

VALVTECHNOLOGIES



**ValvXpress<sup>®</sup>**

Pre-engineered Automated Valve Solution

Pre-Engineered • Zero-Leakage • Metal-Seated

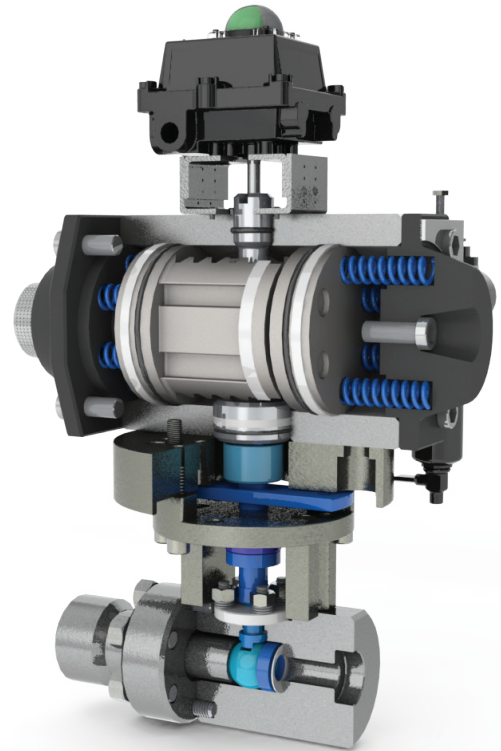
# ValvXpress®

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/120VAC, 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.

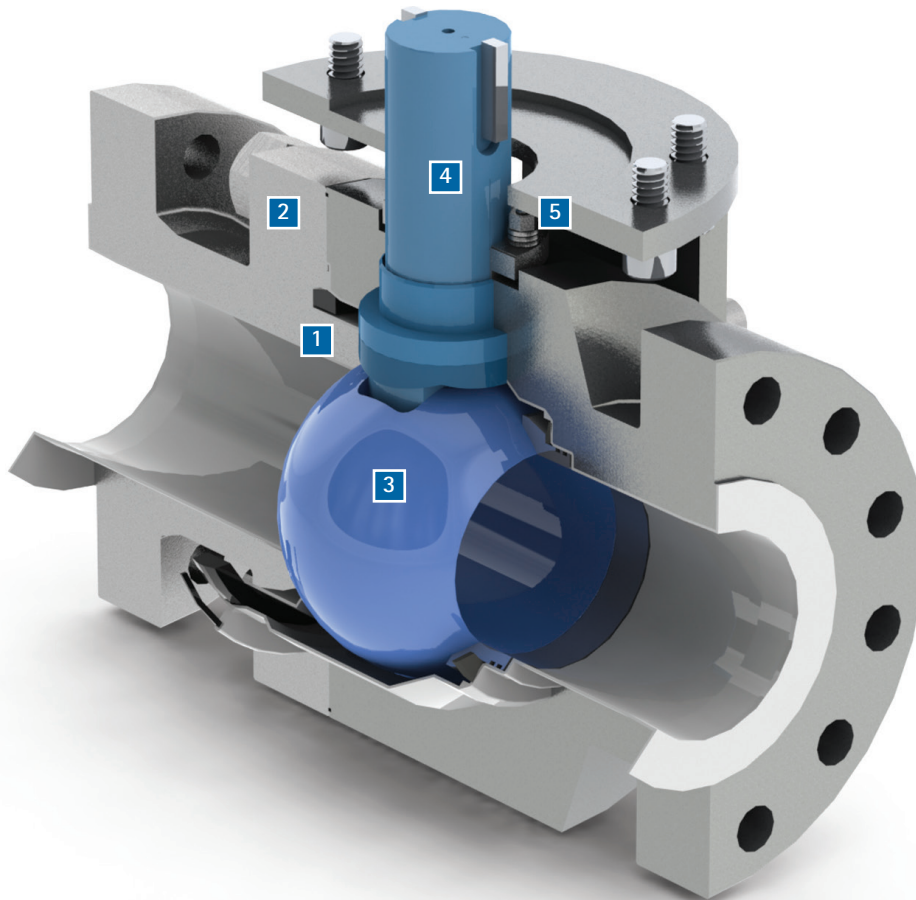
**1 Integral Metal Seat**

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.

