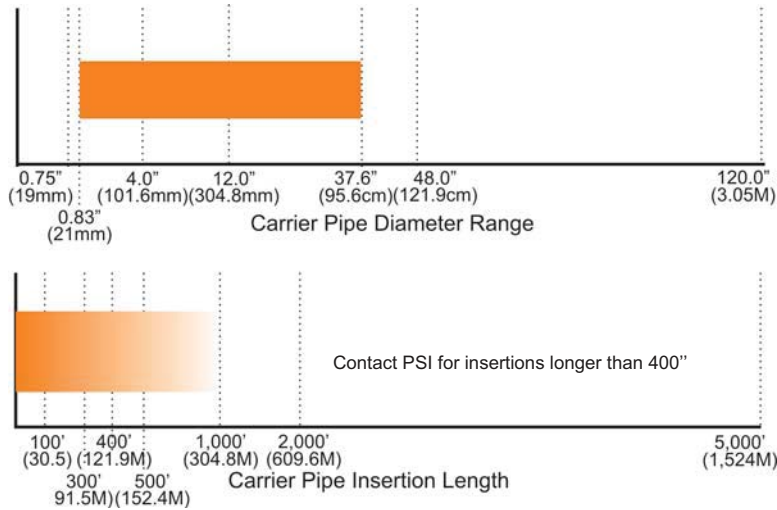
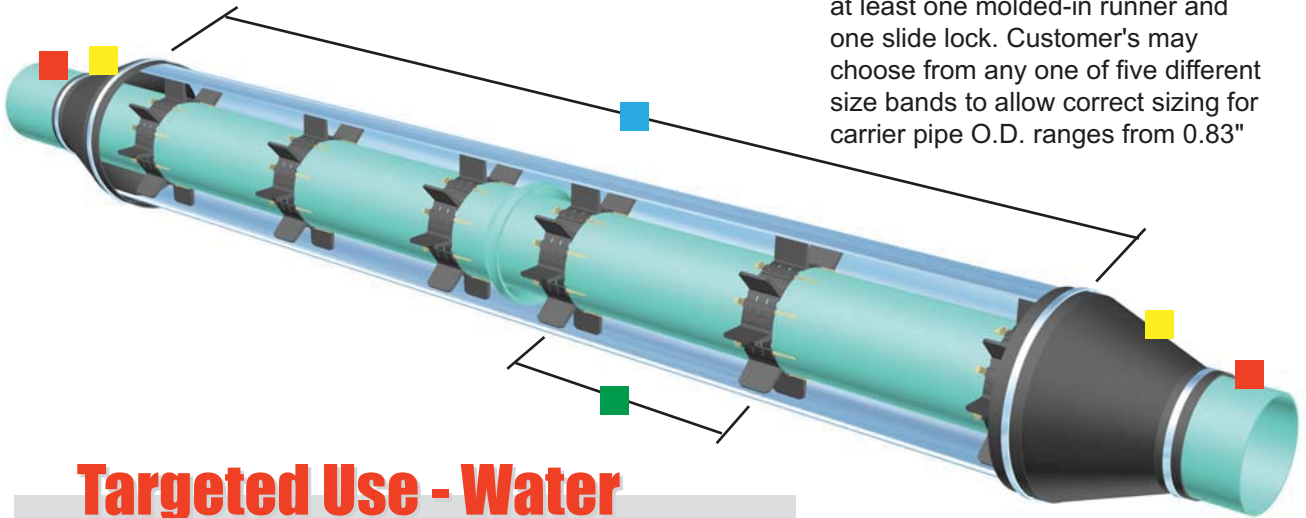


# Ranger II® Non-metallic Casing Spacers

## PSI Ranger II® Non-metallic Casing Spacers



The Ranger II® is an all non-metallic casing isolator/spacer system that uses molded segments to encircle the carrier pipe. Each segment includes at least one molded-in runner and one slide lock. Customer's may choose from any one of five different size bands to allow correct sizing for carrier pipe O.D. ranges from 0.83"



### Targeted Use - Water

- For carrier pipe diameters ranging from 0.83" (21mm) to 37.60" (955mm).
- For carrier pipe insertion lengths up to 400 feet.\* (121.9M)
- Spacing Recommendation: Max 8' (243.8cm) between spacers, Max 2' (61.0cm) from casing pipe end, Max 2' (61.0cm) on each side of bell or mechanical joint.
- Recommended End Seals: Model C, S, W, and R.

