Table of Contents

Rigid Nonmetallic Conduit

Carlon® Schedule 40 PVC Rigid

Nonmetallic Conduit (Heavy Wall EPC)

Certified for underground applications encased in concrete or direct burial.
Also for use in exposed or concealed above ground applications.

- Sunlight resistant
- Rated for use with 75ºC conductors
- Superior weathering characteristics
- Meets CSA Standard C22.2 No. 211.2
- 3/4 in. – 4 in. are FT-4 Rated

Schedule 40 Heavy Wall

Cat. No.		Trade Size (in.)	Std. Crate Qty.		Std. Bundle Qty.		Wt. Per 100 ft.	Dimensions (in.)		Wall (in.)
10 ft.	20 ft.		10 ft.	20 ft.	10 ft.	20 ft.		O.D.	I.D.	
49005CC-010	–	1/2	6000	12000	100	200	17	0.840	0.622	0.109
49007CC-010	49007CC-020	3/4	4400	8800	100	200	23	1.050	0.824	1.113
49008CC-010	49008CC-020	1	3600	7200	100	200	34	1.315	1.049	0.133
49009CC-010	49009CC-020	1-1/4	3300	6600	50	100	46	1.660	1.380	0.140
49010CC-010	49010CC-020	1-1/2	1800	3600	50	100	55	1.900	1.610	0.145
49011CC-010	49011CC-020	2	1400	2800	50	100	73	2.375	2.067	0.154
49012CC-010	49012CC-020	2-1/2	930	1860	10	20	124	2.875	2.469	0.203
49013CC-010	49013CC-020	3	880	1760	10	20	163	3.500	3.068	0.216
49014CC-010	–	3-1/2	630	–	10	20	196	4.000	3.548	0.226
49015CC-010	49015CC-020	4	570	1140	10	20	232	4.500	4.026	0.237
49016CC-010	–	5	380	760	10	20	315	5.563	5.047	0.258
49017CC-010	49017CC-020	6	260	520	10	20	409	6.625	6.065	0.280

Acceptable Dimension in Inches of CSA Listed Integral Bell

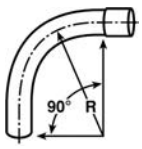
Trade Size of Conduit (in.)	A		B		C	
	At Entrance (in.)		At Bottom (in.)		Socket Depth (in.)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1/2	0.860	0.844	0.844	0.828	1.500	0.652
3/4	1.074	1.054	1.056	1.036	1.500	0.719
1	1.340	1.320	1.320	1.300	1.875	0.875
1-1/4	1.689	1.665	1.667	1.643	2.000	0.938
1-1/2	1.930	1.906	1.906	1.882	2.000	1.062
2	2.405	2.381	2.381	2.357	2.000	1.125
2-1/2	2.905	2.875	2.883	2.853	3.000	1.469
3	3.530	3.500	3.507	3.477	3.125	1.594
3-1/2	4.065	3.965	4.007	3.977	3.250	1.687
4	4.565	4.465	4.506	4.476	3.375	1.750
5	5.653	5.543	5.583	5.523	3.625	1.937
6	6.708	6.608	6.644	6.584	3.750	2.125

Schedule 40 Elbows

Schedule 40 Elbows

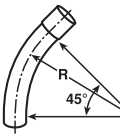
Integral Belled End for Use With Nonmetallic Solvent Weld Fittings

90° Elbow

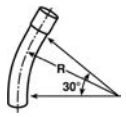
Item	Belled End Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
	UA9ADCB-CTN	1/2	40
	UA9AECB-CTN	3/4	25
	UA9AFCB-CTN	1	25
	UA9AGCB-UPC	1-1/4	20
	UA9AHCB-UPC	1-1/2	25
	UA9AJCB-UPC	2	20
	UA9AKCB-CTN	2-1/2	10
	UA9ALCB-UPC	3	25
	UA9AMCB	3-1/2	1
	UA9ANCB	4	1
	UA9APCB	5	1
	UA9ARCB	6	1

Custom elbows available on request.
Plain end elbows also available.

45° Elbow

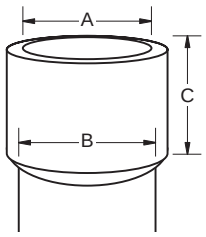
Item	Belled End Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
	UA7ADCB-CTN	1/2	25
	UA7AECB-CTN	3/4	20
	UA7AFCB-CTN	1	14
	UA7AGCB	1-1/4	20
	UA7AHCB	1-1/2	20
	UA7AJCB	2	20
	UA7ALCB	3	5
	UA7AMCB	3-1/2	1
	UA7ANCB	4	1
	UA7APCB	5	1
	UA7ARCB	6	1

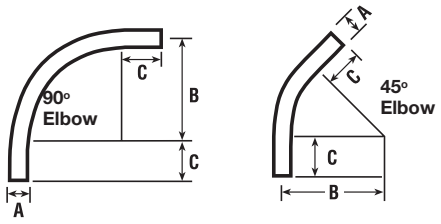
30° Elbow

Item	Belled End Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
	UA6ADB	1/2	50
	UA6AEB	3/4	25
	UA6AFB	1	8
	UA6AGB	1-1/4	20
	UA6AHB	1-1/2	1

Flexible Elbows

Item	Belled End Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
	UAFAD	1/2	8
	UAFAE	3/4	6
	UAFAF	1	6





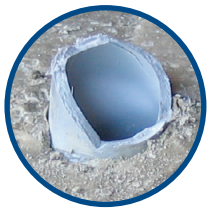
Integral Belled End Dimensions

Trade Size of Conduit (in.)	A		B		C	
	At Entrance (in.)		At Bottom (in.)		Socket Depth (in.)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1/2	0.860	0.844	0.844	0.828	1.500	0.652
3/4	1.074	1.054	1.056	1.036	1.500	0.719
1	1.340	1.320	1.320	1.300	1.875	0.875
1-1/4	1.689	1.665	1.667	1.643	2.000	0.938
1-1/2	1.930	1.906	1.906	1.882	2.000	1.062
2	2.405	2.381	2.381	2.357	2.000	1.125
2-1/2	2.905	2.875	2.883	2.853	3.000	1.469
3	3.530	3.500	3.507	3.477	3.125	1.594
3-1/2	4.065	3.965	4.007	3.977	3.250	1.687
4	4.565	4.465	4.506	4.476	3.375	1.750
5	5.653	5.543	5.583	5.523	3.625	1.937
6	6.708	6.608	6.644	6.584	3.750	2.125

Standard Radius Elbow Dimensions

Trade Size (in.)	A (in.)	B (in.)	C (in.)
		Minimum (Radius)	Minimum
1/2	0.840	4	1-1/2
3/4	1.050	4-1/2	1-1/2
1	1.315	5-3/4	1-7/8
1-1/4	1.660	7-1/4	2
1-1/2	1.900	8-1/4	2
2	2.375	9-1/2	2
2-1/2	2.875	10-1/2	3
3	3.500	13	3-1/8
3-1/2	4.000	15	3-1/4
4	4.500	16	3-3/8
5	5.563	24	3-5/8
6	6.625	30	3-3/4

PVC Conduit Repair System



The new, revolutionary, Carlon PVC Conduit Repair System significantly reduces the time and money associated with repairing broken PVC conduits "stub-ups" in concrete slabs.

The system is a line of couplings, adapters, reamers and plugs designed to allow contractors to quickly and easily repair broken PVC conduits without having to chip away and repour concrete, while still maintaining the inside diameter of the conduit. Simply cut off the broken conduit; ream the I.D. of the conduit; and insert a coupling or adapter, it's that easy.

Features

- cULus Listed
- Nonmetallic couplings, adapters and plugs won't rust or corrode
- Available in sizes 1/2 in. through 2 in.

Benefits

- Saves time and money
- Maintains inside diameter of conduit
- Metallic Reamers for extra strength, durability and longer life
- Quickly and easily repair broken PVC conduit

Couplings

c UL us LISTED

Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
E910D	1/2	25
E910E	3/4	25
E910F	1	15
E910G	1-1/4	10
E910H	1-1/2	10
E910J	2	10

Male Threaded Adapters

c UL us LISTED

Cat. No.	Trade Size (in.)	Std. Ctn. Qty.
E920D	1/2	25
E920E	3/4	25
E920F	1	15
E920G	1-1/4	10
E920H	1-1/2	10
E920J	2	10

Reamers

c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.
E910REAMD	1/2	12
E910REAME	3/4	12
E910REAMF	1	10
E910REAMG	1-1/4	10
E910REAMH	1-1/2	10
E910REAMJ	2	10
E910REAMKIT	All sizes – 1/2, 3/4, 1, 1-1/4, 1-1/2 and 2	5

Schedule 40 Plugs

c UL us LISTED

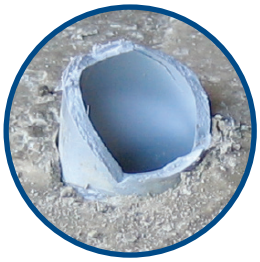
Cat. No.	Size (in.)	Std. Ctn. Qty.
HL-6X*	1/2	1 bag of 50
HL-10*	3/4	
HL-13A*	1	
HL-16*	1-1/4	
HL-18*	1-1/2	
HL-21*	2	

* = Suffixe (R: Red, B: Blue, Y: Yellow)

PVC Conduit Repair System

Coupling
E910 Series

Male Threaded Adapter
E920 Series



Broken conduit on jobsite

Instructions

1. Cut broken conduit off flush.

2. Insert plug to keep conduit clean/dry through balance of rough-in. Once rough-in is complete, remove plug and continue with step 3.

Alternative to Conduit Repairs

Prior to concrete pour, measure and saw cut all conduit stub-ups to the thickness of the concrete pour. Insert plugs. Pour concrete flush to the conduit. When pour is complete, remove plugs and proceed with step 3. This alternative method saves time/money by eliminating the need for transitions or use of metal elbows.

3. With reamer tool and standard 1/2 in. drill, ream I.D. of conduit. It is recommended to use a variable speed drill. Use slower speed to avoid overheating the conduit.

4. The guide will direct the cutter; the stop will touch when completed.

Cementing Instructions

A. Clean socket I.D. and spigot O.D. of dirt and moisture.
B. Apply a uniform coat of cement to spigot end and push onto socket bottom, rotating 1/4 turn.
C. Allow time to set before disturbing. This will depend upon temperature.

5. Insert the coupling and cement into place using the cement manufacturer's instructions.

Apply a uniform coat of cement.

Insert fitting.

Rotate 1/4 turn.

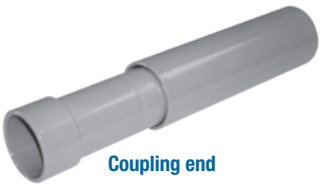
c UL us LISTED

Fittings and Accessories

Expansion Fittings*

E945 Series expansion fittings are designed to compensate for length changes due to temperature variations in exposed conduit runs.

- Exclusive Molded in Mid-point indicator on the piston
- Exclusive 2 in. Expansion Fitting with an 8 in. travel distance
- Two-piece molded design with lubricated seals for easier movement for the life of the product
- Ridges on the fitting for easier installation (Sizes 2 in. through 6 in. only)
- Male terminal Adapter End design (1/2 in. – 2 in. NPT Threads and 2-1/2 in. – 6 in. NPSC Threads)
- Two O-Rings to prevent leakage
- Can be installed vertically or horizontally



Coupling end

Male Terminal adapter end

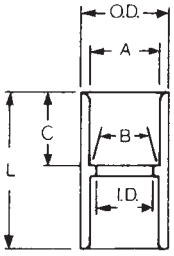
Coupling End Cat. No.	Male Terminal Adapter End Cat. No.	Size (in.)	Std. Ctn. Qty.	Travel Length (in.)
E945D	E945DX	1/2	20	4
E945E	E945EX	3/4	15	4
E945F	E945FX	1	10	4
E945G	E945GX	1-1/4	5	4
E945H	E945HX	1-1/2	5	4
E945J	E945JX	2	15	8
E945K	E945KX	2-1/2	10	8
E945L	E945LX	3	10	8
E945M	E945MX	3-1/2	5	8
E945N	E945NX	4	5	8
E945P	E945PX	5	1	8
E945R	E945RX	6	1	8

* Please refer to page I21 for additional information.

Standard Couplings

All socket fittings should be attached using Carlon solvent cement. Using Carlon fittings with Carlon nonmetallic conduit insures system integrity.

Socket type for joining nonmetallic conduit.



Cat. No.	Size (in.)	Std. Ctn. Qty.	A	B	I.D. (in.)	O.D. (in.)	C	L
			Typical (in.)				Typical (in.)	
CE940DR-CTN	1/2	75	0.852	0.836	0.728	1-7/64	11-16	1-1/2
CE940ER-CTN	3/4	45	1.064	1.046	0.840	1-5/16	3/4	1-5/8
CE940F-UPC	1	50	1.330	1.310	1.210	1-5/8	15/16	2
E940G	1-1/4	30	1.677	1.655	1.535	1-63/64	1	2-1/8
E940H	1-1/2	25	1.918	1.894	1.755	2-15/64	1-1/8	2-3/8
E940J	2	30	2.393	2.369	2.190	2-47/64	1-3/16	2-1/2
E940K	2-1/2	20	2.890	2.868	2.688	3-5/16	1-33/64	3-3/16
E940L	3	25	3.515	3.492	3.375	3-31/32	1-3/4	3-13/32
E940M	3-1/2	20	4.015	3.992	3.780	4-9/16	1-3/4	3-5/8
E940N	4	15	4.515	4.491	4.265	5-3/32	1-25/32	3-3/4
E940P	5	8	5.593	5.553	5.097	6-1/4	1-5/16	4-1/16
E940R	6	5	6.658	6.614	6.115	7-1/2	2-3/16	4-5/8

Short Expansion Couplings*

(Expands to a maximum of 2 in.)

c UL us LISTED

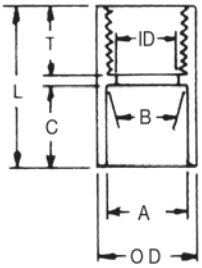
Cat. No.	Size (in.)	Std. Ctn. Qty.
E955D	1/2	40
E955E	3/4	40
E955F	1	25
E955G	1-1/4	15
E955H	1-1/2	10
E955J	2	6

* Please refer to page I21 for additional information.

