



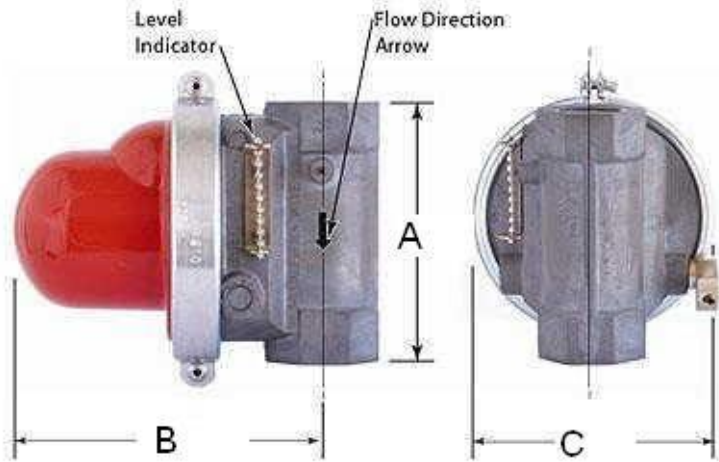
Koso/California Valve
Pacific Seismic Products

Seismic Shut-off Valve-NPT

Vertical - Top Entry

Specifications & Response To Seismic Disturbance

- Manual Reset
- High flow efficiency with minimal pressure drop
- Positive closure, soft seal seating
- Visual open-close indicator
- Made in the USA
- Meets ASCE 25-06



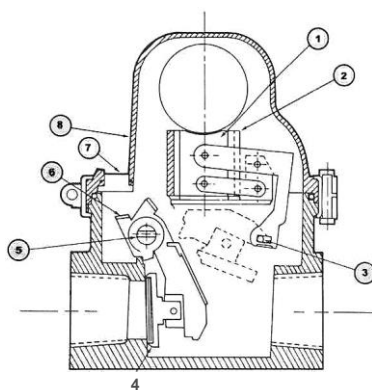
| Thread | Model No. | Max Pressure | Length A | Height B | Width C |
|--------|-------------|--------------|----------|----------|---------|
| 3/4" | EV-VT300-7 | 7 PSI | 4" | 4 3/4" | 3 7/8" |
| | EV-VT310-60 | 60 PSI | | | |
| 1" | EV-VT301-7 | 7 PSI | 4" | 4 3/4" | 3 7/8" |
| | EV-VT311-60 | 60 PSI | | | |
| 1 1/4" | EV-VT302-7 | 7 PSI | 5 1/4" | 5" | 3 7/8" |
| | EV-VT312-60 | 60 PSI | | | |
| 1 1/2" | EV-VT303-7 | 7 PSI | 5 1/4" | 5" | 3 7/8" |
| | EV-VT313-60 | 60 PSI | | | |
| 2" | EV-VT314-60 | 60 PSI | 5 5/8" | 5" | 3 7/8" |
| 2-1/2" | EV-VT318-60 | 60 PSI | 8 1/8" | 5 5/8" | 4 3/4" |

The valve shall close within five seconds when subjected to a horizontal, sinusoidal oscillation with the following characteristics:

| Peak Acceleration | Period |
|-------------------|--------------|
| 1. 0.7G | 0.13 Seconds |
| 2. 0.4G | 0.2 Seconds |
| 3. 0.3G | 0.4 Seconds |
| 4. 0.25G | 1.00 Seconds |

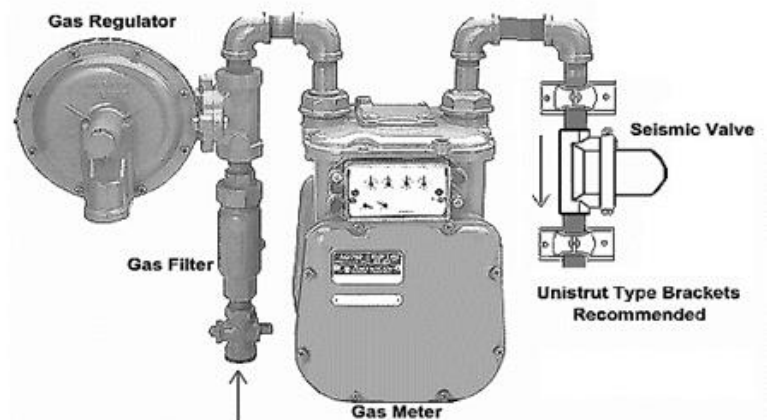
The valve shall not close when subjected for five seconds to each of three horizontal, sinusoidal oscillations with the following characteristics:

| Peak Acceleration | Period |
|-------------------|--------------|
| 1. 0.4G | 0.1 Seconds |
| 2. 0.2G | 0.2 Seconds |
| 3. 0.15G | 0.40 Seconds |
| 4. 0.10G | 1.00 Seconds |



1. Stationary Post, supporting ball
2. Reacting cylinder
3. Rolling latch (no sliding friction)
4. Soft seat
5. Manual reset
6. Position indicator
7. Visual open-close indicator
8. Bonnet

TYPICAL INSTALLATION



Capacity Charts

Capacity charts represent CFH of natural gas at 60° F

Use the following charts to determine the approximate loss of pressure (in inches water column) through the valve.