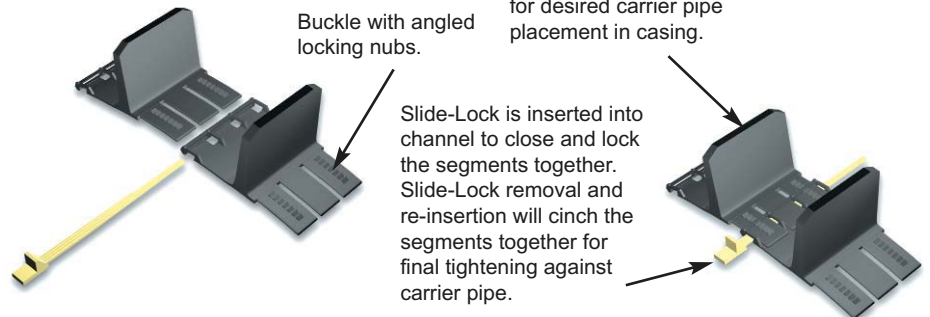
Ranger II® spacers should **not** be used on concrete carrier pipe. Engineered equal to 304 Stainless Steel Metallic Casing Spacers. Excellent for the Stacking Distributor.

(21.1mm) up to 37.60" (95.5cm) in diameter. Once sized, the segments are placed around the carrier pipe and cinched together via non-metallic slide-locks. Installation is quick and easy while only a small inventory of segments may be used to accommodate a large variety of pipe styles, types and diameters.

Runners are available in a variety of heights to allow for desired carrier pipe placement in casing.

Separate segments are connected by inserting the buckles into slots on the adjacent segment. Slot accepts Slide-Lock. Arrow molded on segment indicates correct insertion direction.

Slide-Lock is used to tension the segments together after installation on pipe. Channels face up during insertion while the correct size Slide-Lock (micro, mini, midi, maxi) is molded on the flat (bottom) side.



# PSI Ranger II® Non-metallic Casing Spacers

## Material Specifications

| SPECIFICATION                                  | ASTM TEST | VALUE                                    |
|--|-----------|--|
| Band/Runner Segments                           |           | Injection molded virgin polypropylene    |
| Tensile Strength                               | D790      | 8,100 - 9,000 psi                        |
| Compressive Strength                           | D695      | 3,000 psi (211 kg/sq. cm)                |
| Water Absorption                               | D570      | 0.1%                                     |
| Temperature                                    |           | -22°F. to +212°F. (-30°C. to +100°C.)    |
| Impact Strength                                | D256      | 1.5 ft lb/in.<br>(0.8 joules/cm)         |
| Dielectric Strength                            | D149      | 800 Volts/Mil. Min.                      |
| Color  |           | Black                                    |
| <b>Liner - None</b>                            |           |  |
| <b>Runners - Sizes and Configurations</b>      |           | 1 Runner Per Segment (Micro, Mini, Midi) |
| 1.5" (38mm) through 6.89" (175mm)              |           | 2 Runners Per Segment (Medi, Maxi)       |
| <b>Hardware</b>                                |           |  |
| Non-metallic - Slide-Locks - No Metallic Parts |           |  |



