



**GC Valves** LLC

A DEMA Company

**SPECIALISTS IN FLUID CONTROL**

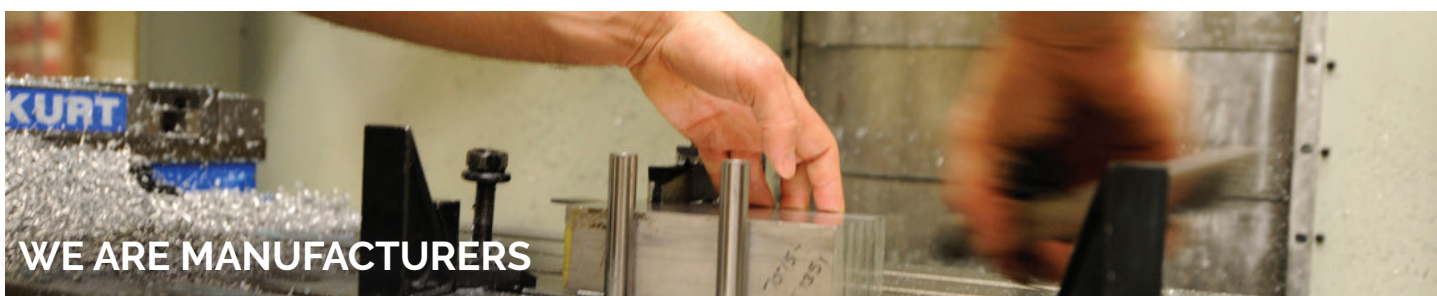
**SOLENOID VALVES**



# TOP THREE REASONS LEADING MANUFACTURERS CHOOSE GC VALVES



We partner with our customers in a variety of ways to provide a customized solution where one is needed. If you have a problem application, we take it on to solve the issue at hand. Our staff engineers work with our distributors and OEMs to supply the solution they need to control the fluids in their system.



We understand the importance of having all the parts you need in working order to ensure your customer's quality products are delivered in a timely manner. Providing high quality fluid control products on time is essential to our customer's success. We take partnerships with OEMs seriously because we know that our customer's brands and image depend on the equipment they make.



We utilize innovative materials in order to solve different problems experienced in the field. Whether we start from scratch on a design or utilize our large portfolio of products, we make short work of any problem. We are constantly evolving our processes to make the products we supply that much better.





# APPLICATIONS & MARKETS

## We Have Solenoid Valves That Are Used For...



### Car Wash

Soap and wax metering, low pressure function controls such as foam brush, tire cleaner, and presoak.



### Water Quality

UV, ozone, DI, RO systems. NSF-61 and "No Lead" Products from 1/8" to 2" NPT.



### Misting

High pressure system components along with feed and dump valves.



### Food & Beverage

Processing, preparation, dispensing; from high temperature oils and steam to blast chillers.



### Energy

Fuels, gases and liquids for prime and back-up generation systems.



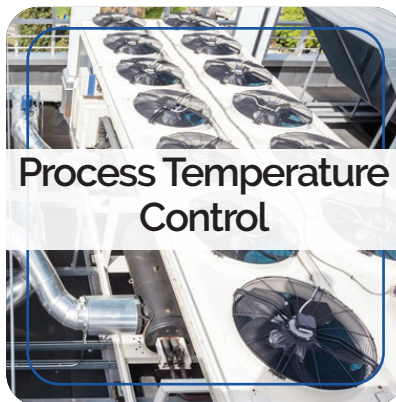
### Health Care

Gas management, water filtration, steam, and other line fluids for sterilization and vacuum applications.



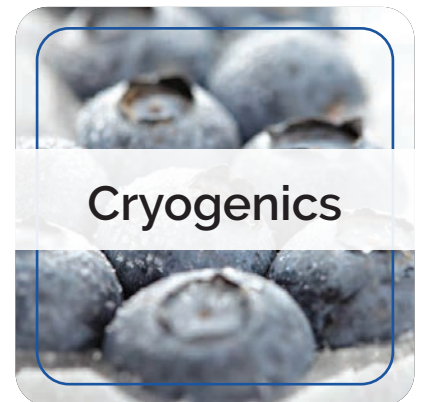
### Special Effects

Air, water, gases, high pressure, CO<sub>2</sub>, combustibles. We have the control valves to ensure the show goes on.



