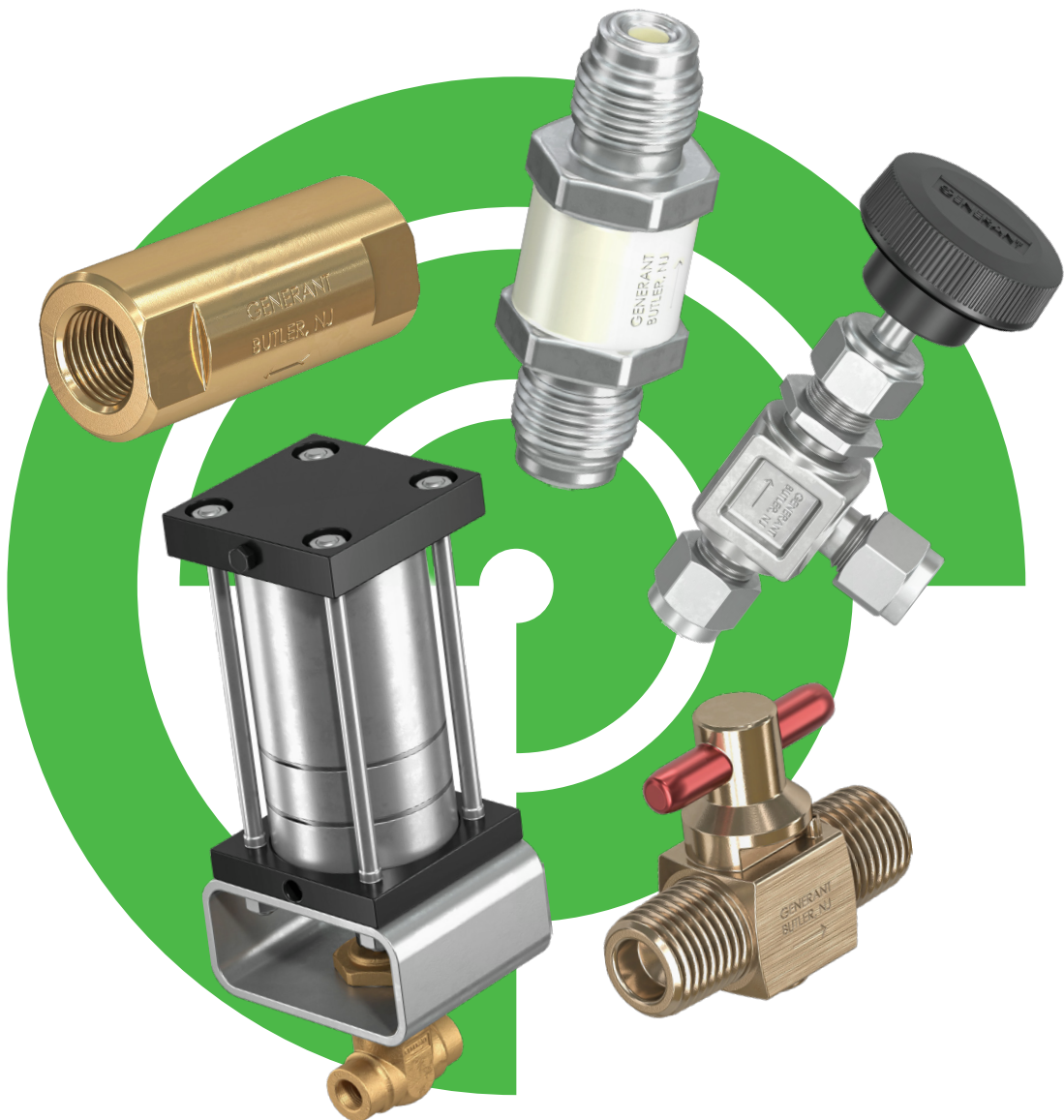


Generant Valves

Applications-Driven Valve Technology



In partnership with Generant

HEROSE UK have been supplying Generant valves to our extensive and diverse customer base for over 20 years.

