



**Flying W Plastics, Inc.**

## ***HDPE Utility Service Conduit***

**ASTM F-2160**



**APPLICATIONS:**

**ELECTRICAL DUCT  
TELEPHONE DUCT  
TELEVISION CABLE DUCT**

**800-327-4735**



## Flying W Plastics, Inc.

Flying "W" Plastics manufactures **Utility Service Conduit** from High Density Polyethylene in accordance with the specifications of ASTM F-2160 and/or NEMA TC 7. Other dimensional requirements may be acceptable upon request.

**Utility Service Conduit** offers excellent characteristics that make it ideal for conduit, including:

- High strength to endure heavy external loads.
- Its flexibility, toughness, lightness, and impact resistance help lower installation cost
- Resist corrosive chemicals and aggressive soils.
- Long term strength for increased life and performance.
- Moisture proof and watertight.
- Coils provide for fewer joints and lower installation costs.
- Does not support biological growth.
- Color-coded for easy identification.

To decrease costly shoring and hazardous working conditions the duct can be assembled above the ditch, plowed in, buried in open ditches or pulled through existing conduit.

**Utility Service Conduit** shall be joined by either heat fusion or mechanical fittings. Flying "W" Plastics offers **Utility Service Conduit** in various sizes and wall thickness, some of which are covered in the charts on next pages. The duct may be ordered in continuous coils, with or without steel reels, or produced in straight lengths up to 50 feet

Flying "W" Plastics stocks a vast supply of **Utility Service Conduit** to meet most applications. Special orders are also accepted with usually one of the quickest turnaround in the business. We have our own truck fleet and ship anywhere in the continental United States. Less than truckload orders are shipped on common carriers that offer cost effective and timely service. Hot Shot services for quick delivery needs are also available.

The physical properties of Utility Service Conduit are covered on page 9. For more information, contact us for a distributor in your area, or visit us on the web at [www.flyingwplastics.com](http://www.flyingwplastics.com).



## Flying W Plastics, Inc.

### UTILITY SERVICE CONDUIT DIMENSIONAL SPECIFICATIONS

The following table represents the specifications of ASTM F-2160 and NEMA TC-7 for O.D. controlled conduit. 1"-6" Sizes.

Sizes	Wall Thickness	Nominal O. D.	Nominal I. D.	Minimum Wall	Nominal Lbs/ft	Standard Coil/Reel Lengths	Standard Truck	Steel Reel Size FxTxD*
1"	SDR 9	1.315"	1.00"	.146"	0.23	500'	117000'	Coils
	SDR 11	1.315"	1.07"	.120"	0.20	5000'	80000'	70x38x30
	SDR 13.5	1.315"	1.12"	.097"	0.17	8000'	96000'	84x43x36
1 ¼"	SDR 9	1.660"	1.26"	.184"	0.37	500'	78000'	Coils
	SDR 11	1.660"	1.34"	.151"	0.31	2000'	32000'	70x28x30
	SDR 13.5	1.660"	1.39"	.123"	0.26	5000'	70000'	84x42X36
	SDR 15.5	1.660"	1.44"	.107"	0.23	8000'	96000'	96x43x30
1 ½"	SDR 9	1.900"	1.45"	.211"	0.49	500'	36000'	Coils
	SDR 11	1.900"	1.53"	.173"	0.41	4000'	56000'	84x42x36
	SDR 13.5	1.900"	1.60"	.141"	0.34	6000'	72000'	96x45x36
2"	SDR 9	2.375"	1.81"	.264"	0.76	500'	24500'	Coils
	SDR 11	2.375"	1.91"	.216"	0.64	1000'	18000'	70x42x36
	SDR 13.5	2.375"	2.00"	.176"	0.53	2500'	35000'	84x42x36
	SDR 15.5	2.375"	2.04"	.153"	0.47	4000'	48000'	96x45x36
	SDR 17	2.375"	2.07"	.140"	0.43			
2 ½"	SDR 11	2.875"	2.32"	.261"	0.94	1500'	18000'	96x38x55
	SDR 13.5	2.875"	2.42"	.213"	0.78			
3"	SDR 11	3.500"	2.86"	.318"	1.39	500'	12000'	Coils
	SDR 13.5	3.500"	2.98"	.259"	1.15	1000'	12000'	96x38x55
	SDR 15.5	3.500"	3.04"	.226"	1.02	1250'	15000'	96x45x55
4"	SDR 9	4.500"	3.50"	.500"	2.77	500'	6000'	Coils
	SDR 11	4.500"	3.68"	.409"	2.29	550'	6600'	96x45x70
	SDR 13.5	4.500"	3.83"	.333"	1.90	750'	9000'	102x45x70
	SDR 15.5	4.500"	3.92"	.290"	1.68			
5"	SDR 11	5.563"	4.55"	.506"	3.50	500'	4000'	114x45x80
	SDR 13.5	5.563"	4.73"	.412"	2.91	500'		
6" **	SDR 11	6.625"	5.42"	.602"	4.97	450'	3600'	120x45x84
	SDR 13.5	6.625"	5.64"	.491"	4.13	450'		

