



# INDUSTRIAL

PRODUCT SELECTION GUIDE





## GROTH CORPORATION

Groth Corporation was founded by Edward Groth on August 1, 1960. Groth began as a manufacturers' representative, distributor, and remanufacturer of pressure relief valves sold to the refining and petrochemical industries. In 1999, Groth Corporation joined Continental Disc Corporation and moved to its current Stafford, Texas manufacturing site in 2002. These two events strengthened Groth's position as a global leader in low pressure safety solutions.

Today, Groth is a global leader in low pressure safety equipment with representatives around the world, providing engineered solutions with uncompromising commitment to customer satisfaction.

Groth industrial products are comprised of independent product lines, classified as: pressure/vacuum relief valves, blanket gas regulators and flame arresters.

## QUALITY AND CERTIFICATIONS

Groth Corporation products are designed to the latest standards from around the world. Groth possesses in-house flow lab testing capabilities which have been certified by an independent authority and are capable of flow testing products to API 2000 standards. Additionally, Groth has the capability of performing deflagration and detonation testing as per U.S. Coast Guard 33 CFR and ISO 16852 (ATEX) guidelines. Groth has worked with outside testing and approval agencies such as Southwest Research, TUV and IBExU to ensure that products perform to relevant specifications. As an ISO 9001 approved company, including compliancy to the European Pressure Equipment Directive (PED) through testing and certifications, Groth is able to meet the customer's demanding requirements for performance, safety and consistent quality.

## PRODUCT OVERVIEW

The following information provides a brief summary of Groth industrial products. More details on applications, features, benefits and technical information for each model

can be found in the tables on the following pages.

Complete product specifications are available in the Groth Industrial Product Catalog. We also invite you to call our offices at 281-295-6800 or visit our website at [www.grothcorp.com](http://www.grothcorp.com).

**PRESSURE/VACUUM RELIEF VALVES** are protection devices typically mounted on a nozzle opening on the top of a fixed roof atmospheric storage tank. Their primary purpose is to protect a tank against rupture or implosion by allowing the tank to breathe, or vent, when pressure changes in the tank due to normal operations.

**PILOT OPERATED RELIEF VALVES** serve the same primary purpose as pressure/vacuum relief valves, but with better performance characteristics than weight or spring loaded valves. Lower leakage and better flow performance make a pilot operated valve the solution when the focus is product conservation, expanded tank working pressure range, and reduced fugitive emissions. A pilot operated relief valve provides the maximum available leakage control technology as specified in the Clean Air Act of 1990.

**EMERGENCY RELIEF VALVES** protect tanks against excessive pressure caused by external fire exposure or flashes within the tank. Emergency relief valves provide higher flow capacity than standard pressure/vacuum relief valves.

**DEFLAGRATION FLAME ARRESTERS** are fire safety devices used to protect stored or process media from deflagrations. A deflagration flame arrester can be used on the top of a tank in certain conditions, as an in-line safety device where combustible gases are transported through low pressure pipe lines.

**DETONATION FLAME ARRESTERS** provide flame protection in cases where the ignition source pipe lengths are greater than what can be protected with a deflagration arrester.

**BLANKET GAS REGULATORS** can provide both pressure and fire protection for storage tanks by supplying a blanket-ing gas which maintains a constant positive pressure in the vapor space of a storage tank.



## SERIES 3000

BLANKET GAS REGULATOR

### FEATURES & BENEFITS

- Modulating action ensures the valve only opens as much as necessary, which lowers operational cost by conserving product
- Direct acting, patented force-multiplying linkage allows for a compact size and low weight solution
- Field adjustable orifice selector allows flow selection from: 25%-100% for 1/2" and 5%-100% for 1"
- Setting is unaffected by fluctuations in blanket gas supply pressure, providing reliable, repeatable performance

### TECHNICAL DETAILS

- Available in 1/2" and 1" (DN15, DN25)
- Settings from 0.5 InWC to 15 psig (1.24 mbarg to 1.03 barg)
- Molded PFA Actuator Diaphragm
- Wide selection of elastomeric seal materials
- Available in stainless steel or other materials by request
- Field adjustable flow capacity (25%-100% for 1/2", 5%-100% for 1")
- ATEX Approval (3011L & 3011H)
- Canadian Registration (CRN)



