

FLAME

CONTROL



SAFETY PRODUCTS THAT PROTECT EQUIPMENT, LIVES & THE ENVIRONMENT

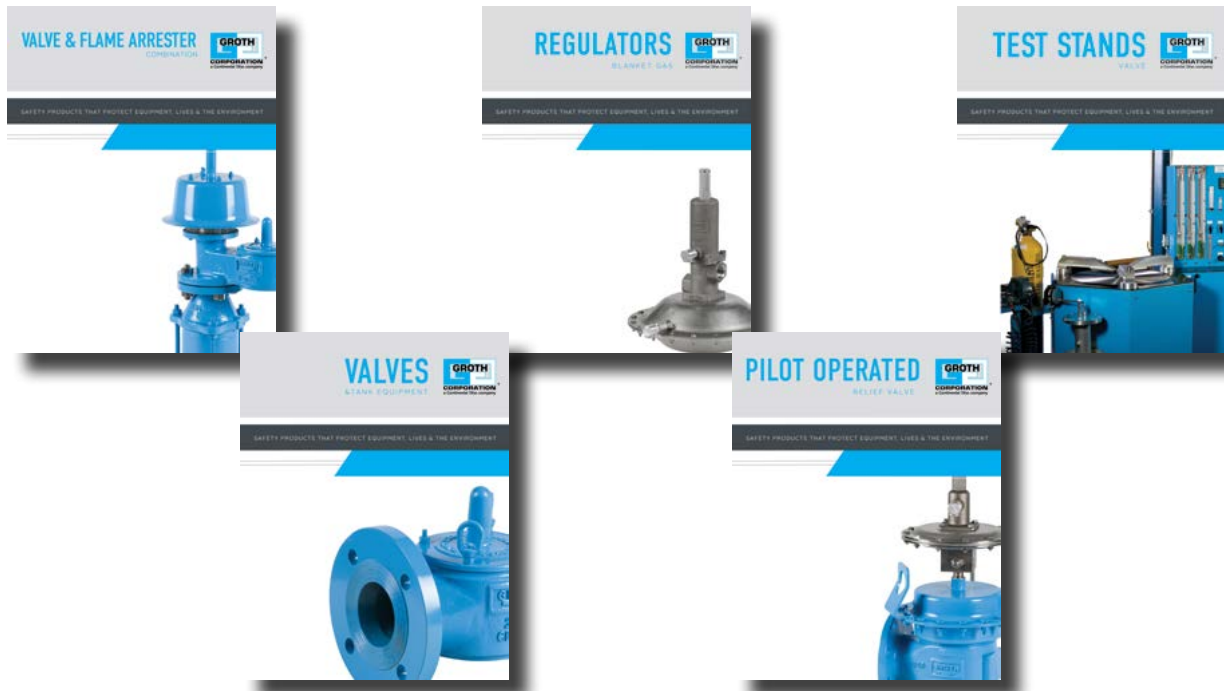


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ADDITIONAL GROTH PRODUCTS

Please see our other Groth Datasheets for additional product lines:



MODEL 7622B

TECHNICAL DETAILS

- Sizes 0.5" through 2"
- Housing standard material: carbon steel or stainless steel
- Flame element standard material: stainless steel
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Good for IEC gas group IIB3 (MESG \geq 0.65 mm)
- Pre-ignition system pressure up to 23.2 psia (1.60 bara)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU14ATEX2076 X**



DEFLAGRATION FLAME ARRESTER / FLAME CHECK

Model 7622B is designed to prevent flashback in small lines carrying flammable gases. They are often used in small pilot lines and are intended for use where the gas flow can be shut off. The units are union type fittings with FNPT connections.



FEATURES & BENEFITS

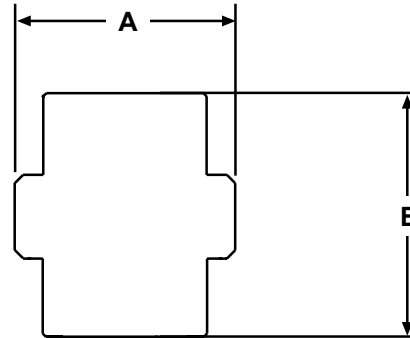
- Flame element has sufficient openings to provide a minimum pressure drop and still prevent flashback in the line
- Flame element consists of mesh and chemically etched plates
- Modular design allows easy access for inspection and maintenance

OPTIONS

- Special options available
- FNPT threaded connections

MODEL 7622B // SPECIFICATIONS

Size (FNPT) (Metric)	A Width (Metric)	B Height (Metric)	Approx Ship. Wt. Lbs (Metric)
0.50"* (13 mm)	1.87" (48 mm)	2.77" (70 mm)	1 (0.5 kg)
0.75" (19 mm)	1.87" (48 mm)	1.84" (47 mm)	1 (0.5 kg)
1" (25 mm)	2.12" (54 mm)	2.34" (59 mm)	3 (1.4 kg)
1.50" (38 mm)	2.50" (64 mm)	2.59" (66 mm)	4 (1.8 kg)



Specifications subject to change without notice. Certified dimensions available upon request.

*0.5" size utilizes a 0.75" flame check with 0.75" x 0.5" reducers.

Note: Maximum working pressure 25 psig

HOW TO ORDER

For easy ordering, select proper model numbers

MODEL #	SIZE	MATERIAL	OPTIONS
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <p style="text-align: center; margin-top: 5px;">7622B</p>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <p style="text-align: center; margin-top: 5px;">0.5" = 05 0.75" = 75 1" = 01 1.5" = 15</p>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <p style="margin-top: 5px;">Flame Element 5 = Stainless Steel</p> <p style="margin-top: 5px;">Body Material 3 = Carbon Steel 5 = Stainless Steel Z = Special</p>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div> </div> <p style="margin-top: 5px;">O = No Options Z = Special Options N = FNPT threaded connections</p>

NOTES

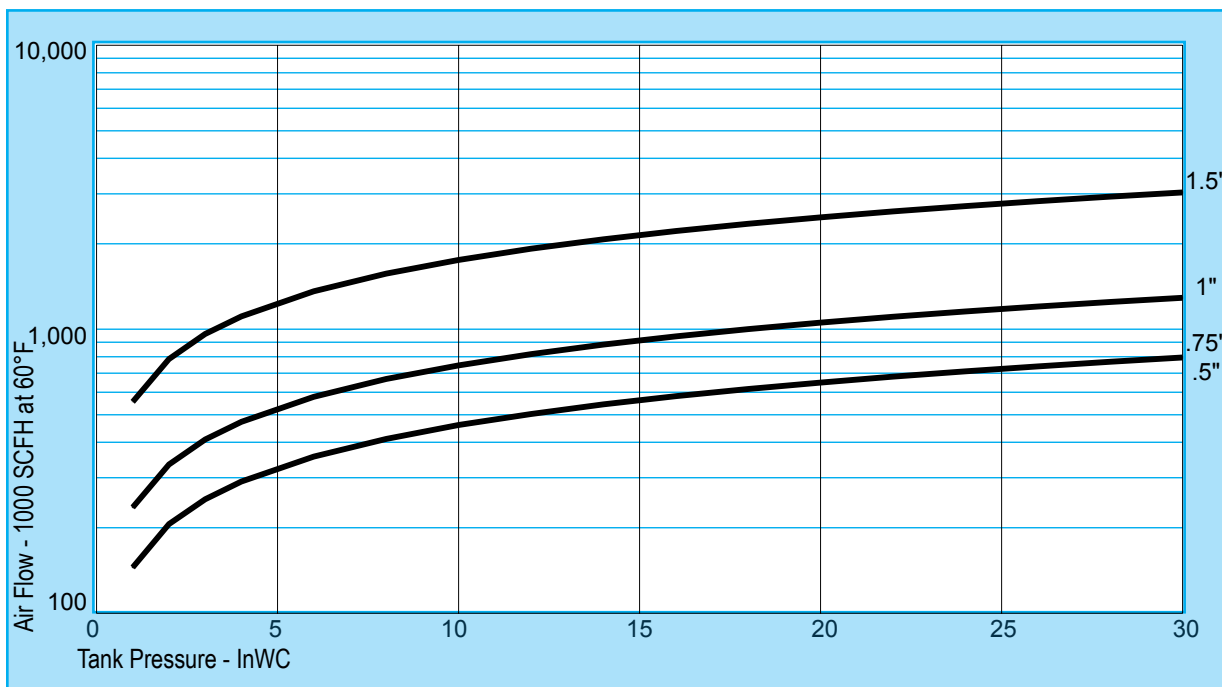
- Include model number and setting when ordering.
- For special options, consult factory.

EXAMPLE 7 6 2 2 B — 0 1 — 3 5 — N O

Indicates a 1" Model 7622B with Carbon Steel body, Stainless Steel Flame Element, FNPT connections, and no options.other options.

Air Flow - Standard Cubic Feet per Hour at 60°F				
Pressure Drop		Size		
InWC	oz/in ²	0.5" & 0.75"	1"	1.5"
1	0.6	145	236	555
2	1.2	206	334	785
3	1.7	252	409	962
4	2.3	291	472	1110
6	3.5	356	578	1360
8	4.6	411	668	1570
10	5.8	460	746	1755
12	6.9	503	817	1922
14	8.1	544	883	2075
16	9.2	581	944	2218
18	10.4	616	1001	2353
20	11.6	649	1055	2479
22	12.7	681	1106	2600
24	13.9	711	1155	2715
26	15.0	740	1202	2825
28	16.2	768	1247	2932
30	17.3	795	1290	3034

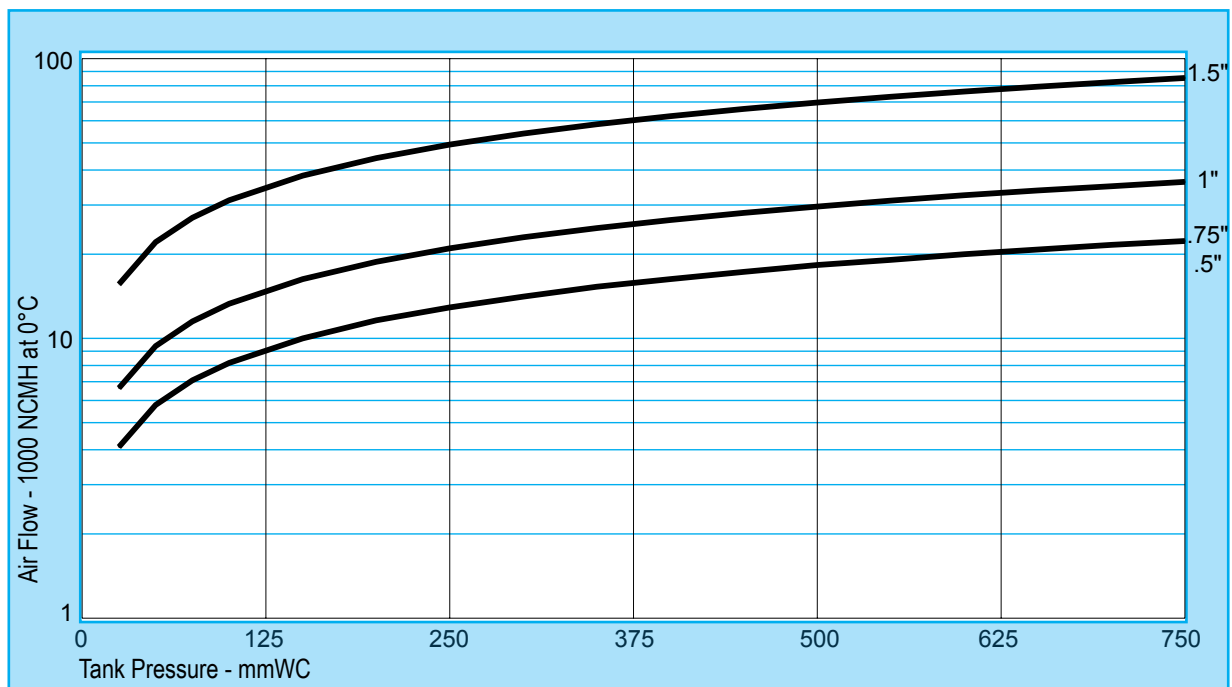
1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7622B // FLOW CAPACITY

