

# **Experience and a History in Construction Products**

Although Blue Diamond Industries was established in 2004, the management team has experience in the engineered construction products industry that spans decades with some of the largest and most reputable manufacturers in the pipe industry. BDI understands its customers in construction and commits to be "easy to do business with," by supplying quality products at competitive prices, and delivering on time. Once a customer, Blue Diamond continually strives to earn your loyalty.

# **HDPE Conduit Division**

The conduit manufacturing division in Middlesboro, KY has been producing high density polyethylene (HDPE) pipe for over 25 years. BDI innerduct and conduit provide security and protection to fiber optic and coaxial networks, the communications lifelines. Cable in Conduit (CIC) protects electric lines for street lighting, signalization projects and "Intelligent Highway Systems." BDI conduit is manufactured to the latest ASTM specifications as well as being registered to produce RUS & UL Certified products in diameters ranging from 1/2" through 6" diameter in virtually every color and striping identification system imaginable. BDI is agile and



customer focused. By being able to change product styles and respond to requirements quickly, BDI gives each customer flexibility and dependable service.

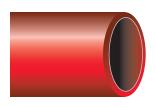
# **Corrugated Plastic Pipe (CPP) Division:**

In March of 2006, BDI purchased the assets of Plastic Tubing (PTI) in Roseboro, NC and Oneonta, AL.

PTI began operations in 1969, and was responsible for many innovations in the corrugated plastic pipe industry. BDI manufactures corrugated PE pipe for highway, commercial, agricultural and environmental markets in 3" through 24", in both single and double-wall to the latest AASHTO and ASTM specifications.



## **Product types.**



## Smooth wall innerduct.

Smooth wall is the standard High Density Polyethylene (HDPE) Duct. The interior of smooth wall has a glass-like finish which delivers the lowest coefficient of friction of all available non-lubricated innerduct. Smooth wall innerduct is a durable high quality product for direct burial applications.



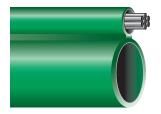
### Ribbed wall innerduct.

Blue Diamond's ribbed wall innerduct is designed to allow extremely long cable pulls to glide through the interior raised ribs. All ribbed wall innerduct is internally ribbed and available in any SDR and SIDR rating.



## Tracer wire innerduct.

Tracer wire innerduct provides a method of locating underground fiber optic cable. The tracer wire is a single copper wire co-extruded onto the wall of the innerduct providing a corrosion resistant conductor. An alternative method of locating buried fiber optic cable is to use traceable tape, available pre-installed in any of our duct products.



### Figure 8 innerduct.

Blue Diamond's figure 8 innerduct features a high tensile galvanized support strand for aerial placement of duct. The support strand is an integral component of the co-extruded duct. Limited sizes & availability. Call for information.

|  | Colors & Identification   |  |  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|--|--|
| Standard colors<br>available in:         White, black, blue, green, red, orange, lilac, grey, yellow, brown, buff, terra cotta<br>*Special colors are available. |   |  |  |  |  |  |  |  |  |
| Striping: Striping combinations are available in all colors in combinations of single, double triple and quad stripes.   |   |  |  |  |  |  |  |  |  |
| Identification:  | <ul> <li>Innerduct size, SDR and sequential markings every 2' are laser imprinted on every order.</li> <li>Custom imprints such as company name, project name or any other special identification markings are also available.</li> </ul> |  |  |  |  |  |  |  |  |
| Options:   | <ul> <li>Lubrication.</li> <li>Up to four lengths/colors of innerduct per reel available in parallel or series.</li> <li>Pre-installed pull tape or tracer tape.</li> </ul>   |  |  |  |  |  |  |  |  |

