

# Oil & Natural Gas Product Overview



We have you covered with a wide range of product selections  
for the oil & natural gas industry



PROVEN QUALITY. LEADING TECHNOLOGY.

# Graco's Commitment to the Oil & Natural Gas Market

Graco Inc., based in Minneapolis MN, USA, was established in 1926 and is a world leader in fluid handling solutions. For numerous decades, we've delivered various high quality equipment solutions to the Oil & Natural Gas market.

To complement the business, in 2014 we created a dedicated organization, our ONG Division, to focus on the Oil & Natural Gas equipment market. We also acquired two well-respected specialty equipment manufacturers – Alco Valves Group in 2014 and High Pressure Equipment Company in 2015.



Graco Inc. developed and released a new product line of chemical injection equipment in 2015 for use in the midstream and upstream sectors of the Oil & Natural Gas markets. Enhancements and additions to the product line are ongoing to meet customer demands. The product line includes chemical injection pumps (solar, electrically and pneumatically operated), technologically advanced controllers with remote cellular or SCADA connectivity, chemical metering pumps and beam pumps.



Alco Valves Group, based in the UK, manufactures and designs high-quality valves that are used in critical applications in the oil and gas industry both onshore and offshore worldwide. For over 40 years, they have supplied instrumentation, double block and bleed, subsea and process valves to many leading names in the industry. They also support other markets such as petrochemicals, automotive, nuclear and defense.



High Pressure Equipment (HiP), founded in 1953, is an Erie, Pennsylvania, USA based manufacturer and supplier of instrumentation valves, fittings, tubing, pressure vessels and manifolds. HiP® products are engineered to perform in ultra-high pressure environments up to 150,000 PSI working pressure. They also manufacture and supply standard and custom skid packages including: pressure testing equipment, bolt tensioning hydraulic power packs and gas boosters.



# Chemical Injection Product Line

Graco chemical injection pumps are exactly what experienced oil and natural gas industry professionals want and need to meet the ongoing challenges of transferring chemicals in harsh and often remote geographies. The product line includes solar DC, electric AC and pneumatic operated pumps as well as technologically advanced controllers and accessories to dispense, control, and monitor production chemicals at well sites, refineries and pipelines.

- Solar Powered Chemical Injection pumps and equipment
- Electric Chemical Injection Pumps
- Pneumatic Chemical Injection Pumps
- Pumpjack powered chemical injection pumps
- Pump Controllers & Tank Level Monitoring
- Remote Communication and Automation



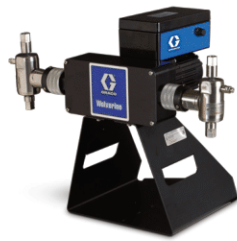
# Chemical Injection

## ELECTRIC/SOLAR POWERED



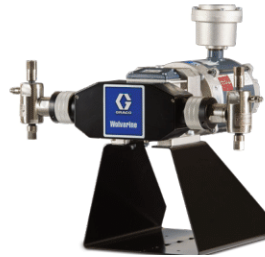
### Wolverine®

- Ordinary Location
- 1/11 hp and 1/5 hp motors
- 370 GPD (1400 LPD)
- 10,000 PSI (690 Bar)



### Wolverine Variable Speed

- Class 1, Div. 2
- Continuous injection
- Brushless motor
- 370 GPD (1400 LPD)
- 10,000 PSI (690 Bar)



### Wolverine Hazardous Location

- Class 1, Div. 1
- ATEX approved
- 370 GPD (1400 LPD)
- 10,000 PSI (690 Bar)



### Wolverine DA

- Double acting
- Self-priming
- Variable Speed (C1D2)
- 555 GPD (2100 LPD)
- 2,500 PSI (172 Bar)

## PNEUMATIC



### Python®

- 3 air motor sizes
- 50 PSI min inlet
- 169 GPD (640 LPD)
- 12,000 PSI (827 Bar)



### Python XL

- 3 air motor sizes
- 15 PSI min inlet
- 370 GPD (1400 LPD)
- 12,000 PSI (827 Bar)