Generant plays a large part in the HEROSE UK portfolio being a manufacturer that is synonymous with quality, service, innovation and value. This range of products complements our comprehensive package serving the industrial, cryogenic, clean energy and many other market sectors.

About Generant

For over 75 years, Generant has manufactured high-quality valves for use across a broad spectrum of industries. Operating from a head office in New Jersey, USA they have two manufacturing plants with control of all machining, assembly, test, quality, engineering and R&D departments.

The versatile Generant product range includes Relief Valves, Check Valves, Pressure Regulators and many customer-specific valves designed to suit a variety of applications. Taking a customer-centric approach to consultation and product development, Generant exceeds the most demanding of industry requirements and have gained the experience necessary to satisfy the needs of their clients worldwide.

Generant product range

- Specialist Application Valves
- Relief Valves
- Regulators
- High Pressure Gas Control Valves
- Needle Valves
- Check Valves
- Ball & Plug Valves
- Cryogenic Liquid Cylinder Accessories



Generant Resources

Generant resources contain documentation and tools that help our customers get detailed information about our products and services. You can view/download User Instructions, Catalogues and CAD files for our Generant product line grouped by categories, view ISO certifications and use tools such as Flow and CV Calculators.

If you have any questions, comments or suggestions, please contact us and we will be happy to assist you with your needs.

Instructions



User and installation details are available for all Generant valves.

CAD Models



Models are provided in STEP file format for you to download and view.

CV Calculations



Theoretical Flow Rate given a CV for Inlet, Outlet and Media conditions.

Flow Calculators



The Flow Calculators are useful tools for determining relief valve flows.

Certifications



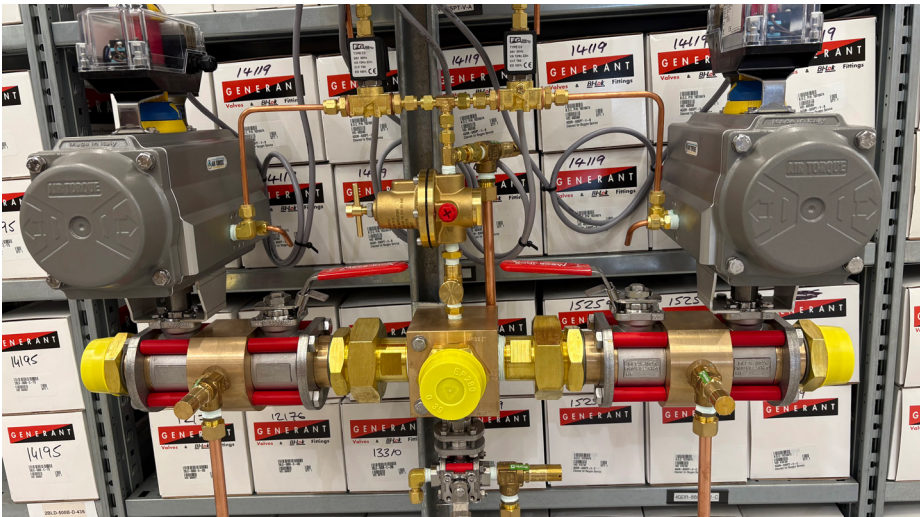
ISO, TPED, PED and other relevant statement documents are found here.

Catalogues



The complete package of valve data sheets are available to download here.

Stock, Service & Modular Supplies from HEROSE UK



At HEROSE UK we invest in stockholding in our large range of valves to service our customers' specific needs with a next day dispatch service. This includes having complete packages available to supply customer annual call-off contracts, from stock. Together our Customer Service Team works with our Operations to ensure stocks are held at appropriate levels and are ready for shipping nationally and internationally when and as required.

For many customers we build, test and supply modular systems to simplify procurement and in-house fabrication costs.

Generant Industries Served

Generant valves satisfy the most demanding applications in the industries served. Generant's valves have benefited from the experience and knowledge gained after servicing user's needs for over 70 years.

Industries Served



Cryogenic and Industrial Gas

Generant is a leading manufacturer of pressure and flow control devices engineered to meet the demanding requirements of cryogenic and industrial gas applications.



Oil and Gas Markets

Many valve types are used in the exploration, extraction, transporting, refining and distribution phases of energy and gas markets, including many high pressure designs.



