



ISO Registered Company

## TECHNICAL BULLETIN

7C00 - TB  
11-24



# Model 7C00

## Detonation Flame Arrestor

### OBJECTIVE

The Model 7C00 unstable/overdriven detonation flame arrestor type II 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 7C00 is used as an independent safety system to ensure explosion protection.

### TECHNIQUE

7C00 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 breathe, 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 D flammable gases and vapors. Elements for other gas groups are available upon request.

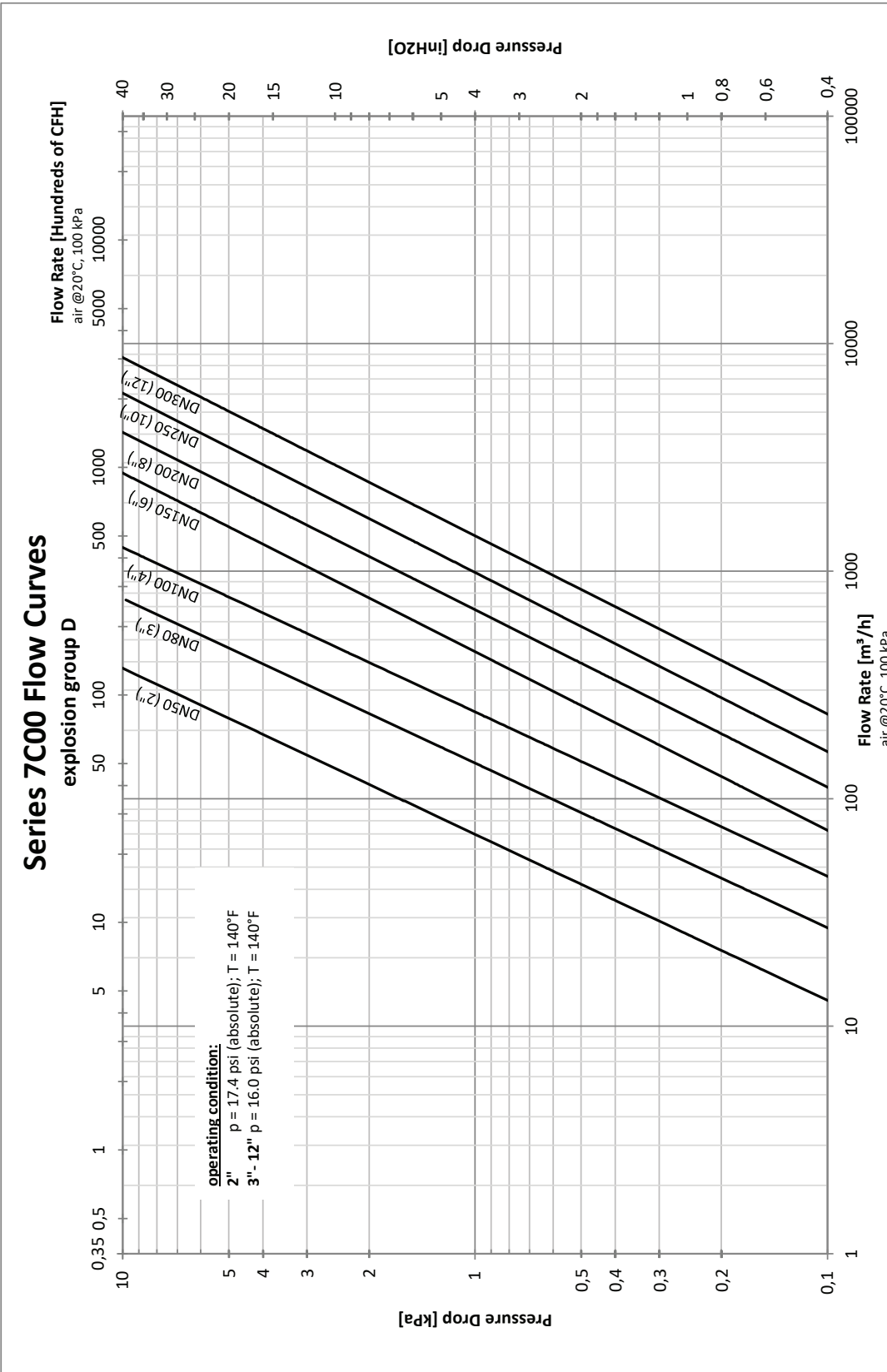
### SPECIAL FEATURES

The Model 7C00 is designed, manufactured, and tested according to Title 33, Code of Federal Regulations (CFR), part 154, Appendix A for USCG approved application.