### Python XL-DA

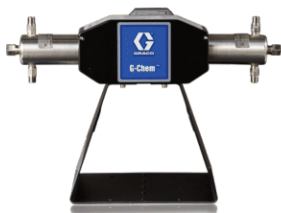
- Double acting
- Self-priming
- 700 GPD (2650 LPD)
- 12,000 PSI (827 Bar)



### Python XL-DA25

- Double acting
- Self-priming
- 2.5 inch stroke
- 1,615 GPD (6113 LPD)
- 7,500 PSI (517 Bar)

## ENTRY LEVEL PUMPS



### G-Chem™

- Ordinary location
- 1/7 hp motor
- 66 GPD (250 LPD)
- 2,500 PSI (172 Bar)



### G-Chem Beam

- Powered by well site pump jack
- Same fluid heads and drive housing as the G-Chem electric
- 20 GPD (76 LPD)
- 2,500 PSI (172 Bar)



### Mongoose™ Chemical Metering Pump

- Low pressure/low flow rate application
- Poppet or Graco check valves
- Stainless steel and kynar fluid heads
- 45 GPD (170 LPD)
- 250 PSI (17 Bar)

# Harrier® Electronic Injection Rate Controllers

Closely control and monitor chemical use and collect critical operating information for reducing costs and improve processes.

## CONTROLLERS



### Harrier EZ and Harrier

- Used for DC pumps
- Control injection rates via timer or cycle count
- Temperature based control for methanol injection
- ETL listed for electrical safety: UL 508 and CSA 22.2 No. 14
- On/Off switch
- Built-in low voltage disconnect functionality



### Harrier AC

- Used with AC operated pumps
- Pump-mount and wall-mount option
- Control injection rates via timer or cycle count
- Auxiliary input port
- ETL listed for electrical safety to UL 508 and CSA 22.2 No. 14
- NEMA 4X enclosure



### Harrier+

- Used for AC and DC pumps
- Adaptive Flow Control for high dosing accuracies
- Remote monitoring via cellular or SCADA communication
- Automation and tank level monitoring
- Class 1, Division 2 certified for Hazardous Location

## Tank Level Monitoring Solution

The Graco tank level monitor and Harrier+ combination puts tank and chemical injection information at the user's fingertip, whether on-site or 1,000 miles away. Not only can you monitor your chemical usage but you can also ensure proper pump operation and verification.



Tank Level Sensor



Tank Level Wire Harness



# Modular Control Box Options

When specifying the correct chemical injection system, choosing the correct control box configuration can be very critical in ensuring proper system operation.

## ONE-BATTERY AND TWO-BATTERY CONTROL BOXES

### One-Battery Metal Box Part #: B5215X



- For DC power only
- Painted steel construction
- Lockable slide lid
- Configured for a pole mount

### Two-Battery Metal Box Part #: B522XX



- For DC power only
- Houses up to two batteries
- Aluminum construction
- Lockable slide lid
- Configured for a pole mount
- Includes box and sub-plate

## NEMA RATED CONTROL BOXES

### NEMA Rated AC Box Part #: B52AXX



- NEMA 4 rated box
- Conforms to UL-508A and CSA 22.2 No. 14 & 73
- For AC power only
- Houses the Harrier+ controller
- Painted steel construction
- Lockout/Tagout disconnect
- Configured for a pole mount

### NEMA Rated DC Box Part #: B52NXX



- NEMA 4X rated box
- For DC power only
- Separate battery box that holds up to two batteries (Part #: B32808)
- UV resistant polycarbonate construction (UL-5VA rated)
- Lockable hinged door
- Configured for a pole mount
- Additional dual battery boxes can be linked (Part #: B32809)
- On/Off switch

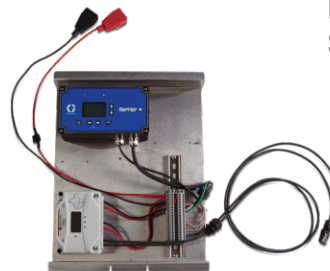
## FOUR-BATTERY CONTROL BOXES

### Four-Battery Plastic Box Part #: B32805



- For DC power only
- Houses up to four batteries
- Lockable hinged lid
- Removable sub-plate for easy battery access and ease of serviceability
- Plastic box only

### Four-Battery Plastic Box Sub-Plate Part #: B524XX



- Removable sub-plate for easy battery access and ease of serviceability
- Keeps electric components and battery separate
- Sub-plates are configurable with all controller and charge controller options
- On/Off switch

# Instrumentation Valves

Alco valves and fittings with pressures up to 10,000 PSI (690 Bar), deliver trusted solutions for critical applications. The valves are available in 316/316L SST and can handle temperature range from -4°C (25°F) to 230°C (466°F). Sizes: 1/4" to 1" available.