### Process Temperature Control

Oil, steam, hot water, glycol and CO<sub>2</sub>. We offer valves that can handle fluids from cryogenics to 400 °F.











































### Cryogenics

Liquid and gaseous CO<sub>2</sub>, liquid nitrogen, argon, oxygen for cleaning operations, bakery, food processing, and special FX.

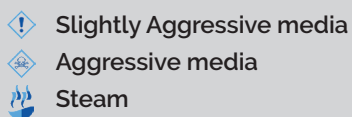
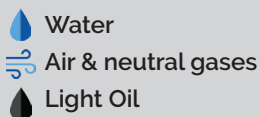
## ...And Much More!

# GC VALVES PRODUCT LINE

Series	Media	Connection	Function	Orifice Range	Pressure Range	Max Fluid Temp	Cv Range	Approvals	Valve Body	Seal Materials
 S20		3/8"-1 1/2" NPT	NC, NO	5/8"-1 1/4"	0-200 PSI	295 ° F	4.3-23			Nitrile, FKM, GFLT, EPDM
 S21		3/8"-2" NPT	NC, NO	5/8"-1 1/2"	4-250 PSI	366 ° F	4.3-29			Nitrile, FKM, GFLT, EPDM
 S27		1"-2" NPT	NC, NO	1"-1 1/4"	0-125 PSI	295 ° F	13-27			Nitrile, FKM, GFLT, EPDM
 SC91		10/32"-1/4" NPT	NC, NO	0.8mm-3.0mm	0-580 PSI	266 ° F	0.035-0.280			Nitrile, FKM, EPDM, PTFE, FFKM
 SC31		1/8"-1/4" NPT	NC, NO	0.8mm-3.0mm	0-580 PSI	122 ° F	0.035-0.280			Nitrile, FKM, EPDM, PTFE, FFKM
 SC41		1/4"-3/8" NPT	NC, NO	0.8mm-6.0mm	0-2030 PSI	284 ° F	0.035-0.350			Nitrile, FKM, EPDM, PTFE, FFKM
 S30		1/8"-3/8" NPT	NC, NO, 3-way	1/32"-3/8"	0-2400 PSI	366 ° F	.03-1.3			Nitrile, FKM, GFLT, EPDM, PTFE, FFKM, Rulon
 S31		1/8"-3/8" NPT	NC, NO, 3-way	1/32"-3/8"	0-2000 PSI	366 ° F	.03-1.3			Nitrile, FKM, GFLT, EPDM, PTFE, FFKM, Rulon
 S33		1/8"-1/4" NPT	3-way	1/16"-11/64"	0-200 PSI	295 ° F	.09-.38			Nitrile, FKM, EPDM
 S40		1/4"-1 1/4" NPT	NC, NO	3/8"-1 1/8"	0-300 PSI	366 ° F	1.1-18.8			Nitrile, FKM, EPDM, PTFE

## KEY

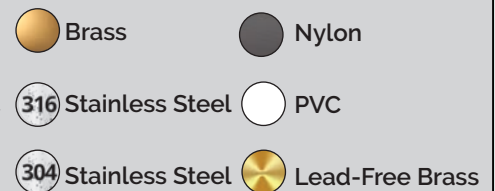
### MEDIA



### FUNCTION

NC – 2-way Normally Closed  
 NO – 2-way Normally Open  
 3-way – Normally Closed, Normally Open, Diverting, Universal, or Free Exhaust

