



PLAN

FLOOR

3-2x12  
15'-0"  
ADDITION

# SAFETY & RELIEF VALVES





# SAFETY & RELIEF VALVES



*See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.*



# SAFETY & RELIEF VALVES

## Hot Water Relief Valves

### RVW 10 (10) SERIES



### SECTION IV ASME HOT WATER RELIEF VALVES

These capacity-certified relief valves protect against excessive water pressure (from thermal expansion) and steam generated when Btu input controls fail. Valves comply with ASME Section IV requirements. Ideal for use with hot water boilers and heating systems.

#### FEATURES

- Pressures from 20 to 150 psig
- Brass or bronze body available with optional satin or polished chrome finish
- Maximum temperature service: 250°F
- 10-321 in polished chrome only
- Stainless steel springs
- 10-624/634 are high capacity safety relief valves ideal for OEM applications
- 10-418/417 are ideal for use in swimming pool heater applications
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C



10-102  
10-303



10-104  
10-301



10-321



10-407(30#)  
10-417



10-408 (30#)  
10-418



10-624  
(Male inlet)  
10-634  
(Female inlet)

Series Number	Size (in.)		Certified Pressure Range psig	Height (in.)	Wt./100 (lbs.)	*Certified Capacity			
	Inlet NPT	Outlet NPT				30 psig	40 psig	50 psig	75 psig
10-102	3/4 F	1 F	20-60	3.31	105	710,000	870,000	1,035,000	-
10-104	3/4 M	1 F	20-60	3.75	109	710,000	870,000	1,035,000	-
10-301	3/4 M	3/4 F	20-60	3.75	114	550,000	675,000	805,000	-
10-303	3/4 F	3/4 F	20-60	3.31	115	550,000	675,000	805,000	-
10-321	3/4 M	3/4 F	20-60	3.75	123	425,000	525,000	625,000	-
10-407	3/4 M	3/4 F	30	3.00	62	535,000	-	-	-
10-408	3/4 F	3/4 F	30	2.75	65	535,000	-	-	-
10-417	3/4 M	3/4 F	20-80	3.00	62	477,000	587,000	697,000	972,000
10-418	3/4 F	3/4 F	20-80	2.75	65	477,000	587,000	697,000	972,000

\* National Board Capacity Certified – BTU Per Hour (90% of actual capacity at 10% accumulation). ASME boiler and pressure vessel code – Section IV – Heating Boilers

Series Number	Size (in.)		Certified Pressure Range psig	Height (in.)	Wt./100 (lbs.)	*Certified Capacity				
	Inlet NPT	Outlet NPT				30 psig	75 psig	100 psig	125 psig	150 psig
10-624	3/4 M	3/4 F	30-150	4.62	106	689,000	1,405,000	1,802,000	2,199,000	2,597,000
10-634	3/4 F	3/4 F	30-150	4.62	106	689,000	1,405,000	1,802,000	2,199,000	2,597,000

Note: To order 10-620 series add pressure set point to the end of base number (i.e. 10624150=150 psig).

#### SUFFIX KEY (Excluding 10-624 and 10-634)

Pressure psig	Plain Brass	Satin Chrome	Polished Chrome
20	-02	-41	-67
22	-03	-42	-68
25	-04	-43	-69
30	-05	-44	-70
35	-06	-45	-71
40	-07	-46	-72
43	-08	-47	-73
45	-09	-48	-74
50	-10	-49	-75
55	-11	-50	-76
60	-12	-51	-77

Note: When ordering, specify pressure and finish by adding the two digit suffix after the product number, i.e. 10-102-05: 3/4" FNPT x 1" FNPT at 30 psig with plain brass finish.

# COMMERCIAL PRODUCTS CATALOG

## Safety Valves

### RVS 32 & RVS 52 (10-322, 10-512) SERIES



10-512



10-322

### ASME SECTION VIII STEAM SAFETY VALVES

National Board capacity certified safety valves; brass body with optional satin or polished chrome finish. Protects against excess pressure from thermal expansion and steam caused by failure of BTU input controls. Ideally suited for OEM applications such as steam cookers, autoclaves, sterilizers, coffee makers and similar equipment.

#### FEATURES

- Pressure settings 15 to 60 psig
- Discharge capacities to 725 lbs./hr.
- Stainless steel springs
- 10512 - Silicone soft seat for tight shut-off
- 10322 - EPDM soft seat for tight shut-off
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C

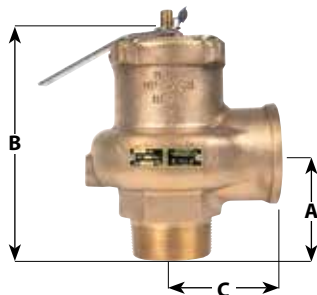
Series Number	Size (in.)		Pressure Range psig	Height	Wt./100 (lbs.)
	Inlet NPT	Outlet NPT			
10-322	3/4 M	3/4 F	20-60	3.75	128
10-512	1/2 M	1/2 F	15-60	2.62	58

#### MODEL NUMBERING SYSTEM

10 - X	-X	-XX	-X
MODEL AND SIZE (IN.)	FINISH	SET PRESSURE	OPTIONS
512 = 1/2 x 1/2	B = Plain Brass S = Satin Chrome P = Polished Chrome	Set Pressure in PSIG (2 Digits)	CE = PED/CE S = Stainless Steel trim V = Viton® Seat
322 = 3/4 x 3/4			

## ASME Section IV Low Pressure Steam Safety Valves

### RVS 14 (14-200) SERIES



### HIGH CAPACITY LOW PRESSURE STEAM BOILER SAFETY VALVES

National Board capacity certified in accordance with ASME Section IV at 15 psig. For commercial and industrial boilers. Capacities up to 6843 lbs./hr.

#### FEATURES

- EPDM o-ring for positive seal
- One piece body, all bronze construction
- PTFE coated piston
- Chrome plated Bronze body seat
- Optional test gag available for hydrostatic testing (add "G" suffix)
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C

Series Number	Size (in.)	*Capacity lbs./hr.	Dimensions (in.)			Wt./100 (lbs.)
			A	B	C	
14-205-08	2 x 2	3150	3.00	7.12	3.12	8.4
14-206-08	2-1/2 x 2-1/2	4676	3.50	8.25	3.50	13.0
14-207-08	3 x 3	6843	4.12	9.37	3.87	17.0

\* National Board Capacity Certified at 15 psig. (90% of actual capacity at 33% accumulation.)

Note: When ordering specify pressure by adding the two digit key number after the part number as follows: 5 psig - 03; 6 psig - 04; 8 psig - 05; 10 psig - 06; 12 psig - 07; 15 psig - 08



# SAFETY & RELIEF VALVES

## Hot Water Relief Valves

### RVW 60/61 (10-600) SERIES



### SECTION IV ASME HOT WATER RELIEF VALVES

High-capacity heating valves with female inlet, expanded or standard female outlet. Protects against excessive water pressure due to failure of controls to regulate BTU input. Elevated seat for drainage of water away from seat area. Entire pressure range is National Board capacity certified.

#### FEATURES

- High BTU capacity rating
- Silicone seat
- Fabric reinforced molded diaphragm isolates spring from water at all times
- Bronze body and spring cage
- Maximum temperature service 250°F
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C

Series Number	Size (in.)		Certified Pressure Range psig	Wt./100 (lbs.)	Dimensions (in.)		
	Inlet NPT	Outlet NPT			A	B	C
10-604	3/4F	3/4F	15-160	232	1.03	5.25	1.62
10-605	1F	1F	15-160	410	1.25	6.69	2.00
10-606	1-1/4F	1-1/4F	15-160	795	1.25	8.37	2.47
10-607	1-1/2F	1-1/2F	15-160	1100	2.00	10.75	2.75
10-608	2F	2F	15-160	2375	2.19	14.00	3.69
10-614	3/4F	1 F	15-160	226	1.03	5.25	1.72
10-615	1 F	1-1/4F	15-160	390	1.25	6.69	2.00
10-616	1-1/4F	1-1/2F	15-160	755	1.25	8.37	2.47
10-617	1-1/2F	2F	15-160	1145	2.00	10.75	2.75
10-618	2F	2-1/2F	15-160	2315	2.19	14.00	3.66

Use Suffix No. to designate last two digits of Product No. for desired pressure. Other pressure settings available upon request.

