



Griffco Valve Inc.
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CHEMICAL PUMP ACCESSORIES



BACK PRESSURE VALVES

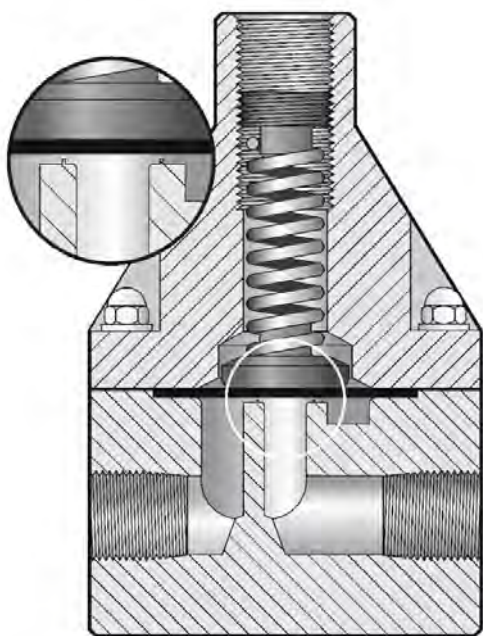
Griffco M & G-Series diaphragm back pressure valves are designed to enhance the performance of any chemical feed system by applying a constant pressure to the discharge of the pump. This will ensure positive ball seating in the pump check valve, a positive head differential and a constant minimum discharge head. The valve also acts as an anti-siphon valve.

Features:

- Robust Construction ensures high reliability in municipal and industrial applications.
- Vulcanized PTFE / EPDM diaphragm
- Adjustable 1 – 10 bar pressure range
- Optional 17 bar & 25 bar rated valves
- Anti-Siphon Function
- Optional built in priming valve
- Tamper resistant adjustment screw
- Wide range of liquid handling materials include: PVC, CPVC, PP, PVDF, PTFE 316 SS, Alloy 20, Hastelloy C



Operation:



Griffco diaphragm back pressure valves apply positive discharge pressure to a metering pump system to prevent siphoning and eliminate varying dosage rates caused by fluctuating downstream pressure. The diaphragm is held against the valve seat by an internal spring. When the preset pressure is exceeded, the diaphragm is forced up and chemical flows through the valve to the injection point. The valves are preset for 3.5 bar, however they are field adjustable from 1 – 10 bar (optional 17 bar and 25 bar) via the adjustment screw. Installation should be as close to the injection point as possible to prevent chemical line drainage, and it is most important that all chemical system equipment such as pulsation dampeners and pressure gauges are between the pump and back pressure valve.

PRESSURE RELIEF VALVES

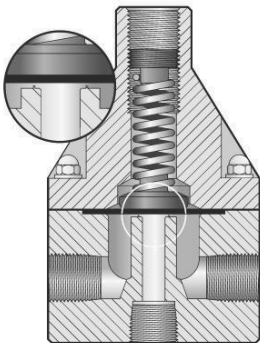
Griffco M & G-Series diaphragm pressure relief valves are designed to protect chemical feed systems from damage caused by excessively high pressure, a result of a blockage in the chemical feed line due to defective equipment, accidental valve closure, or plugged injection valves.

Features:

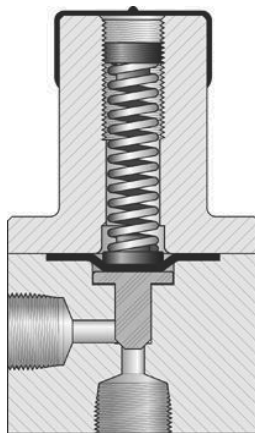
- Robust Construction ensures high reliability in municipal and industrial applications.
- Vulcanized PTFE / EPDM diaphragm
- Adjustable 1 – 10 bar pressure range
- Optional 17 bar, 25 bar, and high pressure rated valves up to 135 bar
- Tamper resistant adjustment screw
- Wide range of liquid handling materials include: PVC, CPVC, PP, PVDF, PTFE, 316 SS, Alloy 20, Hastelloy C



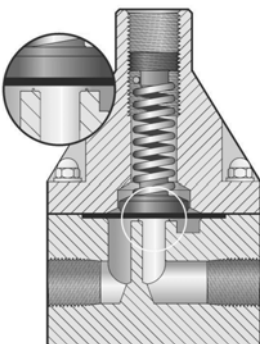
Operation:



3 port design, DN8 – DN25 valves



2 port design, high pressure valves



2 port design, DN8 – DN100 valves

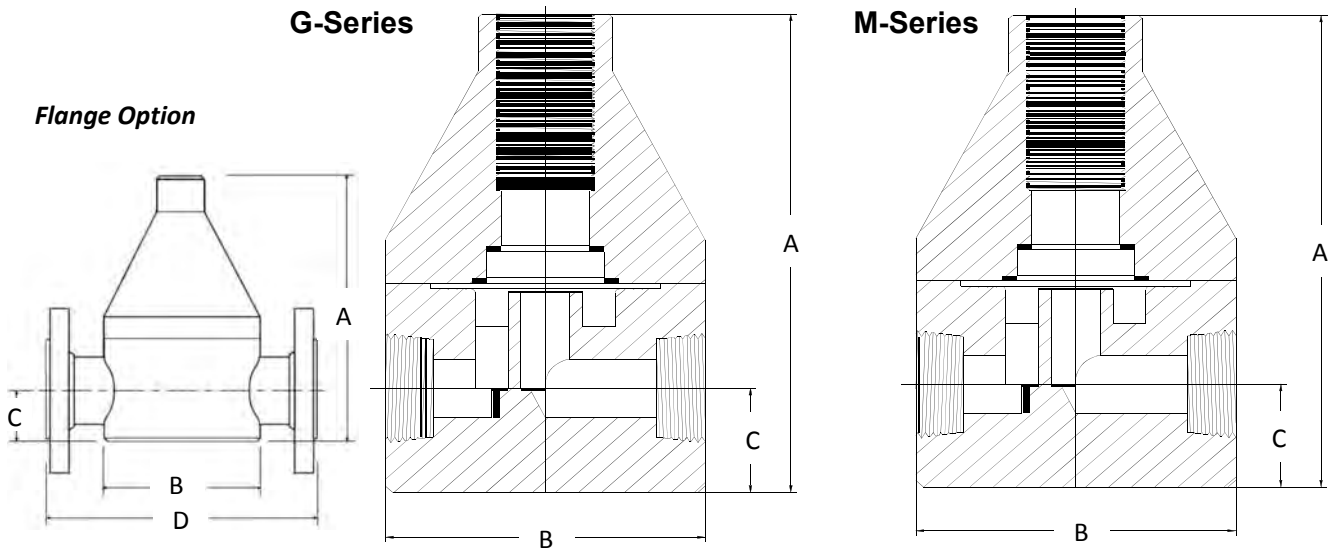
Griffco diaphragm pressure relief valves operate when the pressure in the chemical system exceeds the preset pressure of the valve. The diaphragm is held against the valve seat by an internal spring. When the preset pressure is exceeded the diaphragm is forced up and the chemical flows out the relief port, back to the chemical tank or to the suction side of the pump. The valves are pre-set at 3.5 bar, however they are field adjustable from 1 – 10 bar, (optional 17 bar, 25 bar, and high pressure rated valves up to 135 bar) via the adjustment screw. The relief valve should be set approximately 1 bar higher than the system pressure. Installation should be made as close to the pump as possible, without any valves or accessories between the relief valve and the pump. Consult your pump manufacturer for their recommendations.

EQUIPMENT SELECTION GUIDE

Technical Data:

Models PRM, PRG, BPM & BPG Sizes: (DN)	8, 10, 15, 20, 25, 40, 50, 80, 100				
Connections:	ISO Thread, Socket, Union, & Flange				
Pressure Adjustment	Standard: 1–10 bar, Optional: 0–3.5 bar, 1–17 bar, 3.5 – 25 bar *NOTE: Size DN 40 and larger valves; MAX RANGE 1 – 17 bar				
Flow Rates @ 10 bar	Shipping Weight: Kgs				
Size	Pulsating	Continuous	Plastic	Metal / Plastic Top	Metal / Metal Top
DN8	375 l/h	1135 l/h	0.45	1.14	1.36
DN10	757 l/h	2271 l/h	0.45	1.14	1.36
DN15 (M Series)	984 l/h	3400 l/h	0.45	1.36	1.59
DN15 (G Series)	1135 l/h	4770 l/h	1.4	2.5	3.0
DN20	1135 l/h	4770 l/h	1.4	2.5	3.0
DN25	1890 l/h	5905 l/h	1.6	2.7	3.2
DN40	4542 l/h	14.3 m3/h	4.0	8.0	12.5
DN50	8892 l/h	28.4 m3/h	4.0	9.0	13.6
DN80	19.6 m3/h	61.2 m3/h	12.7	31.8	36.3
DN100	19.6 m3/h	61.2 m3/h	13.6	34.0	38.6
Max Temperature: (°C)	PVC: 60° ; CPVC & PP: 90°; PTFE, PVDF, & Metal: 150°, (Peak 200°)				
Max Operating Pressure (bar) @ 21°C	Plastic/Noryl: 25 bar		Metal/Metal: 135 bar		
Materials of Construction:					
Diaphragm	PTFE / EPDM, Optional: Viton, Hypalon & PTFE / Viton				
Valve Top	Standard: Noryl (DN15 – DN50); PVC (DN80 – DN100) Optional: 316 SS				
Valve Body	PVC, CPVC, PP, PTFE, PVDF, Halar, 316 SS, A 20, Hast. C				

