



ISO Registered Company

TECHNICAL BULLETIN

6A00 - TB
11-24



Model 6A00

Inline Deflagration Flame Arrestor

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, IIB1, IIB3, IIB 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.

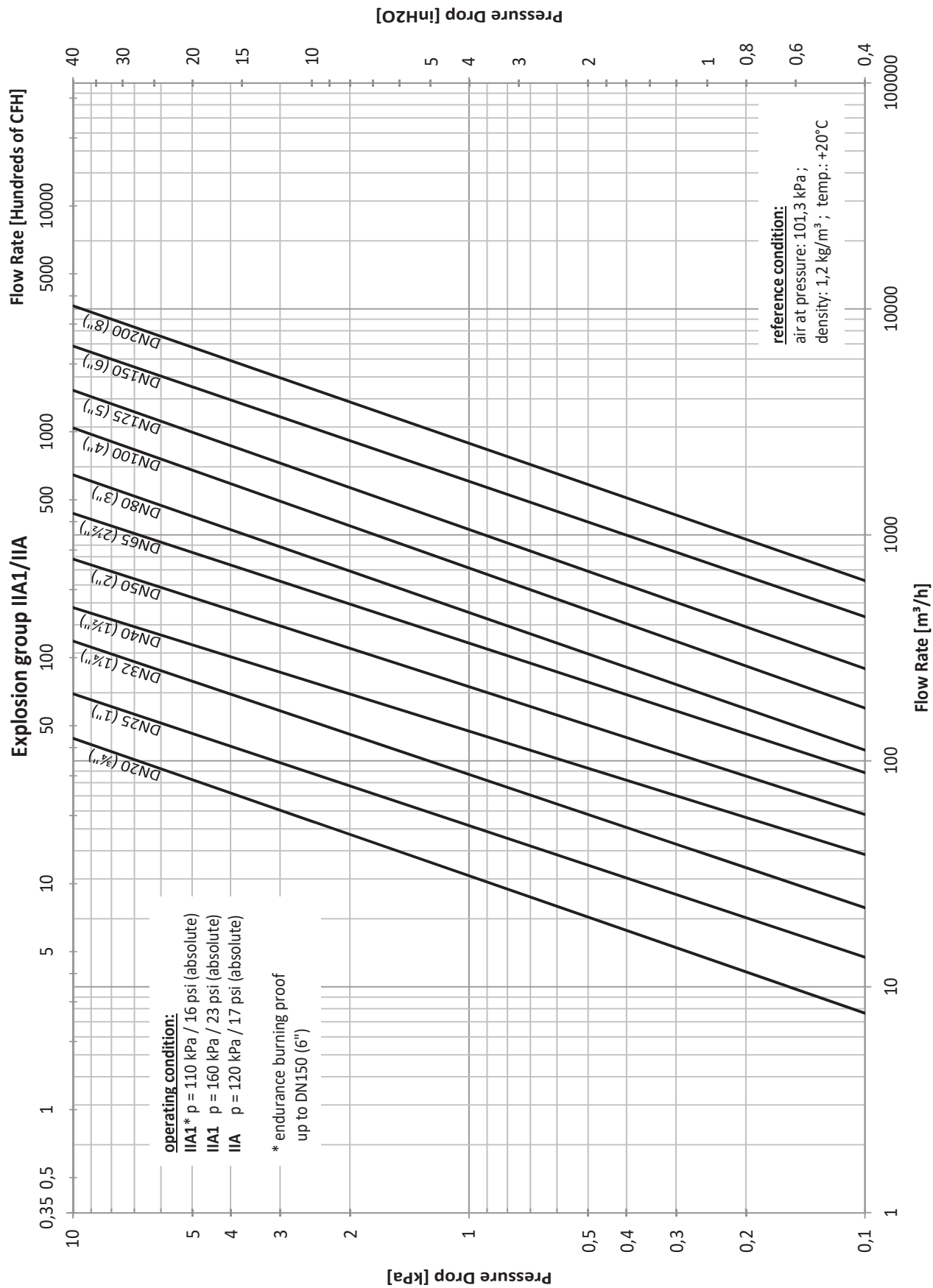
The single element design is bidirectional and available for horizontal or vertical installations.

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.