**BTU/HR at 10% over-pressure. National Board Certified. Ratings are 90% of actual at 10% accumulation.**

Pressure psig	Suffix Number	3/4 x 3/4 10-604	1 x 1 10-605	1-1/4 x 1-1/4 10-606	1-1/2 x 1-1/2 10-607	2 x 2 10-608
30	-05	827,000	1,339,000	2,316,000	3,151,000	5,193,000
50	-10	1,209,000	1,956,000	3,384,000	4,604,000	7,589,000
60	-12	1,399,000	2,265,000	3,918,000	5,331,000	8,786,000
75	-15	1,686,000	2,728,000	4,720,000	6,421,000	10,583,000
100	-20	2,162,000	3,500,000	6,055,000	8,238,000	13,577,000
125	-25	2,639,000	4,272,000	7,390,000	10,054,000	16,571,000
150	-34	3,116,000	5,044,000	8,725,000	11,871,000	19,565,000

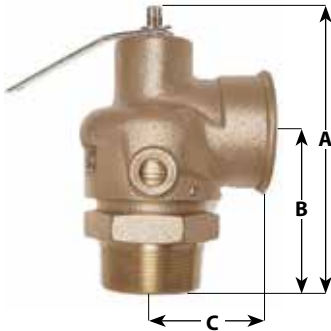
Pressure psig	Suffix Number	3/4 x 1 10-614	1 x 1-1/4 10-615	1-1/4 x 1-1/2 10-616	1-1/2 x 2 10-617	2 x 2-1/2 10-618
30	-05	970,000	1,570,000	2,716,000	3,696,000	6,091,000
50	-10	1,418,000	2,295,000	3,969,000	5,400,000	8,900,000
60	-12	1,641,000	2,657,000	4,596,000	6,252,000	10,305,000
75	-15	1,977,000	3,200,000	5,535,000	7,531,000	12,412,000
100	-20	2,536,000	4,105,000	7,101,000	9,661,000	15,924,000
125	-25	3,096,000	5,011,000	8,668,000	11,792,000	19,435,000
150	-34	3,655,000	5,916,000	10,234,000	13,923,000	22,947,000

Other pressure settings available upon request.

# COMMERCIAL PRODUCTS CATALOG

## Low Pressure Steam Safety Valves

### RVS 12 (12-200) SERIES



#### ASME SECTION IV

#### LOW PRESSURE STEAM HEATING BOILER SAFETY VALVES

Use on commercial steam heating boilers. National Board capacity certified at 15 psig.

#### FEATURES

- TFE coated EPDM seal
- All bronze construction
- 3/8" NPT side tapping for drain
- Top guided seat alignment
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C

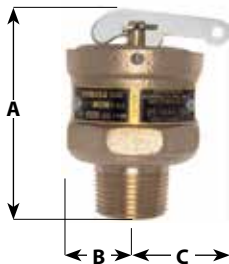
Series Number	Size (in.)		Max. Pressure psig	Capacity* lbs./hr.	Wt./100 (lbs.)	Dimensions (in.)		
	Inlet NPT	Outlet NPT				A	B	C
12-205	2	2	15	2500	514	6.00	3.75	2.62
12-206	2-1/2	2-1/2	15	3529	835	8.50	5.25	3.06
12-208	3	3	15	4100	1162	9.50	6.00	3.75

Note: When ordering specify pressure by adding the two digit key number after the product number as follows: 5 psig - 03; 6 psig - 04; 8 psig - 05; 10 psig - 06; 12 psig - 07; 15 psig - 08

\* National Board Capacity Certified-(15 psi rating, 90% of actual capacity at 33% accumulation.)

## Low Pressure Steam Safety Valves

### RVS 13 (13) SERIES



13-101



#### ASME SECTION IV

#### LOW PRESSURE STEAM HEATING BOILER SAFETY VALVES

National Board capacity certified at 15 psig in accordance with ASME Section IV; positive drainage of condensate from seat area.

#### FEATURES

- Flat seat, EPDM disc for positive seal
- Standard set pressure of 15 psig, capacities apply to valves set at 15 psig
- No. 13-101 is top outlet discharge
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C
- Rough Chrome option
- Non-code air service option (-A suffix)

Series Number	Size (in.)		Pressure psig	Max. Capacity* lbs./hr.	Wt./100 (lbs.)	Dimensions (in.)		
	Inlet NPT	Outlet NPT				A	B	C
13-101-B15	3/4 M	Top	15	410	64	2.87	0.94	1.250
13-211-B15	3/4 M	3/4 F	15	475	107	1.81	3.69	1.437
13-202-B15	1 M	1 F	15	643	110	2.06	3.87	1.218
13-213-B15	1-1/4 M	1-1/2 F	15	1200	218	2.53	4.50	1.875
13-214-B15	1-1/2 M	2 F	15	1900	320	3.00	5.25	2.187
13-511-B15	3/4 M	3/4 F	15	407	62	1.69	3.25	1.187
13-512-B15	3/4 F	3/4 F	15	407	59	1.81	2.75	1.187

\* National Board Capacity Certified at 15 psig (90% of actual capacity at 33% accumulation.)

Notes: 1) Pressure settings available: 5 to 15 psig in 1 psig increments

2) Per ASME Code Section IV only 15 psi settings are "HV" and "NB" stamped

#### PART NUMBERING SYSTEM

13 -	XXX	-X	-XX	-X
SERIES	FINISH	SET PRESSURE	OPTIONS	
101 =	3/4" M x Top	B = Plain Brass S = Satin Chrome*	Set Pressure in PSIG (2 Digits)	A = Air Service (Non-ASME)
211 =	3/4" M x 3/4" F			
202 =	1" M x 1" F			
213 =	1-1/4" M x 1-1/2" F			
214 =	1-1/2" M x 2" F			
511 =	3/4" M x 3/4" F			
512 =	3/4" F x 3/4" F			

\* Available on select models only

www.apollovalves.com

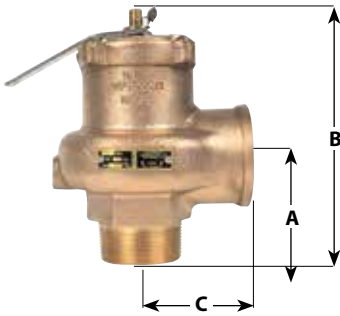
Customer Service (704) 841-6000



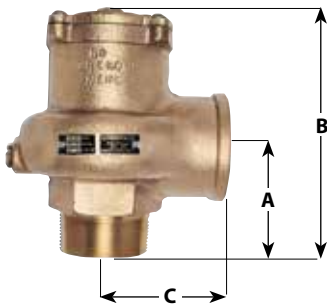
# SAFETY & RELIEF VALVES

## Relief Valves

### RVA 14 (14-400/500) SERIES



14-400  
W/LIFT LEVER



14-500  
PLAIN CAP

### NON-CODE AIR RELIEF VALVES

High volume air relief valves designed for non-ASME code low pressure air and gas service. Rugged bronze construction features elastomer soft seating and TFE coated discs. Standard test lever for model 14-400 and optional plain cap, weather resistant sealed body for model 14-500.

#### FEATURES

- Vibration resistant soft seat standard
- Stainless steel spring
- One piece unified bronze body design
- High flow "top-guided" design
- Inlet sizes 2", 2-1/2", and 3"
- Set pressures 4 to 22 psig @ 400°F max
- Compact end to end dimension

Series 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

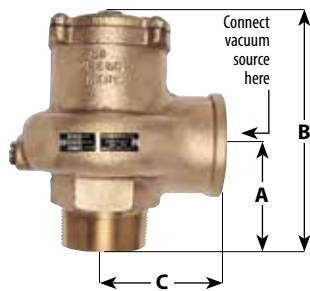
#### PART NUMBERING SYSTEM

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 5 = Air Relief, Plain Cap	05 = 2" NPT 06 = 2 1/2" NPT 07 = 3" NPT	Set Pressure in PSIG (2 Digits)

# COMMERCIAL PRODUCTS CATALOG

## Vacuum Relief Valves

### RVV 14 (14-600) SERIES



14-600

### VACUUM RELIEF VALVES

High flow vacuum relief valves feature one piece cast bronze bodies, teflon coated discs and elastomer soft seating provide accurate and dependable operation. Ideal for use with high volume vacuum systems, bulk hauling tanks and trailers, powdered solids/bulk handling and pneumatic conveying equipment.

