July 2025

IRDH Series Detonation Flame Arrester

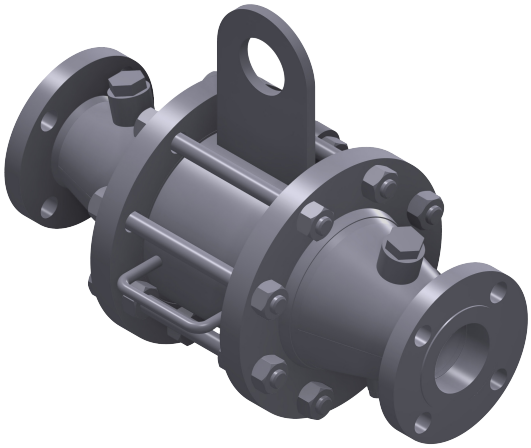


Figure 1. *IRDH Series Detonation Flame Arrester*

Features

- **Replaceable element assembly for inspection and maintenance**
- **Detonation arrestors can be installed anywhere within the pipeline**
- **Fabricated construction for size DN 15 to 150 / 1/2 to 6 in.**
- **Advanced crimped stainless steel element construction as standard. Other materials available**
- **Bi-directional**
- **Independently tested and certified**
- **Manufactured and tested to ISO/IEC 80079-49 and GB/T13347**

Specifications

The Specifications section lists the specifications for the IRDH Flame Arrester. Specification is stamped on the nameplate attached to the flame arrester. It is available in a variety of configurations to meet your specific needs.

Housing Size
DN 25 to 300 / 1 to 12 in.

Inlet Connection
DN 15 to 150 / 1/2 to 6 in.

End Connection Style
Drilled to ANSI CL150RF dimensions (Raised of Flat Face)
Drilled to imperial DIN 2633 dimensions (Raised or Flat Face)

Minimum Operating Pressure
0.8 bara / 11.6 psia

Maximum Operating Pressure
1.1 bara / 16.0 psia

Testing
The elements are approved for service in accordance with ISO/IEC 80079-49 and GB/T13347 for Gas Group IIC

Materials
Carbon Steel
Stainless Steel

1. The pressure/temperature limits in this Bulletin or any applicable standard limitation should not be exceeded.
2. Using optional restriction collar.

IRDH —	025	015	/	C	/	2	F	S	/	0
	Housing Size	**Inlet Connection**		**Gas Group**		**End Section Type**	**Inlet Flange Type**	**Material**		**Nameplate and Mark**
	025 = DN 25 / 1 in. 050 = DN 50 / 2 in. 080 = DN 80 / 3 in. 100 = DN 100 / 4 in. 150 = DN 150 / 6 in. 200 = DN 200 / 8 in. 250 = DN 250 / 10 in. 300 = DN 300 / 12 in.	015 = DN 15 / 1/2 in. 020 = DN 20 / 3/4 in. 025 = DN 25 / 1 in. 040 = DN 40 / 1 1/2 in. 050 = DN 50 / 2 in. 065 = DN 65 / 2 1/2 in. 080 = DN 80 / 3 in. 100 = DN 100 / 4 in. 150 = DN 150 / 6 in.		C = IIC		2 = Fabricated	F = CL150 RF K = PN10 or PN16 RF	C = Carbon steel S = Stainless steel		0 = None 1 = TS Mark 2 = ATEX Mark 3 = TS and ATEX

The IRDH product code matrix is shown above. The example code IRDH-025015/C/2FS/0C has DN 25 / 1 in. housing size, DN 15 / 1/2 in. inlet connection, IIC gas group, fabricated end section type, CL150 RF inlet flange type and stainless steel material.

Figure 2. *IRDH Product Code Matrix*

Introduction

IRDH Series Flame Arrester is used in applications with supersonic flames mounted in process or vent lines. They are designed to be installed anywhere in the piping system.

A flame arrester protects the pipeline from accidental ignition of vapor within the process. It is designed to stop the propagation of flame from external sources.