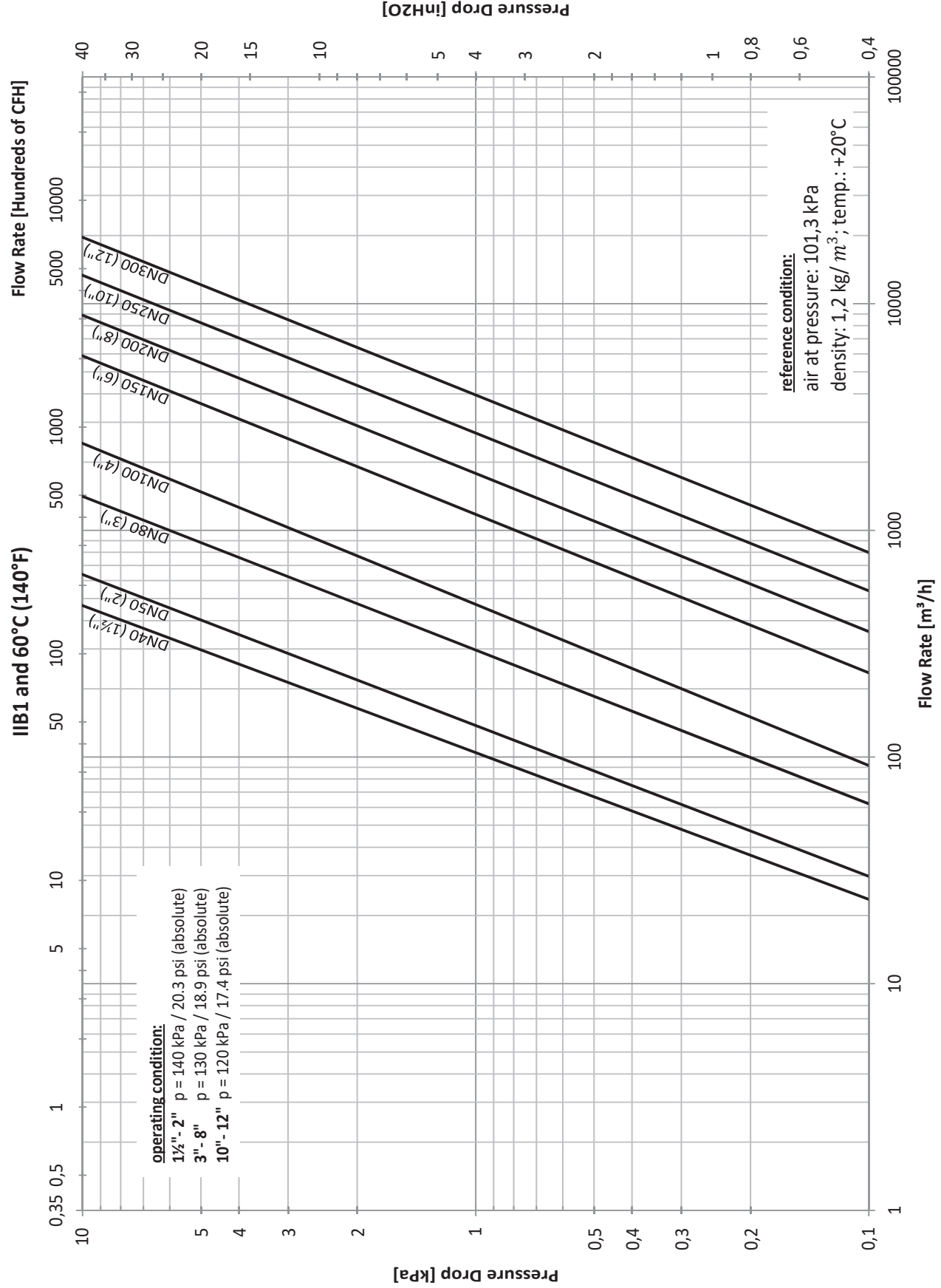
Sizes: Units are available in DN20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400 (3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14", 16") line sizes; thread connections according to ISO7/1, BS21 or ASME B1.20.1. Standard for flange connections to EN1092-1 PN10, ASME B16.5 150#RF or JIS B 2220 10K.

