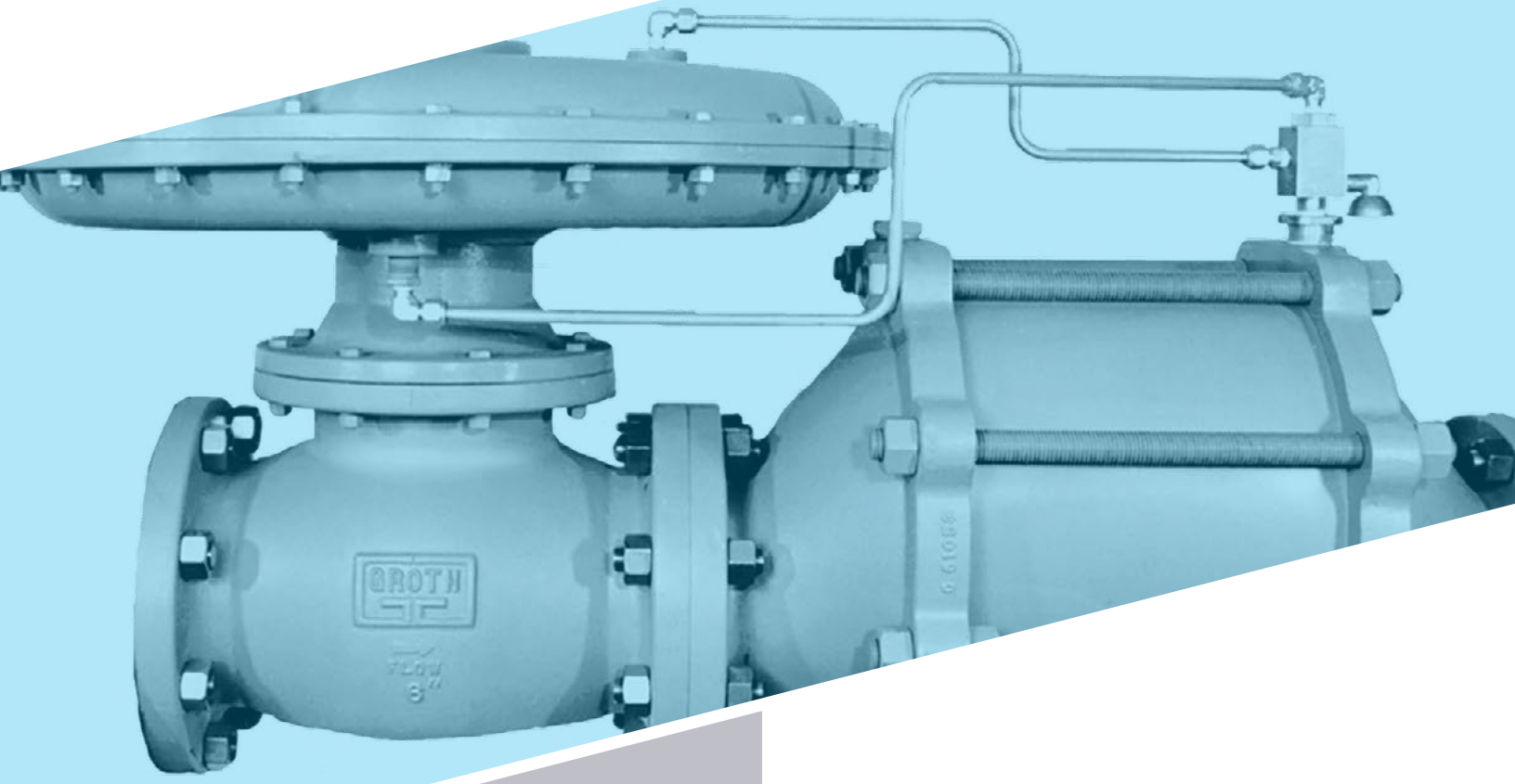
GROTH®
CORPORATION

PRESSURE RELIEF FLAME TRAP

MODEL 8400A



MODEL 8400A

The Groth Model 8400A Pressure Relief and Flame Trap Assembly accomplishes two purposes. It will maintain a predetermined back pressure in order that only surplus gas is flared and it inhibits a possible flame flashback of the flare into the gas control system. A fusible element that is rated at 260 F precludes valve shut-off unless contacted by flame. The visual indicator provides operator with easy adjustments. The proven spiral wound, crimped ribbon flame element provides the best flame quenching performance with the least pressure drop.