Options:

1. To prevent downstream damage

2. From external explosion possibilities

3. From atmospheric explosions within the pipework

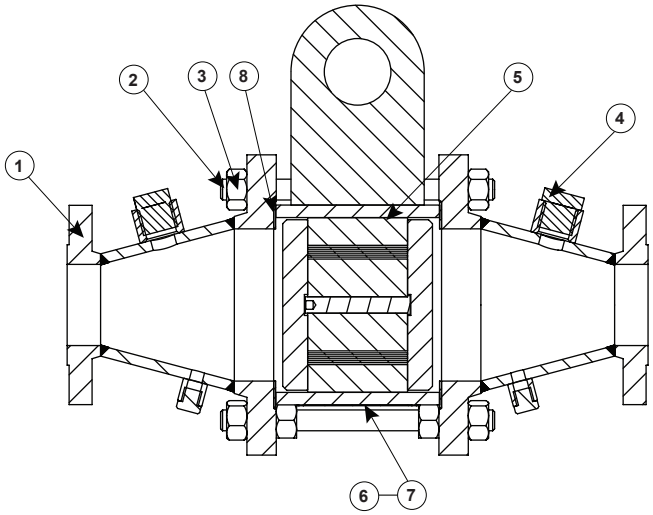
Principle of Operation

The flame arrester is designed to stop the propagation of a flame by absorbing and dissipating heat through the surface area of the element. Heat is absorbed as ignited gas attempts to pass through the small passages within the element assembly. This action lowers the temperature of the gas below its ignition point and quenches the flame.

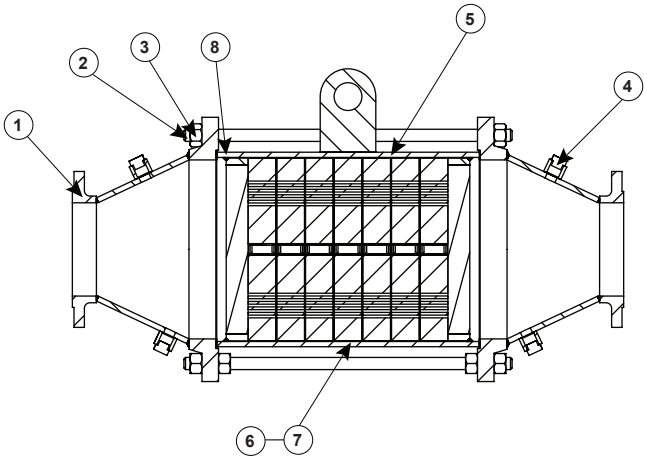
The element assembly can be inspected and cleaned or replaced to remove any dirt or residue build-up.

Ordering Information

Use the Specifications section on page 2 and carefully review the description to the right of each specification. Use this information to complete the Ordering Guide on the following page. Specify the desired selection wherever there is a choice to be made. Then send the Ordering Guide to your local Sales Office.