#### FEATURES

- Weather resistant construction
- Elastomer soft seat is vibration resistant
- Stainless steel spring
- One piece unified bronze body design
- High capacity "top-guided" design
- TFE/chrome plated internals
- Connection sizes 2", 2-1/2", and 3"
- Relief settings 8" to 30" Hg @ 400°F max

Series 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

### SERIES 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 06 = 2 1/2" NPT 07 = 3" NPT	XX = Inches of Mercury



# SAFETY & RELIEF VALVES

## Safety Valve

### RVA 15 (15-100) SERIES



### ASME SECTION VIII SAFETY VALVES

ASME Air Relief Valves

#### FEATURES

- National Board Certified 15 psig through 250 psig
- Stainless steel springs
- High performance molded Viton seat design, Sizes 1/4" to 1/2"
- Viton o-ring seat, 3/4" & 1"
- Registered in all Canadian Provinces and Territories: CRN #0G8547.5C
- Maximum temp. 325°F
- ASTM B16 brass body
- Optional dual ASME/European Pressure Equipment Directive Compliance
- Manufactured in USA

**National Board Certified capacities for air and gas service in air compressors, air receivers and gas lines**

Series Number	Inlet Size (in.)	Dimensions (in.)		Wt./100 (lbs.)
		A	B	
15-112	1/4 NPT	2.625	.78	18.5
15-115	3/8 NPT	3.250	1.125	42.2
15-117	1/2 NPT	3.375	1.125	45.3
15-118	3/4 NPT	4.062	1.218	58.0
15-119	1 NPT	5.125	1.875	153.0

Set Pressure psig*	Capacities in SCFM @ 10% Accumulation			
	15-112 1/4"	15-115 & 117 3/8" or 1/2"	15-118 3/4"	15-119 1"
15	24	60	107	222
30	35	88	156	323
50	51	128	229	473
75	72	179	319	659
100	92	230	409	845
125	112	281	499	1032
150	133	332	589	1218
165	145	363	644	1330
175	153	383	680	1405
200	173	432	770	1591
225	194	484	860	1778
250	214	535	950	1964

\* Other set pressures available upon request.

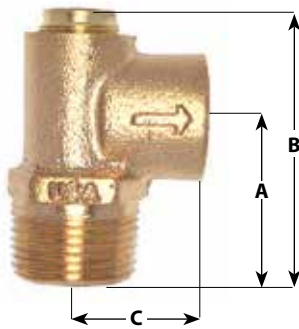
#### SERIES NUMBERING SYSTEM

15-XXX	-X	-XXX	-XX
SIZE (IN.)	FINISH	SET PRESSURE	OPTIONS
112 = 1/4 NPT 115 = 3/8 NPT 117 = 1/2 NPT 118 = 3/4 NPT 119 = 1 NPT	B = Plain Brass	Set Pressure in PSIG (15-250 psig)	CE = PED/CE Q = Performance (Calibration) Test Reports

# COMMERCIAL PRODUCTS CATALOG

## Pressure Relief Valves

### RVW 16 (16-200) SERIES



16-200

### PRESSURE RELIEF VALVES

Pressure relief valves relieve excess pressure in cold water supply systems, storage tanks, and well pumps. Also suitable for air, oil, and other non-hazardous liquids.

#### FEATURES

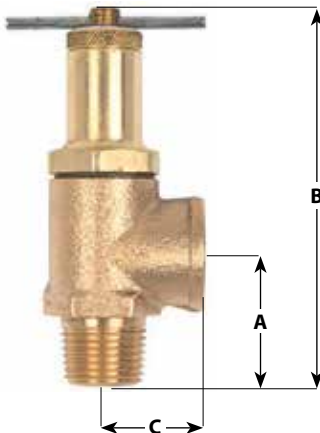
- Cast bronze body, stainless steel springs
- Standard pressure settings from 50 to 175 psig
- All valves are 100% factory tested
- Silicone soft seat ensures seat tightness, extended service life
- Maximum recommended service temperature 120°F

Series Number	Inlet Size (in.)	Dimensions (in.)			Wt./100 (lbs.)
		A	B	C	
16-202	1/2 M x 1/2 F	1.41	2.12	1.00	33.0
16-203	3/4 M x 1/2 F	1.41	2.50	1.00	37.5

Note: When ordering, specify pressure by adding the two digit suffix after the product number, i.e.: 50 psig: -01; 75 psig: -02; 100 psig: -03; 125 psig: -04; 150 psig: -05; 175 psig: -06

### 16-501 SERIES

LEAD FREE OPTION COMING SOON!



### BY-PASS RELIEF VALVES

Adjustable relief valves protect equipment by providing low volume liquid relief or bypass control. Excess volume may be discharged back to the low pressure source. Ideal for agricultural sprayers and simple commercial or industrial pressurized systems.

#### FEATURES

- Adjustable relief settings, in two ranges to 600 psi
- Cast bronze body, stainless steel springs
- Choice of Nitrile (Buna) or PTFE soft seats
- Knurled locknut locks pressure adjustment
- Viton stem seal, polypropylene body gasket
- Maximum recommended service temperature 120°F

Series Number	Size (in.)	Relief Range	Seat Material	Wt./100 (lbs.)
16-501-01	1/2 M x 1/2 F	50 - 250	Nitrile	0.62
16-501-02	1/2 M x 1/2 F	250 - 600	Nitrile	0.62
16-501-25	1/2 M x 1/2 F	50 - 250	PTFE	0.62
16-501-60	1/2 M x 1/2 F	250 - 600	PTFE	0.62

### 16-503 & 16-504 SERIES

LEAD FREE OPTION COMING SOON!



### CALIBRATED PRESSURE RELIEF VALVES

Allows for in-line pressure adjustments without the need for a pressure gauge. Provides static overpressure protection for liquid filled systems such as well pumps, tanks, and fire protection systems.

#### FEATURES

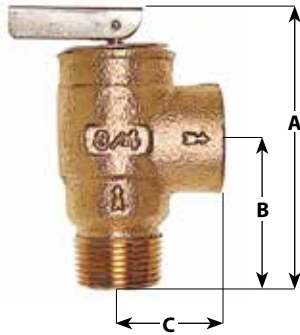
- 1/2" or 3/4" inlet connection
- Factory preset at 100 psi
- Pressure range 50 to 175 psi, calibrated in 25 psi increments
- Cast bronze body, SS springs
- Silicone soft seat, EPDM cap seal
- Maximum service temp: 200°F

Series Number	Size (in.)	Dimensions (in.)			Wt./100 (lbs.)
		A	B	C	
16-503-01	1/2 M x 1/2 F	1.31	3.44	1.00	37
16-504-01	3/4 M x 1/2 F	1.31	3.44	1.00	37

# SAFETY & RELIEF VALVES

## Hot Water Relief Valves

### RVW 17 (17-400) SERIES



17-400



### PRESSURE RELIEF VALVES

Prevents excessive thermal expansion buildup in plumbing systems, tank applications and tankless water heaters. Conforms to HUD/FHA requirements: ideal for well systems.

#### FEATURES

- Bronze body, stainless steel spring
- CSA certified design to ANSI Z21.22 "Relief Valves for Hot Water Supply Systems"
- ASME capacity certified from 75 to 150 psig\*
- CRN #0G8547.5C Registered in all Canadian Provinces and Territories

Series Number	Size (in.)		CSA Capacity Rating BTU/Hr.	Wt./100 (lbs.)	*ASME Certified Discharge Capacities			
	Inlet NPT	Outlet NPT			75 BTU/Hr.	100 BTU/Hr.	125 BTU/Hr.	150 BTU/Hr.
17-401	1/2 M	1/2 F	15,000	57	-	-	-	-
17-402	3/4 M	3/4 F	200,000	53	505,000	648,000	791,000	934,000

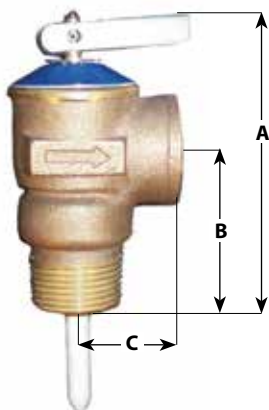
Note: When ordering specify pressure by adding the two digit key number after the product number as follows: 75 psig - 01; 100 psig - 02; 125 psig - 03; 150 psig - 04; 160 psig - 05

\* 3/4 model only: National Board Capacity Certified - BTU per hour (90% of actual capacity at 10% accumulation) ASME boiler and pressure vessel code - Section IV - Heating Boilers

# COMMERCIAL PRODUCTS CATALOG

## Temperature & Pressure Relief Valves

### TP (18C-400) SERIES



18C-400



### WATER HEATER T&P RELIEF VALVES

Feature unique non-metallic coating which protects the element against galvanic and electromechanical corrosion by isolating it from the heated water. This coating is electrostatically applied for uniform coverage, then thermobonded, resulting in optimum adhesion for extended service life. CSA design certified at all settings to ANSI Z21.22. ASME Section IV rated at 125 psig and 150 psig settings for 3/4" NPT only.

