



ISO Registered Company



Model 7A00 Detonation Flame Arrestor

OBJECTIVE

The Model 7A00 detonation 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 7A00 is used as an independent safety system to ensure explosion protection.

TECHNIQUE

7A00 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 IIA, IIB3 and IIC flammable gases and vapors. Elements for other gas groups are available upon request.

SPECIAL FEATURES

The Model 7A00 is designed, manufactured, and tested according to Directive 2014/34/EU (ATEX114) and ISO 16852.

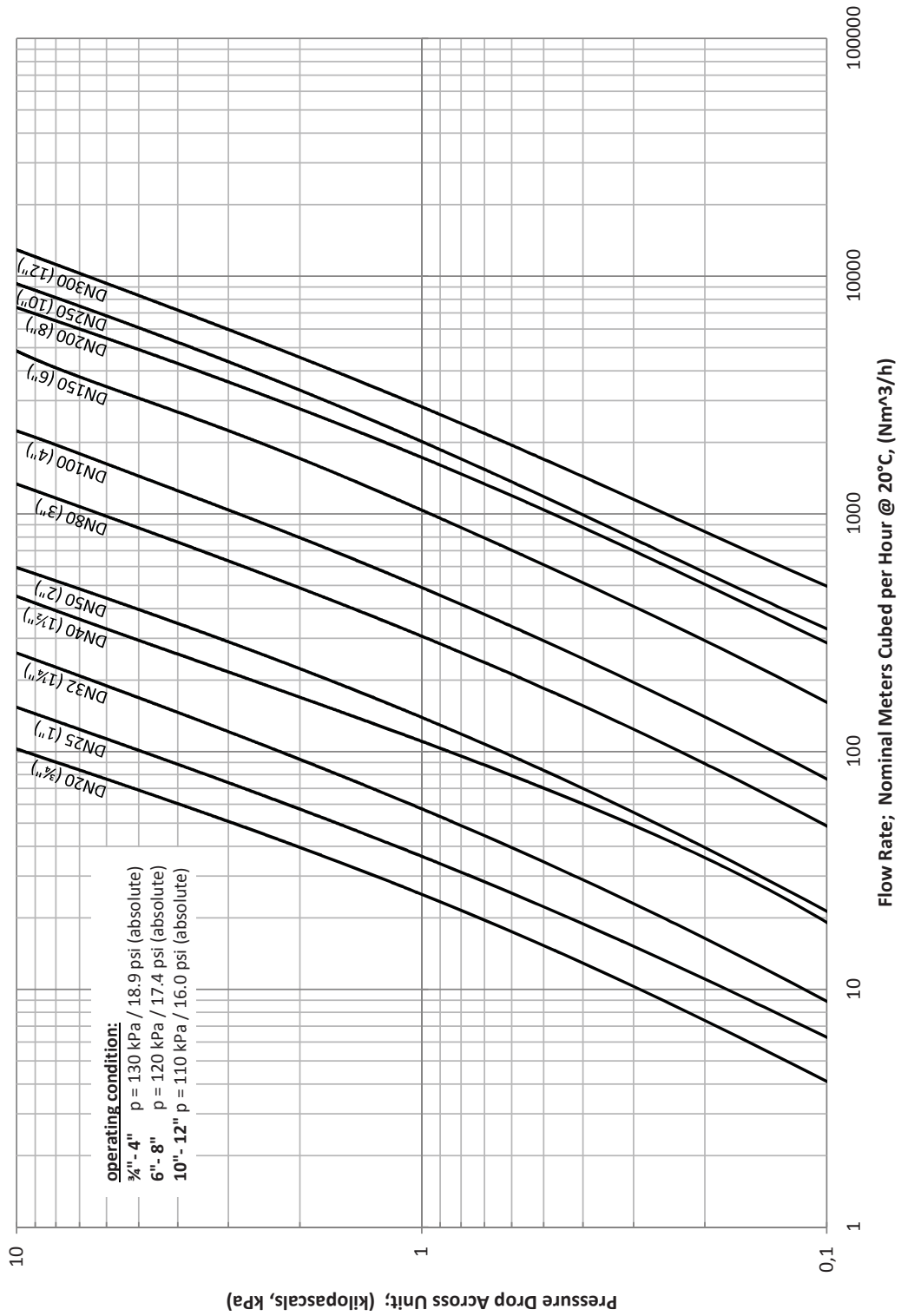
The element design is bidirectional and available for horizontal or vertical installations.

Easy Maintenance: The Model 7A00 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 DN20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300 (3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12") 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.