Pharmaceuticals and Biotechnology

Many types of valves are used in instrument control circuits, gas blanketing and process control applications. This package includes many regulated approvals.



Semi-Conductor Manufacturing

The manufacturing processes utilise many unique gases that require the robust, reliable, and safe controls from Generant, including valves for many clean energy installations.

Generant Products by Type



Specialist Application Valves
See page 6



Relief Valves
See page 7



Regulators
See page 8



High Pressure Gas Control Valves
See page 9



Power Generation

Generant valves are utilised in many power generation applications across the world, including capacitors and other energy protection applications.



Chemical Processing

Numerous valve types are supplied for the chemical manufacturing and petrochemical processing industries operating in harsh environments.



Research Instrumentation

Generant's engineering experience and in-house manufacturing flexibility provide research labs and testing facilities with fluid control circuitry.



Medical Devices

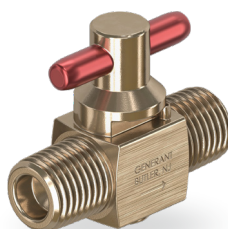
A firm understanding of the regulatory requirements has allowed Generant to develop custom designed product solutions for oxygen and other regulated applications.



Needle Valves
See page 9



Check Valves
See page 10



Ball & Plug Valves
See page 11

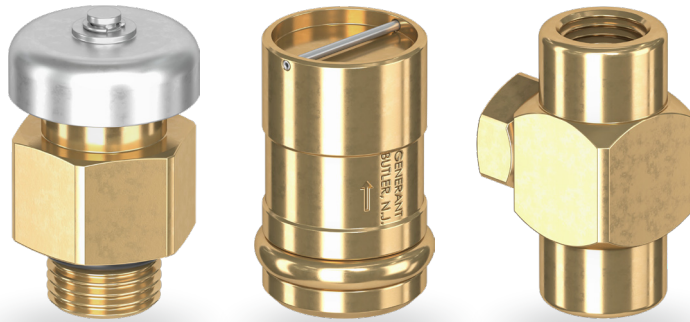


Cryogenic Liquid Cylinder Accessories
See page 11

Engineered Custom Solutions for your Applications

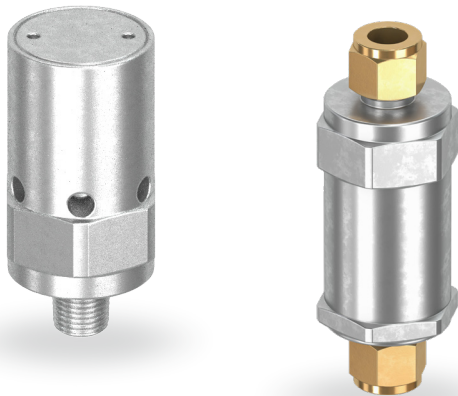
Whether the application requires modifications to existing products or complete custom designs, the Generant dedicated design team can find a solution for you. Together we will work with you throughout the design process from regulatory compliance analysis and conceptualisation to design validation and production.

With the knowledge and expertise to apply applicable standards, ensuring regulatory compliance, we can provide a comprehensive design solution for the simplest to the most demanding of applications. From relief valves for medical breathing equipment to robust hydraulic check valves for elevator lifts – we can make your valve.



Absolute Pressure Relief Valves

The Generant Series APRV, Absolute Pressure Relief Valve, is a spring reference over pressure protection device for applications requiring constant set pressure independent of changes in ambient pressure (altitude). The valve was developed primarily for use with liquid helium dewars and the valve has been extensively tested to verify that the valve can withstand the extreme cold environment (FS Seals). Valves come factory preset with set pressures ranging from 15.0 to 24.0 Psia (1.02 to 1.65 Barg). Relief pressure can be discharged to atmosphere or to a downstream connection.