Technical Details

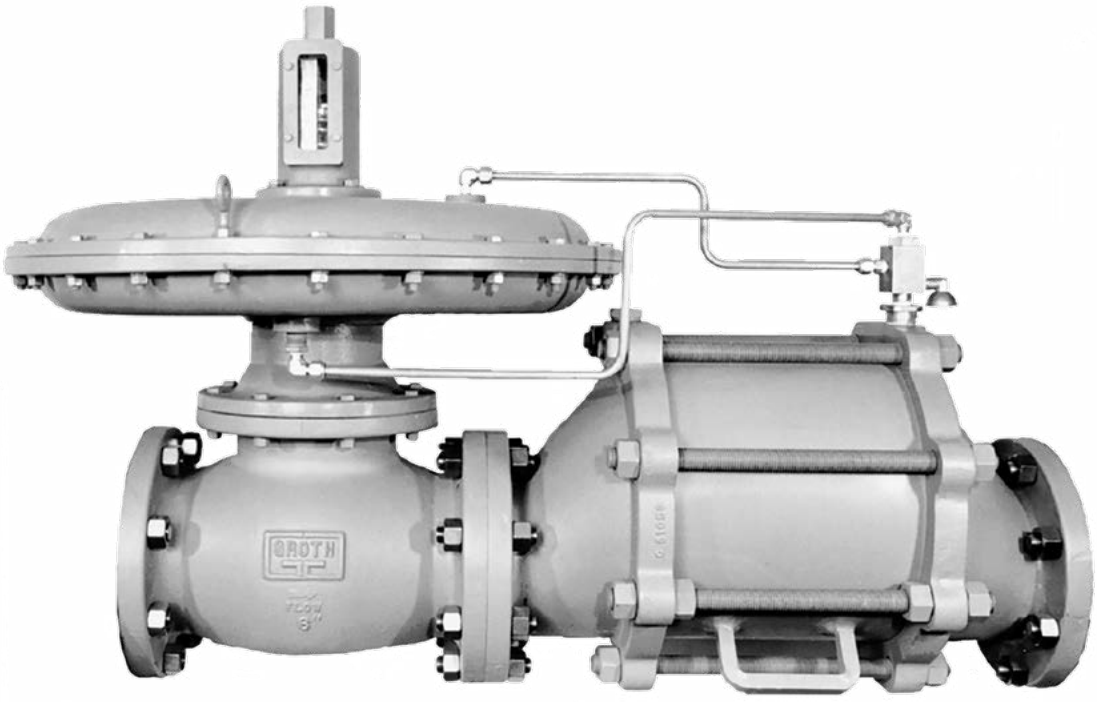
- Size: 2" (DN 50) through 12" (DN 300)
- Material: Aluminum and other materials
- Standard operating range is 2 to 12 InWC

Features

- Simple upstream pressure regulation allows for accurate pressure relief
- Adjustable set pressure for easy process pressure relief adjustment
- Prevents pipeline deflagration from damaging tanks, pipelines, and other process equipment
- Corrosion Resistant throughout

Options

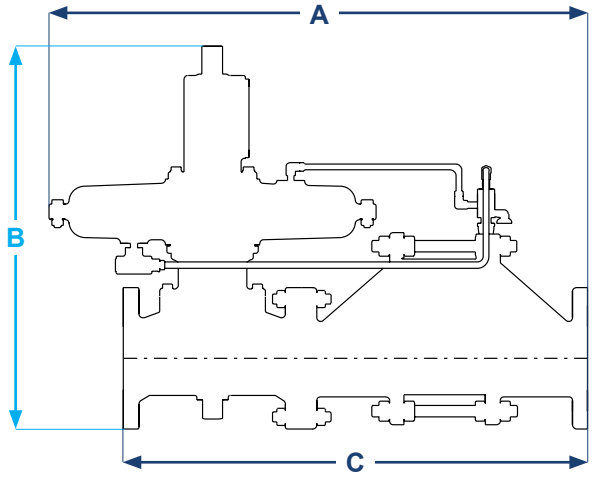
- Drain connection
- Drip trap connection
- Insulation jacket
- Thermocouple/thermowell connection
- Flame check (vent line)
- Electronic shut-off
- Various spring ranges
- Special range of 8" to 24" is available when higher pressures are required
- Consult factory for 10 to 12 InWC for optional settings



