cashco
ISO Registered Company

Model 6A00
Inline Deflagration Flame Arrestor
Easy Maintenance

OBJECTIVE
The Model 6A00 inline deflagration flame arrestor is a device that can be fitted to the opening of an enclosure or to the connecting pipe work of a system of enclosures. Its primary function is to allow the flow of gases or vapor of flammable liquids through the enclosure, but prevent the transmission of a flame. The element inside the housing provides an extinguishing barrier to the ignited vapor mixture by absorbing heat from the flame. The Model 6A00 is used as an independent safety system to ensure explosion protection.

TECHNIQUE
6A00 flame arrestors are designed on the principle of "quenching gap". The crimped SST metal element allows vapor to pass through in order to allow a vessel to breath, yet prevents the propagation of a flame from the exposed side to the protected side.

CONSTRUCTION
Housing Material: Carbon Steel, Stainless Steel.

Trim Material: Stainless Steel (1.4571) element. Standard element is suitable for explosion group IIA1 and IIA flammable gases and vapors. Elements for other gas groups are available upon request.

SPECIAL FEATURES
The Model 6A00 is designed, manufactured, and tested according to Directive 2014/34/EU (ATEX114) and ISO 16852.

The single element design is bidirectional and available for horizontal or vertical installations.
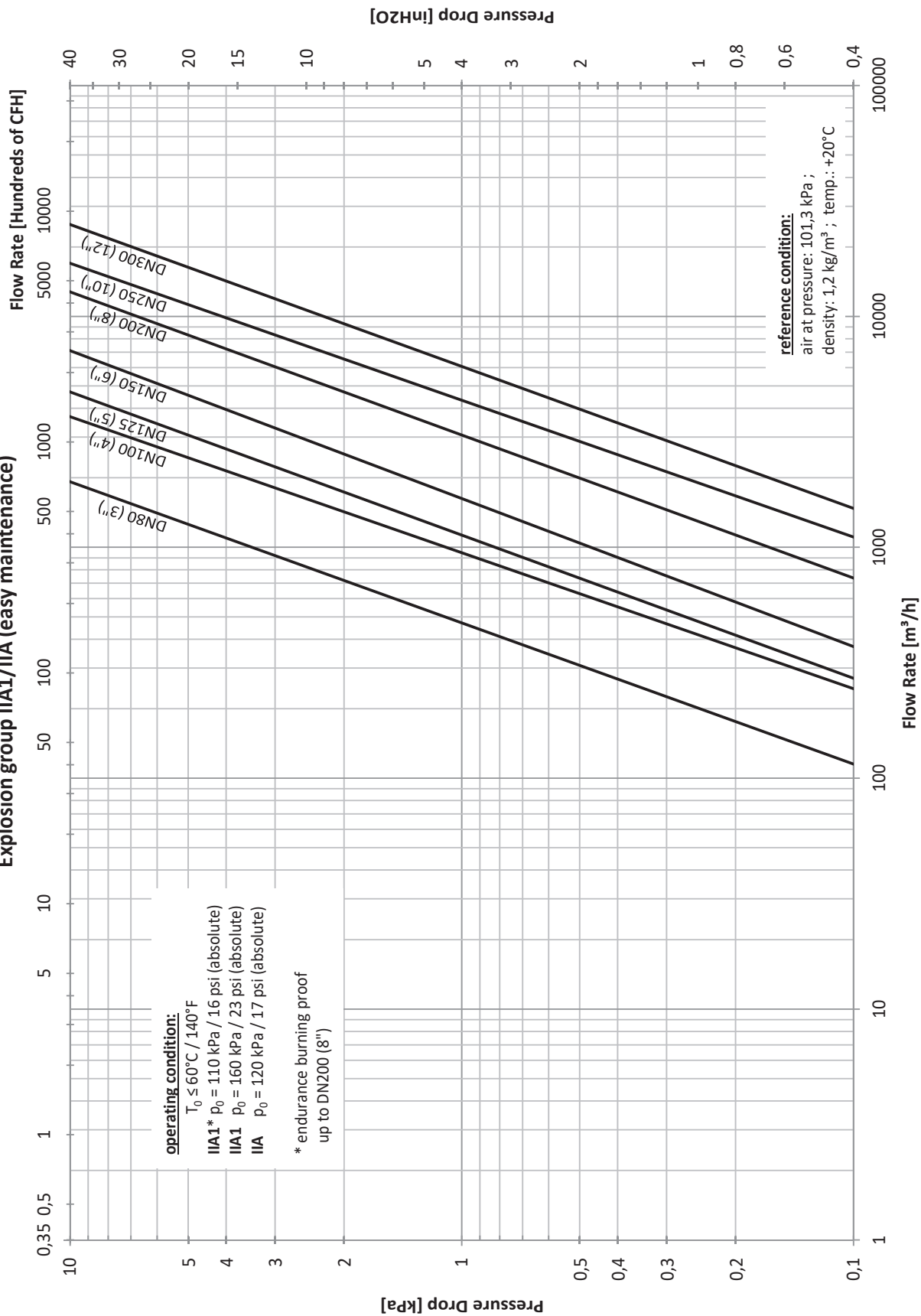
The maximum distance between flame arrestor and ignition source should not be more than 50 x the diameter of the connection size for most hydrocarbon gases.