APRV: Absolute Pressure Relief Valve

- **Types:** APRV
- **Body & End Cap Material:** Nickel Plated CDA 360 Brass, ASTM B16
- **Bellows:** Brass and 3000 Series Stainless Steel
- **Seat Material:** Fluorosilicone
- **Set Pressure Range:** 15.0 to 24.0 Psia (1.02 to 1.65 Bar)
- **Factory Set Tolerance:** ± 0.5 Psig
- **Reseat:** 92% of Set Pressure in Psia
- **Temperature Rating:** -80°F to 350°F (-62°C to 176°C)
- **Connections:** 1/4" NPT, Dual Ferrule Tube

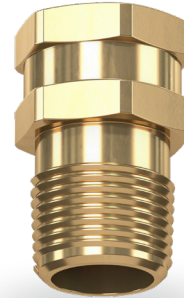
Generant Relief Valves

Factory preset and 100% flow and seal tested. This extensive product offering includes low pressure/high accuracy and high pressure/high flow designs. Generant pressure relief valves are relied upon in many diverse industries. This wide product range provides product solutions for many different liquid and gas applications



CRV: Brass Cryogenic In-Line Relief Valve

- **Types:** CRV
- **Body Material:** Brass, Stainless Steel
- **Seat Material:** Fluorosilicone, Teflon, Viton
- **Pressure:** 10 to 750 Psig (0.69 to 51.7 Barg)
- **Temperature:** -320°F to 392°F (-196°C to 200°C)
- **Size:** 1/4" to 1/2" (6 to 15mm)
- **Connections:** NPT



VRV: Brass, Stainless Steel and Aluminium In-Line Vent Relief Valve

- **Types:** VRV
- **Body Material:** Brass, Stainless Steel, Aluminium
- **Seat Material:** Buna, Ethylene Propylene, Fluorosilicone, Neoprene, Silicone, Teflon, Viton
- **Pressure:** 0.5 to 150 Psig (0.3 to 10.3 Barg)
- **Temperature:** -320°F to 400°F (-196°C to 205°C)
- **Size:** 1/8" to 1" (3 to 25mm)
- **Connections:** NPT – Other connections on request



LCV: Brass In-Line Liquid Cylinder Valve

- **Types:** LCV
- **Body Material:** Brass
- **Seat Material:** Fluorosilicone, PCTFE
- **Pressure:** 22 to 500 Psig (1.5 to 34 Barg)
- **Temperature:** -320°F to 350°F (-196°C to 176°C)
- **Size:** 1/4" (6mm)
- **Connections:** NPT

Note: Quiet operation for liquid cylinders used indoors



HPRV: Brass, Stainless Steel Relief Valve

- **Types:** HPRV
- **Body Material:** Brass, Stainless Steel 303 & 316
- **Seat Material:** Buna, Ethylene Propylene, Neoprene, Silicone, Teflon, Viton
- **Pressure:** 10 to 2,400 Psig (0.69 to 165 Barg)
- **Temperature:** -320°F to 400°F (-196°C to 205°C)
- **Size:** 1/8" to 3/4" (3 to 20mm)
- **Connections:** NPT – Other connections on request

Generant Regulators

With unique features Generant has been manufacturing all brass pressure regulators for over 50 years. These high-capacity industrial regulators have been installed in industrial gas, steam, car wash, machine tool and general industrial applications. Today we offer spring and pilot operated configurations.



CRM: Cryogenic Regulator

- **Types:** CRM
- **Body Material:** Brass
- **Seat Material:** PTFE
- **Max. Inlet Pressure:** 600 Psig (41.4 Barg)
- **Outlet Pressure Range:** 15 to 525 Psig (1.0 to 36.2 Barg)
- **Temperature:** -320°F to 200°F (-196°C to 93°C)
- **Size:** 1/4" (6mm)
- **Connections:** NPT



GEM: Combination Liquid Cylinder Pressure Build – Economizer Regulator

- **Types:** GEM
- **Body Material:** Brass
- **Seat Material:** PTFE
- **Max. Inlet pressure:** 600 Psig (41.4 Barg)
- **Outlet Pressure Range:** 50 to 500 Psig (3.4 to 34.5 Barg)
- **Temperature:** -320°F to 150°F (-196°C to 65°C)
- **Size:** 1/4"
- **Connections:** NPT



