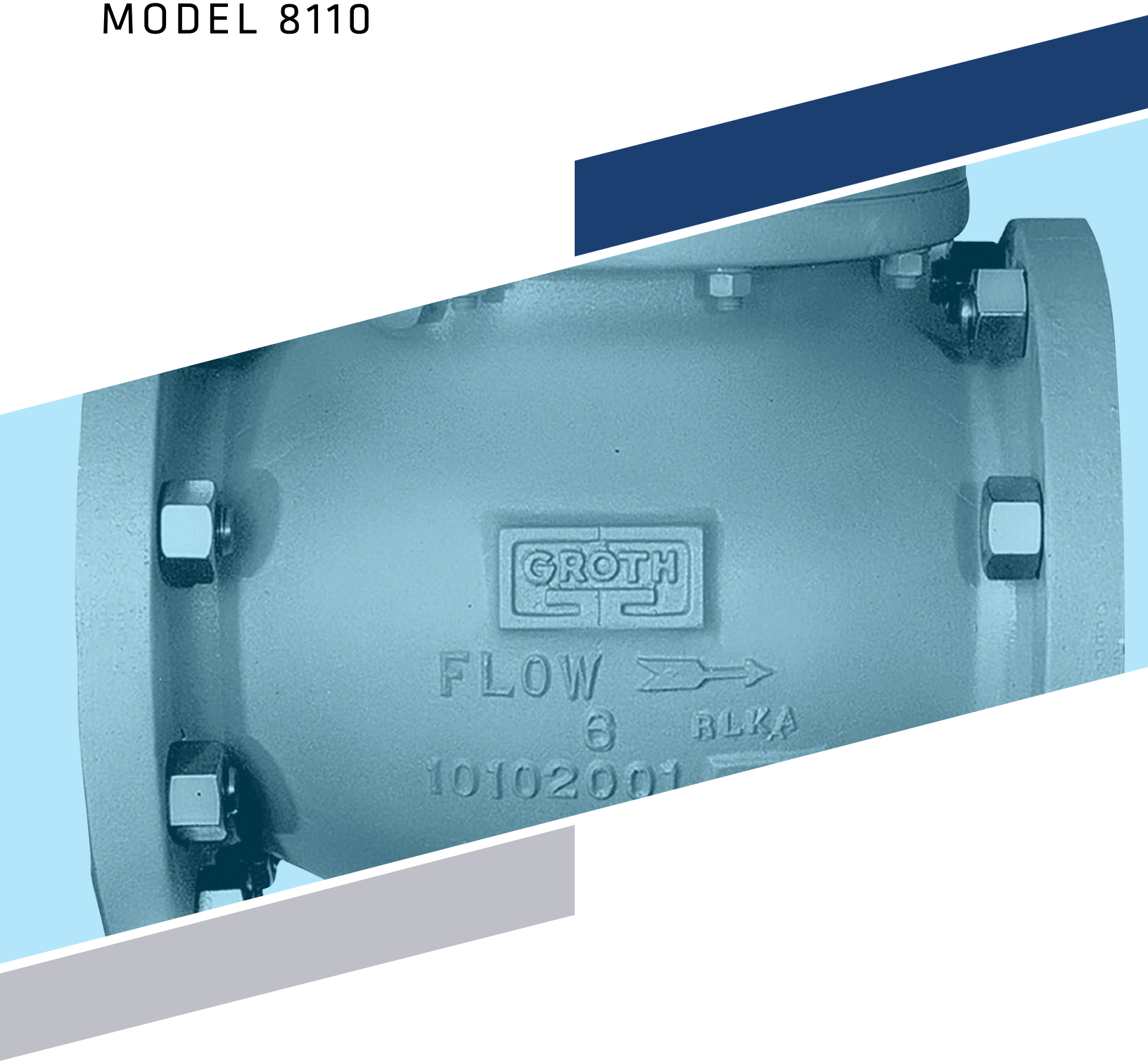
GROTH®
CORPORATION

BACK PRESSURE CHECK VALVE

MODEL 8110



MODEL 8110

The Groth Model 8110 Back Pressure Check Valve is used specifically in low pressure gas control lines where minimum pressure drops and maximum flow capacity are required. Furnished standard in aluminum with a free swinging aluminum pendulum type pallet. By removing the cover, easy access is provided for quick inspection and maintenance. Model 8110 check valves should be installed in your low pressure line downstream of meters, regulators, and other gas control devices that may be otherwise damaged by an accidental reversal of the pressure in the system due to pressure waves from a flashback or similar disturbance.

