CONTROLS SUPPLY CHAIN
VALVES ACTUATORS INSTRUMENTATIONS

ANDERSON GREENWOOD AMAL LIR/LIRE FLAME ARRESTERS

In-line deflagration flame arresters designed to prevent the propagation of subsonic flames.

FEATURES

- Concentric and eccentric model variants available.
- Fabricated housings.
- Advanced crimped stainless steel element construction as standard. Other materials available.
- Mounted vertically or horizontally.
- Uni-directional.
- Can be used in combination with a Marvac pressure/vacuum valve.
- Independently tested and certified.
- Manufactured to ISO 9001:2015.

GENERAL APPLICATION

The Types LIR/LIRE are used in applications with subsonic flames and mounted in process or vent lines. They can be located in the pipeline or at the end of the pipe vent.

TECHNICAL DATA

Materials:	Carbon steel, stainless steel
Sizes:	DN 6 to 400 (⅛" to 16")
Connections:	Threaded, flanged or plain
Temperature range:	-20 to 165°C (-4 to 329°F)
Gas groups:	IIA, IIB1, IIB2, IIB3, IIB, IIC[1]
Certification:	ATEX Directive 2014/34/EU; PED 2014/68/EU; ISO 16852

1. Up to and including DN 150 (6")

MATERIALS AND CONNECTION OPTIONS

Materials
Carbon steel and stainless steel.

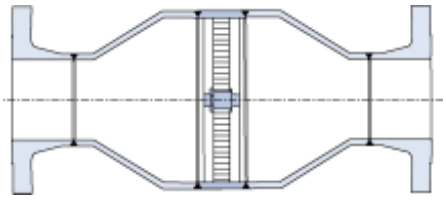
Connection pipe size

Threaded	DN 6 to 80 (⅛" to 3")
Flanged	DN 15 to 400 (½" to 16")
Plain	DN 20 to 150 (¾" to 6")

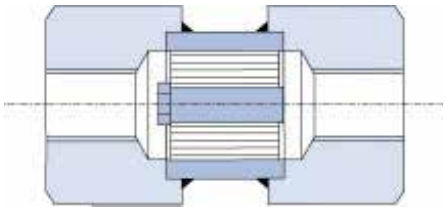
Gas groups
- IIA
- IIB1
- IIB2
- IIB3
- IIB
- IIC[1]

NOTE
Accessories, special materials and connections are available on request.

TYPE LIR FLANGED[2] (LF VERSION)



TYPE LIR SCREWED (LR VERSION)



TEMPERATURE RANGE

Type	Connection	Gas group	Size range	Short burn	Max. temperature	Element
LIR/LIRE	Flanged	IIA	DN 12 to 400	Yes	-20/60°C (-4/140°F)	1 x 0.8 mm (0.039 x 0.031")
LIR/LIRE	Flanged	IIB1/IIB3	DN 12 to 400	Yes	-20/60°C (-4/140°F)	1 x 0.8/0.6 mm (0.039 x 0.031/0.024")
LIR/LIRE	Flanged	IIB	DN 12 to 400	Yes	-20/60°C (-4/140°F)	1 x 0.45 mm (0.039 x 0.018")
LIR/LIRE	Flanged	IIC	DN 12 to 400	Yes	-20/60°C (-4/140°F)	1 x 0.15 mm (0.039 x 0.006")
LIR/LIRE	Flanged	IIA	DN 12 to 400	No	-20/165°C (-4/329°F)	1 x 0.6 mm (0.039 x 0.024")
LIR/LIRE	Flanged	IIB1/IIB3	DN 12 to 400	No	-20/165°C (-4/329°F)	1 x 0.38 mm (0.039 x 0.015")
LIR/LIRE	Flanged	IIB	DN 12 to 400	No	-20/165°C (-4/329°F)	1 x 0.3 mm (0.039 x 0.012")
LIR/LIRE	Flanged	IIC	DN 12 to 500	No	-20/165°C (-4/329°F)	1 x 0.15 mm (0.039 x 0.006")
LIR	Screwed	IIA	DN 6 to 40 (⅛" to 1 ½")	Yes	-20/60°C (-4/140°F)	1 x 0.8 mm (0.039 x 0.031")
LIR	Screwed	IIB1/IIB3	DN 6 to 40 (⅛" to 1 ½")	Yes	-20/60°C (-4/140°F)	1 x 0.8/0.6 mm (0.039 x 0.031/0.024")
LIR	Screwed	IIB	DN 6 to 40 (⅛" to 1 ½")	Yes	-20/60°C (-4/140°F)	1 x 0.45 mm (0.039 x 0.018")
LIR	Screwed	IIC	DN 6 to 40 (⅛" to 1 ½")	Yes	-20/60°C (-4/140°F)	1 x 0.15 mm (0.039 x 0.006")
LIR	Screwed	IIA	DN 6 to 40 (⅛" to 1 ½")	No	-20/165°C (-4/329°F)	1 x 0.6 mm (0.039 x 0.024")
LIR	Screwed	IIB1/IIB3	DN 6 to 40 (⅛" to 1 ½")	No	-20/165°C (-4/329°F)	1 x 0.38 mm (0.039 x 0.015")
LIR	Screwed	IIB	DN 6 to 40 (⅛" to 1 ½")	No	-20/165°C (-4/329°F)	1 x 0.3 mm (0.039 x 0.012")
LIR	Screwed	IIC	DN 6 to 40 (⅛" to 1 ½")	No	-20/165°C (-4/329°F)	1 x 0.15 mm (0.039 x 0.006")

NOTES
All sizing and selection must be conducted by the factory.
Standard elements are double the pipe size.
1. Only available up to and including DN 150 (6")
2. Eccentric variants are available.

SELECTION GUIDE

Example:	LIR	50	LF	100	19	60	S3	S3
Model								
LIR								
LIRE								
Connection diameter								
Threaded								
DN 6 to 40 (⅛" to 1½") - Type LIR only								
DN 50 to 80 (2" to 3")								
DN 20 to 50 (¾" to 2") - Type LIR only								
Flanged								
DN 15 to 400 (½" to 16")								
DN 20 to 50 (¾" to 2")								
Plain								
DN 20 to 150 (¾" to 6") - Type LIR only								
Element code								
LF								
Element diameter								
DN 25 to 50 (1" to 2")								
DN 40 to 600 (1½" to 24")								
DN 50 to 300 (2" to 12")								
Element width								
19 19 mm (0.75")								
38 38 mm (1.5")								
76 76 mm (3.0")								
Cell height								
80 0.80 mm (0.032")								
60 0.60 mm (0.024")								
45 0.45 mm (0.018")								
38 0.38 mm (0.015")								
15 0.15 mm (0.006")								
Element material								
S3 Stainless steel								
C Carbon steel								
Body material								
S3 Stainless steel								
C Carbon steel								