

Carlon® P&C Flex® Corrugated Flexible Conduit

Carlon® P&C Flex® Nonmetallic Corrugated Conduit makes power and communication installations faster and easier by providing maximum installation flexibility. The corrugated design is flexible enough to accommodate any degree of bend requirement. Unlike rigid conduit, it has a tight bend radius, making this product ideal for shallow trenches.

P&C Flex is manufactured to IPS dimensions and can be used with any existing conduit system using standard fittings. It is UV Resistant and suitable for a variety of applications including direct burial, under bridges, service entrance/FTTx terminations, manhole terminations, pedestal/enclosure terminations and running up utility poles or outside of buildings.

P&C Flex is available in sizes 3/4" though 4", with or without pull tape (1" through 4" only) and comes in a variety of convenient standard put-ups.

**The NEW
Sweep
Alternative**



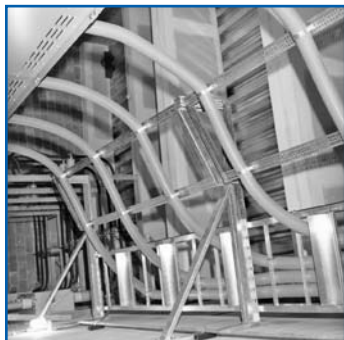
Features:

- Accommodates any degree of bend – ideal for shallow trenches.
- Easily handles offsets
- Manufactured to IPS dimensions – can be used with standard IPS coupling/fittings
- UV Resistant
- Can be used as a flexible sweep or raceway – one SKU can do multiple bends
- Available in sizes 3/4" though 4"
- Small put-ups for easy handling

Note: Not UL Listed



Applications



Innovative Solutions For Wire and Cable Management

P&C Flex Conduit

Part No.	Size	I.D.	O.D.	Pull Tape	Reel/ Coil	Std. Ctn. Qty. (Ft.)	Std. Ctn. Wt. (lbs.)
11807-350	3/4"	.83	1.040	Empty	Coil	350	39.9
1808-250C	1"	1.000	1.315	Empty	Coil	250	36.3
11808-5200	1"	1.000	1.315	Empty	Reel	5200	1144.0
11809-900	1 1/4"	1.340	1.660	Empty	Reel	900	246.6
11809-4500	1 1/4"	1.340	1.660	Empty	Reel	4500	1084.5
11810-250	1 1/2"	1.570	1.900	Empty	Reel	250	79.0
11810-4500	1 1/2"	1.570	1.900	Empty	Reel	4500	1084.5
11810T-2300	1 1/2"	1.570	1.900	1250 lb.	Reel	2300	455.4
11810T-250	1 1/2"	1.570	1.900	1250 lb.	Reel	250	80.0
11811-1100	2"	2.045	2.375	Empty	Reel	1100	655.6
11811-250	2"	2.045	2.375	Empty	Reel	250	97.0
11811-2500	2"	2.045	2.375	Empty	Reel	2500	1005.0
11811-700	2"	2.045	2.375	Empty	Reel	700	277.2
11811T-250	2"	2.045	2.375	1250 lb	Reel	250	98.0
11812-250	2 1/2"	2.469	2.875	Empty	Reel	250	176.0
11812AG-001	2 1/2"	2.469	2.875	Empty	Reel	1300	800.8
11813-1200	3"	3.068	3.500	Empty	Reel	1200	1122.0
11813-250	3"	3.068	3.500	Empty	Reel	250	248.0
11813-500	3"	3.068	3.500	Empty	Reel	500	193.0
11813-750	3"	3.068	3.500	Empty	Reel	750	723.8
11815-250	4"	4.026	4.500	Empty	Reel	250	324.0
11815-800	4"	4.026	4.500	Empty	Reel	800	811.2

P&C Flex Fittings

Couplings



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
E940E	3/4"	100	4.6
E940F	1"	50	3.5
E940G	1 1/4"	30	3.2
E940H	1 1/2"	25	3.4
E940J	2"	30	5.3
E940K	2 1/2"	20	7.5
E940L	3"	25	14.7
E940N	4"	15	12.5

Female Adapters



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
E942E	3/4"	100	4.3
E942F	1"	50	3.7
E942G	1 1/4"	30	3.3
E942H	1 1/2"	25	3.3
E942J	2"	30	5.4
E942K	2 1/2"	20	6.6
E942L	3"	25	11.8
E942N	4"	15	10.8

Terminal Adapters



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
E943E	3/4"	125	4.2
E943F	1"	50	3.0
E943G	1 1/4"	25	4.1
E943H	1 1/2"	25	2.7
E943J	2"	5	6.9
E943K	2 1/2"	20	6.3
E943L	3"	45	16.6
E943N	4"	15	11.7

Bell Ends (Schedule 40)



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
E997F	1"	50	2.6
E997G	1 1/4"	35	2.5
E997H	1 1/2"	30	2.5
E997J	2"	10	4.8
E997K	2 1/2"	10	2.0
E997L	3"	10	10.0
E997N	4"	30	16.0

