

Series 1200/1400 Screwed and Flanged Safety Relief Valves

- Inlet sizes $\frac{3}{4}$ " to 2" NPT & Flanged
- Flat seat with replaceable O-ring
- Manufactured in accordance with ASME Code Section VIII
- NBBI capacity certified for air/gas & liquid
- High flow capacities with low blowdown
- NACE and severe service options
- Temperature range -60° F to 550° F
- Pressures from 10 PSIG to 2000 PSIG

Series 1200/1400 Safety Relief Valves

The Series 1200 and 1400 are economical safety relief valves that are ideal for gas compressors, separators, heater treaters, scrubbers, dehydrators, gas production units, pipelines, and similar OEM applications.

The Series 1200 and 1400 are high performance valves built with the quality you expect from Hydroseal. They are designed for high flow air, gas and liquid service, and incorporate Hydroseal's replaceable O-ring flat disc design for premium seal tightness and ease of maintenance.

- Inlet sizes $\frac{3}{4}$ " to 2" NPT & Flanged
- Orifice areas of 0.243 & 0.490 square inches
- NBBI capacity certified for air/gas and liquids*, ASME "UV" Code stamped
- Temperature range -60° F to 550° F
- Replaceable O-ring seat seal for bubble tight service
- Flat seat and disc
- Low blowdown
- High flow rates

* 1200 Certification for liquid pending

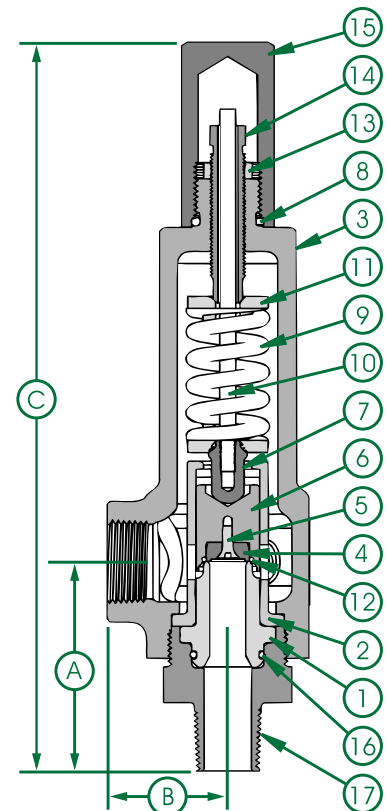
Series 1400 Materials

Item	Part Name	Standard	Nace	Stainless
1	Nozzle	316SS	316SS	316SS
2	Guide	316SS	316SS	316SS
3	Bonnet	WCB	WCB	CF8M
4	Disc	316SS	316SS	316SS
5	Disc Screw	316SS	316SS	316SS
6	Disc Holder	316SS	316SS	316SS
7	Stem Head	316SS	316SS	316SS
8	Cap Seal	Specify	Specify	Specify
9	Spring	SS	Inconel	316SS
10	Stem	316SS	316SS	316SS
11	Spring Plate	CS	316SS	316SS
12	Seat O-ring	Specify	Specify	Specify
13	Lock Nut	CS	316SS	316SS
14	Adjusting Screw	CS	316SS	316SS
15	Cap	CS	CS	316SS
16	Nozzle Seal	Specify	Specify	Specify
17	Base	CS	CS	316SS
18	Tag	316SS	316SS	316SS

WCB/WCC - ASME SA 216

CF8M - ASME SA 351

For higher set pressures Inconel or 17/7 SS may be substituted for 316 SS as applicable



Nomenclature

1200/1400

Series	Orifice (sq. in.)	Inlet x Outlet	A Dim.	B Dim.	C Dim.	Weight (approx.)	Connection	Connection Facing	Seat O-rings	Material	Cap	Spring Range Code
14	E 0.243	2 3/4" x 1"	3-1/4"	1-7/8"	11-1/4"	8 lb.	M M x F F F x F	0 NPT 1 RF x RF 2 RTJ x RF 3 RF x NPT	V Fluorocarbon (Viton®) N Nitrile (Buna-N) E EPDM K Kalrez®	0 Standard 2 NACE 3 Stainless	O Closed L Open Lever P Packed Lever	Spring Designator
	E 0.243	3 1" x 1"	3-1/4"	1-7/8"	11-1/4"	8 lb.						
12	G 0.490	7 1-1/2" x 2"	4-1/4"	2-1/4"	10-1/2"	14 lb.	A 150 x 150 B 300 x 150 C 600 x 150					ASME Code requires lift lever on air, and water over 140°F
	G 0.490	8 2" x 2"	4-1/4"	2-1/4"	10-1/2"	14 lb.						

Dimensions shown for NPT, flange dimensions available on request.