## SERIES 1660A

PRESSURE RELIEF  
PILOT OPERATED VALVE

### FEATURES & BENEFITS

- Rated flow at less than 10% overpressure provides the ability to operate closer to the tank MAWP, increasing the operating range of the process
- Bubble-tight to set pressure design prevents fugitive emissions and conserves stored product
- Flexibility in terms of film or o-ring seat and snap or modulating action allows product customization to specific application requirements

### FEATURES & BENEFITS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings from 2 InWC to 15 psig (4.98 mbarg to 1.03 barg)
- Vacuum settings from 3 InWC to 12 psig (7.47 mbarg to 827 mbarg)
- Carbon steel, stainless steel & aluminum materials available
- Options include pilot exhaust piped to discharge header, field test connection, manual blow down, conical film seat pallet, and remote sense pickup
- Cryogenic service proven reliable below minus 300°F (-184°C) with no freeze-up
- ATEX and PED Approval



## SERIES 1400

PILOT OPERATED  
PRESSURE/VACUUM  
RELIEF VALVE

### FEATURES & BENEFITS

- Rated flow at less than 10% overpressure provides the ability to operate closer to the tank MAWP, increasing the operating range of the process
- Flexibility in snap or modulating action allows product customization to specific application requirements

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings from 2 InWC to 15 psig (4.98 mbarg to 1.03 barg)
- Vacuum settings from 1/2 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Carbon steel, stainless steel, aluminum and other materials available
- ATEX and PED Approval





## SERIES 1200A

VENT TO ATMOSPHERE  
PRESSURE/VACUUM  
RELIEF VALVE

### FEATURES & BENEFITS

- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval



## SERIES 1220A

PIPE-AWAY PRESSURE/  
VACUUM RELIEF VALVE

### FEATURES & BENEFITS

- The outlet size is the same as the inlet size
- The flanged outlet connection allows escaping vapors to be piped away, instead of released directly to the atmosphere
- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval



## SERIES 1260A

PIPE-AWAY  
PRESSURE RELIEF VALVE

### FEATURES & BENEFITS

- An ideal solution when only pressure relief is required
- The flanged outlet connection allows escaping vapors to be piped away, instead of released directly to the atmosphere
- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Available in aluminum, carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- Back pressure in the system must be considered
- ATEX and PED Approval



**SERIES 2300A**  
PRESSURE RELIEF VALVE

**FEATURES & BENEFITS**

- Can be used for emergency relief on smaller tanks
- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

**TECHNICAL DETAILS**

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Available in aluminum, carbon steel, stainless steel and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval



**SERIES 1300A**  
VACUUM RELIEF VALVE

**FEATURES & BENEFITS**

- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

**TECHNICAL DETAILS**

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval



**SERIES 1360A**  
VACUUM RELIEF VALVE  
(Side Mount)

**FEATURES & BENEFITS**

- Optional flanged inlet connection allows relief capacity to be piped in, instead of pulled directly from the atmosphere
- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

**TECHNICAL DETAILS**

- Sizes 3" through 14" (DN80-DN350)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval





## MODEL 8800A

VENT TO ATMOSPHERE  
PRESSURE/VACUUM  
RELIEF VALVE/FLAME  
ARRESTER COMBINATION

### FEATURES & BENEFITS

- Combines the benefits of the 1200A Series and the Model 7618 in a complete package that meets the increased flame protection requirements of API 2000

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel and other materials



## MODEL 8820A

PIPE-AWAY PRESSURE/VACUUM  
RELIEF VALVE/FLAME  
ARRESTER COMBINATION

### FEATURES & BENEFITS

- Combines the benefits of the 1220A Series and the Model 7618 in a complete package that meets the increased flame protection requirements of API 2000

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel and other materials



## MODELS 1720A & 1760A

PIPE-AWAY PRESSURE/VACUUM  
RELIEF VALVE SAME SIZE I/O

### FEATURES & BENEFITS

- Peripheral and central seat guides ensure reliable, repeatable performance
- A wide seat and air-cushion seal keeps leakage low long after the valve is put in service
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

### TECHNICAL DETAILS

- 2", 3" and 4" sizes available (DN50-DN100)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 33 osig (2.15 mbarg to 142 mbarg)
- Vacuum settings 0.5 osig to 16 osig (2.15 mbarg to 68.9 mbarg)
- Available in carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval