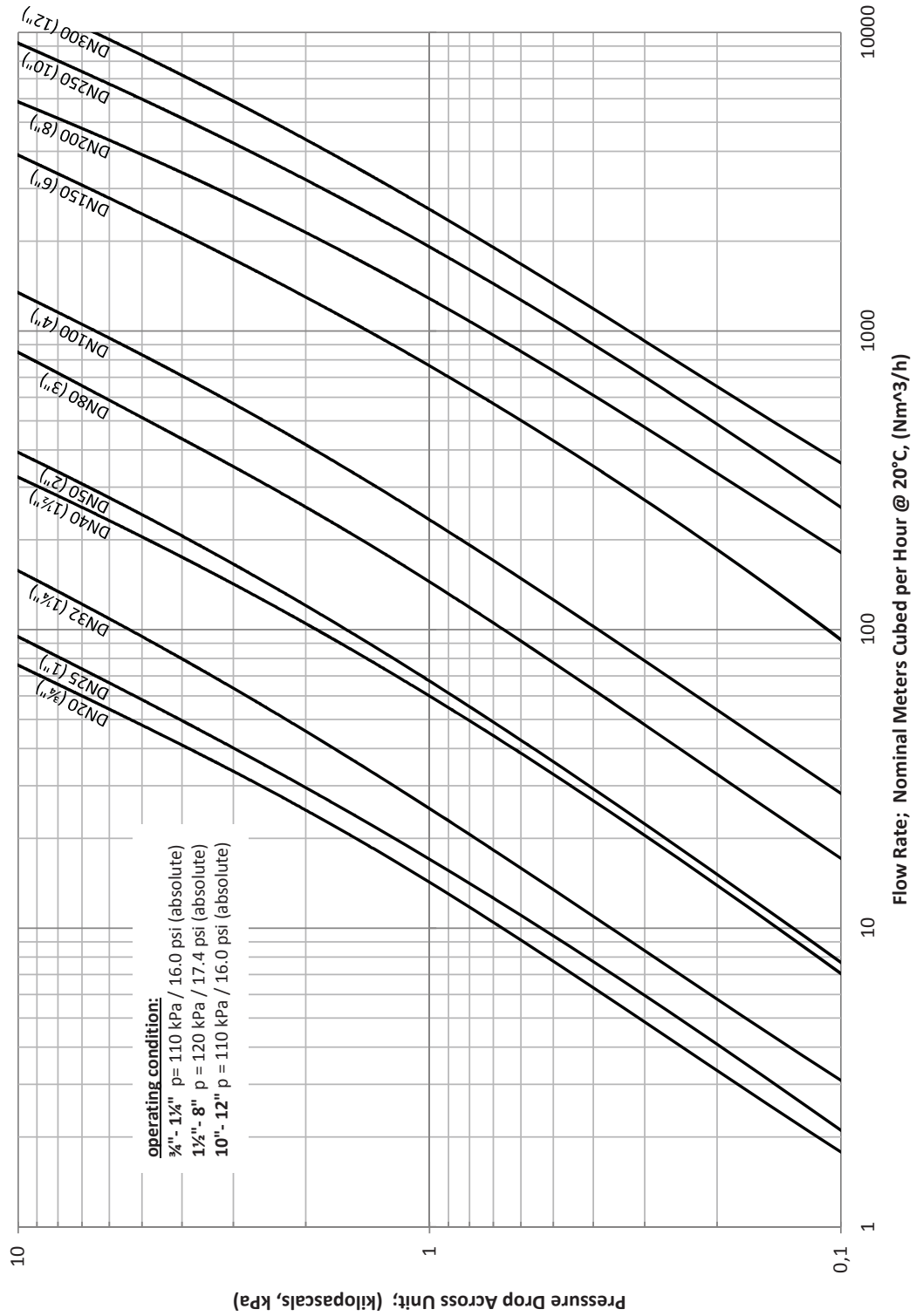
Series 7A00 Flow Curves

IIA and 60°C (140°F)