NO. 1 TO 13



NO. 14 TO 19

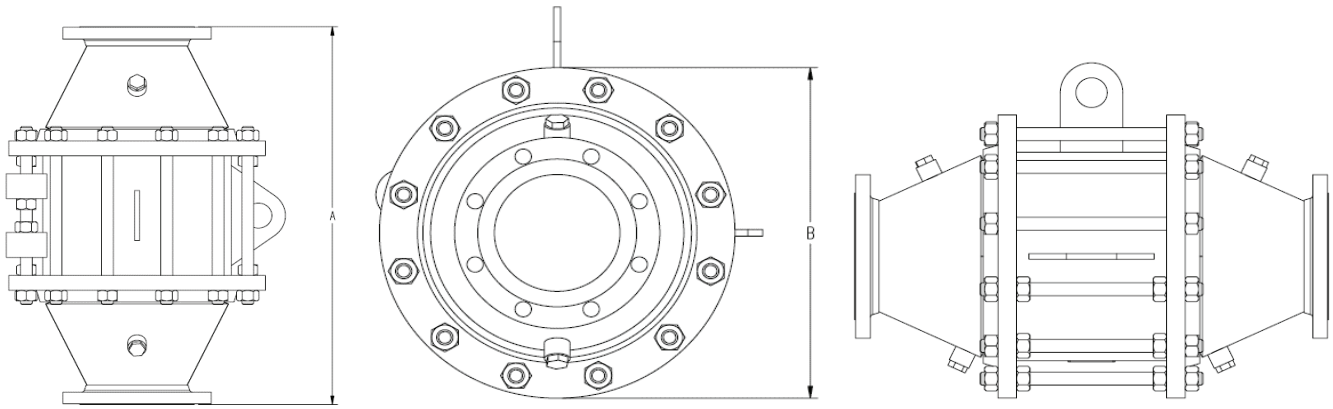


Figure 2. *IRDH Series Dimensions*

Table 1. *Size and Dimensions*

NO.	SIZES		DIMENSIONS (mm)		
			A	A TOLERANCE	B
1	DN 15 X DN 25	1/2 x 1 in.	443	5	108
2	DN 15 X DN 50	1/2 x 2 in.	492	5	152
3	DN 20 X DN 50	3/4 x 2 in.	502	5	152
4	DN 20 X DN 80	3/4 x 3 in.	537	5	190
5	DN 25 X DN 50	1 x 2 in.	359	5	152
6	DN 25 X DN 80	1 x 3 in.	393	5	190
7	DN 25 X DN 100	1 x 4 in.	427	5	229
8	DN 40 X DN 80	1-1/2 x 3 in.	403	5	190
9	DN 40 X DN 100	1-1/2 x 4 in.	437	5	229
10	DN 50 X DN 100	2 x 4 in.	443	5	229
11	DN 50 X DN 150	2 x 6 in.	517	5	279
12	DN 65 X DN 150	2-1/2 x 6 in.	581	5	279
13	DN 80 X DN 150	3 x 6 in.	580	5	279
14	DN 80 X DN 200	3 x 8 in.	857	5	343
15	DN 80 X DN 300	3 x 12 in.	1139	5	483
16	DN 100 X DN 200	4 x 8 in.	935	5	343
17	DN 100 X DN 250	4 x 10 in.	843	5	406
18	DN 100 X DN 300	4 x 12 in.	1096	5	483
19	DN 150 X DN 300	6 x 12 in.	999	5	483

Ordering Guide

Housing Size (Select One)
- ☐ DN 25 / 1 in.
- ☐ DN 50 / 2 in.
- ☐ DN 80 / 3 in.
- ☐ DN 100 / 4 in.
- ☐ DN 150 / 6 in.
- ☐ DN 200 / 8 in.
- ☐ DN 250 / 10 in.
- ☐ DN 300 / 12 in.

Inlet Connection (Select One)
- ☐ DN 15 / 1/2 in.
- ☐ DN 20 / 3/4 in.
- ☐ DN 25 / 1 in.
- ☐ DN 40 / 1 1/2 in.
- ☐ DN 50 / 2 in.
- ☐ DN 65 / 2 1/2 in.
- ☐ DN 80 / 3 in.
- ☐ DN 100 / 4 in.
- ☐ DN 150 / 6 in.

Inlet Flange Type (Select One)
- ☐ CL150 RF
- ☐ PN10
- ☐ PN16 RF

Regulators Quick Order Guide	
* * *	Readily Available for Shipment
* *	Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

Material (Select One)
- ☐ Carbon steel
- ☐ Stainless steel

Nameplate and Mark (Select One)
- ☐ None
- ☐ TS Certification Mark
- ☐ ATEX Certification Mark
- ☐ TS and ATEX Certification Mark

Specification Worksheet

Application:
Specific Use _____
Line Size _____
Fluid Type _____
Specific Gravity _____
Temperature _____
Does the Application Require Overpressure Protection?
☐ Yes ☐ No

Pressure:
Maximum Inlet Pressure (P_{1max}) _____
Minimum Inlet Pressure (P_{1min}) _____
Downstream Pressure Setting(s) (P_2) _____
Set Pressure _____
Maximum Flow (Q_{max}) _____

Accuracy Requirements:
Less Than or Equal To:
☐ 5% ☐ 10% ☐ 20% ☐ 40%

Construction Material Requirements (if known):
_____
_____

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