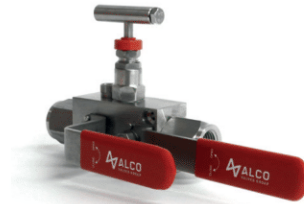
VALVES & FITTINGS UP TO 10,000 PSI (689 BAR)

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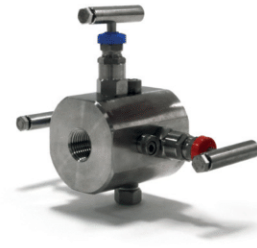
## Ball Valve

- Flexible 3 piece design for easy maintenance
- Two piece design means less leak paths for extra safety



## Double Block & Bleed (DBB) Valves

- Flexible 3 piece design for easy maintenance



## Double Block & Bleed (DBB) Manifold Valves

- All valves have 2-piece non-rotating hardened (17-4PH) tips as standard for bubble tight shut off and long service life



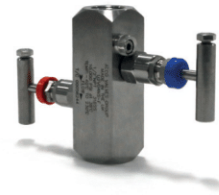
## Piston Check Valve

- Primary soft seal for bubble tight close, with secondary metal-to-metal seal as standard



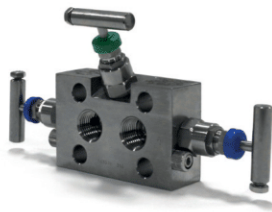
## Needle Valve

- 2 piece non-rotating hardened (17-4PH) tip for first time seal and long service life



## Needle Manifold

- 2 Valve Needle Manifold



## Needle Manifold Valves - Oil/Gas

- Direct Mounted 3 or 5 Valve Needle Manifold

# XC Valve Range

High integrity double block and bleed valves isolate with a redundant isolation barrier for complex operations, safely and reliably. The XC Range features seats manufactured from PEEK thermoplastic to provide a dependable lifespan in the toughest services.

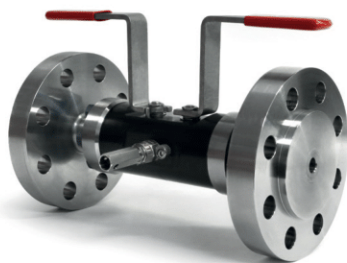
- Designed and manufactured in accordance with ASME & API 6A standards
- Fugitive emissions tight design
- Fire safe to ISO 10497
- Stocked cartridges allow for shorter lead times
- Pressure ratings from Class 150 to Class 2500
- Anti-static to ATEX requirements and cavity relieved as standard
- Service temperatures from -46°C (-51°F) to 200°C (392°F)
- Features 2 high performance floating pattern ball valves and a venting needle valve c/w NPT female vent

## XC VALVE RANGE

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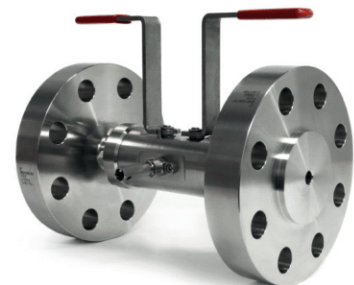
**XC Stocked Cartridge**



