

**CURTISS -
WRIGHT**

Valve Group



Series 2700

Farris Engineering
Pressure Relief Valves

Numbering System

Selecting and specifying Farris pressure relief valves is simple using the numbering system that follows. Each digit of the type number has a distinct significance. The digits describe the basic valve series, orifice, seat design, inlet temperature range, body, bonnet and spring material, inlet type and pressure rating.

27	D	A	2	3	H-	M	2	0	/S4 ⁴				
Series Number	Orifice Area	Seat Construction ⁵	Inlet Size ¹	Outlet Size ¹	Special Variations	Inlet Connections	Cap Construction	Test Gag ²	Special Materials				
27	US Customary Units Sq. In.	A Metal Seat	1 1/2"	3 1"	H High pressure variations of standard types	M MNPT	2 Plain	0 No Gag	S4 Complete 316 St. St. N1 NACE Trim: Standard N4 NACE Trim: All St. St. M1 Monel Body & Disc M2 Monel Internals M4 Complete Monel H1 Hastelloy C Body & Disc H2 Hastelloy C Internals H4 Complete Hastelloy C				
	C 0.068	C Soft Seat	2 3/4"	4 1-1/2"						B Balanced design ³	F FNPT	4 Packed Lever	1 Test Gag
	D 0.125	T Teflon Seat	3 1"	5 2"									
	E 0.223				4 1-1/2"	6 2-1/2"	E Heat transfer fluid high pressure	2 Flanged-300RF					
	F 0.350	3 Flanged-600RF											
	G 0.573		4 Flanged-900RF										
	Metric mm²	5 Flanged-1500RF											
	C 43.87		6 Flanged-2500RF										
	D 80.65	0 Special											
	E 143.87		S Socket Weld										
	F 225.81	T Sanitary											
	G 369.68		W Welding Nipple										

Ordering Information

Please specify the following so that we may process your order as quickly as possible.

- Quantity.*
- Inlet and outlet sizes.
- Farris type number.*
- Inlet and outlet connections: MNPT, FNPT, flanged, socket weld, sanitary inlet or welding nipple.
- Materials of construction if other than standard.
- O-ring seat pressure seal material, if required.
- Set pressure.*
- Operating and relieving temperatures.*
- Allowable overpressure.*
- Fluid and fluid state.*
- Backpressure, superimposed constant and/or variable, and built-up.*
- Required capacity.*
- Accessories: open or packed lever if required; test gag.
- Code requirements, if any.

*As a customer service, we verify your selection and sizing. In order to do this, we must have this information.

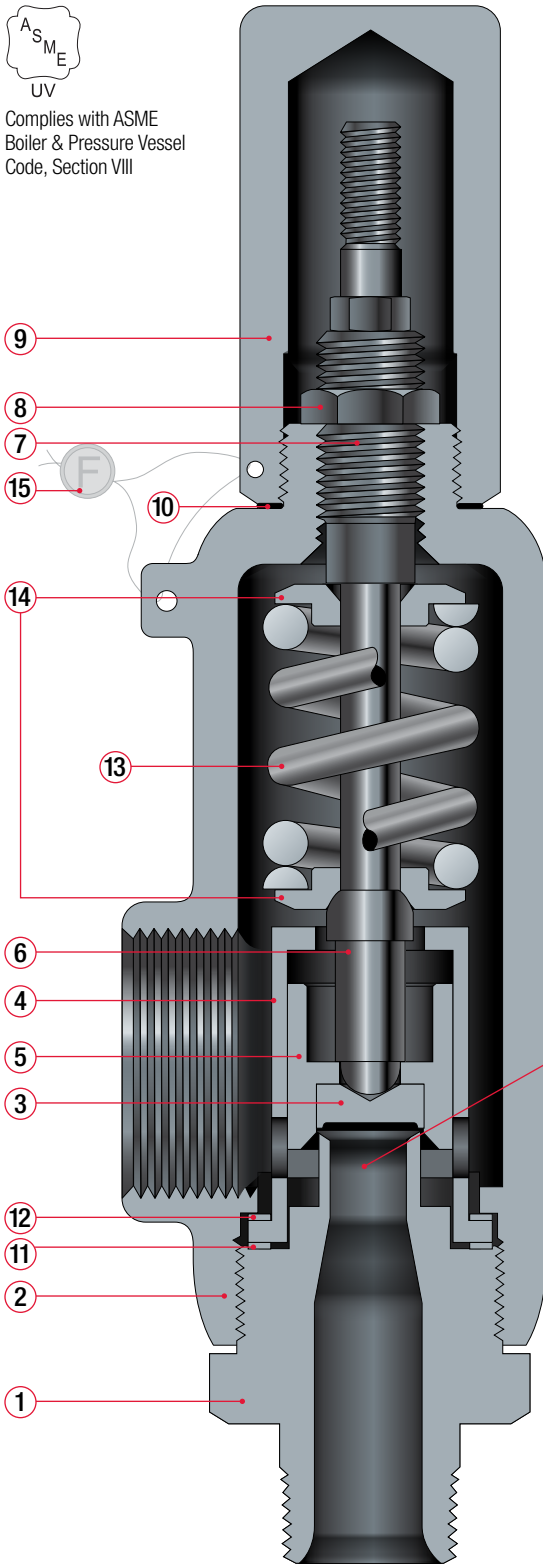
General Notes:

- Not all combinations of inlet and outlet sizes shown are available. Consult the selection tables of pages 4 and 5.
- Test gag option is not available with open lever cap.
- Available in O-ring seat design only. Consult the Farris Factory.
- Duplex stainless steel available upon request, consult the factory.
- Selection of proper soft good material is customer's responsibility.

2700 Series – Conventional

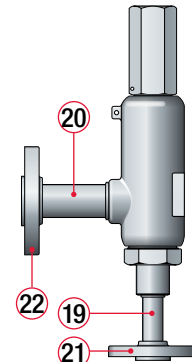
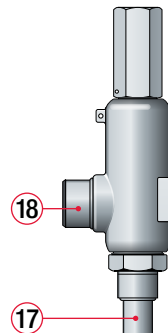
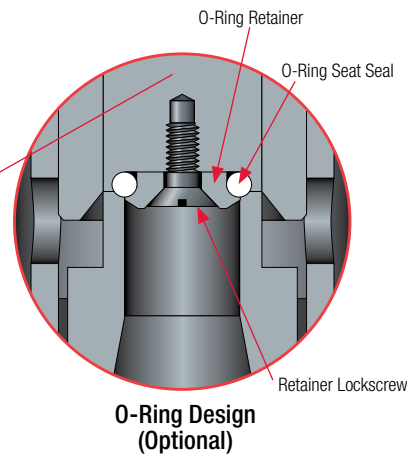