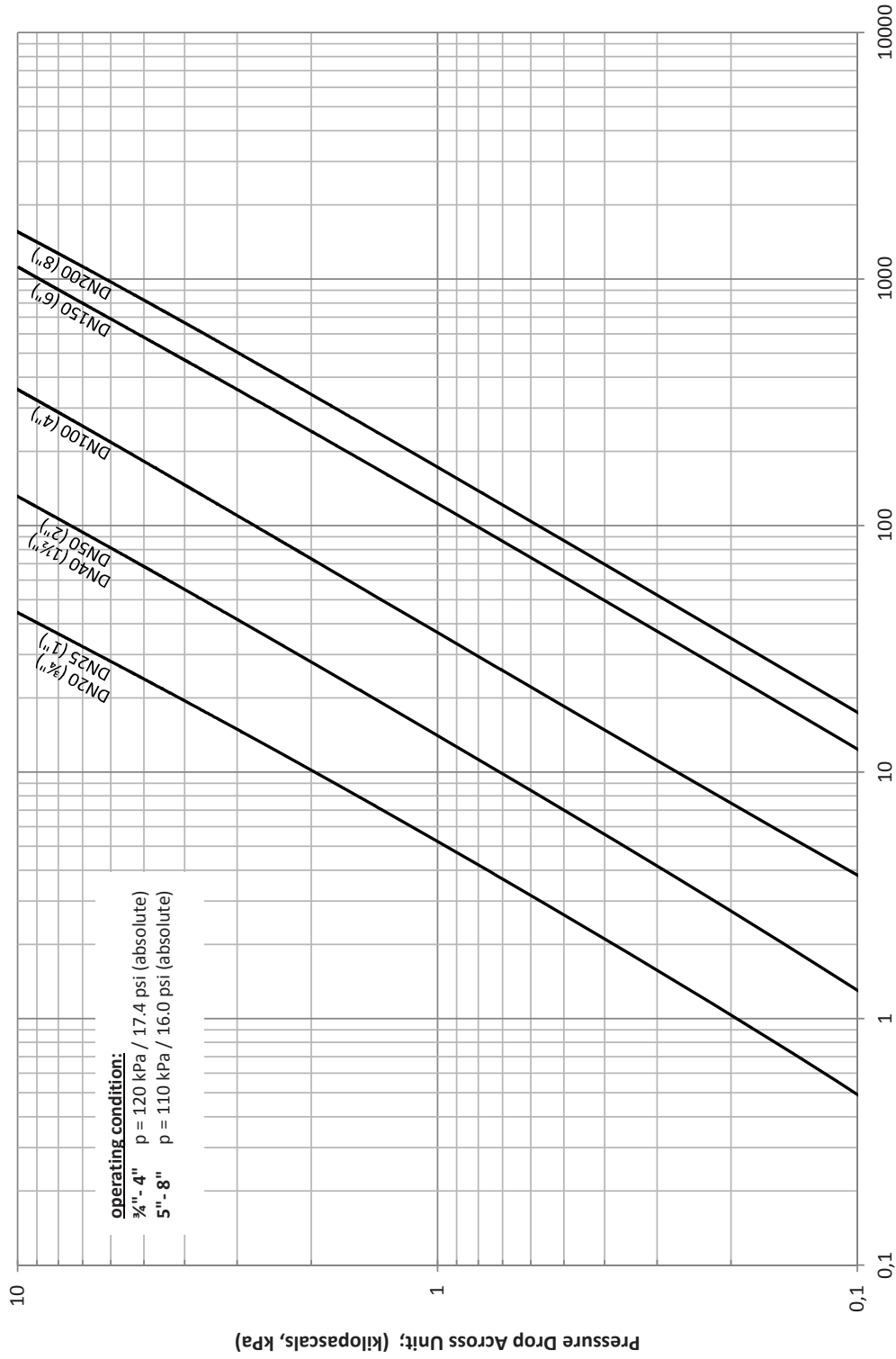
Series 7A00 Flow Curves

IIB3 and 60°C (140°F)



Series 7A00 Flow Curves

IIC and 60°C (140°F)