1. Identify maximum inlet pressure to the valve.
2. Identify maximum Cubic Feet/Hour – CFH
3. See Column 1 for the pressure drop.

3/4" 300-7 310-60
CV=21 (Equivalent Length of Pipe = 3')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|------|-------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 362 | 365 | 394 | 465 | 510 | 551 |
| 0.2 | 512 | 516 | 556 | 657 | 721 | 779 |
| 0.3 | 627 | 631 | 681 | 805 | 883 | 954 |
| 0.4 | 724 | 729 | 787 | 930 | 1019 | 1102 |
| 0.5 | 809 | 815 | 880 | 1039 | 1140 | 1232 |
| 0.6 | 886 | 893 | 963 | 1138 | 1248 | 1349 |
| 0.7 | 957 | 964 | 1040 | 1229 | 1346 | 1457 |
| 0.8 | 1023 | 1031 | 1112 | 1314 | 1441 | 1558 |
| 0.9 | 1085 | 1093 | 1180 | 1374 | 1529 | 1652 |
| 1 | 1144 | 1152 | 1243 | 1469 | 1611 | 1742 |
| 2 | 1616 | 1627 | 1756 | 2076 | 2277 | 2462 |
| 3 | 1976 | 1990 | 2149 | 2510 | 2787 | 3013 |
| 4 | 2279 | 2296 | 2479 | 2932 | 3216 | 3478 |
| 5 | 2545 | 2564 | 2769 | 3275 | 3594 | 3886 |

1" 301-7 311-60
CV=41 (Equivalent Length of Pipe = 3')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|------|-------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 707 | 712 | 768 | 908 | 995 | 1076 |
| 0.2 | 1000 | 1007 | 1086 | 1283 | 1407 | 1521 |
| 0.3 | 1224 | 1233 | 1330 | 1572 | 1724 | 1863 |
| 0.4 | 1413 | 1423 | 1536 | 1815 | 1990 | 2151 |
| 0.5 | 1580 | 1591 | 1717 | 2029 | 2225 | 2405 |
| 0.6 | 1731 | 1743 | 1881 | 2222 | 2437 | 2634 |
| 0.7 | 1869 | 1882 | 2031 | 240 | 2632 | 2845 |
| 0.8 | 1998 | 2012 | 2171 | 2566 | 2814 | 3042 |
| 0.9 | 2119 | 2134 | 2303 | 2721 | 2984 | 3226 |
| 1 | 2233 | 2249 | 2427 | 2868 | 3145 | 3400 |
| 2 | 3154 | 3177 | 3429 | 4053 | 4446 | 4806 |
| 3 | 3858 | 3886 | 4196 | 4961 | 5442 | 5883 |
| 4 | 4450 | 4482 | 4840 | 5724 | 6280 | 6790 |
| 5 | 4969 | 5005 | 5406 | 6395 | 7017 | 7588 |

1 1/4" 302-7 312-60
CV=64 (Equivalent Length of Pipe = 4')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|------|-------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 1103 | 1111 | 1199 | 1417 | 1554 | 1679 |
| 0.2 | 1560 | 1571 | 1696 | 2003 | 2197 | 2375 |
| 0.3 | 1911 | 1924 | 2077 | 2453 | 2690 | 2908 |
| 0.4 | 2466 | 2484 | 2681 | 3167 | 3473 | 3764 |
| 0.5 | 2701 | 2721 | 2936 | 3469 | 3804 | 4112 |
| 0.6 | 2917 | 2938 | 3171 | 3747 | 4109 | 4441 |
| 0.7 | 3118 | 3141 | 3390 | 4005 | 4392 | 4748 |
| 0.8 | 3307 | 3331 | 3595 | 4248 | 4658 | 5036 |
| 1 | 3486 | 3511 | 3789 | 4477 | 4910 | 5308 |
| 2 | 4924 | 4959 | 5353 | 6327 | 6940 | 7502 |
| 3 | 6023 | 6066 | 6549 | 7743 | 8494 | 9184 |
| 4 | 6946 | 6996 | 7555 | 8935 | 9802 | 10599 |
| 5 | 7757 | 7813 | 8438 | 9982 | 10953 | 11844 |