Complies with ASME
Boiler & Pressure Vessel
Code, Section VIII

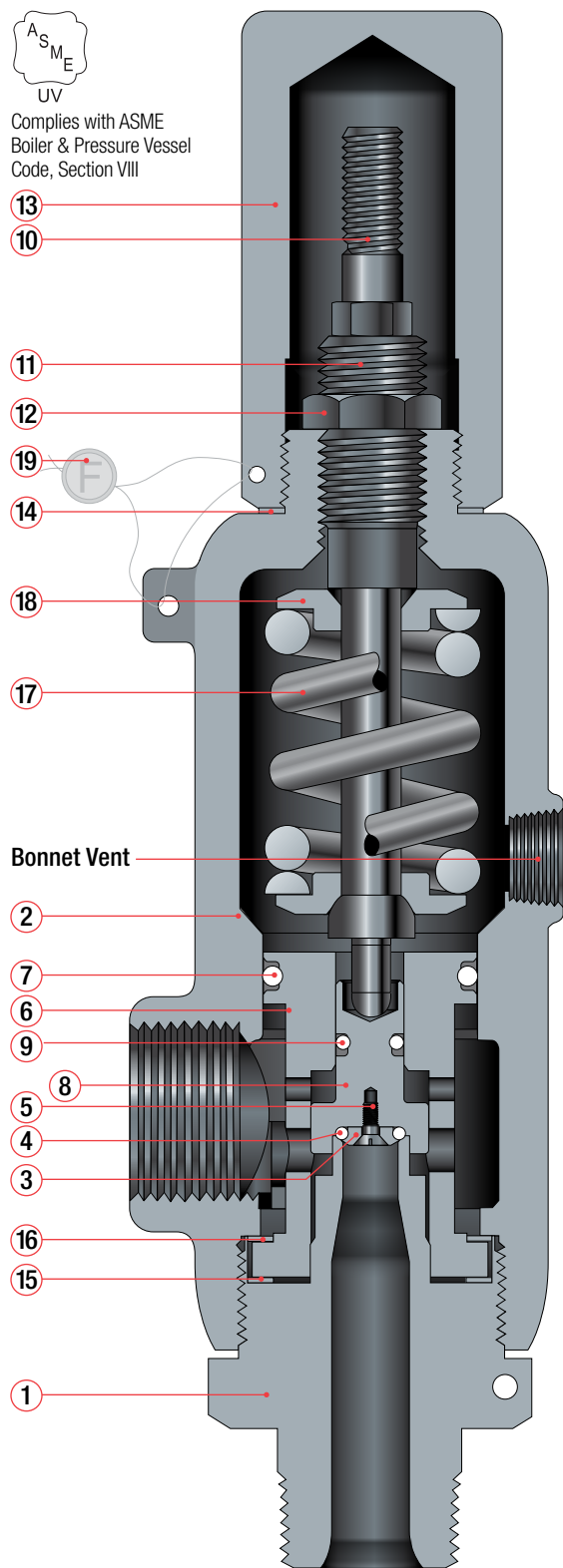


Bill of Materials – Conventional

Item	Part Name	Standard Material
1	Body	SA-351 Gr. CF8M St. St. or SA-479 Type 316 St. St.
2	Bonnet	SA-216 Gr. WCB, Carb. St.
3	Disc	316 St. St.
4	Guide	316 St. St.
5	Disc Holder	316 St. St.
6	Stem	316 St. St.
7	Spring Adj. Screw	316 St. St.
8	Jam Nut	316 St. St.
9	Cap, Plain Screwed	Carbon Steel
10	Cap Gasket	316 St. St.
11	Body Gasket	316 St. St.
12	Guide Gasket	316 St. St.
13	Spring (-50°F to +750°F)	Stainless Steel
14	Spring Buttons	316 St. St.
15	Wire Seal	St. St. Wire / Lead Seal
16	Nameplate (Not Shown)	Stainless Steel
17	Welding Nipple (Inlet)	316 St. St.
18	Welding Nipple (Outlet)	Carbon Steel
19	Lap Joint Stub End (Inlet)	316 St. St.
20	Lap Joint Stub End (Outlet)	Carbon Steel
21	Lap Joint Flange (Inlet)	Carbon Steel
22	Lap Joint Flange (Outlet)	Carbon Steel



2700 Series – Balanced Design



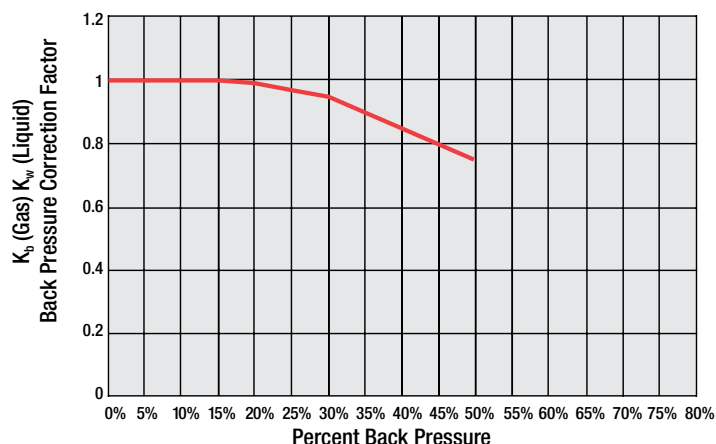
- General Notes:
1. Other O-ring materials available. Consult the factory.
 2. Flanged, socket weld, welding nipple and female inlet threaded designs available.
 3. Temperature for balanced or O-ring seat design is limited by the elastomer selected. See page 4.
- Viton is a registered trademark of DuPont Elastomers.

Do you have variable back pressure? Can't use a balanced bellows design? Farris has the solution with the Series 2700 Balanced Design pressure relief valve. The balanced effect is achieved by isolating the upper valve chamber and eliminating any back pressure build-up in the bonnet affecting valve set pressure.

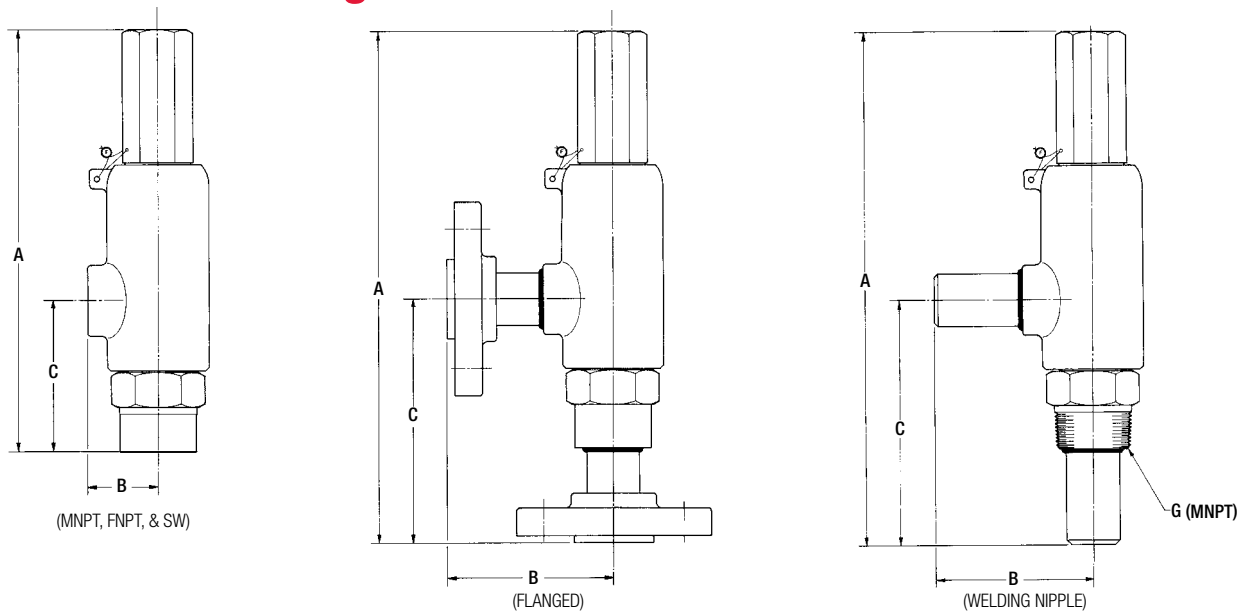
These valves are available in 1/2", 3/4" and 1" inlet sizes with a 1" outlet and two orifice areas. Pressure ranges from 15 to 1480 psig, standard soft seat design. Flanged and welded inlet and outlet connections are available with the same material options as the standard design.