Easy Maintenance: The Model 6A00 deflagration flame arrestor is a passive device with no moving parts. The flame cell element can be easily removed for inspection and cleaning in appropriate solvent solution.
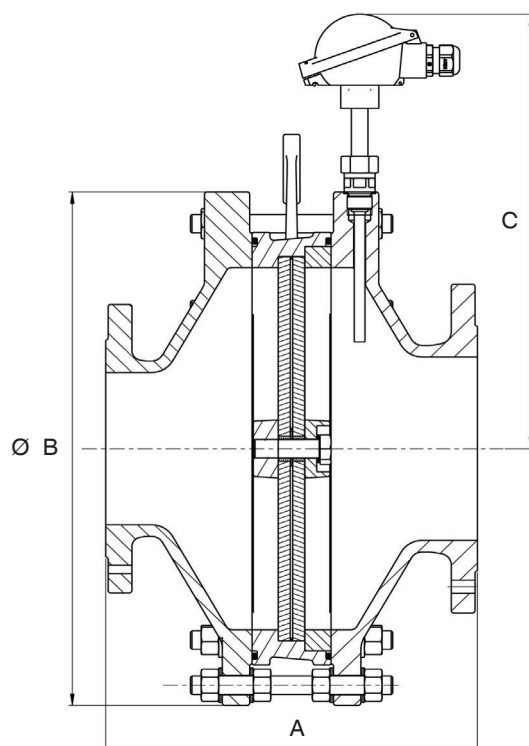
Sizes: Units are available in DN50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400 (2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14". 16") line sizes; thread connections according to ISO7/1, BS21 or ASME B1.20.1. Standard for flange connections to EN1092-1 PN10 or ASME B16.5 150#RF.

Series 6A00 Flow Curves

Explosion group IIA1/IIA (easy maintenance)

Flow Rate [Hundreds of CFH]

Pressure Drop [inH2O]

40 30 20 15 10 5 4 3 2 1 0,8 0,6 0,4

DN300 (12")
DN250 (10")
DN200 (8")
DN150 (6")
DN125 (5")
DN100 (4")
DN80 (3")

100000

10000

1000

100

Flow Rate [m³/h]

operating condition:
$T_0 \leq 60°C / 140°F$
IIA1* $p_0 = 110$ kPa / 16 psi (absolute)
IIA1 $p_0 = 160$ kPa / 23 psi (absolute)
IIA $p_0 = 120$ kPa / 17 psi (absolute)

* endurance burning proof
up to DN200 (8")

reference condition:
air at pressure: 101,3 kPa ;
density: 1,2 kg/m³ ; temp.: +20°C

Pressure Drop [kPa]

0,35 0,5 1 5 10

10 5 4 3 2 1 0,5 0,4 0,3 0,2 0,1

DIMENSIONS

Metric Units - mm				
SIZE	A		ØB	C
DIN, ASME (*)	IIA1	IIA		
DN50	205		181	248
DN65	216		215	265
DN80	235		240	278
DN100	253		288	302
DN125 (**)	280		370	343
DN150	312		445	380
DN200	346		545	430
DN250	385		665	490
DN300	424		765	540
DN350	DIN	562	886	601
	ASME	682		
DN400	DIN	642	980	648
	ASME	742		
(*) DIN (PN10) Flange, ASME 150RF Flange (**) NOT available with ASME 150RF Flange				

