

# SAFETY & RELIEF VALVES

## Low Pressure Air Relief Valves

### 14-400 AND 14-500 SERIES

High volume air relief valves designed for low pressure/high volume air and gas service. Rugged bronze construction features elastomer soft seating and TFE coated discs for dependable operation.

Inlet sizes 2", 2 1/2" and 3"  
Factory set pressures 4 to 22 psig @ 400°F max.

#### APPLICATIONS:

- Non-ASME code air and gas service
- Low pressure, high volume blowers and compressors
- Bulk hauling tanks, trailers and rail cars
- Powdered solids / bulk handling
- Pneumatic conveying equipment

#### FEATURES:

- Vibration resistant soft seat is standard
- Stainless steel spring
- One piece corrosion resistant bronze body design
- High flow "top-guided" design

#### OPTIONS:

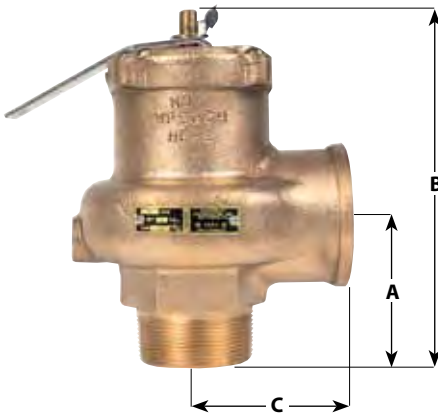
- Model 14-400 with test lever
- Model 14-500 with plain cap, weather resistant sealed body

#### AIR RELIEF CAPACITY:

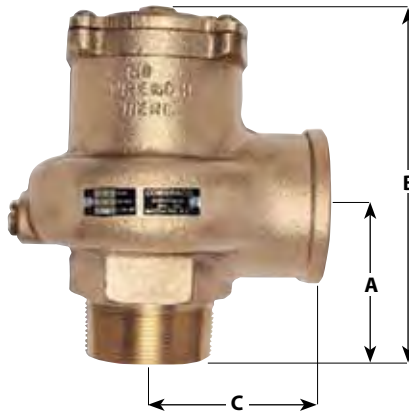
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#### DIMENSIONS AND WEIGHTS

| Model Number | Size (in./mm.) | Dimensions (in./mm.) |       |       | Wt./Ea. (lbs./kg.) |
|--------------|----------------|----------------------|-------|-------|--------------------|
|              |                | A                    | B     | C     |                    |
| 14-X05       | 2 x 2          | 3                    | 6-1/2 | 3-1/8 | 8.4                |
|              | 50M x 50F      | 76                   | 165   | 79    | 3.81               |
| 14-X06       | 2-1/2 x 2-1/2  | 3-1/2                | 7-5/8 | 3-1/2 | 12.5               |
|              | 65M x 65F      | 89                   | 194   | 89    | 5.7                |
| 14-X07       | 3 x 3          | 4-1/8                | 8-3/4 | 3-7/8 | 17.0               |
|              | 80M x 80F      | 105                  | 222   | 98    | 7.7                |



14-400  
W/LIFT LEVER



14-500  
PLAIN CAP

#### MODEL NUMBERING SYSTEM

##### 14-400/500 Series Air Relief Valves

| 14                  | -X   | -XX   | -X                              |
|---------------------|--|---|---------------------------------|
| SERIES NUMBER       | BODY/CAP STYLE AND SERVICE                                   | INLET CONNECTION                              | RELIEF PRESSURE                 |
| 14 = Base Model No. | 4 = Air Relief, with Test Lever<br>5 = Air Relief, Plain Cap | 05 = 2" NPT<br>06 = 2 1/2" NPT<br>07 = 3" NPT | Set Pressure in PSIG (2 Digits) |

#### EXAMPLES:

14-406 12

2-1/2" 14 Series air relief valve set at 12 psig, with lift lever

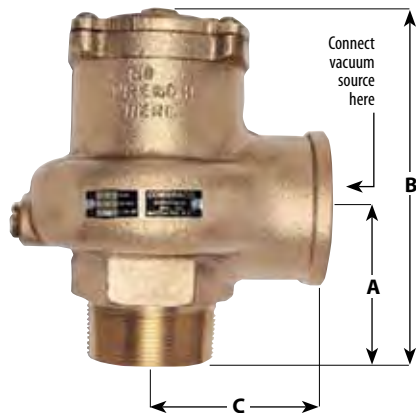
14-505-08

2" air relief valve set at 8 psig, with sealed cap

# SAFETY & RELIEF VALVES

## Vacuum Relief Valves

### 14-600 SERIES



14-600

High flow vacuum relief valves feature one piece cast bronze bodies. Teflon coated discs and elastomer soft seating provide accurate and dependable operation.