#### FEATURES

- Meets HUD/FHA requirements
- Cast bronze body, SS spring
- Rated 210°F maximum
- CRN #OG0053.6C Registered in all Canadian Provinces and Territories
- ASME capacity certified for 3/4" NPT only

Series Number	Size (in.)	Element Length (in.)	CSA Capacity Rating BTU/Hr.	Wt./100 (lbs.)
18C-401	1/2 M x 1/2 F	1.44	15,000	48.0
18C-401	1/2 M x 1/2 F	3.00	15,000	54.0
18C-402	3/4 M x 3/4 F	1.44	95,000	52.0
18C-402	3/4 M x 3/4 F	3.00	105,000	58.0
18C-402	3/4 M x 3/4 F	8.00	105,000	62.0

**Special statement regarding T&P Valves and compliance to the Lead Free requirements of the U.S. Safe Drinking Water Act.**

Effective January 4th 2014 the SDWA requires that pipes, fittings or fixtures used to convey or dispense potable water must be lead free. Further clarification has been provided by the EPA in a document titled "Summary of the Reduction of Lead In Drinking Water Act and frequently Asked Questions". The latest document can be viewed on our website: [www.apollovalves.com/lead\\_free](http://www.apollovalves.com/lead_free); click on the NEW EPA FAQ link.

FAQ #6 states that water heaters are covered by the Act and must comply. However most water heater OEM's are certifying their heaters as complete assemblies using non-Lead Free T&P valves due to their relatively small wetted surface area.

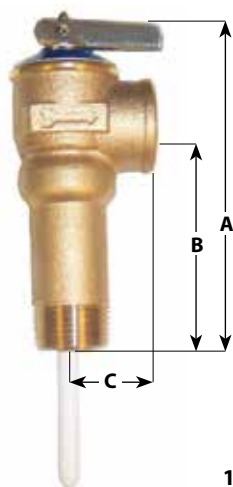
FAQ #23 acknowledges this and states that replacement parts (including T&P valves) need not be lead free as long as the entire water heater with all installed components overall device would meet the Lead Free requirements of the Act.

#### SUFFIX KEY

Pressure psig	Coated Element Length				
	401 Series		402 Series		
	1.44"	3"	1.44"	3"	8"
125	-27	-29	-27	-29	-36
150	-28	-30	-28	-30	-37
175	-	-	-	-24	-

## Temperature & Pressure Relief Valves

### TPX (18C-402X) SERIES



18C-402X  
EXTENDED SHANK



### EXTENDED SHANK WATER HEATER T&P RELIEF VALVES

Relief valves with an extended body length (2") for protection of water heaters with extra insulation. Unique non-metallic coating protects thermal element against galvanic and electromechanical corrosion. CSA design certified at all settings to ANSI Z21.22. ASME Section IV rated at 125 psig and 150 psig settings.

#### FEATURES

- Meets HUD/FHA requirements
- Cast bronze body, SS spring
- Rated 210°F maximum
- CRN #OG0053.6C Registered in all Canadian Provinces and Territories
- ASME capacity certified

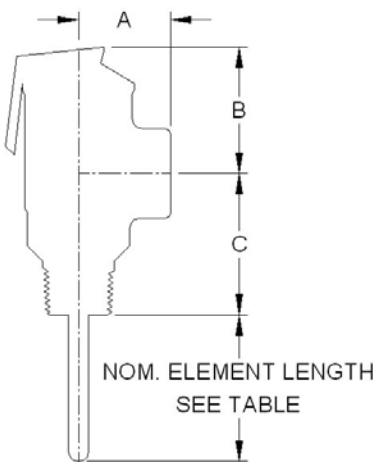
Series Number	Size (in.)	Element Length (in.)	Pressure psig	CSA Capacity Rating BTU/Hr.	Wt./100 (lbs.)
18C-402X-39	3/4 M x 3/4 F	3	64.0	105,000	125
18C-402X-38	3/4 M x 3/4 F	3	64.0	105,000	150



# SAFETY & RELIEF VALVES

## Temperature & Pressure Relief Valves

### TPC (18C-500) SERIES



### HIGH CAPACITY COMMERCIAL T&P VALVES

The Apollo 18C-500 Series bronze automatic temperature and pressure relief valves are used for protection of high capacity commercial hot water heaters and storage tanks.

#### FEATURES

- 3/4" through 2" NPT connections
- ASME Section IV certified capacity
- CSA listed and Certified to ANSI Z21.22
- 125 and 150 psig set pressures at 210°F max
- Coated element protects against corrosion
- SS elements (1-1/2" and 2")
- Canadian Registration Number CRN-0G1438.6C

Series Number	Size (in.)	Element Length (in.)	Inlet Type	CSA Capacity Rating Btu/HR	*ASME Cap. Rating BTU/HR
18C5113125	3/4"	2.69"	M	185,000	1,619,000
18C5113150	3/4"	2.69"	M	185,000	1,912,000
18C5115125	3/4"	4.38"	M	205,000	1,619,000
18C5115150	3/4"	4.38"	M	205,000	1,912,000
18C5118125	3/4"	7.56"	M	205,000	1,619,000
18C5118150	3/4"	7.56"	M	205,000	1,912,000
18C5123125	3/4"	2.88"	F	185,000	1,619,000
18C5123150	3/4"	2.88"	F	185,000	1,912,000
18C5125125	3/4"	4.56"	F	205,000	1,619,000
18C5125150	3/4"	4.56"	F	205,000	1,912,000
18C5128125	3/4"	7.75"	F	205,000	1,619,000
18C5128150	3/4"	7.75"	F	205,000	1,912,000
18C5213125	1"	3.06"	M	500,000	1,825,000
18C5213150	1"	3.06"	M	500,000	2,155,000
18C5215125	1"	4.75"	M	500,000	1,825,000
18C5215150	1"	4.75"	M	500,000	2,155,000
18C5225125	1"	4.75"	F	750,000	3,070,000
18C5225150	1"	4.75"	F	750,000	3,625,000
18C5228125	1"	8.13"	F	750,000	3,070,000
18C5228150	1"	8.13"	F	750,000	3,625,000
18C5314125	1-1/4" x 1"	3.97"	M	750,000	3,070,000
18C5314150	1-1/4" x 1"	3.97"	M	750,000	3,625,000
18C5424125	1-1/2"	4.13"	F	1,200,000	5,125,000
18C5424150	1-1/2"	4.13"	F	1,200,000	6,050,000
18C5513125	2" x 1-1/2"	3.25"	M	1,200,000	5,125,000
18C5513150	2" x 1-1/2"	3.25"	M	1,200,000	6,050,000

Series Number	Inlet Size (in./mm.)	Dimensions (in./mm.)		
		A	B	C
18C511	3/4" M x 3/4" FNPT	1.50	3.47	2.53
	(20)	(40)	(88)	(64)
18C512	3/4" F x 3/4" FNPT	1.50	3.47	2.35
	(20)	(40)	(88)	(60)
18C521	1" M x 1" FNPT	1.56	3.47	2.38
	(25)	(40)	(88)	(60)
18C522	1" F x 1" FNPT	1.56	3.47	2.13
	(25)	(40)	(88)	(54)
18C531	1-1/4" M x 1" FNPT	1.75	4.34	1.91
	(32)	(44)	(110)	(49)
18C542	1-1/2" M x 1-1/2" FNPT	2.47	5.84	1.71
	(40)	(63)	(148)	(43)
18C551	2" M x 1-1/2" FNPT	2.47	5.84	2.59
	(50)	(63)	(148)	(66)

\* National Board certified capacity per ASME Section IV-Heating Boilers

**Special statement regarding T&P Valves and compliance to the Lead Free requirements of the U.S. Safe Drinking Water Act.**

Effective January 4th 2014 the SDWA requires that pipes, fittings or fixtures used to convey or dispense potable water must be lead free. Further clarification has been provided by the EPA in a document titled "Summary of the Reduction of Lead In Drinking Water Act and frequently Asked Questions". The latest document can be viewed on our website: [www.apollovalves.com/lead\\_free](http://www.apollovalves.com/lead_free); click on the NEW EPA FAQ link.