Air Flow - Normal Cubic Meters per Hour at 0°C				
Pressure Drop		Size		
mm H ₂ O	mb	0.5" & 0.75"	1"	1.5"
25.4	3.00	3.9	6.3	14.9
50.8	5.00	5.5	8.9	21.0
76.2	7.50	6.8	11.0	25.8
102	10.00	7.8	12.6	29.7
152	15.00	9.5	15.5	36.4
203	20.00	11.0	17.9	42.1
254	25.00	12.3	20.0	47.0
305	30.00	13.5	21.9	51.5
356	35.00	14.6	23.7	55.6
406	40.00	15.6	25.3	59.4
457	45.00	16.5	26.8	63.0
508	50.00	17.4	28.3	66.4
559	55.00	18.2	29.6	69.7
610	60.00	19.0	30.9	72.7
660	65.00	19.8	32.2	75.7
711	70.00	20.6	33.4	78.5
762	75.00	21.3	34.6	81.3

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7618

TECHNICAL DETAILS

- Flange sizes 2” through 12”
- Housing standard material: carbon steel, stainless steel, aluminum
- Designed for quick and easy maintenance
- Unique recessed seating for superior protection
- Proven spiral-wound, crimped-ribbon flame element (316SS or aluminum)
- Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C)
- Vertical installation only



MODEL 7618

DEFLAGRATION FLAME ARRESTERS

The 7618 model is designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

END-OF-LINE	END-OF-LINE	IN-LINE
Weather Hood Outlet	Flanged Outlet with or without Discharge Piping	
<ul style="list-style-type: none"> • Gas Group: NEC D, IEC IIA • Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C) • Pre-Ignition Pressure = Atmosphere 	<ul style="list-style-type: none"> • Gas Group: NEC D, IEC IIA • Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C) • Pre-Ignition Pressure = Atmosphere • Discharge Piping Length ≤ 10 pipe diameters 	<ul style="list-style-type: none"> • Gas Group: IEC IIA1, Methane (includes most Biogas applications) • Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C) • Pre-Ignition Pressure ≤ 1 psig • Run-up Length ≤ 50 pipe diameters (2") • Run-up Length ≤ 20 pipe diameters (3") • Run-up Length ≤ 10 pipe diameters (4" – 12")

FEATURES & BENEFITS

- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

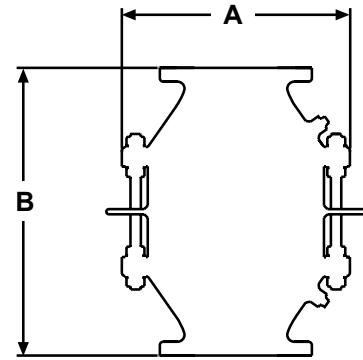
OPTIONS

- Exterior painting or coating available
- Weatherhood (replaces flanged outlet)
- DIN or ASME/ANSI drilling available
- Tapped drain and instrumentation ports available

MODEL 7618 // SPECIFICATIONS

Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Width (Metric)	B Height (Metric)	MAWP 7618 ^o Aluminum (Metric)	MAWP 7618 ^o Carbon or SS (Metric)	Approx Ship. Wt. Lbs. (Aluminum)
2" (50 mm)	8.75" (221 mm)	14" (356 mm)	50 psig (345 kPa)	100 psig (690 kPa)	18 (8 kg)
3" (80 mm)	9.50" (241 mm)	16" (406 mm)	50 psig (345 kPa)	100 psig (690 kPa)	25 (11 kg)
4" (100 mm)	12.25" (311 mm)	18.25" (464 mm)	50 psig (345 kPa)	100 psig (690 kPa)	40 (18 kg)
6" (150 mm)	16.50" (419 mm)	21" (533 mm)	50 psig (345 kPa)	100 psig (690 kPa)	70 (32 kg)
8" (200 mm)	21" (533 mm)	25" (635 mm)	50 psig (345 kPa)	100 psig (690 kPa)	135 (61 kg)
10" (250 mm)	24.75" (629 mm)	30" (762 mm)	50 psig (345 kPa)	100 psig (690 kPa)	235 (107 kg)
12" (300 mm)	28.62" (727 mm)	32.50" (826 mm)	50 psig (345 kPa)	100 psig (690 kPa)	345 (156 kg)



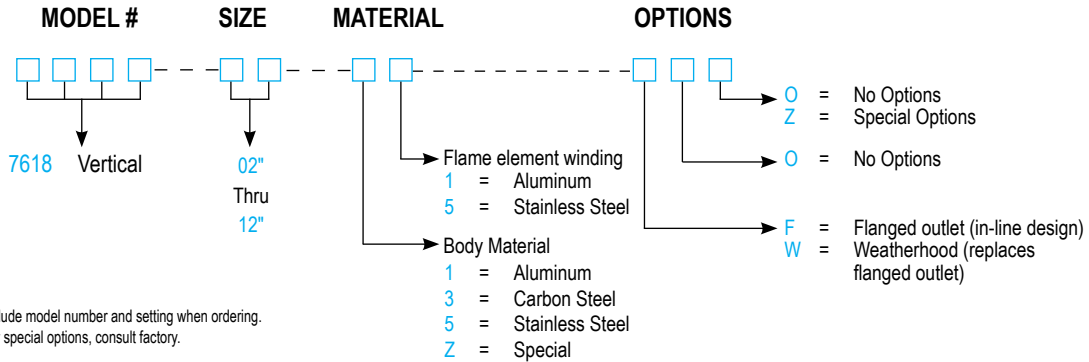
* Larger sizes available on special application.

¹150# ANSI drilling compatibility, F.F. on aluminum and R.F. on carbon steel and stainless steel alloys.

^oPneumatic tested to 15 psig as standard.

HOW TO ORDER

For easy ordering, select proper model numbers



NOTES

- Include model number and setting when ordering.
- For special options, consult factory.

EXAMPLE

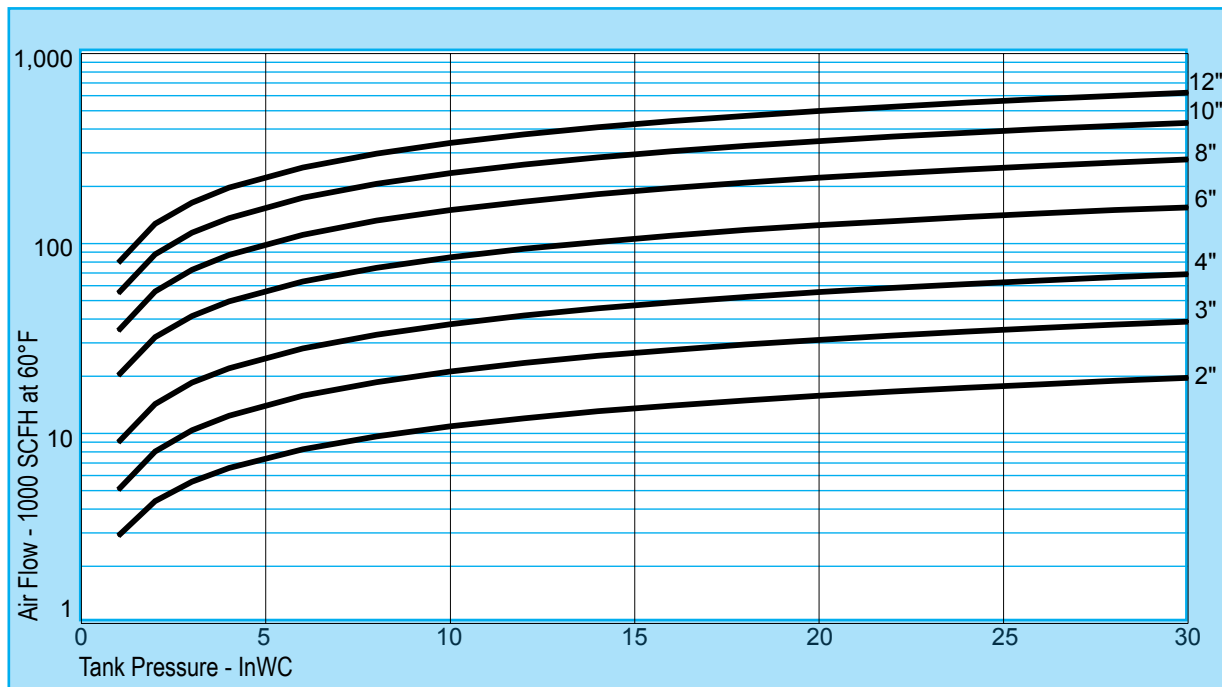
7 6 1 8 — 0 4 — 1 1 — F O O

Indicates a 4" Model 7618 with Aluminum Body, Aluminum Flame element winding, Flanged outlet, no Jacket and no other options.

MODEL 7618 // FLOW CAPACITY (END OF LINE)

Air Flow - 1000 Standard Cubic Feet per Hour at 60°F								
Tank Pressure		Size						
InWC	oz/in ²	2" (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)	10" (250 mm)	12" (300 mm)
1	0.6	2.89	5.05	8.98	20.2	34.7	54.7	79.1
2	1.2	4.40	8.03	14.3	32.1	55.9	87.8	127
3	1.7	5.58	10.4	18.5	41.5	72.7	114	164
4	2.3	6.57	12.4	22.0	49.5	87.0	136	197
6	3.5	8.25	15.8	28.0	63.1	111	174	251
8	4.6	9.66	18.6	33.1	74.5	132	206	297
10	5.8	10.9	21.2	37.6	84.7	150	235	338
12	6.9	12.0	23.5	41.7	93.8	166	260	375
14	8.1	13.1	25.6	45.5	102	182	284	409
16	9.2	14.0	27.5	49.0	110	196	306	441
18	10.4	14.9	29.4	52.2	118	209	327	470
20	11.6	15.8	31.1	55.4	125	222	346	499
22	12.7	16.6	32.8	58.3	131	234	365	525
24	13.9	17.4	34.4	61.1	138	245	383	551
26	15.0	18.1	35.9	63.9	144	256	400	576
28	16.2	18.9	37.4	66.5	150	267	416	599
30	17.3	19.6	38.8	69.0	155	277	432	622

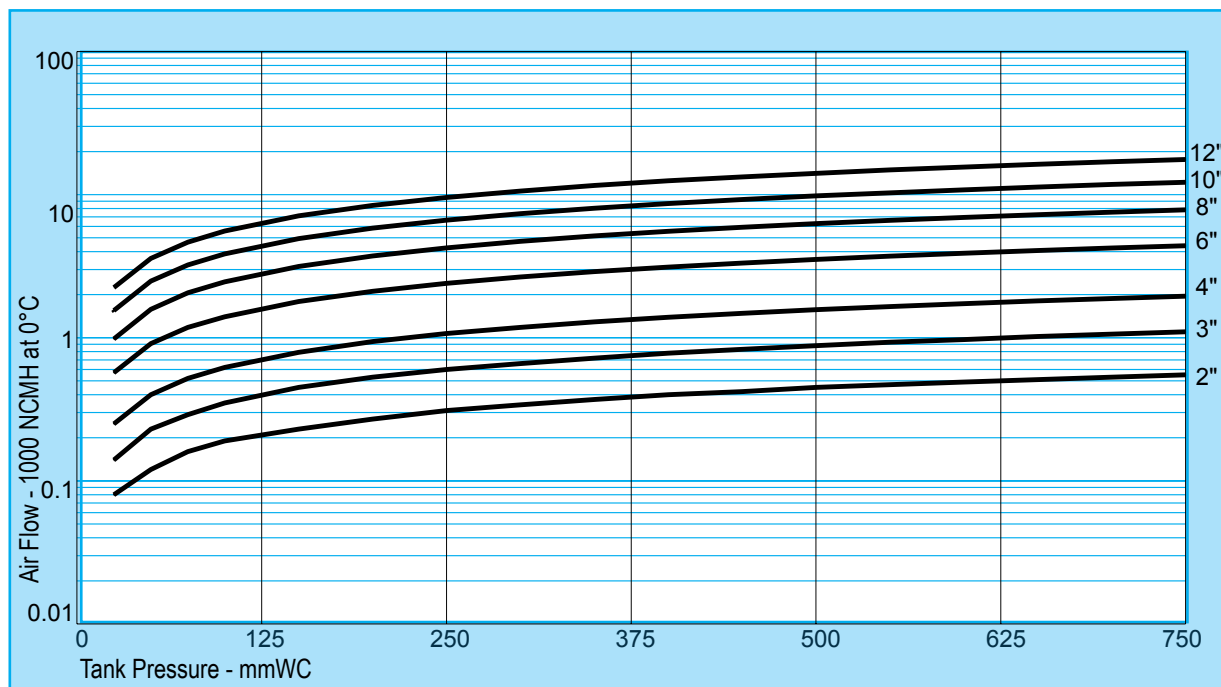
1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7618 // FLOW CAPACITY (END OF LINE)