\*Flange x Internal Traverse x Drum (in inches)

\*\* Coiled duct truckloads may require special state permits

Other reel and coil sizes are available upon request..

You may also visit us on the web at [flyingwplastics.com](http://flyingwplastics.com) for more information.



## Flying W Plastics, Inc.

### UTILITY SERVICE CONDUIT DIMENSIONAL SPECIFICATIONS

**Controlled (SIDR) HDPE Utility Service Conduit.** The following table represents the dimensional specifications of ASTM D-2239, and ASTM F-2160 for I.D.

Sizes	Wall Thickness	Nominal O. D.	Nominal I. D.	Minimum Wall	Nominal Lbs/ft	Standard Coil/Reel Lengths	Standard Truck	Steel Reel Size FxTxD*
1"	SIDR 11.5	1.231"	1.049"	.091"	0.15	5000'	80000'	70x38x30
	SIDR 15	1.189"	1.049"	.070"	0.11	8000'	96000'	84x43x36
1 ¼"	SIDR 9	1.690"	1.380"	.153"	0.33	5000'	70000'	84x42X36
	SIDR 11.5	1.627"	1.380"	.120"	0.25	8000'	96000'	96x43x30
1 ½"	SIDR 11.5	1.890"	1.610"	.140"	0.34	4000'	56000'	84x42x36
	SIDR 15	1.825"	1.610"	.107"	0.26	6000'	72000'	96x45x36
2"	SIDR 11.5	2.427"	2.067"	.180"	0.56	2500'	35000'	84x42x36
4"	SIDR 11.5	4.750"	4.026"	.350"	2.12	500'	6000'	96x45x70
						700'	8400'	102x45x70

**Ribbed HDPE Utility Service Conduit** is manufactured to specifications of ASTM F2160. It has a lower coefficient of friction when compared to smooth duct and is available in a wide variety of colors, stripes and sizes. See table below for specifications.

Sizes	Wall Thickness	Nominal O. D.	Nominal I. D.	Minimum Wall	Nominal Lbs/ft	Standard Coil/Reel Lengths	Standard Truck	Steel Reel Size FxTxD*
1"	13.5	1.315"	1.11"	.097"	.17	5000'	80000'	70x38x30
1 1/4"	13.5	1.660"	1.41"	.123"	.26	5000'	70000'	84x42x36
1 1/2"	13.5	1.900"	1.61"	.141"	.34	4000'	56000'	84x42x36
2"	13.5	2.375"	2.02"	.176"	.53	2500'	35000'	84x42x36
3"	13.5	3.500"	2.97"	.259"	1.15	1000'	12000'	96x38x55
4"	13.5	4.500"	3.82"	.333"	1.90	550'	6600'	96x45x70

\*Flange x Internal Traverse x Drum (in inches)



## Flying W Plastics, Inc.

### UTILITY SERVICE CONDUIT DIMENSIONAL SPECIFICATIONS

#### Schedule 40 and Schedule 80 HDPE conduit.

The following table represents the specifications of ASTM F-2160 for O.D. Controlled.