## SERIES 1800A

10% OVERPRESSURE  
PRESSURE/VACUUM  
RELIEF VALVE

### FEATURES & BENEFITS

- Rated flow at only 10% overpressure provides the ability to operate closer to the tank MAWP, increasing the operating range of the process
- Reduced seat leakage prevents fugitive emissions and conserves stored product
- Near zero blow down lowers operating cost by reducing product evaporation
- Peripheral and central seat guides ensure reliable, repeatable performance
- Self-draining housing body and drip rings protect seating surfaces from condensate and freezing, increasing operational reliability

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings 0.5 osig to 15 psig (2.15 mbarg to 1.03 barg)
- Vacuum settings 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg)
- Available in aluminum, carbon steel, stainless steel, fiberglass and other materials
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX and PED Approval



## SERIES 2000A

EMERGENCY RELIEF VALVES

### FEATURES & BENEFITS

- A wide stainless steel seat and air-cushion seal keeps leakage low long after the valve is put in service
- Models 2400A & 2450A feature a hinged design including a lift stop ensuring positive re-seating for reliable performance
- Models 2050A & 2450A incorporate a vacuum breaker for added vacuum relief capacity.

### TECHNICAL DETAILS

- Sizes 16", 20" and 24" (DN400, DN500 and DN600)
- ANSI 150# and API 650 drilling classes available
- Pressure settings Models 2000 1.5 - 16 osig (6.46 mbarg to 68.9 mbarg)
- Pressure settings Models 2400 1.5 - 8 osig (6.46 mbarg to 34.5 mbarg)
- Vacuum settings 0.5 - 4 osig (2.15 mbarg to 17.2 mbarg)
- Available in carbon steel, stainless steel, fiberglass and other materials
- Refer to catalog for complete details and options
- ATEX Approval



## MODEL 2100

EMERGENCY RELIEF VALVE

### FEATURES & BENEFITS

- Independently adjustable springs keep the valve tightly sealed until set pressure is reached
- FKM seating ensures a tight seal

### TECHNICAL DETAILS

- Sizes 16", 20" and 24" (DN400, DN500 and DN600)
- Pressure settings 1 - 15 psig (68.9 mbarg to 1.03 barg)
- ANSI 150# and API 650 drilling classes available
- Available in carbon steel, stainless steel and other materials
- ATEX Approval (2100A)





## MODEL 7618

VERTICAL DEFLAGRATION  
ARRESTER

### FEATURES & BENEFITS

- Proven spiral-wound, crimped ribbon, flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance
- Compact design keeps weight and installation cost down
- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Available in carbon steel, stainless steel, aluminum and other materials
- Reference the catalog for more details



## MODEL 7628

HORIZONTAL DEFLAGRATION  
ARRESTER

### FEATURES & BENEFITS

- Proven spiral-wound, crimped ribbon, flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance
- Compact design keeps weight and installation cost down
- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Eccentric design allows for horizontal installation by preventing liquid accumulation

### TECHNICAL DETAILS

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Available in carbon steel, stainless steel, aluminum and other materials
- Tapped drain and instrumentation ports available
- Reference the catalog for more details



## MODEL 7622B

DEFLAGRATION  
ARRESTER

### FEATURES & BENEFITS

- Perforated plate construction reduces pressure drop
- Design permits easy access for inspection and maintenance

### TECHNICAL DETAILS

- Sizes 1/2" through 2" (DN15-DN50)
- Available with carbon steel and stainless steel housing and stainless steel element
- Maximum operational pressure: 23.2 psia (1.60 bara)
- Operational temperature range: -4 to 140°F (-20 to 60°C)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
- IEC gas group IIB3 (MESG  $\geq$  0.65 mm)







## MODEL 7658A

DETONATION  
FLAME ARRESTER

### FEATURES & BENEFITS

- Options for in-line cleaning & swing bolts for fast removal of the flame bank assembly
- Availability of multiple flame bank assembly diameters for each pipe size allows arrester to be sized to provide required flow capacity at minimum cost
- Proven spiral-wound, crimped ribbon, flame element provides reliable flame protection
- Modular design allows easy flame bank maintenance
- Compact design keeps weight & installation cost down
- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop

### TECHNICAL DETAILS

- Sizes 2"× 5" through 6"×12" (DN50-DN150 connections)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Standard materials of construction are carbon steel or stainless steel for bases and housings
- 316 SS element is standard
- Unstable detonations
- Maximum operational pressure: 15.7 psia (1.08 bara)
- Operational temperature range: -4 to 140°F (-20 to 60°C)
- Burn Time t<sub>BT</sub>: 10 minutes
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
- Certified to USCG per 33 CFR Part 154 App. A Type II
- IEC gas group IIA (MESG ≥ 0.90 mm)



## MODEL 7661

DETONATION  
FLAME ARRESTER

### FEATURES & BENEFITS

- Housings are available in carbon steel, stainless steel or Alloy C276 and elements in stainless steel, Alloy C276 or other corrosion resistant alloys
- These arresters are compact with high flow capacity and low pressure drop
- Flame bank assemblies are easily removed in-line for cleaning and maintenance and are economical to replace if necessary

### TECHNICAL DETAILS

- Sizes 4"×16" through 12"×30" (DN100-DN300 connections)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Standard materials of construction are carbon steel or stainless steel for bases and housings
- 316SS element is standard
- Unstable detonations
- Maximum operational pressure: 15.7 psia (1.08 bara)
- Operational temperature range: -4 to 140°F (-20 to 60°C)
- Burn Time t<sub>BT</sub>: 20 minutes
- Certified to ATEX Directive in compliance with EN ISO 16852:2010 (Flame bank assembly sizes 16", 20" and 24")
- Certified to USCG per 33 CFR Part 154 App. A Type II (flame bank assembly sizes 16", 20", 24" and 30")
- IEC gas group IIA (MESG ≥ 0.90 mm)



## MODEL 7758A

DETONATION  
FLAME ARRESTER

### FEATURES & BENEFITS

- Sintered wire mesh flame element efficiently and robustly protects product
- Compact design with high flow capacity and low pressure drop reduces installation and acquisition costs
- Flame bank assemblies are easily removed in-line for cleaning and maintenance and are economical to replace if necessary

### TECHNICAL DETAILS

- Sizes 2"× 4" through 12"×20" (DN50-DN300 connections)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Housings are available in carbon steel, 316 SS and Alloy C276
- Elements are available in 316 SS, Alloy C276 and other corrosion resistant alloys
- Maximum operational pressure: 17.2 to 19.7 psia (1.188 to 1.36 bara) dependent on size
- Operational temperature range: -4 to 140°F (-20 to 60°C)
- Burn Time t<sub>BT</sub>: 5 to 30 minutes dependent on size
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
- IEC gas group IIB3 (MESG ≥ 0.65 mm)





**MODEL 12-TH**  
THIEF HATCH

**FEATURES & BENEFITS**

- Ultra-tight sealing reduces product leakage and fugitive emissions
- Higher flow capacity to protect from excessive pressure build up
- Designed for easy maintenance, thus reducing downtime and lower operational cost
- Corrosion resistance can be enhanced with FKM soft goods and coating
- Direct replacement for any standard round API 12 thief hatch
- Incorporates a mechanical lock system to be used with a pad lock or lock out bar

**TECHNICAL DETAILS**

- Sizes 8"
- Bolting: API 12
- Available Pressure Settings: 4, 6, 8, 12, 16, 24 & 32 osig
- Available Vacuum Settings: 0.4, 0.9 & 3.5 osig
- Leak Rate: 1 SCFH air @ 90% of set pressure
- Optional: Polyester/PTFE Coating
- Accessories: Flange (base) Gasket, Mounting Kit



**MODELS 6000/6100**  
GAUGE HATCH

**FEATURES & BENEFITS**

- Provides access for gauging or obtaining product samples from storage tanks
- Design ensures uniform seating while providing convenient access for gauge product sampling
- Designed with serrated foot lever surface to avoid foot slip-page when opening
- Model 6000 provides pressure relief as emergency venting
- Model 6100 incorporates positive cover hold down which assures premium tight seal on tanks with internal pressures up to 3 psig (207 mbarg)
- Fluoropolymer seating diaphragms are standard to minimize sticking caused by resinous vapors and atmospheric moisture

**TECHNICAL DETAILS**

- Sizes 4" through 10" (DN100-DN250)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Available in aluminum, carbon steel, stainless steel & additional materials
- Available in free lift or lockdown cover
- Gasketed covers are recommended on tanks with high pressure settings
- Optional materials of BUNA-N, FKM & other seating diaphragms can be provided when required
- ATEX Approval (6100)