BPR: Back Pressure Regulator

- **Types:** BPR
- **Body Material:** Brass
- **Seat Material:** Metal to Metal
- **Max. Inlet pressure:** 600 Psig (41.4 Barg)
- **Outlet Pressure Range:** 15 to 600 Psig (1.0 to 41.4 Barg)
- **Temperature:** -320°F to 200°F (-196°C to 93°C)
- **Size:** 1/4" (6mm)
- **Connections:** Female NPT



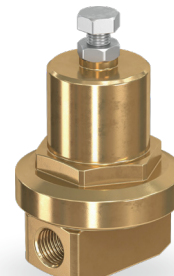
BLD: Cryogenic Pressure Build Regulator

- **Types:** BLD
- **Body Material:** Brass
- **Seat Material:** PTFE
- **Max. Inlet pressure:** 600 Psig (41.4 Barg)
- **Outlet Pressure Range:** 15 to 600 Psig (1.0 to 41.4 Barg)
- **Temperature:** -320°F to 200°F (-196°C to 93°C)
- **Size:** 1/2" (15mm)
- **Connections:** NPT



GDR: High-Flow Gas Delivery Regulator

- **Types:** GDR
- **Body Material:** Brass
- **Seat Material:** EPDM, FKM, Nitrile
- **Max. Inlet pressure:** 580 Psig (40.0 Barg)
- **Outlet Pressure Range:** 0 to 450 Psig (0 to 31.0 Barg)
- **Temperature:** -80°F to 375°F (-60°C to 190°C)
- **Size:** 1/4" to 1" (6 to 25mm)
- **Connections:** NPT, BSPT



BPRX: Back Pressure Regulator

- **Types:** BPRX
- **Body Material:** Brass, Stainless Steel 316
- **Seat Material:** PTFE
- **Max. Inlet pressure:** 750 Psig (51.7 Barg)
- **Outlet Pressure Range:** 15 to 600 Psig (1.0 to 41.4 Barg)
- **Temperature:** -320°F to 200°F (-196°C to 93°C)
- **Size:** 3/8" to 1/2" (12 to 15mm)
- **Connections:** Female NPT

Generant High Pressure Gas Control Valves

These high-pressure cylinder filling application valves are industry leaders at gas cylinder filling plants with Generant developing the master shut-off/control valve line. These valves provide consistent, low operating torques throughout the entire operating pressure range of the valve to 5,500 Psig in oxygen service.



MV: Manual Cylinder Fill Plant Gas Control Valves

- **Types:** MV
- **Body Material:** Brass
- **Seat Material:** PCTFE and Copper
- **Pressure:** 29 inHg to 5500 Psig (to 380 Barg)
- **Temperature:** -40°F to 165°F (-40°C to 74°C)
- **Size:** 1/2" to 1" (6 to 25mm)
- **Connections:** NPT, NPSM, O-Ring Seal Union



MVA: Actuated Cylinder Fill Plant Gas Control Valves

- **Types:** MVA
- **Body Material:** Brass
- **Seat Material:** PCTFE and Copper
- **Pressure:** 29 inHg to 5500 Psig @ 70°F (to 380 Barg)
- **Temperature:** -40°F to 165°F (-40°C to 74°C)
- **Size:** 1/2" to 1" (6 to 25mm)
- **Connections:** NPT, NPSM, O-Ring Seal Union
- **Cylinder Operating Pressure:** 85–125 Psig
- **Operating Temperature Rating:** -40° to 165°F (-40° to 74°C)
- **Flow Coefficient:** Cv is 2.5 for all valve configurations

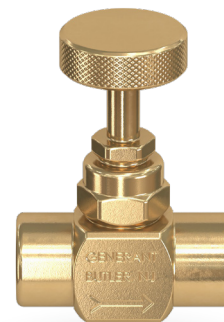
Generant Needle Valves

Brass and stainless steel needle valves have been manufactured at Generant for over 75 years. The forged and machined body needle valve options are used as economic metering valves where positive shut-off and coarse metering is desired. For extremely accurate flow metering, we offer the alternative PMV series, for the precise control of fluids and gases.



