

Casing spacer data and specification sheet Rev. June 10 2013

# Silvertip™ HD (High-Density Polyethylene) Casing Spacers

# **ABOUT SILVERTIP™ CASING SPACERS**

Silvertip<sup>™</sup> casing spacers are designed to provide effective mechanical and dielectric protection to essential infrastructure piping installed in casings beneath roadways, bridges and other critical structures.

Carrier pipes passing through casings are susceptible to damage if there is physical contact with the casing pipe. Contact between metal carrier pipes and casings can also result in accelerated corrosion and a shortened pipeline service life.

Silvertip<sup>™</sup> casing spacers offer engineers a reliable method to ensure that piping inside of casings will be consistent with the rest of the system design. Contractors appreciate the durability and predictable installation process. Owners appreciate the lower life cycle costs related to well designed and constructed details that are expensive to revisit.

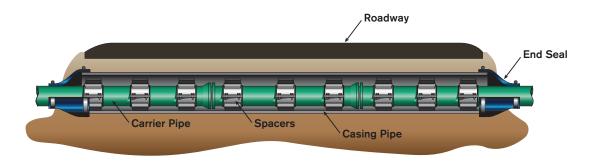


Fig 1. Diagram of typical casing spacer installation.





# HIGH-DENSITY POLYETHYLENE (HD) CASING SPACER SPECIFICATIONS

#### **Band and Risers**

Silvertip™ HD casing spacers are manufactured from injection molded high-density polyethylene Casing spacer constructed with two half shells for 20mm (3/4") up to 300mm (12") nominal pipe size Multisegmented casing spacer for nominal pipe size 350mm (14") to 1200mm (48")

#### **Runners**

Injection molded HDPE runners 25mm, 40mm or 50mm (1", 1.5" or 2") high

#### **Bolt, Nuts and Washers**

Zinc-plated nuts and bolts included with the spacers Optional non-metallic nuts and bolts are available

# **Material Specifications**

Dielectric Strength (ASTM D-149) – 00-500 Volts/mil Flexural Strength (ASTM D-790) – 6.9 MPa (1000 psi) Compressive Strength (ASTM D-693) – 22.1 MPa (3200 psi) Tensile Strength (ASTM D-638, D-651) – 21.4-24.1 MPa (3100-3500 psi) Water Absorption (ASTM D-570) – < 0.01% Impact Strength (ASTM D-256) – 1.07 J/cm (2.0 ft-lb/in) of notch Maximum Operating Temperature – 60°C (140°F)



Fig 3. Several typical small-diameter Silvertip™ High-Density Polyethylene (HD) casing spacers.





## ORDERING CASING SPACERS

#### 1. Select your spacer model.

Silvertip<sup>™</sup> High-Density Polyethylene (HD) casing spacers feature insulators made of injection-molded HPDE. These non-metallic casing spacers are an economical choice for smaller diameter pipes where custom positioning in the casing is not required.

### 2. Identify your pipe dimensions.

- a. Carrier pipe OD (must be IPS OD)
- b. Select your runner height
- c. ID of the casing

#### 3. Ensure sizing.

- a. Ensure the overall diameter of the spacer is smaller than your casing ID
- b. Ensure the selected runner height will elevate any bell joint or mechanical connection on the carrier pipe.
- c. Select a wider casing spacer for longer crossings where abrasion of the runner may be a concern.

# 4. Choose your HD casing spacer part number.

Order using either <u>millimeters</u> or <u>inches</u> measurements. See Table 1 for a complete list of HD casing spacer sizes and options.

### HD CASING SPACER QUANTITY and PLACEMENT

How many HD casing spacers will you need? One spacer is recommended for every 1.8 to 2.4 meters (6 to 8 feet) of pipeline, unless pipe span or load-carrying limitations require closer placement.

As pipe size increases, the lower load-carrying capacity of this model requires closer placement between spacers. Place a spacer within 300mm of both ends of the casing to prevent a "fulcrum" effect on the carrier at the casing ends. These spacers are NOT recommended for concrete pipe.

Carrier pipes with a mechanical joint or bell/spigot connection typically require a casing that is three nominal pipe sizes larger than the carrier pipe diameter. See Table 1 for a complete list of HD casing spacer sizes and options.

Silvertip™ Casing Spacers are manufactured with ISO 9001 certified quality management.





Table 1: Silvertip™ High-Density Polyethylene (HD) casing spacers options and part numbers

Carrier Size* mm (inch)	Minimum Casing Size mm (inch)	Width of spacer mm (inch)	Number of segments per spacer	Runner height	Number of runners per spacer	Silvertip™ HD casing spacer order number
25 (1)	80 (3)	63 (2.5)	2	13 (0.5)	4	HD-25-80
40 (1.5)	80 (3)	57 (2.25)	2	13 (0.5)	6	HD-40-80
50 (2)	100 (4)	92 (3.625)	2	16 (0.625)	6	HD-50-100
80 (3)	150 (6)	92 (3.625)	2	16 (0.625)	6	HD-80-150
100 (4)	150 (6)	82 (3.25)	2	14 (0.5625)	6	HD-100-150
100 (4)	200 (8)	82 (3.25)	2	25 (1)	6	HD-100-200
100 (4)	250 (10)	82 (3.25)	2	38 (1.5)	6	HD-100-250
150 (6)	250 (10)	95 (3.75)	2	25 (1)	6	HD-150-250
150 (6)	300 (12)	124 (4.875)	2	38 (1.5)	6	HD-150-300
150 (6)	350 (14)	114 (4.5)	2	51 (2)	6	HD-150-350
200 (8)	300 (12)	124 (4.875)	2	25 (1)	6	HD-200-300
200 (8)	350 (14)	124 (4.875)	2	38 (1.5)	6	HD-200-350
200 (8)	400 (16)	124 (4.875)	2	51 (2)	6	HD-200-400
250 (10)	350 (14)	124 (4.875)	2	25 (1)	6	HD-250-350
250 (10)	400 (16)	124 (4.875)	2	38 (1.5)	6	HD-250-400
250 (10)	450 (18)	124 (4.875)	2	51 (2)	6	HD-250-450
300 (12)	400 (16)	152 (6)	2	25 (1)	6	HD-300-400
300 (12)	450 (18)	152 (6)	2	38 (1.5)	6	HD-300-450
300 (12)	500 (20)	152 (6)	2	51 (2)	6	HD-300-500
350 (14)	450 (18)	152 (6)	4	25 (1)	8	HD-350-450
400 (16)	500 (20)	152 (6)	4	25 (1)	8	HD-400-500
450 (18)	550 (22)	152 (6)	5	25 (1)	10	HD-450-550
500 (20)	610 (24)	152 (6)	5	25 (1)	10	HD-500-610

<sup>\*</sup>All Silvertip<sup>™</sup> High-Density Polyethylene (HD) spacers are molded to fit IPS OD (steel and PVC) carrier pipe. Contact your sales representative for sizing and product selection assistance.