Air Flow - 1000 Normal Cubic Meters per Hour at 0°C								
Tank Pressure		Size						
mmWC	mb	2" (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)	10" (250 mm)	12" (300 mm)
25	2.45	0.08	0.14	0.25	0.57	0.98	1.55	2.24
50	4.90	0.12	0.23	0.40	0.91	1.58	2.49	3.59
75	7.35	0.16	0.29	0.52	1.18	2.06	3.23	4.66
100	9.80	0.19	0.35	0.62	1.40	2.46	3.86	5.57
150	14.7	0.23	0.45	0.79	1.79	3.15	4.93	7.11
200	19.6	0.27	0.53	0.94	2.11	3.73	5.84	8.42
250	24.5	0.31	0.60	1.07	2.40	4.25	6.64	9.57
300	29.4	0.34	0.66	1.18	2.66	4.72	7.37	10.6
350	34.3	0.37	0.72	1.29	2.90	5.15	8.04	11.6
400	39.2	0.40	0.78	1.39	3.12	5.55	8.67	12.5
450	44.1	0.42	0.83	1.48	3.33	5.92	9.25	13.3
500	49.0	0.45	0.88	1.57	3.53	6.28	9.81	14.1
550	53.9	0.47	0.93	1.65	3.72	6.62	10.3	14.9
600	59	0.49	0.97	1.73	3.90	6.94	10.8	15.6
650	64	0.51	1.02	1.81	4.07	7.25	11.3	16.3
700	69	0.53	1.06	1.88	4.24	7.55	11.8	17.0
750	74	0.55	1.10	1.95	4.40	7.84	12.2	17.6

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7628

TECHNICAL DETAILS

- Flange sizes 2” through 12”
- Housing standard material: carbon steel, stainless steel, aluminum
- Designed for quick and easy maintenance
- Unique recessed seating for superior protection
- Proven spiral-wound, crimped-ribbon flame element (316SS or aluminum)
- Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C)
- Horizontal installation only



MODEL 7628

DEFLAGRATION FLAME ARRESTERS

The 7628 model is designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

END-OF-LINE	IN-LINE
Flanged Outlet with or without Discharge Piping	
<ul style="list-style-type: none">• Gas Group: NEC D, IEC IIA• Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C)• Pre-Ignition Pressure = Atmosphere• Discharge Piping Length ≤ 10 pipe diameters	<ul style="list-style-type: none">• Gas Group: IEC IIA1, Methane (includes most Biogas applications)• Operating Temperature $\leq 140^{\circ}\text{F}$ (60°C)• Pre-Ignition Pressure ≤ 1 psig• Run-up Length ≤ 50 pipe diameters (2")• Run-up Length ≤ 20 pipe diameters (3")• Run-up Length ≤ 10 pipe diameters (4" – 12")

FEATURES & BENEFITS

- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

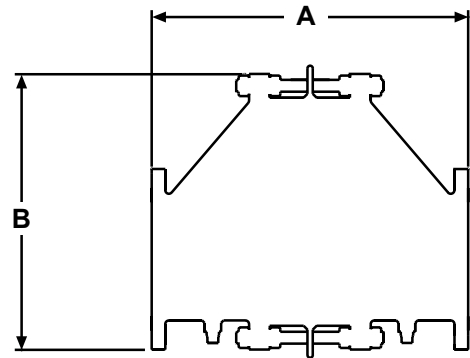
OPTIONS

- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Tapped drain and instrumentation ports available

MODEL 7628 // SPECIFICATIONS

Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Length (Metric)	B Height (Metric)	MAWP 7628 ^o Aluminum (Metric)	MAWP 7628 ^o Carbon or SS (Metric)	Approx Ship. Wt. Lbs. (Aluminum)
2" (50 mm)	15" (381 mm)	9.50" (241 mm)	150 psig (1035 kPa)	350 psig (2415 kPa)	18 (8 kg)
3" (80 mm)	17" (431 mm)	11" (279 mm)	140 psig (966 kPa)	325 psig (2242 kPa)	25 (11 kg)
4" (100 mm)	18.75" (476 mm)	12.50" (318 mm)	140 psig (966 kPa)	325 psig (2242 kPa)	40 (18 kg)
6" (150 mm)	21" (533 mm)	16.50" (419 mm)	140 psig (966 kPa)	325 psig (2242 kPa)	70 (32 kg)
8" (200 mm)	26" (660 mm)	20.50" (521 mm)	90 psig (621 kPa)	200 psig (1380 kPa)	135 (61 kg)
10" (250 mm)	30" (762 mm)	24.50" (622 mm)	75 psig (517 kPa)	150 psig (1035 kPa)	235 (107 kg)
12" (300 mm)	32.50" (826 mm)	28.50" (724 mm)	75 psig (517 kPa)	150 psig (1035 kPa)	345 (156 kg)



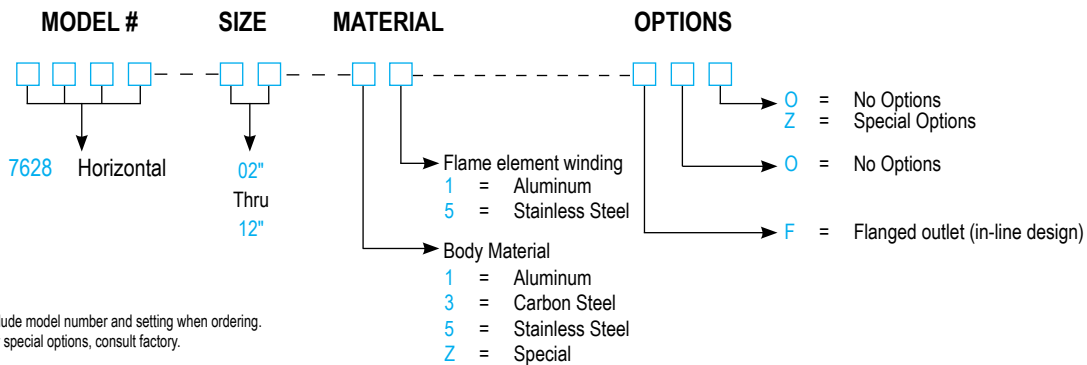
* Larger sizes available on special application.

¹150# ANSI drilling compatibility, F.F. on aluminum and R.F. on carbon steel and stainless steel alloys.

²Pneumatic tested to 15 psig as standard.

HOW TO ORDER

For easy ordering, select proper model numbers



- NOTES**
- Include model number and setting when ordering.
 - For special options, consult factory.

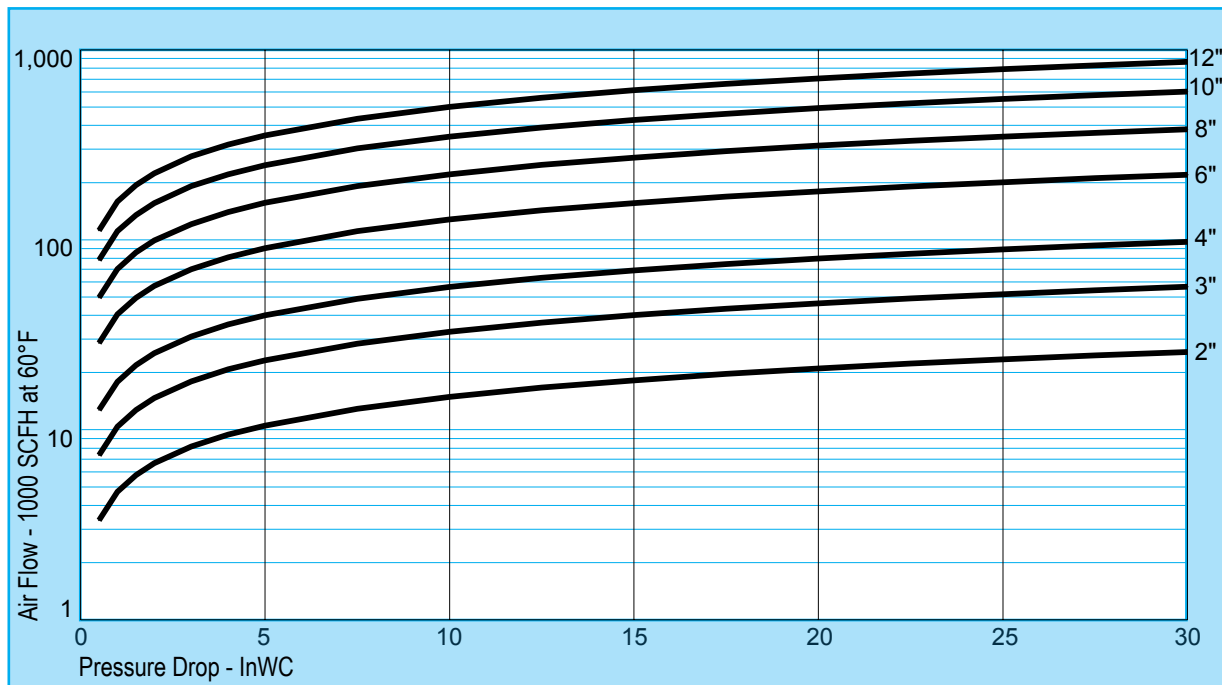
EXAMPLE 7 6 2 8 — 0 4 — 1 1 — F O O

Indicates a 4" Model 7628 with Aluminum Body, Aluminum Flame element winding, Flanged outlet, no Jacket and no other options.

MODEL 7628 // FLOW CAPACITY (IN-LINE)

Air Flow - 1000 Standard Cubic Feet per Hour at 60°F								
Pressure Drop		Size						
InWC	oz/in ²	2" (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)	10" (250 mm)	12" (300 mm)
1	0.6	3.32	5.58	9.92	23.6	40.2	63.4	91.8
2	1.2	5.27	9.44	16.8	40.0	69.1	109	157
3	1.7	6.79	12.6	22.4	53.3	93.0	146	211
4	2.3	8.08	15.3	27.2	64.8	113.8	178	257
6	3.5	10.3	20.0	35.5	84.5	150	234	337
8	4.6	12.1	23.9	42.5	101	180	282	405
10	5.8	13.8	27.5	48.8	116	207	324	466
12	6.9	15.3	30.7	54.5	130	232	363	522
14	8.1	16.6	33.6	59.8	142	255	398	573
16	9.2	17.9	36.4	64.7	154	277	431	620
18	10.4	19.1	39.0	69.3	165	297	463	665
20	11.6	20.2	41.5	73.7	176	306	480	701
22	12.7	21.3	43.8	77.9	186	320	502	723
24	13.9	22.3	44.8	79.7	190	335	524	756
26	15.0	23.3	46.6	82.9	198	348	545	786
28	16.2	24.3	48.4	86.0	205	362	566	816
30	17.3	25.2	50.1	89.1	212	374	586	845

