

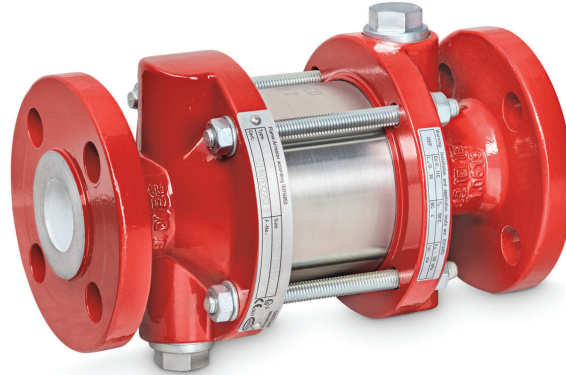


ISO Registered Company

## TECHNICAL BULLETIN

6A00-HT- TB

09-23



# Model 6A00-HT

## In-line Deflagration Flame Arrestor High Temperature

### 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 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 IIA1, IIA, and IIC 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 DN20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400 (3/4", 1", 1-1/4", 1-1/2", 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, ASME B16.5 150#RF or JIS B 2220 10K.

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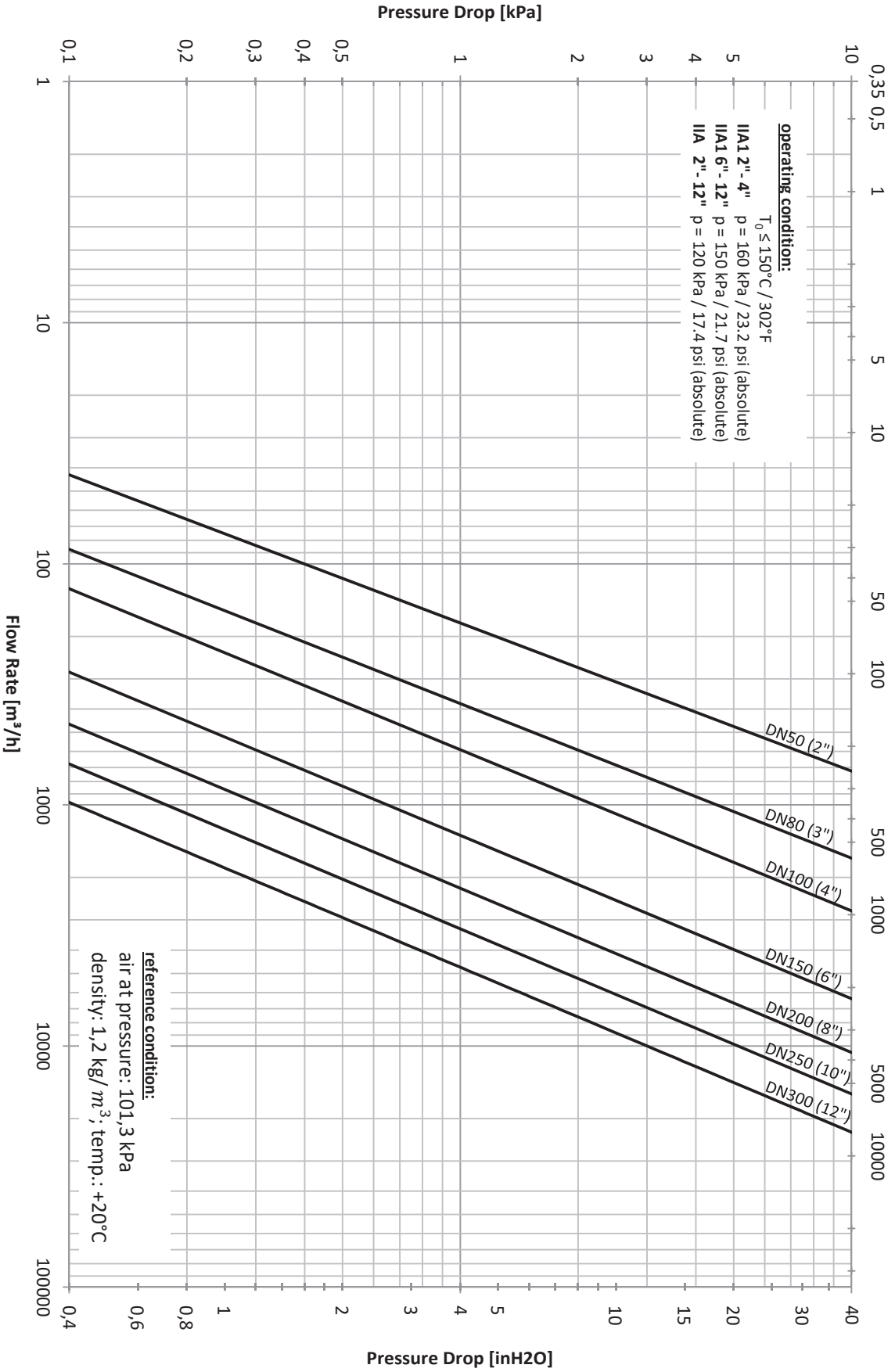
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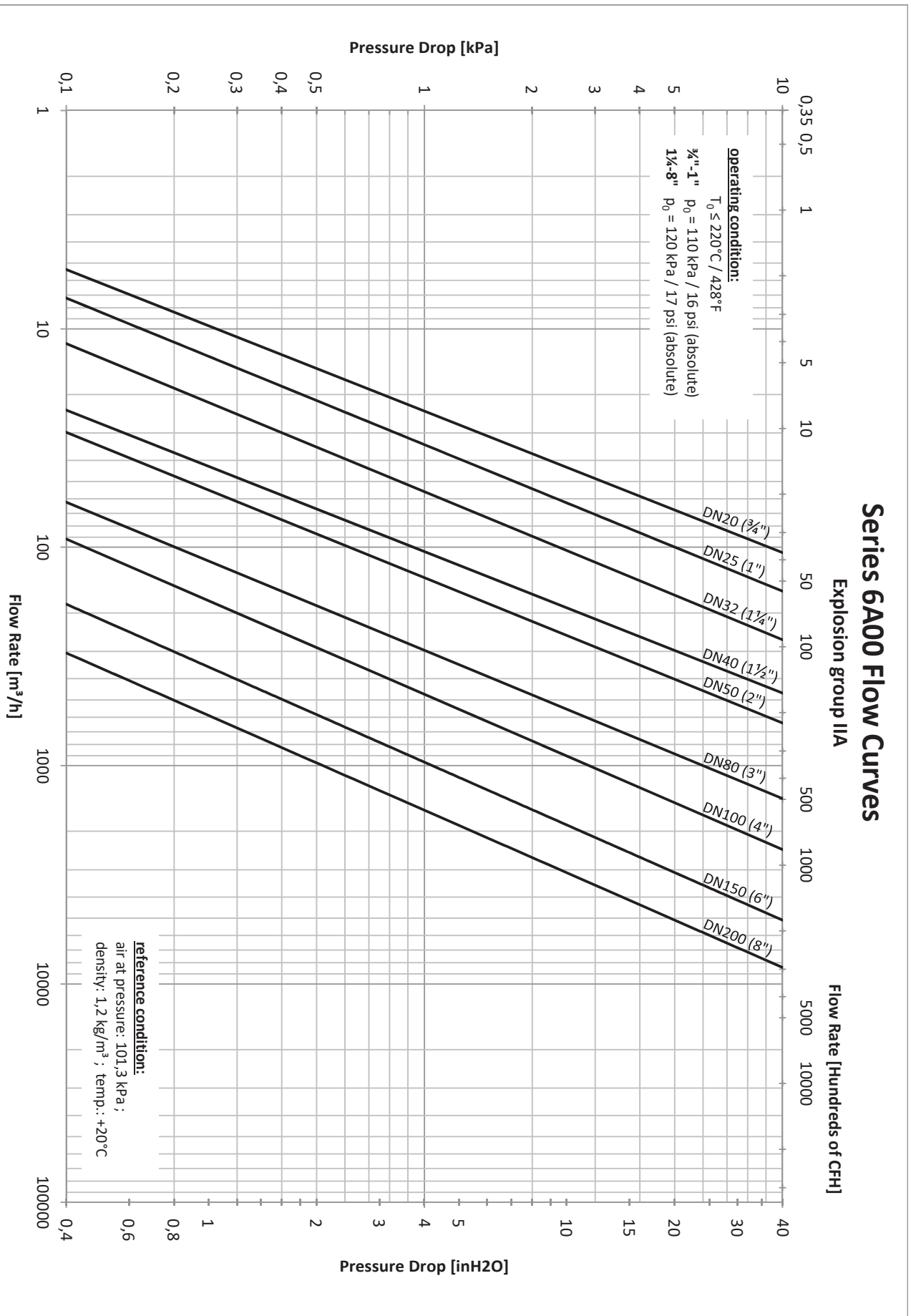
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# Series 6A00 Flow Curves

