

# FLEXIBLES

series  
**FNN**

|            |       |       |      |      |               |
|------------|-------|-------|------|------|---------------|
| Protection | Gas   | Zone  | 1-2  | II2G | Ex db IIC Gb  |
|            | Dusts | 21-22 | II2D |      | Ex tb IIIC Db |

|                      |         |
|----------------------|---------|
| Degree of Protection | IP66/67 |
|----------------------|---------|

|            |          |       |       |
|------------|----------|-------|-------|
| Amb. Temp. | Standard | -20°C | +40°C |
|            | Extended | -50°C | +80°C |



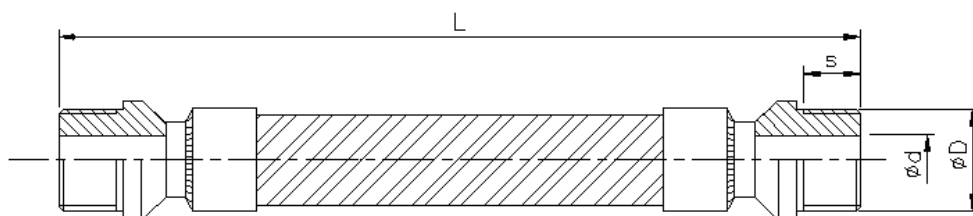
|                   |                |
|-------------------|----------------|
| Entries Threading | NPT ANSI B1.20 |
|-------------------|----------------|

|          |                                                                                    |
|----------|------------------------------------------------------------------------------------|
| Material | Flexible Pipe: Stainless Steel AISI 304/321(*)<br>Fittings: Steel (FE 37-UNI 7070) |
|----------|------------------------------------------------------------------------------------|

|                            |                                                                                                                                                                                                       |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards and Certificates | <p>Directive 2014/34/EU (ATEX)</p> <p>EN 60079 - 0 • EN 60079 - 1<br/>EN 60079 - 31</p> <p>CE BVI 13 ATEX 0086U</p> <p>IEC 60079 - 0 • IEC 60079 - 1<br/>IEC 60079 - 31</p> <p>IECEx EPS 13.0038U</p> |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- Recommended for fixed connections and/or when light vibrations may occur.
- T.I.G. welding of fittings.
- Operating temperature: -50°C ÷ +450°C.

|         |                                                  |                                                                           |
|---------|--------------------------------------------------|---------------------------------------------------------------------------|
| Options | - Stainless Steel AISI 304 or AISI 316 fittings. | - Fittings threading Metric ISO 262 (M) or EN 10226 (Gk) (only for ATEX). |
|---------|--------------------------------------------------|---------------------------------------------------------------------------|



## NOTES

**(\*) Flexible pipe:**  
Inner tube in Stainless Steel AISI 321 with parallel coils and outer braid in Stainless Steel AISI 304.

**Determination of Length:**  
The total length of the flexible sheath (L = 6 m max) is expressed in cm and includes fittings and threads.

**Bending radius "R"**  
Values given in table are indicative and may vary according to the type of installation.  
the minimum bending radius depends on several factors including:  
- Fixed installation: bending radius smaller than suggested;  
- Mobile installation or manual use: suggested bending radius can be increased.  
Further adjustments of bending radius may influenced by:  
- Possible gradual movement, rapid and/or with vibration;  
- Number, type and diameter of accommodated conductors.

| Nominal diameter code                       | 1    | 2    | 3   | 4      | 5      | 6    | 7      | 8    | 9    |
|---------------------------------------------|------|------|-----|--------|--------|------|--------|------|------|
| Fittings threading diameter (ØD)            | 1/2" | 3/4" | 1"  | 1.1/4" | 1.1/2" | 2"   | 2.1/2" | 3"   | 4"   |
| Length of threading (s)                     | 14   | 14   | 17  | 17     | 17     | 17   | 18     | 18   | 18   |
| Flexible pipe internal usable diameter (Ød) | 11   | 19   | 25  | 30     | 38     | 50   | 64     | 75   | 100  |
| R - bending radius [see Notes]              | 250  | 310  | 375 | 405    | 480    | 550  | 675    | 750  | 920  |
| Weight (g/m)                                | 290  | 500  | 650 | 1000   | 1200   | 1540 | 2550   | 2900 | 4200 |

| L = Standard Lengths (cm) |    |    |    |    |    |    |    |    |     |            |
|---------------------------|----|----|----|----|----|----|----|----|-----|------------|
| Ø                         | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 100 | On request |
| 1/2"                      | x  | x  | x  | x  | x  | x  | x  | x  | x   | max 600    |
| 3/4"                      | x  | x  | x  | x  | x  | x  | x  | x  | x   |            |
| 1"                        | x  | x  | x  | x  | x  | x  | x  | x  | x   |            |
| 1.1/4"                    | •  | •  | •  | •  | •  | •  | •  | •  | •   |            |
| 1.1/2"                    | •  | •  | •  | •  | •  | •  | •  | •  | •   |            |
| 2"                        | •  | •  | •  | •  | •  | •  | •  | •  | •   |            |
| 2.1/2"                    | •  | •  | •  | •  | •  | •  | •  | •  | •   | max 300    |
| 3"                        | •  | •  | •  | •  | •  | •  | •  | •  | •   |            |
| 4"                        | •  | •  | •  | •  | •  | •  | •  | •  | •   | max 200    |

- x = Lengths normally available at stock.  
• = Lengths normally not available at stock.

**Example: FNN 2/60N**

**Example: FNN 1/11/100N**

Order Coding

|                                          |                       |                                            |             |                                                                   |
|------------------------------------------|-----------------------|--------------------------------------------|-------------|-------------------------------------------------------------------|
| Flexible pipe IP with Male/Male fittings | Nominal Diameter code | Internal usable diameter (only for Ø=1/2") | Length (cm) | Threading                                                         |
| FNN                                      | 2                     | ...                                        | 60          | N = NPT (N)<br>M = Metric (M)<br>.. = EN 10226 (Gk) only for ATEX |

Standards (IEC/EN 60079-14 par. 9.4) state that the total cross-sectional area of the cables, including insulation, shall be not more than 40 % of the cross-sectional area of the conduit.