Bill of Materials – Balanced Design		
Item	Part Name	Standard Material
1	Body	SA-351 Gr. CF8M St. St. or SA-479 Type 316 St. St.
2	Bonnet	SA-216 Gr. WCB, Carb. St.
3	O-ring Retainer	316 St. St.
4	O-ring Seat Seal	Viton®
5	Retainer Lock Screw	304 St. St.
6	Guide	316 St. St.
7	Guide Seal	Viton
8	Disc Holder	316 St. St.
9	Disc Holder Seal	Viton
10	Stem	316 St. St.
11	Spring Adj. Screw	316 St. St.
12	Jam Nut	316 St. St.
13	Cap, Plain Screwed	Carbon Steel
14	Cap Gasket	316 St. St.
15	Body Gasket	316 St. St.
16	Guide Gasket	316 St. St.
17	Spring	Stainless Steel
18	Spring Buttons	316 St. St.
19	Wire Seal	St. St. Wire/Lead Seal
20	Nameplate (Not Shown)	Stainless Steel

Series 2700 Back Pressure Correction Factor, Balanced Design



Dimensions & Weights



Threaded Connections (MNPT x FNPT)								
Valve Size ¹	US Customary Units (Inches)			Metric Units (millimeters)			Approx. Weight	
Inlet x Outlet	A (Max.) All Cap Const.	B	C	A (Max.) All Cap Const.	B	C	lb	kg
C and D Orifice								
1/2 x 1	11-1/4	1-3/4	3-9/16	282	45	91	8	3.6
3/4 x 1	11-1/4	1-3/4	3-9/16	286	45	91	8	3.6
3/4 x 1 H.P.	13-5/8	2-1/2	3-3/4	346	64	95	14	6.3
1 x 1	11-1/2	1-3/4	3-3/4	292	45	95	8	3.6
1 x 1 H.P.	13-5/8	2-1/2	3-3/4	346	64	95	14	6.3
E Orifice								
1 x 1-1/2	13-5/8	2-1/2	3-1/2	346	64	89	16	7.2
F Orifice								
1-1/2 x 2	14-9/16	3	3-7/8	370	76	98	17	7.7
G Orifice								
1-1/2 x 2-1/2	14-9/16	3	4-1/8	370	76	105	18	8.1

Socket Weld & FNPT x FNPT Connections								
Valve Size ¹	US Customary Units (Inches)			Metric Units (millimeters)			Approx. Weight	
Inlet x Outlet	A (Max.) All Cap Const.	B	C	A (Max.) All Cap Const.	B	C	lb	kg
C and D Orifice								
1/2 x 1	11-7/16	1-3/4	3-11/16	291	45	94	8	3.6
1/2 x 1 H.P.	13-5/8	2-1/2	3-3/4	346	64	95	14	6.3
3/4 x 1	11-7/16	1-3/4	3-11/16	291	45	94	8	3.6
3/4 x 1 H.P.	13-5/8	2-1/2	3-3/4	346	64	95	14	6.3
1 x 1	11-7/16	1-3/4	3-11/16	291	45	94	8	3.6
1 x 1 H.P.	13-5/8	2-1/2	3-3/4	346	64	95	14	6.3
E Orifice								
1 x 1-1/2	13-3/8	2-1/2	3-1/2	340	64	89	16	7.2
F Orifice								
1-1/2 x 2	14-9/16	3	3-7/8	370	76	98	17	7.7
G Orifice								
1-1/2 x 2-1/2	14-9/16	3	4-1/8	370	76	105	18	8.1

- General Notes:
- H.P. designates the high pressure version of a given inlet size.
 - Same pipe thread connections also used on socket weld models with corresponding inlet sizes.
 - Tolerance for "B" and "C" dimensions is $\pm 1/8"$.