

Model 708-2 ▲

The Model 708-2 has a wide range of applications: anywhere a system must be protected from pressures that are too high (relief) or too low (sustaining). Typical applications include:

- Pump systems
- Municipal distribution systems
- Irrigation systems

MODEL FEATURES

- ▶ Relief Valve: Limits inlet pressure by relieving excess pressure
- ▶ Pressure Sustaining: Prevents inlet pressure from dropping below a predetermined minimum
- ▶ Operates over a wide flow range
- ▶ Reduced port design allows use of properly sized valves without separate reducer fittings
- ▶ Inlet pressure is adjustable with a single screw
- ▶ Quick opening; adjustable closing speed
- ▶ Can be maintained without removal from the line
- ▶ Factory tested and can be pre-set to your requirements

OPERATION

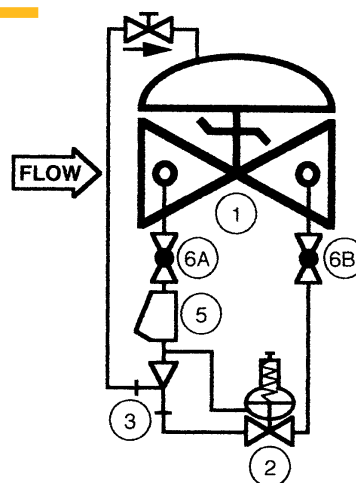
The normally closed, spring-loaded pilot, sensing upstream pressure, responds to changes in pressure and causes the main valve to do the same. The net result is a constant modulating action of the pilot and main valve to hold the upstream pressure constant. The pilot system is equipped with a closing speed control that fine tunes the valve response to the system variables.

COMPONENTS

The Model 708-2 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 765 Basic Reduced Port Control Valve
- 2.) Model 1330 Pressure Relief/Back Pressure Pilot
- 3.) Model 126 Ejector
Fixed orifice pilot system supply restrictor
- 4.) Model 141-3 Flow Control Valve
Adjustable closing speed control
- 5.) Model 159 Y-Strainer
Protects pilot system from dirt/debris
- 6.) Model 141-4 Isolation Ball valves
- 7.) Model 155 Visual Indicator (Optional)

SCHEMATIC



RECOMMENDED INSTALLATION

- Install the valve with adequate space above and around the valve to facilitate servicing. Refer to the Dimension table.
- Valve should be installed with the bonnet (cover) at the top, particularly 8" and larger valves, and any valve with a limit switch.
- Shut-off valves should be installed upstream and downstream of the control valve. These are used to isolate the valve during startup and maintenance.
- Install a pressure gauge upstream of the valve to enable adjustment to the required pressure setting. This gauge may be installed in the upstream side port of the valve body.

MAX. PRESSURE (Ductile Iron)

150# Flanges 250 psi
 300# Flanges 640 psi

The pressures listed below are maximum pressures at 100°F.

SIZE	3"	4"	6"	8"	10"	12"	16"	18"	20"	24"
MAX. CONTINUOUS FLOW, GPM	260	575	1000	2250	3900	6150	8750	13750	15125	16500
MAX. INTERMITTENT FLOW, GPM	460	1000	1800	4000	7000	11000	15750	24750	26125	27500

Cavitation Note: Relief valves, by their application, are subject to pressure differentials that may induce cavitation. When these conditions exist, it may be only on an intermittent basis, causing minimum concern got valve deterioration. Charts indexing only inlet and outlet pressures do not address the complexity of this phenomenon. OCV can assist you in validating your application.

TOLL FREE 1.888.628.8258 • phone: (918)627.1942 • fax: (918)622.8916 • 7400 East 42nd Place, Tulsa, Ok 74145
 email: sales@controlvalves.com • website: www.controlvalves.com

Model 708-2 Reduced Port Design



SIZES

GLOBE

Flanged Ends (globe) 3" -24"

Flanged Ends (angle) 3" -16"

TEMPERATURE RANGE

(Valve Elastomers)

EPDM 32°F - 230°F*

SPRING RANGE

(inlet setting)

5-30 psi, 20-80 psi, 20-200 psi, 100-300 psi

MATERIALS

Body/Bonnet: Ductile iron (epoxy coated)

Others available (consult factory)

Seat Ring: low-lead Bronze, Stainless steel

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: EPDM*

Seat Disc: EPDM*

Pilot: low-lead Bronze, Stainless steel

Other pilot system components:

low-lead Bronze/Brass, Stainless steel

Tubing & Fittings: Copper/brass,

Stainless steel

*Others available upon request.

**Valves 1-1/4" through 24" are certified to NSF/ANSI 372. Valves 4" through 24" are also certified to NSF/ANSI 61-G.

SPECIFICATIONS (Typical Commercial Plumbing Application)

The <pressure relief> <pressure sustaining> valve shall function to <prevent main line pressure from exceeding a predetermined maximum> <prevent the upstream pressure from falling below a predetermined minimum.>

DESIGN

The valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled, reduced port globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet, and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a closing speed control and an inline strainer. The <pressure relief> <pressure sustaining> valve shall be operationally and hydrostatically tested prior to shipment.

MATERIALS OF CONSTRUCTION

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be low-lead bronze. Elastomers (diaphragm, resilient seats, and O-rings) shall be EPDM. Control pilots shall be low-lead bronze. The closing speed control, Y-strainer and isolation ball valves shall be brass, and control line tubing shall be copper.

OPERATING CONDITIONS

The <pressure relief> <pressure sustaining> valve shall be suitable for controlling the inlet pressure to a <maximum> <minimum> of <X> psi at flow rates ranging from <Y to Z> gpm.

ACCEPTABLE PRODUCTS

The <pressure relief> <pressure sustaining> valve shall be a <SIZE> Model 708-2, globe pattern, with <150# flanged> <300# flanged> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

U.S. DIMENSIONS - INCHES

DIM	END CONN	3	4	6	8	10	12	16	18	20	24
A	150# FLGD	10 1/2	13 1/2	15 1/2	21 5/8	26	30	34 1/2	48	48	48
	3000# FLGD	10 7/8	14 1/8	16 3/8	22 5/8	27 3/8	31 1/2	36 5/8	49 5/8	49 5/8	49 3/4
E	ALL	6	6 1/2	8	10	11 7/8	15 3/8	17	19	19	19
F (Opt)	ALL	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8
H	ALL	11	11	12	13	14	17	18	20	20	20

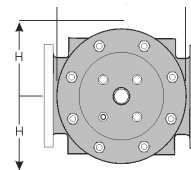
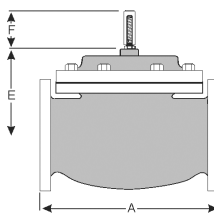
For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 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. Consult our factory @ 1-888-628-8258 for parts and service.

How to order your Model 708-2 valve

When Ordering please provide:

Fluid to be controlled • Model Number • Size •
Globe or Angle • End Connection • Body Material
• Trim Material • Pilot Options • Pressure Setting
or Spring Range • Special Requirements /
Installation Requirements



QUALITY SYSTEM
REGISTERED TO
ISO 9001

Represented by:

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