Series 6A00 Flow Curves



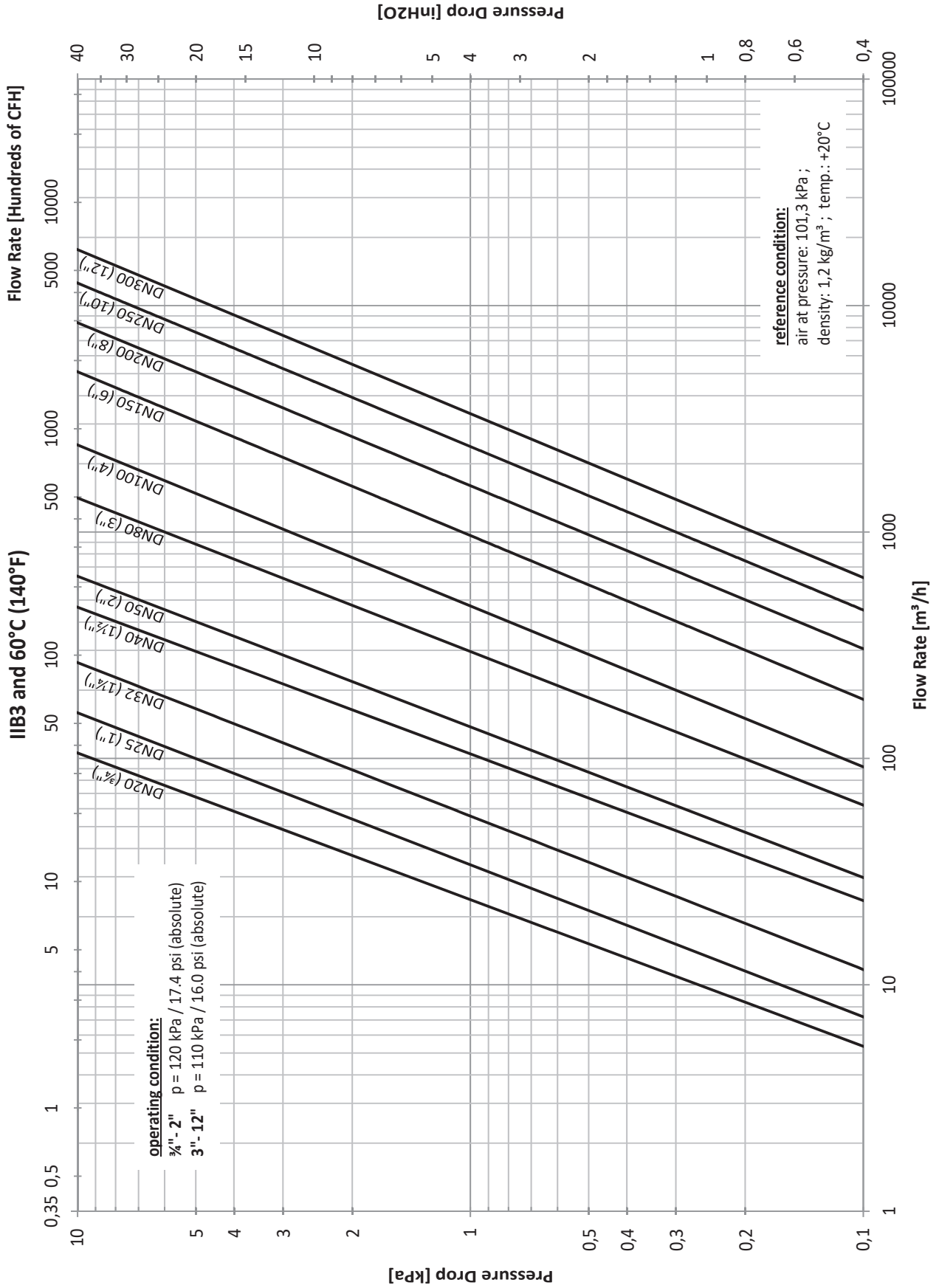
Series 6A00 Flow Curves

IIB1 and 60°C (140°F)