Sizes	Wall Thickness	Nominal O. D.	Nominal I. D.	Minimum Wall	Nominal Lbs/ft	Standard Coil/Reel Lengths	Standard Truck	Reel Size FxTxD*
1"	SCH 40	1.315"	1.04"	.133"	0.22	5000'	80000'	70x38x30
	SCH 80	1.315"	0.95"	.179"	0.28	8000'	96000'	84x43x36
1 ¼"	SCH 40	1.660"	1.38"	.140"	0.29	5000'	70000'	84x42x36
	SCH 80	1.660"	1.27"	.191"	0.39	8000'	96000'	96x43x30
1 ½"	SCH 40	1.900"	1.61"	.145"	0.35	4000'	56000'	84x42x36
	SCH 80	1.900"	1.50"	.200"	0.47	6000'	72000'	96x45x36
2"	SCH 40	2.375"	2.06"	.154"	0.47	2500'	35000'	84x42x36
	SCH 80	2.375"	1.93"	.218"	0.64	4000'	48000'	96x45x36
2 ½"	SCH 40	2.875"	2.46"	.203"	0.75	1500'	18000'	96x38x55
	SCH 80	2.875"	2.32"	.276"	0.99			
3"	SCH 40	3.500"	3.06"	.216"	0.98	1000'	12000'	96x38x55
	SCH 80	3.500"	2.90"	.300"	1.32	1250'	15000'	96x45x55
4"	SCH 40	4.500"	4.02"	.237"	1.39	20' & 40'	16240'	Sticks Only
	SCH 80	4.500"	3.82"	.337"	1.92	550'	6600'	96x45x70
5"	SCH 40	5.563"	5.04"	.258"	1.89	20' & 40'	12160'	Sticks Only
	SCH 80	5.563"	4.81"	.375"	2.69			
6"	SCH 40	6.625"	6.03"	.280"	2.44	20' & 40'	7280'	Sticks Only
	SCH 80	6.625"	5.70"	.432"	3.67			
8"	SCH 40	8.625"	7.94"	.322"	3.68	40' & 50'	4480'	Sticks Only
10"	SCH 40	10.75"	9.97"	.365"	5.21	40' & 50'	2880'	Sticks Only
12"	SCH 40	12.75"	11.89"	.406"	6.90	40' & 50'	2240'	Sticks Only

\*Flange x Internal Traverse x Drum (in inches)

Other reel and coil sizes are available upon request.

You may also visit us on the web at [flyingwplastics.com](http://flyingwplastics.com) for more information.



## Flying W Plastics, Inc.

### HDPE Larger Diameter Conduit Available in 20', 40', and 50' lengths. Meets ASTM F 2160 Specifications

		SDR 9			SDR 11		
Pipe Size	Nominal OD	Min. Wall	Average ID	Weight (lbs/ft.)	Min. Wall	Average ID	Weight (lbs/ft.)
4"	4.500	0.500	3.44	2.74	0.409	3.63	2.29
5"	5.563	0.618	4.25	4.18	0.506	4.49	3.51
6"	6.625	0.736	5.06	5.93	0.602	5.34	4.97
8"	8.625	0.958	6.59	10.05	0.784	6.96	8.43
10"	10.750	1.194	8.21	15.62	0.977	8.67	13.09
12"	12.750	1.417	9.74	21.97	1.159	10.29	18.41
14"	14.000	1.556	10.70	26.49	1.273	11.30	22.20
		SDR 13.5			SDR 17		
Pipe Size	Nominal OD	Min. Wall	Average ID	Weight (lbs/ft.)	Min. Wall	Average ID	Weight (lbs/ft.)
4"	4.500	0.333	3.79	1.91	0.265	3.93	1.54
5"	5.563	0.412	4.68	2.91	0.327	4.86	2.35
6"	6.625	0.491	5.58	4.13	0.390	5.79	3.34
8"	8.625	0.639	7.27	7.00	0.507	7.54	5.66
10"	10.750	0.796	9.06	10.88	0.632	9.40	8.79
12"	12.750	0.944	10.74	15.30	0.750	11.16	12.36
14"	14.000	1.037	11.80	18.45	0.824	12.25	14.90



## Flying W Plastics, Inc.

Flying "W" Plastics manufactures HDPE Utility Service Conduit with pull tape or pull rope installed. The following table represents the characteristics listed by the manufacturer of the most popular applications for both rope and tape.

