

The Moog Animatics PSC actuator is a belt-driven linear system with integrated guide rails, low backlash and high traverse speeds. These actuators are ideal for moving light loads at speeds beyond the reach of ball screw actuators. These fully integrated actuator products bring SmartMotor™ capabilities, ease of use, and speed to market to your actuator applications. They are designed for precise motion, long life and minimal maintenance, making them an ideal fit for applications in material handling, packaging, biomedical, semiconductor, life sciences and more. These actuators are available with strokes from 150 mm to 3000 mm in 50 mm increments (other lengths are available by special request). The PSC actuator is shipped preassembled with the NEMA 23 Moog Animatics SmartMotor of your choice *. The motor can be mounted on either side of the actuator for maximum design and mounting flexibility. These actuators can also be ordered as a complete T-Bot (vertical) or H-Bot (horizontal) two-axis gantry system.

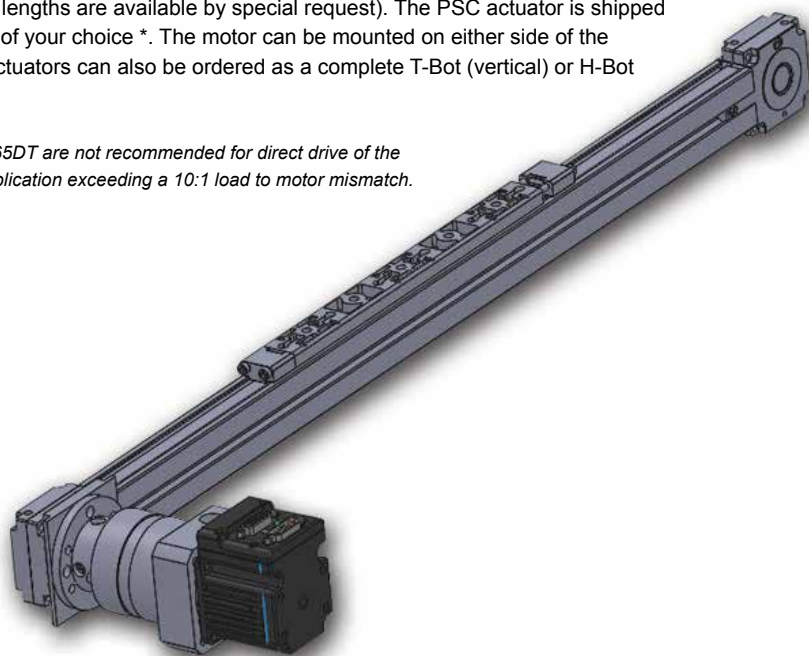
*Due to inertial mismatch, SmartMotor models SM23165D and SM23165DT are not recommended for direct drive of the PSC actuators. The addition of a gearhead may be required for any application exceeding a 10:1 load to motor mismatch.

Key Features

- Extruded aluminum actuator body with T-slots
- Integrated belt tensioner
- One piece, machined, stress-proof, shafted pulley
- Zero-backlash, belt-to-pulley design
- Corrosion-resistant components

Key Benefits

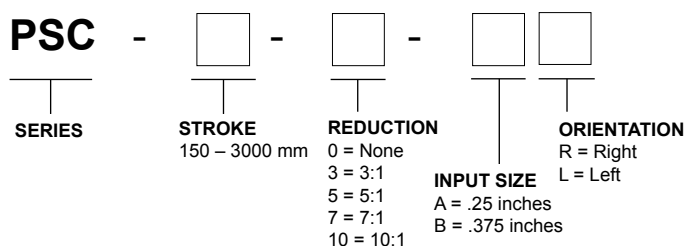
- Save time on mounting
- Maintain positional accuracy if belt stretches
- Long service life
- No need for linear encoder to increase precision
- Suitable for splash-prone environments



Technical Specifications

| PSC Size and Data | | | |
|---|---------------------------|--|---|
| Actuator Specifications | | Motor Sizing Information | |
| Motion | Horizontal or Vertical | Weight of Drive Pulley, oz [kg] | 4.7 [0.13] |
| Max. Speed - Horizontal [Vertical], mm/sec | 1270 [635] | Weight of Idler Pulley, oz [kg] | 4.3 [0.12] |
| Max. Load - Horizontal [Vertical], N | 90 [90] | Weight of Cart, lb [kg] | 0.4 [0.18] |
| Unidirectional Repeatability, μm | ± 25 | Weight of Belt, kg Based on Travel Selected | $((\text{Travel in Meters} \times 2) + .32) \times .04$ |
| Bidirectional Repeatability, μm | | | |
| Max. Moment Load, in-lb [Nm] | 15 [1.7] | Coupling | Flexible Jaw |
| Positional Accuracy, mm/mm | 0.12 per 300 stroke | Displacement/Rev, mm | 105 |
| Acceleration Maximum, g | 5 | Pulley Pitch Diameter, mm | 33.42 |
| Beam Dimensions, mm | 28 x 38 | Pulley Material/Width, mm | Steel, 12 |
| Ultimate Tensile Strength of Belt, lb [N] | 800 [3559] | Breakaway Torque, oz-in | 12 – 14 |
| Recommended Belt Running Load, lb [N] | 200 [889] | Coefficient of Friction | 0.25 |
| Available Stroke, mm | 150 – 3000 in 50 mm steps | Rolling Resistance, lb [kg] | 0.008 [0.004] |
| Available Gear Reductions | None, 3:1, 5:1, 7:1, 10:1 | Weight | |
| Overall Length | Stroke + 480 | Unit Mass | $1.6 + 0.0016 \times (\text{stroke, mm}) + (\text{motor mass, kg})$ |

Part Numbering System Guide



For more details, see www.animatics.com/psc

Also, see the Part Number Generator at www.animatics.com/pngenerator