

Product Datasheet: Pneumatic Actuators

General Specifications

Actuator Type	Double Acting / Spring Return
Operating Principle	Scotch Yoke (Symmetric / Canted Design)
Torque Range	Up to 4000 Nm (standard)
Operating Pressure	2.5 to 8 bar (40 to 120 psi)
Operating Temperature Range	-20°C to +80°C (Standard), -40°C to +150°C (Optional)
Rotation Angle	90° ± 5° (Adjustable travel stops ±5°)
Stroke Time	< 1 sec to 3 sec (depending on size)

Construction & Materials

Body	Aluminum Hard Anodized / Epoxy Coated
End Caps	Epoxy Coated Aluminum / Carbon Steel
Shaft	EN8 / EN24 Hardened Steel
Bearings / Guides	PTFE / Bronze
Fasteners	Stainless Steel (SS304/316)
Seals	Nitrile / Viton / FKM (Optional)

Performance Features

- ISO 5211 mounting compatibility
- High-efficiency torque transmission with Scotch Yoke mechanism
- Anti-blowout shaft design
- Adjustable travel stops for open/close calibration
- Low-friction sliding components for long life
- External visual position indicator
- Optional NAMUR interface for solenoids and accessories

Options & Accessories

- Manual override
- Solenoid valves (NAMUR or threaded)
- Limit switch boxes (mechanical or proximity)
- Positioners (pneumatic, electro-pneumatic, digital)
- Declutchable gear override

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- ATEX / SIL certified models

Certifications & Compliance

ATEX	Ex II 2GD c T6 for explosive atmospheres
SIL Compliance	SIL 2 / SIL 3 (per IEC 61508)
ISO	ISO 5211 / ISO 9001:2015 certified
PED / CE	Compliant

Model Selection Table (Excerpt)

Model	Output Torque, Air Volume, Weight
SY-P63	70 / 40 Nm, 0.3 / 0.2 L, 2.5 kg
SY-P90	160 / 90 Nm, 0.6 / 0.4 L, 4.1 kg
SY-P125	400 / 220 Nm, 1.5 / 1.0 L, 8.2 kg
SY-P160	720 / 400 Nm, 2.8 / 2.1 L, 12.0 kg
SY-P200	1400 / 800 Nm, 5.1 / 3.4 L, 19.6 kg

Ordering Code Example

SY-P125-D-S-V-EX = Model: SY-P125, Double Acting, Stainless Steel Shaft, Viton Seals, ATEX Certified