Dimensions:



Dimensions: All Materials G-Series BPG, BPHF, PRG, PRHF				Flange Option D (cm)
Size	A (cm)	B (cm)	C (cm)	
DN15	14.12	8.90	2.857	22.60
DN20	14.12	8.90	2.857	22.60
DN25	14.88	8.90	3.175	22.60
DN40	21.21	12.45	4.635	26.67
DN50	22.60	12.45	5.461	26.67
DN80	28.58	15.24	7.62	38.10*
DN100	28.58	15.24	7.62	38.10*

Dimensions: All Materials M-Series BPM & PRM				Flange Option D (cm)
Size	A (cm)	B (cm)	C (cm)	
DN8	9.02	5.97	1.90	N/A
DN10	9.02	5.97	1.90	N/A
DN15	10.80	5.97	2.74	16.13

*Available In Flange Only

PRODUCT CODES

Back Pressure Valves:

Product Codes for Ordering M-Series Valves

BPM

1 2 3 4

1 = Size

D008 – DN8
D010 – DN10
D015 – DN15

2 = Material

P - PVC
CP - CPVC
PP - Polypro
T - PTFE
K - PVDF
H - Halar
S - 316 SS
A - Alloy 20
C - Hastelloy

3 = Spring Opt

1 - 0 – 3.5 bar
2 - 1 – 17 bar

4 = Options

V - Viton Diaphragm
S - Socket Connection
F - Flange Connection
U - Union Connection
OSS - 316 SS Top
MSS - 3.5 – 25 bar
AR - Priming Valve
90 - 90° Configuration

Product Codes for Ordering G-Series Valves

BPG

(High Flow) **BPHF** 1 2 3 4

1 = Size

D015 – DN15
D020 – DN20
D025 – DN25
D040 – DN40
D050 – DN50
D080 – DN80
D100 – DN100

2 = Material

P - PVC
CP - CPVC
PP - Polypro
T - PTFE
K - PVDF
H - Halar
S - 316 SS
A - Alloy 20
C - Hastelloy

3 = Spring Opt

1 - 0 – 3.5 bar
2 - 1 – 17 bar

4 = Options

V - Viton Diaphragm
S - Socket Connection
F - Flange Connection
U - Union Connection
OSS - 316 SS Top
MSS - 3.5 – 25 bar
AR - Priming Valve
90 - 90° Configuration

Pressure Relief Valves:

Product Codes for Ordering M-Series Valves

PRM

1 2 3 4

1 = Size

D008 – DN8
D010 – DN10
D015 – DN15

2 = Material

P - PVC
CP - CPVC
PP - Polypro
T - PTFE
K - PVDF
H - Halar
S - 316 SS
A - Alloy 20
C - Hastelloy

3 = Spring Opt

1 - 0 – 3.5 bar
2 - 1 – 17 bar

4 = Options

V - Viton Diaphragm
S - Socket Connection
F - Flange Connection
U - Union Connection
OSS - 316 SS Top
MSS - 3.5 – 25 bar
AR - Priming Valve
90 - 90° Configuration

Product Codes for Ordering G-Series Valves

PRG

(High Flow) **PRHF** 1 2 3 4

(High Pressure) **PRHP**

1 = Size

D015 – DN15
D020 – DN20
D025 – DN25
D040 – DN40
D050 – DN50
D080 – DN80
D100 – DN100

2 = Material

P - PVC
CP - CPVC
PP - Polypro
T - PTFE
K - PVDF
H - Halar
S - 316 SS
A - Alloy 20
C - Hastelloy

3 = Spring Opt

1 - 0 – 3.5 bar
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V - Viton Diaphragm
S - Socket Connection
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OSS - 316 SS Top
MSS - 3.5 – 25 bar
AR - Priming Valve
90 - 90° Configuration

CALIBRATION CYLINDERS

Griffco PVC & Borosilicate Glass Calibration Cylinders are designed to enhance the performance of a chemical feed system by providing a verification of the flow rate of the chemical feed pump.