Fittings and Accessories

Female Adapters

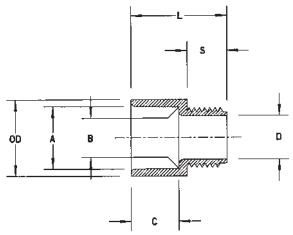
For adapting nonmetallic conduits to threaded fittings, metallic systems. Female threads on one end, socket end on other.



Cat. No.	Size (in.)	Std. Ctn. Qty.	A	B	Min. I.D. (in.)	Max. O.D. (in.)	C	T	L
			Typical (in.)				Typical (in.)		
E942D	1/2	150	0.852	0.836	0.620	1-7/64	11/16	3/4	1-9/16
E942E	3/4	100	1.064	1.046	0.822	1-5/16	13/16	3/4	1-5/8
E942F	1	50	1.330	1.310	1.046	1-5/8	15/16	7/8	1-15/16
E942G	1-1/4	30	1.677	1.655	1.377	1-63/64	1	7/8	2
E942H	1-1/2	25	1.918	1.894	1.607	2-5/32	1-1/8	7/8	2-7/32
E942J	2	30	2.393	2.369	2.064	2-47/64	1-3/16	1	2-5/16
E942K	2-1/2	20	2.890	2.868	2.450	3-11/32	1-5/8	1-1/8	2-15/16
E942L	3	25	3.515	3.492	3.000	3-31/32	1-3/4	1-1/8	3-1/16
E942M	3-1/2	20	4.015	3.992	3.500	4-1/2	1-7/8	1-1/8	3-1/4
E942N	4	15	4.515	4.491	4.000	5-1/64	1-3/4	1-1/16	3-13/64
E942P	5	8	5.593	5.553	5.047	6-1/4	1-15/16	1-1/16	3-3/16
E942R	6	6	6.658	6.614	6.055	7-1/4	2-1/8	1-1/16	3-3/8

Male Terminal Adapters

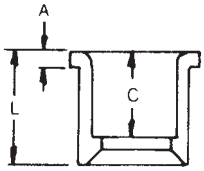
For adapting nonmetallic conduits to boxes threaded fittings, metallic systems. Male threads on one end, socket end on other.



Cat. No.	Size (in.)	Std. Ctn. Qty.	A	B	Min. D (in.)	Max. O.D. (in.)	C	S	L
			Typical (in.)				Typical (in.)		
E943D	1/2	150	0.852	0.836	0.594	1.042	0.652	0.545	1.310
E943E	3/4	100	1.064	1.046	0.793	1.290	0.809	0.553	1.470
E943F	1	50	1.330	1.310	1.025	1.580	0.965	0.812	1.902
E943G	1-1/4	30	1.677	1.655	1.345	1.973	1.208	0.816	1.986
E943H	1-1/2	25	1.918	1.894	1.574	2.188	1.155	0.802	2.105
E943J	2	30	2.393	2.369	1.998	2.713	1.145	0.825	2.093
E943K	2-1/2	20	2.890	2.868	2.400	3.290	1.490	0.812	2.480
E943L	3	25	3.515	3.492	2.989	3.965	1.643	0.797	2.660
E943M	3-1/2	20	4.015	3.992	3.405	4.515	1.720	0.802	2.740
E943N	4	15	4.515	4.491	3.895	5.065	1.788	0.733	2.830
E943P	5	8	5.593	5.553	4.900	6.104	1.935	0.990	3.200
E943R	6	6	6.658	6.614	5.900	7.288	2.128	0.985	3.410

Reducer Bushings

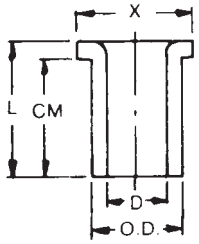
For connecting different sizes of conduit. Bell x Spigot.



Cat. No.	Size (in.)	Std. Ctn. Qty.	L	A	C
			Typical (in.)		
E950ED	3/4 x 1/2	100	1-5/32	13/64	1-1/32
E950FD-CAR	1 x 1/2	25	1-11/32	3/16	57/64
E950FE	1 x 3/4	100	1-11/32	3/16	1-1/64
E950GE-CAR	1-1/4 x 3/4	10	1-15/32	3/16	1-1/64
E950GF	1-1/4 x 1	50	1-15/32	3/16	1-9/64
E950HF-CAR	1-1/2 x 1	10	1-19/32	3/16	1-9/64
E950HG-CAR	1-1/2 x 1-1/4	10	1-19/32	3/16	1-17/64
E950JG-CAR	2 x 1-1/4	10	1-3/4	7/32	1-17/64
E950JH-CAR	2 x 1-1/2	10	1-3/4	7/32	1-25/64
E950KJ-CAR	2-1/2 x 2	10	2-5/32	3/8	1-27/64
E950LJ-CAR	3 x 2	10	2-1/8	1/4	1-7/8
E950LK	3 x 2-1/2	25	1-15/16	1/4	1-11/16
E950NL	4 x 3	25	2-3/4	5/16	1-15/16

Box Adapters for Enclosures

Adapts nonmetallic conduit to all electrical enclosures by inserting adapter through knockout and cementing into Carlon couplings.



Cat. No.	Size (in.)	Std. Ctn. Qty.	Min. D (in.)	O.D. Typical (in.)	Max. X (in.)	CM	L
						Typical (in.)	
E996D	1/2	100	0.662	0.840	1-7/64	23/32	27/32
E996E	3/4	100	0.824	1.050	1-21/64	25/32	29/32
E996F	1	100	1.049	1.315	1-5/8	61/64	1-3/32
E996G	1-1/4	50	1.380	1.660	1-31/32	1-1/16	1-1/4
E996H	1-1/2	50	1.610	1.900	2-13/64	1-3/16	1-3/8
E996J	2	25	2.067	2.375	2-29/32	1-1/4	1-7/16
E996K	2-1/2	15	2.469	2.875	3-7/16	1-7/8	1-15/16
E996L	3	20	3.068	3.500	4-1/8	2	2-1/16
E996N	4	10	4.026	4.500	5-1/8	2-1/2	2-1/4

Threaded Adapters

Cat. No.	Size (in.)	Std. Ctn. Qty.
E9842D 1	1/2	25
E9842E 2	3/4	25

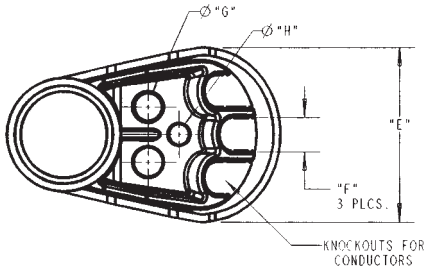
1 Fits 3/4 in. sockets
2 Fits 1 in. sockets

Plugs with Pull Tabs (Polyethylene)

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
P258JT	2	60	3
P258LT	3	30	3
P258NT	4	48	8
P258PT	5	30	6
P258RT	6	30	9

Fittings and Accessories

Service Entrance Caps



c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Dimensions (in.)			
			E	F	G	H
E998D	1/2	5	1.76	0.45	0.45	–
E998E	3/4	20	1.76	0.45	0.45	–
E998F	1	15	2.26	0.59	0.58	–
E998G	1-1/4	20	3.52	0.74	0.71	0.50
E998H	1-1/2	10	3.52	0.74	0.71	0.50
E998J	2	5	4.26	0.83	0.78	0.56
E998K-UPC	2-1/2	2	7.47	1.70	1.31	1.00
E998L	3	2	77.47	1.70	1.31	1.00
E998N	4	2	10.45	2.25	1.88	1.31

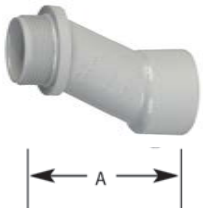
End Caps

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E958D	1/2	100	3
E958E	3/4	100	4
E958F	1	75	5
E958G	1-1/4	40	4
E958H	1-1/2	30	4
E958J	2	25	5
E958K	2-1/2	10	4
E958L	3	10	5
E958N	4	5	17
E958P	5	5	11
E958R	6	5	13

Meter Hubs

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E991G	1-1/4	20	3.8
E991G-UPC	1-1/4	12	2.3
E991H	1-1/2	25	8.0
E991J	2	6	1.0
E991J-UPC	2	12	2.0

Meter Offset



Cat. No.	Size (in.)	Std. Ctn. Qty.	Offset (in.)	A (in.)
E995G	1-1/4	15	0.758	4.230
E995J	2	8	0.684	4.270

Offset

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E994D	1/2	25	3
E994E	3/4	25	3
E994F	1	50	12

End Bells

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E997F	1	50	2.6
E997G	1-1/4	35	2.5
E997H	1-1/2	30	2.5
E997J	2	40	5.0
E997K	2-1/2	30	2
E997L	3	50	10
E997M	3-1/2	40	11
E997N	4	30	16
E997P	5	15	8
E997R	6	10	7
E997T	8	3	15

Fittings and Accessories

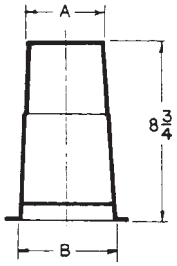
Flat Sealing Washer

Where a waterproof termination is required into any enclosure (metallic or nonmetallic), install the neoprene washer over the threads of a terminal adapter before inserting into the enclosure. Use a standard locknut or threaded bushing to secure the assembly.

Cat. No.	Size (in.)	Std. Ctn. Qty.
E943DW	1/2	125
E943EW	3/4	125
E943FW	1	100
E943GW	1-1/4	50
E943HW	1-1/2	50
E943JW	2	25

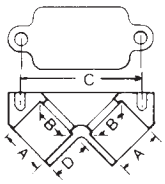
Holform™ Concrete Sleeves

HOLFORM™ nonmetallic concrete sleeve forms are the easy way to form holes in concrete. They install in seconds with nails, screws or staples and are easily removed. Concrete will not adhere to them. HOLFORM™ are adjustable to any slab thickness. (Not CSA applicable)



Cat. No.	Min. O.D. A (in.)	B (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E92CSH	1-1/2	1-3/4	20	3
E92CSJ	2	2-13/32	25	6
E92CSL	3	3-13/32	25	8
E92CSN	4	4-13/32	18	8
E92CSP	5	5-13/32	15	8
E92CSR	6	6-13/32	12	8

Access Pull Elbows



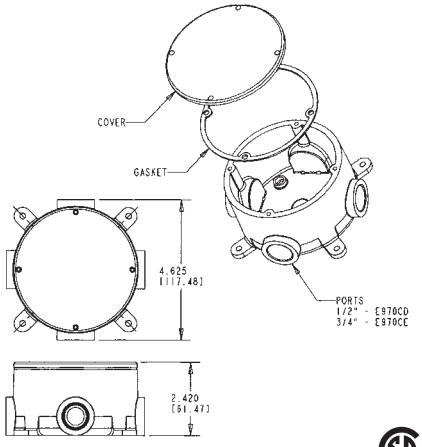
c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Typical (in.)			
			A	B	C	D
E990D	1/2	75	0.852	0.836	2.187	0.718
E990DR-CAR	1/2	25	0.852	0.836	2.187	0.718
E990E	3/4	50	1.064	1.046	2.531	0.781

Gasket included

Conduit Bodies Type X with Cover

Four knockout type socket openings, 90° spacing. Available with 1/2 in. or 3/4 in. socket outlets. Includes cover and gasket.



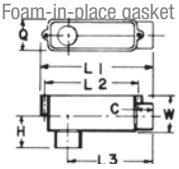
Cat. No.	Size (in.)	Vol. Cu. (in.)	Std. Ctn. Qty.
CE970CDE	1/2	15.16	15
E970CE	3/4	15.16	15

Supplied with 4 stainless steel cover screws. Diameter 4-1/8 in., Thickness 1/4 in.
Not designed for use with wiring devices or light fixtures.

