

VALVTECHNOLOGIES



ValvXpress[®]

Automated Valve Solution

Pre-Engineered • Zero-Leakage • Metal-Seated

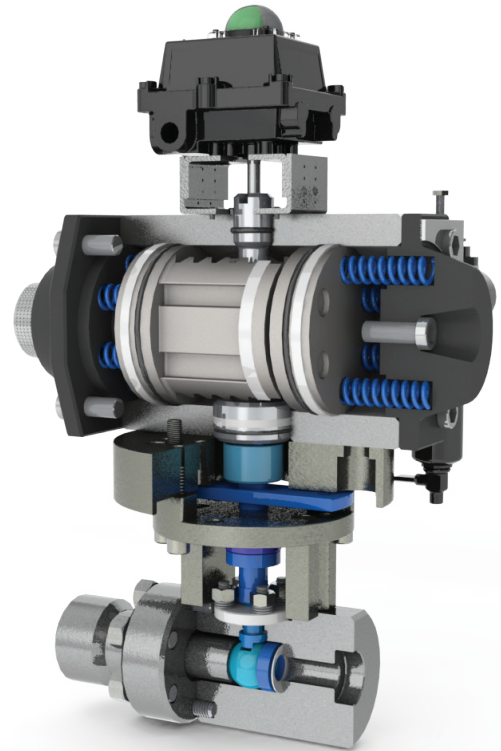
ValvXpress®

ValvXpress® is perfect for customers who demand quick delivery of a zero-leakage automated valve solution for severe service water and steam applications. The package includes the superior quality of the V1-1 valve and ValvTechnologies actuator, backed with the best four-year guarantee in the industry.

Four-year guarantee on valve and actuator automation packages.

Available for quick delivery.

**Quality and dependability
in one package – guaranteed**



ValvXpress® pre-engineered, automated packages are compact, robust and ready to ship.

Pre-engineered package includes:

- Half thru 4" metal-seated V1-1 ball valve
- Socket weld and butt weld end connections
- A105, F22, F91 body materials
- 2500#-4500# pressure classes
- Valve operating conditions to 1400°F (760°C)
- High-cycle pneumatic rack and pinion actuator
 - Hard anodized coating
 - High-temperature Viton® seals
- High-cycle mounting hardware
- Limit switch with position indicator – 2-SPDT, quick set cam, IP67, NEMA 4/4X
- NAMUR solenoid – 110V/120V, 230V, 24VDC coils
- Filter/regulator with gauge
- Retainer prevents stem driving into ball

The V1-1 proven seat design provides improved performance, far beyond the wear-prone, corrosion-prone crevices of conventional seats. Engineered to eliminate leak paths and maximize direct flow, these units' enhanced rotary design and construction also deliver the extra safety margin crucial to maintaining peak productivity.