**SERIES 1500**  
AIR OPERATED  
PRESSURE/VACUUM  
RELIEF VALVE

**FEATURES & BENEFITS**

- Snap acting design and soft-seat seals conserve product and minimize valve wear, lowering operational and maintenance costs
- Instrument air-operated allows for non-corrosive, non-plugging operation when storage media would otherwise damage or inhibit pilot operation
- Valve can be completely serviced while installed, reducing maintenance costs
- Lower profile and weight than spring operated models for high settings
- Remote pilot sensing from pressure switch
- Remote or manual blowdown available

**TECHNICAL DETAILS**

- Sizes 2" through 12" (DN50-DN300)
- 150# ANSI, PN10, PN16, JIS drilling classes available
- Pressure settings from 5 InWC to 15 psig (12.4 mbarg to 1.03 barg)
- Vacuum settings from 0.5 osig to 12 psig (2.15 mbarg to 827 mbarg) Models 1500 and 1520
- Aluminum, carbon steel, fiberglass (FRP) or special body materials available





## FIBERGLASS PLASTIC RELIEF VALVES

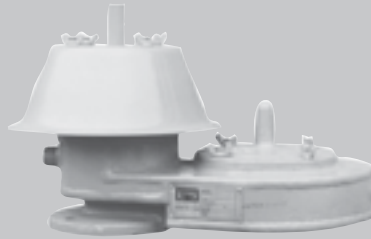
Fiberglass valves are used the same as their counterparts manufactured in metal, primarily on above ground storage tanks installations. Fiberglass construction can be used where highly corrosive and toxic liquids are being stored.

### STANDARD

- The non-metallic construction increases life in highly corrosive applications
- Peripheral and central seat guides ensure reliable, repeatable performance
- "Cushioned Air" seating
- Fluoropolymer seating diaphragms are standard
- Self draining housing body and drop rings protect seating surfaces from condensate and freezing

### AVAILABILITY

- Fiberglass construction is available on Series 1200A, 1300A, 2000A and other products



## STEAM JACKETED RELIEF VALVES

Steam jacketed valves are designed for use on tanks containing liquids whose vapors may crystallize at normal temperatures. They afford protection against valve clogging.

Uniform heating of the housing and valves assures the valve will remain in operating condition.

### SPECIAL FEATURES

- Steam jacketed valves are built of corrosion resistant materials throughout
- Valve covers can be easily removed for convenient inspection and maintenance
- Steam heated valves are suitable for steam circulation up to 100 psig (6.89 barg) saturated

### AVAILABILITY

- Steam jacketed valves are available on Models 1200A, 1220A, 1260A, 1300A, 1360A, 2000A, 2300A and 2400A



## MODEL 210 TEST STAND

The Model 210 Test Stand contains all valves and gauges necessary to accurately verify settings for both pressure and vacuum conditions. Seat leakage is monitored using flow meters ranging from 0.1 - 100 SCFH.

The Model 210 Test Stand is designed to assist in meeting the requirements of the 1990 Clean Air Act Amendments.

### STANDARD

- Pressure/Vacuum testing
- Digital gauges
- Flowmeters
- Manometers
- Pressure vessel directly under test flange for smooth regulated pressure or vacuum
- Heavy steel construction
- SS tubing
- Mounting adapters & gaskets included

### OPTIONS

- Pilot valve kit
- Blanket gas regulator kit

## WHY PRESSURE/ VACUUM RELIEF VALVES ARE REQUIRED

- Saves money by saving product
- Minimizes evaporation emissions
- Protects tank from over or under pressure when sized properly
- Protection against fire hazard when conforming to API standards
- Reduces atmospheric corrosion of tank
- Generally required by OSHA, EPA, etc.

For specific performance characteristics of the products contained in this selection guide, please see the Groth Industrial Catalogs.

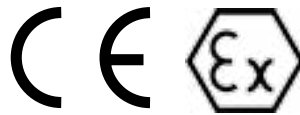


SMART RELIEF...SAFE SOLUTIONS<sup>SM</sup>

All Groth manufacturing facilities are ISO 9001 approved.



The products in this document may qualify for some, none or all of these certifications:



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