Technical Details

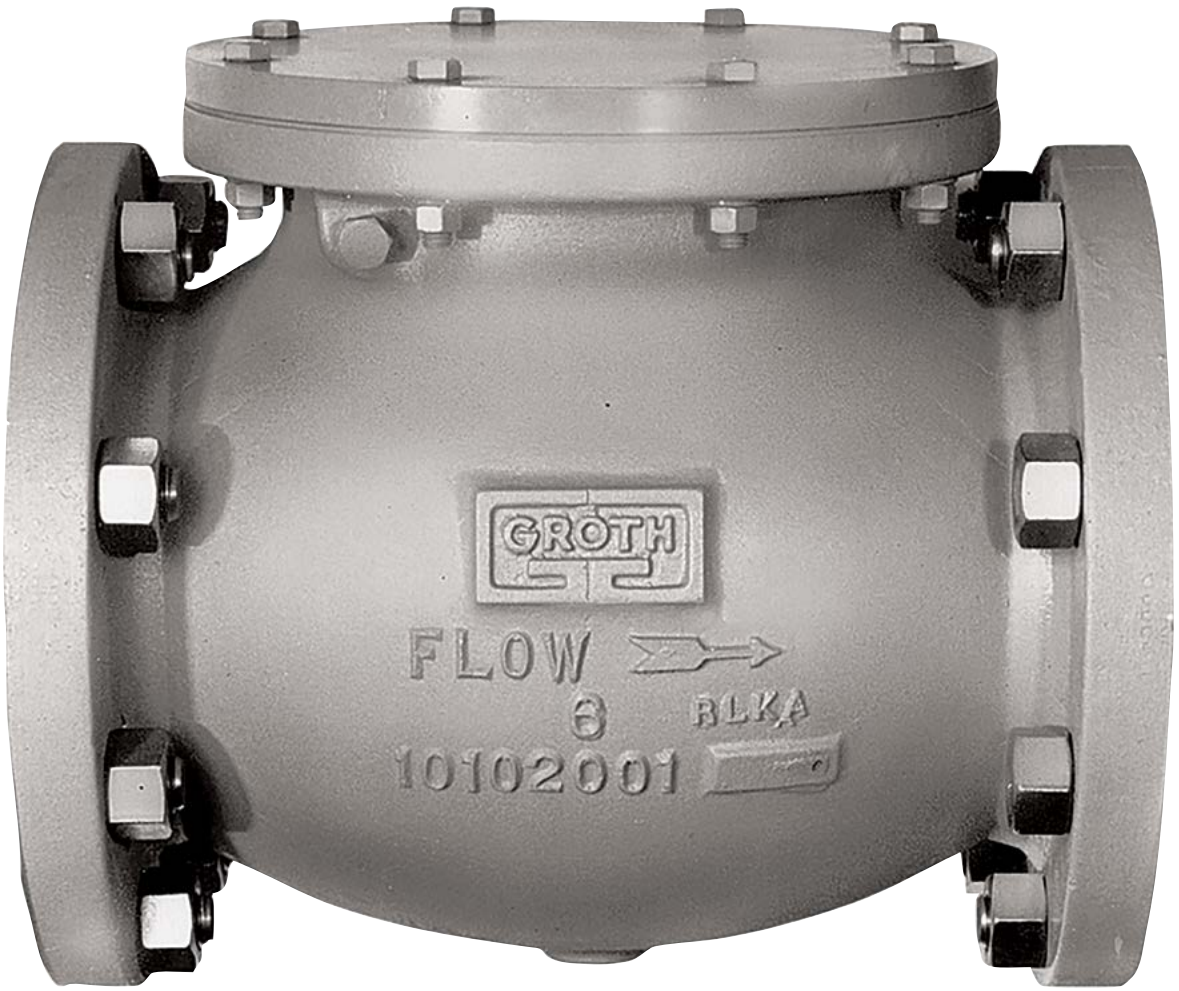
- Size: 2" (DN 50) through 12" (DN 300)
- Material: Aluminum (type 356), Carbon Steel and Stainless Steel
- ATEX Certified

Features

- Full flow with low pressure drop
- Low maintenance reduces the cost to operate the product

Options

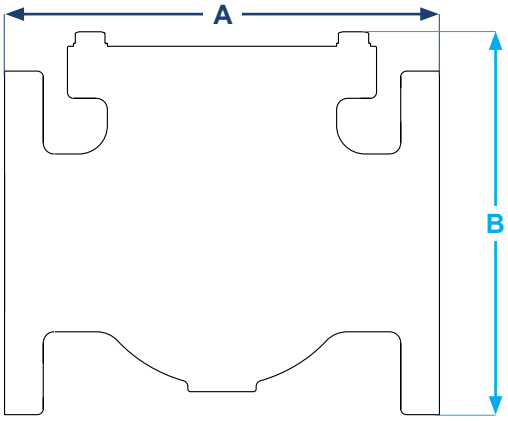
- 125# ASME FF flanged connector
- Threaded connection for 2" and 3" sizes only