FAQ #6 states that water heaters are covered by the Act and must comply. However most water heater OEM's are certifying their heaters as complete assemblies using non-Lead Free T&P valves due to their relatively small wetted surface area.

FAQ #23 acknowledges this and states that replacement parts (including T&P valves) need not be lead free as long as the entire water heater with all installed components overall device would meet the Lead Free requirements of the Act.



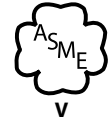
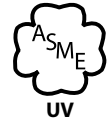
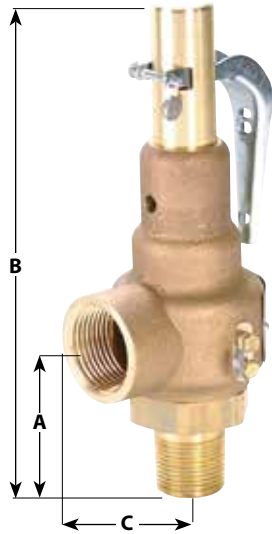
See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.

Customer Service (704) 841-6000

# COMMERCIAL PRODUCTS CATALOG

## ASME Section I & VIII Safety Valves

### 19 SERIES



### BRONZE SAFETY VALVES FOR STEAM, AIR & GAS SERVICE

National Board capacity certified, high capacity, ideal for use with steam boilers, sterilizers, pressure vessels, compressors, and pressure piping systems.

#### FEATURES

- Pressures: 15 through 300 psig steam, air, gas
- Max. temp. 406°F with stainless steel trim
- 13 Sizes, 1/2" through 2-1/2" NPT
- Stainless steel springs
- Optional 316 stainless steel wetted trim (Specify 19L or 19S Series)
- Available in metal and soft seat designs
- Metal to metal seat lapped to optical flatness (19M)
- PFA Teflon® soft seat easily replaced (19K)
- Double ring, full bore, high capacity design
- Tapped body drain facilitates piping of condensate away from equipment
- Registered in all Canadian Provinces and Territories, CRN #0G8547.5C
- Wide wrenching hex for easier, faster installations
- Dual ASME/CE European Pressure Equipment Directive Compliant option

Series Number	Orifice Designation	Inlet Size (in.)	Dimensions (in.)			Wt./100 (lbs.)
			A	B	C	
19KDC	D	1/2 x 3/4	2.21	6.52	1.37	1.6
19KDD	D	3/4 x 3/4	2.21	6.52	1.37	1.6
19KED	E	3/4 x 1	2.50	7.16	1.75	2.0
19KEE	E	1 x 1	2.64	7.30	1.75	2.2
19KFE	F	1 x 1-1/4	2.95	9.34	2.00	4.1
19KFF	F	1-1/4 x 1-1/4	2.95	9.34	2.00	4.3
19KGF	G	1-1/4 x 1-1/2	3.38	11.01	2.37	7.4
19KGG	G	1-1/2 x 1-1/2	3.38	11.01	2.37	7.6
19KHG	H	1-1/2 x 2	3.63	11.96	2.75	11.5
19KHH	H	2 x 2	3.63	11.96	2.75	11.6
19KJG	J	1-1/2 F X 2-1/2	3.80	14.00	3.50	20.0
19KJH	J	2 x 2-1/2	4.06	14.25	3.50	19.9
19KJJ	J	2-1/2 x 2-1/2	4.50	14.68	3.50	20.8

### CERTIFIED CAPACITIES

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	174	310	484	794	1,240	2,035
25	229	408	637	1,045	1,631	2,677
40	311	555	866	1,421	2,217	3,641
50	366	653	1,019	1,672	2,608	4,283
100	646	1,152	1,798	2,950	4,602	7,557
125	787	1,404	2,191	3,595	5,609	9,210
150	929	1,656	2,585	4,240	6,616	10,864
165	1,014	1,807	2,821	4,628	7,220	11,856
200	1,211	2,160	3,371	5,531	8,630	14,170
250	1,494	2,664	4,158	6,822	10,644	17,477
300*	1,777	3,168	4,945	8,112	12,658	20,784
Approx 1 psi increments	5.7	10.1	15.7	25.8	40.3	66.1

#### ASME Section I Steam

Power Boiler - "V" steam lbs./hr. steam @ 3% accumulation

\*Specify Model 19S with stainless steel wetted trim for steam settings beyond 250 psig.

# SAFETY & RELIEF VALVES

## ASME Section I & VIII Safety Valves

### 19 SERIES (CONT.)

### BRONZE SAFETY VALVES FOR STEAM, AIR & GAS SERVICE

#### ASME Section VIII Steam

Unfired Pressure Vessels - "UV" steam lbs./hr.  
@ 10% accumulation

*\*Specify Model 19S with stainless steel wetted trim  
for steam settings beyond 250 psig.*

#### CERTIFIED CAPACITIES

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	179	320	499	819	1,278	2,099
25	234	417	652	1,070	1,669	2,741
40	322	574	896	1,471	2,295	3,768
50	382	682	1,064	1,746	2,725	4,474
100	684	1,220	1,904	3,124	4,875	8,005
125	835	1,489	2,324	3,813	5,950	9,770
150	985	1,758	2,744	4,502	7,025	11,535
165	1,076	1,920	2,996	4,916	7,670	12,594
200	1,287	2,296	3,584	5,881	9,175	15,066
250	1,590	2,834	4,424	7,259	11,325	18,596
300*	1,892	3,373	5,265	8,639	13,479	22,132
Approx 1 psi increments	6.0	10.8	16.8	27.6	43.0	70.6

#### ASME Section VIII Air

Unfired Pressure Vessels - "UV" air SCFM @  
10% accumulation

#### CERTIFIED CAPACITIES

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	64	114	178	292	455	747
25	83	149	232	381	594	976
40	115	204	319	524	817	1,342
50	136	243	379	622	970	1,593
100	244	434	678	1,112	1,736	2,849
125	297	530	828	1,358	2,118	3,478
150	351	626	977	1,603	2,501	4,106
165	383	683	1,067	1,750	2,731	4,484
200	459	818	1,276	2,094	3,267	5,364
250	566	1,009	1,575	2,584	4,032	6,621
300	673	1,201	1,874	3,075	4,798	7,878
Approx 1 psi increments	2.2	3.8	6.0	9.8	15.3	25.1

#### 19 SERIES NUMBERING SYSTEM

19M	D	C	K	165	A
BASE MODEL NUMBER	ORIFICE LETTER	INLET SIZE (IN.) NPT	ASME CODE AND SERVICE	SET PRESSURE IN PSI	SPECIAL OPTIONS
19K = Brass Trim/Teflon Seat	D	C = 1/2	A = Sect. I Steam		A = Anti-vibration trim
19M = Brass Trim/Metal Seat	E	D = 3/4	K = Sect. VIII Air		CE = CE/PED Compliant
19L = Stainless Trim/Teflon Seat	F	E = 1	L = Sect. VIII Steam		Q = Performance (Calibration) test report
19S = Stainless Trim/Metal Seat	G	F = 1-1/4	N = Non-Code Air		X = Oxygen cleaning
	H	G = 1-1/2	P = Non-Code Steam		* Other suffixes - factory issued
	J	H = 2			
		J = 2-1/2			



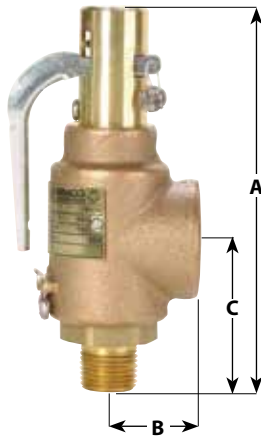
See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.

