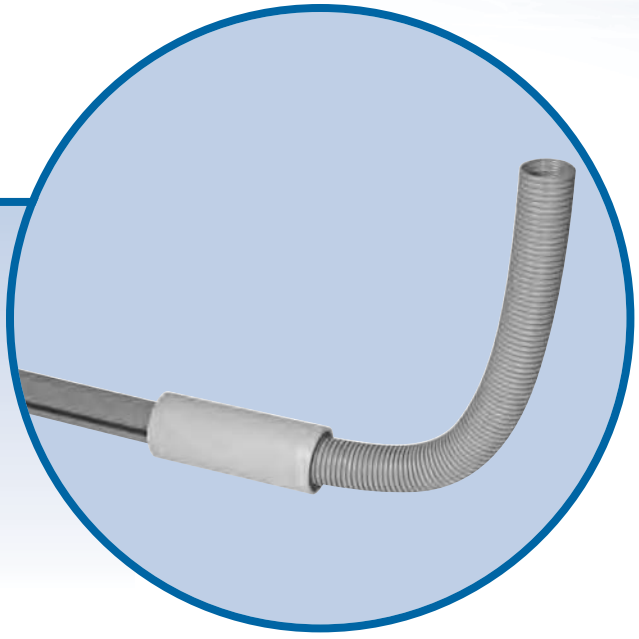
Carlon® P&C Flex™ Corrugated Flexible Conduit



Carlon® P&C Flex™ Non-Metallic 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.

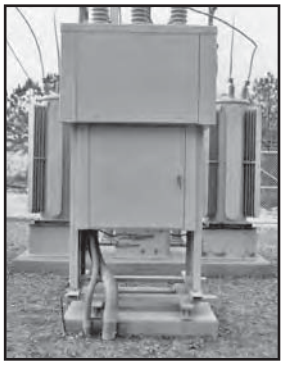
P&C Flex™ is available in sizes ¾" though 4", with or without pull tape (1" through 4" only) and comes in a variety of convenient standard put-ups.

Features:

- Accommodates any degree of bend — ideal for shallow trenches
  - For use with HDPE — Use ELA_ Series Fittings
  - For use with PVC — Use E940_ Series Fittings
- 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 ¾" though 4"
- Small put-ups for easy handling

NOTE: Not UL Listed.

Applications



Corporate Office
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

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Carlon®

P&C Flex™

P&C Flex Conduit

CAT. NO.	SIZE (IN.)	I.D. (IN.)	O.D. (IN.)	PULL TAPE	REEL/ COIL	STD. CTN. (FT.)	STD. WT. (LBS.)
11807-350	¾	.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	1019.0
11809-900	1¼	1.340	1.660	Empty	Reel	900	243.0
11809-4500	1¼	1.340	1.660	Empty	Reel	4500	972.0
11810-250	1½	1.570	1.900	Empty	Reel	250	75.8
11810-4500	1½	1.570	1.900	Empty	Reel	4500	1080.0
11810T-2300	1½	1.570	1.900	1250 lb.	Reel	2300	720.0
11810T-250	1½	1.570	1.900	1250 lb.	Reel	250	78.0
11811-1100	2	2.045	2.375	Empty	Reel	1100	521.4
11811-250	2	2.045	2.375	Empty	Reel	250	87.0
11811-2500	2	2.045	2.375	Empty	Reel	2500	815.0
11811-500	2	2.045	2.375	Empty	Reel	500	201.6
11811-700	2	2.045	2.375	Empty	Reel	700	269.0
11811T-250	2	2.045	2.375	1250 lb	Reel	250	89.0
11812-250	2½	2.469	2.875	Empty	Reel	250	121.0
11812AG-001	2½	2.469	2.875	Empty	Reel	1300	516.1
11813-1200	3	3.068	3.500	Empty	Reel	1200	850.8
11813-250	3	3.068	3.500	Empty	Reel	250	192.0
11813-500	3	3.068	3.500	Empty	Reel	500	523.0
11813-750	3	3.068	3.500	Empty	Reel	750	554.3
11815-250	4	4.026	4.500	Empty	Reel	250	324.0
11815-800	4	4.026	4.500	Empty	Reel	800	778.4