Conduit Bodies

Type LB

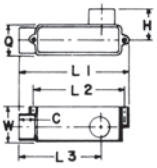
- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C Typical	Max. L1 (in.)	L2	L3	Max. (in.)			Vol. Cu. in.
					Typical (in.)		H	Q	W	
E986D	1/2	25	11/16	4-5/16	3-7/32	3-1/16	1-5/16	1-11/32	1-1/2	4.0
E986E	3/4	15	29/32	6-9/32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E986F	1	10	29/32	6-9/32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E986G	1-1/4	10	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E986H	1-1/2	10	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E986J	2	10	1-5/32	9-31/32	8-13/32	7-1/4	2-9/16	3-5/32	3-15/32	63.0
E986K	2-1/2	4	1-5/8	14-7/8	13-1/4	11-31/32	3-3/4	4-11/32	4-5/8	210.0
E986L	3	4	1-5/8	14-7/8	13-1/4	11-31/32	3-3/4	4-11/32	4-5/8	210.0
E986M	3-1/2	4	1-25/32	17-23/32	15-7/8	14-17/64	4-7/16	5-11/32	5-21/32	390.0
E986N	4	4	1-25/32	17-23/32	15-7/8	14-17/64	4-7/16	5-11/32	5-21/32	390.0

Type LR

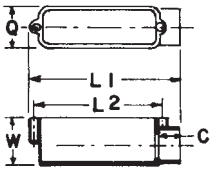
- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C Typical	Max. L1	L2	L3	Max. (in.)			Vol. Cu. in.
					Typical (in.)		H	Q	W	
E985D-CAR	1/2	10	11/16	4-5/16	3-7/32	3-1/16	1-5/16	1-11/32	1-1/2	4.0
E985E-CAR	3/4	10	29/32	6-9/32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E985F-CAR	1	10	29/32	6-9/32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E985G-CAR	1-1/4	5	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E985H-CAR	1-1/2	5	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E985J-CAR	2	3	1-5/32	9-9/32	8-13/32	7-1/4	2-9/16	3-5/32	3-15/32	63.0

Type E

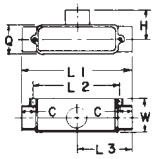
- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C (in.)	L1 (in.)	L2 (in.)	Q (in.)	W (in.)	Vol. Cu. in.
E988D	1/2	25	11/16	4-5/16	3-1/2	1-11/32	1-1/2	4.0
E988E	3/4	15	29/32	6-11/32	5-9/32	1-3/4	2-1/32	12.0
E988F	1	10	29/32	6-11/32	5-9/32	1-3/4	2-1/32	12.0
E988G	1-1/4	10	1-3/32	8	6-13/32	2-1/2	2-3/4	32.0
E988H	1-1/2	10	1-3/32	8	6-13/32	2-1/2	2-3/4	32.0
E988J	2	10	1-5/32	9-15/32	8-13/32	3-5/32	3-15/32	63.0

Type T

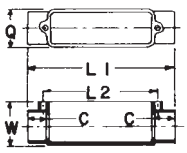
- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C Typical (in.)	Max. L1 (in.)	L2	L3	Max. (in.)			Vol. Cu. in.
					Typical (in.)		H	Q	W	
E983D-CAR	1/2	10	11/16	4-11/16	3-7/32	2-11/32	1-5/16	1-11/32	1-1/2	4.0
E983E	3/4	15	29/32	6-7/8	5-9/32	4-7/16	1-25/32	1-3/4	2-1/32	12.0
E983F	1	20	29/32	6-7/8	5-9/32	3-7/16	1-25/32	1-3/4	2-1/32	12.0
E983G	1-1/4	10	1-3/32	8-21/32	6-13/32	4-21/64	2-5/16	2-1/2	2-3/4	32.0
E983H	1-1/2	4	1-3/32	8-21/32	6-13/32	4-21/64	2-5/16	2-1/2	2-3/4	32.0
E983J	2	10	1-5/32	10-5/16	8-13/32	5-5/32	2-9/16	3-5/32	3-15/16	63.0

Type C

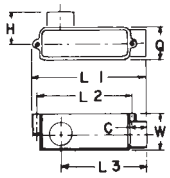
- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C Typical (in.)	Max. L1 (in.)	L2	Max. (in.)		Vol. Cu. in.
					Typical (in.)	Q	W	
E987D-CTN	1/2	8	11/16	4-11/16	3-1/2	1-11/32	1-1/2	4.0
E987E-CAR	3/4	10	29/32	6-7/8	5-32/64	1-3/4	2-1/32	12.0
E987F-CAR	1	10	29/32	6-7/8	5-9/32	1-3/4	2-1/32	12.0
E987G-CAR	1-1/4	5	1-3/32	8-21/32	6-13/32	2-1/2	2-3/4	32.0
E987H-CAR	1-1/2	4	1-3/32	8-21/32	6-13/32	2-1/2	2-3/4	32.0
E987J	2	15	1-5/32	10-5/16	8-13/32	3-5/32	3-15/32	63.0

Type LL

- Hubs are not threaded
- Textured lids
- Foam-in-place gasket



Cat. No.	Size (in.)	Std. Ctn. Qty.	C Typical (in.)	Max. L1 (in.)	L2	L3	Max. (in.)			Vol. Cu. in.
					Typical (in.)		H	Q	W	
E984D-CAR	1/2	10	11/16	4-5/16	3-7/32	3-1/16	1-5/16	1-11/32	1-1/2	4.0
E984E	3/4	20	29/32	6-9/32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E984F-CAR	1	10	29/32	6-9-32	5-9/32	4-25/32	1-25/32	1-3/4	2-1/32	12.0
E984G	1-1/4	10	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E984H	1-1/2	10	1-3/32	7-31/32	6-13/32	6	2-5/16	2-1/2	2-3/4	32.0
E984J	2	10	1-5/32	9-9/32	8-13/32	7-1/4	2-9/16	3-5/32	3-15/32	63.0

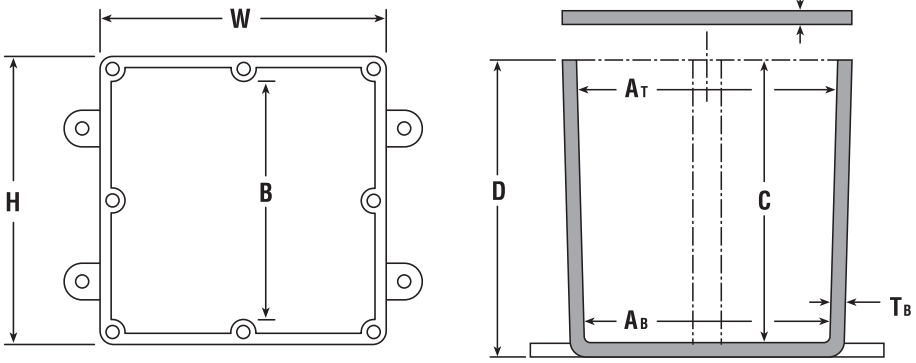
Junction Boxes

Molded Nonmetallic Junction Boxes 6P Rated

Nonmetallic junction boxes are CSA Certified. Manufactured from PVC or PPO thermoplastic molding compound and featuring foam-in-place gasketed lids attached with stainless steel screws.

These rugged enclosures offer all the corrosion resistance and physical properties you need for direct burial applications.

These enclosures are Nema 4-4x-6P Rated.

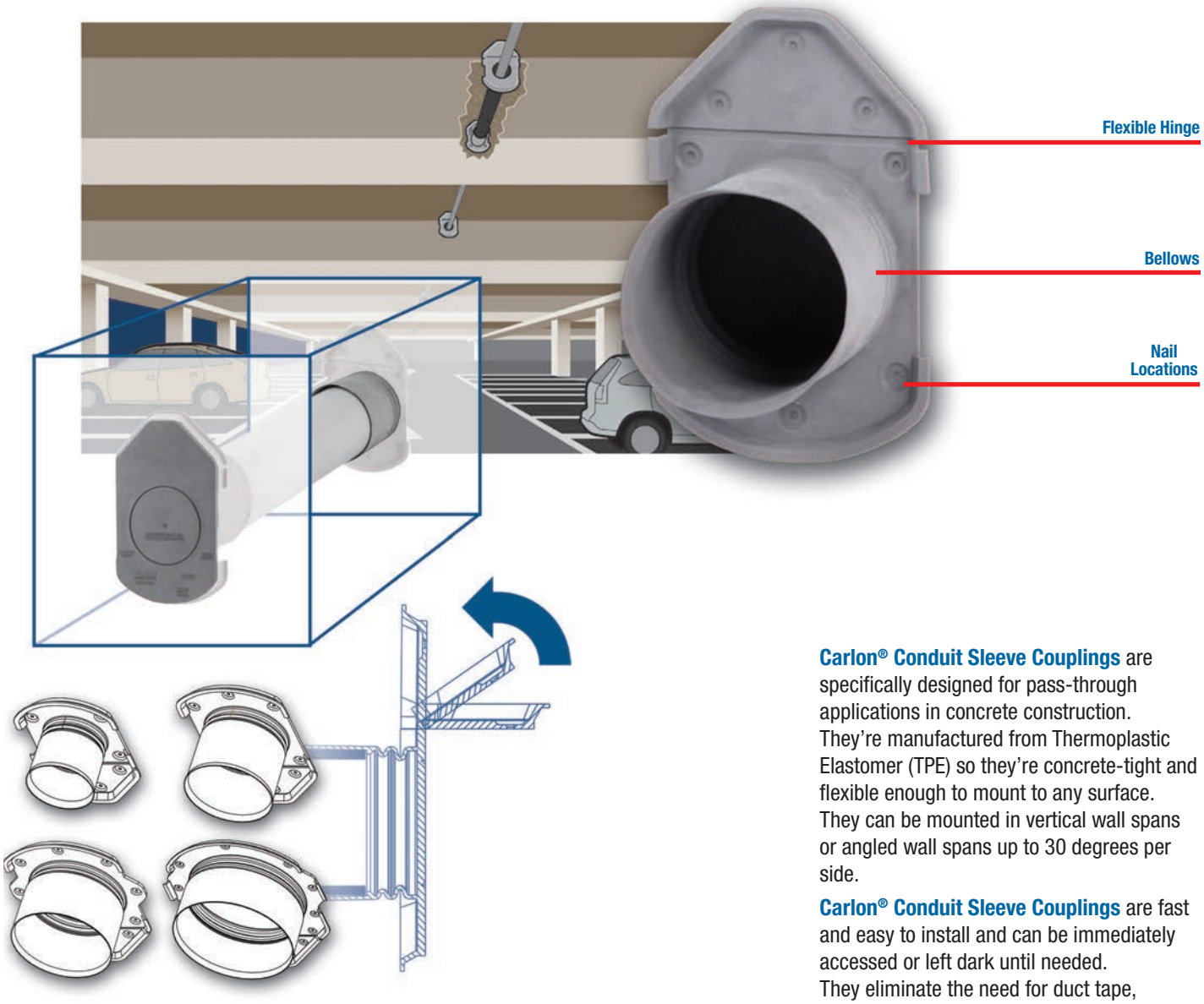


LISTED

Cat. No.	H x W x D (in.)	Std. Ctn. Qty.	Minimum (in.)				Typical (in.)		Material		Std. Ctn. Wt. (lb.)
			A_T	A_B	B	C	T_B	T_C	PVC	Thermoplastic	
E989NNJ	4 x 4 x 2	10	3-11/16	3-5/8	–	2	0.160	0.155	X		3
E989NNJ-CAR	4 x 4 x 2	8	3-11/16	3-5/8	–	2	0.160	0.155	X		3
E987N-CAR	4 x 4 x 4	10	3-11/16	3-1/2	–	4	0.160	0.155		X	4
E989PPJ	5 x 5 x 2	10	4-11/16	4-1/2	–	2	0.110	0.150		X	3
E987R	6 x 6 x 4	10	6	5-5/8	–	4	0.190	0.190		X	3
E989RRR-UPC	6 x 6 x 6	8	5-5/8	5-3/8	–	6	0.160	0.150		X	14
E989N-CAR	8 x 8 x 4	1	8	8	–	4	0.185	0.190		X	2
E989SSX-UPC	8 x 8 x 7	2	7-21/32	7-5/16	–	7	0.160	0.150		X	6
E989UUN	12 x 12 x 4	3	11-5/8	11-1/2	11-1/8	4	0.160	0.150		X	12
E989R-UPC	12 x 12 x 6	2	11-15/16	11-7/8	11-7/16	6	0.265	0.185		X	10

Conduit Sleeve Couplings

Pass-through for concrete walls, columns and posts



Carlon® Conduit Sleeve Couplings are specifically designed for pass-through applications in concrete construction. They're manufactured from Thermoplastic Elastomer (TPE) so they're concrete-tight and flexible enough to mount to any surface. They can be mounted in vertical wall spans or angled wall spans up to 30 degrees per side.

Carlon® Conduit Sleeve Couplings are fast and easy to install and can be immediately accessed or left dark until needed. They eliminate the need for duct tape, clamps and special mounting means while providing superior aesthetics by blending into the concrete.

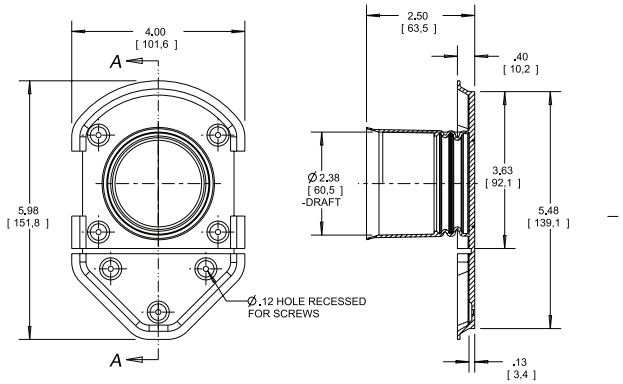
Applications – Concrete walls, columns and posts.