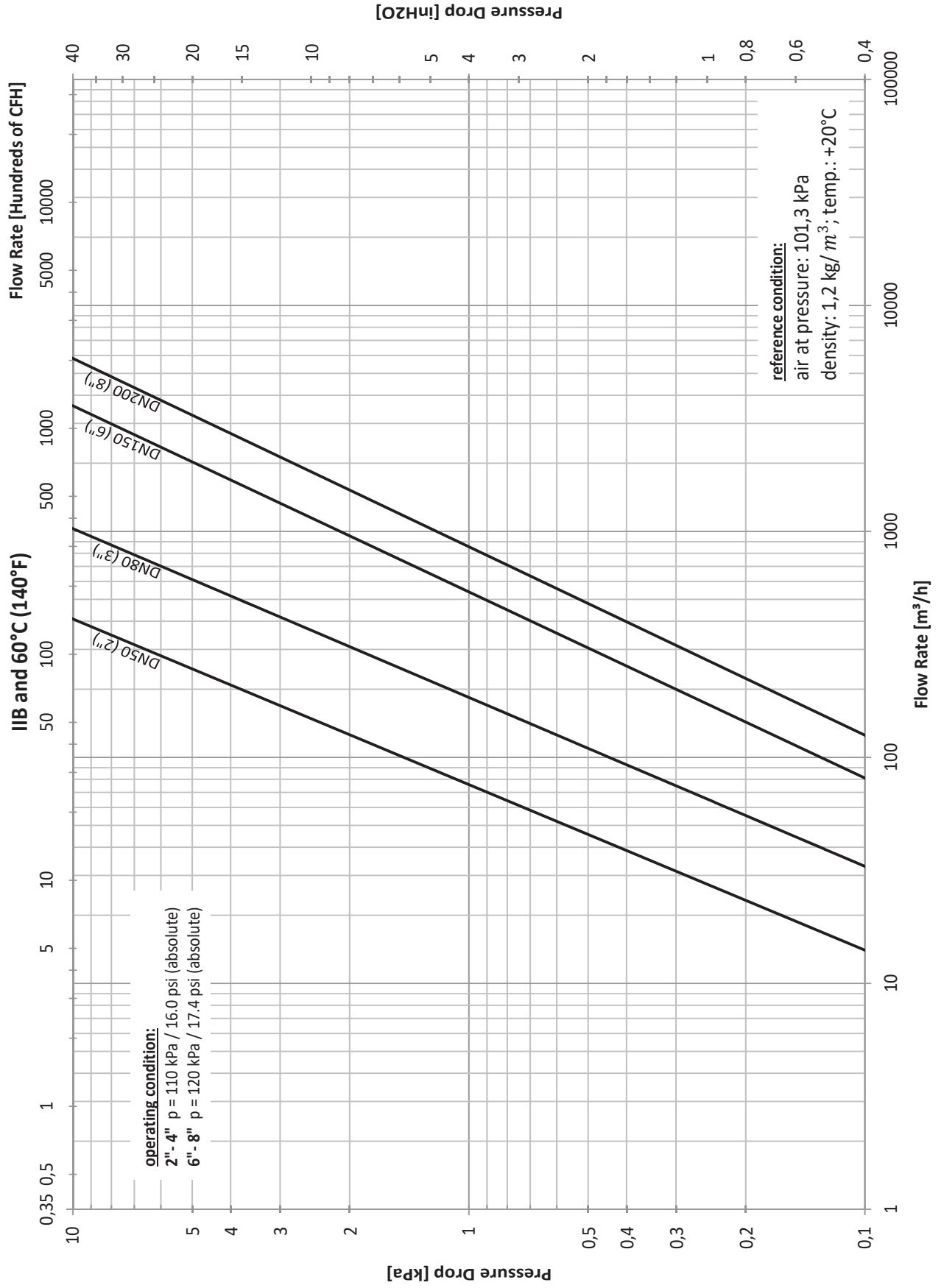


Series 6A00 Flow Curves

