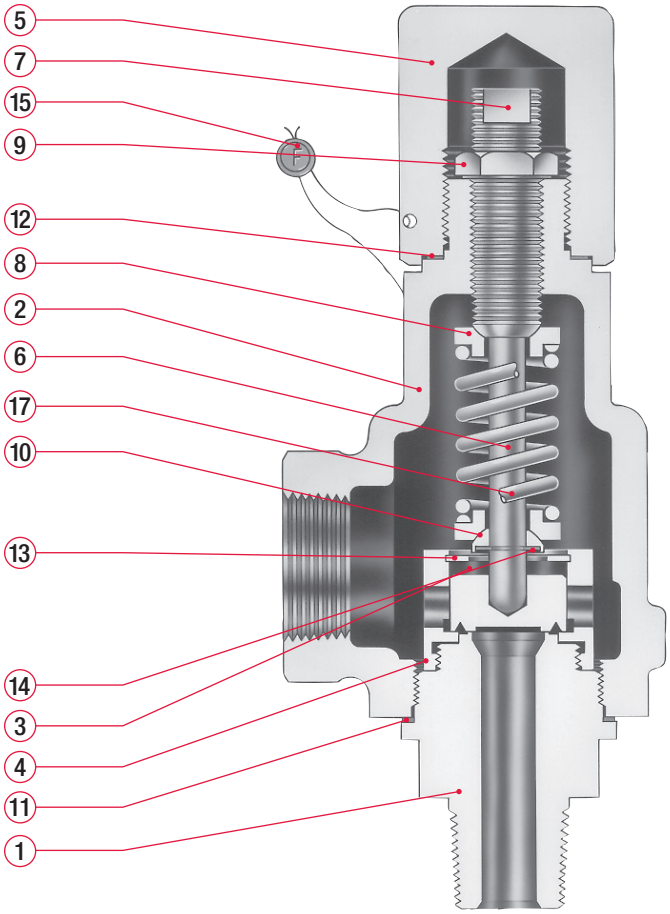
Series 1896M

Pressure Relief Valves

ASME Section VIII for Air, Steam, Vapor & Liquid Service

Applications include:

Set pressures to 300 psig.
Brass body and trim.
Bronze bonnet and cap.
Flat seats for easy maintenance.



Bill of Materials

Item No.	Part Name	Material
1	Body	ASTM B16 H.H. Brass
2	Bonnet	SB-62 Bronze
3	Disc	ASTM B16 H.H. Brass
4	Guide	Brass
5	Cap, Plain Screwed	Brass
6	Stem	St. St.
7	Spring Adj. Screw	Brass
8	Spring Button	St. St.
9	Jam Nut	Brass
10	Stem Shoulder	St. St.
11	Body Gasket	316 St. St.
12	Cap Gasket	316 St. St.
13	Lift Stop Ring	St. St.
14	Retaining Ring-Stem Shoulder	St. St.
15	Wire Seal	Stainless Steel Wire/ Lead Seal
16	Nameplate (not shown)	St. St.
17	Spring	316 St. St.

ASME UV

Selection Table (Connections: MNPT x FNPT)

Type Number[1]	Service	Valve Size Inlet x Outlet	Maximum Set Pressure[2]		Maximum Back Pressure		Materials	
			psig -400°F to +400°F	barg -240°C to +204°C	psig @ 100°F	barg @ 37.8°C	Body / Bonnet	Spring
1896M2-M20	Air, Steam & Vapor	1/2 x 3/4	300	20.7	50	3.45	Brass / Bronze	316 St. St.
1896M3-M20		3/4 x 3/4						
1896ML2-M20	Liquid	1/2 x 3/4						
1896ML3-M20		3/4 x 3/4						

General Notes:
1. Type numbers shown designate valves with plain screwed caps. Test lever required for air, steam or hot water service (above 140°F / 60°C). For packed lever change the three digit type number suffix from "-M20" to "-M40". Example: 1896M2-M20 becomes 1896M2-M40.
2. Maximum set pressure for steam service is 240 psig (saturation temperature of 400°F).

Series 1896M Capacity Tables

ASME Pressure Vessel Code (UV)

Air – 10% Overpressure

Capacities in Standard Cubic Feet Per Minute at 60° F[1]

Set Pressure (psig)	Air Capacity
15	51
20	59
30	74
40	92
50	109
60	126
70	144
80	161
90	178
100	195
120	230
140	264
160	299
180	334
200	368
220	403
240	437
260	472
280	506
300	541

Steam – 10% Overpressure

Capacities in Lbs. Per Hour at Saturation Temperature[1]

Set Pressure (psig)	Steam Capacity
15	144
20	166
30	210
40	258
50	307
60	356
70	404
80	453
90	501
100	550
120	647
140	744
160	841
180	938
200	1035
220	1132
240	1229

Water – 10% Overpressure

Capacities in U.S. Gallons Per Minute at 70° F[1,2]

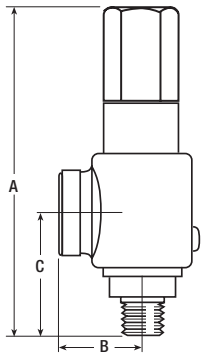
Set Pressure (psig)	Water Capacity
15	9.3
20	10.6
30	12.7
40	14.6
50	16.3
60	17.9
70	19.4
80	20.7
90	22.0
100	23.1
120	25.4
140	27.4
160	29.3
180	31.1
200	32.7
220	34.3
240	35.9
260	37.3
280	38.8
300	40.1

Actual Orifice Areas

Inlet Size	Air, Gas & Steam[4]		Liquid[5]	
	sq in	sq mm	sq in	sq mm
1/2" or 3/4"	0.110	71	0.110	71

Dimensions and Weights

Type Number		A (max) All Cap Constructions	B	C	Approx. Weight Lbs/Kgs
1896M	in	7-1/2	1-9/16	2-7/16	3
	mm	190	40	62	1.4



General Notes:

1. Capacities at 30 psig and below are based on 3 psi overpressure.
2. To determine water capacity at 25% overpressure, multiply the capacity at 10% by 1.066.
3. Maximum set pressure for steam service is 240 psig (saturation temperature of 400°F).
4. For sizing purposes, the coefficient of discharge K_d is 0.779 for air, gas, steam and vapor.
5. For liquid service, use the ASME liquid equation with a coefficient of discharge K_d equal to 0.529.

CURTISS-WRIGHT

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