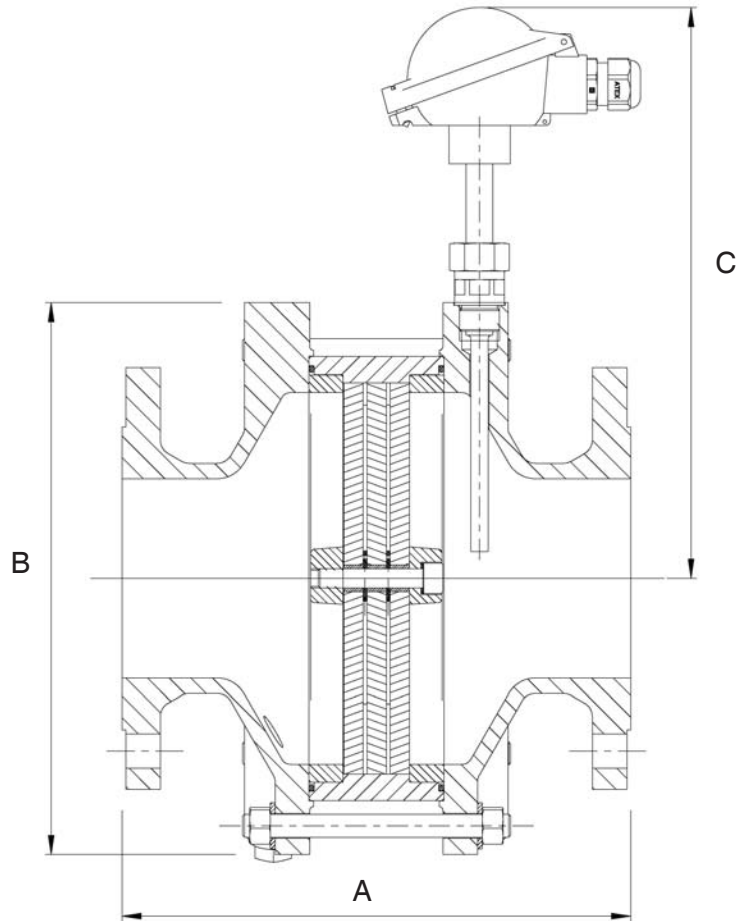


operating condition:
 ¾" - 4" p = 120 kPa / 17.4 psi (absolute)
 5" - 8" p = 110 kPa / 16.0 psi (absolute)

Flow Rate; Nominal Meters Cubed per Hour @ 20°C, (Nm³/h)

Pressure Drop Across Unit; (kilopascals, kPa)

DIMENSIONS



| Metric Units - mm | | | | | |
|--------------------|-----|------|-----|-----|-----|
| SIZE | A | | | Ø B | C |
| Rp, BSP, NPTF | IIA | IIB3 | IIC | | |
| 3/4" | 139 | 139 | 151 | 115 | 210 |
| 1" | 139 | 139 | 151 | 115 | 210 |
| 1-1/4" | 139 | 139 | 175 | 132 | 220 |
| 1-1/2" | 139 | 139 | 194 | 175 | 242 |
| 2" | 139 | 139 | 194 | 175 | 242 |
| DIN, JIS, ASME (*) | IIA | IIB3 | IIC | Ø B | C |
| DN25 | 183 | 183 | 195 | 115 | 210 |
| DN50 | 199 | 199 | 254 | 175 | 242 |
| DN65 (**) | 229 | 229 | - | 215 | 262 |
| DN80 | 248 | 248 | 309 | 240 | 275 |
| DN100 | 266 | 266 | 327 | 290 | 300 |
| DN125 (**) | 337 | 337 | 386 | 445 | 380 |
| DN150 | 337 | 337 | 386 | 445 | 380 |
| DN200 | 370 | 370 | 419 | 545 | 430 |
| DN250 | 434 | 409 | - | 665 | 490 |
| DN300 | 473 | 448 | - | 765 | 540 |

(*) 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 | IIA | IIB3 | IIC | | |
| 3/4" | 5.5 | 5.5 | 5.9 | 4.5 | 8.3 |
| 1" | 5.5 | 5.5 | 5.9 | 4.5 | 8.3 |
| 1-1/4" | 5.5 | 5.5 | 6.9 | 5.2 | 8.7 |
| 1-1/2" | 5.5 | 5.5 | 7.6 | 6.9 | 9.5 |
| 2" | 5.5 | 5.5 | 7.6 | 6.9 | 9.5 |
| DIN, JIS, ASME (*) | IIA | IIB3 | IIC | Ø B | C |
| 1" | 7.3 | 7.2 | 7.7 | 4.5 | 8.3 |
| 2" | 7.8 | 7.8 | 10 | 6.9 | 9.5 |
| 2-1/2" (**) | 9.0 | 9.0 | - | 8.5 | 10.3 |
| 3" | 9.8 | 9.8 | 12.2 | 9.4 | 10.8 |
| 4" | 10.4 | 10.4 | 12.9 | 11.4 | 11.8 |
| 5" (**) | 13.3 | 13.3 | 15.2 | 17.5 | 15.0 |
| 6" | 13.3 | 13.3 | 15.2 | 17.5 | 15.0 |
| 8" | 14.6 | 14.6 | 16.5 | 21.4 | 16.9 |
| 10" | 17.1 | 16.1 | - | 26.1 | 19.3 |
| 12" | 18.6 | 17.6 | - | 30.1 | 21.2 |

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

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such product at any time without notice. Cashco, Inc. does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Cashco, Inc. product remains solely with the purchaser.