Explosion group IIA1/IIA

Flow Rate [Hundreds of CFH]





# Series 6A00 Flow Curves

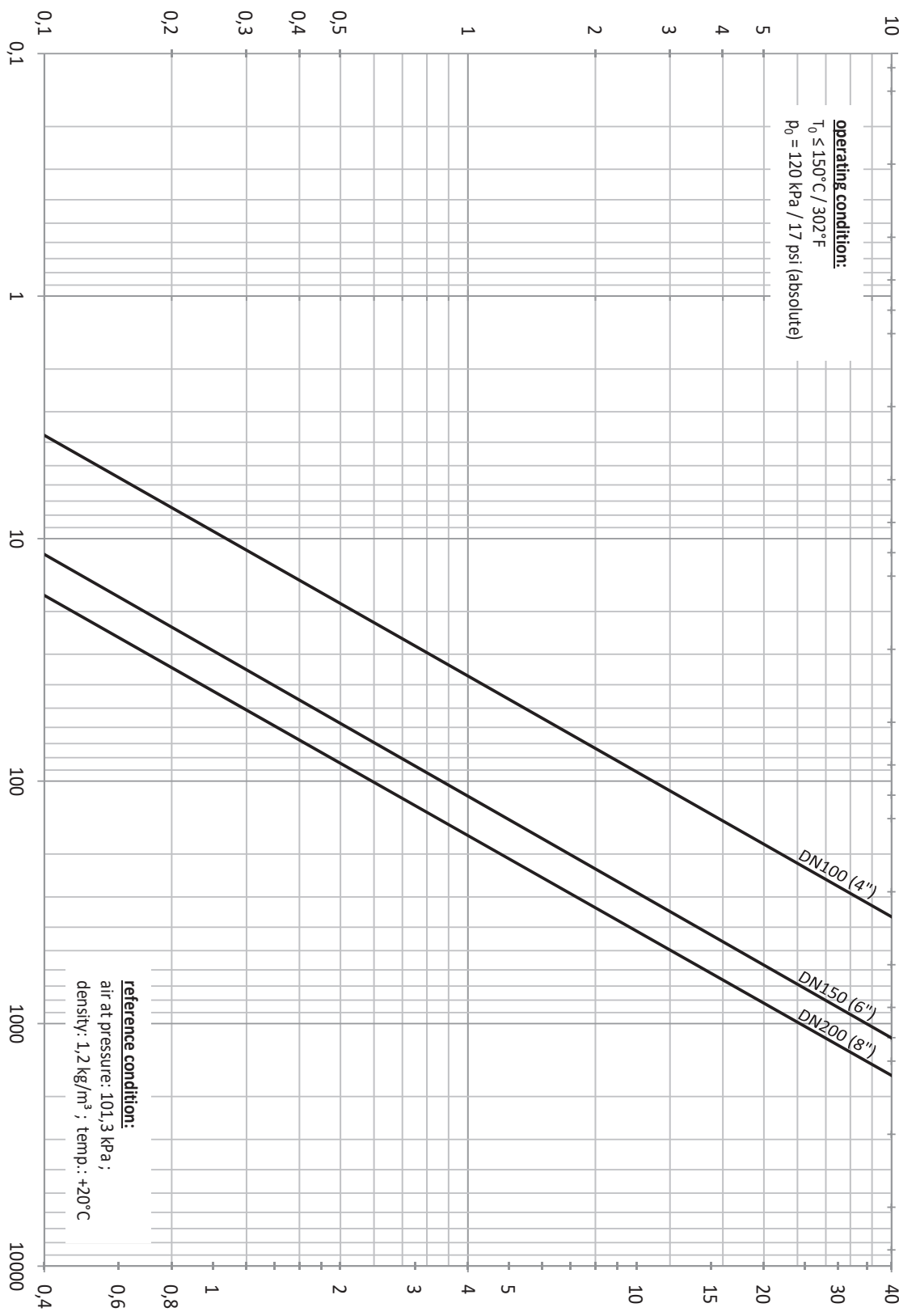
Explosion group IIC

Flow Rate [Hundreds of CFH]