1 1/2" 303-7 313-60
CV=101 (Equivalent Length of Pipe = 5')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|-------|-------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 1741 | 1754 | 1893 | 2236 | 2452 | 2650 |
| 0.2 | 2462 | 2480 | 2676 | 3162 | 3467 | 3748 |
| 0.3 | 3015 | 3037 | 3277 | 3872 | 4246 | 4590 |
| 0.4 | 3892 | 3920 | 4230 | 4888 | 5481 | 5924 |
| 0.5 | 4263 | 4293 | 4633 | 5474 | 6004 | 6490 |
| 0.6 | 4604 | 4637 | 5004 | 5913 | 6484 | 7009 |
| 0.7 | 4921 | 4956 | 5349 | 6320 | 6931 | 7493 |
| 0.8 | 5219 | 5256 | 5673 | 6703 | 7351 | 7947 |
| 0.9 | 5501 | 5540 | 5979 | 7065 | 7749 | 8376 |
| 1 | 5832 | 5873 | 6333 | 7463 | 8177 | 8834 |
| 2 | 7770 | 7826 | 8448 | 9985 | 10952 | 11840 |
| 3 | 9505 | 9573 | 10336 | 12220 | 13405 | 14493 |
| 4 | 10962 | 11041 | 11922 | 14100 | 15469 | 16727 |
| 5 | 12241 | 12330 | 13316 | 15753 | 17285 | 18691 |

2" 314-60
CV=164 (Equivalent Length of Pipe = 5')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|-------|-------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 2828 | 2848 | 3073 | 3630 | 3981 | 4303 |
| 0.2 | 3998 | 4027 | 4346 | 5134 | 5630 | 6085 |
| 0.3 | 4896 | 4931 | 5322 | 6287 | 6894 | 7452 |
| 0.4 | 5653 | 5693 | 6144 | 7259 | 7960 | 8605 |
| 0.5 | 6320 | 6365 | 6869 | 8115 | 8899 | 9620 |
| 0.6 | 6922 | 6971 | 7524 | 8889 | 9748 | 10537 |
| 0.7 | 7476 | 7529 | 8126 | 9601 | 1052 | 11381 |
| 0.8 | 7991 | 8048 | 8686 | 10263 | 11255 | 12166 |
| 0.9 | 8475 | 8535 | 9212 | 10885 | 11937 | 12904 |
| 1 | 8932 | 8996 | 9709 | 11473 | 12582 | 13601 |
| 2 | 12617 | 12707 | 13717 | 16213 | 17783 | 19225 |
| 3 | 15434 | 15545 | 16783 | 19842 | 21766 | 23533 |
| 4 | 17800 | 17928 | 19359 | 22895 | 25118 | 27160 |
| 5 | 19877 | 20020 | 21622 | 25579 | 28066 | 30350 |

2-1/2" 318-60
CV=236 (Equivalent Length of Pipe = 10')

| "W.C. Drop | Inlet Pressures - CFH | | | | | |
|------------|-----------------------|--------|--------|--------|--------|--------|
| | 8" | 14" | 3 PSI | 10 PSI | 15 PSI | 20 PSI |
| 0.1 | 4,069 | 4,098 | 4,422 | 5,224 | 5,729 | 6,192 |
| 0.2 | 5,754 | 5,795 | 6,253 | 7,388 | 8,101 | 8,757 |
| 0.3 | 7,046 | 7,096 | 7,658 | 9,047 | 9,921 | 10,724 |
| 0.4 | 8,135 | 8,193 | 8,842 | 10,446 | 11,455 | 12,382 |
| 0.5 | 9,094 | 9,159 | 9,884 | 11,678 | 12,807 | 13,843 |
| 0.6 | 9,961 | 10,032 | 10,827 | 12,792 | 14,028 | 15,164 |
| 0.7 | 10,758 | 10,835 | 11,693 | 13,816 | 15,151 | 16,378 |
| 0.8 | 11,499 | 11,581 | 12,499 | 14,769 | 16,196 | 17,508 |
| 0.9 | 12,195 | 12,282 | 13,256 | 15,663 | 17,178 | 18,569 |
| 1 | 12,853 | 12,945 | 13,972 | 16,509 | 18,106 | 19,572 |
| 2 | 18,156 | 18,286 | 19,739 | 23,331 | 25,590 | 27,665 |
| 3 | 22,210 | 22,369 | 24,151 | 28,554 | 31,322 | 33,865 |
| 4 | 25,615 | 25,799 | 27,858 | 32,947 | 36,146 | 39,084 |
| 5 | 28,604 | 28,810 | 31,115 | 36,809 | 40,388 | 43,675 |