P&C Flex Fittings

Couplings

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
E940E	¾	100	4.6
E940F	1	50	3.5
E940G	1¼	30	3.2
E940H	1½	25	3.4
E940J	2	30	5.3
E940K	2½	20	7.5
E940L	3	25	14.7
E940N	4	15	12.5

Female Adapters

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
E942E	¾	100	4.3
E942F	1	50	3.7
E942G	1¼	30	3.3
E942H	1½	25	3.3
E942J	2	30	5.4
E942K	2½	20	6.6
E942L	3	25	11.8
E942N	4	15	10.8

Terminal Adapters

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
E943E	¾	125	4.2
E943F	1	50	3.0
E943G	1¼	25	4.1
E943H	1½	25	2.7
E943J	2	5	6.9
E943K	2½	20	6.3
E943L	3	45	16.6
E943N	4	15	11.7

Bell Ends (Schedule 40)

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
E997F	1	50	2.6
E997G	1¼	35	2.5
E997H	1½	30	2.5
E997J	2	10	4.8
E997K	2½	10	2.0
E997L	3	10	10.0
E997N	4	30	16.0

Plugs

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
P258H	1½	50	1.7
P258JT	2	60	3.1
P258K	2½	25	1.5
P258LT	3	30	3.4
P258NT	4	48	8.3

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Technical Information

PERFORMANCE PROPERTIES	¾"	1"	1¼"	1½"	2"	2½"	3"	4"
Stiffness F/ y at 5% deflection	200	200	200	200	200	130	130	90
Impact Strength (ft./lbs.) 72°	35	40	40	50	50	70	120	140
Impact Strength (ft./lbs.) 32°	5	8	8	15	25	35	60	60
Minimum Bending Radius (inches)	6	6	6	7	8	12	15	18
Conduit Tensile Strength	200	300	400	500	700	1000	1500	2000

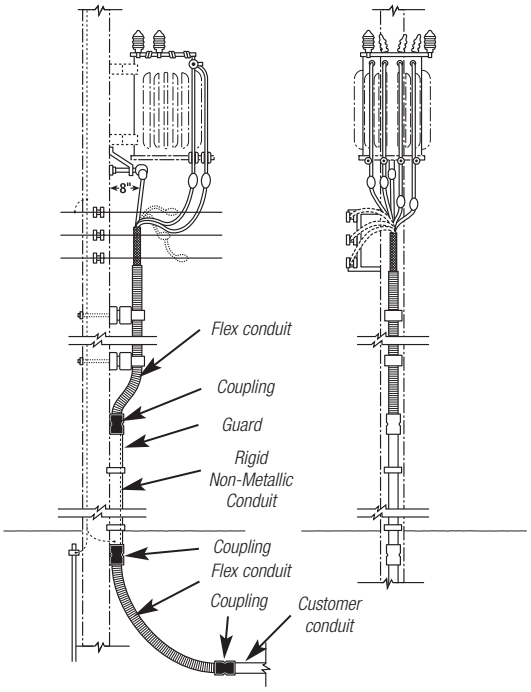
Storage: -4° to 158°F
Handling: -4° to 104°F