Customer Service (704) 841-6000

# COMMERCIAL PRODUCTS CATALOG

## ASME Section I & VIII Safety Valves

### 29 SERIES



### OEM STYLE BRONZE SAFETY VALVES FOR STEAM, AIR & NON-HAZARDOUS GAS

Ideally suited for OEM applications where compact size, dependable performance and maximum economy are required. These rugged safety valves feature a top guided design and patented Teflon® "soft-seat" for dramatically reduced seat leakage. Flow ratings are National Board certified.

#### FEATURES

- Stainless steel springs are standard
- PFA Teflon® seat resists corrosive boiler chemicals
- Pressure settings from 30 to 200 psig
- Rust proofed steel stem and spring washers
- Lower control ring ensures short, consistent blowdown
- Tapped body drain allows piping of condensate away from equipment
- Reduced repair costs; soft seat easily replaced
- Registered in All Canadian Provinces under CSA B51 CRN #0G8547.5C
- Optional European Pressure Equipment Directive Compliance

Series Number	Size (in.)		Dimensions (in.)			Wt./100 (lbs.)
	Inlet	Outlet	A	B	C	
29-102	3/8	1	5.41	1.25	2.12	1.30
29-202	1/2	1	5.41	1.25	2.12	1.33
29-302	3/4	1	5.41	1.25	2.12	1.90
29-303	3/4	1-1/4	7.25	1.69	2.75	3.43
29-402	1	1-1/4	7.25	1.69	2.75	3.43
29-501	1-1/4	1-1/4	7.25	1.69	2.75	3.48

#### ASME Section I Steam

Power Boiler "V" steam lbs./hr. @ 3% accumulation

Set Pressure psig	29-102	29-303
	29-202 29-302	29-402 29-501
50	238	479
75	331	664
100	423	851
125	516	1,036
150	608	1,223
200	794	1,596
Approx 1 psi increments	3.7	7.4

#### ASME Section VIII Steam

Unfired pressure vessels - "UV" steam lbs./hr. @ 10% accumulation

Set Pressure psig	29-102	29-303
	29-202 29-302	29-402 29-501
50	251	504
75	350	704
100	448	902
125	547	1,102
150	646	1,299
200	844	1,697
Approx 1 psi increments	3.9	8.0

#### ASME Section VIII Air

Unfired pressure vessels - "UV" air SCFM @ 10% accumulation

Set Pressure psig	29-102	29-303
	29-202 29-302	29-402 29-501
50	89	180
75	124	250
100	159	321
125	194	391
150	230	463
200	300	604
Approx 1 psi increments	1.4	2.8

### 29 SERIES NUMBERING SYSTEM

29	202	A	100	S
BASE MODEL NUMBER	INLET x OUTLET NPT	SERVICE	SET PRESSURE	OPTIONS
Bronze with Brass Trim and Teflon® Soft Seat	102 = 3/8 x 1 202 = 1/2 x 1 302 = 3/4 x 1 303 = 3/4 x 1-1/4 402 = 1 x 1-1/4 501 = 1-1/4 x 1-1/4	A = ASME Sec I Steam K = ASME Sec VIII Air L = ASME Sec VIII Steam	Set Pressure, PSIG (range 30-200 psig)	S = Stainless Steel Wetted Trim (models 29-202 & 29-303 only) CE = CE/PED Q = Performance (Calibration) test reports



# SAFETY & RELIEF VALVES

## ASME Section I & VIII Safety Valves

### 119 SERIES

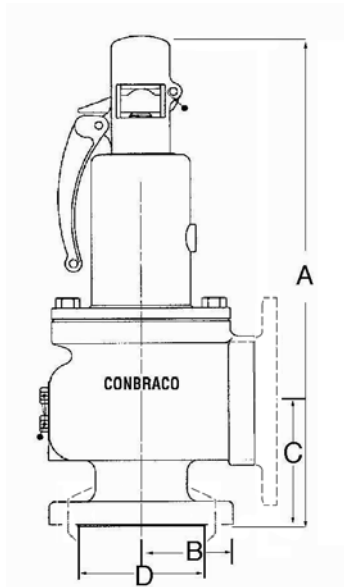


### CAST IRON SAFETY VALVE

High capacity safety valves ideal for use with all types of boilers, pressure vessels and pressure piping systems. Their top-guided design includes two control rings that ensure seat tightness. Direct replacement for most competitive models.

#### FEATURES

- Set pressures to 250 psig @ 450°F max
- Flanged inlet sizes: 1-1/2" through 6" ANSI 250 lb; some sizes available in female NPT
- National Board Certified ASME flow ratings
- 316 stainless steel wetted trim (disc and nozzle) is standard
- Metal to metal seating, lapped to optical flatness
- Semi-nozzle design available in eight orifice sizes
- Rust proof steel stem, spring and spring washers
- Drip pan elbows are available (see page 90)
- Registered in all Canadian Provinces Under CSA B51, CRN #0G8547.5C
- Optional dual ASME/European Pressure Equipment Directive Compliance



Series Number	Valve Size (in.)	Orifice Letter	Orifice Area (sq. in.)	Dimensions (in.)				Wt./ (lbs.) APP
				A	B	C	Hex D	
119 JGC	1-1/2 250# x 2 1/2 FNPT	J	1.36	15.00	4.00	4.31		35
119 KHC	2 250# x 3 FNPT	K	1.93	16.00	4.00	4.62		36
119 KHA	2 FNPT x 3 FNPT	K	1.93	16.00	4.00	4.62	3-3/4	37
119 KJC	2-1/2 250# x 3 FNPT	K	1.93	16.00	4.00	4.62		41
119 KKC	3 250# X 3 FNPT	K	1.93	16.00	4.00	4.63		45
119 LJC	2-1/2 250# x 4 FNPT	L	2.99	22.00	5.12	5.62		84
119 LJA	2-1/2 FNPT x 4 FNPT	L	2.99	22.00	5.12	5.62	5-3/8	81
119 LKC	3 250# x 4 FNPT	L	2.99	22.00	5.12	5.62		85
119 LMC	4 250# X 4 FNPT	L	2.99	22.00	5.13	5.63		90
119 MKA	3 FNPT x 4 FNPT	M	3.77	22.00	5.12	5.62	5-3/8	80
119 MKC	3 250# x 4 FNPT	M	3.77	22.00	5.12	5.62		87
119 MMC	4 250# X 4 FNPT	M	3.77	22.00	5.13	5.63		95
119 NMD	4 250# x 6 125#	N	4.55	28.00	7.25	6.75		210
119 PMD	4 250# x 6 125#	P	6.69	28.00	7.25	6.75		215
119 QPD	6 250# x 8 125#	Q	11.59	42.00	10.00	9.25		530
119 RPD	6 250# x 8 125#	R	16.79	42.00	10.00	9.25		530

#### Information required for ordering 119 series valves:

1. Determine the orifice letter that corresponds to your required flow rate from the following capacity charts.
2. Select the inlet x outlet connection options from the list of models available for that orifice (above).
3. Specify base model number, set pressure, ASME Code section and service.

For Further information request catalog SRCA9000

### 119 SERIES NUMBERING SYSTEM

119	K	H	C	A	MAA	0150	Q
SERIES NUMBER	ORIFICE LETTER	INLET (IN.)	CONNECTION	SERVICE	SPECIAL OPTIONS	SET PRESSURE	SUFFIX
119 = Stainless Steel Wetted Trim	The orifice letter from the Capacity Chart (pg. 84)	G = 1-1/2 H = 2 J = 2-1/2 K = 3 M = 4 P = 6	A = FNPT x FNPT C = 250# x FNPT D = 250# x 125#	A = Sec I Steam K = Sec VIII Air L = Sec VIII Steam N = Non Code Air P = Non Code Steam	Factory issued letters/numbers (MAA default) MCE = CE/PED	Set Pressure, PSIG (4 digits)	Q = Performance (Calibration) test reports



See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.

Customer Service (704) 841-6000

# COMMERCIAL PRODUCTS CATALOG

## ASME Section I & VIII Safety Valves

### 119 SERIES (CONT.)

### ASME SECTION I

Steam Boilers - Pounds of saturated steam per hour @ 3% or 2 psig accumulation, whichever is greater.

### ASME SECTION VIII

Pressure Vessels - Pounds of saturated steam per hour @ 10% or 3 psig accumulation, whichever is greater.

### ASME SECTION VIII

Pressure Vessels - Standard cubic feet of air per minute @ 10% or 3 psig, whichever is greater.