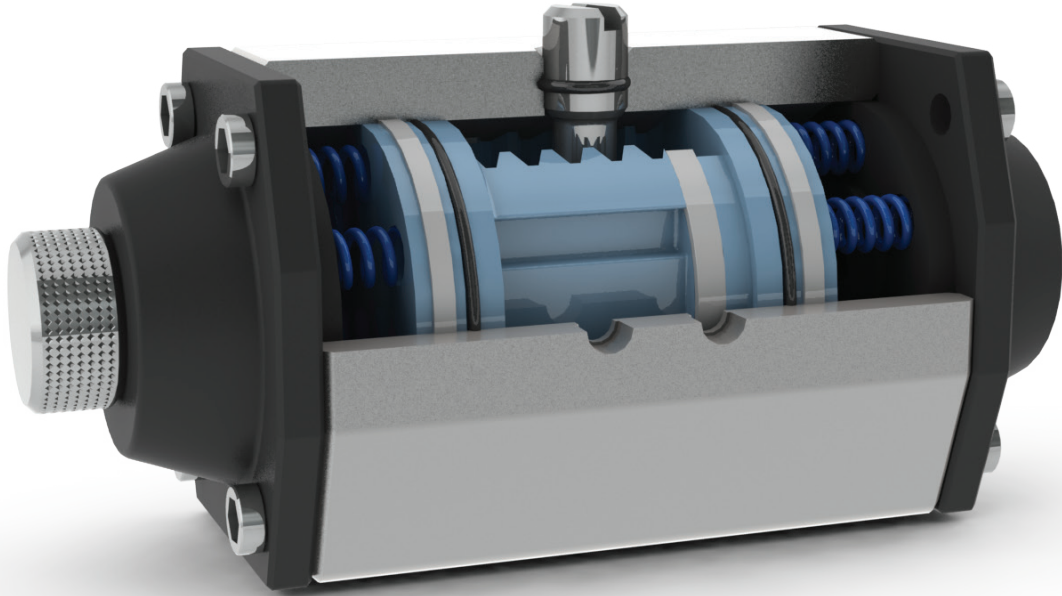
**5 Live Loaded Gland Area**

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.

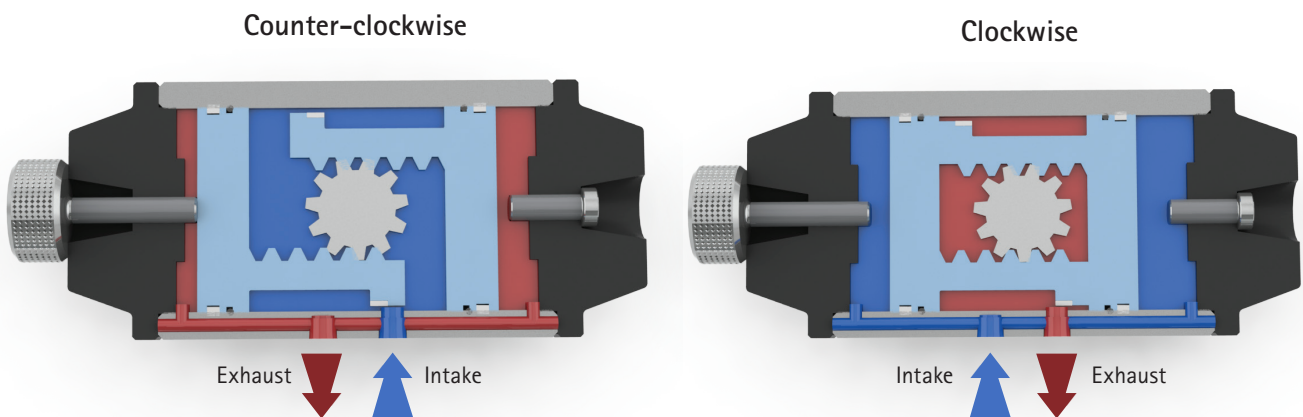
# Actuator

The actuators utilize a rack and pinion design which provides linear torque output in a compact package. 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 supply pressure 142 psi / 10 bar
- Maximum ambient temperature 320°F / 160°C