# **Reel Capacities.**

| Pipe Size | reel size = flange x traverse x drum |             |            |           |           |           |           |            |  |  |  |  |
|-----------|--------------------------------------|-------------|------------|-----------|-----------|-----------|-----------|------------|--|--|--|--|
|           | 48x45x30                             | 60x45x304   | 72x45x30   | 84x45x30  |           |           |           |            |  |  |  |  |
| 1/2"      | 5,000                                | 20,000      | 17,500     | 25,000    |           |           |           |            |  |  |  |  |
|           | 40.45.20                             | CO 45 - 204 | 70 45 - 20 | 04-45-20  | ,<br>     |           |           |            |  |  |  |  |
| 3/4"      | 48x45x30                             | 60x45x304   | 72x45x30   | 84x45x30  |           |           |           |            |  |  |  |  |
|           | 3,500                                | 7,000       | 10,000     | 20,000    |           |           |           |            |  |  |  |  |
| 1"        | 48x45x30                             | 60x45x304   | 72x45x30   | 84x45x30  | 96x45x30  | 102x45x30 |           |            |  |  |  |  |
| •         | 2,000                                | 4,500       | 7,000      | 10,000    | 14,000    | 16,000    |           |            |  |  |  |  |
|           | 60x45x304                            | 72x45x30    | 84x45x30   | 96x45x30  | 102x45x30 |           |           |            |  |  |  |  |
| 1 1/4"    |                                      | 4,500       |            |           |           |           |           |            |  |  |  |  |
|           | 2,500                                |             | 6,500      | 8,500     | 10,000    |           |           |            |  |  |  |  |
| 1 1/2"    | 72x45x36                             | 84x45x36    | 96x38x36   | 96x45x36  | 102x42x30 | 114x42x30 |           |            |  |  |  |  |
| 1 1/2     | 3,000                                | 4,500       | 5,000      | 6,000     | 7,500     | 9,000     |           |            |  |  |  |  |
|           | 72x45x42                             | 84x45x42    | 96x45x42   | 102x45x42 | 114x45x48 |           |           |            |  |  |  |  |
| 2"        | 1,500                                | 2,500       | 3,750      | 4,500     | 6,000     |           |           |            |  |  |  |  |
|           | 04-45-40                             | 00.45.40    | 400-45-40  | 444-45-40 |           |           |           |            |  |  |  |  |
| 2 1/2"    | 84x45x48                             | 96x45x48    | 102x45x48  | 114x45x48 |           |           |           |            |  |  |  |  |
|           | 1,500                                | 2,000       | 2,500      | 3,500     |           |           |           |            |  |  |  |  |
| 3"        | 84x45x54                             | 96x45x64    | 102x45x64  | 114x45x64 |           |           |           |            |  |  |  |  |
| 3         | 1,000                                | 1,200       | 1,500      | 2,000     |           |           |           |            |  |  |  |  |
|           | 96.7/                                | 5x72        | 102v/      | 45x72     |           |           |           | 45x72      |  |  |  |  |
| 4"        | 550 SDR                              | 500 SIDR    | 700 SDR    | 700 SIDR  | 1,000 SDR | 900 SIDR  | 1,250 SDR | 1,100 SIDR |  |  |  |  |

|   | 5" | 102x45x78 | 114x45x78 | 120x45x78 |  |  |
|---|----|-----------|-----------|-----------|--|--|
|   | 5  | 400       | 600       | 750       |  |  |
| Ì |    |           |           | 1         |  |  |
|   | 6" | 114x45x84 | 120x45x84 |           |  |  |
|   | U  | 275       | 400       |           |  |  |

375'

\*Parallelling duct will decrease maximum reel capacities.

# **Respool Footages**<sup>\*</sup>. (Parallel or Segment)

| Pipe Size | 2-Way  | 3-Way  | 4-Way  |  |
|-----------|--------|--------|--------|--|
| 1"        | 5,000' | 3,300" | 2,500' |  |
| 1 1/4"    | 3,600' | 2,500' | 1,800' |  |
| 1 1/2"    | 2,500' | 1,500' | 1,250' |  |
| 2"        | 1,500' | 1,000' | 750'   |  |
|           |        |        |        |  |

| Reels per Truckload |    |  |  |  |  |  |
|---------------------|----|--|--|--|--|--|
| 72"                 | 16 |  |  |  |  |  |
| 84"                 | 14 |  |  |  |  |  |
| 96"                 | 12 |  |  |  |  |  |
| 102"                | 11 |  |  |  |  |  |
|                     | •  |  |  |  |  |  |
| 114"                | 8  |  |  |  |  |  |
| 120"                | 8  |  |  |  |  |  |

\*Footage based on standard 96" reels. \*\*Footage is based on equal lengths. Special put ups are available.