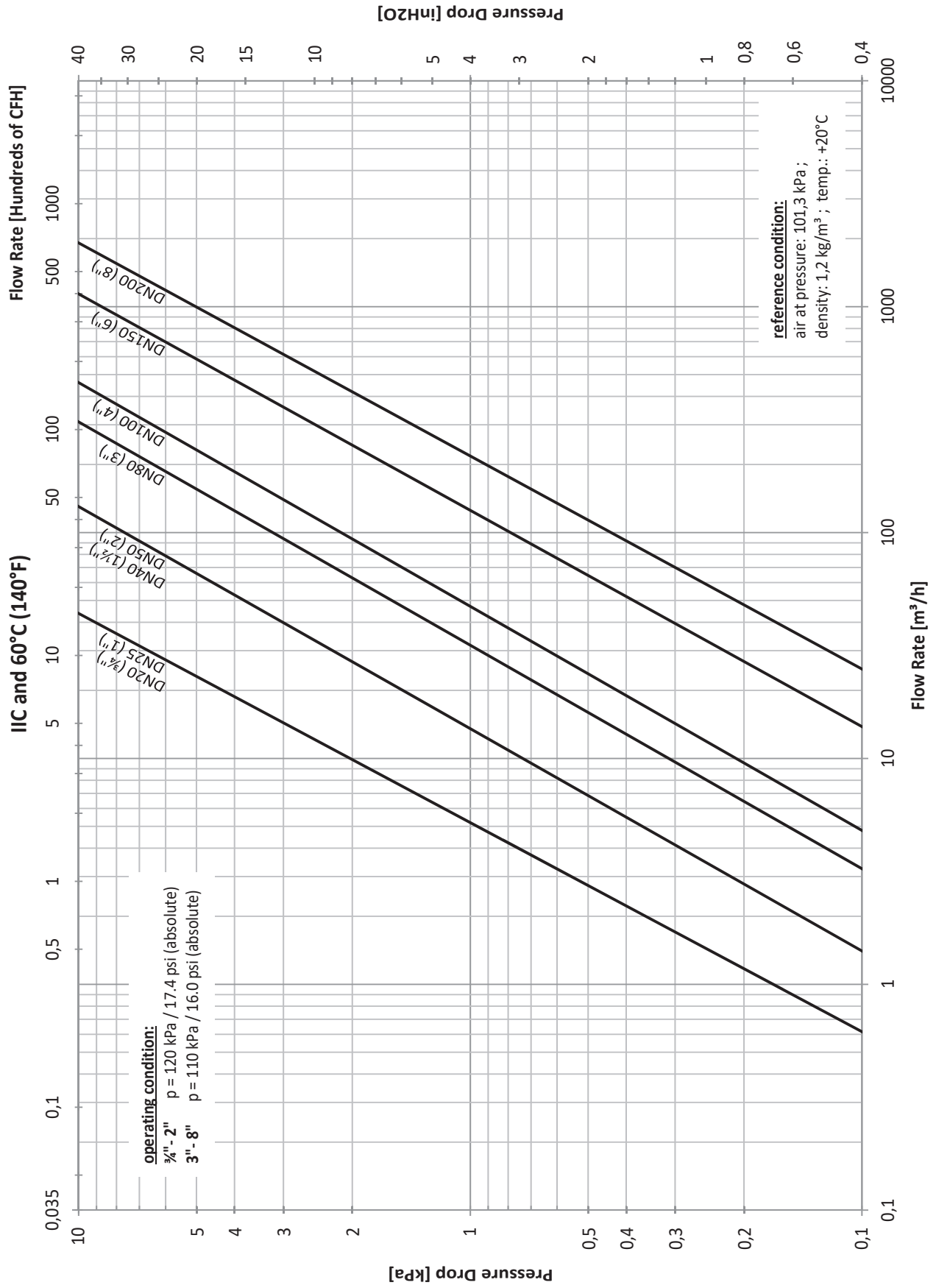
IIB3 and 60°C (140°F)