Connection sizes 2", 2 1/2" and 3"  
Relief settings 8" to 30" Hg @ 400°F max.

#### APPLICATIONS:

- High volume vacuum systems
- Bulk hauling tanks and trailers
- Powdered solids / bulk handling
- Pneumatic conveying equipment

#### FEATURES:

- Weather resistant construction
- Elastomer soft seat is vibration resistant
- Stainless steel spring
- One piece corrosion resistant bronze body design
- High capacity "top-guided" design
- TFE / chrome plated internals

#### VACUUM AIR RELIEF CAPACITY:

See page 19

#### DIMENSIONS AND WEIGHTS

| Model Number | Size (in./mm.) | Dimensions (in./mm.) |       |       | Wt./Ea. (lbs./kg.) |
|--------------|----------------|----------------------|-------|-------|--------------------|
|              |                | A                    | B     | C     |                    |
| 14-605       | 2 x 2          | 3                    | 6-1/2 | 3-1/8 | 8.4                |
|              | 50M x 50F      | 76                   | 165   | 79    | 3.81               |
| 14-606       | 2-1/2 x 2-1/2  | 3-1/2                | 7-5/8 | 3-1/2 | 11.8               |
|              | 65M x 65F      | 89                   | 194   | 89    | 5.4                |
| 14-607       | 3 x 3          | 4-1/8                | 8-3/4 | 3-7/8 | 16.3               |
|              | 80M x 80F      | 105                  | 222   | 98    | 7.4                |

#### MODEL NUMBERING SYSTEM

| 14                  | -6                         | -0X   | -VXX   |
|---------------------|----------------------------|---|--|
| SERIES NUMBER       | BODY/CAP STYLE AND SERVICE | INLET CONNECTION                              | RELIEF PRESSURE  |
| 14 = Base Model No. | 6 = Vacuum Relief          | 05 = 2" NPT<br>06 = 2 1/2" NPT<br>07 = 3" NPT | Vacuum Relief Setting, HG "V" Prefix + Inches Mercury ("V" + 2 Digits) |

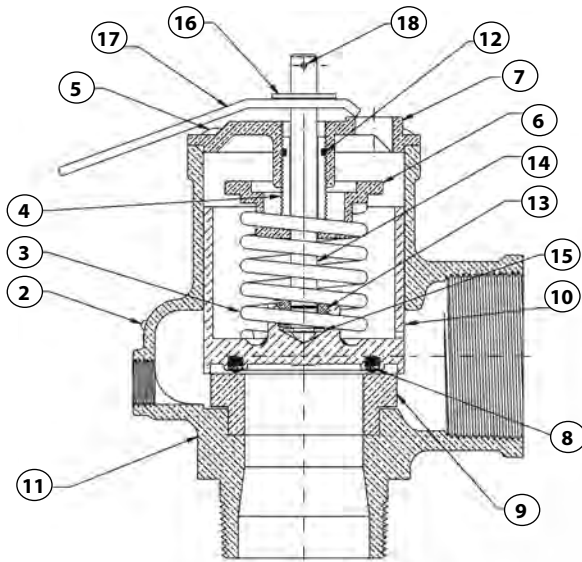
#### EXAMPLE:

14-607-V14  
3" Vacuum relief valve set at 14 Hg"