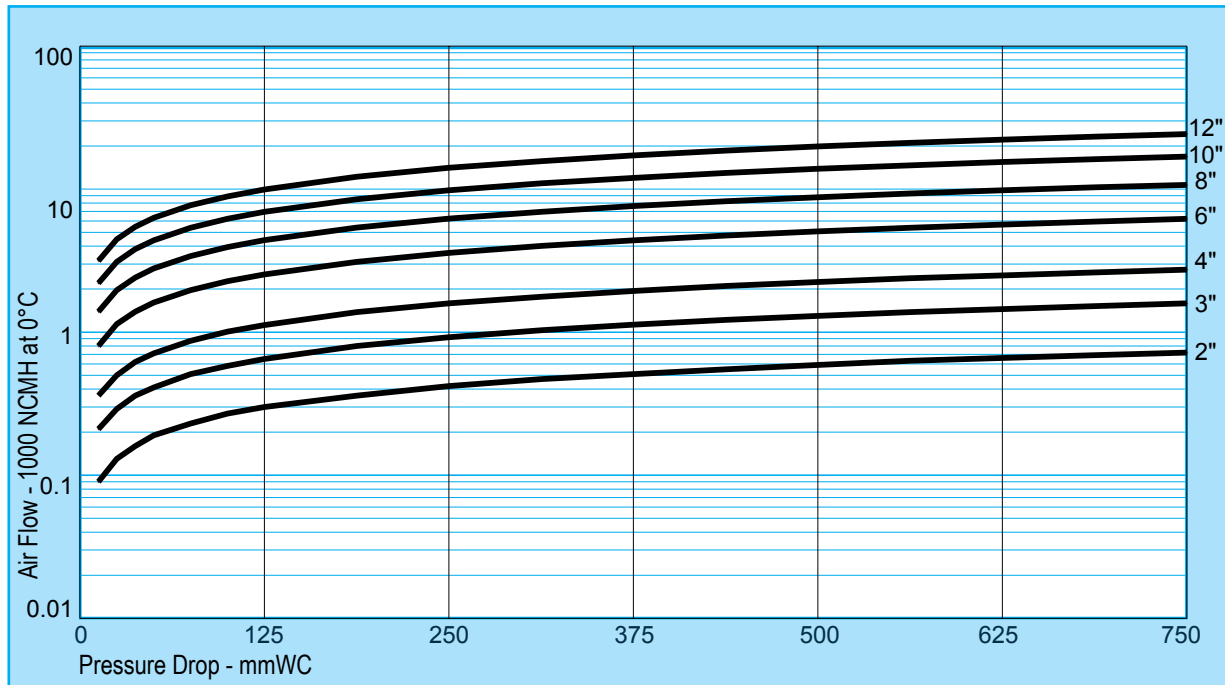
1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7628 // FLOW CAPACITY (IN-LINE)

Air Flow - 1000 Normal Cubic Meters per Hour at 0°C								
Pressure Drop		Size						
mmWC	mb	2" (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)	10" (250 mm)	12" (300 mm)
25	2.45	0.09	0.16	0.28	0.67	1.14	1.80	2.60
50	4.90	0.15	0.27	0.48	1.13	1.96	3.08	4.45
75	7.35	0.19	0.36	0.63	1.51	2.63	4.13	5.97
100	9.80	0.23	0.43	0.77	1.84	3.22	5.05	7.29
150	14.7	0.29	0.57	1.00	2.39	4.24	6.63	9.55
200	19.6	0.34	0.68	1.21	2.87	5.10	7.98	11.5
250	24.5	0.39	0.78	1.38	3.29	5.88	9.18	13.2
300	29.4	0.43	0.87	1.54	3.68	6.58	10.3	14.8
350	34.3	0.47	0.95	1.69	4.04	7.23	11.3	16.2
400	39.2	0.51	1.03	1.83	4.37	7.84	12.2	17.6
450	44.1	0.54	1.10	1.96	4.68	8.41	13.1	18.8
500	49.0	0.57	1.17	2.09	4.97	8.66	13.6	19.9
550	53.9	0.60	1.24	2.21	5.26	9.08	14.2	20.5
600	59	0.63	1.27	2.26	5.38	9.48	14.8	21.4
650	64	0.66	1.32	2.35	5.60	9.87	15.5	22.3
700	69	0.69	1.37	2.44	5.81	10.2	16.0	23.1
750	74	0.71	1.42	2.52	6.01	10.6	16.6	23.9

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



TECHNICAL DETAILS

- Sizes 2" through 12"
- Housing standard material: carbon steel, stainless steel, aluminum
- Flame element standard material: 316L stainless steel
- Other materials available upon request
- Maximim Operational pressure 15.7 psia (1.08 bara)*
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Burn Time t_{BT} 5 minutes*
- IEC gas group IIA1 (MESG \geq 1.14 mm)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBEXU12ATEX2018 X**
- Thermocouple is required for flame detection per the ATEX code



DEFLAGRATION FLAME ARRESTERS

The 7588 model is a In-Line Vertical Deflagration Flame Arrester designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

FEATURES & BENEFITS

- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

OPTIONS

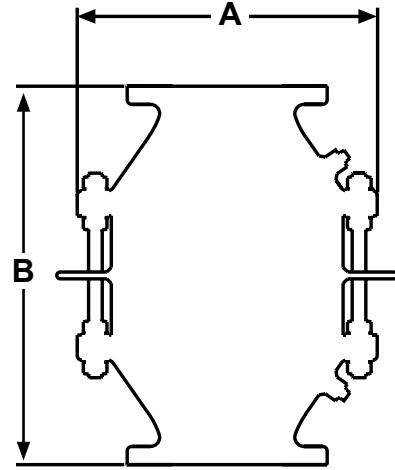
- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Drains and instrument ports available
- Factory installed thermocouples for flame sensing

*Testing parameters based on EN ISO 16852:2010

MODEL 7588 // SPECIFICATIONS

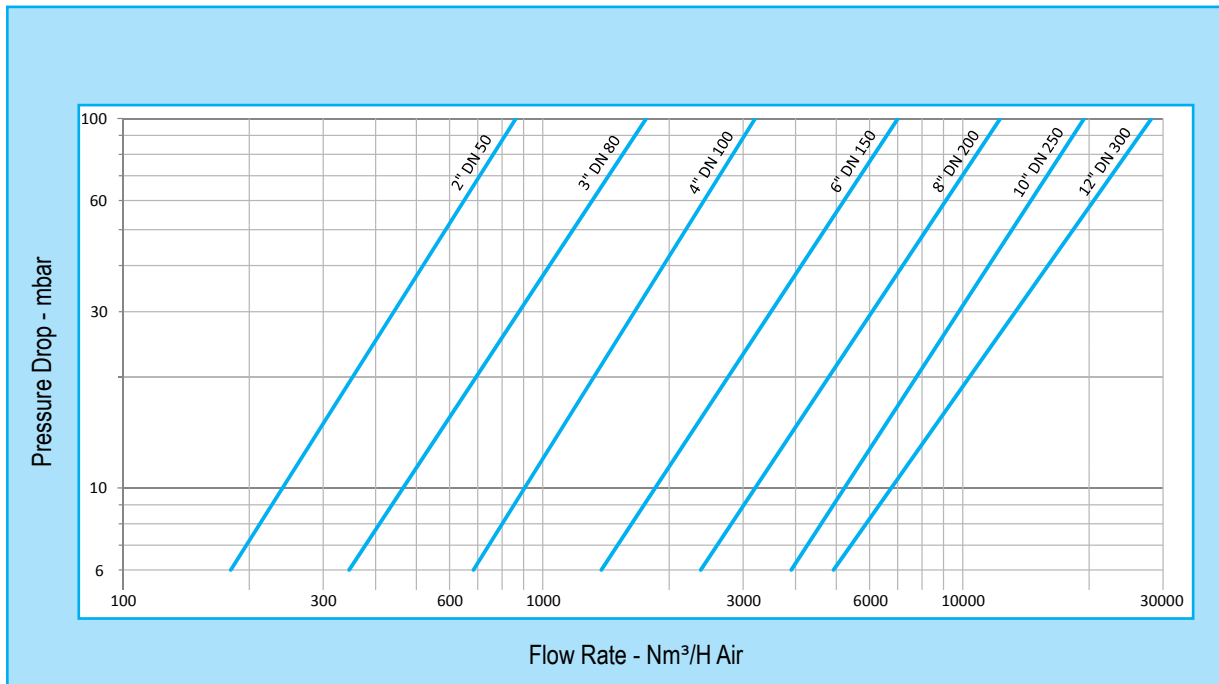
Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Width (Metric)	B Height (Metric)	Maximum Run Up (L/D)*	Approx Ship. Wt. Lbs. (Aluminum)	Approx Ship. Wt. Lbs. (Carbon or SS Body)
2" (50 mm)	8.75" (221 mm)	14" (356 mm)	50	18 (8 kg)	40 (18 kg)
3" (80 mm)	9.50" (241 mm)	16" (406 mm)	20	27 (12 kg)	60 (27 kg)
4" (100 mm)	11.50" (292 mm)	18.25" (464 mm)	10	42 (19 kg)	91 (41 kg)
6" (150 mm)	16.50" (419 mm)	21" (533 mm)	10	92 (42 kg)	184 (83 kg)
8" (200 mm)	21" (533 mm)	25" (635 mm)	10	146 (66 kg)	309 (140 kg)
10" (250 mm)	24.75" (629 mm)	30" (762 mm)	10	237 (108 kg)	498 (226 kg)
12" (300 mm)	28.62" (727 mm)	32.50" (826 mm)	10	306 (139 kg)	694 (314 kg)



*Testing parameters based on EN ISO 16852:2010

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



TECHNICAL DETAILS

- Sizes 2" through 12"
- Housing standard material: carbon steel, stainless steel, aluminum
- Flame element standard material: 316L stainless steel
- Other materials available upon request
- Maximim Operational pressure 15.7 psia (1.08 bara)*
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Burn Time t_{BT} 5 minutes*
- Good for IEC gas group IIA1 (MESG \geq 1.14 mm)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010 Certificate #: **IBExU12ATEX2017 X**
- Thermocouple is required for flame detection per the ATEX code



DEFLAGRATION FLAME ARRESTERS

The 7598 model is a In-Line Horizontal Deflagration Flame Arrester designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

FEATURES & BENEFITS

- Eccentric design allows for horizontal installation by preventing liquid accumulation
- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

OPTIONS

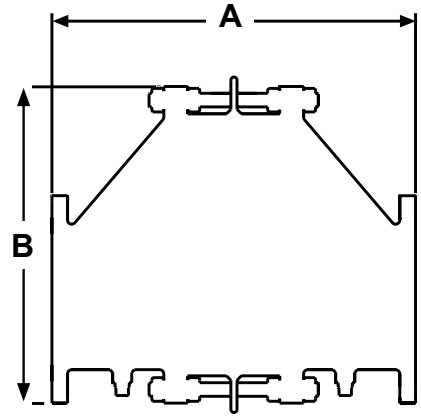
- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Drains and instrument ports available
- Factory installed thermocouples for flame sensing

*Testing parameters based on EN ISO 16852:2010

MODEL 7598 // SPECIFICATIONS

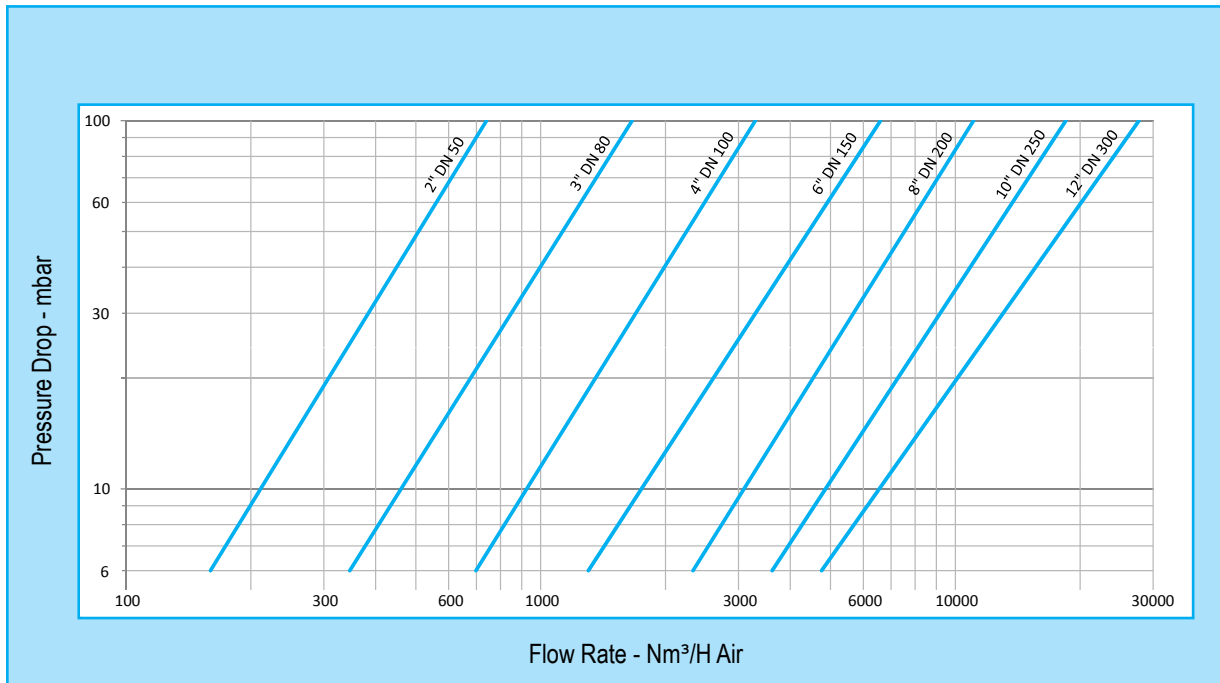
Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Length (Metric)	B Height (Metric)	Maximum Run Up (L/D)*	Approx Ship. Wt. Lbs. (Aluminum)	Approx Ship. Wt. Lbs. (Carbon or SS Body)
2" (50 mm)	13.75" (349 mm)	9.50" (241 mm)	50	31 (14 kg)	69 (31 kg)
3" (80 mm)	15.75" (400 mm)	11" (279 mm)	20	40 (18 kg)	85 (38 kg)
4" (100 mm)	18" (457 mm)	12.50" (318 mm)	10	53 (24 kg)	112 (51 kg)
6" (150 mm)	21" (533 mm)	16.50" (419 mm)	10	111 (50 kg)	216 (98 kg)
8" (200 mm)	25" (635 mm)	20.50" (521 mm)	10	213 (97 kg)	413 (187 kg)
10" (250 mm)	30" (762 mm)	24.50" (622 mm)	10	306 (139 kg)	622 (282 kg)
12" (300 mm)	32.50" (826 mm)	28.50" (724 mm)	10	378 (171 kg)	693 (314 kg)