7A00 Series PRODUCT CODER

01/25/17

7A

POS
3 & 4

POS
5

B

POS
7 & 8

POS
9

POS
10 & 11

POS
12

POS
13

POS
14 & 15

POS
16

O

POS
18

| POSITION 3 & 4 SIZE / EXPLOSION GROUP | | | |
|--|-------------|--------------|-------------|
| Size metric (in) | IIA CODE | IIB3 CODE | IIC CODE |
| DN20 (3/4") | 3Y | ES | MZ |
| DN25 (1") | 3Z | ET | N0 |
| DN32 (1-1/4") | 46 | F0 | N7 |
| DN40 (1-1/2") | 4E | F8 | NF |
| DN50 (2") | 4F | F9 | NG |
| DN65 (2-1/2") | 4P | FH | NR |
| DN80 (3") | 4Y | FS | NZ |
| DN100 (4") | 56 | G0 | P7 |
| DN125 (5") | 5D | G7 | PE |
| DN150 (6") | 5E | G8 | PF |
| DN200 (8") | 5N | GG | PP |
| DN250 (10") | 5X | GR | - |
| DN300 (12") | 64 | GY | - |

| POSITION 5 OPERATING CONDITION | | | | |
|-----------------------------------|-------------|---|--------------------------------|------|
| Explosion Group | Size | p _{max} absolute in kPa (psi) | T _{max} in °C (°F) | CODE |
| IIA | DN20 - 100 | 130 (19) | ≤ 60 (140) | 3 |
| | DN50 | 150 (21) | ≤ 60 (140) | 5 |
| | DN125 - 200 | 120 (17) | ≤ 60 (140) | 2 |
| | DN250 - 300 | 110 (16) | ≤ 60 (140) | 1 |
| IIB3 | DN20 - 32 | 110 (16) | ≤ 60 (140) | 1 |
| | DN40 - 200 | 120 (17) | ≤ 60 (140) | 2 |
| | DN250 - 300 | 110 (16) | ≤ 60 (140) | 1 |
| IIC | DN20 - 100 | 120 (17) | ≤ 60 (140) | 2 |
| | DN125 - 200 | 110 (16) | ≤ 60 (140) | 1 |

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 DN65 - 300 (2-1/2" - 12") | 0D |

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

| POSITION 12 PORTS | |
|--|------|
| Number / Location | CODE |
| Without ports For NPT - Sizes DN20 - 50 (3/4" - 2") For ASME Flange - Sizes DN25 (1") | 1 |
| One port G1/2" on each side Std. for all explosion groups and sizes | 2 |
| Two ports G1/2" on each side | 4 |

| POSITION 10 & 11 HOUSING MATERIALS / CONNECTION | | | |
|--|------------|----------------|-----------|
| (Threaded) Sizes DN20 - 50 (3/4" - 2") | Rp | BSPP | NPT |
| | CODE | | |
| CS (zinc plated) | | | 23 |
| CS (1.0619 zinc plated) | 41 | 42 | |
| Stainless Steel (1.4581) | 91 | 92 | |
| (Flanged) Sizes DN25 - 300 (1" - 12") | DIN (PN10) | ASME(150#RF) * | JIS (10K) |
| | CODE | | |
| CS Sizes DN250 & 300 (10" & 12") | 17 | 19 | 1C |
| CS (zinc plated) Sizes DN25 (1") | 27 | 29 | 2C |
| CS (1.0619) Sizes DN32 - 200 (1-1/4" - 8")* | 37 | 39 | 3C |
| Stainless Steel (1.4571) Sizes DN250 & 300 (10" & 12") | 87 | 89 | 8C |
| Stainless Steel (1.4581) * Sizes DN25 - 200 (1" - 8" sizes) | 97 | 99 | 9C |

(*) Not Available in Sizes 2-1/2" and 5".

| POSITION 13 MOUNTING KIT MAT'L FOR HOUSING | |
|---|------|
| Material | CODE |
| Standard 8.8 Zinc Plated | 1 |
| 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 |

Binder Engineering B.V.
Cort van der Lindenstraat 25
2288 EV Rijswijk
Telefoon: 070-3074300
E-mailadres: sales@binder-engineering.nl

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

| POSITION 18 PAINT | |
|---------------------------|------|
| Color | CODE |
| No Paint (CS-Zinc or SST) | 0 |
| Blue Epoxy | 1 |