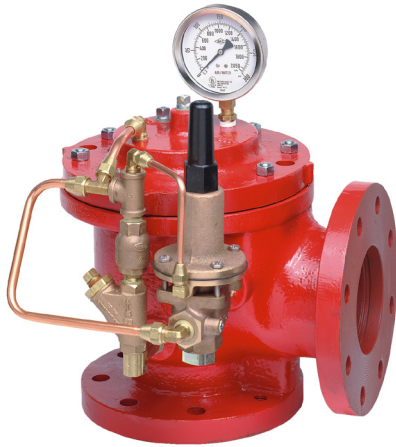


# "Apollo" Valves

# SUBMITTAL SHEET

## 108FC Series

### Fire Pump Relief Valve



|                               |  |
|-------------------------------|--|
| <b>Job Name:</b>              |  |
| <b>Job Location:</b>          |  |
| <b>Engineer:</b>              |  |
| <b>Contractor:</b>            |  |
| <b>Tag:</b>                   |  |
| <b>PO Number:</b>             |  |
| <b>Representative:</b>        |  |
| <b>Wholesale Distributor:</b> |  |



### DESCRIPTION

The Model 108FC automatically relieves excess fire pump discharge pressure, to prevent the pressure from exceeding the rating of the fire system components.

The normally closed, spring loaded pilot, sensing pump discharge pressure, opens when pressure exceeds the spring setting, allowing the main valve to open. As the pump pressure increases the pilot controls the main valve to open further. Pressure is maintained at the controlled set point over a wide range of flows regardless of back pressure in the downstream piping. The valve closes gradually as pressures decrease below the set point.

### FEATURES

- Limits maximum pump discharge pressure.
- Opens quickly; maintains pressure within close limits.
- Adjustable 60-180 psi or 100-300 psi.
- Pilot-operated main valve.
- Pressure setting is adjustable with single screw.
- Factory tested and pre-set to your requirements.
- UL Listed & Factory Mutual Approved for both split-case centrifugal and vertical turbine pumps.
- Sizes 3" - 8", globe and angle pattern.
- ANSI Flanged Class 150, Class 300, and 300 inlet x 150 outlet.
- Wide range of materials available.

### SIZING

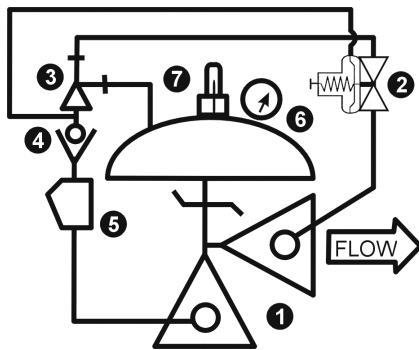
Fire pump relief valves are sized per the guidelines in NFPA 20, and are based on the rated flow of the pump.

| Valve Size | Max Pump Flow (gpm) | Max Pressure Setting (psi) |          |
|------------|---------------------|----------------------------|----------|
| 3"         | 500                 | 300 (UL)                   | 175 (FM) |
| 4"         | 1000                | 300 (UL)                   | 175 (FM) |
| 6"         | 2500                | 300 (UL)                   | 175 (FM) |
| 8"         | 5000                | 175 (UL & FM)              |          |

### MAXIMUM PRESSURE

| End Connections | Ductile Iron | Steel/SS | Bronze  |
|-----------------|--------------|----------|---------|
| Threaded        | 640 psi      | 640 psi  | 500 psi |
| Grooved         | 300 psi      | 300 psi  | 300 psi |
| 150# Flanged    | 250 psi      | 285 psi  | 225 psi |
| 300# Flanged    | 640 psi      | 740 psi  | 500 psi |

### SCHEMATIC



### COMPONENTS (as shown on the schematic diagram)

| No. | Component   |
|-----|---|
| 1   | <b>Model 65 Basic Control Valve</b> (angle pattern shown), a hydraulically operated, diaphragm-actuated, globe or angle valve which closes with an elastomer-on-metal seal.   |
| 2   | <b>Model 1330FC Pressure Relief Pilot</b> , a two-way, normally-closed pilot valve which senses upstream pressure under its diaphragm and balances it against an adjustable spring load. An increase in upstream pressure tends to make the pilot open. |
| 3   | <b>Model 126 Ejector</b> , a simple "tee" fitting with a fixed orifice in its inlet port. It provides the proper pressure to the diaphragm chamber of the main valve depending on the position of the pressure relief pilot.                            |
| 4   | <b>Model 141-1 Check Valve</b> , that prevents the valve from opening under a vacuum condition that may be encountered with a vertical turbine pump.  |
| 5   | <b>Model 159 Y-Strainer</b> . The strainer protects the pilot system from solid contaminants in the line fluid.   |
| 6   | <b>Pressure Gauge</b>   |
| 7   | <b>Model 155 Visual Indicator</b> (optional), enables user to determine valves' operating position.   |

Apollo Valves, Manufactured by **Conbraco Industries, Inc.**  
701 Matthews Mint-Hill Road, Matthews, NC 28105 USA  
[www.apollovalves.com](http://www.apollovalves.com) | (704) 841-6000

This specification is provided for reference only. Conbraco Industries Inc. reserves the right to change any portion of this specification without notice and without incurring obligation to make such changes to Conbraco products previously or subsequently sold. Please visit our website @ [www.apollovalves.com](http://www.apollovalves.com) for the most current information.

