

TYPE M/N E P/Q

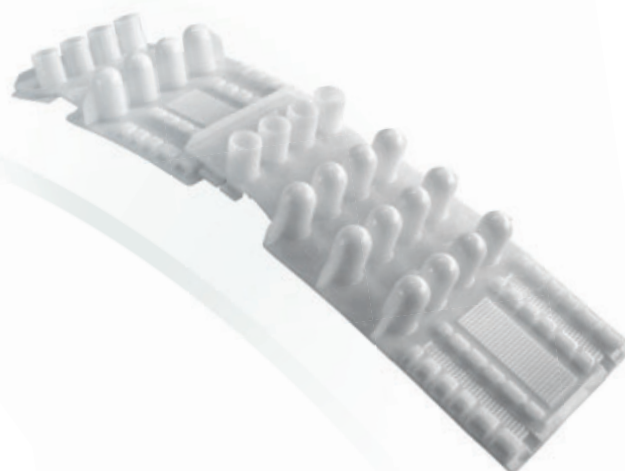
MOD. 13100/M | PIPE DN 150-1000
H. 18-25-36-41-50-75-90 mm

MOD. 13100/N | PIPE DN 150-1000
H. 18-25-36-50-75-90 mm

MOD. 13100/P | PIPE DN 150-750
H. 110-120 mm

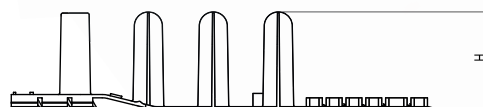
MOD. 13100/Q | PIPE DN 150-750
H. 110-120 mm

Spacer for pipeline crossings.

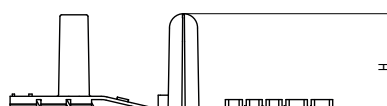
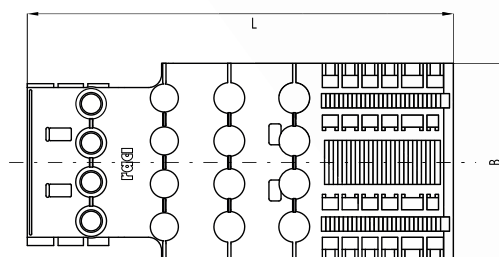


CHARACTERISTICS

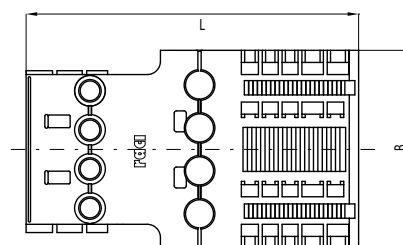
- Modular system to assemble insulator rings, which allows spacers to be used on a wide pipe diameter range therefore reducing inventory costs.
- Spacers are quickly and easily assembled by manually fitting elements one into the other.
- The tooth insertion method allows on site adjustments to fit a wide range of pipe diameters.
- Spacers are manufactured entirely out of high density polyethylene (HDPE). No metal bolts or attachments are required.
- A low friction coefficient guarantees an easy insertion into the casing.
- Designed and tested to maintain continuous and long term support for the carrier pipe and its contents.
- Spacers provide a constant projection around the entire circumference of the carrier pipe.
- Spacers provide long term protection from corrosion.
- Spacers can be installed on steel-coated pipes, concrete pipes, ductile iron pipes or plastic pipes.
- Heights 25 mm and 41 mm homologated according to SNAM RETE GAS specification (GASD A 09.01.06 and GASD C 09.06.00).
- Tightening by tool type C90 for height up to 90 mm, tool type A200 for height from 110 a 120 mm.



e M/P



e N/Q



MATERIAL - HDPE

- Yield strength*:**
≥ 25 N/mm² (test according to UNI EN ISO 527-2)
- Elongation at break*:**
> 200% (test according to UNI EN ISO 527-2)
- Hardness shore D:**
64 - ASTM D 2240
- Minimum working temperature:**
-20°C (for applications below 5°C contact Raci)
- Minimum stocking temperature:**
-5°C (for applications below 5°C contact Raci)
- Dielectric strength:**
> 37 kV/mm - ASTM D 149/64
- UVL stabilization:**
Good



(*) on test specimen with moulded material, realized and tested for every batch of production. Batch number is marked on each element recording nr/year of moulding.