*Note: Available factory preset at any pressure 15-250 psig.*

### J ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	1947	2008	715
30	2868	2929	1043
50	4096	4280	1523
75	5646	5969	2124
100	7227	7657	2726
125	8809	9346	3327
150	10390	11034	3928
175	11971	12723	4529
200	13552	14412	5130
225	15133	16100	5731
250	16714	17789	6332

### K ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	2761	2848	1014
30	4067	4154	1479
50	5809	6070	2161
75	8008	8465	3013
100	10250	10860	3865
125	12493	13255	4718
150	14735	15650	5570
175	16978	18045	6423
200	19220	20440	7275
225	21463	22834	8128
250	23705	25229	8980

### L ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	4286	4421	1574
30	6314	6449	2295
50	9018	9423	3354
75	12432	13141	4678
100	15913	16859	6001
125	19394	20577	7324
150	22876	24295	8648
175	26357	28013	9971
200	29838	31731	11294
225	33320	35449	12618
250	36801	39167	13941

### M ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	5410	5580	1986
30	7969	8140	2897
50	11382	11894	4234
75	15691	16587	5904
100	20085	21280	7574
125	24480	25973	9245
150	28874	30666	10915
175	33268	35358	12586
200	37662	40051	14256
225	42056	44744	15926
250	46451	49437	17597

### N ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	6522	6728	2395
30	9608	9814	3493
50	13723	14340	5104
75	18918	19998	7118
100	24215	25655	9132
125	29513	31313	11146
150	34811	36971	13160
175	40108	42629	15173
200	45406	48287	17187
225	50704	53944	19201
250	56002	59602	21215

### P ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	9592	9895	3522
30	14131	14434	5138
50	20183	21091	7507
75	27823	29412	10469
100	35615	37733	13431
125	43407	46055	16393
150	51199	54376	19355
175	58990	62697	22317
200	66782	71018	25278
225	74574	79340	28240
250	82366	87661	31202

### Q ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	16617	17141	6101
30	24480	25004	8900
50	34964	36537	13005
75	48200	50952	18136
100	61698	65368	23267
125	75197	79783	28398
150	88695	94199	33529
175	102193	108614	38660
200	115691	123030	43791
225	129189	137445	48923
250	142687	151861	54054

### R ORIFICE

Set Pressure psig	ASME Section I Steam lbs./hr.	ASME Section VIII Steam lbs./hr.	ASME Section VIII Air SCFM
15	24061	24820	8834
30	35446	36205	12887
50	50628	52903	18830
75	69791	73776	26260
100	89336	94649	33689
125	108880	115522	41119
150	128425	136395	48549
175	147969	157267	55978
200	167514	178140	63408
225	187059	199013	70837
250	206603	219886	78267

# SAFETY & RELIEF VALVES

## Safety Relief Valves

### 500 SERIES



### ASME SECTION VIII SAFETY RELIEF VALVES

Versatile ASME Section VIII safety relief valve certified for steam, air/gas and liquid service. Choice of bronze, carbon steel or stainless steel bodies to suit a wide range of applications.

#### FEATURES

- Set pressures to 1200 psig @ 800°F max
- Inlet sizes 1/2" through 2"
- Wide range of materials and options
- High capacity full nozzle design
- Stainless steel springs are standard
- Short "tuned" blowdown
- API 527 seat tightness
- Back pressure tight bonnet design
- Packed lever and screwed cap designs
- One trim suitable for all types of service
- Optional soft seating
- CSA B51 CRN #0G8547.5C
- Optional Dual ASME/CE European Pressure Equipment Directive Compliance Marking

Series Number	Valve Size (in.)	Orifice Letter	Flow Area (sq. in.)	Dimensions (in.)			Wt. Ea. (lbs.)
				A	B	C	
5xxDC	1/2 X 1	D	0.13	2.37	7.50	1.62	2.0
5xxDCD*	1/2 X 3/4	D	0.13	2.37	7.50	1.62	2.0
5xxDD	3/4 X 1	D	0.13	2.37	7.50	1.62	2.0
5xxDDD*	3/4 X 3/4	D	0.13	2.37	7.50	1.62	2.0
5xxED	3/4 X 1-1/4	E	0.23	2.62	9.00	2.00	3.0
5xxEE	1 X 1-1/4	E	0.23	2.62	9.00	2.00	3.0
5xxFE	1 X 1-1/2	F	0.36	2.87	10.25	2.37	5.0
5xxFF	1-1/4 X 1-1/2	F	0.36	2.87	10.25	2.37	5.0
5xxGF	1-1/4 X 2	G	0.59	3.25	13.25	2.62	9.0
5xxGG	1-1/2 X 2	G	0.59	3.25	13.25	2.62	9.5
5xxHG	1-1/2 X 2-1/2	H	0.92	3.50	15.00	2.75	15.5
5xxHH	2 X 2-1/2	H	0.92	3.50	15.00	2.75	16.0
5xxJH	2 X 3	J	1.50	4.00	17.00	3.25	23.0

\* 3/4" outlet option available with 510 and 520 bronze bodied models only.

### 500 SERIES NUMBERING SYSTEM

52	3	J	H	B	K	M	AA	0425	Q
SERIES BODY/TRIM MATERIAL	CAP	ORIFICE LETTER	INLET SIZE	CONNECTION	SERVICE	SEAT	SPECIAL OPTIONS	SET PRESSURE	SUFFIX
51 = Bronze/Brass	1 = Screwed Cap	D	C = 1/2	B = MNPT x NPT	J = Sec VIII Liquid	M = Metal	Factory Issued Letters/Numbers for Special Options or Features "AA" = Default Setting "CE" = CE/PED "HT" = High Temp Spring "OX" = Cleaned for Oxygen	Set Pressure, PSIG (4 digits)  Vacuum "HG" Prefix + 2 digits	Q = Performance (Calibration) Test Reports
52 = Bronze/Stainless	2 = Screwed + Gag	E	D = 3/4	D = 3/4 Outlet (Model 510 & 520 D Orifice Only)	K = Sec VIII Air/Gas	B = BUNA-N			
53 = Carbon/Stainless	3 = Packed Lever	F	E = 1		L = Sec VIII Steam	E = EPR			
54 = All Stainless	4 = Packed + Gag	G	F = 1-1/4		M = Non Code Liquid	K = PCTFE			
		H	G = 1-1/2		N = Non Code Air	N = Neoprene			
		J	H = 2		P = Non Code Steam	Z = Kalrez®			
					Q = Vacuum	S = Silicone			
						V = Viton			

Notes:

1. The ASME Code Section VIII requires a lift lever for the following services: air, steam, or hot water over 140°F
2. Maximum back pressure is 50 psig.
3. High temperature stainless steel alloy spring is required above 550°F / 288°C. Specify option "HT"
4. Contact factory for pricing and availability.



See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.

Customer Service (704) 841-6000

# COMMERCIAL PRODUCTS CATALOG

## Safety Relief Valves

### 500 SERIES (CONT.)

### ASME SECTION VIII SAFETY RELIEF VALVES

#### Pressure and Temperature Ratings

Series Body Trim	510 Bronze Brass	520 Bronze Stainless	530 Carbon Steel Stainless	540 Stainless Steel Stainless
Max. Set-Steam	250 PSI	300 PSI	900 PSI (D/E) 600 PSI (F/G) 500 PSI (H/J)	900 PSI (D/E) 600 PSI (F/G) 500 PSI (H/J)
Max. Set-Air/ Gas/Liquid	300 PSI	1200 PSI (D) <sup>1</sup> 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)	1200 PSI (D) <sup>1</sup> 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)	1200 PSI (D) <sup>1</sup> 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)
Temp. Limits*	-320/406°F	-320/422°F	-20/800°F	-320/800°F

<sup>1</sup>Max set pressure for liquids is 1000 psi.

#### Notes:

- Limits based upon materials of construction and use of metal to metal seating. Refer to 500 series soft seat chart for limitations based upon elastomer.
- Specify "HT" high temperature Inconel springs for service temperature beyond 550°F.
- \* Models 510, 520 and 540 are suitable for cryogenic service to -320°F, with choice of either "M" metal or "K" PCTFE seat options.

