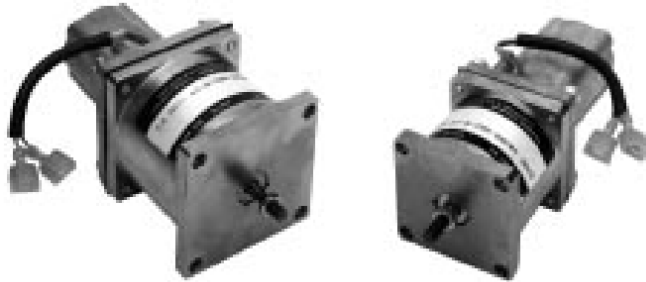


# Dyna 2000 & 2500 Linear Actuators



- All electric
- Fast response
- Small & compact
- Two moving parts
- Spring return to minimum fuel
- Mounts in any position
- Precise repeatability
- Meets INR & EMP for moderate tactical battlefield environment

## DESCRIPTION

The Dyna 2000 and Dyna 2500 linear actuators provide accurate precise positioning with a minimal number of moving parts. Many of the moving parts normally associated with electric actuators are eliminated, prolonging the MTBF (mean time between failure).

The actuator design employs the principle of variable reluctance. This simple design of a proportional electric solenoid has a sliding armature whose magnetic force is proportional to the input coil current.

These actuators are easy to install by mounting near the fuel system and direct connecting to the fuel control rod or lever. In most installations, the normal rotary-to-rotary connection is eliminated, resulting in a more trouble-free and accurate control system.

The actuator is suitable for installation on diesel, gasoline, or natural gas engines with fuel system force requirements of less than 13 pounds (58 N) of force.

## TYPICAL APPLICATIONS

- Speed governing
- Generator sets
- Forklift trucks
- Power carts
- Off-road vehicles
- Pump sets
- Pleasure boats
- Wood chippers

### Available Models:

#### Dyna 2000—

- DYNC-10202-000-0-12—12 Vdc, 0.25 ft-lb (0.34 J) output
- DYNC-10202-000-0-24—24 Vdc, 0.25 ft-lb (0.34 J) output

#### Dyna 2500—

- DYNC-10502-000-0-12—12 Vdc, 0.50 ft-lb (0.68 J) output
- DYNC-10502-000-0-24—24 Vdc, 0.50 ft-lb (0.68J) output

## SPECIFICATIONS

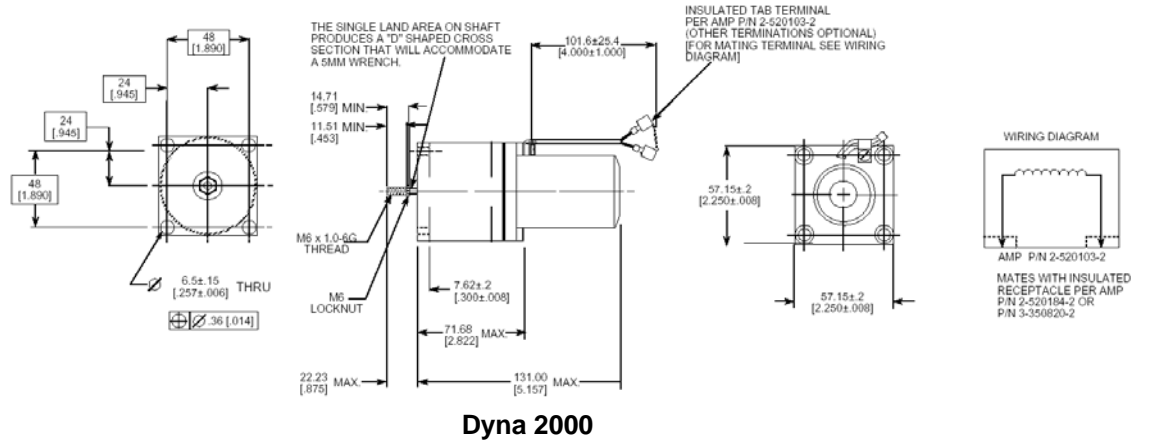
|   | Dyna 2000   | Dyna 2500                      |
|---|---|--------------------------------|
| <b>Work</b> .....                                     | 0.25 ft-lb (0.34 J)   | 0.50 ft-lb (0.68 J)            |
| <b>Force</b> .....                                    | 6.5 lbF (28.9 N)  | 13.0 lbF (57.8 N)              |
| <b>Output Stroke</b> .....                            | 0.775–0.825 inch (19.68–20.96 mm)   |                                |
| <b>Weight</b> .....                                   | 2.5 lb (1.1 kg)   | 3.8 lb (1.7 kg)                |
| <b>Nominal Steady State Current</b> .....             | 2.5 A (12 Vdc), 1.0 A (24 Vdc)  | 2.5 A (12 Vdc), 1.0 A (24 Vdc) |
| <b>Max. Current @ Stall @ 24 °C</b> .....             | 5.4 A (12 Vdc), 3.0 A (24 Vdc)  | 5.9 A (12 Vdc), 3.0 A (24 Vdc) |
| <b>Max. Current @ Stall @ 125 °C</b> .....            | 3.9 A (12 Vdc), 2.0 A (24 Vdc)  | 4.2 A (12 Vdc), 2.0 A (24 Vdc) |
| <b>Nominal Response Time to Travel 63% of Stroke:</b> |   |                                |
| in ON Direction.....                                  | 0.05 second   |                                |
| in OFF Direction.....                                 | 0.032 second  |                                |
| <b>Operating Voltage</b> .....                        | 12 or 24 Vdc ±20%   |                                |
| <b>Ambient Operating Temperature</b> .....            | –65 to +250 °F (–54 to 121 °C)  |                                |
| <b>Mechanical Vibration</b> .....                     | 5 to 500 Hz, Curve L, per US MIL-STD-810C   |                                |
| <b>Sealing</b> .....                                  | Oil, water, and dust resistant  |                                |
| <b>Connection</b>                                     | 18 AWG (0.8 mm <sup>2</sup> ) leads with min. length of 3 inches (76 mm) with insulated tab terminal per AMP P/N 2-52013-2. Mates with insulated receptacle per AMP P/N 2-520184-2. |                                |