*Testing parameters based on EN ISO 16852:2010

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



TECHNICAL DETAILS

- Sizes 2" through 12"
- Housing standard material: carbon steel, stainless steel, aluminum
- Flame element standard material: 316L stainless steel
- Other materials available upon request
- Maximim Run Up (L/D) 50*
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Burn Time t_{BT} 2 minutes (sizes 8", 10" and 12")*
- Burn Time t_{BT} 10 minutes (sizes 2", 3", 4" and 6")*
- IEC gas group IIA (MESG \geq 0.90 mm)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU12ATEX2016 X**
- Thermocouple is required for flame detection per the ATEX code



DEFLAGRATION FLAME ARRESTERS

The 7688 model is a In-Line Vertical Deflagration Flame Arrester designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

FEATURES & BENEFITS

- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

OPTIONS

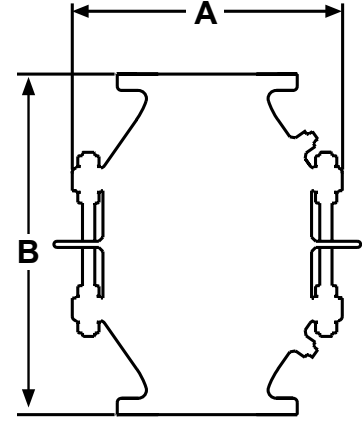
- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Drains and instrument ports available
- Factory installed thermocouples for flame sensing

*Testing parameters based on EN ISO 16852:2010

MODEL 7688 // SPECIFICATIONS

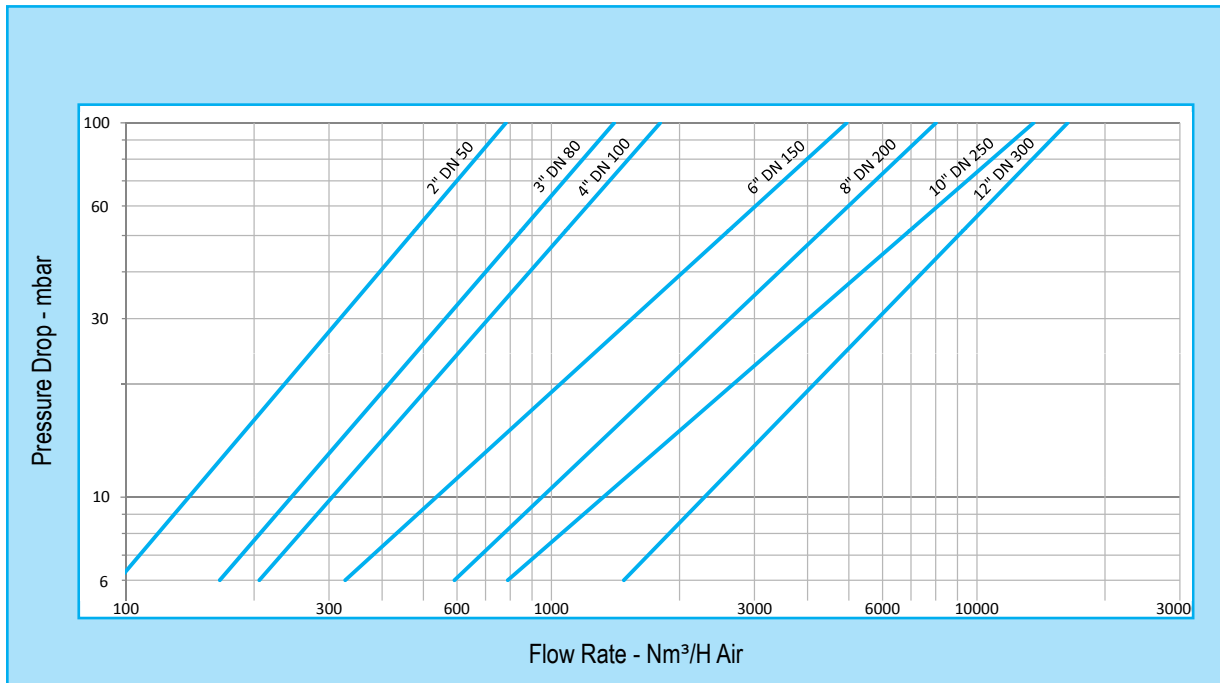
Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Width (Metric)	B Height (Metric)	Maximum Operational Pressure* psia (bara)	Burn Time t _{BT} * minutes	Approx Ship. Wt. Lbs. (Aluminum)	Approx Ship. Wt. Lbs. (Carbon or SS Body)
2" (50 mm)	8.75" (221 mm)	14" (356 mm)	23.2 (1.60)	10	19 (9 kg)	41 (18 kg)
3" (80 mm)	9.50" (241 mm)	16" (406 mm)	23.2 (1.60)	10	28 (13 kg)	61 (28 kg)
4" (100 mm)	11.50" (292 mm)	18.25" (464 mm)	17.4 (1.20)	10	44 (20 kg)	93 (42 kg)
6" (150 mm)	16.50" (419 mm)	21" (533 mm)	17.4 (1.20)	10	98 (44 kg)	189 (86 kg)
8" (200 mm)	21" (533 mm)	25" (635 mm)	17.4 (1.20)	2	155 (70 kg)	317 (144 kg)
10" (250 mm)	24.75" (629 mm)	30" (762 mm)	17.4 (1.20)	2	250 (113 kg)	512 (232 kg)
12" (300 mm)	28.62" (727 mm)	32.50" (826 mm)	17.4 (1.20)	2	324 (147 kg)	712 (323 kg)



*Testing parameters based on EN ISO 16852:2010

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



TECHNICAL DETAILS

- Sizes 2" through 12"
- Housing standard material: carbon steel, stainless steel, aluminum
- Flame element standard material: 316L stainless steel
- Other materials available upon request
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Good for IEC gas group IIA (MESG \geq 0.90 mm)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU12ATEX2015 X**
- Thermocouple is required for flame detection per the ATEX code



DEFLAGRATION FLAME ARRESTERS

The 7698 model is a In-Line Horizontal Deflagration Flame Arrester designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

FEATURES & BENEFITS

- Eccentric design allows for horizontal installation by preventing liquid accumulation
- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped ribbon, flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

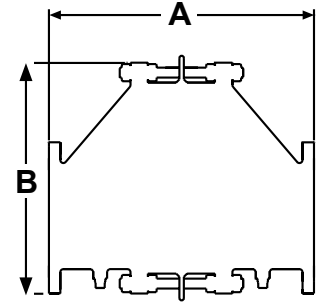
OPTIONS

- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Drains and instrument ports available
- Factory installed thermocouples for flame sensing

MODEL 7698 // SPECIFICATIONS

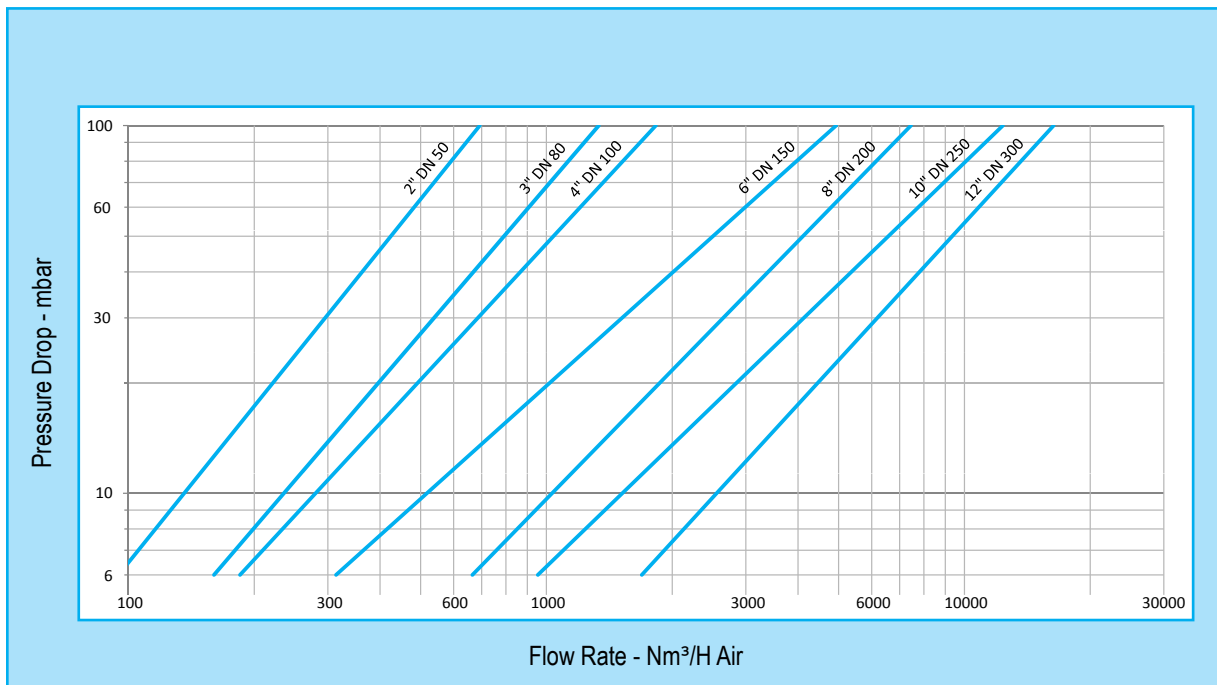
Specifications subject to change without notice. Certified dimensions available upon request.

Size* (Metric)	A Length (Metric)	B Height (Metric)	Maximum Operational Pressure* psia (bara)	Maximum Run Up (L/D)*	Burn Time t _{BT} * minutes	Approx Ship. Wt. Lbs. (Aluminum)	Approx Ship. Wt. Lbs. (Carbon or SS Body)
2" (50 mm)	13.75" (349 mm)	9.50" (241 mm)	23.2 (1.60)	50	10	32 (14 kg)	70 (32 kg)
3" (80 mm)	15.75" (400 mm)	11" (279 mm)	23.2 (1.60)	50	10	41 (19 kg)	86 (39 kg)
4" (100 mm)	18" (457 mm)	12.50" (318 mm)	17.4 (1.20)	20	10	55 (25 kg)	114 (52 kg)
6" (150 mm)	21" (533 mm)	16.50" (419 mm)	17.4 (1.20)	20	10	116 (53 kg)	222 (101 kg)
8" (200 mm)	25" (635 mm)	20.50" (521 mm)	17.4 (1.20)	20	2	221 (100 kg)	422 (191 kg)
10" (250 mm)	30" (762 mm)	24.50" (622 mm)	17.4 (1.20)	20	2	320 (145 kg)	635 (288 kg)
12" (300 mm)	32.50" (826 mm)	28.50" (724 mm)	17.4 (1.20)	20	2	397 (180 kg)	836 (379 kg)



*Testing parameters based on EN ISO 16852:2010

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



TECHNICAL DETAILS

- Sizes 2" through 12"
- Housing standard material: carbon steel, stainless steel, aluminum
- Flame element standard material: 316L stainless steel
- Other materials available upon request
- Operational Temperature Range -4 to 140 °F (-20 to 60 °C)
- Burn Time t_{BT} 2 minutes*
- IEC gas group IIA (MESG \geq 0.90 mm)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010 Certificate #: **IBExU12ATEX2019 X**
- Thermocouple is required for flame detection per the ATEX code



DEFLAGRATION FLAME ARRESTERS

The 7678 model is an End-Of-Line Vertical Deflagration Flame Arrester designed to inhibit flame propagation in gas piping systems and to protect low pressure tanks containing flammable liquids. Arresters protect low flash point liquids from external sources of ignition. This provides increased fire protection and safety.