Product	Material	Approximate Width	Tensile Strength	Sequential Footage Markings	Pre-lubricated
Rope	Polypropylene	1/4"	1250 lbs.	No	No
Non Sequential Tape	Polyester	1/2"	1130 lbs.	No	No
Sequential Tape	Polyester	1/2"	1250 lbs.	Yes	Yes
Sequential Tape 1800	Polyester	5/8"	1800 lbs.	Yes	Yes
Sequential Tape 2500	Polyester	3/4"	2500 lbs.	Yes	Yes



HDPE Conduit with pull tape



HDPE Conduit with pull rope



## Flying W Plastics, Inc.

### PRODUCT SPECIFICATION & TECHNICAL INFORMATION UTILITY SERVICE CONDUIT

Flying “W” Plastics certifies the above product of be manufactured from select high density polyethylene copolymers (see typical properties below) and meet specifications set forth in ASTM D-3350, ASTM F-2160, and NEMA TC-7. The high density polyethylene copolymers are selected specifically for use in telecommunications, electrical/power or telephone ducting applications, while keeping in mind the required properties to balances stiffness, ESCR and molecular weight to provide toughness and crush strength.

Typical Properties (1)	English	SI Units	ASTM Method
Density	-	0.948 g/cc	D 4883
Melt Index <sup>2</sup>	-	0.22 g/10 min	D 1238
Tensile Strength @ Yield (2 in/min) @ Break (2 in/min)	3400 psi 4500 psi	23.4 MPa 31.0 MPa	D 638 D 638
Elongation @ Break (2 in/min)	>800%	>800%	D 638
Flexural Modulus <sup>3</sup>	130,000 psi	897 MPa	D 790
Hardness (Shore D)	68	68	D 2240
Deflection Temperature @ 66 psi	156 *F	69 *C	D 648
Brittleness Temperature	<-180 *F	<-118 *C	D 746
OIT @ 200 *C	>20 min.	>20 min.	D3895 Modified <sup>4</sup>
Environmental Stress Crack Residance <sup>5</sup>	>96 hrs	>96 hrs	D 1693
Environmental Stress Crack Resistance <sup>6</sup>	>192 hrs	>192 hrs	D 1693
Cell Classification	335430A	335430A	D 3350

(1) Typical properties will vary within specification limits

(2) 190 \*C / 2160g

(3) 2% Secant-Method 1

(4) Excludes Copper Mesh

(5) Condition B, 10% Igepal, F10

(6) Condition C, 100% Igepal, F20



## Flying W Plastics, Inc.

Flying "W" Plastics **Utility Service Conduit** is available in several colors or stripes depending upon application and customer request. The most common colors available are:

**Black**  
**Orange**  
**Red**  
**Yellow**  
**Mint Green**

**Blue**  
**Gray**  
**Brown**  
**Pink**  
**(Other colors available upon request)**

**Green**  
**White**  
**Lilac**  
**Buff**

**Utility Service Conduit** may be manufactured with carbon black or some other ultraviolet screening substance to protect the material from ultraviolet radiation.

**Utility Service Conduit** is available with pull rope, pull tape or empty depending upon customer request. It may also be pre-lubed, and/or ribbed inside.

If you do not see your exact application, or if you have any questions or would like a sales quotation, please contact our sales office by phone or fax at the numbers listed below. Our business hours are Monday through Friday 8:00am to 5:00pm EST.



## **FLYING W PLASTICS** **UTILITY SERVICE CONDUIT**

P.O. Box 759 Glenville, WV 26351 304-462-5779 Fax:304-462-7657 Sales 800-327-4735

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**Flying W Plastics, Inc.**

## **FLYING "W" PLASTICS**

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# **YOUR CONDUIT CONNECTION**

### **PRODUCTS:**

**P.V.C. Sewer & Drain Pipe**

**Polyethylene Gas Pipe**

**Polyethylene Water Pipe**

**Polyethylene Utility Pipe and Conduit**



**800-327-4735**