English Units - in				
SIZE	A		ØB	C
DIN, ASME (*)	IIA1	IIA		
2"	8.1		7.1	9.8
2-1/2"	8.5		8.5	10.4
3"	9.3		9.4	10.9
4"	10.0		11.3	11.9
5" (**)	11.0		14.6	13.5
6"	12.3		17.5	15.0
8"	13.6		21.5	16.9
10"	15.1		26.2	19.3
12"	16.7		30.1	21.3
14"	DIN	22.1	34.9	23.7
	ASME	26.9		
16"	DIN	25.3	38.6	25.5
	ASME	29.2		
(*) DIN (PN10) Flange, ASME 150RF Flange (**) NOT available with ASME 150RF Flange				

6A00 Series PRODUCT CODER 11/25/24

6A	POS 3 & 4	POS 5	B	POS 7 & 8	POS 9	POS 10 & 11	POS 12	POS 13	POS 14 & 15	POS 16	POS 17	POS 18

POSITION 3 & 4 SIZE / EXPLOSION GROUP

Size metric (in)	IIA1	IIA
	CODE	
DN50 (2")	0V	4F
DN65 (2-1/2")	13	4P
DN80 (3")	1B	4Y
DN100 (4")	1K	56
DN125 (5")	VW	VX
DN150 (6")	1U	5E
DN200 (8")	22	5N
DN250 (10")	2A	5X
DN300 (12")	2H	64
DN350 (14")	2S	6C
DN400 (16")	30	6L

POSITION 5 OPERATING CONDITION

Explosion Group	Size	$p_{max.}$ absolute in kPa (psi)	T_{max} in ^{0}C (^{0}F)	CODE
IIA1	DN65 - 200	110 (16)	$\leq$ 60 (140)	X *
	DN50 - 200	160 (23)	$\leq$ 60 (140)	Y
	DN250 - 400			6
IIA	DN50 - 200	120 (17)	$\leq$ 60 (140)	W
	DN250 - 400			2

* Endurance burning proof. Please regard pos. 17.
Consult factory for additional operating conditions.

POSITION 7 & 8 CASING / ELEMENT / RIM MATERIALS

Material	CODE
Stainless Steel (1.4571) Size DN350 - 400 (14" - 16")	0D
Stainless Steel (1.4581) Sizes DN50 - 300 (2" - 12")	0P

POSITION 9 GASKET MATERIALS

Material	CODE
NBR	1
FKM	2
EPDM	3
FKM/FEP seamless covered	4

POSITION 10 & 11 HOUSING MATERIALS / CONNECTION

(Flanged) Sizes DN50 - 400 (2" - 16")	DIN (PN10)	ASME(150#RF) *
	CODE	
Carbon Steel Sizes DN350 & 400 (14" & 16")	17	19
Carbon Steel (1.0619) Sizes DN50 - 300 (2" - 12")	37	39
Stainless Steel (1.4571) Sizes DN350 & 400 (14" & 16")	87	89
Stainless Steel (1.4581) Sizes DN50 - 300 (2" - 12")	97	99

(*) Not Available in Size 5".

POSITION 12 PORTS

Number / Location	CODE
One port G1/2" on each side Std for all explosion groups and sizes	2
Two ports G1/2" on each side	4

POSITION 13 MOUNTING KIT MAT'L FOR HOUSING

Material	CODE
8.8 Zinc Plated (Standard CS)	1
A2 Stainless Steel (Standard SST)	2
A4 Stainless Steel	3

POSITION 14 & 15 TEMPERATURE SENSOR (PT100)

Quantity	Ex ia 3-wire	Ex ia 3-wire plus transmitter
	CODE	
None	00	00
One	01	02

Please regard pos. 17

POSITION 16 NAME PLATE

Material / Language	CODE
Alum / German	7
Alum / English	8

POSITION 17 CONTINUOUS BURNING

Description	CODE
Without PT100	0
Endurance burn proof	3
Short time burn proof *	7

* If PT100 is selected (pos. 14 & 15)

POSITION 18 PAINT

Color	CODE
No Paint (Only Stainless Steel)	0
Epoxy (Standard) Signal Blue (RAL5005)	1
Hempadur (Off-Shore) Flame Red (RAL3000)	9