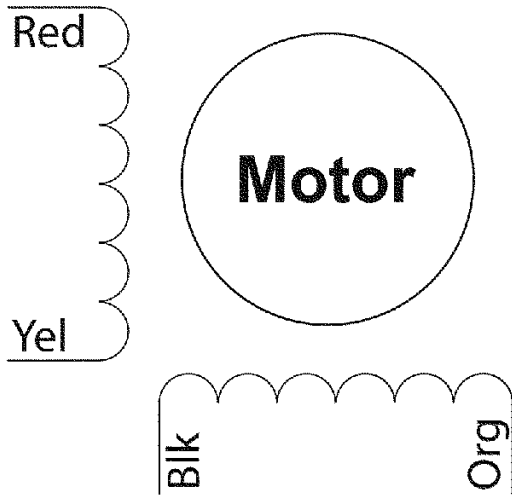
Optional rear shaft.
Specify suffix "C" instead
of "A" when ordering

SIZE 23 SPEED/TORQUE CURVES

All motors connected in series with driver voltage, and step mode as noted in each curve.

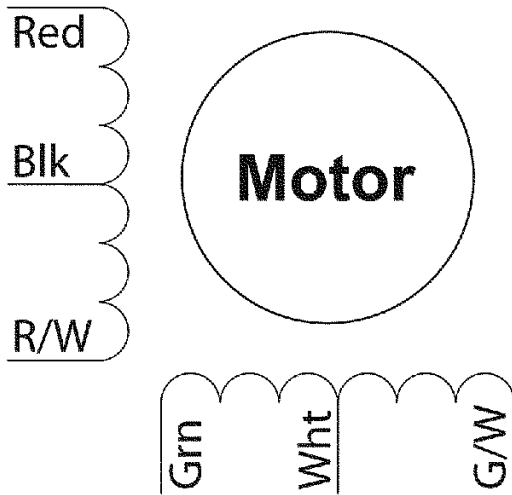


FOUR LEAD MOTORS



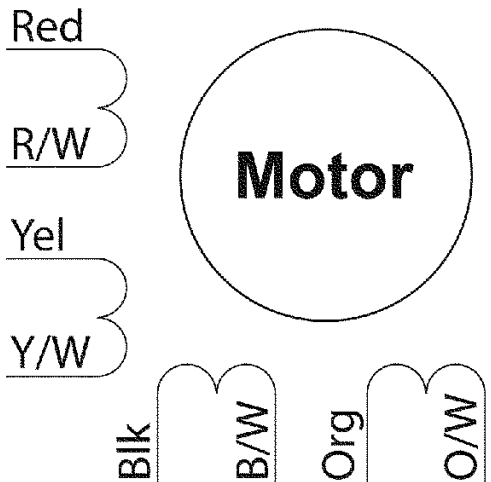
| Wire Color | Drive Connection |
|----------------------------------|------------------|
| Orange | A+ |
| Black | A- |
| Red | B+ |
| Yellow | B- |
| Bipolar Drive Connections | |

SIX LEAD MOTORS



| Wire Color | Drive Connection |
|--|------------------|
| Grn / Wht | A+ |
| White | A Common |
| Green | A- |
| Red | B+ |
| Black | B Common |
| Red / Wht | B- |
| Bipolar & Unipolar Series Connections | |

EIGHT LEAD MOTORS



| Wire Color | Drive Connection |
|---|------------------|
| Orange | A+ |
| Org / Wht | A Common |
| Blk / Wht | |
| Black | A- |
| Red | B+ |
| Red / Wht | B Common |
| Yel / Wht | |
| Yellow | B- |
| Bipolar or Unipolar Drive Series Connections | |

| Wire Color | Drive Connection |
|---|------------------|
| Orange | A+ |
| Blk / Wht | |
| Org / Wht | A- |
| Black | |
| Red | B+ |
| Yel / Wht | |
| Red / Wht | B- |
| Yellow | |
| Bipolar Drive Parallel Connections | |