SPECIFICATIONS

Size In (mm)	A Length In (mm)	B Height In (mm)	C Face to Face In (mm)	Max Working Pressure psig (barg)	Approx Ship Weight Al Lbs (kg)
2 (50)	28.69 (729)	25 (635)	22.81 (579)	10 (0.689)	80 (36)
3 (80)	31.31 (795)	26 (660)	26.06 (662)		100 (45)
4 (100)	34.25 (870)	27 (686)	29.69 (754)		150 (68)
6 (150)	41.81 (1062)	32.25 (819)	36.06 (916)		200 (91)
8 (200)	50.06 (1272)	33.50 (851)	47.94 (1218)		300 (136)
10 (250)	55.75 (1416)	47.75 (1213)	55.75 (1416)		645 (293)
12 (300)	67.38 (1711)	50.75 (1289)	67.38 (1711)		795 (362)

* 150# ASME compatibility. NPT connection available on 2" and 3" size only.



FLOW CAPACITY

Pressure		Air Flow Capacity 1000 Standard Cubic Feet per Hour at 60° F In (mm)						
InWC	oz/in²	2 (50)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)
0.25	0.10	0.62	1.40	2.48	5.58	9.92	15.5	22.3
0.50	0.30	0.99	2.24	3.97	8.94	15.9	24.8	35.8
0.75	0.40	1.29	2.90	5.15	11.6	20.6	32.2	46.4
1.00	0.58	1.54	3.46	6.15	13.8	24.6	38.5	55.4
1.50	0.90	1.96	4.42	7.85	17.7	31.4	49.1	70.7
2.00	1.16	2.32	5.23	9.29	20.9	37.2	58.1	83.6
3.00	1.73	2.93	6.59	11.7	26.4	46.9	73.2	105
4.00	2.31	3.44	7.75	13.8	31.0	55.1	86.1	124
5.00	3.00	3.90	8.76	15.6	35.1	62.3	97.4	140
6.00	3.47	4.30	9.69	17.2	38.7	68.9	108	155
8.0	4.62	5.03	11.3	20.1	45.3	80.5	126	181
10.0	5.78	5.67	12.8	22.7	51.1	90.8	142	204
12.0	6.93	6.26	14.1	25.0	56.3	100	156	225
14.0	8.00	6.79	15.3	27.2	61.1	109	170	244
16.0	9.00	7.29	16.4	29.1	65.6	117	182	262
18.0	10.00	7.75	17.4	31.0	69.8	124	194	279
20.0	11.60	8.20	18.4	32.8	73.8	131	205	295
25.0	14.40	9.21	20.7	36.9	82.9	147	230	332
30.0	17.30	10.1	22.8	40.5	91.2	162	253	365