O-ring Materials

Material	Symbol	Temperature Limits °F	Temperature Limits °C
Fluorocarbon (Viton®)	V	-15 to 400	-26 to 205
Nitrile (Buna N)	N	-60 to 225	-51 to 107
EPDM	E	-60 to 300	-51 to 149
Kalrez®	K	-30 to 550	-34 to 288



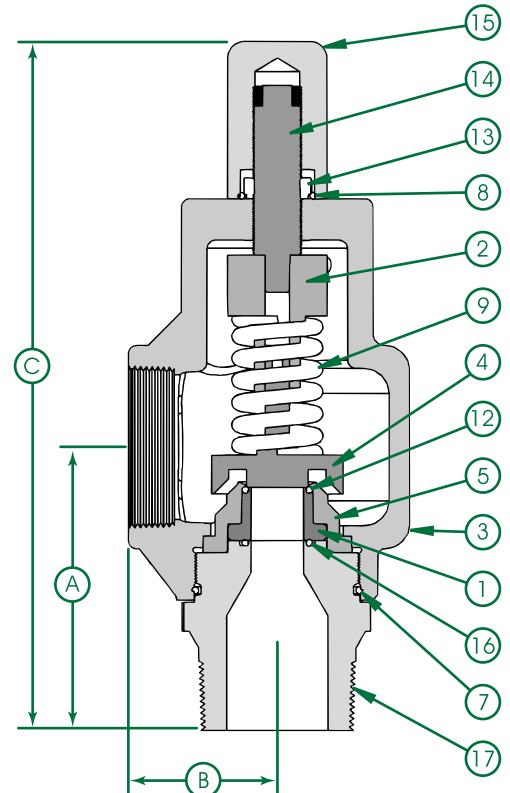
NOTE: Drawings not to scale. Designs and specifications subject to change without notice. Viton® and Kalrez® are registered trademarks of DuPont Dow Elastomers, LLC.

Series 1200 Materials

Item	Part Name	Standard	Nace	Stainless
1	Nozzle Insert	316SS	316SS	316SS
2	Guide/Spring Adapter	316SS	316SS	316SS
3	Bonnet	WCB	WCB	CF8M
4	Disc	316SS	316SS	316SS
5	Seat Cap	316SS	316SS	316SS
7	Base Seal	Specify	Specify	Specify
8	Cap Seal	Specify	Specify	Specify
9	Spring	17/7	Inconel	Inconel
12	Seat O-ring	Specify	Specify	Specify
13	Lock Nut	CS	316SS	316SS
14	Adjusting Screw	CS	316SS	316SS
15	Cap	CS	CS	316SS
16	Nozzle Seal	Specify	Specify	Specify
17	Base	CS	CS	316SS
18	Tag	316SS	316SS	316SS

WCB/WCC - ASME SA 216

CF8M - ASME SA 351



Performance Under Pressure

Series 1200/1400 Capacities

SET PRESSURE PSIG	AIR CAPACITY - SCFM		GAS CAPACITY - SCFM [®]		WATER CAPACITY - GPM	
	1400-E Orifice 0.243 sq. in. ®m=3.538 scfm/psia K=0.794	1200-G orifice 0.490 sq. in. m= 7.759 scfm/psia K=0.863	E Orifice 0.243 sq. in. SG.=0.6 Nat. gas	G Orifice 0.490 sq. in.	E Orifice 0.243 sq. in. ®ff=5.117 gpm/psid K=0.554	G Orifice [®] 0.490 sq. in. ff=11.838 gpm/psid K=0.635
15	116	254	150	328	14	50
25	157	331	195	427	18	63
50	247	541	318	698	38	88
75	344	754	444	973	46	108
100	441	968	569	1249	54	124
125	538	1181	695	1523	60	139
150	636	1394	820	1798	66	152
175	733	1608	946	2074	71	164
200	830	1821	1071	2349	76	176
225	928	2034	1197	2624	81	186
250	1025	2248	1322	2900	85	196
275	1122	2461	1448	3175	89	206
300	1220	2675	1573	3451	93	215
325	1317	2888	1699	3726	97	224
350	1414	3101	1824	4000	100	232
375	1511	3315	1950	4276	104	240
400	1609	3528	2075	4551	107	248
425	1706	3741	2201	4826	111	256
450	1803	3955	2326	5102	114	263
475	1901	4168	2452	5377	117	271
500	1998	4382	2577	5653	120	278
550	2192	4808	2828	6202	126	291
600	2387	5235	3079	6753	131	304
650	2582	5662	3330	7304	137	317
700	2776	6088	3581	7854	142	328
750	2971	6515	3832	8404	147	340
800	3165	6942	4083	8955	152	351
850	3360	7369	4334	9506	156	362
900	3555	7795	4585	10056	161	372
950	3749	8222	4836	10606	165	383
1000	3944	8649	5088	11157	170	393
1050	4138	9076	5339	11708	174	402
1100	4333	9502	5590	12258	178	412
1150	4528	9929	5841	12808	182	421
1200	4722	10356	6092	13359	186	430
1250	4917	10783	6343	13910	190	439
1300	5111	11209	6594	14460	194	448
1350	5306	11636	6845	15010	197	456
1400	5501	12063	7096	15561	201	465
1450	5695	12490	7347	16112	204	473
1500	5890	12916	7598	16662	208	481
1600	6279	13770	8100	17763	215	497
1700	----	14623	----	18864	---	512
1800	----	15477	----	19965	---	527
1900	----	16330	----	21066	---	541
2000	----	17184	----	22167	---	555

[®] G orifice Code for liquid pending

[®] ASME air capacities are stamped on gas service valves.

[®] m=slope

[®] ff=flow factor

$$SCFM (Air) = m (1.1 * set pressure + 14.7)$$

$$GPM (water) = ff \sqrt{1.1 set pressure}$$



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