Sweep and Elbow Conversion Chart

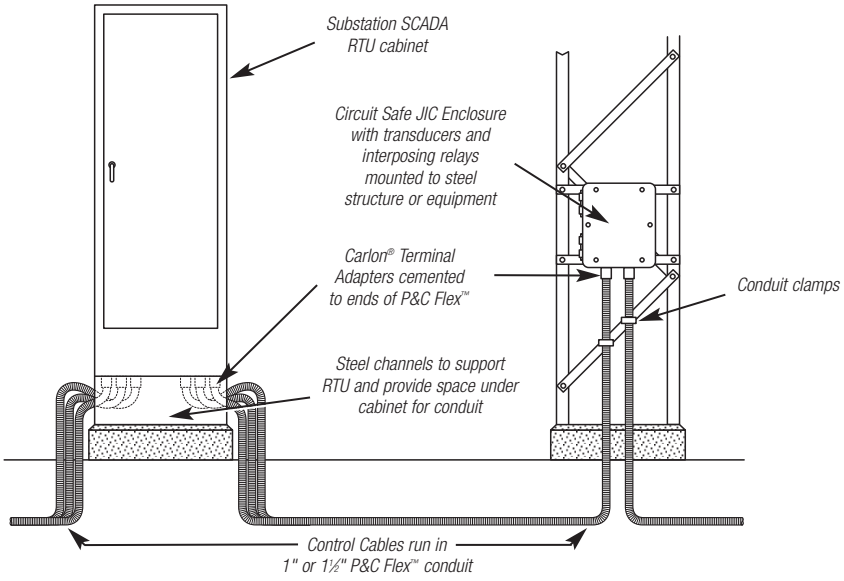
RADIUS (IN.) NOM. DIA.	SEGMENT	18" REQUIRED LENGTH OF P&C FLEX (IN.)	24" REQUIRED LENGTH OF P&C FLEX (IN.)	36" REQUIRED LENGTH OF P&C FLEX (IN.)	48" REQUIRED LENGTH OF P&C FLEX (IN.)	60" REQUIRED LENGTH OF P&C FLEX (IN.)
1½	90º	33	42	61	80	99
	45º	19	23	33	42	52
	30º	14	17	23	30	36
	22½º	12	14	19	23	28
2	90º	32	42	61	79	98
	45º	18	23	32	42	51
	30º	14	17	23	29	35
	22½º	11	12	18	23	28
2½	90º	34	44	63	81	100
	45º	20	25	33	44	53
	30º	16	19	24	31	37
	22½º	13	15	20	25	30
3	90º	35	44	63	82	101
	45º	20	25	34	44	53
	30º	16	19	24	32	38
	22½º	13	16	20	25	30
4	90º	37	46	65	84	103
	45º	22	27	37	46	55
	30º	18	21	27	34	40
	22½º	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

Technical Information



P&C Flex™ conduit is flexible. Carlon® P&C Flex™ Non-Metallic Corrugated Conduit is used to transition from Carlon® P&C Duct Type DB. Despite equipment being mounted away from the pole, P&C Flex™ conduit remains flush to the pole.



Carlon® P&C Flex™ Non-Metallic Corrugated Conduit protects control cables in supervisory control and data acquisition equipment (SCADA) in distribution substations. Flexibility provides maximum utilization of equipment.

When soil conditions do not permit direct burial of cable, use Carlon® P&C Flex™ Non-Metallic Corrugated Conduit to protect the cable. A lower coefficient of friction provides easy wire pulls on location. Flexibility eliminates the need for elbows.

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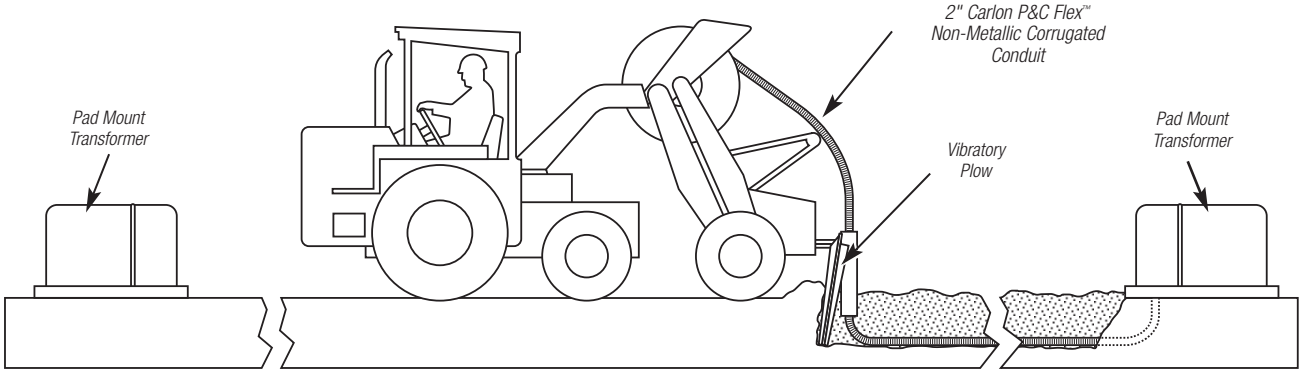
Suggested Applications