FEATURES & BENEFITS

- Flame arrester element geometry maximizes flame quenching capability while minimizing pressure drop
- Proven spiral-wound, crimped-ribbon flame element provides reliable flame protection
- Modular design allows easy and cost-effective flame bank maintenance

OPTIONS

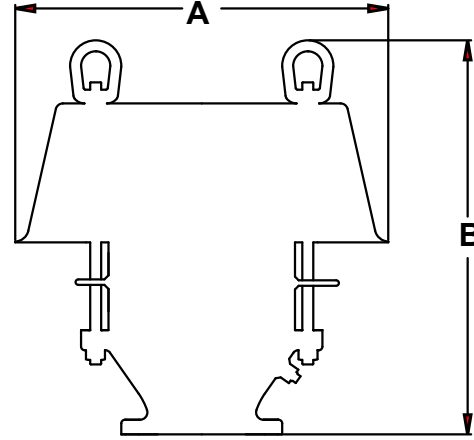
- Exterior painting or coating available
- DIN or ASME/ANSI drilling available
- Drains and instrument ports available
- Factory installed thermocouples for flame sensing

*Testing parameters based on EN ISO 16852:2010

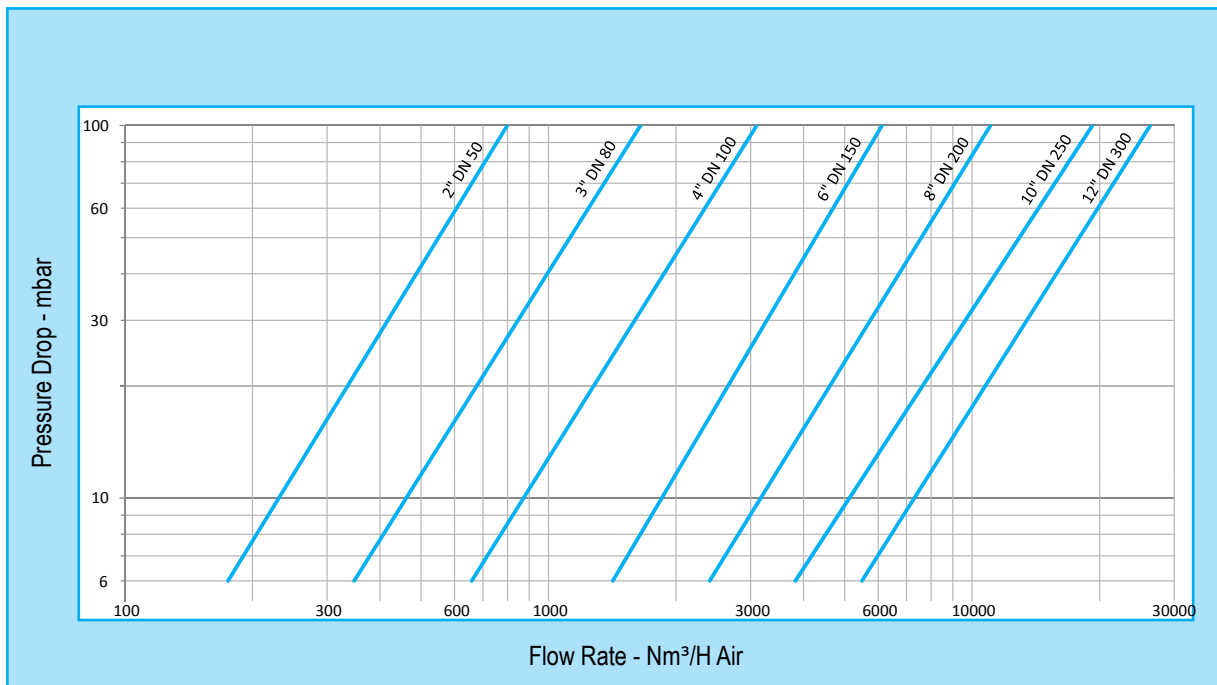
MODEL 7678 // SPECIFICATIONS

Specifications subject to change without notice. Certified dimensions available upon request.

Size (Metric)	A Width (Metric)	B Height (Metric)	Approx Ship. Wt. Lbs. (Aluminum)	Approx Ship. Wt. Lbs. (Carbon or SS Body)
2" (50 mm)	13" (330 mm)	18" (457 mm)	22 (10 kg)	37 (17 kg)
3" (80 mm)	17" (432 mm)	18.7" (475 mm)	35 (16 kg)	65 (29 kg)
4" (100 mm)	19.5" (495 mm)	21.1" (536 mm)	49 (22 kg)	90 (41 kg)
6" (150 mm)	23.50" (597 mm)	24.2" (615 mm)	105 (48 kg)	168 (76 kg)
8" (200 mm)	28.3" (719 mm)	32" (813 mm)	160 (73 kg)	280 (127 kg)
10" (250 mm)	32.25" (819 mm)	36" (914 mm)	244 (111 kg)	417 (189 kg)
12" (300 mm)	40" (1016 mm)	39" (991 mm)	314 (142 kg)	567 (257 kg)



1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.



MODEL 7658A

TECHNICAL DETAILS

- Sizes 2"x5" through 6"x12"
- Vertical or horizontal installation
- In-line or end-of-line deflagrations
- Unstable detonations
- Pre-ignition system pressure up to 15.7 psia (1.08 bara)
- Pre-ignition system temperatures -4 to 140°F (-20 to 60°C)
- Burn Time t_{BT} 10 minutes
- Bi-directional with respect to flow and ignition source
- Standard materials of construction are carbon steel or stainless steel
- Stainless Steel element is standard
- Low pressure drop with multiple element sizes available for each flange size
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU12ATEX2160 X**
- Certified to USCG per 33 CFR Part 154 App. A Type II
Certificate #: **CSA LO 4000-5704**
- Thermocouple is required for flame detection per the ATEX & USCG codes



FLAME ARRESTER

The Groth Model 7658A Deflagration & Detonation Flame Arrester inhibits flame propagation in gas piping systems. The design of the Model 7658A Flame Arrester makes it ideal to protect liquid storage tanks containing NEC Group D (IEC Class IIA) gases with a Maximum Experimental Safe Gap (MESG) equal to or greater than 0.90 mm.

FEATURES & BENEFITS

Housings are available in carbon steel, stainless steel or Alloy C276 and elements in stainless steel, Alloy C276 or other corrosion resistant alloys.

These arresters are compact with high flow capacity and low pressure drop. Elements are easily removed in-line for cleaning and maintenance and are economical to replace if necessary.

OPTIONS

- Other materials available
- Sensor ports
- Large inspection and cleaning ports
- Swing bolts for fast element removal
- Factory installed thermocouples for flame sensing

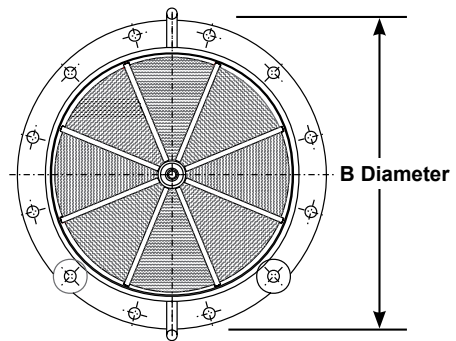
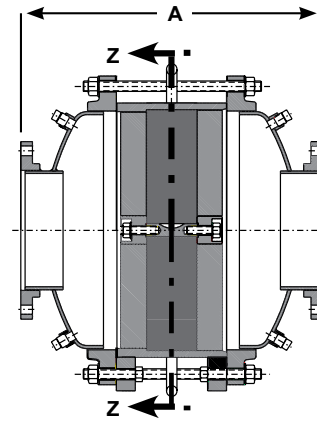
MODEL 7658A // SPECIFICATIONS

Specifications subject to change without notice. Certified dimensions available upon request.

Housing Size (Metric)	A Length (Metric)	B Diameter (Metric)	Approx Ship. Wt. Lbs. (Metric)
5" (125 mm)	18" (457 mm)	9" (229 mm)	75 (34 kg)
6" (150 mm)	20.31" (516 mm)	11" (279 mm)	100 (45 kg)
8" (200 mm)	22.43" (570 mm)	13.5" (343 mm)	175 (79 kg)
12" (300 mm)	25.94" (659 mm)	19" (483 mm)	350 (159 kg)

* Larger sizes available on special applications.

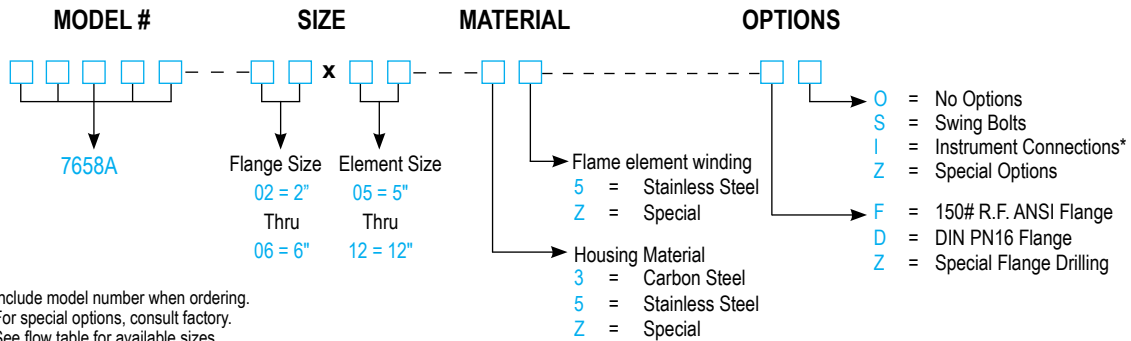
All units with ANSI 150 RF flanges standard (other flange drillings available).



Section Z-Z

HOW TO ORDER

For easy ordering, select proper model numbers



- NOTES**
- Include model number when ordering.
 - For special options, consult factory.
 - See flow table for available sizes.
 - * Customer specified size

EXAMPLE

7 6 5 8 A — 0 3 x 0 6 — 3 5 — F O

Indicates a 3" Model 7658A with Carbon Steel housing, 6" Stainless Steel Flame Element, ANSI Flanged Outlet and no other options.

MODEL 7658A // FLOW CAPACITY

Air Flow Capacity																	
1000 Standard Cubic Feet per Hour at 60° F																	
Pressure Drop oz/in ²		0.58	1	1.16	1.73	2	2.31	3.47	4.62	5.78	6.93	9.24	11.6	13.9	16.0		
Pressure Drop InWC		1	1.73	2	3	3.46	4	6	8	10	12	16	20	24	27.7		
NOMINAL PIPE SIZE	2	NOMINAL ELEMENT DIAMETER	5	0.63	1.08	1.24	1.82	2.08	2.39	3.46	4.48	5.45	6.37	8.11	9.72	11.2	12.6
			6	0.89	1.50	1.72	2.50	2.84	3.23	4.60	5.85	7.02	8.12	10.1	12.0	13.7	15.2
			8	1.48	2.40	2.72	3.81	4.27	4.79	6.54	8.07	9.46	10.7	13.0	15.1	17.0	18.6
	3	NOMINAL ELEMENT DIAMETER	6	0.92	1.58	1.82	2.70	3.11	3.57	5.27	6.90	8.49	10.0	13.0	15.8	18.5	20.9
			8	1.61	2.73	3.14	4.60	5.25	6.00	8.66	11.1	13.5	15.7	19.9	23.7	27.3	30.4
			12	3.32	5.40	6.11	8.57	9.61	10.8	14.7	18.2	21.3	24.1	29.3	33.9	38.2	41.8
	4	NOMINAL ELEMENT DIAMETER	8	1.63	2.81	3.23	4.81	5.52	6.35	9.36	12.3	15.1	17.8	23.1	28.1	32.9	37.2
			12	3.57	6.01	6.88	9.99	11.4	12.9	18.4	23.4	28.1	32.5	40.5	47.9	54.7	60.7
			12	3.67	6.31	7.3	10.8	12.4	14.3	21.1	27.6	34.0	40.2	52.0	63.3	74.1	83.7

Note: Consult factory for flow on other sizes.