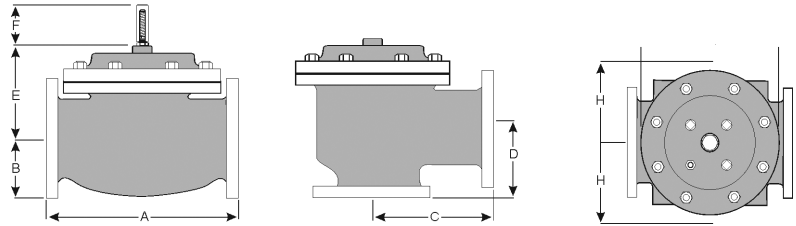


# "Apollo" Valves

## SUBMITTAL SHEET

### 108FC Series

Fire Pump Relief Valve



#### DIMENSIONS (in.)

| DIM        | END CONN. | 3      | 4       | 6      | 8        |
|------------|-----------|--------|---------|--------|----------|
| A          | 150#      | 12     | 15      | 17-3/4 | 25-3/8   |
|            | 300#      | 12-3/4 | 15-5/8  | 18-5/8 | 26-3/8   |
|            | 300#x150# | 12-3/4 | 15-5/8  | 18-5/8 | 26-3/8   |
| C<br>Angle | 150#      | 6      | 7-1/2   | 10     | 12-11/16 |
|            | 300#      | 6-3/8  | 7-13/16 | 10-1/2 | 13-3/16  |
|            | 300#x150# | 6-3/8  | 7-13/16 | 10     | 12-11/16 |
| D<br>Angle | 150#      | 4      | 5-1/2   | 6      | 8        |
|            | 300#      | 4-3/8  | 5-13/16 | 6-1/2  | 8-1/2    |
|            | 300#x150# | 4-3/8  | 5-13/16 | 6-1/2  | 8-1/2    |
| E          | ALL       | 6-1/2  | 8       | 10     | 11-7/8   |
| F          | ALL       | 3-7/8  | 3-7/8   | 3-7/8  | 6-3/8    |
| H          | ALL       | 11     | 12      | 13     | 14       |

#### DIMENSIONS (mm)

| DIM        | END CONN. | DN80 | DN100 | DN150 | DN200 |
|------------|-----------|------|-------|-------|-------|
| A          | 150#      | 305  | 381   | 451   | 645   |
|            | 300#      | 324  | 397   | 473   | 670   |
|            | 300#x150# | 324  | 397   | 473   | 670   |
| C<br>Angle | 150#      | 152  | 191   | 254   | 322   |
|            | 300#      | 162  | 196   | 267   | 335   |
|            | 300#x150# | 162  | 196   | 254   | 322   |
| D<br>Angle | 150#      | 102  | 140   | 152   | 203   |
|            | 300#      | 111  | 148   | 165   | 216   |
|            | 300#x150# | 111  | 148   | 165   | 216   |
| E          | ALL       | 165  | 203   | 254   | 302   |
| F          | ALL       | 98   | 98    | 98    | 98    |
| H          | ALL       | 279  | 305   | 330   | 356   |

For maximum efficiency, the Apollo control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 8" and larger valves, or any valves with a limit switch, in positions other than described. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician.

#### FACTORY CODE

| 108            | G   | 002              | 020  | 1   | 1                     | 1                        | 3           |             |            |            |
|----------------|---|------------------|--|---|-----------------------|--------------------------|-------------|-------------|------------|------------|
| MODEL NUMBER   | VALVE TYPE/<br>CONNECTION FULL PORT   | SERIES EXTENSION | VALVE SIZE -<br>FULL PORT                    | BODY & BONNET<br>MATERIAL                   | SEAT RING<br>MATERIAL | PILOT,<br>FITTINGS, TUBE |             | ELASTOMERS  |            |            |
| 108 = Standard | A = Angle/Flanged<br>ANSI CLS 150<br>B = Angle/Flanged<br>ANSI CLS 300<br>F = Angle/Flanged<br>CLS 300 x CLS 150<br>G = Globe/Flanged<br>ANSI CLS 150<br>(Full & Reduced Port)<br>H = Globe/Flanged<br>ANSI CLS 300 | FC0              | 030 = 3"<br>040 = 4"<br>060 = 6"<br>080 = 8" | 1 = Ductile Iron Red<br>Enamel Epoxy Coated | 1 = Bronze B61        | Code<br>1                | Pilot<br>BZ | Ftgs<br>BRS | Tube<br>CU | 1 = Buna-N |

**HOW TO ORDER YOUR VALVE**  
When ordering please provide:  
-Size -Globe or Angle -End Connection -Pressure Setting or  
Spring Range -Special Requirements / Installation requirements.

Apollo Valves, Manufactured by **Conbraco Industries, Inc.**  
701 Matthews Mint-Hill Road, Matthews, NC 28105 USA  
[www.apollovalves.com](http://www.apollovalves.com) | (704) 841-6000

This specification is provided for reference only. Conbraco Industries Inc. reserves the right to change any portion of this specification without notice and without incurring obligation to make such changes to Conbraco products previously or subsequently sold. Please visit our website @ [www.apollovalves.com](http://www.apollovalves.com) for the most current information.