3"

| -                    | 2160 SDF<br>Data | <b>`</b>      | SDR 9    |                  |               | SDR 11   |                  | SDR 13.5      |          |                  |  |
|----------------------|------------------|---------------|----------|------------------|---------------|----------|------------------|---------------|----------|------------------|--|
| Nominal<br>Duct Size | Nominal<br>OD    | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft |  |
| 1/2"                 | 0.840            | 0.633         | 0.093    | 0.099            | 0.667         | 0.076    | 0.085            | 0.696         | 0.062    | 0.072            |  |
| 3/4"                 | 1.050            | 0.797         | 0.117    | 0.152            | 0.839         | 0.095    | 0.130            | 0.874         | 0.078    | 0.110            |  |
| 1"                   | 1.315            | 1.003         | 0.146    | 0.235            | 1.051         | 0.120    | 0.200            | 1.100         | 0.097    | 0.168            |  |
| 1 1/4"               | 1.660            | 1.270         | 0.184    | 0.372            | 1.338         | 0.151    | 0.314            | 1.394         | 0.123    | 0.264            |  |
| 1 1/2"               | 1.900            | 1.452         | 0.211    | 0.488            | 1.534         | 0.173    | 0.409            | 1.599         | 0.141    | 0.343            |  |
| 2"                   | 2.375            | 1.816         | 0.264    | 0.763            | 1.917         | 0.216    | 0.639            | 2.002         | 0.176    | 0.531            |  |
| 2 1/2"               | 2.875            | 2.198         | 0.319    | 1.117            | 2.321         | 0.261    | 0.936            | 2.424         | 0.213    | 0.778            |  |
| 3"                   | 3.500            | 2.676         | 0.389    | 1.655            | 2.825         | 0.318    | 1.387            | 2.950         | 0.259    | 1.151            |  |
| 4"                   | 4.500            | 3.440         | 0.500    | 2.737            | 3.633         | 0.409    | 2.292            | 3.794         | 0.333    | 1.903            |  |
| 5"                   | 5.562            | 4.252         | 0.618    | 4.181            | 4.490         | 0.506    | 3.505            | 4.689         | 0.412    | 2.912            |  |
| 6"                   | 6.625            | 5.064         | 0.824    | 5.931            | 5.348         | 0.602    | 4.971            | 5.585         | 0.491    | 4.130            |  |

ASTM F 2160 SDR Pipe Data

SDR 15.5

**SDR 17** 

## SCH 40

| Nominal<br>Duct Size | Nominal<br>OD | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft | Nominal<br>ID | Min Wall | Weight<br>Ibs/ft |
|----------------------|---------------|---------------|----------|------------------|---------------|----------|------------------|---------------|----------|------------------|
| 1/2"                 | 0.840         | _             | _        | _                |               | _        | _                | _             | _        |                  |
| 3/4"                 | 1.050         | 0.895         | 0.068    | 0.098            | 0.906         | 0.062    | 0.092            | 0.804         | 0.113    | 0.148            |
| 1"                   | 1.315         | 1.147         | 0.084    | 0.149            | 1.140         | 0.077    | 0.139            | 1.029         | 0.133    | 0.218            |
| 1 1/4"               | 1.660         | 1.426         | 0.107    | 0.235            | 1.445         | 0.098    | 0.218            | 1.360         | 0.140    | 0.295            |
| 1 1/2"               | 1.900         | 1.635         | 0.123    | 0.305            | 1.656         | 0.112    | 0.282            | 1.590         | 0.145    | 0.352            |
| 2"                   | 2.375         | 2.049         | 0.153    | 0.470            | 2.076         | 0.140    | 0.434            | 2.047         | 0.154    | 0.472            |
| 2 1/2"               | 2.875         | 2.482         | 0.185    | 0.685            | 2.516         | 0.169    | 0.629            | 2.445         | 0.203    | 0.744            |
| 3"                   | 3.500         | 3.021         | 0.226    | 1.015            | 3.064         | 0.206    | 0.932            | 3.042         | 0.216    | 0.974            |
| 4"                   | 4.500         | 3.885         | 0.290    | 1.676            | 3.939         | 0.265    | 1.540            | 3.896         | 0.282    | 1.649            |
| 5"                   | 5.562         | 4.801         | 0.359    | 2.563            | 4.868         | 0.327    | 2.352            | 5.009         | 0.258    | 1.904            |
| 6"                   | 6.625         | 5.719         | 0.427    | 3.637            | 5.799         | 0.390    | 3.337            | 6.031         | 0.280    | 2.444            |