Features: PVC Cylinders

- High Reliability / Low Cost
- High Contrast Graduation Markings
- Clear Easy-View Tube
- Robust Construction
- Direct GPH and mL Readout
- Sealed Top with Overflow Connection
- Optional EZ-Clean Model
- Optional Open Top with Dust Cap

Features: Glass Cylinders

- High Reliability / Low Cost
- Borosilicate Glass Tube
- 7 End Cap Materials
- Easy Disassembly For Cleaning
- Protective Outer Shield (Except 10K & 20K)
- High Contrast Graduation Markings
- US, Metric & GPH Scales
- Sealed Top with Overflow Connection

Operation:

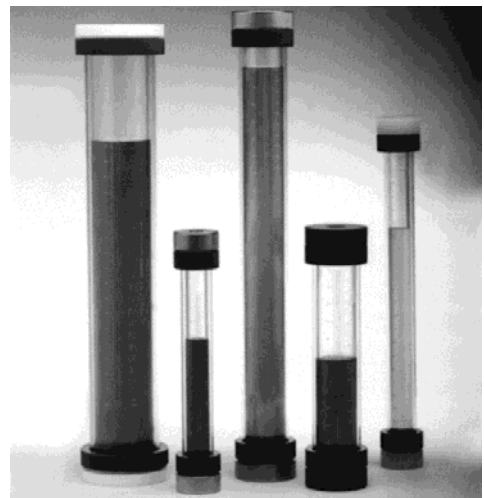
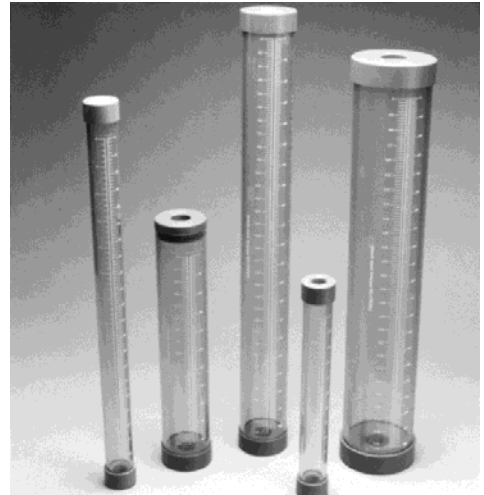
Griffco calibration cylinders are installed in the suction line to the chemical pump. Two isolating valves, (not supplied) must be installed in the suction line as per the typical installation drawing. The top of the cylinder should be vented back to the storage tank or to drain.

Fill the cylinder to the top mark then close the valve from the chemical tank. Switch on the chemical feed pump and draw down the chemical in the cylinder for 30 seconds. Switch the pump off. The reading on the right side of the cylinder is a direct readout of US gph.

Alternatively, observe the volume withdrawn on the ml scale. To convert to LPH use this formula:

$$\text{LPH} = (\text{volume} \div \text{draw time}) \times 3.6$$

Note: Maximum cylinder pressure is 1 bar



Product Codes:

For PVC CC -

For Glass CCG -

1

2

1=Size

- 0030 – 30 mL *
- 0100 – 100 mL
- 0200 – 200 mL
- 0300 – 300 mL **
- 0500 – 500mL
- 1000 – 1000 mL
- 2000 – 2000 mL
- 4000 – 4000 mL
- 5000 – 5000 mL
- 7000 – 7000 mL
- 10000 – 10000 mL
- 15000 – 15000 mL
- 20000 – 20000 mL
- 30000 – 30000 mL
- 40000 – 40000 mL

2=End Caps/Material

Ends for PVC:

- S = Sealed c/w Vent
- L = Dust Cover
- EZ = Easy Clean

Ends for Glass:

- P = PVC
- CP = CPVC
- PP = Polypro
- K = PVDF
- T = Teflon
- M = 316 SS
- A = Alloy 20

* 30mL, Glass Only **300, PVC Only

INJECTION QUILLS & ACCESSORIES

INJECTION QUILLS:

Griffco injection check valves are designed to ensure chemical feed systems feed chemical into the center of the process stream for better mixing and to prevent corrosion along the edge of the process pipe. The ball check prevents the process fluid from going back up the chemical line.