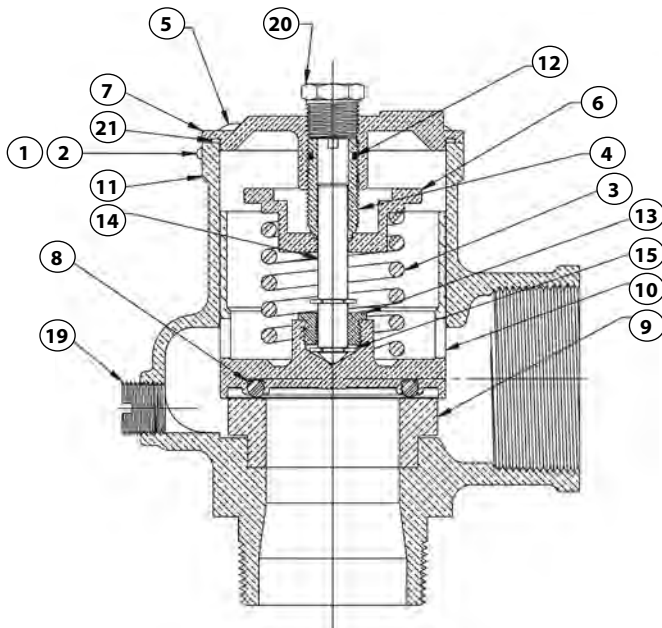
# SAFETY & RELIEF VALVES

## Low Pressure Air and Vacuum Relief Valves

### 14-400, 14-500 AND 14-600 SERIES



14-400



14-500 & 14-600

### MATERIALS

| Item | Component       | Material          |
|------|-----------------|-------------------|
| 1    | Nameplate       | Aluminum          |
| 2    | Drivescrews (2) | Steel (Plated)    |
| 3    | Spring          | Stainless Steel   |
| 4    | Adjusting Screw | Brass ASTM B-16   |
| 5    | Cap Screw (4)   | Steel (Plated)    |
| 6    | Spring Washer   | Brass ASTM B-16   |
| 7    | Cap             | Bronze ASTM B-584 |
| 8    | Seat-O-Ring     | Silicone          |
| 9    | Seat Insert     | Brass ASTM B-16   |
| 10   | Disc            | Bronze ASTM B-584 |
| 11   | Body            | Bronze ASTM B-584 |
| 12   | Friction Ring   | EPDM              |
| 13   | Stem Nut        | Brass ASTM B-16   |
| 14   | Stem            | Brass ASTM B-16   |
| 15   | Retaining Ring  | Steel (Plated)    |
| 16   | Lift Washer     | Steel (Plated)    |
| 17   | Lift Lever      | Steel (Plated)    |
| 18   | Roll Pin        | Steel (Plated)    |
| 19   | Plug            | Brass ASTM B-16   |
| 20   | Plug            | Brass ASTM B-16   |
| 21   | Cap Seal O-Ring | Silicone          |

# SAFETY & RELIEF VALVES

## Air Relief Valves

### 14-400 AND 14-500 SERIES

### NON-CODE AIR RELIEF CAPACITIES

Standard cubic feet per minute (Normalized cubic meters per hour) of air at 10% overpressure.