### ASTM D 2239 SIDR Pipe Data

SIDR 9

SIDR 11.5

### SIDR 15

| Nominal<br>Duct Size | Nominal<br>ID | Nominal<br>OD | Min Wall | Weight<br>Ibs/ft | Nominal<br>OD | Min Wall | Weight<br>Ibs/ft | Nominal<br>OD | Min Wall | Weight<br>Ibs/ft |
|----------------------|---------------|---------------|----------|------------------|---------------|----------|------------------|---------------|----------|------------------|
| 1"                   | 1.049         | 1.302         | 0.117    | 0.193            | 1.251         | 0.091    | 0.151            | 1.209         | 0.070    | 0.117            |
| 1 1/4"               | 1.380         | 1.707         | 0.153    | 0.328            | 1.640         | 0.120    | 0.255            | 1.584         | 0.092    | 0.197            |
| 1 1/2"               | 1.610         | 1.989         | 0.179    | 0.444            | 1.910         | 0.140    | 0.343            | 1.845         | 0.107    | 0.264            |
| 2"                   | 2.067         | 2.554         | 0.230    | 0.732            | 2.448         | 0.180    | 0.559            | 2.363         | 0.138    | 0.426            |
| 2 1/2"               | 2.469         | 3.051         | 0.274    | 1.044            | 2.924         | 0.215    | 0.798            | 2.818         | 0.165    | 0.600            |
| 3"                   | 3.068         | —             | —        | —                | 3.634         | 0.267    | 1.232            | 3.502         | 0.205    | 0.926            |
| 4"                   | 4.026         | —             | —        | —                | 4.768         | 0.350    | 2.122            | 4.595         | 0.268    | 1.595            |
| 5"                   | 5.046         | —             | —        | —                | 5.976         | 0.439    | 3.334            | 5.759         | 0.336    | 2.506            |

Please note that some sizes and dimensions may require additional equipment or extended lead times and may be required to be manufactured in straight lengths. Please inquire for details.

# 🕕 UL Listed HDPE.

UL Listed HDPE is a nonmetallic flexible raceway manufactured from High Density Polyethylene used for underground or innerduct applications to protect cables and wires. UL Listed HDPE is compliant with the 2005 NEC Article 353 and is listed to UL 651. Its high tensile strength-to-weight ratio, superior crush resistance and low coefficient of friction for cable installation makes it ideal for directional boring.