Pressure		Flow Capacity of 0.7 SG Digester Gas 1000 Standard Cubic Feet per Hour at 60° F In (mm)						
InWC	oz/in²	2 (50)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)
0.25	0.10	0.74	1/67	2.97	6.67	11.9	18.5	26.7
0.50	0.30	1.19	2.67	4.75	10.7	19.0	29.7	42.7
0.75	0.40	1.64	3.46	6.16	13.9	24.6	38.5	55.4
1.00	0.58	1.84	4.14	7.26	16.6	29.4	46.0	66.2
1.50	0.90	2.35	5.28	9.39	21.1	37.5	58.7	84.5
2.00	1.16	2.78	6.25	11.1	25.0	44.4	69.4	100
3.00	1.73	3.50	7.88	14.0	31.5	56.0	87.5	126
4.00	2.31	4.11	9.26	16.5	37.0	65.8	103	148
5.00	3.00	4.66	10.5	18.6	41.9	74.5	116	168
6.00	3.47	5.15	11.6	20.6	46.3	82.3	129	185
8.0	4.62	6.02	13.5	24.1	54.1	96.2	150	217
10.0	5.78	6.78	15.3	27.1	61.0	109	170	244
12.0	6.93	7.48	16.8	29.9	67.3	120	187	269
14.0	8.00	8.12	18.3	32.5	73.0	130	203	292
16.0	9.00	8.71	19.6	34.8	78.4	139	218	314
18.0	10.00	9.27	20.9	37.1	83.4	148	232	334
20.0	11.60	9.80	22.0	39.2	88.2	157	245	353
25.0	14.40	11.0	24.8	44.0	99.1	176	275	396
30.0	17.30	12.1	27.2	48.4	109	194	303	436