FNV: Brass & Stainless Steel Forged Needle Valve

- **Types:** FNV, FNVML
- **Body Material:** Brass, Stainless Steel
- **Seat Material:** Metal to metal, PCTFE, PTFE
- **Pressure:** Brass 0 to 3,000 Psig (0 to 207 Barg); Stainless Steel 0 to 6,000 Psig (0 to 413 Barg)
- **Temperature:** -321°F to +450°F (-196° to 232°C) metal; -65°F to +200°F (-54° to 93°C) Kel-F
- **Size:** 1/8" to 1/2" (DN3 to DN15)
- **Connections:** NPT & Dual Ferrule Tube



3000: Brass & Stainless Steel Needle Valves

- **Types:** 3000
- **Body Material:** Brass, Stainless Steel
- **Seat Material:** KEL-F, Metal, PTFE
- **Pressure:** 0 to 5000 Psig (0 to 354 Barg)
- **Temperature:** -320°F to 400°F (-196°C to 204°C)
- **Size:** 1/8" to 1/2" (3 to 15mm)
- **Connections:** KELF, PTFE, Metal

Generant Check Valves

Generant check valves are supplied in many designs ranging from ultra-low cracking pressures that are designed for many applications including severe service designs to 10,000 Psig. Available in fixed and adjustable crack pressures, and a variety of materials these check valves provide solutions for the most demanding applications.



HPCV: High Pressure Check Valve

- **Types:** HPCV
- **Body Material:** Brass, Stainless Steel
- **Seat Material:** Fluorosilicone, Teflon, Viton
- **Operating Pressure:** 2 to 10,000 Psig (0.01 to 689.0 Barg)
- **Temperature:** -320°F to 392°F (-196°C to 200°C)
- **Size:** 1/4" to 1/2" (6 to 15mm)
- **Connections:** NPT – Other connections on request



PCV: Poppet Check Valve

- **Types:** PCV
- **Body Material:** Brass, Stainless Steel 316
- **Seat Material:** Buna, Ethylene Propylene, Neoprene, Silicone, Fluorosilicone, Viton
- **Pressure:** 0 to 3,000 Psig (0 to 206 Barg)
- **Temperature:** -80°F to 375°F (-62°C to 190°C)
- **Size:** 1/8" to 1/2" (3 to 15mm)
- **Connections:** Tube, Male & Female NPT



ICV: Poppet Check Valve

- **Types:** ICV
- **Body Material:** Brass, Stainless Steel 316
- **Seat Material:** Buna, Ethylene Propylene, Neoprene, Silicone, Fluorosilicone, Viton
- **Pressure:** vacuum to 800 Psig (vacuum to 55 Barg)
- **Temperature:** -80°F to 375°F (-62°C to 190°C)
- **Size:** 1/8" to 3/4" (3 to 20mm)
- **Connections:** Male & Female NPT



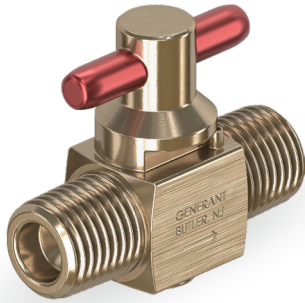
CV: Check Valve

- **Types:** CV
- **Body Material:** Brass, Stainless Steel 303 & 316, Carbon Steel
- **Seat Material:** Buna, Ethylene Propylene, Neoprene, Silicone, Teflon, Viton, PTFE
- **Operating Pressure:** 0.15 to 4,500 Psig (0.01 to 310 Barg)
- **Temperature:** -320°F to 400°F (-195°C to 204°C)
- **Size:** 1/8" to 2" (3 to 50mm)
- **Connections:** Female NPT

Note: For liquid service consider the series CV-XX3

Generant Ball & Plug Valves

This range includes brass and stainless steel high-flow, quarter-turn Ball and Plug Valves. The valves are available in various standard configurations, delivering low operating torque and zero-leak shut-off. For low-pressure systems, we offer the Series 4000, a quick-opening valve with snap-action operation.



