

PNL & HYL-SERIES

Piston Linear Valve Actuators



COMPANY



For over 30 years Paladon Systems has been supplying valve actuators and control systems on a global basis.



Since its inception in 1981, Paladon Systems has continuously developed its design, engineering, organisational, quality and management capabilities. Today Paladon Systems designs and manufactures many valve automation technologies that lead the industry in terms of cost efficiency, operational performance and environmental responsibility.



Paladon Systems' vast experience with supporting the Oil, Gas and Power industries with valve automation solutions for the most critical applications in extreme operating environments has resulted in product designs that offer unsurpassed quality and reliability across all industries and applications.

Holding ISO 9001 certification for over 20 years, today Paladon Systems hold accreditation and approvals from almost all major institutes, engineering companies and end users.

Headquartered in England, Paladon Systems has offices and facilities in Scotland, Italy, Malaysia, the Russian Federation and the United States. With a comprehensive suite of valve automation solutions backed by a dedicated team of field service engineers, Paladon Systems is **Total Valve Control**.



INTRODUCTION

Paladon Systems PNL and HYL-Series piston linear valve actuators are designed specifically to control all makes and sizes of rising stem valves such as gate and control valves. When designing this next generation of pneumatically and hydraulically powered linear actuators we set ourselves the following fundamental targets:

- To have a compact and reliable valve actuator
- To achieve a highly modular design permitting easy field maintenance and easy application to the various valves to be automated
- To accommodate the most current customer-driven design requirements in terms of performance reliability, corrosion and environmental resistance, and maintenance-free life

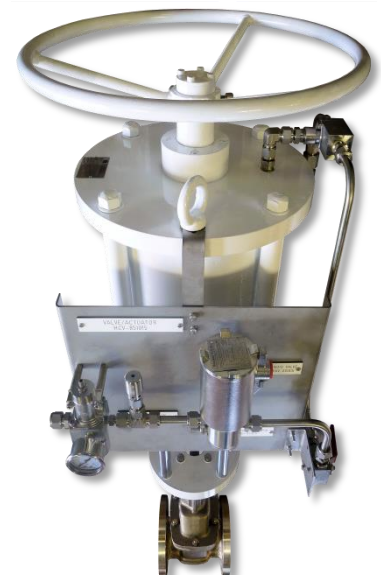
The rigorous testing that the actuators have undergone, both in the field and on the test bench, have exceeded our expectations and guarantee long cycle-life under the severest operating conditions.



APPLICATIONS

PNL & HYL-Series valve actuators are designed to operate:

- Wedge gate valves
- Expanding gate valve
- Through conduit valves
- Globe
- Knife gate valves
- Swing check
- Lift and turn ball valves.



KEY FEATURES

- Available in double-acting or spring-return (fail-safe) configurations
- All steel construction with no external threads
- Totally enclosed weatherproof housings, certified to IP66
- Scragged springs (set removal) ensure optimum performance and reliability
- Electroless nickel plated cylinders as standard; chrome, Xylan or electrofilm coatings are also available
- EN ISO 5210 valve interface
- Valve stem position indicator can accommodate position switches or transmitter
- All actuators are fitted with lifting lugs and control accessory mounting pads
- Available with optional hand wheel, gearbox or hydraulic manual overrides



VALVE MOUNTING OPTIONS

- **Pedestal**
The standard valve mounting design uses a pedestal or a yoke to mount the actuator above the valve from the valve bonnet bolting
- **Compact**
Where space is at a premium, this design allows the actuator body to be directly mounted on the valve body, thus eliminating the height incurred when using pedestal type mounting
- **Integral**
Incorporates the valve bonnet and back seat into the end cap of the actuator, with the valve stem being completely integral with the actuator

PERFORMANCE DATA

■ Supply Pressures

- ▶ PNL-Series 2.7 to 12 Barg (40 to 175 psig)
- ▶ HYL-Series 13 to 250 Barg (90 to 3,625 psig)

■ Thrust Output Range

- ▶ PNL & HYL-Series Up to 289,134 N (65,000 lbf)

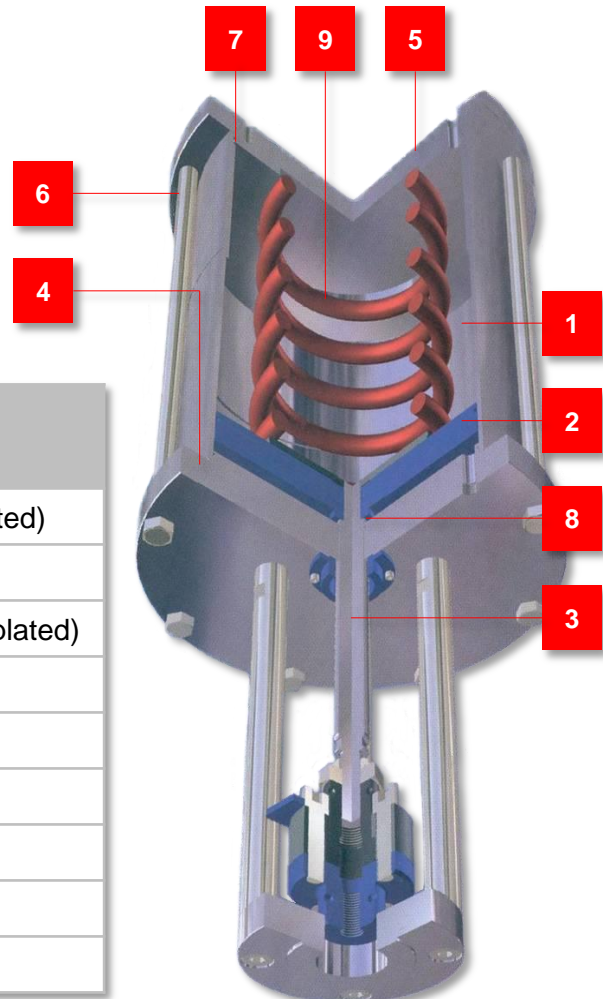
■ Ambient Operating Temperatures

- ▶ Ultra-low -65 to +80°C (-85 to +176°F) (HY-Series only)
- ▶ Low -45 to +60°C (-49 to +140°F)
- ▶ Standard -20 to +80°C (-4 to 176°F)
- ▶ High -20 to +140°C (-4 to +284°F)



MATERIALS OF CONSTRUCTION

Item No.	Component	Material
1	Cylinder Liner	Carbon Steel (ENP coated)
2	Piston	Carbon Steel
3	Piston Rod	Alloy Steel (Chromium plated)
4	Rod Head Flange	Carbon Steel
5	Blank Head Flange	Carbon Steel
6	Tie Rod	Carbon Steel
7	O-Ring	NBR
8	Bearing	Fe-Bz-Teflon
9	Spring	Spring Steel



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