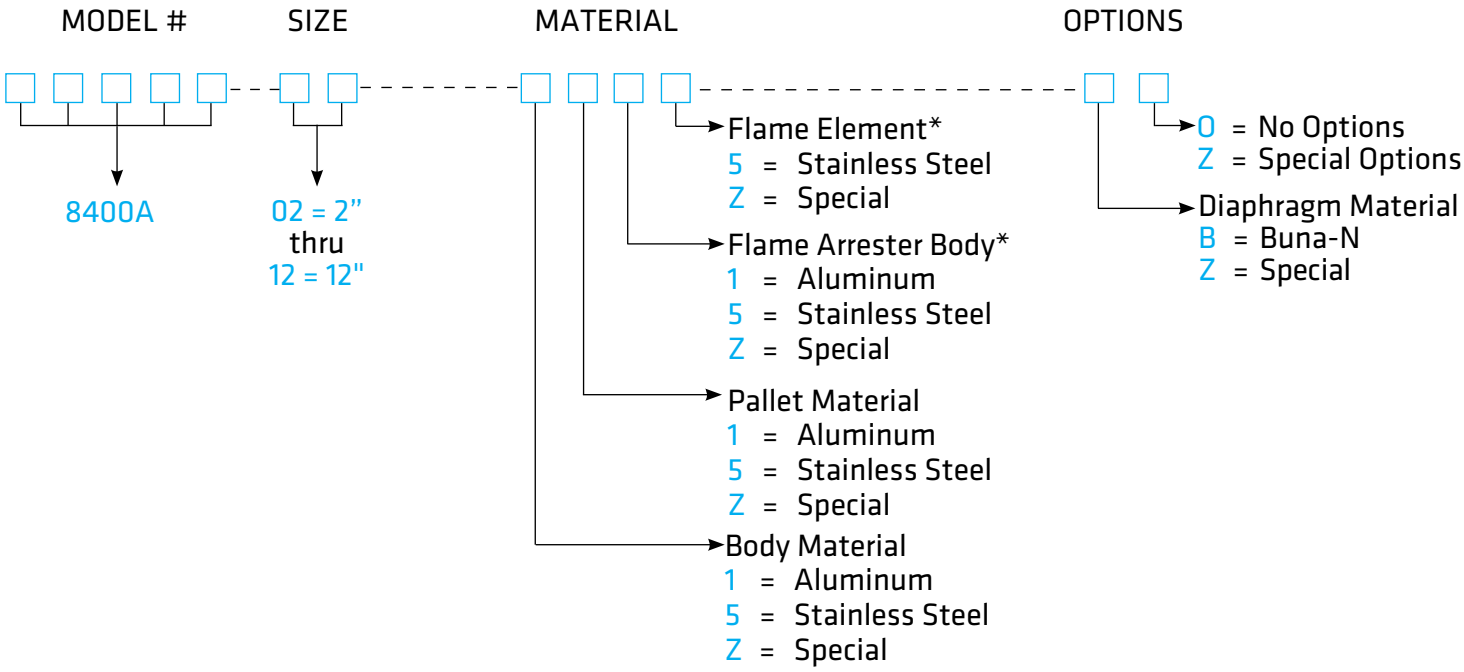
FLOW CAPACITY

Pressure		Air Flow Capacity 1000 Normal Cubic Meters per Hour at 0° C In (mm)						
mmWC	mbar	2 (50)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)
6.35	0.60	0.02	0.04	0.07	0.15	0.27	0.42	0.60
12.7	1.00	0.03	0.06	0.11	0.24	0.43	0.66	0.96
19.1	2.00	0.03	0.08	0.14	0.31	0.55	0.86	1.24
25.4	3.00	0.04	0.09	0.16	0.37	0.66	1.03	1.48
38.1	4.00	0.05	0.12	0.21	0.47	0.84	1.32	1.89
50.8	5.00	0.06	0.14	0.25	0.56	1.00	1.56	2.24
76.2	7.50	0.08	0.18	0.31	0.71	1.26	1.96	2.81
102	10.00	0.09	0.21	0.37	0.83	1.48	2.31	3.32
127	12.50	0.10	0.23	0.42	0.94	1.67	2.61	3.75
152	15.00	0.12	0.26	0.46	1.04	1.85	2.89	4.15
203	20.00	0.13	0.30	0.54	1.21	2.16	3.38	4.85
254	25.00	0.15	0.34	0.61	1.37	2.43	3.80	5.47
305	30.00	0.17	0.38	0.67	1.51	2.68	4.18	6.03
356	35.00	0.18	0.41	0.73	1.64	2.92	4.55	6.54
406	40.00	0.20	0.44	0.78	1.76	3.13	4.88	7.02
457	45.00	0.21	0.47	0.83	1.87	3.32	5.20	7.47
508	50.00	0.22	0.49	0.88	1.98	3.51	5.49	7.90
635	62.00	0.25	0.55	0.99	2.22	3.94	6.16	8.89
762	75.00	0.27	0.61	1.08	2.44	4.34	6.78	9.78

Pressure		Flow Capacity of 0.7 SG Digester Gas 1000 Normal Cubic Meters per Hour at 0° C In (mm)						
mmWC	mbar	2 (50)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)
6.35	0.60	0.02	0.04	0.08	0.18	0.32	0.50	0.72
12.7	1.00	0.03	0.07	0.13	0.29	0.51	0.80	1.14
19.1	2.00	0.04	0.09	0.17	0.37	0.66	1.03	1.48
25.4	3.00	0.05	0.11	0.20	0.44	0.79	1.23	1.77
38.1	4.00	0.06	0.14	0.25	0.57	1.00	1.57	2.26
50.8	5.00	0.07	0.17	0.30	0.67	1.19	1.86	2.68
76.2	7.50	0.09	0.21	0.38	0.84	1.50	2.34	3.38
102	10.00	0.11	0.25	0.44	0.99	1.76	2.76	3.96
127	12.50	0.12	0.28	0.50	1.12	2.00	3.11	4.50
152	15.00	0.14	0.31	0.55	1.24	2.20	3.46	4.96
203	20.00	0.16	0.36	0.65	1.45	2.58	4.02	5.81
254	25.00	0.18	0.41	0.73	1.63	2.92	4.55	6.54
305	30.00	0.20	0.45	0.80	1.80	3.21	5.01	7.21
356	35.00	0.22	0.49	0.87	1.96	3.48	5.44	7.82
406	40.00	0.23	0.53	0.93	2.10	3.72	5.84	8.41
457	45.00	0.25	0.56	0.99	2.23	3.96	6.22	8.95
508	50.00	0.26	0.59	1.05	2.36	4.21	6.56	9.46
635	62.00	0.29	0.66	1.18	2.65	4.72	7.37	10.61
762	75.00	0.32	0.73	1.30	2.92	5.20	8.12	11.68

HOW TO ORDER

For easy ordering, select proper model numbers



Notes

- For special options, consult factory

* Not required for Model 8860

Example

8	4	0	0	A	–	0	4	–	1	5	5	5	–	B	0

Indicates a 4" Model 8400A with aluminum body, 316SS pallet and flame element, Buna-N diaphragm.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