

Pulsation Dampeners



Griffco pulsation dampeners are designed to enhance the performance of chemical feed systems by reducing harmful shock waves and delivering continuous chemical dosage at the injection point.

Features:

- High Reliability, Low Cost
- 9 Volumetric Sizes Available
- CPVC, PVDF, Noryl®, PVC, PP, 316SS Construction
- Multiple Diaphragm Materials
- Pressures Up To 17 bar Metallic; 10 bar Plastic

Information needed to size a dampener:

1 – Type of pump. (K factor)

- Simplex: Single Acting= .60; Double Acting = .25
- Duplex: Single Acting= .25; Double Acting = .15
- Triplex: Single Acting= .13; Double Acting = .06
- Quadruplex: Single Acting= .10; Double Acting = .06
- Quintuplex: Single Acting= .06; Double Acting = .02

2 – Volume/Stroke of dosing pump in cm³ (V)

3 – System mean operation pressure (SP)

4 – Min and max operating pressure (Pmin & Pmax)

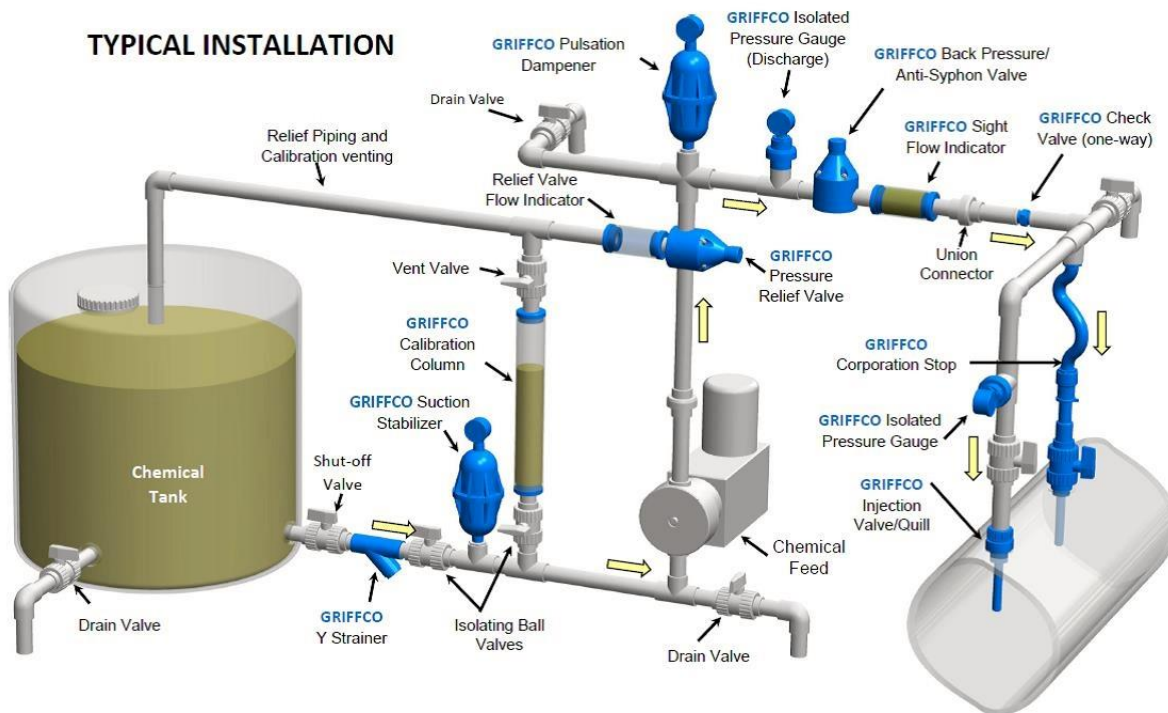
5 – Compressed charge in dampener (y)

Compressed Air =1.0; Nitrogen=.714

Required Dampener Capacity (C) Calculation:

$$C \text{ (cm}^3\text{)} = \frac{(V) \times (K) \times (SP/P_{min})^y}{1 - (SP/P_{max})^y}$$