| TYPE | USEFUL LENGTH | | WIDTH (B) | | HEIGHT (H) | | LOADING CAPACITY (kg) |
|------|---------------|-------------|-----------|------|-------------------|--------------------|-----------------------|
| | mm | inch | mm | inch | mm | inch | |
| M | 265 - 320 | 10,4 - 12,6 | 180 | 7,1 | 18 - 25 - 36 - 41 | 0,7-0,98-1,42-1,61 | 1000 |
| N | 185 - 240 | 7,3 - 9,4 | | | 50 - 75 - 90 | 1,97-2,95-3,54 | |
| P | 265 - 320 | 10,4 - 12,6 | | | 110 - 120 | 4,33 - 4,72 | |
| Q | 185 - 240 | 7,3 - 9,4 | | | | | |

The loading capacity values are estimated and verified under static and ideal conditions.

| OUTSIDE Ø MAIN PIPE D.E. | | SPACER ELEMENTS* (pcs.) | | | | RECOMMENDED SPACING BETWEEN INSULATORS (H element) | | | |
|--------------------------|-------|-------------------------|-----|--------|------|--|------|-------|------|
| Ø MIN | Ø MAX | Family | | Family | | Gas | | Water | |
| | | M | N** | P | Q** | mt | feet | mt | feet |
| 143 | 168 | 1 | 1 | 1 | 1 | 2,5 | 8,2 | 2,5 | 8,2 |
| 169 | 201 | 2 | - | 2 | - | 2,5 | 8,2 | 2,5 | 8,2 |
| 202 | 227 | 1 | 2 | 1 | 2 | 2,5 | 8,2 | 2,5 | 8,2 |
| 228 | 252 | 2 | 1 | 2 | 1 | 2,5 | 8,2 | 2,0 | 6,6 |
| 253 | 286 | 3 | - | 3 | - | 2,5 | 8,2 | 2,0 | 6,6 |
| 287 | 311 | 2 | 2 | 2 | 2 | 2,0 | 6,6 | 2,0 | 6,6 |
| 312 | 337 | 3 | 1 | 3 | 1 | 2,0 | 6,6 | 2,0 | 6,6 |
| 338 | 395 | 4 | - | 4 | - | 2,0 | 6,6 | 2,0 | 6,6 |
| 396 | 421 | 4 | 1 | 4 | 1 | 2,0 | 6,6 | 2,0 | 6,6 |
| 422 | 505 | 5 | - | 5 | - | 2,0 | 6,6 | 2,0 | 6,6 |
| 506 | 590 | 6 | - | 6 | - | 2,0 | 6,6 | 1,5 | 4,9 |
| 591 | 674 | 7 | - | 7 | - | 2,0 | 6,6 | 1,5 | 4,9 |
| 675 | 759 | 8 | - | 8 | - | 1,5 | 4,9 | 1,5 | 4,9 |
| 760 | 915 | 9 | - | n.a. | n.a. | 1,5 | 4,9 | 1,0 | 3,3 |
| 850 | 1015 | 10 | - | n.a. | n.a. | 1,5 | 4,9 | 1,0 | 3,3 |

(*) number and type of elements to make one insulator ring around the entire circumference of the carrier pipe.

(**) The elements N and Q was designed as special pipe sizes for closing element in order to complete the circumferences on some pipe OD ranges. Therefore it is not possible to use more than 1 or 2 elements N or Q in a ring.

| TYPE | H (mm) | PIECES FOR CARTON BOX | CARTON DIMENSIONS (cm) | CARTONS WEIGHT (Kg) | |
|------|--------|-----------------------|------------------------|---------------------|------|
| | | | | Net | Gros |
| M | 18 | 100 | 60 x 40 x 50 | 27 | 29 |
| | 25 | 85 | | 23 | 25 |
| | 36 | 60 | | 20 | 22 |
| | 41 | 55 | | 21 | 23 |
| | 50 | 40 | | 16 | 18 |
| | 75 | 30 | | 15 | 17 |
| | 90 | 25 | | 15 | 17 |
| N | 18 | 100 | 60 x 40 x 50 | 20 | 22 |
| | 25 | 90 | | 19 | 21 |
| | 36 | 70 | | 16 | 18 |
| | 50 | 50 | | 13 | 15 |
| | 75 | 35 | | 11 | 13 |
| | 90 | 30 | | 10 | 12 |
| P | 110 | 24 | 60 x 40 x 50 | 14 | 16 |
| | 120 | 20 | | 13 | 15 |
| Q | 110 | 30 | 60 x 40 x 50 | 11 | 13 |
| | 120 | 26 | | 10 | 12 |

Note: for logistic reasons, deliveries are for full carton boxes only.