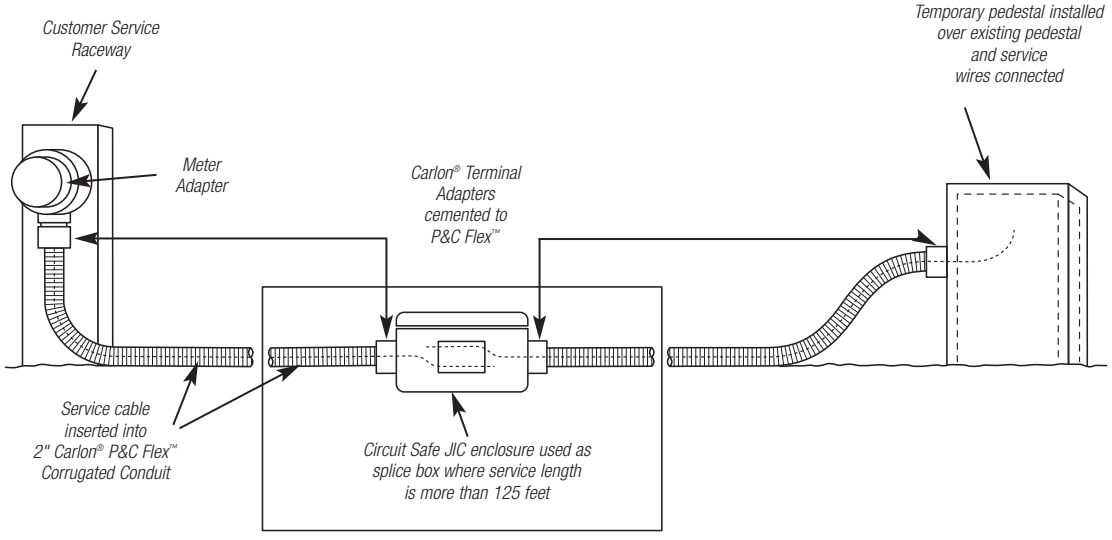
- Carlon® P&C Flex™ Non-Metallic Corrugated Conduit is the most versatile system available for power and communications applications
- P&C Flex™ combines high crush strength with flexibility. Longer coil lengths reduce installation time

Here are a few application ideas that illustrate how P&C Flex® can be effectively used:

In single-phase underground primary systems, lower the cost of direct buried and standard conduit systems by installing P&C Flex™ Non-Metallic Corrugated Conduit with a vibratory plow.

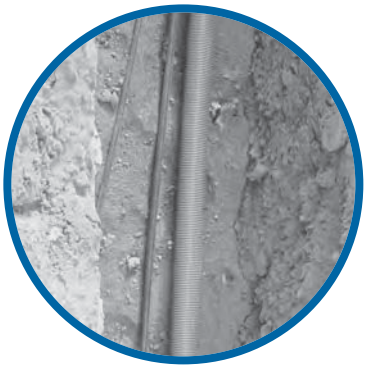


Digging up faulty cable in frozen ground can be expensive and time consuming. Use Carlon® P&C Flex™ from the customer service raceway to the temporary service pedestal to restore power on an interim basis. When the service length is more than 250 feet, use a splice box and an additional length of P&C Flex™ Non-Metallic Corrugated Conduit.



Installation

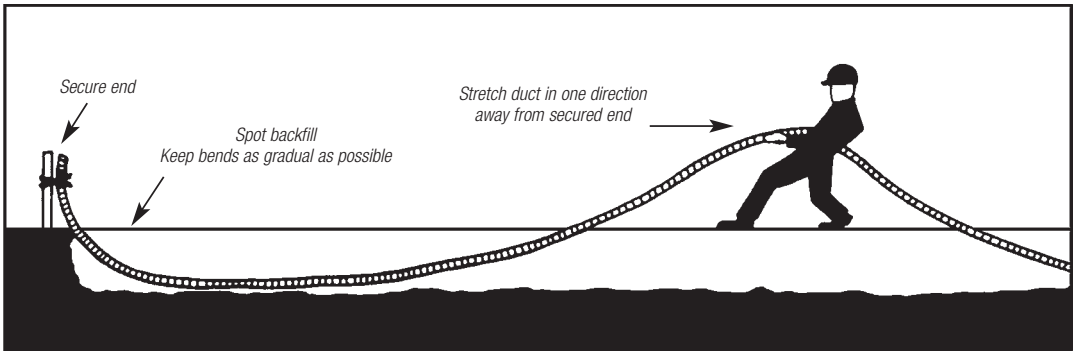
Incorrect Method



Correct Method

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

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 ensure ease of cable pull-in after duct installation.

5 Pneumatic Rodding

All commonly used vacuum or pressure rodding equipment 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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