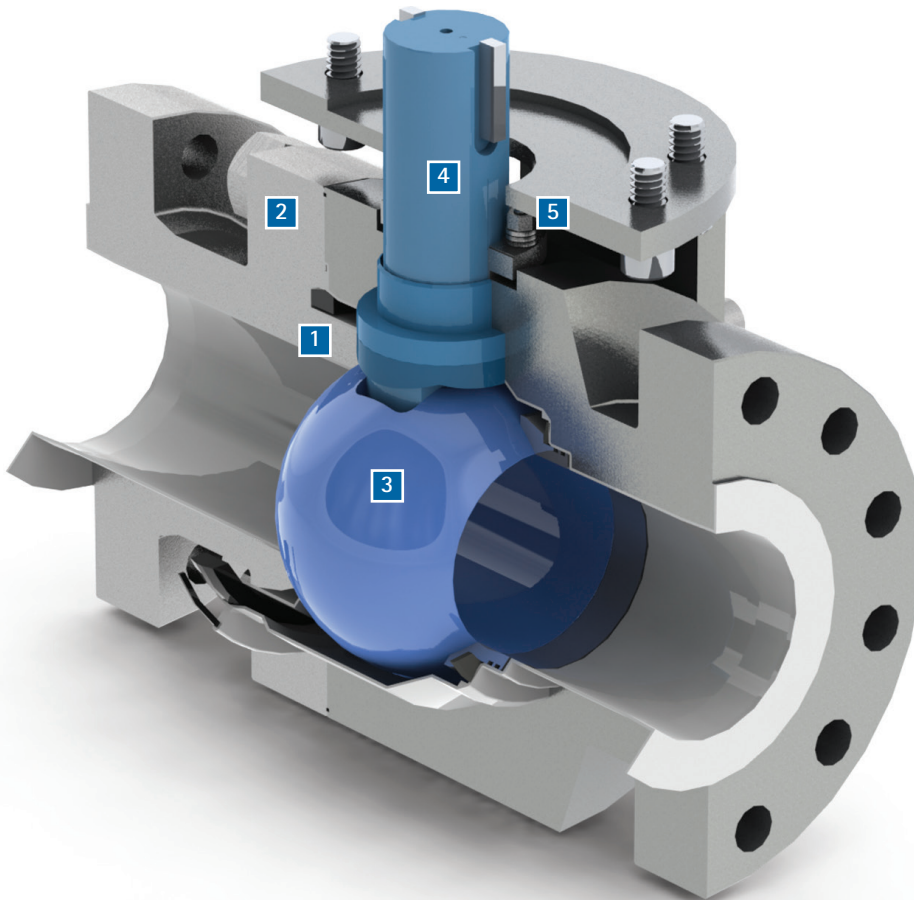
1 Integral Metal Seat

With patented ceramet and our exclusive HVOF RiTech® coating process, the integral seat in ValvTechnologies' rotary operating valves are resistant to attack of abrasive magnetite or ferrous oxides in the steam flow.

2 Body Seal Ring

ValvTechnologies employs a field proven seal ring technology to ensure sealing under all operating conditions, up to 1400°F (760°C). The body seal ring is loaded at a pressure higher than 20,000 psi (1379 bar).

The integral seat mounts the ball in a fixed position which allows for superior performance over floating ball valves.



3 Patented Coating Process

The sealing surfaces are overlaid with tungsten or chromium carbide using our exclusive HVOF RiTech® coating process. These surfaces have a hardness of 68-72 Rc to allow operation in the most severe conditions.

4 Blow-out Proof Stem

ValvTechnologies' design utilizes a one piece, hard-faced, blow-out proof stem that is inserted through the inside of the body cavity eliminating the possibility of blow-out through the gland area.

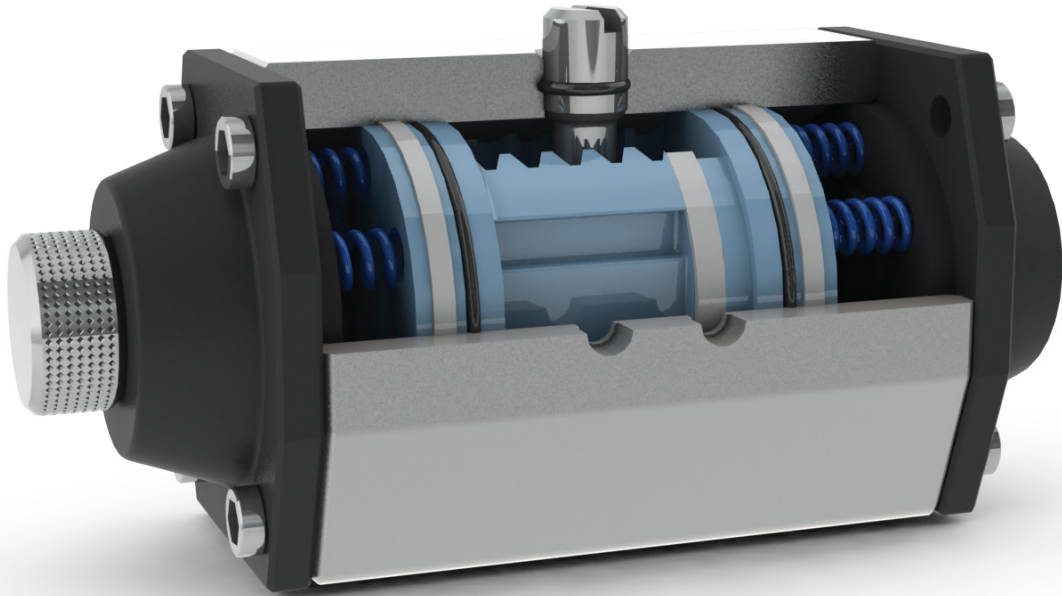
5 Live Loaded Gland Area

The V1-1 gland packing design features a four-stud, live-loaded assembly designed for heavy industrial applications. The packing material is high purity Grafoil® surrounded by carbon fiber/inconel anti-extrusion rings. The six Belleville springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high-cycle service.