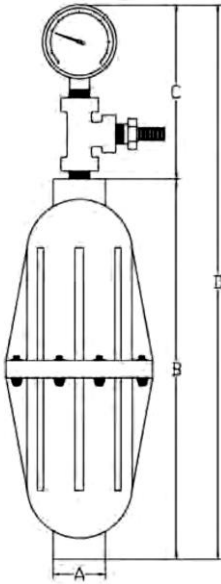
TYPICAL INSTALLATION



TECHNICAL DATA:

| | |
|------------------------------------|---|
| Materials of Construction: | Body: CPVC, PVDF, Noryl®, PVC, PP, 316 SS Top: Noryl®, 316 SS |
| Connection Sizes: | 1/2", 3/4" and 1" |
| Connections: | Standard: NPT, Optional: BSPT, Flanged, Socket, Union, |
| Gauge Port Sizes | Standard: 1/4", Optional: 1/8" |
| Max Temperature: (°C) | CPVC: 80°, PVDF: 110°, Noryl: 110°, PVC: 60°, PP: 80° |
| Max Operating Pressure @ 21 °C | Plastic: 10 bar (peak: 17 bar), Metal 17 bar (peak 24 bar) |
| Diaphragm Material | Standard: EPDM, Optional: Viton®, Hypalon® |
| Gauge and Charging Valve Materials | Standard: Brass, Optional: 316 SS |
| Dampening Effect | ± 2.5% |
| Optional Gauges | Std: 0 – 11 bar; Optional: 0 – 4 bar, 0 – 7 bar, 0 – 14 bar, 0 – 21 bar |

Dimensions for Plastics:



| Model | Capacity (cm ³) | A | B (mm) | C (mm) | D (mm) |
|--------|-----------------------------|------|--------|--------|--------|
| PD0011 | 98,0 | 1/2" | 107,5 | 106,5 | 214,0 |
| PD0012 | 160,00 | 1/2" | 144,5 | 106,5 | 251,5 |
| PD0013 | 245,00 | 1/2" | 181,5 | 106,5 | 288,5 |
| PD0021 | 262,00 | 3/4" | 133,5 | 111,5 | 245,5 |
| PD0022 | 475,00 | 3/4" | 197,0 | 111,5 | 309,0 |
| PD0023 | 688,00 | 3/4" | 260,5 | 111,5 | 372,5 |
| PD0031 | 590,00 | 1" | 147,0 | 111,5 | 259,0 |
| PD0032 | 1.380,00 | 1" | 251,5 | 111,5 | 363,5 |
| PD0033 | 2.048,00 | 1" | 355,5 | 111,5 | 467,5 |

Note: Dimensions for 316 SS available upon request

Product Codes for Ordering:

PD □ □ □ □ □ □ □ □
 1 2 3 4 5 6

| 1 - Size | 2 - Housing Material | 3 - Diaphragm Material | 4 - Charging Assembly Options | 5 - Pressure Options | 6 - Other Options |
|----------------------------|----------------------|------------------------|----------------------------------|----------------------|--------------------------------|
| 0011 – 6 in ³ | CP - CPVC | E – EPDM | 0 - Brass Tee & Economy Gauge | 1 – 11 bar | B - BSPT Connection |
| 0012 – 10 in ³ | K – PVDF | H - Hypalon® | 1 - Brass Tee & Mid Range Gauge | 2 – 4 bar | F - Flanged Connection |
| 0013 – 15 in ³ | N – Noryl® | V – Viton® | 2 - Brass Tee & Premium Gauge | 3 – 7 bar | R - Rubber Boot for Gauge |
| 0021 – 16 in ³ | P - PVC | | 3 - 316 SS Tee & Economy Gauge | 4 – 14 bar | S - Socket Connection |
| 0022 – 29 in ³ | PP – GF Polypro | | 4 - 316 SS Tee & Mid Range Gauge | 5 – 21 bar | U - Union Connection |
| 0023 – 42 in ³ | S – 316 SS | | 5 - 316 SS Tee & Premium Gauge | | UD - Metric Union Connection |
| 0031 – 36 in ³ | | | 6 - Brass Tee - Compound Gauge | | UZ - Threaded Union Connection |
| 0032 – 80 in ³ | | | 7 - 316 SS Tee - Compound Gauge | | M – Back Mount Gauge |
| 0033 – 125 in ³ | | | | | M8 – Back Mount 1/8" Gauge |

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