Conduit Sleeve Couplings

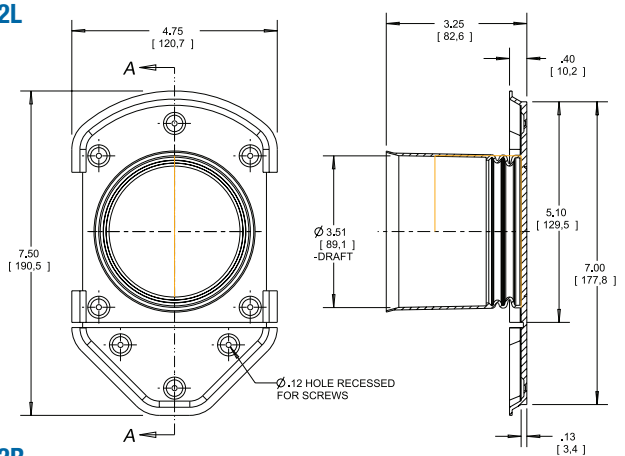
Features

- EXCLUSIVE
- Manufactured from TPE, concrete-tight
- Flexible hinge provides alignment of pass-through with ceiling
- Bellows – mounts to vertical walls and angled walls up to 30°
- Quick and easy installation
- Eliminates the use of duct tape and clamps
- Manufactured to IPS dimensions for use with most conduit types
- Superior aesthetics (blends in to the concrete)
- Trade sizes: 2 in., 3 in., 4 in. and 6 in.
- Future-proofs the structure. Pass-through remains dark and protected until needed
- Note: Firestop (where needed) and conduit NOT INCLUDED

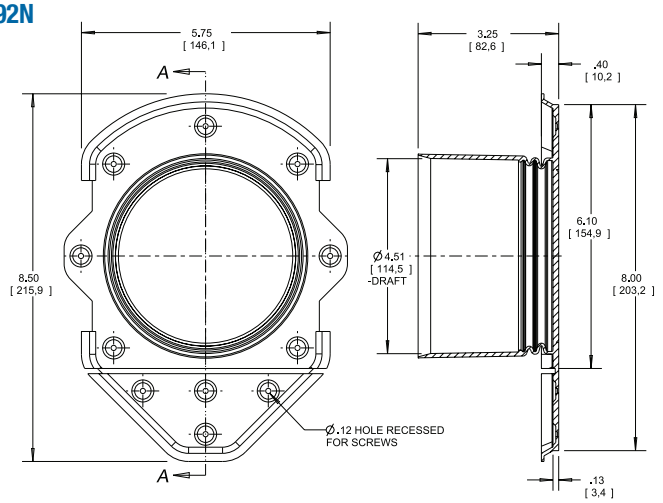
E992J



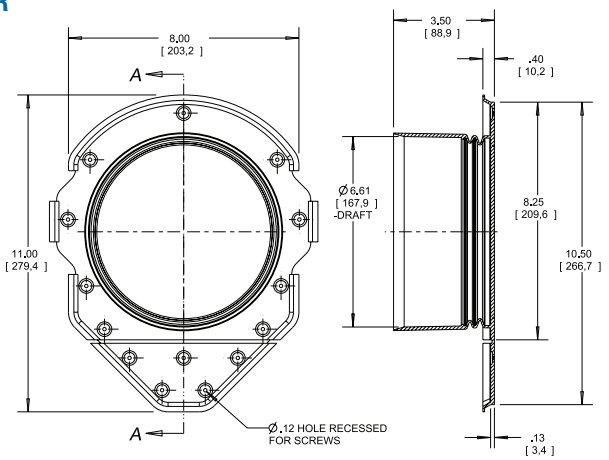
E992L



E992N



E992R



Specifications

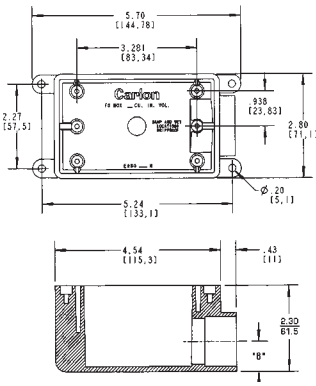
Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E992J	2	84	13.0
E992L	3	30	8.3
E992N	4	22	8.6
E992R	6	18	13.0

Switch Boxes

Single Gang FS Boxes

All sizes take standard covers and accessories or devices. Integral mounting feet provide easy mounting. Grounding lugs included.

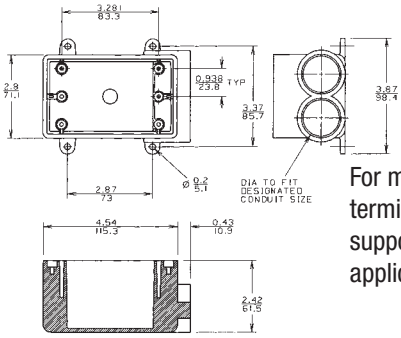
Type FSE



For dead-end terminations.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C980DFN-CTN	1/2	18	12
C980EFN-CTN	3/4		12
C980FFN-CTN	1		8

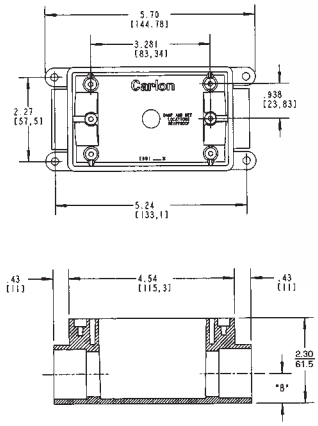
Type FSS



For multiple dead-end circuit terminations or where additional support is required in stub-up applications.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C982DFN-CTN	1/2	18	12
C982EFN-CTN	3/4		12
C982FFN-CTN	1		8

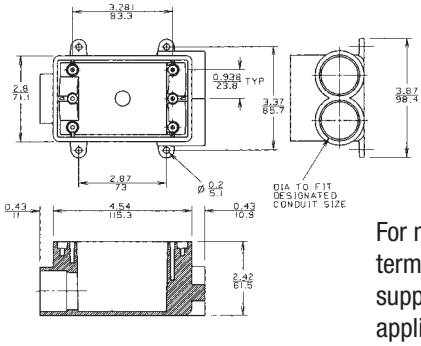
Type FSC



For through terminations.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C981DFN-CTN	1/2	18	12
C981EFN-CTN	3/4		12
C981FFN-CTN	1		8

Type FSCC



For multiple through circuit termintions or where additional support is required in stub-up applications.

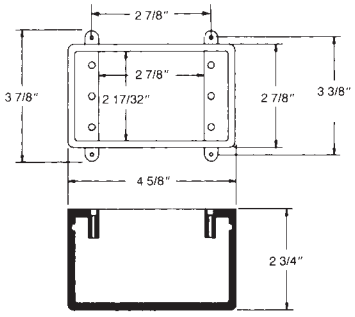
Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C979DFN	1/2	18	15
C979EFN	3/4		
C979FFN	1		

Switch Boxes

Single Gang FD Deep Device Boxes

All sizes take standard covers and accessories or devices. Integral mounting feet provide easy mounting. Grounding lugs included.

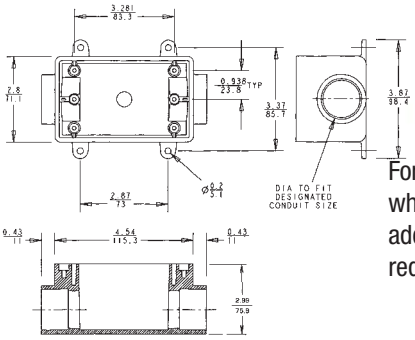
Type FD



For terminations where hub requirements vary according to application – hubs easily made with flared wood bit or hole saw.

Cat. No.	Volume Cu. In.	Std. Ctn. Qty.
CE9801-UPC	25	10

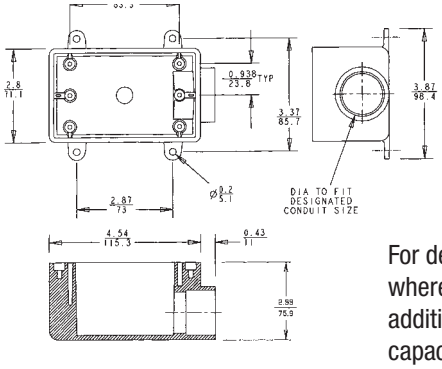
Type FDC

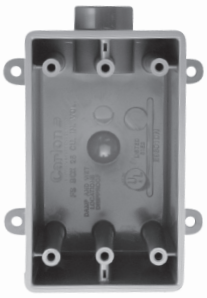


For through terminations where large devices or additional wiring capacity is required.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C9811EN	3/4	25	10
C9811FN	1		

Type FDE





For dead-end terminations where large devices or additional wiring capacity is required.

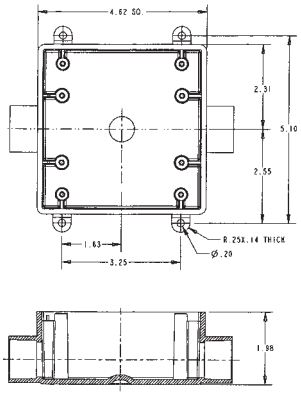
Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
C9801DN	1/2	25	10
C9801EN	3/4		
C9801FN	1		

Switch Boxes

Two Gang FS Boxes

All sizes take standard covers and accessories or devices. Integral mounting feet provide easy mounting. Grounding screws are included.

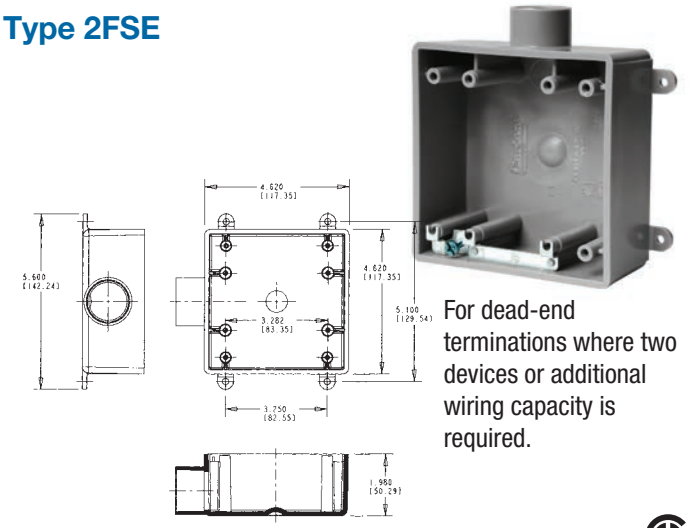
Type 2FSC



For through terminations where two devices or additional wiring capacity is required.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
CE9812DR	1/2	32	4
CE9812E-CTN	3/4		10
CE9812FR	1		10

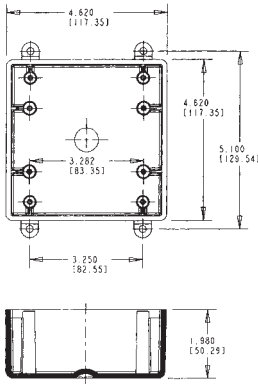
Type 2FSE

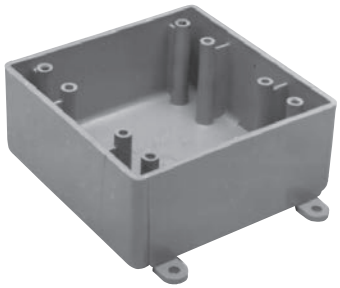


For dead-end terminations where two devices or additional wiring capacity is required.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
CE9802D-CTN	1/2	32	10
CE9802E-CTN	3/4		10
CE9802FR	1		1

Type FS





For terminations where hub requirements vary according to application - hubs easily made with flared wood bit or hole saw.

Cat. No.	Size (in.)	Volume Cu. In.	Std. Ctn. Qty.
CE9802	N/A	32	10

Covers

Single Gang

Fits single gang FS boxes. Supplied with stainless steel mounting screws and gasket.

Cat. No.	Colour	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E980CN-CAR	Grey	12	1.60
E980CM-CAR	White		

Two Gang

Fits two gang FS boxes, other nonmetallic and metallic FS boxes. Supplied with stainless steel mounting screws and gasket.

Cat. No.	Colour	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
E9802CN-CAR	Grey	10	2.17
E9802CM-CAR	White		

FS Type Duplex Receptacle Covers

For indoor use only. Gasket not included

Cat. No.	Gang	Std. / Inner Qty.	Std. Ctn. Wt. (lb.)
E98DGDR	2	150 / 5	0.75
E98SGDR	1	200 / 5	0.45

FS Type Switch Covers

For indoor use only. Gasket not included

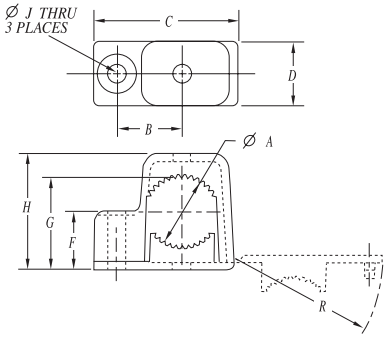
Cat. No.	Gang	Std. / Inner Qty.	Std. Ctn. Wt. (lb.)
E98DTSCR	2	150 / 5	0.90
E98STSCR	1	200 / 5	0.55

Support Straps

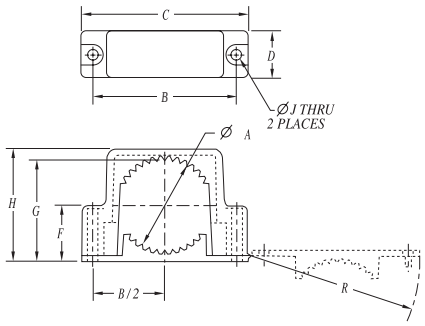
Snap Strap® Conduit – Support Straps

Carlon's Snap Strap® offers a unique support strap designed especially for the installation of PVC conduit. Also suitable for installations of rigid steel. This high strength, nonmetallic clamp allows conduit to expand and contract freely, eliminating the bowing commonly seen from the expansion and contraction of conduit caused by varying temperature changes. Finished installations have a neat, attractive appearance on exposed applications. To be used in accordance with conduit spacing requirements per Section 12-1114 of the CEC. This part is not supplied with screws.