| Options:                               | UL 651 Listed        |                | SCH 40         |                |                  | SCH 80         |                |                  | SDR 13.5       |                |                  |
|--|----------------------|----------------|----------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|
| Sizes 1" - 6"<br>Schedule 40           | Nominal<br>Duct Size | Nominal<br>OD  | Nominal<br>ID  | Min Wall       | Weight<br>Ibs/ft | Nominal<br>ID  | Min Wall       | Weight<br>Ibs/ft | Nominal<br>ID  | Min Wall       | Weight<br>Ibs/ft |
| Schedule 80                            | 3/4"                 | 1.050<br>1.315 | 0.804          | 0.113          | 0.148<br>0.218   | 0.722          | 0.154<br>0.179 | 0.189<br>0.278   |                |                |                  |
| Sizes 2" - 4" SDR 13.5                 | 1 1/4"               | 1.660          | 1.360          | 0.140          | 0.295            | 1.255          | 0.191          | 0.384            |                |                |                  |
| Multiple color and striping options    | 1 1/2"<br>2"         | 1.900<br>2.375 | 1.590<br>2.047 | 0.145<br>0.154 | 0.352<br>0.472   | 1.476<br>1.913 | 0.200<br>0.218 | 0.465<br>0.644   | 2.002          | 0.176          | 0.531            |
| Sequentially marked footage            | 2 1/2"<br>3"         | 2.875<br>3.500 | 2.445 3.042    | 0.203          | 0.744<br>0.974   | 2.290          | 0.276<br>0.300 | 0.983<br>1.316   | 2.424<br>2.950 | 0.213<br>0.259 | 0.778<br>1.151   |
| Conforms to NEMA TC-7 Smoothwall       | 4"<br>5"             | 4.500<br>5.562 | 3.998<br>5.009 | 0.237          | 1.387<br>1.904   | 3.786<br>4.768 | 0.337<br>0.375 | 1.924<br>2.671   | 3.794          | 0.333          | 1.903            |
| Coilable PE Electrical Plastic Conduit | 6"                   | 6.625          | 6.031          | 0.280          | 2.444            | 5.709          | 0.432          | 3.674            |                |                |                  |

## **Blue Diamond HDPE is RUS Listed.**

# **CIC (Cable In Conduit) HDPE.**

BDI has the capability of installing power and telecom cable inside the conduit at the manufacturing facility. Applications include DOT street or airport lighting projects, coax and fiber optic cable for the telecom, CCTV security FTTH, and CATV industries, power utility, and command/control wiring for pipelines and irrigations systems.

#### Features and Benefits:

Long continuous lengths on steel reels, perfect for directional drilling, plowing, or trenching One step installation a economical advantage over PVC "sticks"-short lengths Conduit diameters available from 1/2" through 6" Conduit protects single or multiple cables before, during and after installation adhering to UL, NEC and Bellcore standards Blue Diamond will also install customer supplied cable

#### **Conduit Specifications:**

Resin material per ASTM D 3350 Manufactured to ASTM F 2160 and NEMA TC 7 UL 651 certified duct available conforming to NEC Article 353 CIC per NEC and ASTM D 3485 Conduit available in Schedule 40 and 80 and SDR 13.5 and 11 A variety of color and striping combinations available with identification and continuous footage markings



# **Accessory Products.**

Blue Diamond offers a variety of HDPE accessories to meet the individual needs of your project. Blue Diamond can provide coupling devices ranging from aluminum to plastic, transition couplers to watertight options. Blue Diamond has a solution for both SDR and SIDR innerduct.

Blue Diamond also offers an extensive line of duct plugs, vinyl endcap and pull tape options. We work with many of the top suppliers in the country to provide a solution to every need. We can install polyester pull tape ranging from 1000# to 6000# by request. Blue Diamond also offers a detectable pull tape with a copper conductor woven into the pull tape giving you a single product for detecting, measuring and pulling.





## **Blue Diamond Vaults.**

In addition to the extensive line of accessory products, Blue Diamond also

offers a variety of surface access storage vaults. The Blue Diamond MOV 300 vault series offers PVC constructed handhold chambers in rectangular and circular designs. Prices include aluminum treadplate lids and all hardware for installation.



The MOV 300 series are specifically designed for fiber optic OSP underground applications. The MOV 330-WT is a watertight version of the popular handhole designed to provide a watertight environment for electronic components to prevent the infiltration of natural groundwater in the vault.

The Blue Diamond OptiVault is a surface access storage vault designed to house slack cable, amplifiers, and splice closures for underground cable construction. With a 29" surface entry, the OptiVault is available in 3 heights and a standard 48" internal

diameter. The OptiVault is manufactured from HDPE for easy handling and installation. The OptiVault is RUS/USDA listed and has lid options

ranging from traffic rated, to concrete filled. This unique design is an innovative and cost effective solution for your outside plant application.





### **Corporate Headquarters – Sales Offices**

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