0,035 0,1 0,5 1 5 10 50 100 500 1000

**operating condition:**  
 $T_0 \leq 150^\circ\text{C} / 302^\circ\text{F}$   
 $p_0 = 120 \text{ kPa} / 17 \text{ psi (absolute)}$

Pressure Drop [kPa]



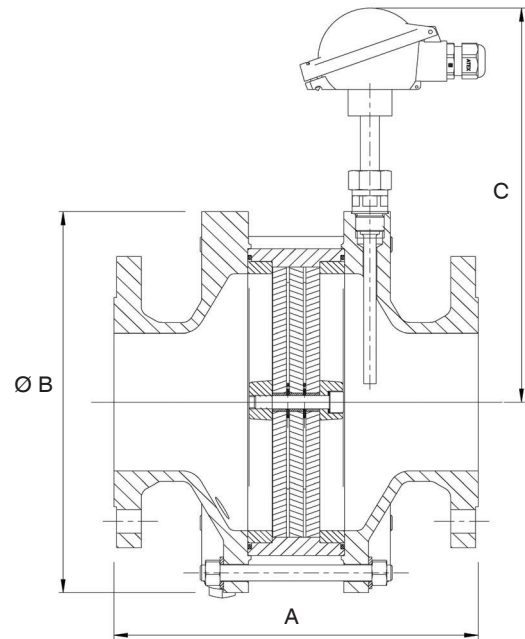
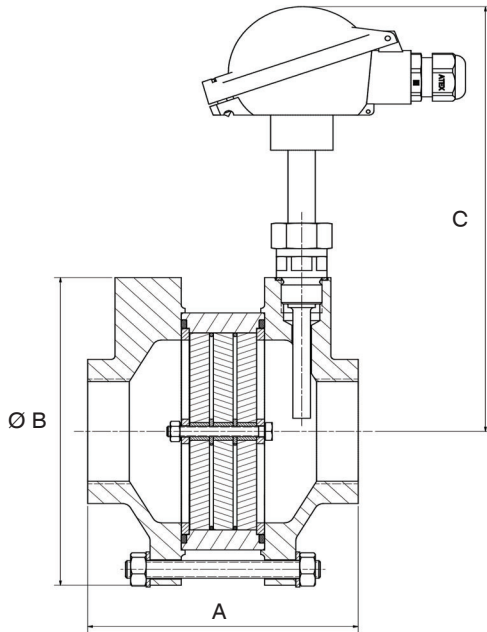
**reference condition:**  
 air at pressure: 101,3 kPa;  
 density: 1,2 kg/m³ ; temp.: +20°C

Pressure Drop [inH2O]

Flow Rate [m³/h]

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

## DIMENSIONS



Metric Units - mm					
SIZE	A			Ø B	C
Rp, BSP, NPTF	IIA1	IIA		IIC	
3/4"			139		115 212
1"			139		115 212
1-1/4"			139		132 221
1-1/2"	127	139	219	175	242
2"	127	139	219	175	242
3"	175	188	249	240	275
DIN, ASME (*)	IIA1	IIA		IIC	Ø B C
DN25			183		115 212
DN32			195		132 221
DN40	187	199	279	181	245
DN50	187	199	279	181	245
DN65 (**)	216	229	290	215	262
DN80	235	248	309	240	275
DN100	253	266	327	288	300
DN125 (**)	280	292	353	370	340
DN150	312	337	386	445	380
DN200	346	370	419	545	430
DN250	385			665	490
DN300	424			765	540
	IIA1	IIA		IIC	Ø B C
		DIN	ASME		
DN350		562	682		886 601
DN400		642	742		980 648

(\*) DIN (PN10) Flange, JIS 10K Flange, ASME 150RF Flange  
 (\*\*) NOT available with ASME 150RF Flange