## Features

- All non-metallic. No nuts, bolts, washers or any other metal parts to corrode or degrade over time.
- Designed for carrier pipe diameters from 0.83" (21mm) to 37.60" (955mm) in diameter.
- Segmented pieces - small inventory may be used to accommodate a large variety of pipe styles, types and diameters. No extra trips from job site to warehouse for additional parts.
- Easy assembly. Simply slide the segments together and cinch tight with the patented Slide-Lock connecting system.
- Wide variety of runner heights to allow numerous options for pipe positioning within the casing.
- Runner variations may be used to adjust for grade.
- Will accommodate small conduit attachment for communications or electrical cable.
- Medi and Maxi segments, 2 molded runners per segment.
- Segment band and runners molded as one piece.
- Manufactured from UV resistant polypropylene.
- High impact strength, 1.5 ft. lbs./inch (0.8 joules/cm)
- Excellent compressive strength, 3,000 psi (211 kg/square cm)
- 800 Volts/Mil. Dielectric Strength.
- Wide temperature range, -22° to +212° F. (-30° to +100° C.)
- Eliminates sand or grout fill.
- No special tools required for installation.
- Low coefficient of friction for ease of installation.

## Weight and Spacing Guidelines

### Ranger II® Casing Spacers Skid Height Spacing: (Maximum Distance Between Casing Spacer.)

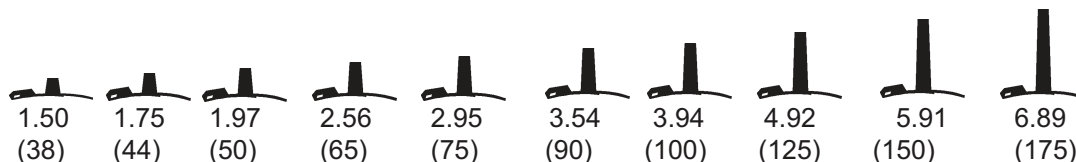
|  |           |
|--|-----------|
| Skid Height 1.50" (38mm) to 1.97" (50mm) | 8' (Feet) |
| Skid Height 2.56" (65mm) to 3.54" (90mm) | 6' (Feet) |
| Skid Height 3.94" (100mm) and up         | 5' (Feet) |

### Installed On Various Pipe Types, Such As:

PVC Water, PVC Sewer, HDPE  
Steel, Ductile Iron...etc.

### Ranger II Casing Spacers Skid Height Max Load Per Spacer:

|  | MICRO   | MINI    | MIDI      | MEDI      | MAXI      |
|--|---------|---------|-----------|-----------|-----------|
| Skid Height 1.50" (38mm) to 1.97" (50mm)   | 175 lb. | 500 lb. | 1,250 lb. | 3,300 lb. | 5,000 lb. |
| Skid Height 2.56" (65mm) to 2.95" (75mm)   | 135 lb. | 400 lb. | 1,000 lb. | 2,600 lb. | 4,000 lb. |
| Skid Height 3.54" (90mm) to 3.94" (100mm)  | 120 lb. | 350 lb. | 875 lb.   | 2,300 lb. | 3,500 lb. |
| Skid Height 4.92" (125mm) to 5.91" (150mm) |         | 250 lb. | 625 lb.   | 1,650 lb. | 2,500 lb. |
| Skid Height 6.89" (175mm)                  |         |         | 550 lb.   | 1,400 lb. | 2,300 lb. |



| Weight Comparison<br>9.05" x 17.25" CR Application           |  |
|--|--|
| <b>Ranger II<br/>Non-Metallic</b>                            | <b>Model S8GN2<br/>Stainless Steel</b> |
| <b>2.79 lbs.</b>   | <b>15 lbs.</b>                         |
| <b>Ranger II® Advantage<br/>Installer and Shipping Costs</b> |  |