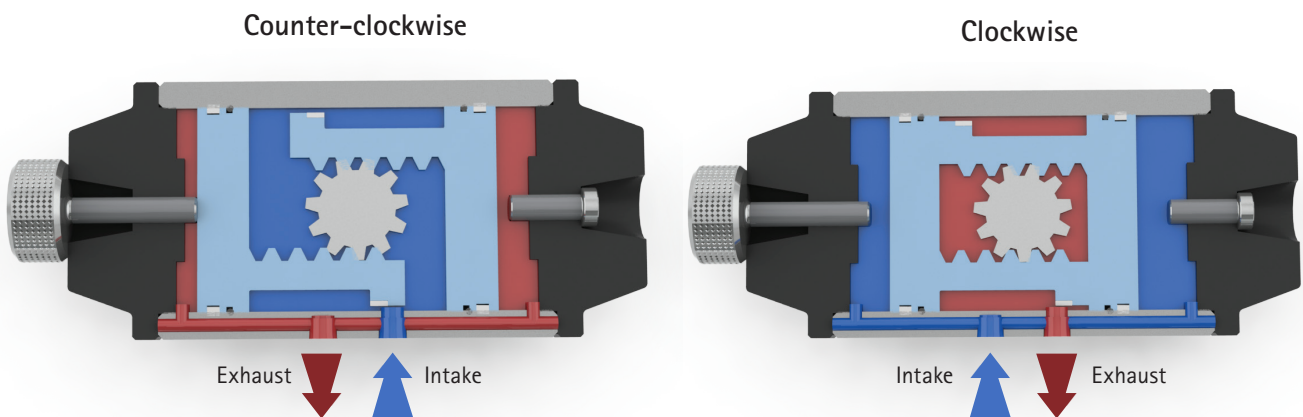
Actuator

The actuators utilize a rack and pinion design which provides constant torque output in a compact package. The torque output is proportional to the air supply pressure. Twin horizontally opposed cylinders incorporate piston guides to ensure engagement between the rack and pinion. Double acting and spring return models are of comparable compact design.

- Hard anodized body with high-temperature seals
- Maximum working pressure 142 psi / 10 bar
- Maximum working temperature 320°F / 160°C



Actuator Operation



Counter clockwise output operation is achieved by inserting pressure into the intake to force the pistons apart thus rotating the actuator pinion counter clockwise. During the operation, air from the outer chambers is exhausted. Clockwise output operation is achieved by reverse of the above.

Mounting & Accessories



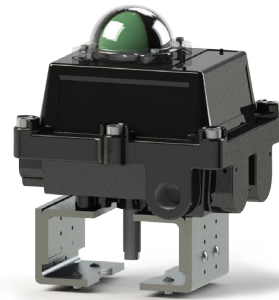
Mounting Kit

- Air gap for heat dissipation
- Retainer prevents stem driving into ball
- Cast WCB top plate & bottom plate
- Single-fit actuator mounting
- Integral stop
- Drive sleeve



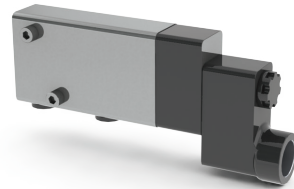
Manual Override

- Declutchable gearbox with handwheel



Limit Switch

- Enclosure rated to IP67
- Quick-set cam
- 2-SPDT switches
- Multipoint terminal strip
- Visual open/closed beacon



NAMUR Solenoid

- Interchangeable 110V/120V, 230V, 24VDC coils
- Anodized aluminum housing



Filter/Regulator

- High-efficiency water & particle removal
- Full-flow gauge ports
- Balanced design for optimum control