Features:

- High Reliability / Low Cost
- Robust Machined Construction
- Comes Complete with Union
- Hastelloy C Spring
- Integrated Quill
- Optional Chemical Line Drain
- Wide Range of Materials
- Various Sizes: DN15 – DN50



ACCESSORIES:

Integrated Priming Valve

Griffco diaphragm backpressure valves are designed to enhance the performance of chemical feed systems. The addition of a priming valve to the backpressure valve enables the manual priming of the pump.

Features:

- Manual Pump Priming
- Manual Pump Head Degassing
- Optional Automatic Degassing
- Available in PVC, PP, PVDF, 316 SS



Spare Parts Kits:

Kits include:

- Diaphragm
- Spring
- Threaded adjustment screw
- Diaphragm support disc

Connector Sets:

To connect flexible tubing to the valve

Wall Brackets:

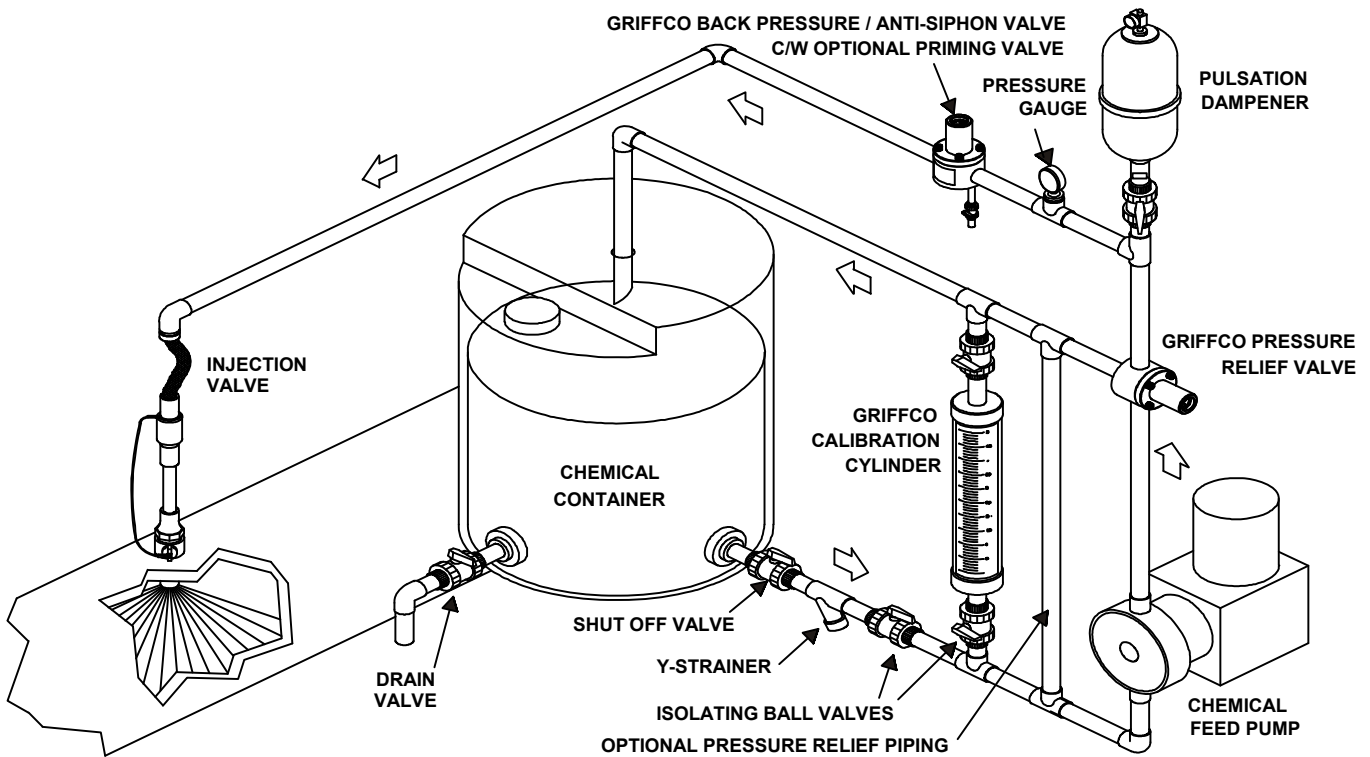
To facilitate mounting the back pressure and pressure relief valves.

Calibration Cylinder Stands & Accessories:

- Floor Stands
- Ball Valves



TYPICAL INSTALLATION



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