- UV inhibited for use in direct sunlight



Single Mount



Double Mount

Single Mount

Cat. No.	Size in. (mm)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions in. (mm)								
				A	B	C	D	F	G	H	J	R
E978DC-CAR	1/2 (16)	40	1	0.80 (20.3)	0.75 (1.90)	1.63 (41.4)	0.75 (19.1)	0.59 (14.9)	0.99 (25.1)	1.36 (34.5)	0.21 (5.33)	1.67 (42.4)
E978EC-CAR	3/4 (21)	40	3	1.00 (25.4)	0.88 (22.4)	1.92 (48.7)	0.75 (19.1)	0.70 (17.8)	1.20 (30.4)	1.57 (39.9)	0.21 (5.33)	1.96 (49.8)
E978FC-CAR	1 (27)	30	4	1.20 (30.5)	1.02 (25.9)	2.17 (55.1)	0.75 (19.1)	0.83 (21.1)	1.43 (36.3)	1.84 (46.7)	0.21 (5.33)	2.22 (56.3)

Double Mount

Cat. No.	Size in. (mm)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions in. (mm)								
				A	B	C	D	F	G	H	J	R
E978GC-CAR	1-1/4 (35)	15	4	1.66 (42.16)	2.75 (69.9)	3.23 (82.0)	1.00 (25.4)	0.95 (24.1)	1.78 (45.2)	2.15 (54.61)	0.218 (5.54)	3.28 (83.3)
E978HC-CAR	1-1/2 (41)	15	5	1.92 (48.77)	3.05 (77.5)	3.53 (89.7)	1.00 (25.4)	1.08 (27.4)	2.04 (51.8)	2.40 (60.96)	0.218 (5.54)	3.58 (90.9)
E978JC-CAR	2 (53	10	5	2.34 (59.44)	3.50 (88.9)	4.00 (101.6)	1.00 (25.4)	1.31 (33.3)	2.48 (63.0)	2.86 (72.64)	0.218 (5.54)	4.06 (103.1)

Clamps

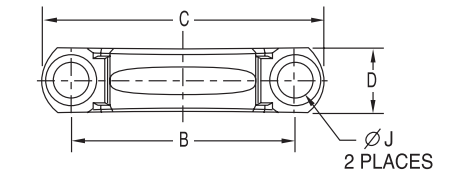
2 Hole Nonmetallic Conduit Clamps

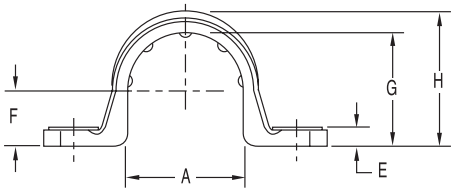
Nonmetallic clamps offer the same chemical resistance as Carlon nonmetallic conduits for a complete, corrosion resistant system.

To be used in accordance with conduit spacing requirements per Section 12-1114 of the CEC.

- UV inhibited for use in direct sunlight

Nylon Mansory Clamp





Conduit Clamps

Cat. No.	Size in. (mm)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions in. (mm)								
				A	B	C	D	E	F	G	H	J
E977DC	1/2 (16)	100	1.2	0.892 (22.6)	1.71 (43.4)	2.16 (54.8)	0.50 (12.7)	0.14 (3.5)	0.42 (10.6)	0.866 (21.9)	1.04 (26.4)	0.260 (6.6)
E977EC	3/4 (21)	100	1.4	1.102 (27.9)	1.97 (50.0)	2.40 (60.9)	0.50 (12.7)	0.14 (3.5)	0.525 (13.3)	1.076 (27.3)	1.255 (31.8)	0.260 (6.6)
E977FC	1 (27)	100	2	1.39 (35.3)	2.25 (57.1)	2.81 (71.3)	0.594 (15.0)	0.14 (3.5)	0.658 (16.7)	1.342 (34.0)	1.574 (39.9)	0.260 (6.6)
E977GC	1-1/4 (35)	50	5	1.714 (43.5)	2.68 (68.0)	3.28 (83.3)	0.64 (16.2)	0.15 (3.8)	0.83 (21.0)	1.687 (42.8)	1.89 (48.0)	0.320 (8.1)
E977HC	1-1/2 (41)	50	6	1.92 (48.7)	2.82 (71.6)	3.44 (87.3)	0.70 (17.7)	0.15 (3.8)	0.97 (24.6)	1.93 (49.0)	2.12 (53.8)	0.312 (7.9)
E977JC	2 (53)	25	4.5	2.54 (64.5)	3.54 (89.9)	4.18 (106.1)	0.76 (19.3)	0.16 (4.0)	1.05 (26.6)	2.29 (58.1)	2.49 (63.2)	0.315 (8.0)
E977K*	2-1/2 (63)	50	10	2.88 (73.0)	4.88 (123.8)	5.81 (147.7)	1.00 (25.4)	0.05 (1.3)	1.44 (36.5)	2.88 (73.0)	3.00 (76.1)	0.38 (9.5)
E977KC-CAR	2-1/2 (63)	25	1.4	2.86 (72.6)	4.50 (114.3)	5.46 (138.7)	1.00 (25.4)	0.20 (5.08)	1.43 (36.3)	2.86 (72.6)	3.12 (79.2)	0.36 (9.14)
E977L*	3 (78)	25	5.0	3.38 (85.7)	5.72 (145.3)	6.88 (174.6)	1.00 (25.4)	0.05 (1.3)	1.66 (16.7)	3.34 (84.9)	3.47 (88.0)	0.38 (9.5)
E977LC-CAR	3 (78)	20	1.4	3.47 (88.2)	5.00 (127.0)	6.00 (152.4)	1.00 (25.4)	0.20 (5.08)	1.74 (44.3)	3.48 (88.4)	3.70 (94.0)	0.36 (9.14)
E977N*	4 (103)	15	3.0	4.75 (120.7)	7.52 (190.9)	8.77 (222.7)	1.25 (57.2)	0.12 (3.1)	1.94 (49.2)	4.38 (111.1)	4.50 (114.2)	0.50 (12.7)
E977NC-CAR	4 (103)	15	12.2	4.366 (110.9)	6.15 (156.2)	7.20 (182.9)	1.00 (25.4)	0.20 (5.08)	2.32 (58.8)	4.50 (114.3)	4.70 (119.4)	0.36 (9.14)
E977NDC-CTN**	1/2 (16)	12	1.2	–	–	–	–	–	–	–	–	–
E977NEC-CTN**	3/4 (21)	12	1.3	–	–	–	–	–	–	–	–	–

* PVC coated steel straps
** Nylon masonry clamp

General Information

Typical Properties of Conduit Raw Material Compound

Thermal	ASTM Test	Typical Values
Coefficient of Thermal Expansion-inch/inch/°C (properties at 23°C)	D696	3.38 x 10-5
Heat Distortion °C at 264 psi	D648	71°C
Thermal Conductivity BTU (hr.) (ft.) (°C/in.)	N/A	1.3

Mechanical	ASTM Test	Typical Values
Specific Gravity	D792	1.43 – 1.6
Tensile Strength (psi) @ 23°C	D638	5,000 – 6,500
Izod Impact ft. lb./in. of notch	D256	0.65 – 1.5
Flexural Strength (psi)	D790	12,500
Compressive Strength (psi)	D695	9,000
Hardness (Durometer D)	D2240	85

Electrical	ASTM Test	Typical Values
Dielectrical Strength volts/mil	D149	1100
Dielectric Constant 60 Hz @ 30°C	D150	4.00
Power Factor 60 Hz @ 30°C	D150	1.93

Impedance (Volts lost per ampere per 100 feet)	Ø3 90% P.F.	80% P.F.	Ø1 90% P.F.	80% P.F.
Steel Conduit	0.0118	0.0123	0.0136	0.0142
Schedule 40	0.0105	0.0106	0.0121	0.0122

Using 250 kcmil copper conductor comparable values for other conductor sizes.

Wire Fill

Maximum number of conductors in Schedule 40 PVC conduit (Based on Table 1, Chapter 9 of the NEC)

Type Letters	Conductor Size AWG, kcmil	Conduit Trade Size													
		1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	4-1/4	5	6	8
THWN THHN	14	13	24	39	69	94	154								
	12	10	18	29	51	79	114	164							
	10	6	11	18	32	44	73	194	160						
	8	3	5	9	19	22	36	51	71	106	136				
FEP (14 thru 2) FEPB (14 thru 4/0)	6	1	4	6	11	15	26	37	57	76	98	125	154		
	4	1	2	4	7	9	16	22	35	47	60	75	94	137	236
	3	1	1	3	6	8	13	19	29	39	51	64	90	116	201
	2	1	1	3	5	7	11	16	25	33	43	54	67	97	169
	1		1	1	3	5	9	12	18	25	32	49	59	72	125
PFA (14 thru 8) PFAH (14 thru 4/0) Z (14 thru 4/0)	1/0		1	1	3	4	7	10	15	21	27	33	42	61	105
	2/0		1	1	2	3	6	8	13	17	22	29	35	51	88
	3/0		1	1	1	3	5	7	11	14	18	23	29	42	73
	4/050		1	1	1	2	4	6	9	12	15	19	24	35	61
	250			1	1	1	3	4	7	10	12	16	20	28	49
	300			1	1	1	3	4	6	8	11	13	17	24	42
	350			1	1	1	2	3	5	7	9	12	15	21	37
	400				1	1	1	3	5	6	8	10	13	19	33
XHHW (4 thru 500)	500				1	1	1	2	4	5	7	9	11	16	27
	600				1	1	1	1	3	4	5	7	9	13	22
	700					1	1	1	3	4	5	6	8	11	19
	750					1	1	1	2	3	4	6	7	11	19
XHHW	6	1	3	5	9	13	21	30	47	63	81	102	128	185	320
	600				1	1	1	1	3	4	5	7	9	13	22
	700					1	1	1	3	4	5	6	7	11	19
	750					1	1	1	2	3	4	6	7	10	18

Weight Comparison

Carlon Schedule 40 rigid nonmetallic conduit compared to other rigid conduit in pounds per 100 feet (approx.)

Nom. Size	Carlon Schedule 40 Rigid Nonmetallic Conduit	Carlon Schedule 80 Rigid Nonmetallic Conduit	Aluminum	Electrical Metallic Tubing (EMT)	Inter-mediate Metal Conduit (IMC)	Rigid Metal Conduit (RMC)
1/2	18	22	27	30	57	79
3/4	23	29	36	46	78	105
1	35	43	43	66	112	153
1-1/4	48	60	70	96	114	201
1-1/2	57	72	86	112	176	246
2	76	100	116	142	230	334
2-1/2	125	153	183	230	393	527
3	164	212	239	270	483	690
3-1/2	198		288	350	561	831
4	234	310	340	400	625	982
5	317	431	465	Not Made	Not Made	1344
6	412	592	612	Not Made	Not Made	1770

General Information

Expansion and Contraction

Temperature Considerations for Rigid Nonmetallic Conduit Compensation for Linear Expansion

Like all construction materials, PVC will expand or contract with variations in temperatures. The coefficient of linear expansion in PVC conduit is 3.38 x 10-5 in./in./°C as compared to 1.2 x 10-5 for aluminum and 0.6-5 x 10-5 for steel. An expansion fitting is needed whenever the change in length due to temperature variation will be 1/4 in. or greater.

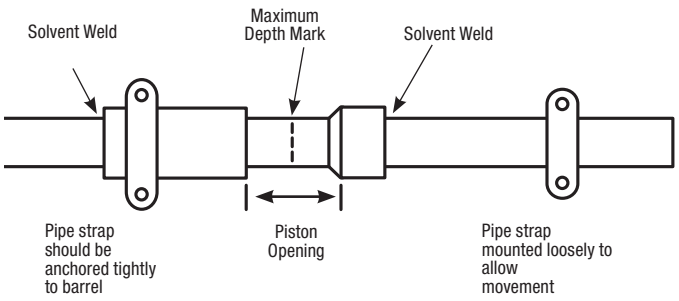
Add 1°C to the estimated temperature range when conduit is installed in direct sunlight to allow for radiant heating.

An expansion fitting consists of two sections, one telescoping inside another. When installing expansion fittings, alignment of piston and barrel is important. Be sure to mount expansion fitting level for best performance.

For a vertical run, the expansion fitting must be installed close to the top of the run with the barrel jointing down, in order that rain water does not run into the opening. The lower end of the conduit run must be secured at the bottom so that any length change due to temperature variation will result in an upward movement.