SOV: Shut-Off Valve

- **Types:** SOV
- **Body Material:** Brass, Stainless Steel 316
- **Seat Material:** Buna, Ethylene Propylene, Neoprene, Viton
- **Pressure:** 0 to 3,000 Psig (0 to 207 Barg)
- **Temperature:** -65°F to 375°F (-54°C to 190°C)
- **Size:** 1/8" to 1/2" (3 to 15mm)
- **Connections:** Male + Female NPT, Male + Female Dual Ferrule Tube

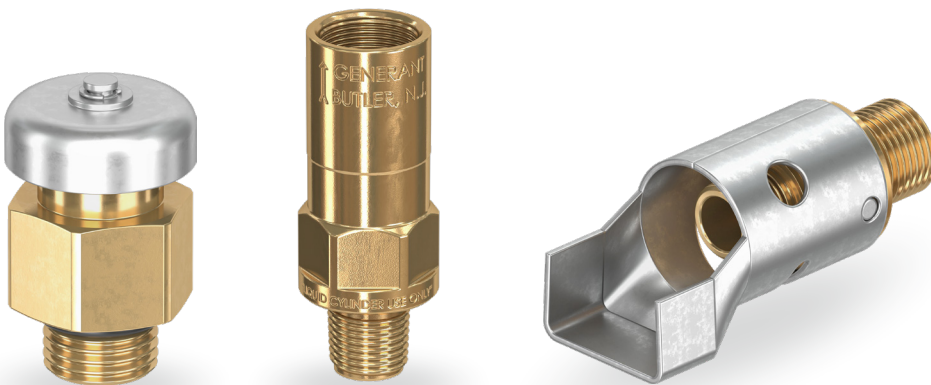


IBV: Instrument Ball Valve

- **Types:** IBV
- **Body Material:** Stainless Steel 316
- **Seat Material:** Stainless Steel & PCTFE
- **Pressure:** 0 to 3,000 Psig (0 to 207 Barg)
- **Temperature:** -65°F to 200°F (-54°C to 93°C)
- **Size:** 1/4" to 3/4" (6 to 20mm)
- **Connections:** Female NPT, Bi-Lok

Generant Cryogenic Liquid Cylinder Accessories

This Generant range of liquid cylinder accessories are provided as a standard on OEM equipment on most Cryogenic DOT 4L Liquid Cylinders. From Safety Relief Valves to CGA Self-Locking Connectors, Generant understands your cylinder needs.



Driving innovation in industrial gas applications

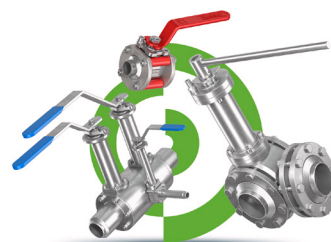
If safety and performance are your top priority, you'll need product experts and engineering consultants who provide state-of-the-art valve technology and advanced engineering solutions that drive innovation in global industrial gas applications.



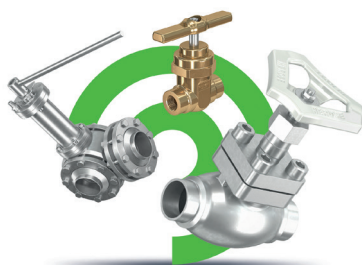
Clean Power



Modules



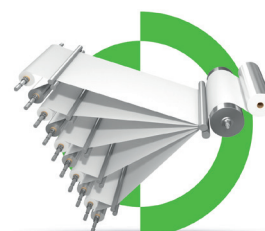
**Cryogenic
Quarter-Turn Valves**



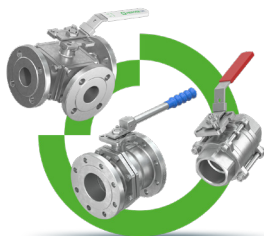
**Cryogenic & Gas
Delivery Valves**



**Liquid Cylinder
+ Micro-Bulk**



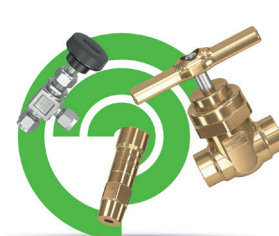
Insulation



Industrial Valves



Gauges



Generant Valves

To place your order or to find out more, contact us on: