



HARD-TO-HANDLE
FLUIDS



Solenoid Valves for Hard-To-Handle Fluids

GC Valves offers dependable, reliable solenoid valves for hard-to-handle fluids and challenging operating environments. We work with a wide range of difficult applications, including aggressive oxidizers like ozone, low-conductivity ultra-pure/DI water, solvent exposure, and mildly chlorinated water. We also have solutions for harsh ambient conditions like humid marine air and salt mist.

Our approach is to match valve materials and internal seals to your specific process conditions. With options like nickel plating, 316 stainless construction, oxygen cleaning, and PTFE or FFKM seals, we help reduce corrosion, sticking, leakage, and premature wear for consistent long-term performance.

Available Options:

- **Nickel Plating** – Improves corrosion resistance and helps reduce sticking in wet or harsh environments
- **O₂ Cleaning** – For oxygen service and cleanliness-critical applications
- **316 Stainless Steel (316 SS)** – Recommended for corrosive fluids and harsh environments
- **Nylon-6 (PA6-GF30)** – Lightweight, cost-effective material option for many water-based applications
- **FFKM Seals** – Premium option for aggressive chemistries and broad compatibility
- **PTFE Seals** – Excellent for many oxidizers and solvents; low friction and broad compatibility
- **Rebuild Kits** – Supports maintenance programs and helps extend valve life



Fluids We Can Handle:

- Ozone
- Mildly chlorinated water
- Ultra-pure / DI water
- Solvents
- Humid marine air / salt mist (*external exposure*)
- Mild alkaline cleaners (*light duty CIP*)

CUSTOM SOLUTIONS



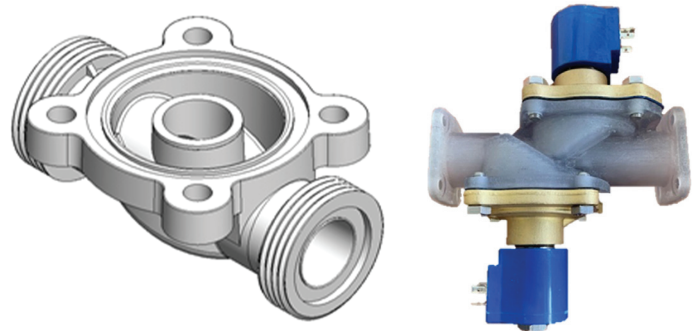
We produce over 1.5 million solenoid valves annually. GC Valves has a history of tailoring solutions for OEMs with demanding applications. Whether you need to design around temperature, pressure, chemical compatibility, flow, or reliability, GC Valves can provide a fluid control solution to meet your needs.

Our world-class engineering team and product portfolio allow for custom solutions in a wide variety of applications. The valves shown here are a small portion of our offering and just a hint of what we can provide with regards to custom valves. Our long history of collaborating with OEMs gives us the experience and comfort level needed to solve difficult design challenges. We pride ourselves on making cost-effective custom solutions, understanding the demands of manufacturers, and providing our products on time, tested, and of the highest quality.

ENGINEERING CAPABILITIES

3D Modeling and 3D Printing - Rapid Prototypes

- STEP files
- Solidworks part
- ACIS
- Pro/E and Creo part
- Parasolid files
- IGES files and more!
- Quick delivery time
- Multiple materials
- Fitment check
- Low-pressure fluid testing
- Tangible design



Sales Drawings

- Basic views
- Overall dimensions
- Specifications

Test Reports

- Professional reports
- Certified results
- Data-driven decisions

Testing Capabilities

- Burst testing
- Noise
- Flow
- Torque
- Water hammer
- Life cycle
- Heat Rise and
- Hi-Pot (High Potential)
- Maximum operating pressure differential
- Minimum opening pressure
- Chemical compatibility
- Internal and External leakage



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