Expansion Characteristics of PVC Rigid Nonmetallic Conduit Coefficient of Thermal Expansion = 3.38 x 10-5 in./in./°C

Temp. Change in Degrees F	Length Change in inches per 100 ft. of PVC Conduit	Temp. Change in Degrees C	Length Change in inches per 100 ft. of PVC Conduit	Temp. Change in Degrees C	Length Change in inches per 100 ft. of PVC Conduit	Temp. Change in Degrees C	Length Change in inches per 100 ft. of PVC Conduit
5	0.2	12.8	2.2	40.5	4.2	68.3	6.3
10	0.4	15.6	2.4	43.3	4.5	71.1	6.5
15	0.6	18.3	2.6	46.0	4.7	73.9	6.7
20	0.8	21.1	2.8	48.9	4.9	76.7	6.9
25	1.0	23.9	3.0	51.6	5.1	79.4	7.1
30	1.2	26.7	3.2	54.4	5.3	82.2	7.3
35	1.4	29.4	3.4	57.2	5.5	85.0	7.5
40	1.6	32.2	3.6	60.0	5.7	87.8	7.7
45	1.8	35.0	3.8	62.7	5.9	90.6	7.9
50	2.0	37.8	4.1	65.5	6.1	93.3	8.1



Determine the Piston Opening

The expansion joint must be installed to allow both expansion and contraction of the conduit run. The correct piston opening for any installation condition should use the following formula:

$$O = \left[\frac{T_{max} - T_{installed}}{\Delta T} \right] E$$

Where:

O	=	Piston opening (in.)
T max	=	Maximum anticipated temperature of conduit (°C)
T inst.	=	Temperature of conduit at time of installation (°C)
ΔT	=	Total change in temperature of conduit (°C)
E	=	Expansion allowance built into each expansion fitting (in.)

Example

380 ft. of conduit is to be installed on the outside of a building exposed to the sun in a single straight run. It is expected that the conduit will vary in temperature from -17°C in the winter to 60°C in the summer (this includes the -1°C for radiant heating from the sun). The installation is to be made at a conduit temperature of 32°C. From the table, a 60°C temperature change will cause a 5.7 in. length change in 100 ft. of conduit. The total change for this example is 5.7 in. x 3.8 = 21.67 in. which should be rounded to 22 in. The number of expansion fittings will be 22 in. x fitting range (4 in. for Carlon trade sizes 1/2 in. through 1-1/2 in. and 8 in. for sizes 2 in. through 6 in.). If the E945D fitting is used, the number will be 22 in. x 4 = 5.50 which should be rounded to 6. The fitting should be placed at 62 ft. intervals (380 x 6). The proper piston setting at the time of installation is calculated as explained above.

$$O = \left[\frac{60°C - 32°C}{60°C} \right] 4.0 = 1.4 \text{ in.}$$

Insert the piston into the barrel to the maximum depth. Place a mark on the piston at the end of the barrel. To properly set the piston, pull the piston out of the barrel to correspond to the 2.1 in. calculated above. See drawing at lower left.

Summary

1. Anticipate expansion and contraction of PVC conduit in above ground, exposed installation.
2. Use an expansion fitting when length change due to temperature variation will be 1/4 in. or greater.
3. PVC conduit expands 4.1 in. for each 100 feet of run and a 37.8°C temperature change.
4. Align expansion fitting with the conduit run to prevent binding.
5. Follow the instructions to set the piston opening.
6. Rigidly fix the outer barrel of the expansion fitting so it cannot move. Mount the conduit connected to the piston loosely enough to allow the conduit to move as the temperature changes.

General Information

Corrosion Resistance of Carlon Schedule 40 PVC Conduit and Fittings

Carlon Schedule 40 is generally acceptable for use in environments containing the chemicals below. These environmental resistance ratings are based upon tests where the specimens were placed in complete submergence in the reagent listed. Schedule 40 can be used in many process areas where chemicals not on this list are manufactured or used because worker safety requirements dictate that any air presence or splashing be at a very low level.

If there are any questions for specific suitability in a given environment, prototype samples should be tested under actual conditions.

Acetic Acid 0-20%
Acetic Acid 20-30%
Acetic Acid 30-60%
Acetic Acid 80%
Acetic Acid – Glacial
Acetic Acid Vapors
Acetylene
Adipic Acid
Alum
Aluminum Chloride
Aluminum Fluoride
Aluminum Hydroxide
Aluminum Oxychloride
Aluminum Nitrate
Aluminum Sulfate
Ammonia-Dry Gas
Ammonium Bifluoride
Ammonium Carbonate
Ammonium Chloride
Ammonium Hydroxide 28%
Ammonium Metaphosphate
Ammonium Nitrate
Ammonium Persulfate
Ammonium Phosphate – Neutral
Ammonium Sulfate
Ammonium Sulfide
Ammonium Thiocyanate
Amyl Alcohol
Anthraquinone
Anthraquinonesulfonic Acid
Antimony Trichloride
Aqua Regia
Arsenic Acid 80%
Arylsulfonic Acid
Barium Carbonate
Barium Chloride
Barium Hydroxide
Barium Sulfate
Barium Sulfide
Beet – Sugar Liquor
Benzine Sulfonic Acid 10%
Benzoic Acid
Bismuth Carbonate
Black Liquor (Paper Industry)
Bleach – 12.5% Active CL,
Borax
Boric Acid
Brine
Bromic Acid
Bromine – Water
Butadiene
Butane
Butyl Alcohol
Butyl Phenol
Butylene
Butyric Acid
Calcium Bisulfite
Calcium Carbonate
Calcium Chlorate
Calcium Chloride
Calcium Hydroxide
Calcium Hypochlorite
Calcium Nitrate
Calcium Sulfate
Carbonic Acid
Carbon Dioxide Gas – Wet
Carbon Dioxide – Aqueous Solution
Carbon Monoxide
Caustic Potash
Caustic Soda
Chloraceatic Acid
Chloral Hydrate
Chlorine Gas (Dry)
Chlorine Gas (Moist)
Chlorine Water
Chlorosulfonic Acid
Chrome Alum
Chromic Acid 10%
Chromic Acid 30%
Chromic Acid 40%
Chromic Acid 50%
Citric Acid
Copper Chloride
Copper Cyanide
Copper Fluoride
Copper Nitrate
Copper Sulfate
Cottonseed Oil
Cresylic Acid 50%
Crude Oil – Sour
Crude Oil – Sweet
Demineralized Water
Dextrin
Dextrose
Diglycolic Acid
Disodium Phosphate
Ethyl Alcohol
Ethylene Glycol
Fatty Acids
Ferric Chloride
Ferric Nitrate
Ferric Sulfate
Ferrous Chloride
Ferrous Sulfate
Fluorine Gas – Wet
Fluorine Gas – Dry
Fluoroboric Acid
Fluorosilicic Acid
Formaldehyde
Formic Acid
Fructose
Gallic Acid
Gas – Coke Oven
Gas – Natural (Dry)
Gas – Natural (Wet)
Gasoline – Sour
Gasoline – Refined
Glucose
Glycerine (Glycerol)
Glycol
Glycolic Acid
Green Liquor (Paper Industry)
Heptane
Hexanol, Tertiary
Hydrobromic Acid 20%
Hydrochloric Acid 0% - 25%
Hydrochloric Acid 25% - 40%
Hydrocyanic Acid or Hydrogen Cyanide
Hydrofluoric Acid 10%
Hydrofluorosilicic Acid
Hydrogen Phosphide
Hydrogen Sulfide – Dry
Hydrogen Sulfide – Aqueous Solution
Hydroquinone
Hydroxylamine Sulfate
Iodine
Kerosene
Lactic Acid 28%
Lauric Acid
Lauryl Chloride
Lauryl Sulfate
Lead Acetate
Lime Sulfur
Linoleic Acid
Linseed Oil
Lubricating Oils
Magnesium Carbonate
Magnesium Chloride
Magnesium Hydroxide
Magnesium Nitrate
Magnesium Sulfate
Maleic Acid
Malic Acid
Mercuric Chloride
Mercuric Cyanide
Mercurous Nitrate
Mercury
Methyl Sulfate
Methylene Chloride
Mineral Oils
Naphthalene
Nickel Chloride
Nickel Nitrate
Nitric Acid, Anydrous
Nitric Acid 20%
Nitric Acid 40%
Nitric Acid 60%
Nitrobenzene
Nitrous Oxide
Oils and Fats
Oils – Petroleum – (See Type)
Oleic Acid
Oxalic Acid
Palmitic Acid 10%
Perchloric Acid 10%
Phenylhydrazine Hydrochloride
Phosgene, Gas
Phosphoric Acid – 0-25%
Phosphoric Acid – 25-50%
Phosphoric Acid – 50-85%
Photographic Chemicals
Plating Solutions
Potassium Bicarbonate
Potassium Bichromate
Potassium Borate
Potassium Bromide
Potassium Carbonate
Potassium Chloride
Potassium Chromate
Potassium Cyanide
Potassium Dichromate
Potassium Ferricyanide
Potassium Ferrocyanide
Potassium Fluoride
Potassium Hydroxide
Potassium Nitrate
Potassium Perborate
Potassium Perchlorite
Potassium Permanganate 10%
Potassium Persulfate
Potassium Sulfate
Propane
Propyl Alcohol
Silicic Acid
Silver Cyanide
Silver Nitrate
Silver Plating Solutions
Sodium Acetate
Sodium Arsenite
Sodium Benzoate
Sodium Bicarbonate
Sodium Bisulfate
Sodium Bisulfite
Sodium Bromide
Sodium Chlorate
Sodium Chloride
Sodium Cyanide
Sodium Dichromate
Sodium Ferricyanide
Sodium Ferrocyanide
Sodium Fluoride
Sodium Hydroxide
Sodium Hypochlorite
Sodium Nitrate
Sodium Nitrite
Sodium Sulfate
Sodium Sulfide
Sodium Sulfite
Sodium Thiosulfate (Hypo)
Stannic Chloride
Stannous Chloride
Stearic Acid
Sulfur
Sulfur Dioxide – Gas Dry
Sulfur Trioxide
Sulfuric Acid – 0-10%
Sulfuric Acid – 10-75%
Sulfuric Acid – 75-90%
Sulfurous Acid
Tannic Acid
Tanning Liquors
Tartaric Acid
Titanium Tetrachloride
Triethanolamine
Trimethyl Propane
Trisodium Phosphate
Turpentine
Urea
Vinegar
Whiskey
White Liquor (Paper Industry)
Wines
Zinc Chloride
Zinc Chromate
Zinc Cyanide
Zinc Nitrate
Zinc Sulfate

DB/2 PVC Conduit

Rigid Type DB/2 PVC Conduit

Physical Properties by ASTM Test Methods

Carlon® Type DB/2 PVC Conduit is designed for use in concrete encased or masonry and direct burial applications. Type DB/2 PVC is CSA Certified, tested to CSA Standard C22.2 No. 211.1

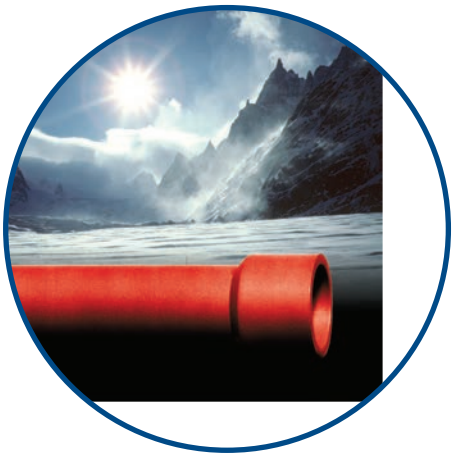
Properties	ASTM No.	Typical Values Type DB/2 Conduit
Tensile Strength, psi	D638	4,800
Modulus of Elasticity in tension, psi	D638	500,000
Flexural Strength, psi	D790	11,000
Deflection Temp under load at 265 psi deg. C	D648	720C
Coefficient of Thermal Expansion in./in./°C	D696	3.30 X 10-5
Maximum Coefficient of Static Friction		0.20

Performance Properties of Type DB/2 Conduit

as Indicated Under CSA Standard C22.2 No. 211.1

Pipe Stiffness kPA	
Conduit Series	Minimum Pipe Stiffness (FΔy), all sizes
DB/2	200

Minimum Impact Resistance (J)		
Conduit Series	-18°C	23°C
DB/2	34	61



Cat. No. 10'	Cat. No. 20'	Nom. Size	Std. Crate Only		Approx. Wt. per 100 ft.		Average Outside Diameter		Average Wall Thickness	
			10 ft.	20 ft.	(lb.)	(kg)	(in.)	(mm)	(in.)	(mm)
48811CPD-010	48811CPD-020	2	2460	4920	35	15.9	2.25	57.15	0.070	1.78
48813CPD-010	48813CPD-020	3	1120	2240	58	26.3	3.25	82.55	0.080	2.03
48815CPD-010	48815CPD-020	4	630	1260	100	45.4	4.22	107.08	0.106	2.69
48816CPD-010	48816CPD-020	5	430	860	180	81.6	5.30	134.60	0.150	3.81
48817CPD-010	48817CPD-020	6	280	560	220	99.8	6.27	159.38	0.155	3.94

Also available in orange, add OG after CPD to the cat. no.