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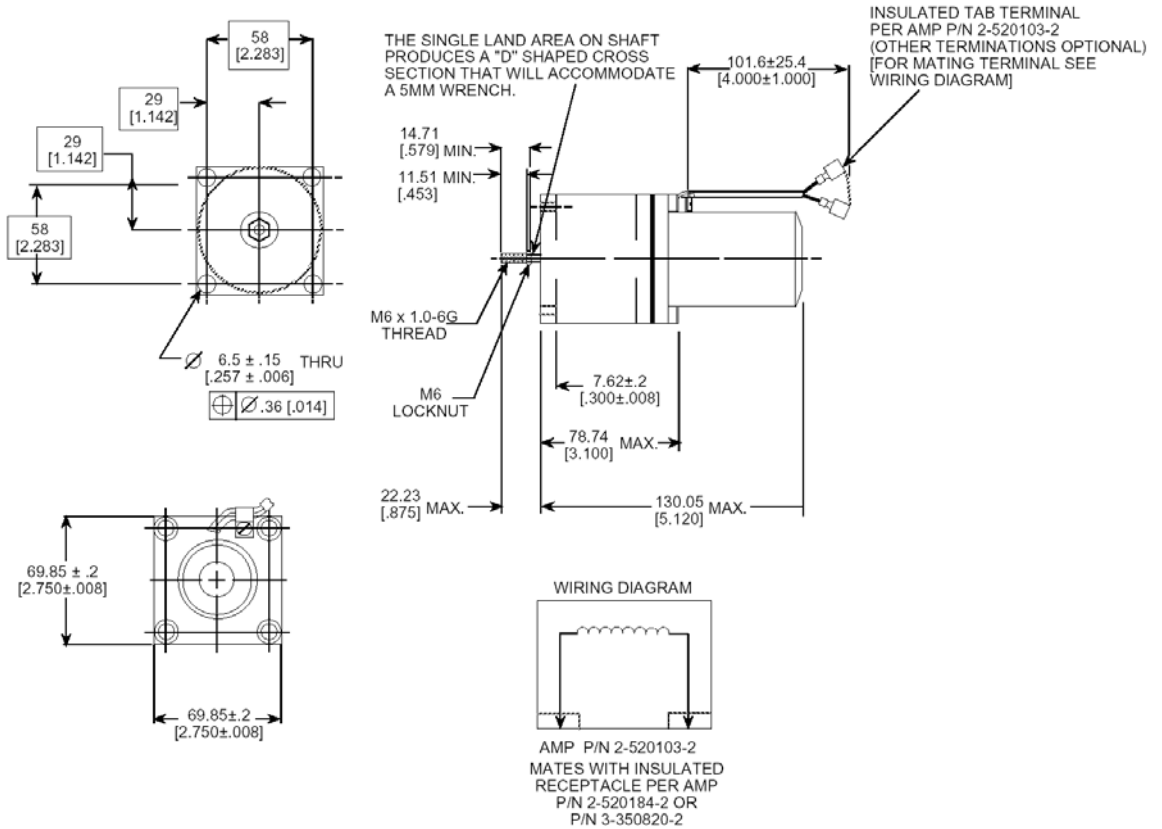
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 Woodward has an international network of distributors and service facilities. For your nearest representative, call the Fort Collins plant or see the Worldwide Directory on our website.

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**Dyna 2000**



**Dyna 2500**

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