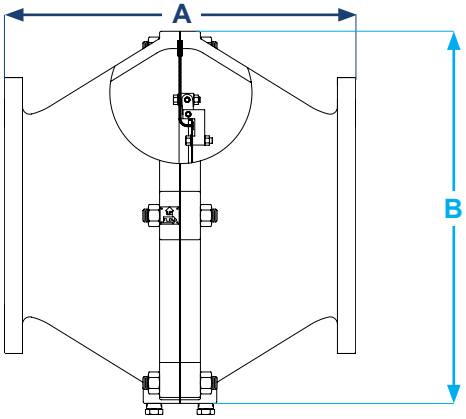
SPECIFICATIONS

Size* In (mm)	A Length In (mm)	B Height In (mm)	Max Working Pressure psig (barg)	Approx Ship Weight Lbs (kg)
2 (50)	8 (203)	8.12 (206)	10 (0.689)	9 (4)
3 (80)	9.50 (241)	10.50 (267)		15 (7)
4 (100)	11.50 (292)	11.50 (292)		28 (13)
6 (150)	14 (356)	13.50 (343)		50 (23)
8 (200)	19.50 (496)	16.50 (419)		90 (41)
10 (250)	25.69 (653)	19.00 (480)		111 (50)
12 (300)	34.82 (884)	22.50 (572)		150 (68)

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



2" - 8"



10" - 12"

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	1.11	2.50	4.44	10.0	17.8	27.8	40.0
0.50	0.30	2.22	5.00	8.89	20.0	35.6	55.6	80.0
0.75	0.40	3.33	7.50	13.3	30.0	53.3	83.3	120
1.00	0.58	4.44	10.0	17.8	40.0	71.1	111	160
1.50	0.90	6.67	15.0	26.7	60.0	1.07	167	240
2.00	1.16	7.70	17.3	30.8	69.3	123	192	277
3.00	1.73	9.43	21.2	37.7	84.9	151	236	339
4.00	2.31	1.9	24.5	43.5	98.0	174	272	392
5.00	3.00	12.2	27.4	48.7	110	195	304	438
6.00	3.47	13.3	30.0	53.3	120	213	333	480
8.0	4.62	15.4	34.6	61.6	139	246	385	554
10.0	5.78	17.2	38.7	68.9	155	275	430	620
12.0	6.93	18.9	42.4	75.4	170	302	471	679
14.0	8.00	20.4	45.8	81.5	183	326	509	733
16.0	9.00	21.8	49.0	87.1	196	348	544	784
18.0	10.00	23.1	52.0	92.4	208	370	577	831
20.0	11.60	24.3	54.8	97.4	219	389	609	876
25.0	14.40	27.2	61.2	109	245	435	680	980
30.0	17.30	29.8	67.1	119	268	477	745	1073

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	1.33	2.99	5.31	12.0	21.2	33.2	47.8
0.50	0.30	2.66	5.98	10.6	23.9	42.5	66.4	95.6
0.75	0.40	3.98	8.96	15.9	35.9	63.7	100	143
1.00	0.58	5.31	12.0	21.2	47.8	85.0	133	191
1.50	0.90	7.97	17.9	31.9	71.7	127	199	287
2.00	1.16	9.20	20.7	36.8	82.8	147	230	331
3.00	1.73	11.3	25.4	45.1	101	180	282	406
4.00	2.31	13.0	29.3	52.0	117	208	325	468
5.00	3.00	14.5	32.7	58.2	131	233	364	524
6.00	3.47	15.9	35.9	63.7	143	255	398	574
8.0	4.62	18.4	41.4	73.6	166	294	460	662
10.0	5.78	20.6	46.3	82.3	185	329	514	741
12.0	6.93	22.5	50.7	90.1	203	362	563	811
14.0	8.00	24.3	54.8	97.4	219	389	609	876
16.0	9.00	26.0	58.6	104	234	416	651	937
18.0	10.00	27.6	62.1	110	248	442	690	994
20.0	11.60	29.1	65.5	116	262	466	727	1047
25.0	14.40	32.5	73.2	130	293	520	813	1171
30.0	17.30	35.6	80.2	143	321	570	891	1283