DB/2 Duct Fittings

PE Coupling – Push Fit

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE242J	2	24
CE242L	3	100
CE242N	4	25
CE242P	5	12
CE242R	6	6

PVC 5° Coupling BxB – Solvent Weld

Cat. No.	Size (in.)	Std. Ctn.Qty.
CE245J	2	30
CE245L	3	15
CE245N	4	15
CE245P	5	20
CE245R	6	1

PVC Coupling – Solvent Weld

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE240J	2	50
CE240L	3	20
CE240N	4	25
CE240P	5	20
CE240R	6	6

PVC 5° Coupling – Push Fit

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE2440L	3	100
CE2440N	4	100
CE2440P	5	45

PVC Female Adapter – I.P.S. Solvent Weld Duct

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE942DJ	2	25
CE942DL	3	30
CE942DN	4	50
CE942DP	5	15
CE942DR	6	6

Plugs with Pull Tab

Cat. No.	Size (in.)	Std. Ctn. Qty.
P258JT	2	60
P258LT	3	30
P258NT	4	48
P258PT	5	30
P258RT	6	30

PVC Conduit to DB/2 Duct Adapter

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE942RJ	2	100
CE942RL	3	30
CE942RN	4	20
CE942RP	5	20

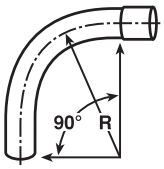
End Bells (For use with DB/2 Duct Only)

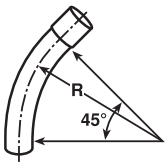
Cat. No.	Size (in.)	Std. Ctn. Qty.
CE297J	2	40
CE297L	3	30
CE297N	4	20
CE297P	5	15
CE297R	6	1

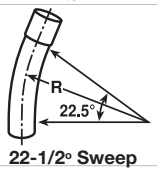
Cap – Solvent Weld

Cat. No.	Size (in.)	Std. Ctn. Qty.
CE935J	2	25
CE935L	3	25
CE935N	4	50
CE935P	5	25
CE935R	6	25

DB/2 Sweeps

Item	Cat. No.	Size (in.)	Radius (in.)	Std. Ctn. Qty.
 90° Sweep	CPF9DJ-PD	2	24	1
	CPF9DL-PD	3	24	
	CPF9DN-PD	4	24	
	CPF9DP-PD	5	24	
	CPF9FJ-PD	2	36	
	CPF9FL-PD	3	36	
	CPF9FN-PD	4	36	
	CPF9FP-PD	5	36	
	CPF9FR-PD	6	36	
	CPF9GP-PD	5	42	
	CPF9IJ-PD	2	60	
	CPF9IL-PD	3	60	
	CPF9IN-PD	4	60	
	CPF9IP-PD	5	60	
	CPF9IR-PD	6	60	
	CPF9BJO-PD	2	12	
	CPF9FJO-PD	2	36	
	CPF9FLO-PD	3	36	
	CPF9FNO-PD	4	36	

Item	Cat. No.	Size (in.)	Radius (in.)	Std. Ctn. Qty.
 45° Sweep	CPF7DJ-PD	2	24	1
	CPF7DL-PD	3	24	
	CPF7DN-PD	4	24	
	CPF7FJ-PD	2	36	
	CPF7FL-PD	3	36	
	CPF7FN-PD	4	36	
	CPF7FR-PD	6	36	
	CPF7GP-PD	5	42	
	CPF7IN-PD	4	60	
	CPF7IP-PD	5	60	
	CPF7IR-PD	6	60	

Item	Cat. No.	Size (in.)	Radius (in.)	Std. Ctn. Qty.
 22-1/2° Sweep	CPF5DJ-PD	2	24	1
	CPF5DL-PD	3	24	
	CPF5DN-PD	4	24	
	CPF5FL-PD	3	36	
	CPF5FN-PD	4	36	
	CPF5GP-PD	5	42	
	CPF5IN-PD	4	60	

Split Duct

Product Overview

Split Duct is the fast and easy way to repair broken ductwork without the costly cutting and resplicing of your conductors.

Our unique tongue-and-groove design leads the industry in providing a strong, rigid solution for duct repair situations.

The interlocking design allows the split duct sections to be staggerend and butted together. Joints may be sealed with tape and reinforced with plastic or metallic straps to produce a rigid, stable unit.

Manufactured from a compound designed specifically for power and telecommunications applications, Split Duct exhibits superior impact strength.

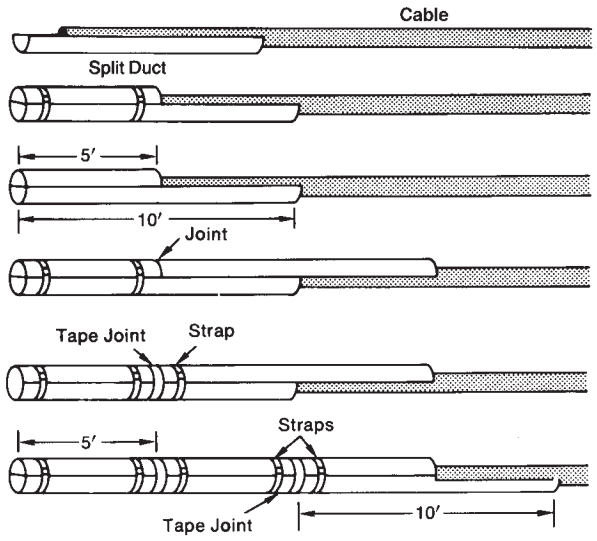
Available in 2 in. through 6 in. diameters, this product line also contains couplings and sweeps necessary to complete the system.

Verify with local inspection authorities before using.

The fast and easy method of installing duct around existing cable for repair and temporary installations.

Recommended Installation Procedure

1. Place one 10-foot Split Duct section under cable.
2. Order to stagger joints, saw another section in half (about 5 feet long).
3. Place 5-foot section over cable and snap the two sections together.
4. Place strap about one foot from the end and another strap about a foot from the joint where the ends of the top sections will butt.
5. Place another 10-foot Split Duct section over the open half of the bottom section, butt the ends tightly together and snap the sections together.
6. Place a length of tape around both sections of the Split Duct to cover the butted joint.
7. Place a strap about one foot beyond the taped joint.
8. Lay another length of Split Duct underneath cable, butt together, tape the butted joint and strap one foot on each side of the joint.
9. Repeat procedure.



Split Duct

Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	O.D. (in.)
Schedule 40				
49011SD-010	2 in. Schedule 40 Split Duct	700	523	2.375
49012SD-010	2-1/2 in. Schedule 40 Split Duct	460	562	2.875
49013SD-010	3 in. Schedule 40 Split Duct	500	802	3.500
49014SD-010	3-1/2 in. Schedule 40 Split Duct	290	560	4.000
49015SD-010	4 in. Schedule 40 Split Duct	290	662	4.500
49016SD-010	5 in. Schedule 40 Split Duct	130	718	5.563
49017SD-010	6 in. Schedule 40 Split Duct	130	523	6.625
Schedule 80				
49411SD-010	2 in. Schedule 80 Split Duct	700	702	2.375
49415SD-010	4 in. Schedule 80 Split Duct	290	890	4.500
C Duct				
68515SD-010	4 in. C Duct Split Duct	320	614	4.350

Split Sleeve Coupling

Cat. No.	Size (in.)	Description	Lenth (in.)	Split	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
Schedule 40 and 80						
E200JS6	2	Split Coupling	6	1	25	6.1
E200KS7	2-1/2		7		25	21
E200LS7	3		7		25	15.5
E200LSS	3		6-1/2		25	10
E200MS8	3-1/2		8		25	41.2
E200NS8	4		8		15	16
E200NSS	4		6		25	17
E200PS8	5		8		15	25
E200PS9	5		9		8	16.4
E200RS1	6		10		6	24.2
C Duct						
E900NS8 (white)	4	C Duct Split Coupling	8	1	15	19
E900NSW (white)	4		6		25	22

Split Sleeve Sweeps

Item	Cat. No.	Nom. Size (in.)	Radius (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
45° Sweep	UA7DJSD	2	24	1	1.4
	UA7FJSD	2	36		2.1
	UA7FLSD	3	36		4.7
	UA7HJSD	2	48		2.7
	UA7HLSD	3	48		6.1
	UA7IJSD	2	60		3.2
	UA7ILSD	3	60		7.2
	UA7INSD	4	60		10.2
22-1/2° Sweep	UA5INSD	4	60		6.1
11-1/4° Sweep	UA3IJSD	2	60		1.0
	UA3ILSD	3	60		3.6
	UA3INSD	4	60		5.1

Two 45° Elbows may be segmented for 90°.

Split Kits

Product Overview

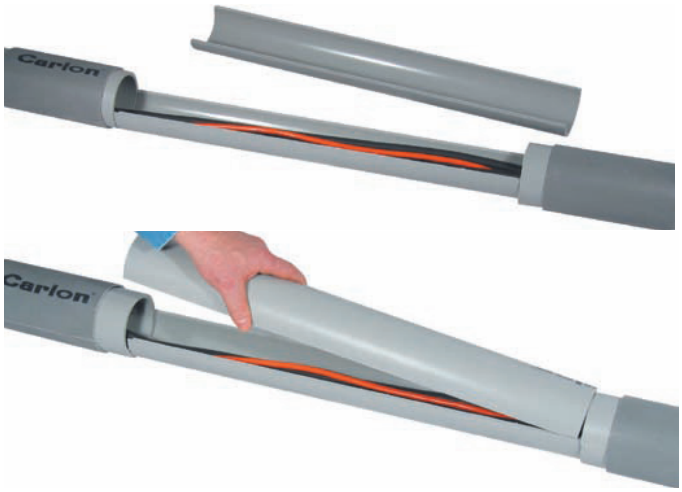
Split Kits are specifically designed to make Schedule-40 and Type-C conduit repairs faster and easier! Damaged conduit can be repaired without disturbing the installed wire/cable system. Split Kits come in handy 2 feet lengths with 7 inch split couplings on each end. UV-resistant for outdoor use, Split Kits feature the same durable tongue-and-groove design as our Split Duct product.

Split Kits are manufactured from extra rugged PVC material. The unique design maintains the same physical performance and dimensional characteristics as the PVC pipe it is repairing! No other repair product can make this offer!

The reason is in the interlocking/tongue-and-groove design that holds the true dimensions of the product, both I.D. and O.D., while maintaining the pipe's physical performance characteristics too.

Verify with local inspection authorities before using.

Split Kits...
Conduit Repairs made Faster and Easier.



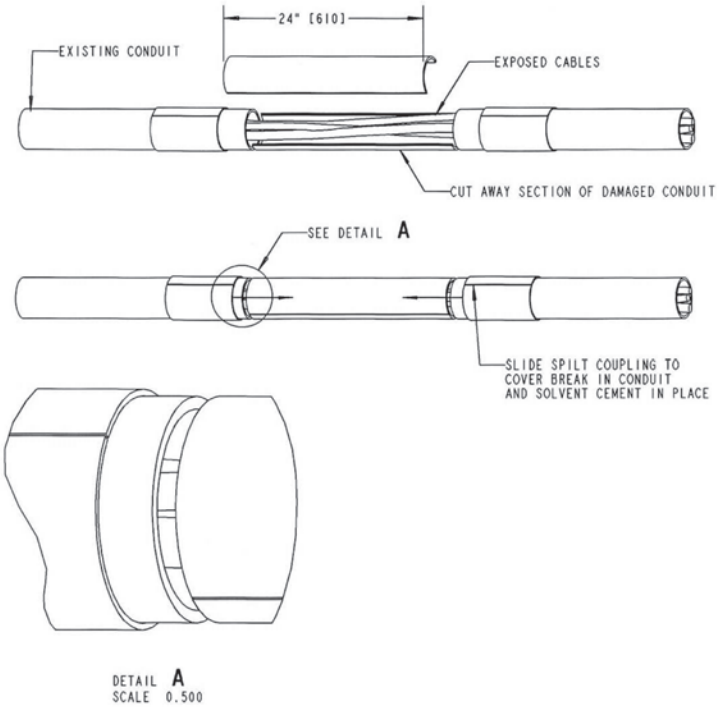
Features

- Interlocking/tongue-and-groove design to assure dimensional pipe characteristics
- Convenient and handy for easy handling, transport and storage
- 2 ft. lengths for fast/easy conduits repairs. Eliminates the need of cutting standard 10 ft. lengths to size. Get off the jobsite FASTER!
- Two 7 in. split couplings for a secure fit. Allows the product to be coupled together for longer repairs.
  Solvent cementable = water-resistant
- Available in two wall types – Schedule 40 (Sizes 2 in. through 6 in.), and Type-C (4 in.)
- Manufactured from extra rugged PVC – lightweight, solvent cementable and compatible with all standard pipe fittings

Split Kits

Specifications

Cat. No.	Size (in.)	Wall Type	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SK4020	2	Schedule 40	10	24.3
SK4025	2-1/2		10	49.2
SK4030	3		8	43.6
SK4040	4		5	40.5
SK4050	5		3	34.6
SK4060	6		2	36.4
SKC40	4	Type C	5	36.2



Snap-Loc™ Spacers

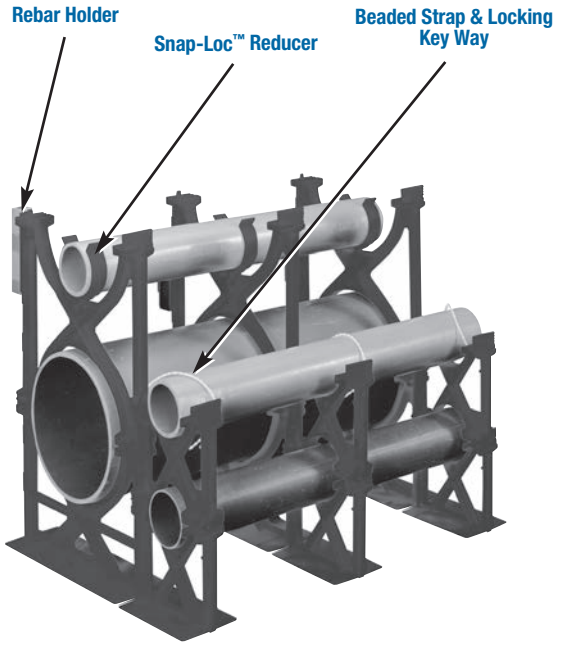
Product Overview

Carlon Snap-Loc™ duct spacers provide stability, consistent separation and relieve direct stress for duct materials encased in concrete and direct burial applications.