#### ASME Section VIII Water - US gallons per minute @ 10% overpressure. NATIONAL BOARD CERTIFIED.

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	14	25	40	65	102	167
20	16	29	45	74	115	189
25	18	32	50	82	127	208
30	19	34	54	89	138	226
35	21	37	58	96	149	244
40	22	40	62	102	160	261
45	24	42	66	108	169	277
50	25	44	70	114	178	292
55	26	46	73	120	187	306
60	28	48	76	125	195	320
65	29	50	79	130	203	333
70	30	52	82	135	211	345
75	31	54	85	140	218	357
80	32	56	88	145	226	369
85	33	58	91	149	233	381
90	34	59	93	153	239	392
95	35	61	96	158	246	402
100	36	63	98	162	252	413
125	40	70	110	181	282	462
150	44	77	121	198	309	506
175	47	83	130	214	334	546
200	50	89	139	229	357	584
225	53	94	148	242	378	619
250	56	99	156	256	399	653
275	59	104	163	268	418	685
300	62	108	171	280	437	715
325	64	113	178	291	455	744
350	66	117	184	302	472	772
375	69	121	191	313	489	799
400	71	125	197	323	505	826
425	73	129	203	333	520	851
450	75	133	209	343	535	876
475	77	136	215	352	550	900
500	79	140	220	361	564	923
525	81	143	226	370		
550	83	147	231	379		
575	85	150	236	388		
600	87	153	241	396		
625	89	157				
650	91	160				
675	92	163				
700	94	166				
725	96	169				
750	97	171				
775	99	174				
800	100	177				
825	102	180				
850	104	183				
875	105	185				
900	107	188				
950	109					
1000	112					

Note: To determine water capacity at 25% overpressure, multiply the capacity at 10% above by 1.066.



# SAFETY & RELIEF VALVES

## Safety Relief Valves

### 500 SERIES (CONT.)

### ASME SECTION VIII SAFETY RELIEF VALVES

ASME Section VIII Steam - Pounds per hour of saturated steam @ 10% overpressure. NATIONAL BOARD CERTIFIED.

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	188	331	520	853	1332	2180
20	216	381	600	984	1536	2513
25	245	432	679	1114	1740	2846
30	274	482	759	1245	1943	3180
35	305	538	846	1388	2168	3546
40	337	593	934	1532	2392	3913
45	368	649	1021	1676	2616	4280
50	400	705	1108	1819	2840	4646
55	431	760	1196	1963	3064	5013
60	463	816	1283	2106	3288	5380
65	494	872	1371	2250	3512	5746
70	526	927	1458	2393	3736	6113
75	558	983	1546	2537	3960	6479
80	589	1038	1633	2680	4184	6846
85	621	1094	1721	2824	4408	7213
90	652	1150	1808	2968	4632	7579
95	684	1205	1896	3111	4857	7946
100	715	1261	1983	3255	5081	8313
125	873	1539	2421	3972	6201	10146
150	1031	1817	2858	4690	7322	11979
175	1189	2095	3295	5408	8442	13812
200	1346	2373	3733	6126	9562	15645
225	1504	2651	4170	6843	10683	17478
250	1662	2929	4607	7561	11803	19312
275	1820	3207	5045	8279	12924	21145
300	1977	3485	5482	8997	14044	22978
325	2135	3763	5919	9714	15165	24811
350	2293	4041	6357	10432	16285	26644
375	2451	4319	6794	11150	17405	28477
400	2608	4597	7231	11867	18526	30311
425	2766	4875	7669	12585	19646	32144
450	2924	5153	8106	13303	20767	33977
475	3082	5431	8543	14021	21887	35810
500	3239	5709	8981	14738	23008	37643
525	3397	5987	9418	15456		
550	3555	6266	9855	16174		
575	3713	6544	10293	16892		
600	3870	6822	10730	17609		
625	4028	7100				
650	4186	7378				
675	4344	7656				
700	4501	7934				
725	4659	8212				
750	4817	8490				
775	4975	8768				
800	5132	9046				
825	5290	9324				
850	5448	9602				
875	5606	9880				
900	5763	10158				
Approx. 1 psi Increment	6.3	11.1	17.5	28.7	44.8	73.3

ASME Section VIII Air - Standard cubic feet of air per minute @ 10% overpressure. NATIONAL BOARD CERTIFIED.

Set Pressure psig	Orifice					
	D	E	F	G	H	J
15	67	118	185	304	474	776
20	77	136	213	350	547	895
25	87	154	242	397	619	1013
30	97	172	270	443	692	1132
35	109	191	301	494	772	1262
40	120	211	332	545	851	1393
45	131	231	363	596	931	1523
50	142	251	395	648	1011	1654
55	154	271	426	699	1091	1784
60	165	290	457	750	1170	1915
65	176	310	488	801	1250	2045
70	187	330	519	852	1330	2176
75	198	350	550	903	1410	2306
80	210	370	581	954	1489	2437
85	221	389	612	1005	1569	2567
90	232	409	644	1056	1649	2698
95	243	429	675	1107	1729	2828
100	255	449	706	1158	1808	2959
125	311	548	862	1414	2207	3611
150	367	647	1017	1669	2606	4264
175	423	746	1173	1925	3005	4916
200	479	845	1329	2180	3404	5569
225	535	944	1484	2436	3802	6221
250	592	1043	1640	2691	4201	6874
275	648	1142	1796	2947	4600	7526
300	704	1240	1951	3202	4999	8179
325	760	1339	2107	3458	5398	8831
350	816	1438	2263	3713	5796	9484
375	872	1537	2418	3969	6195	10136
400	928	1636	2574	4224	6594	10789
425	985	1735	2730	4480	6993	11441
450	1041	1834	2885	4735	7392	12094
475	1097	1933	3041	4991	7791	12746
500	1153	2032	3197	5246	8189	13399
525	1209	2131	3352	5501		
550	1265	2230	3508	5757		
575	1321	2329	3664	6012		
600	1378	2428	3819	6268		
625	1434	2527				
650	1490	2626				
675	1546	2725				
700	1602	2824				
725	1658	2923				
750	1715	3022				
775	1771	3121				
800	1827	3220				
825	1883	3319				
850	1939	3418				
875	1995	3517				
900	2051	3616				
950	2163					
1000	2276					
1050	2388					
1100	2501					
1150	2613					
1200	2725					
Approx. 1 psi Increment	2.2	4	6.2	10.2	16	26.1



See Safety & Relief Valve Catalog (SRCA9000) for more detailed information about the products in this section.

Customer Service (704) 841-6000

# COMMERCIAL PRODUCTS CATALOG

## Accessories



### DRIP PAN ELBOW – APOLLO INTERNATIONAL™

The use of a drip pan elbow is highly recommended for steam service safety valves. When attached to a safety valve outlet, these elbows collect and remove condensate as well as isolate the valve from discharge piping stresses. Elbows through 4" feature female NPT threads and connect to the valve outlet by means of a close nipple. The 6" and 8" elbows have integral 125# ANSI B16.1 flanges and bolt directly to the valve outlet.

Series Number	Size (In.) NPS/DN	Dimensions (in./mm.)							Wt./Ea. (lbs./kg.)
		A NPS/DN	B	C	D	E	F	G NPS/DN	
DPE 07	3/4	1-1/2	3.75	1.63	2.25	1	1.5	1/4	2
	20	40	95	41	57	25	40	8	.9
DPE 10	1	1-1/2	3.75	1.63	2.25	1	1.5	1/4	2
	25	40	95	41	57	25	40	8	.9
DPE 12	1-1/4	2	5.5	2.13	3.38	1.5	2.13	3/8	5
	32	50	127	54	86	40	54	10	2.1
DPE 15	1-1/2	2	5.5	2.13	3.38	1.5	2.13	3/8	5
	40	50	127	54	86	40	54	10	2.1
DPE 20	2	3	6.25	2.25	3.63	1.63	2.25	1/2	7
	50	80	159	57	92	41	57	15	3.2
DPE 25	2-1/2	4	7.38	3	4.38	1.88	2.75	3/4	11
	65	100	187	80	111	48	70	20	5.0
DPE 30	3	4	8	3.5	4.88	2.13	3.13	3/4	17
	80	100	200	89	124	54	80	20	7.7
DPE 40	4	6	9.63	4.5	5.75	2.63	3.75	3/4	30
	100	150	245	114	146	67	95	20	13.6
DPE 60	6	8	12.75	6.63	7.63	3	8	3/4	84
	150	200	324	168	194	80	200	20	38.1
DPE 80	8	10	16.5	7.5	8.63	4.13	10.75	1	151
	200	250	419	191	219	105	273	25	68.5