Plugs



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
P258H	1 1/2"	50	1.7
P258JT	2"	60	3.1
P258K	2 1/2"	25	1.5
P258LT	3"	30	3.4
P258NT	4"	48	8.3

P&C Flex to HDPE Duct Transition Fittings



Part No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lbs.)
ELA-166154	1.66" to 1.54"	50	36.0
ELA-190154	1.90" to 1.54"	25	34.0

Technical Information

Performance Properties	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Stiffness F/Δy at 5% deflection	500	200	200	200	130	130	90
Impact Strength (Ft./Lbs.) 72°	40	40	50	50	70	120	140
Impact Strength (Ft./Lbs.) 32°	8	8	15	25	35	60	60
Minimum Bending Radius (inches)	6	6	7	8	12	15	18
Conduit Tensile Strength	300	400	500	700	1000	1500	2000

- Storage: -4°F to 158°F
- Handling: -4°F to 104°F

Sweep and Elbow Conversion Chart

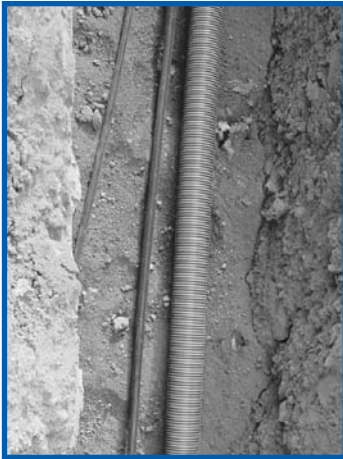
Radius (in.) Nom. Dia.	Segment	18" Required Length of P&C Flex (inches)	24" Required Length of P&C Flex (inches)	36" Required Length of P&C Flex (inches)	48" Required Length of P&C Flex (inches)	60" Required Length of P&C Flex (inches)
1 1/2"	90°	33	42	61	80	99
	45°	19	23	33	42	52
	30°	14	17	23	30	36
	22 1/2°	12	14	19	23	28
2"	90°	32	42	61	79	98
	45°	18	23	32	42	51
	30°	14	17	23	29	35
	22 1/2°	11	12	18	23	28
2 1/2"	90°	34	44	63	81	100
	45°	20	25	33	44	53
	30°	16	19	24	31	37
	22 1/2°	13	15	20	25	30
3"	90°	35	44	63	82	101
	45°	20	25	34	44	53
	30°	16	19	24	32	38
	22 1/2°	13	16	20	25	30
4"	90°	37	46	65	84	103
	45°	22	27	37	46	55
	30°	18	21	27	34	40
	22 1/2°	15	18	22	27	32

For other radius sweeps use this formula:

.0175 x Radius (inches) x Angle° = Required length of P&C flex in inches

Installation

Correct Method

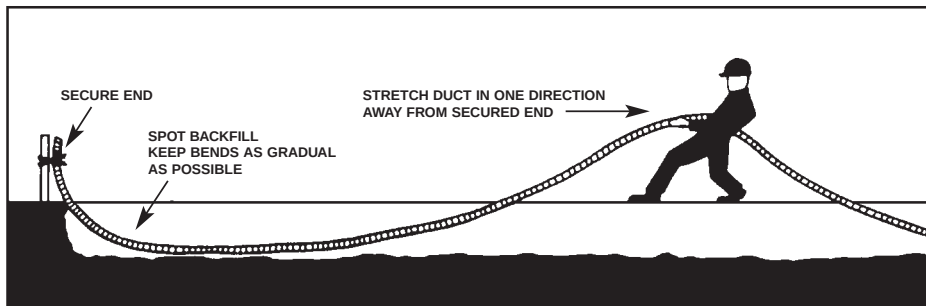


Lay conduit in the trench as straight as possible. Avoid undulations up and down and side to side.

Incorrect Method



Trenching



1. Trenching

Trench should be graded true and free from stones or soft spots. Backfill should also be free of stones and be firmly tamped around the sides of the conduit, to develop maximum supporting strength. Tamping on top of the conduit is not recommended.

2. Backfill

In rocky soil where it is impossible to have an even trench bottom, a selected backfill should be put in before laying the conduit. Selected backfill (not tamped) at least 6" over the top of the conduit is recommended. After final backfill is placed, tamping may be used to finish the grade.

3. Duct Placement

Duct may be unreeled directly into trench or along side trench and subsequently placed in trench. After placing in trench, secure one

end and stretch it by hand to take up the slack. Spot backfill to hold in position. Do not use mechanical stretching equipment.

4. Changes in Direction

Avoid unnecessary turns, dips, or changes in direction. Keep bends as gradual as possible to assure ease of cable pull-in after duct installation.

5. Pneumatic Rodding

All commonly used vacuum or pressure can be used to rod P&C Flex. The line carrier (mouse, puck, rocket) should be soft, flexible material designed to fit snugly into duct without interference.

6. Mechanical Rodding

All commonly used mechanical rodding equipment can be used to rod P&C Flex. The tip should have a ball-type arrangement to keep rod from catching in the convolutions on the inside of duct.

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