### VALVE BODY



Series	Media	Connection	Function	Orifice Range	Pressure Range	Max Fluid Temp	Cv Range	Approvals	Valve Body	Seal Materials
 S71		3/8"-2" NPT	NC, NO	3/8"-2"	7-225 PSI	295 ° F	4.5-48			Nitrile, FKM, EPDM
 S80		1/4"-1/2" NPT	NC, NO	3/8"	0-290 PSI	230 ° F	1.6			Nitrile, FKM
 SP31		3/8"-2" NPT	NC, NO	12mm-55mm	5-150 PSI	122 ° F	2.4 - 41			Nitrile, FKM, EPDM
 SP91		1/2"-1" NPT	NC, NO	4.0mm-25mm	8-200 PSI	266 ° F	4.5 - 12			Nitrile, FKM, EPDM
 H40		1/4"-1/2" NPT	NC, NO	3/8"	0-2200 PSI	230 ° F	1 - 1.5			FKM, PTFE
 H90		1/2"-1" NPT	NC	15mm-25mm	0-1200 PSI	230 ° F	4.2-7			FKM, PTFE
 NS20		3/8"-1 1/2" NPT	NC, NO	5/8"-1 1/4"	0-100 PSI	295 ° F	4.3-18			EPDM, Santoprene
 NS21		3/8"- 2" NPT	NC, NO	5/8"-1 1/4"	4-200 PSI	295 ° F	4.3-13			EPDM, Santoprene
 NS30		1/8"-3/8" NPT	NC, NO	1/32"-9/32"	0-150 PSI	295 ° F	.03-1			EPDM
 NS31		1/8"-3/8" NPT	NC, NO	1/32"-9/32"	0-150 PSI	366 ° F	.03-.65			EPDM
 NS71		3/8"- 2" NPT	NC, NO	3/8"-2"	7-225 PSI	295 ° F	4.5-48			EPDM



# MANIFOLDS

GC Valves offers solenoid valve manifolds and assemblies for dispensing and sampling industrial and scientific gases and liquids.



## Industrial Solenoid Valve Manifolds

- Standard body material: Brass, Stainless Steel
- Optional materials: Aluminum, PVC, other thermoplastics, plating available
- Uses proven S30 and S40 operators and valve components
- Typical pipe sizes include 1/8" to 3/4" NPT
- Reverse manifolds and normally open operator options available



## High Performance Solenoid Valve Manifolds

- Standard body material: Brass, Stainless Steel
- Optional materials: Aluminum, PVC, other thermoplastics, plating available
- Uses proven SC4 and SC9 operators and valve components
- Typical pipe sizes include 1/8" to 3/8" NPT
- Reverse manifolds and metering options available

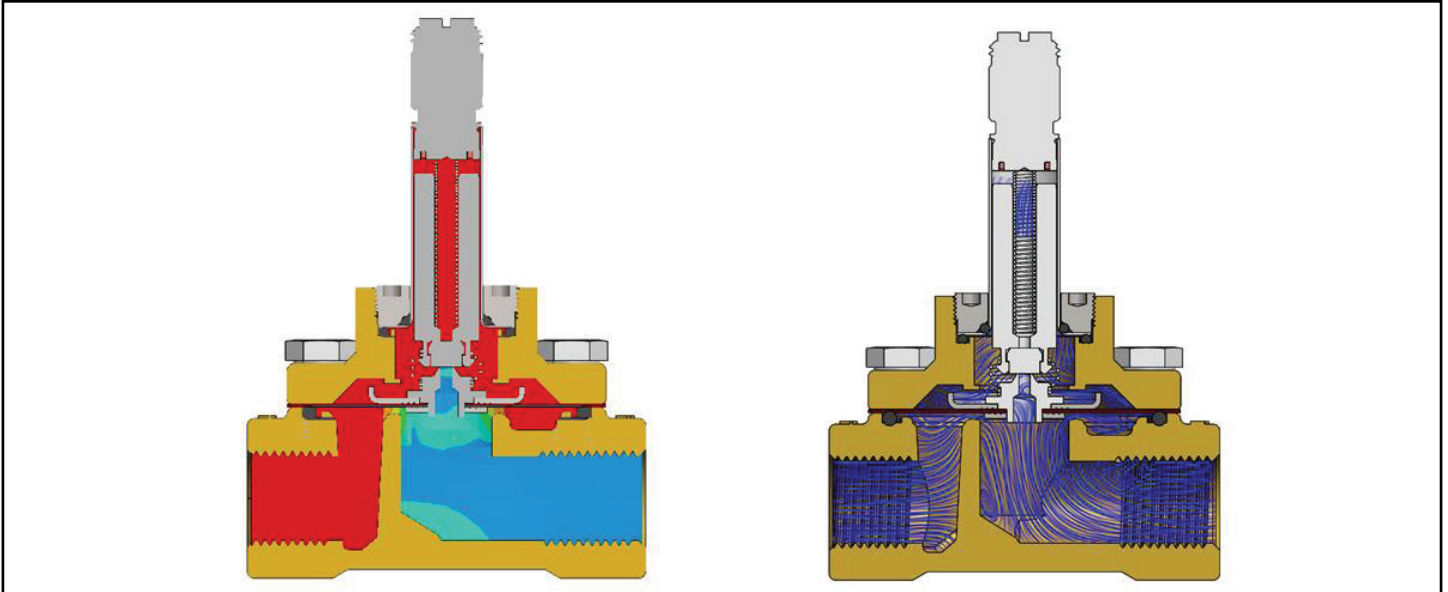
A complete line of general purpose solenoid manifolds intended for a wide variety of applications at standard pressures and flow rates. Our manifold valves can be rated up to 2400 PSI and can be made to withstand the harshest fluid media. Our world class designs are proven to cycle up to 5 million cycles.

Series	Media	Connection	Function	Orifice Range	Pressure Range	Max Fluid Temp	Cv Range	Approvals	Valve Body	Seal Materials
SC9M		1/8" - 1/4" NPT	NC, NO, 3-WAY	1/32" - 3/32"	0-580 PSI	366°F	0.035-0.280			Nitrile, FKM, EPDM, PTFE, FFKM
SC4M		1/4" - 3/8" NPT	NC, NO, 3-WAY	1/32" - 1/8"	0-2030 PSI	366°F	0.035-0.315			Nitrile, FKM, EPDM, PTFE, FFKM
M30		1/8" - 3/8" NPT	NC, NO, 3-WAY	1/32" - 3/8"	0-2400 PSI	366°F	.03-1.3			Nitrile, FKM, EPDM, PTFE, FFKM, Rulon
M31		1/8" - 3/8" NPT	NC, NO, 3-WAY	1/32" - 3/8"	0-2000 PSI	366°F	.03-1.3			Nitrile, FKM, EPDM, PTFE, FFKM, Rulon
M40		1/4" - 1/2" NPT	NC, NO	3/8"	0-2400 PSI	366°F	1.1			Nitrile, FKM, EPDM, PTFE
M20		3/8" - 3/4" NPT	NC, NO, 3-WAY	3/4"	0-200 PSI	295°F	6.7			Nitrile, FKM, EPDM
M21		3/8" - 3/4" NPT	NC, NO, 3-WAY	3/4"	4-200 PSI	295°F	6.7			Nitrile, FKM, EPDM