Actuator Sizing

| Imperial | | | | | |
|----------------|--------------------------|---------------|------------------------------------|---------------|---------------|
| Model | Torque Output (in-lbs.f) | | Cycle time (seconds) | Weight (lbs) | |
| | Spring return | Double acting | | Spring return | Double acting |
| ValvXpress® 04 | 410 | 1,160 | 1 | 14 | 11 |
| ValvXpress® 05 | 960 | 2,720 | 1 | 28 | 22 |
| ValvXpress® 06 | 1,860 | 5,560 | 2 | 54 | 55 |
| ValvXpress® 08 | 3,560 | 10,430 | Double acting 4 Spring return 6 | 101 | 82 |
| ValvXpress® 10 | 9,720 | 26,400 | Double acting 6 Spring return 8 | 225 | 172 |

| Metric | | | | | |
|----------------|--------------------|---------------|------------------------------------|---------------|---------------|
| Model | Torque Output (Nm) | | Cycle time (seconds) | Weight (kg) | |
| | Spring return | Double acting | | Spring return | Double acting |
| ValvXpress® 04 | 46 | 119 | 1 | 6 | 5 |
| ValvXpress® 05 | 108 | 278 | 1 | 13 | 10 |
| ValvXpress® 06 | 209 | 567 | 2 | 24 | 20 |
| ValvXpress® 08 | 400 | 1,064 | Double acting 4 Spring return 6 | 46 | 38 |
| ValvXpress® 10 | 1,090 | 2,695 | Double acting 6 Spring return 8 | 102 | 78 |

NOTES:

- 2500# - water - ΔP 3200 psi
- 4500# - water - ΔP 4300 psi
- 2500# - steam - (water + 40% torque)
- 4500# - steam - (water + 40% torque)
- Torque values at 80 psi / 5.5 bar air supply
- Maximum air supply pressure allowable is 142 psi
- Weights are for actuator only; excludes accessories
- ValvXpress® 04 spring return for low ΔP applications only

ValvXpress® Packages Available

While ValvXpress® is most commonly supplied as a valve, mounting kit and actuator package, ValvTechnologies realizes different customers have different needs. Depending on their specific needs, customer's can choose between three different packages:

- The Total Package
- Build-Your-Own
- Actuator Only

| The Total Package | Build-Your-Own | Actuator-Only |
|---|--|---|
| <p>The Total ValvXpress® Package includes the superior quality of the V1-1 valve, integral stop mounting kit and ValvTechnologies' actuator, backed with the best four-year guarantee in the industry.</p> | <p>Build-Your-Own ValvXpress® includes the superior quality of any ValvTechnologies' valve, integral stop mounting kit allows customers to choose custom accessories based on their specific needs.</p> | <p>Select your ValvXpress® actuator and pair it with any ValvTechnologies' valve and integral mounting kit.</p> |
| Included | | |
| <p>The Total Package package includes:</p> <ul style="list-style-type: none"> • Complete pre-engineered V1-1 valve, mounting kit and actuator fully assembled, tested and ready to install • Standard delivery two weeks • Four-year warranty* on the total package | <p>Build-Your-Own package includes:</p> <ul style="list-style-type: none"> • Complete valve and integral stop mounting kit • Your choice of actuator (spring-return, double-acting or fast-acting) • Your choice of accessories. Select from our standard accessories for us to assemble or specify your own make and model for us to assemble. Or buy your own limit switches, filter/regulators and solenoids and assemble to a plain actuator. • Standard delivery four+ weeks • Four-year warranty* on the total package | <p>Actuator-Only package includes:</p> <ul style="list-style-type: none"> • Integral stop mounting kit • Your choice of actuator (spring-return, double-acting) • Buy your own limit switches, filter/regulators and solenoids and assemble to a plain actuator • Standard delivery four+ weeks • Four-year warranty* on the total package, excluding accessories |
| Benefits | | |
| <p>ValvXpress® Total Package Benefits</p> <ul style="list-style-type: none"> • Fastest leadtime - in time for your outage • Quick shipment • Fully assembled, tested, ready to install • 100% pre-engineered for speed | <p>ValvXpress® Build-Your-Own Benefits</p> <ul style="list-style-type: none"> • Short leadtime • Customized to meet your specific needs • Fully assembled, tested, ready to install • Engineered to order | <p>ValvXpress® Actuator-Only Benefits</p> <ul style="list-style-type: none"> • Fully customized actuator based on your specifications • Par with any ValvTechnologies' valve • Benefit from the reliability of the integral stop mounting kit |

*steam and water applications



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