# PSI Ranger II® Non-metallic Casing Spacers

## Ranger II - Micro for 0.83 to 3.07" (21 to 78mm) Diameter Carrier Pipe Band Width = 2.13" (54mm)

| Carrier Pipe O.D. Range<br>Inches (mm) | No. of<br>Segments | Runner Height Options<br>Inches (mm) |
|--|--------------------|--------------------------------------|
| 0.83 to 1.14 (21 to 29)                | 3                  |                                      |
| 1.14 to 1.54 (29 to 39)                | 4                  |                                      |
| 1.54 to 1.85 (39 to 47)                | 5                  |                                      |
| 1.85 to 2.24 (47 to 57)                | 6                  |                                      |
| 2.24 to 2.48 (57 to 63)                | 7                  |                                      |
| 2.48 to 3.07 (63 to 78)                | 8                  |                                      |

Verify that Slide-Locks match segment size: Make sure (Mini) matches name molded on the bottom of the Slide-Lock. Note: Micro & Mini segments both use the Mini Slide-Lock.

## Ranger II - Mini for 2.48 to 5.51" (63 to 140mm) Diameter Carrier Pipe Band Width = 3.15" (80mm)

| Carrier Pipe O.D. Range<br>Inches (mm) | No. of<br>Segments | Runner Height Options<br>Inches (mm) |
|--|--------------------|--------------------------------------|
| 2.48 to 3.07 (63 to 78)                | 4                  |                                      |
| 3.07 to 3.86 (78 to 98)                | 5                  |                                      |
| 3.86 to 4.49 (98 to 114)               | 6                  |                                      |
| 4.49 to 5.51 (114 to 140)              | 7                  |                                      |

Verify that Slide-Locks match segment size by checking to ensure the segment name (Mini) matches the name molded on bottom of the Slide-Lock. Note: Micro & Mini segments both use the Mini Slide-Lock.

## Ranger II - Midi for 5.51 to 16.65" (140 to 423mm) Diameter Carrier Pipe Band Width = 5.12" (130mm)

| Carrier Pipe O.D. Range<br>Inches (mm) | No. of<br>Segments | Runner Height Options<br>Inches (mm) |
|--|--------------------|--------------------------------------|
| 5.51 to 6.89 (140 to 175)              | 4                  |                                      |
| 6.89 to 8.70 (175 to 221)              | 5                  |                                      |
| 8.70 to 10.31 (221 to 262)             | 6                  |                                      |
| 10.31 to 12.87 (262 to 327)            | 7                  |                                      |
| 12.87 to 14.41 (327 to 366)            | 8                  |                                      |
| 14.41 to 16.65 (366 to 423)            | 10                 |                                      |

Verify that Slide-Locks match segment size by checking to ensure the segment name (Midi) matches the name molded on the bottom of the Slide-Lock.

## Ranger II - Medi for 16.77 to 25.98" (426 to 660mm) Diameter Carrier Pipe Band Width = 6.87" (174 mm)

| Carrier Pipe O.D. Range<br>Inches (mm) | No. of<br>Segments | Runner Height Options<br>Inches (mm) |
|--|--------------------|--------------------------------------|
| 16.77 to 21.22 (426 to 539)            | 4                  |                                      |
| 21.22 to 25.98 (539 to 660)            | 5                  |                                      |

Verify that Slide-Locks match segment size by checking to ensure the segment name (Maxi) matches the name molded on the bottom of the Slide-Lock. Note: Medi & Maxi segments both use the Maxi Slide-Lock.

## Ranger II - Maxi for 25.98 to 37.60" (660 to 955mm) Diameter Carrier Pipe Band Width = 8.86" (225mm)

| Carrier Pipe O.D. Range<br>Inches (mm) | No. of<br>Segments | Runner Height Options<br>Inches (mm) |
|--|--------------------|--------------------------------------|
| 25.98 to 30.79 (660 to 782)            | 6                  |                                      |
| 30.79 to 37.60 (782 to 955)            | 7                  |                                      |

Verify that Slide-Locks match segment size by checking to ensure the segment name (Maxi) matches the name molded on the bottom of the Slide-Lock. Note: Medi & Maxi segments both use the Maxi Slide-Lock.

Ranger II®  
Non-metallic Casing Spacers