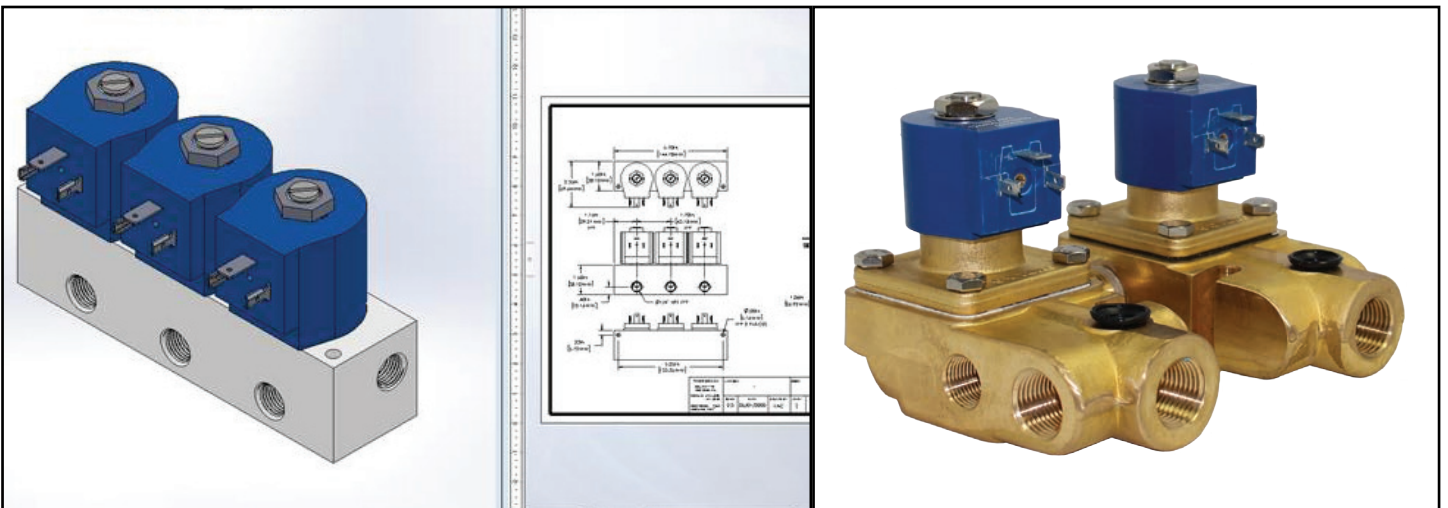
# CUSTOM SOLUTIONS

Our engineering and manufacturing team produces over 1.5 million solenoid valves annually. We have 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.



Software generated fluid flow analysis showing internal pressures throughout the valve to help meet OEM design specifications

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 at making cost-effective custom solutions, understanding the demands of manufacturers, and providing our products on time, tested, and of the highest quality.

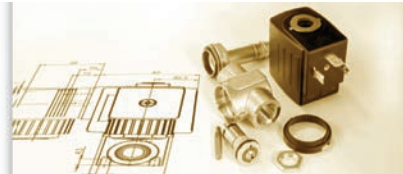


We use 3-D modeling software to bring our concepts to reality and cut down on development time. Two custom pieces are shown above, one 3-D modeled the other in production form.

# DECADES OF INNOVATION & EXCELLENCE



General Controls expands production to support the World War II manufacturing effort.



1930s

General Controls is founded in Glendale, California by combustion controls pioneers Jack and Bill Ray.

1940s



1950s

General Controls sees sustained growth in General Purpose Solenoid Valve product lines.

1960s

ITT acquires General Controls.

**ITT** GENERAL CONTROLS INC. 



1970s

ITT-General Controls leads solenoid valve product evolution and innovation.

Konan Electric becomes North American ITT-licensee for General Purpose Solenoid Valve product line. Components For Automation, Inc. (CFA) is formed to design and manufacture miniature solenoid valves and solenoid valve manifolds.



1980s



1990s

GC Valves is formed, a new facility opens in Charlotte, NC. In-house machining capability is expanded to meet growing demand for custom designs; CFA growth is fueled by unique solenoid valve manifolds.

DEMA acquires GC Valves and Components For Automation in 2016. Manufacturing is consolidated in Charlotte, NC and the united companies become GC Valves, LLC.



2000s

DEMA Engineering Company is a leading supplier of chemical dispensing systems, fluid control devices and solenoid valves, strainers, pumps and injectors for virtually any industrial, institutional and agricultural markets. Our systems address the housekeeping, food service, food processing, warewash and laundry markets plus many other industries where precise metering of fluids is critical. DEMA industrial products answer the needs of the car wash, food & beverage, dairy, agriculture, and irrigation marketplaces. DEMA uses state of the art venturi technology, peristaltic pumps and water driven proportional pumps for superior dilution control in chemical and fluid metering.



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