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

Air Flow Capacity																	
Normal Cubic Meters per Hour at 0° C																	
Pressure Drop mmWC		20.4	40.7	61.1	81.5	102	153	204	255	306	356	407	509	611	713		
Pressure Drop mbar		2	4	6	8	10	15	20	25	30	35	40	50	60	70		
NOMINAL PIPE SIZE	2	NOMINAL ELEMENT DIAMETER	5	14.8	29.2	43.1	56.6	69.8	101	131	159	186	212	237	284	328	370
			6	21.0	40.8	59.5	77.4	94.5	134	171	205	237	267	296	350	400	446
			8	35.2	65.6	92.6	117	140	191	236	276	313	348	380	440	495	546
	3	NOMINAL ELEMENT DIAMETER	6	21.5	42.7	63.6	84.2	104	154	202	248	293	337	380	463	542	617
			8	37.8	74.1	109	143	175	253	326	394	459	521	580	692	797	895
			12	79.3	148	208	264	315	430	530	621	705	783	856	991	1114	1228
	4	NOMINAL ELEMENT DIAMETER	8	38.3	76.0	113	150	186	274	359	441	522	600	676	822	963	1097
			12	84.0	163	238	310	378	537	684	820	948	1069	1184	1400	1599	1785
			12	86.1	171	254	337	418	616	807	993	1174	1349	1520	1851	2166	2469

Note: Consult factory for flow on other sizes.

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

MODEL 7661

TECHNICAL DETAILS

- Sizes 4"x16" through 12"x30"
- Vertical or horizontal installation
- In-line or end-of-line deflagrations
- Unstable detonations
- Pre-ignition system pressure up to 15.7 psia (1.08 bara)
- Pre-ignition system temperatures -4 to 140°F (-20 to 60°C)
- Burn Time t_{BT} 20 minutes
- Bi-directional with respect to flow and ignition source
- Standard materials of construction are carbon steel or stainless steel
- Stainless Steel element is standard
- Low pressure drop with multiple element sizes available for each flange size
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU15ATEX2060 X** (Element Sizes 16", 20" and 24")
- Certified to USCG per 33CFR Part 154 App. A Type II
Certificate #: **IBExU IB-16-8-115, IBExU IB-16-8-031** (Element Sizes 16", 20", 24" and 30")
- Thermocouple is required for flame detection per the ATEX & USCG codes



FLAME ARRESTER

The Groth Model 7661 Deflagration & Detonation Flame Arrester inhibits flame propagation in gas piping systems. The design of the Model 7661 Flame Arrester makes it ideal to protect liquid storage tanks containing NEC Group D (IEC Class IIA) gases with a Maximum Experimental Safe Gap (MESG) equal to or greater than 0.90 mm.

FEATURES & BENEFITS

Housings are available in carbon steel, stainless steel or Alloy C276 and elements in stainless steel, Alloy C276 or other corrosion resistant alloys.

These arresters are compact with high flow capacity and low pressure drop. Elements are easily removed in-line for cleaning and maintenance and are economical to replace if necessary.

OPTIONS

- Other materials available
- Sensor ports
- Large inspection and cleaning ports
- Swing bolts for fast element removal
- Factory installed thermocouples for flame sensing

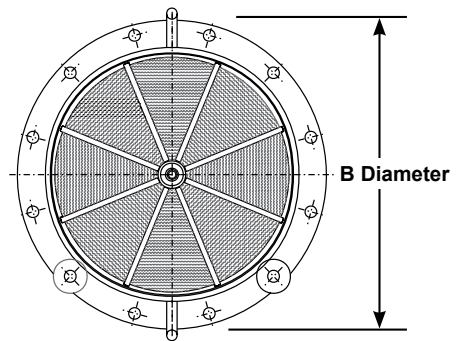
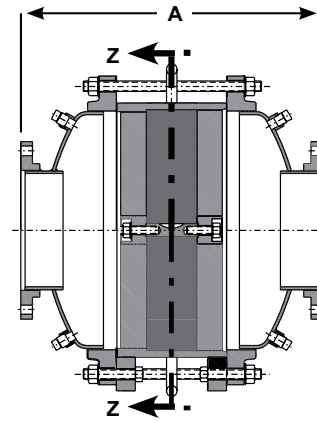
MODEL 7661 // SPECIFICATIONS

Specifications subject to change without notice. Certified dimensions available upon request.

Housing Size (Metric)	A Length (Metric)	B Diameter (Metric)	Approx Ship. Wt. Lbs. (Metric)
16" (400 mm)	29.63" (753 mm)	23.50" (597 mm)	550 (249 kg)
20" (500 mm)	32.43" (824 mm)	27.50" (699 mm)	850 (386 kg)
24" (600 mm)	38.75" (984 mm)	32.00" (813 mm)	1200 (544 kg)
30" (750 mm)	42.88" (1089 mm)	38.75" (984 mm)	1900 (862 kg)

* Larger sizes available on special applications.

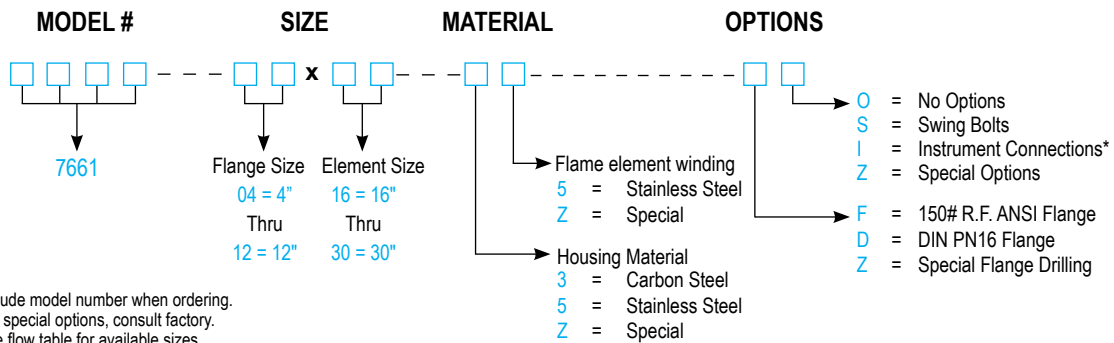
All units with ANSI 150 RF flanges standard (other flange drillings available).



Section Z-Z

HOW TO ORDER

For easy ordering, select proper model numbers



- NOTES**
- Include model number when ordering.
 - For special options, consult factory.
 - See flow table for available sizes.
 - * Customer specified size

EXAMPLE

7 6 6 1 — 0 4 x 1 6 — 3 5 — F O

Indicates a 4" Model 7661 with Carbon Steel housing, 16" Stainless Steel Flame Element, ANSI Flanged Outlet and no other options.

MODEL 7661 // FLOW CAPACITY

Air Flow Capacity																	
1000 Standard Cubic Feet per Hour at 60° F																	
Pressure Drop (oz/in ²)		0.58	1	1.16	1.73	2	2.31	3.47	4.62	5.78	6.93	9.24	11.6	13.9	16.0		
Pressure Drop (InWC)		1	1.73	2	3	3.46	4	6	8	10	12	16	20	24	27.7		
NOMINAL PIPE SIZE	NOMINAL ELEMENT DIAMETER	4	16	5.80	8.76	9.78	13.3	14.9	16.6	22.6	28.0	32.9	37.4	45.4	52.3	58.4	63.5
		6	16	6.42	10.0	11.3	15.9	17.9	20.2	28.5	36.2	43.6	50.6	63.7	75.8	86.9	96.5
		6	20	9.27	14.4	16.2	22.7	25.5	28.8	40.1	50.7	60.5	69.8	86.7	102	115	127
		6	24	19.0	27.6	30.5	40.5	44.9	49.7	66.4	81.3	95.0	108	130	150	168	183
		8	16	6.60	10.5	11.8	16.8	19.0	21.5	30.7	39.4	47.8	55.8	71.2	85.6	99.2	111
		8	20	9.43	15.0	16.9	24.0	27.2	30.8	43.9	56.3	68.2	79.6	101	121	140	156
		8	24	20.1	30.6	34.2	47.0	52.7	59.0	81.2	102	120	138	170	198	223	245
		8	30	25.2	38.1	42.6	58.0	64.8	72.3	98.2	121	142	161	195	223	249	270
		10	20	9.56	15.4	17.5	25.1	28.5	32.4	46.5	59.9	72.9	85.3	109	131	152	170
		10	24	21.4	33.4	37.6	52.6	59.3	66.7	93.0	117	139	160	197	230	259	284
		10	30	27.2	43.4	49.1	69.1	78.0	87.9	122	153	181	207	251	290	323	351
		12	24	20.6	33.9	38.6	55.6	63.1	71.7	102	129	155	178	220	256	289	315
		12	30	29.7	48.6	55.2	78.9	89.3	101	141	177	209	238	288	330	367	398

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

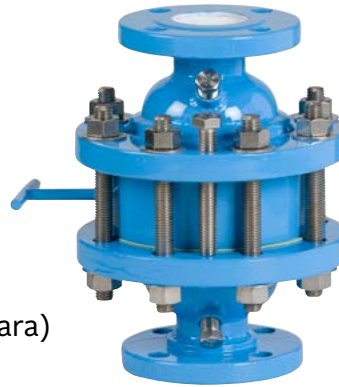
Air Flow Capacity																	
Normal Cubic Meters per Hour at 0° C																	
Pressure Drop (mmWC)		20.4	40.7	61.1	81.5	102	153	204	255	306	356	407	509	611	713		
Pressure Drop (mbar)		2	4	6	8	10	15	20	25	30	35	40	50	60	70		
NOMINAL PIPE SIZE	NOMINAL ELEMENT DIAMETER	4	16	136	228	310	387	460	625	774	909	1030	1150	1250	1440	1610	1760
		6	16	149	260	364	463	559	787	1000	1200	1400	1580	1760	2090	2400	2680
		6	20	215	374	521	661	794	1110	1400	1670	1930	2170	2390	2810	3190	3530
		6	24	452	721	956	1170	1370	1830	2250	2620	2970	3290	3590	4140	4630	5080
		8	16	152	270	382	490	595	847	1090	1320	1540	1760	1970	2370	2740	3090
		8	20	217	387	547	702	852	1210	1560	1880	2200	2500	2790	3350	3870	4350
		8	24	471	795	1090	1370	1630	2240	2800	3320	3810	4260	4680	5460	6160	6790
		8	30	592	992	1350	1680	2000	2710	3350	3920	4450	4930	5370	6170	6870	7500
		10	20	218	397	568	734	895	1280	1660	2010	2360	2690	3010	3620	4190	4730
		10	24	494	865	1210	1530	1840	2570	3230	3850	4410	4950	5440	6350	7160	7880
		10	30	624	1120	1580	2020	2430	3380	4230	5000	5700	6350	6940	8000	8930	9760
		12	24	465	872	1260	1630	1980	2810	3570	4270	4910	5510	6070	7080	7970	8760
		12	30	671	1250	1790	2300	2790	3900	4880	5770	6560	7280	7950	9120	10100	11000

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

MODEL 7758A

TECHNICAL DETAILS

- Sizes 2"x4" through 12"x30"
- Vertical or horizontal installation
- In-line or end-of-line deflagrations
- Stable detonations
- Unstable detonations (element sizes $\leq 12"$)
- Pre-ignition system pressure up to 19.7 psia (1.36 bara)
(see specifications table)
- Pre-ignition system temperatures -4 to 140°F (-20 to 60°C)
- Bi-directional with respect to flow and ignition source
- Available in carbon steel, stainless steel, Alloy C276, and other materials
- Wafer mesh element is standard
- Low pressure drop with multiple element sizes available for each flange size
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU12ATEX2170 X** (Element Sizes 4", 6", 8" and 12" Unstable detonations)
- Certified to ATEX Directive in compliance with EN ISO 16852:2010
Certificate #: **IBExU12ATEX2171 X** (Element Sizes 20", 26" and 30" Stable detonations)
- Thermocouple is required for flame detection per the ATEX code



FLAME ARRESTER

The Groth Model 7758A Deflagration & Detonation Flame Arrester inhibits flame propagation in gas piping systems. The design makes it ideal to protect liquid storage tanks containing both NEC Group D and Group C vapors (IEC Class IIA and IIB1 through IIB3 vapors) with a Maximum Experimental Safe Gap (MESG) equal to or greater than 0.026" [0.65 mm].