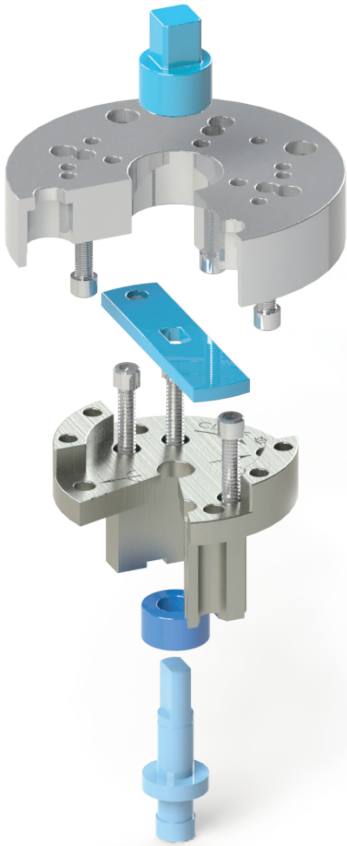


## Actuator Operation (Double Acting Shown)



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



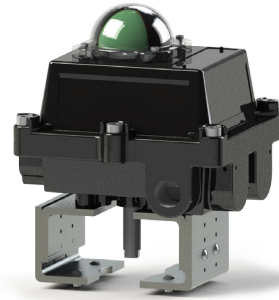
### Mounting Kit

- 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



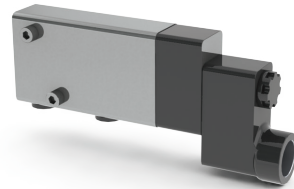
### Manual Override

- Declutchable gearbox with handwheel



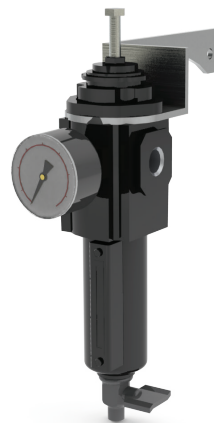
### Limit Switch

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



### NAMUR Solenoid

- Interchangeable 110VAC/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 -  $\Delta P$  3200 psi
- 4500# - water -  $\Delta P$  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  $\Delta P$  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 ValvXpress® Total 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 and integral stop mounting kit and 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>
What's Included		
<p><b>The Total Package includes:</b></p> <ul style="list-style-type: none"> <li>• Complete pre-engineered V1-1 valve, mounting kit and actuator fully assembled, tested and ready to install</li> <li>• ValvTechnologies' standard accessories</li> <li>• Standard delivery of two weeks</li> <li>• Four-year warranty* on total package</li> </ul>	<p><b>Build-Your-Own package includes:</b></p> <ul style="list-style-type: none"> <li>• Complete valve and integral stop mounting kit</li> <li>• Your choice of actuator (spring-return, double-acting or fast-acting)</li> <li>• Your choice of accessories. Select from our standard accessories or specify your own make and model for us to assemble.</li> <li>• Standard delivery four+ weeks</li> <li>• Four-year warranty* on the total package</li> </ul>	<p><b>Actuator-Only package includes:</b></p> <ul style="list-style-type: none"> <li>• Complete integral stop mounting kit or integral stop conversion kit which adapts lever operated stock valves to an automated valve</li> <li>• Your choice of actuator (spring-return, double-acting)</li> <li>• You supply and mount all accessories</li> <li>• Standard delivery four + weeks</li> <li>• Four-year warranty* on the total package, excluding accessories</li> </ul>
Benefits		
<p><b>ValvXpress® Total Package Benefits</b></p> <ul style="list-style-type: none"> <li>• Fastest leadtime - in time for your outage</li> <li>• Quick shipment</li> <li>• Fully assembled, tested, ready to install</li> <li>• 100% pre-engineered for speed</li> </ul>	<p><b>ValvXpress® Build-Your-Own Benefits</b></p> <ul style="list-style-type: none"> <li>• Short leadtime</li> <li>• Customized to meet your specific needs</li> <li>• Fully assembled, tested, ready to install</li> <li>• Engineered to order</li> </ul>	<p><b>ValvXpress® Actuator-Only Benefits</b></p> <ul style="list-style-type: none"> <li>• Fully customized actuator based on your specifications</li> <li>• Benefit from the reliability of the integral stop mounting kit</li> </ul>

\*steam and water applications



## Worldwide Office Locations

### Headquarters & Manufacturing

ValvTechnologies, Inc.  
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