**XC Finished Construction**



**XC Stocked Cartridge**



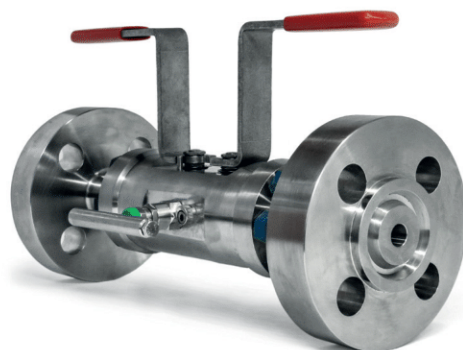
**XC Finished Construction**



**XC 013 DBB Valve Manifold**  
ALCO XC 13mm Bore



**XC 019 & 025 DBB Valve Manifold**  
ALCO XC 19mm and 25mm Bore



**XC 038 & 050 DBB Valve Manifold**  
ALCO XC 38mm and 50mm Bore



# Air Driven/Electric Pumps, Gas Boosters & Power Units

The air driven liquid pumps, gas boosters and power units provide high pressure solutions to the oil and gas, process chemical, utility, aviation and industrial markets. The eTensifier is a high-pressure electric pump that simply plugs into a wall outlet and delivers hydraulic liquid pressures with a smoother flow rate from zero to full pressure.

## AIR DRIVEN HIGH OUTPUT PUMPS & BOOSTERS

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### JB Series Pumps

- Up to 36,500 PSI (2517 Bar)



### Modular PowerStar 4 Pumps

- Up to 33,300 PSI (2296 Bar)



### Standard Power Pack

- Output pressures to 65,000 PSI
- Flow rates up to 14 gpm on the lowest pressure model



### S-86-JN Gas Booster

- Available in 7 ratios
- 13,500 PSI (931 Bar)



### PowerStar4 Gas Booster

- 8,900 PSI (614 Bar)



### PT2020

- Plug and play controller for automated high pressure testing

## ELECTRIC OPERATED PUMPS

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### eTensifier Electric Pump

- Up to 36,500 PSI (2517 Bar)
- Quiet electric motor



### e710

- Supercritical CO<sub>2</sub> extraction pump system
- Continuous 100% duty cycle-run 24/7
- Up to 1.16 GPM

# High Pressure Equipment

The extensive line of valves and affiliated components safely and reliably handle the unique requirements of elevated pressure applications. Valve bodies through 100,000 PSI are high tensile Type 316 stainless steel, 150,000 PSI valve bodies are 17-4 PH stainless steel.

## NEEDLE VALVES



### Taper Seal

- 10,000 PSI (689 Bar) and 15,000 PSI (1034 Bar)
- 1/16" – 3/8" O.D. Tubing

### Medium Pressure

- 20,000 PSI (1379 Bar)
- 1/4" – 1 1/2" O.D. Tubing

### High Pressure

- 30,000 PSI (2068 Bar), 40,000 PSI (2758 Bar) and 60,000 PSI (4137 Bar)
- 1/8" and 3/8" O.D. Tubing

### Ultra High Pressure

- 100,000 PSI (6895 Bar) and 150,000 PSI (10342 Bar)
- 1/4" and 3/8" O.D. Tubing

## BALL VALVES



### Two-Way Ball Valve

10,000 PSI (689 Bar), 15,000 PSI (1034 Bar), and 20,000 PSI (1379 Bar)

### 90° Three-Way Diverter Valve

10,000 PSI (689 Bar), 15,000 PSI (1034 Bar), and 20,000 PSI (1379 Bar)

### 180° Three-Way Ball Valve

10,000 PSI (689 Bar), 15,000 PSI (1034 Bar), and 20,000 PSI (1379 Bar)

## FITTINGS, TUBING & ACCESSORIES



### Fittings

A complete line of elbows, tees and crosses is available for all tubing connection sizes. HiP fittings are constructed of high tensile 316 stainless steel, unless otherwise specified.

### Tubing

HiP high pressure tubing is cold drawn, seamless and supplied in the 1/8" hard condition (not annealed). Tubing is available in all standard valve sizes and in any length specified, as well as a connection-ready nipple.



### Couplings

Union couplings, bulkhead couplings, caps, line filters, check valves, rupture discs, safety heads, and anti-vibration gland assemblies help you complete a safe installation.

### Gauges

HiP gauges deliver accurate pressure readings from ATM to 100,000 psi, are available for wall or panel mounting, and have the appropriate connection machined into the bottom inlet.

### Adapters

Connect different sizes of tubing or tubing and pipe with our female-to-female couplings, female-to-male adapters, male-to-male adapters, reducer couplings, and thermocouple adapters.







## ABOUT GRACO

### PROVEN QUALITY. LEADING TECHNOLOGY.

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

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