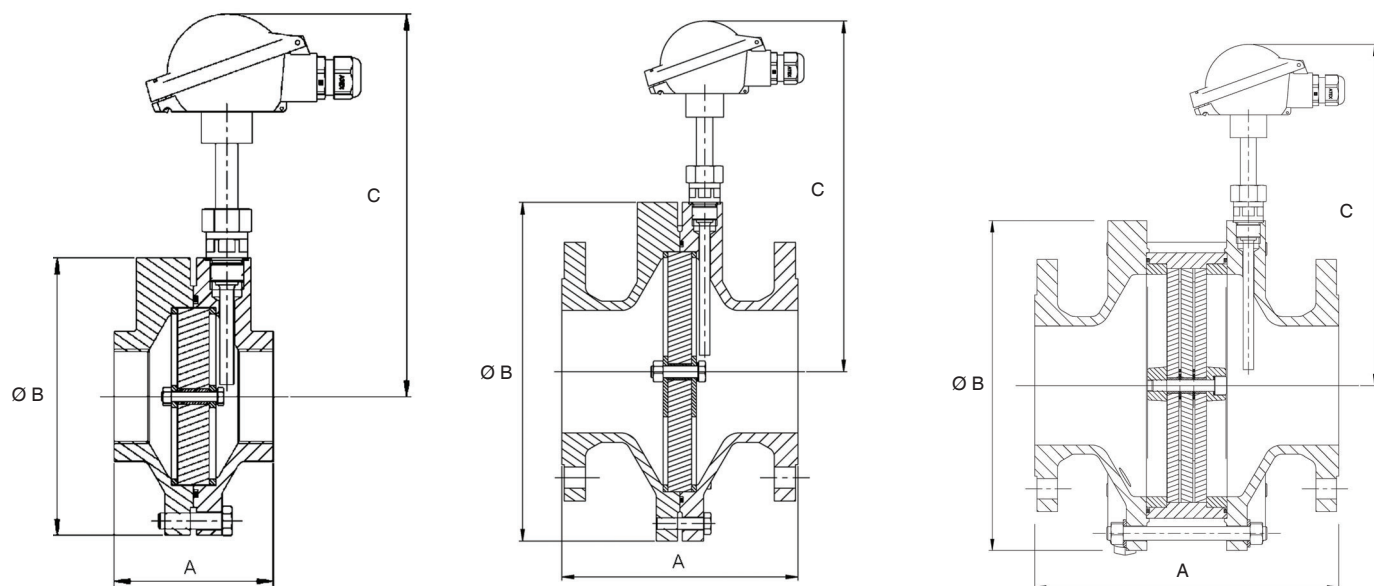
Series 6A00 Flow Curves



Series 6A00 Flow Curves



DIMENSIONS



Metric Units - mm								
SIZE	A						Ø B	C
Rp, BSP, NPTF	IIA1	IIA	IIB1	IIB3	IIB	IIC	Ø B	C
3/4"	100		139	-	151	115	210	
1"	100		139	-	151	115	210	
1-1/4"	100		139	-	175	132	220	
1-1/2"	100		139	-	194	181	245	
2"	100		139	-	194	181	245	
DIN, JIS, ASME (*)	IIA1	IIA	IIB1	IIB3	IIB	IIC	Ø B	C
DN25	144		183	-	195	115	210	
DN40	-		-	-	254	181	245	
DN50	160		199	230	254	181	245	
DN65 (**)	170		229	249	265	215	262	
DN80	190		248	260	284	240	275	
DN100	200		266	278	302	290	300	
DN125 (**)	212	-	-	-	-	370	340	
DN150	246		325	337	361	361	445	380
DN200	270		358	370	395	395	545	430
DN250	385		397	409	-	434	665	490
DN300	424		436	448	-	473	765	540
DN350	DIN	562	-	-	-	-	886	601
	ASME	682	-	-	-	-		
DN400	DIN	642	-	-	-	-	980	648
	ASME	742	-	-	-	-		

(*) 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	IIB1	IIB3	IIB	IIC	Ø B	C
3/4"	3.9		5.5	-	5.9	4.5	8.3	
1"	3.9		5.5	-	5.9	4.5	8.3	
1-1/4"	3.9		5.5	-	6.9	5.2	8.7	
1-1/2"	3.9		5.5	-	7.6	7.1	9.6	
2"	3.9		5.5	-	7.6	7.1	9.6	
DIN, JIS, ASME (*)	IIA1	IIA	IIB1	IIB3	IIB	IIC	Ø B	C
1"	5.7		7.2	-	7.7	4.5	8.3	
1-1/2"	-		-	-	10.0	7.1	9.6	
2"	6.3		7.8	9.1	10.0	7.1	9.6	
2-1/2"(**)	6.7		9.0	9.8	10.4	8.5	10.3	
3"	7.5		9.8	10.2	11.2	9.4	10.8	
4"	7.9		10.5	10.9	11.9	11.4	11.8	
5" (**)	8.3	-	-	-	-	14.6	13.4	
6"	9.7		12.8	13.3	14.2	14.2	17.5	15
8"	10.6		14.1	14.6	15.6	15.6	21.4	16.9
10"	15.1		15.6	16.1	-	17.1	26.2	19.3
12"	16.7		17.2	17.6	-	30.1	30.1	21.2
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, JIS 10K Flange, ASME 150RF Flange
 (**) NOT available with ASME 150RF Flange