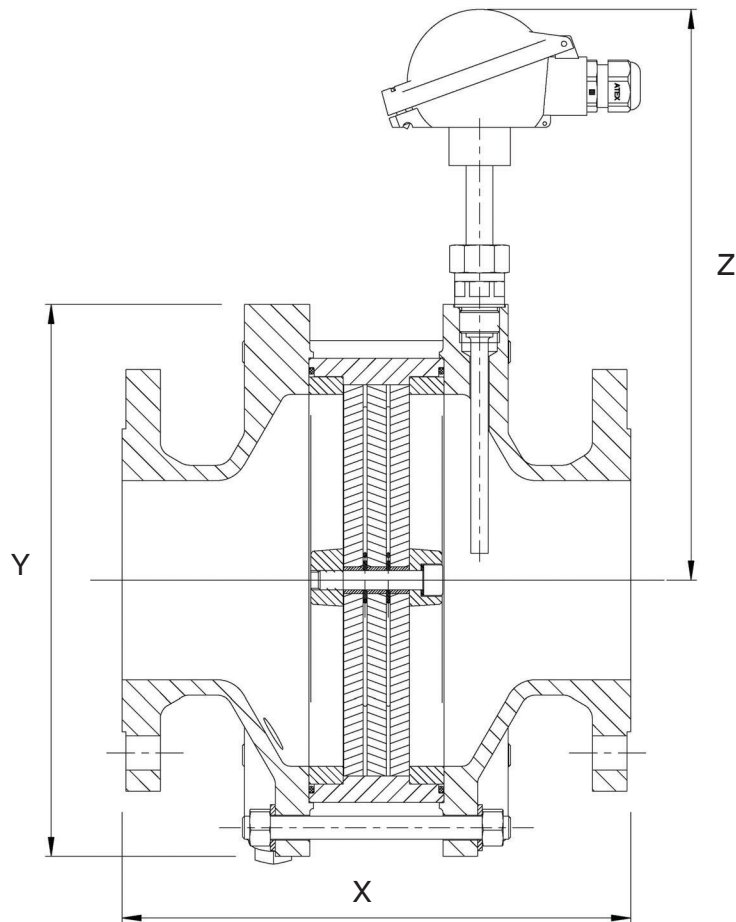
The element design is bidirectional and available for horizontal or vertical installations.

**Easy Maintenance:** The Model 7C00 detonation 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 2", 3", 4", 6", 8", 10", and 12" line sizes; standard flange connections according ASME B16.5 150#RF. Other line sizes are available upon request.



## DIMENSIONS AND WEIGHTS



Units - in				
SIZE	X		Ø Y	Z
	Explosion Group			
	D	C		
2"	10.0	-	6.9	9.5
3"	11.2	-	9.4	10.8
4"	11.9	-	11.4	11.8
6"	15.2	-	17.5	15.0
8"	16.5	-	21.4	16.9
10"	19.0	-	26.1	19.3
12"	20.5	-	30.1	21.2

Units - lbs		
SIZE	Weight	
	Explosion Group	
	D	C
2"	37.5	-
3"	70	-
4"	95	-
6"	238	-
8"	375	-
10"	760	-
12"	1090	-

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# 7C00 Series PRODUCT CODER

11/25/24

**7C**

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	D CODE	C CODE
2"	4F	-
3"	4Y	-
4"	56	-
6"	5E	-
8"	5N	-
10"	5X	-
12"	64	-

POSITION 5 OPERATING CONDITION				
Explosion Group	Size	p <sub>max</sub> absolute in psi	T <sub>max</sub> in °F	CODE
D	2"	17.4	≤ 140	2
	3" - 12"	16	≤ 140	1
Consult factory for additional operating conditions.				

POSITION 7 & 8 CASING / ELEMENT / RIM MATERIALS	
Material	CODE
Stainless Steel (1.4571) Sizes DN150-DN300	0D
Stainless Steel (1.4581) Sizes DN50-DN100	0P

POSITION 9 GASKET MATERIALS	
Material	CODE
NBR	1
FKM	2
EPDM	3
FKM/FEP seamless covered	4

POSITION 10 & 11 HOUSING MATERIALS / CONNECTION	
Material	ASME(150#RF) CODE
Carbon Steel (1.0619)	39
Stainless Steel (1.4581)	99

POSITION 12 PORTS	
Number / Location	CODE
Two ports G1/2" on each side Std. for all explosion groups and sizes	4

POSITION 13 MOUNTING KIT MAT'L FOR HOUSING	
Material	CODE
Standard A2 Stainless Steel	2
A4 Stainless Steel	3

POSITION 14 & 15 TEMPERATURE SENSOR (PT100)		
Quantity	Ex ib 3-wire	Ex ib 3-wire plus transmitter
	CODE	
None	00	00
One	01	02

POSITION 16 NAME PLATE	
Material / Language	CODE
SST / English	2

POSITION 17 CONTINUOUS BURNING	
Description	CODE
Without PT100	0
Short time burn proof *	7
* If PT100 is selected (pos. 14 & 15)	

POSITION 18 PAINT	
Color	CODE
No Paint (SST)	0
Red Hempadur Offshore	9

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