FEATURES & BENEFITS

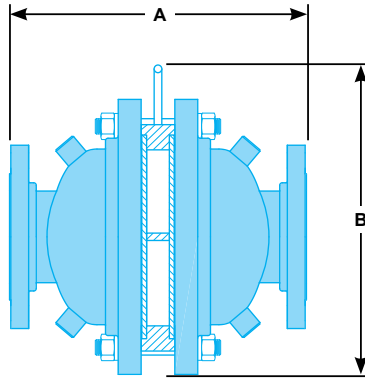
Housings are available in carbon steel, stainless steel, and Alloy C276 and elements in stainless steel, Alloy C276 and other corrosion resistant alloys.

These arresters are compact with high flow capacity and low pressure drop. Wafer mesh elements are easily removed in-line for cleaning and maintenance and are economical to replace if necessary. Contact the factory for additional features and options.

OPTIONS

- Other materials available
- Sensor ports
- Large inspection and cleaning ports
- Swing bolts for fast element removal
- Factory installed thermocouples for flame sensing

MODEL 7758A // SPECIFICATIONS



Specifications subject to change without notice. Certified dimensions available upon request.

Flange Size* (Metric)	Element Size (Metric)	A Length (Metric)	B Height (Metric)	Maximum Burn Time minutes	Maximum Pre-Ignition Pressure			Ship. Wt. Lbs.
					Deflagrations psia (bara)	Stable Detonations psia (bara)	Unstable Detonations psia (bara)	
2" (50 mm)	4" (100 mm)	12" (305 mm)	11" (279 mm)	30	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	54 (25 kg)
2" (50 mm)	6" (150 mm)	12.75" (324 mm)	11" (279 mm)	30	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	77 (35 kg)
2" (50 mm)	8" (200 mm)	15.50" (394 mm)	15.50" (394 mm)	5	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	114 (52 kg)
3" (80 mm)	6" (150 mm)	12.75" (324 mm)	11" (279 mm)	30	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	88 (40 kg)
3" (80 mm)	8" (200 mm)	16" (406 mm)	15" (381 mm)	5	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	125 (57 kg)
3" (80 mm)	12" (300 mm)	18.31" (465 mm)	19" (483 mm)	5	18.0 (1.24)	18.0 (1.24)	18.0 (1.24)	269 (122 kg)
4" (100 mm)	8" (203 mm)	16.75" (425 mm)	15.25" (387 mm)	5	19.7 (1.36)	19.7 (1.36)	19.7 (1.36)	134 (61 kg)
4" (100 mm)	12" (300 mm)	19" (483 mm)	19" (483 mm)	5	18.0 (1.24)	18.0 (1.24)	18.0 (1.24)	275 (125 kg)
4" (100 mm)	20" (500 mm)	23.69" (602 mm)	27.50" (699 mm)	30	17.2 (1.188)	17.2 (1.188)		645 (293 kg)
6" (150 mm)	12" (300 mm)	18.31" (465 mm)	19" (483 mm)	5	18.0 (1.24)	18.0 (1.24)	18.0 (1.24)	287 (130 kg)
6" (150 mm)	20" (500 mm)	23.69" (602 mm)	27.50" (699 mm)	30	17.2 (1.188)	17.2 (1.188)		657 (299 kg)
6" (150 mm)	26" (650 mm)	29.06" (738 mm)	34.25" (870 mm)	30	17.2 (1.188)	17.2 (1.188)		1062 (483 kg)
6" (150 mm)	30" (750 mm)	32.31" (821 mm)	38.75" (984 mm)	30	17.2 (1.188)	17.2 (1.188)		1407 (640 kg)
8" (200 mm)	20" (500 mm)	23.69" (602 mm)	27.50" (699 mm)	30	17.2 (1.188)	17.2 (1.188)		677 (308 kg)
8" (200 mm)	26" (650 mm)	29.06" (738 mm)	34.25" (870 mm)	30	17.2 (1.188)	17.2 (1.188)		1082 (492 kg)
8" (200 mm)	30" (750 mm)	32.31" (821 mm)	38.75" (984 mm)	30	17.2 (1.188)	17.2 (1.188)		1427 (649 kg)
10" (250 mm)	26" (650 mm)	29.06" (738 mm)	34.25" (870 mm)	30	17.2 (1.188)	17.2 (1.188)		1100 (500 kg)
10" (250 mm)	30" (750 mm)	32.31" (821 mm)	38.75" (984 mm)	30	17.2 (1.188)	17.2 (1.188)		1445 (657 kg)
12" (300 mm)	30" (750 mm)	32.31" (821 mm)	38.75" (984 mm)	30	17.2 (1.188)	17.2 (1.188)		1491 (678 kg)

* Consult factory for larger sizes.

MODEL 7758A // FLOW CAPACITY

Flow Capacity (1000 SCFH at 60°F)														
Pressure drop [InWC]		1	2	3	4	6	8	10	12	16	20	24	28	
Pressure drop [oz/in ²]		.58	1.2	1.7	2.3	3.5	4.6	5.8	6.9	9.2	12	14	16	
NOMINAL PIPE SIZE (IN)	2	4	1.14	1.70	2.15	2.54	3.20	3.77	4.28	4.76	5.61	6.37	7.07	7.71
	2	6	1.92	2.80	3.50	4.09	5.09	5.95	6.70	7.39	8.63	9.69	10.7	11.6
	2	8	2.29	3.31	4.09	4.76	5.89	6.84	7.69	8.46	9.79	11.0	12.2	13.1
	3	6	2.52	3.76	4.76	5.61	7.09	8.36	9.50	10.5	12.4	14.2	15.7	17.1
	3	8	3.53	5.22	6.55	7.70	9.60	11.3	12.8	14.2	16.6	18.8	20.7	22.6
	3	12	4.87	7.06	8.76	10.17	12.6	14.7	16.5	18.2	21.2	23.8	26.2	28.5
	4	8	4.07	6.09	7.70	9.11	11.5	13.6	15.5	17.2	20.3	23.1	25.7	28.
	4	12	6.54	9.60	12.1	14.2	17.8	20.8	23.6	26.0	30.5	34.4	38.0	41.4
	4	20	8.84	12.7	15.9	18.4	22.8	26.6	29.9	32.9	38.3	43.0	47.3	51.3
	6	12	7.87	11.8	15.0	17.8	22.4	26.6	30.2	33.6	39.8	45.2	50.4	55.0
	6	20	13.0	19.3	24.3	28.6	35.9	42.2	47.8	52.9	62.1	70.4	77.9	84.8
	6	26	14.1	20.8	26.1	30.7	38.5	45.1	51.1	56.5	66.2	74.9	82.8	90.2
	6	30	15.0	22.1	27.7	32.5	40.7	47.7	53.9	59.6	69.7	78.9	87.0	94.7
	8	20	14.6	22.0	27.9	33.0	41.8	49.4	56.2	62.5	73.9	84.1	93.5	103
	8	26	16.2	24.2	30.7	36.3	45.9	54.2	61.7	68.5	80.8	92.0	102	111
	8	30	17.7	26.4	33.3	39.4	49.8	58.7	66.7	74.1	87.3	98.8	110	121
	10	26	17.0	25.6	32.5	38.5	48.9	58.0	66.1	73.6	87.1	99.8	110	121
	10	30	18.7	28.1	35.7	42.3	53.7	63.6	72.4	80.6	95.0	108	121	132
	12	30	19.1	28.8	36.7	43.5	55.3	65.6	74.9	83.4	98.8	113	125	138

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

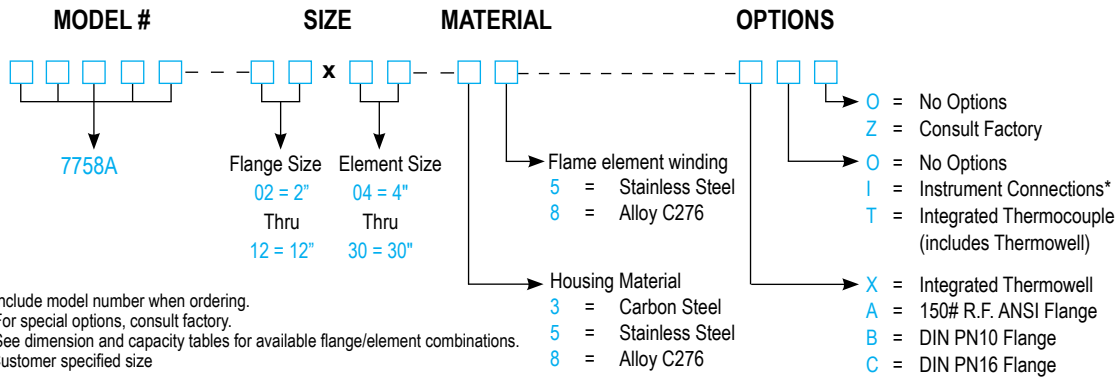
MODEL 7758A // FLOW CAPACITY

Flow Capacity (NCMH at 0°C)														
Pressure drop [mmWC]		25	50	75	100	150	200	250	300	400	500	600	700	
Pressure drop [mbar]		2.5	4.9	7.4	9.8	14.7	19.6	24.5	29	39	49	59	69	
NOMINAL PIPE SIZE (MM)	50	100	32.7	48.7	61.5	72.7	91.8	108	123	136	161	183	203	221
	50	150	55.0	80.3	100	117	146	170	192	212	247	278	308	332
	50	200	65.6	94.8	117	136	169	196	220	242	280	316	349	376
	75	150	72.2	108	136	161	203	240	272	302	357	406	449	490
	75	200	101	150	188	221	275	324	368	406	477	539	594	648
	75	300	140	202	251	291	362	422	474	523	607	684	752	817
	100	200	117	175	221	261	330	389	444	493	583	662	735	803
	100	300	187	275	346	406	509	596	675	746	874	986	1089	1187
	100	500	253	365	455	528	654	762	858	942	1097	1234	1356	1471
	150	300	225	338	430	509	643	762	866	964	1141	1296	1443	1577
	150	500	373	553	697	820	1029	1209	1370	1517	1781	2018	2233	2432
	150	650	403	596	749	880	1103	1294	1465	1620	1898	2146	2375	2584
	150	750	430	634	795	931	1166	1367	1544	1707	1999	2260	2494	2715
	200	500	419	632	801	945	1198	1416	1612	1792	2119	2410	2680	2941
	200	650	463	694	880	1040	1315	1555	1767	1963	2317	2636	2914	3186
	200	750	507	757	956	1130	1427	1683	1912	2124	2503	2832	3159	3458
	250	650	487	733	931	1103	1402	1661	1895	2110	2497	2859	3159	3458
	250	750	536	806	1024	1212	1539	1822	2075	2309	2723	3104	3458	3785
	300	750	547	825	1051	1247	1585	1882	2146	2391	2832	3241	3595	3949

1. Flow facility and equipment comply with API 2000.
2. Flow measurement accuracy verified by an independent research organization.
3. Flow capacity is based on actual tests and certified by Groth Corporation.
4. Flow data are for tank mounting or end of line and includes flame arrester entrance loss, exit loss and internal losses.

HOW TO ORDER

For easy ordering, select proper model numbers



EXAMPLE

7 7 5 8 A — 0 3 x 0 8 — 3 5 — A O O

Indicates a 3" Model 7758A with Carbon Steel housing, 8" Stainless Steel Flame Element, ANSI Flanged Outlet and no other options.



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