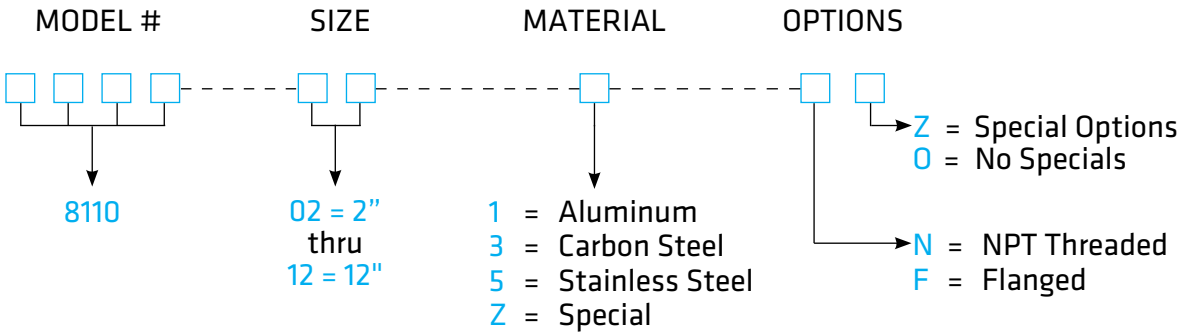
FLOW CAPACITY

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	0.03	0.07	0.12	0.27	0.48	0.74	1.07
12.7	1.00	0.06	0.13	0.24	0.54	0.95	1.49	2.14
19.1	2.00	0.09	0.20	0.36	0.80	1.43	2.23	3.21
25.4	3.00	0.12	0.27	0.48	1.07	1.90	2.97	4.29
38.1	4.00	0.18	0.40	0.72	1.61	2.87	4.47	6.43
50.8	5.00	0.21	0.46	0.83	1.86	3.30	5.14	7.42
76.2	7.50	0.25	0.57	1.01	2.27	4.05	6.32	9.08
102	10.00	0.29	0.66	1.17	2.63	4.66	7.29	10.50
127	12.50	0.33	0.73	1.30	2.95	5.22	8.14	11.73
152	15.00	0.36	0.80	1.43	3.21	5.71	8.92	12.86
203	20.00	0.41	0.93	1.65	3.72	6.59	10.31	14.84
254	25.00	0.46	1.04	1.85	4.15	7.37	11.52	16.61
305	30.00	0.51	1.14	2.02	4.55	8.09	12.62	18.19
356	35.00	0.55	1.23	2.18	4.90	8.73	13.64	19.64
406	40.00	0.58	1.31	2.33	5.25	9.32	14.57	21.00
457	45.00	0.62	1.39	2.48	5.57	9.91	15.46	22.26
508	45.00	0.65	1.47	2.61	5.87	10.42	16.32	23.47
635	62.00	0.73	1.64	2.92	6.56	11.65	18.22	26.25
762	75.00	0.80	1.80	3.19	7.18	12.78	19.96	28.75

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	0.04	0.08	0.14	0.32	0.57	0.89	1.28
12.7	1.00	0.07	0.16	0.28	0.64	1.14	1.78	2.56
19.1	2.00	0.11	0.24	0.43	0.96	1.71	2.68	3.83
25.4	3.00	0.14	0.32	0.57	1.28	2.28	3.56	5.12
28.1	4.00	0.21	0.48	0.85	1.92	3.40	5.33	7.69
50.8	5.00	0.25	0.55	0.99	2.22	3.94	6.16	8.87
76.2	7.50	0.30	0.68	1.21	2.71	4.82	7.55	10.88
102	10.00	0.35	0.78	1.39	3.13	5.57	8.71	12.54
127	12.50	0.39	0.88	1.56	3.51	6.24	9.75	14.04
152	15.00	0.43	0.96	1.71	3.83	6.83	10.66	15.38
203	20.00	0.49	1.11	1.97	4.45	7.88	12.32	17.73
254	25.00	0.55	1.24	2.20	4.96	8.81	13.77	19.85
305	30.00	0.60	1.36	2.41	5.44	9,67	15.08	21.73
356	35.00	0.65	1.47	2.61	5.87	10.42	16.32	23.47
406	40.00	0.70	1.57	2.79	6.27	11.14	17.44	25.10
457	45.00	0.74	1.66	2.96	6.64	11.84	18.49	26.63
508	50.00	0.78	1.75	3.11	7.02	12.48	19.48	28.05
635	62.00	0.87	1.96	3.48	7.85	13.93	21.78	31.37
762	75.00	0.95	2.15	3.83	8.60	15.27	23.87	34.37

HOW TO ORDER

For easy ordering, select proper model numbers



Notes

- For special options, consult factory

Example

8	1	1	0	–	0	4	–	1	–	F	O

Indicates a 4" Model 8110 with an aluminum body, flanged and no specials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