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6A00 Series PRODUCT CODER

11/27/24

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	IIB1	IIB3	IIB	IIC
	CODE		CODE		CODE	CODE
DN20 (3/4")	0B	3Y	-	ES	-	MZ
DN25 (1")	0C	3Z	-	ET	-	N0
DN32 (1-1/4")	0K	46	-	F0	-	N7
DN40 (1-1/2")	0U	4E	81	F8	JV	NF
DN50 (2")	0V	4F	82	F9	JW	NG
DN65 (2-1/2")	13	4P	8A	FH	K4	NR
DN80 (3")	1B	4Y	8J	FS	KC	NZ
DN100 (4")	1K	56	8T	G0	KL	P7
DN125 (5")	VW	VX	-	-	-	-
DN150 (6")	1U	5E	91	G8	KV	PF
DN200 (8")	22	5N	99	GG	L3	PP
DN250 (10")	2A	5X	9H	GR	-	PY
DN300 (12")	2H	64	9R	GY	-	R5
DN350 (14")	2S	6C	-	-	-	-
DN400 (16")	30	6L	-	-	-	-

POSITION 5 OPERATING CONDITION				
Explosion Group	Size	p _{max} absolute in kPa (psi)	T _{max} in °C (°F)	CODE
IIA1	All Sizes	110 (16)	≤ 60 (140)	1 *
	All Sizes	160 (23)	≤ 60 (140)	6
IIA	DN20-25	160 (23)	≤ 60 (140)	6
	DN32-400	120 (17)	≤ 60 (140)	2
IIB1	DN40 & 50	140 (20)	≤ 60 (140)	4
	DN65 - 200	130 (19)	≤ 60 (140)	3
	DN250 & 300	120 (17)	≤ 60 (140)	2
IIB3	DN20 - 50	120 (17)	≤ 60 (140)	2
	DN65 - 300	110 (16)	≤ 60 (140)	1
IIB	DN40 - 100	110 (16)	≤ 60 (140)	1
	DN100 - 200	120 (17)	≤ 60 (140)	2
IIC	DN20 - 50	120 (17)	≤ 60 (140)	2
	DN65 - 300	110 (16)	≤ 60 (140)	1

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

POSITION 7 & 8 CASING / ELEMENT / RIM MATERIALS		
	Material	CODE
IIA1/IIA	Stainless Steel (1.4571) Sizes up to DN200 (8")	02
	Stainless Steel (1.4571) Sizes DN350-DN400 (14"-16")	0D
	Stainless Steel (1.4581) Sizes DN250-DN300 (10"-12")	0P
IIB1/IIB3	Stainless Steel (1.4571) Sizes up to DN50 (2")	0N
	Stainless Steel (1.4581) Sizes DN65-DN300 (2-1/2"-12")	0P
IIB	Stainless Steel (1.4571) Sizes DN40-DN50 (1-1/2"-2")	0D
	Stainless Steel (1.4581) Sizes DN65-DN300 (2-1/2"-12")	0P
IIC	Stainless Steel (1.4571) Size DN32 (1-1/4")	0C
	Stainless Steel (1.4571) Sizes up to DN25 (1")	0N
	Stainless Steel (1.4581) Sizes DN40-DN300 (1-1/2"-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			
(Threaded) Sizes DN20 - 50 (3/4" - 2")	Rp	BSPP	NPT
	CODE		
CS (1.0619 zinc plated)	41	42	43
Stainless Steel (1.4581)	91	92	93
(Flanged) Sizes DN25 - 400 (1" - 16")	DIN (PN10)	ASME (150#RF) *	
	CODE		
CS Sizes DN350 & 400 (14" & 16")	17	19	
CS (1.0619) Sizes DN25 - 300 (1" - 12")	37	39	
Stainless Steel (1.4571) Sizes DN350 & 400 (14" & 16")	87	89	
Stainless Steel (1.4581) Sizes DN25 - 300 (1" - 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 ex. - groups and sizes except IIA1 / IIA sizes DN20 - 200 (3/4" - 8")	2
Two ports G1/2" on one side Std for explosion groups IIA1 / IIA sizes DN20 - 200 (3/4" - 8")	3
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 16 NAME PLATE	
Material / Language	CODE
Alum / German	7
Alum / English	8

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 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

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