English Units - in					
SIZE	A			Ø B	C
Rp, BSP, NPTF	IIA1	IIA		IIC	
3/4"			5.5		4.5 8.3
1"			5.5		4.5 8.3
1-1/4"			5.5		5.2 8.7
1-1/2"	5.0	5.5	8.6	6.9	9.5
2"	5.0	5.5	8.6	6.9	9.5
3"	6.9	7.4	9.8	9.4	10.8
DIN, ASME (*)	IIA1	IIA		IIC	Ø B C
1"			7.2		4.5 8.3
1-1/4"			7.7		5.2 8.7
1-1/2"	7.3	7.8	11.0	7.1	9.6
2"	7.3	7.8	11.0	7.1	9.6
2-1/2" (**)	8.5	9.0	11.4	8.5	10.3
3"	9.3	9.7	12.1	9.4	10.8
4"	10.0	10.5	12.9	11.3	11.8
5" (**)	11.0	11.5	13.9	14.6	13.4
6"	12.3	13.3	15.2	17.5	15.0
8"	13.6	14.6	16.5	21.5	16.9
10"	15.1			26.2	19.3
12"	16.7			30.1	21.3
	IIA1	IIA		IIC	Ø B C
		DIN	ASME		
14"		22.1	26.9		34.9 23.7
16"		25.3	29.2		38.6 25.5

(\*) DIN (PN10) Flange, JIS 10K Flange, ASME 150RF Flange  
 (\*\*) NOT available with ASME 150RF Flange

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# 6A00-HT Series PRODUCT CODER

09/05/23

6	A	POS 3 & 4	POS 5	B	POS 7 & 8	POS 9	POS 10 & 11	POS 12	POS 13	POS 14 & 15	0	POS 18
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POSITION 3 & 4 SIZE / EXPLOSION GROUP			
Size metric (in)	IIA1	IIA	IIC
CODE			
DN20 (3/4")		3Y	
DN25 (1")		3Z	
DN32 (1-1/4")		46	
DN40 (1-1/2")	0U	4E	F8
DN50 (2")	0V	4F	F9
DN65 (2-1/2")	13	4P	FH
DN80 (3")	1B	4Y	FS
DN100 (4")	1K	56	G0
DN125 (5")	VW	VX	W2
DN150 (6")	1U	5E	PF
DN200 (8")	22	5N	PP
DN250 (10")	2A	5X	
DN300 (12")	2H	64	
DN350 (14")		6C	
DN400 (16")		6L	

POSITION 5 OPERATING CONDITION				
Explosion Group	Size	p <sub>max</sub> absolute in kPa (psi)	T <sub>max</sub> in °C (°F)	CODE
IIA1	DN40-100	160 (23)	≤ 150 (302)	N
	DN125-300	150 (22)	≤ 150 (302)	M
IIA	DN40-400	120 (17)	≤ 150 (302)	J
	DN20-25	120 (17)	≤ 220 (428)	T
	DN32-200	110 (16)	≤ 220 (428)	S
IIC	DN40-200	120 (17)	≤ 150 (302)	J

Consult factory for additional operating conditions.

POSITION 7 & 8 CASING / ELEMENT / RIM MATERIALS	
Material	CODE
Stainless Steel (1.4571) Sizes up to DN50 (2") **	0C
Stainless Steel (1.4571) Sizes up to DN65-300 (2-1/2" - 12") *	0D
Stainless Steel (1.4581) Sizes DN125 - 200 (5" - 8")	0P

\* Not Available in Sizes DN125-200 (5" - 8").  
\*\* Except DN50 (2") for IIC, please use 0D instead.

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

\* Up to 150°C (320°F)  
\*\* Up to 200°C (428°F)  
Consult factory for additional operating conditions.

POSITION 10 & 11 HOUSING MATERIALS / CONNECTION			
(Threaded) Sizes DN20 - 50 (3/4" - 2")	Rp	BSPP	NPT
	CODE		
Stainless Steel (1.4581)	91	92	93
(Flanged) Sizes DN40 - 400 (1-1/2" - 16")	DIN (PN10)	ASME(150#RF) *	
	CODE		
CS Sizes DN350 & 400 (14" & 16")	17	19	
Carbon Steel (1.0619) Sizes DN40 - 300 (1-1/2" - 12")	37	39	
Stainless Steel (1.4571) Sizes DN350 & 400 (14" & 16")	87	89	
Stainless Steel (1.4581) Sizes DN40 - 300 (1-1/2" - 12" sizes)	97	99	

(\*) Not Available in Sizes 2-1/2" and 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
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

POSITION 16 NAME PLATE	
Material / Language	CODE
Alum / German	7
Alum / English	8

POSITION 18 PAINT	
Color	CODE
No Paint (Only Stainless Steel)	0
Hempadur (Off-Shore) Flame Red (RAL3000)	9

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