#### US Customary Units SCFM Air

#### Metric Units Nm<sup>3</sup>/Hr. Air

| Ordering Suffix   | Model No.                              | 14-405<br>14-505 | 14-406<br>14-506       | 14-407<br>14-507 | Model No.                             | 14-405<br>14-505  | 14-406<br>14-506  | 14-407<br>14-507  |
|-------------------|--|------------------|------------------------|------------------|---------------------------------------|-------------------|-------------------|-------------------|
|                   | Size (in.)<br>Area (in. <sup>2</sup> ) | 2 x 2<br>2.238   | 2-1/2 x 2-1/2<br>3.339 | 3 x 3<br>5.155   | Size (mm.)<br>Area (cm <sup>2</sup> ) | 50 x 50<br>14.438 | 65 x 65<br>21.544 | 80 x 80<br>33.259 |
| Set Pressure psig |  |                  |                        |                  | Set Pressure barg                     |                   |                   |                   |
| -04               | 4                                      | 615              | 914                    | 1338             | .28                                   | 988               | 1469              | 2151              |
| -05               | 5                                      | 651              | 967                    | 1415             | .34                                   | 1046              | 1554              | 2275              |
| -06               | 6                                      | 687              | 1020                   | 1492             | .41                                   | 1104              | 1639              | 2398              |
| -07               | 7                                      | 722              | 1072                   | 1569             | .48                                   | 1161              | 1724              | 2522              |
| -08               | 8                                      | 758              | 1125                   | 1646             | .55                                   | 1218              | 1809              | 2646              |
| -09               | 9                                      | 793              | 1178                   | 1723             | .62                                   | 1275              | 1893              | 2770              |
| -10               | 10                                     | 829              | 1231                   | 1801             | .69                                   | 1332              | 1978              | 2894              |
| -11               | 11                                     | 864              | 1283                   | 1878             | .76                                   | 1389              | 2063              | 3018              |
| -12               | 12                                     | 900              | 1336                   | 1955             | .83                                   | 1446              | 2147              | 3142              |
| -13               | 13                                     | 935              | 1389                   | 2032             | .90                                   | 1503              | 2232              | 3266              |
| -14               | 14                                     | 971              | 1441                   | 2109             | .97                                   | 1560              | 2317              | 3390              |
| -15               | 15                                     | 1006             | 1494                   | 2186             | 1.03                                  | 1617              | 2402              | 3514              |
| -16               | 16                                     | 1041             | 1547                   | 2263             | 1.10                                  | 1673              | 2487              | 3638              |
| -17               | 17                                     | 1076             | 1600                   | 2340             | 1.17                                  | 1730              | 2572              | 3761              |
| -18               | 18                                     | 1111             | 1653                   | 2417             | 1.24                                  | 1786              | 2657              | 3885              |
| -19               | 19                                     | 1146             | 1706                   | 2494             | 1.31                                  | 1842              | 2742              | 4009              |
| -20               | 20                                     | 1181             | 1756                   | 2571             | 1.38                                  | 1899              | 2823              | 4133              |
| -21               | 21                                     | 1216             | 1809                   | 2648             | 1.45                                  | 1955              | 2907              | 4257              |
| -22               | 22                                     | 1252             | 1861                   | 2725             | 1.52                                  | 2012              | 2992              | 4381              |

### 14-600 SERIES

### VACUUM AIR RELIEF CAPACITY.

Standard cubic feet per minute (normalized cubic meters per hour) of air at 10% overpressure.

#### US Customary Units SCFM Air

#### Metric Units Nm<sup>3</sup>/Hr. Air

| Ordering Suffix         | Model No.                              | 14-605         | 14-606                 | 14-607         | Model No.                             | 14-605            | 14-606            | 14-607            |
|-------------------------|--|----------------|------------------------|----------------|---------------------------------------|-------------------|-------------------|-------------------|
|                         | Size (in.)<br>Area (in. <sup>2</sup> ) | 2 x 2<br>2.238 | 2-1/2 x 2-1/2<br>3.339 | 3 x 3<br>5.155 | Size (mm.)<br>Area (cm <sup>2</sup> ) | 50 x 50<br>14.438 | 65 x 65<br>21.544 | 80 x 80<br>33.259 |
| Relief Setting (in. Hg) |  |                |                        |                | Relief Setting (mm. Hg)               |                   |                   |                   |
| V08                     | 8                                      | 395            | 600                    | 865            | 203                                   | 635               | 964               | 1390              |
| V09                     | 9                                      | 405            | 618                    | 890            | 229                                   | 651               | 993               | 1431              |
| V10                     | 10                                     | 415            | 635                    | 915            | 254                                   | 667               | 1021              | 1471              |
| V11                     | 11                                     | 421            | 642                    | 927            | 279                                   | 676               | 1021              | 1471              |
| V12                     | 12                                     | 426            | 649                    | 939            | 305                                   | 685               | 1043              | 1509              |
| V13                     | 13                                     | 430            | 653                    | 943            | 330                                   | 691               | 1050              | 1516              |
| V14                     | 14                                     | 430            | 653                    | 943            | 356                                   | 691               | 1050              | 1516              |
| V15                     | 15                                     | 430            | 653                    | 943            | 381                                   | 691               | 1050              | 1516              |
| V20                     | 20                                     | 430            | 653                    | 943            | 508                                   | 691               | 1050              | 1516              |
| V25                     | 25                                     | 430            | 653                    | 943            | 635                                   | 691               | 1050              | 1516              |
| V30                     | 30                                     | 430            | 653                    | 943            | 762                                   | 691               | 1050              | 1516              |



For additional information, submittal sheets and manuals, visit [www.apollovalves.com](http://www.apollovalves.com)

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