Carlon Snap-Loc™ Spacers provide:

- A side dovetail rail and groove design allowing for side-by-side interchangeability of conduit spacer sizes while maintaining horizontal stability
- Locking key ways incorporated into intermediate spacers eliminate the need for costly top spacers in each size. The locking key ways provide for the use of a beaded strap that secures the top section of conduit.
- 1 in. and 2 in. Snap-Loc™ Reducers allow fixturing of 1 in. or 2 in. conduit inside larger spacers
- The Snap-Loc™ Rebar Holder provides stabilization on large banks of spacers

Nonmetallic Snap-Loc™ Spacers are designed specifically for use with nonmetallic duct, with maximum O.D. dimensions as specified in NEMA TC-2, TC-6 & 8, TC-10 and ASTM F512. The innovative vertical and horizontal interlocking Snap-Loc™ design has tapered joining slots with maximum tolerances for easy job site assembly.



Important

1. The use of duct spacers for direct burial may result in excessive point deflections unless proper design engineering is applied, such as the proper compaction of the appropriate backfill material.
2. Thomas & Betts is not responsible for Snap-LocTM Spacers used in direct burial applications, design engineers and contractors are responsible for the design of the installation.

Snap-Loc™ Spacers

Dimensions – Base Spacers

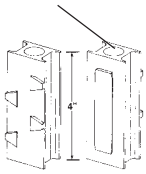
Cat. No.	Size* (in.)	A (in.)	C (in.)	D (Dia.) (in.)	Std. Ctn. Qty.
S288JHN	2 X 1-1/2	4.25	4.12	2.50	100
S288JJN	2 x 2	4.25	4.62	2.50	100
S288JLN	2 x 3	4.25	5.62	2.50	100
S288LHN	3 x 1-1/2	4.81	5.25	3.63	90
S288LJN	3 x 2	4.81	5.75	3.63	80
S288LLN	3 x 3	4.81	6.75	4.63	60
S288NFN	4 x 1	4.50	6.75	4.63	70
S288NHN	4 x 1-1/2	5.31	6.25	4.63	50
S288NJN	4 x 2	5.31	6.75	4.63	50
S288NLN	4 x 3	5.31	7.75	5.69	60
S288PHN	5 x 1-1/2	5.84	7.31	5.69	50
S288PJN	5 x 2	5.84	7.81	5.69	60
S288PLN	5 x 3	5.84	8.81	6.75	50
S288RHN	6 x 1-1/2	6.38	8.38	6.75	50
S288RJN	6 x 2	6.38	8.88	6.75	50
S288RLN	6 x 3	6.38	9.88	6.75	40
S288SHN	8 x 1-1/2	7.38	10.30	8.75	30
S288SJN	8 x 2	7.38	10.76	8.75	30

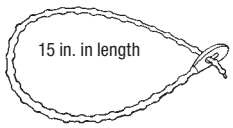
*First number indicates trade size of duct, second number indicates separation between conduits or ducts.

Dimensions – Intermediate Spacers

Cat. No.	Size* (in.)	A (in.)	C (in.)	D (Dia.) (in.)	Std. Ctn. Qty.
S289JHN	2 X 1-1/2	3.88	4.12	2.50	100
S289JJN	2 x 2	4.38	4.62	2.50	100
S289JLN	2 x 3	5.38	5.62	2.50	100
S289LHN	3 x 1-1/2	5.01	5.25	3.63	90
S289LJN	3 x 2	5.51	5.75	3.63	80
S289LLN	3 x 3	6.51	6.75	4.63	60
S289NFN	4 x 1	5.51	6.75	4.63	70
S289NHN	4 x 1-1/2	6.01	6.25	4.63	50
S289NJN	4 x 2	6.51	6.75	4.63	50
S289NLN	4 x 3	7.51	7.75	5.69	60
S289PHN	5 x 1-1/2	7.07	7.31	5.69	50
S289PJN	5 x 2	7.57	7.81	5.69	60
S289PLN	5 x 3	8.57	8.81	6.75	50
S289RHN	6 x 1-1/2	8.14	8.38	6.75	50
S289RJN	6 x 2	8.64	8.88	6.75	50
S289RLN	6 x 3	9.64	9.88	6.75	40
S289SHN	8 x 1-1/2	10.14	10.30	8.75	30
S289SJN	8 x 2	10.64	10.76	8.75	30

Accessories





Snap-Loc™ Reducer

Cat. No.	Size (in.)	Std. Ctn. Qty.
S287F	1	100
S287J	2	100

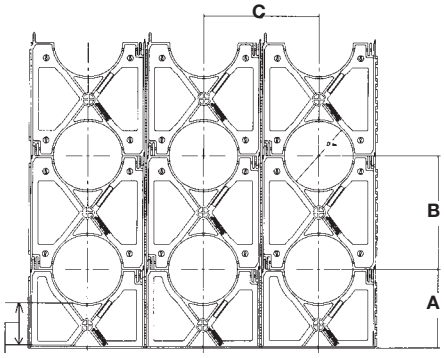
Rebar Holder

Cat. No.	Std. Ctn. Qty.
S258RH	100

Beaded Strap

Cat. No.	Std. Ctn. Qty.
S28612	1 Bag of 250

Specifications



3 in. Standard for all Base Spacers (with the exception of the 4X1-S288NFN)

Suggested Specification

(Duct) (Conduit) bank shall be encased in concrete with at least three inches of concrete at the top and bottom and two inches on each side. A horizontal and vertical separation between the ducts of * inches shall be maintained by installing Carlon high impact spacers with horizontal and vertical locking intervals of **feet.

*Standard Separations of 1 in., 1-1/2 in. , 2 in. and 3 in. are available
**Preferred interval between spacer assemblies is 8 to 10 feet

Installation Note

The spacers and rebar holder are designed with a dovetail tongue and groove feature for easy installation. If required to permanently fix the position of a group of spacers and/or rebar holder, the following are recommended procedures:

1. Use Carlon Quick-set Cement glue during assembly or spot glue after assembly to secure.
2. During assembly, deform the edge of the tongue or groove portion of the dovetail slide with a pair of pliers or similar tool. This deformation will create an interference, restricting movement.
3. An assembled system may be wired together for additional support.

IMPORTANT

1. The use of duct spacers for direct burial may result in excessive point deflections unless proper design engineering is applied, such as the proper compaction of the appropriate backfill material.
2. Thomas & Betts is not responsible for Snap-Loc™ Spacers used in direct burial application, design engineers and contractors are responsible for the design of the installation.

Snap-N-Stac® Combo Spacers

Product Overview

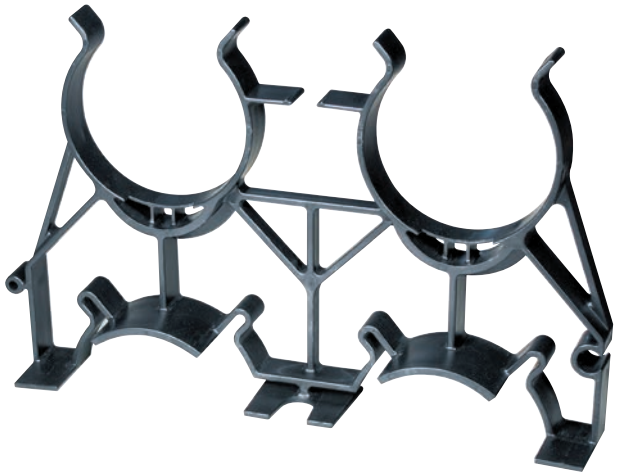
Carlon® Snap-N-Stac® Combo Duct Spacers are specifically designed to replace the two-piece base and intermediate spacer system, by combining the conventional base and intermediate spacer into a single unit!

Manufactured out of highly engineered thermoplastic material, Snap-N-Stac® Spacers are strong, durable and able to withstand the rigors of concrete construction. They feature an innovative horizontal and EXCLUSIVE vertical locking system and can be used as either a base or intermediate spacer.

Snap-N-Stac® Spacers are available in one-way, two-way and three-way configurations (one-way and three-way only available in sizes 2 in. and 4 in.). They accept 2 in., 3 in., 4 in., 5 in., and 6 in. pipe and can be installed horizontally, vertically or turned upright for unique duct bank configurations.

This NEW one-piece design makes underground duct bank installations faster and easier than the conventional two-piece system– saving material and labor costs.

Carlon® Snap-N-Stac® Combo Spacers...The ideal Solution for Underground Duct Bank Installations.



One-Way

Three-Way

Features

- Conventional base and intermediate spacer in a single unit!
- Less inventory required
- EXCLUSIVE vertical locking system
- Horizontal locking system
- Installs horizontally or turned upright
- Molded-in rebar holder on two-way and three-way
- One-, two- and three-way configurations (one-way and three-way only available in sizes 2 in. and 4 in.)
- 5 sizes: 2 in., 3 in., 4 in., 5 in. and 6 in.
- Reducer to accommodate smaller duct sizes
- Can be used as either an intermediate or base spacer
- Spacers interlock horizontally regardless of size
- Nonmetallic, non-corrosive, non-conductive
- Strong and durable
- Easy to handle
- Fast installation

Installations

Horizontal Locking

Vertical Interlocking

With Reducer

Snap-N-Stac® Combo Spacers

Installation Instructions

IMPORTANT

1. Snap-N-Stac® Spacers are recommended for concrete encased applications only.
2. The use of duct spacers for direct burial may result in excessive point deflections unless proper design engineering is applied, such as the proper compaction of the appropriate backfill material.
3. Thomas & Betts is NOT responsible for Snap-N-Stac® Spacers used in direct burial applications, design engineers and contractors are responsible for the design of the installation.

Vertical Interlocking Slide spacers together "Feet Facing Feet."

Molded-In Rebar Holder

Snap-N-Stac® Combo Spacers

Installation Instructions (cont'd)

Vertical Free Standing

If spacers are installed using free standing method, it is recommended to install the spacer on the upper row mid-way between the two spacers on the bottom row.

Reducer

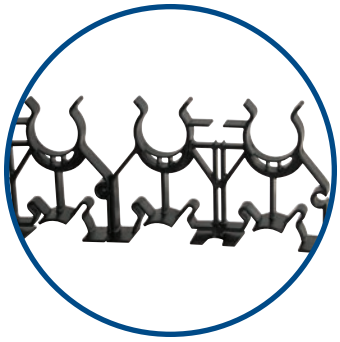
1 in. & 2 in. Snap-Loc™ Reducers allow fixturing of 1 in. and 2 in. conduit inside of larger spacers.

Transition To Various Duct Sizes

Install spacers side-by-side by inserting the male adapter into the female adapter.
Note: All Snap-N-Stac® spacers re designed to interlock horizontally, regardless of size.

Odd Number of Ducts

Two-way spacers, size 2 in. and 4 in. only, can easily be cut apart to produce two one-way spacers. Create three-way and five-way spacers using the one-way spacer. Install spacers side-by-side by inserting the male adapter into the female adapter.



Snap-N-Stac® Combo Spacers

Specifications

Cat. No.	Description	Size (in.)	Separation (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SP2W20-1	1-Way Spacers	2	2	56	15.0
SP2W30-1		2	3	40	13.0
SP4W15-1		4	1-1/2	26	9.6
SP4W20-1		4	2	20	10.0
SP4W30-1		4	3	20	9.4
SP2W20-2	2-Way Spacers	2	2	56	28.5
SP2W30-2		2	3	40	23.8
SP3W20-2		3	2	40	24.0
SP3W30-2		3	3	24	17.9
SP4W15-2*		4	1-1/2	26	18.3
SP4W20-2*		4	2	24	18.8
SP4W30-2*		4	3	20	17.6
SP5W20-2*		5	2	20	17.2
SP5W30-2*		5	3	14	15.5
SP6W20-2*		6	2	12	12.8
SP6W30-2*		6	3	12	14.1
SP2W20-3	3-Way Spacers	2	2	36	28.5
SP2W30-3		2	3	18	17.8
SP4W15-3		4	1-1/2	18	19.4
SP4W20-3		4	2	16	19.3
SP4W30-3		4	3	14	19.1

*Can be cut apart to make (2) one-way spacers

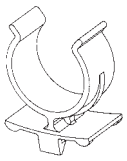
How to Interpret the Catalogue Number

Position 1	Position 2	Position 3	Position 4
Product Type	Duct Size	Duct-to-Duct Spacing Horizontal and Vertical	Horizontal Duct Positions
SP = Spacer	2W = 2 in. Width	15 = 1-1/2 in.	-1 = One-Way
	3W = 3 in. Width	20 = 2 in.	-2 = Two-Way
	4W = 4 in. Width	30 = 3 in.	-3 = Three-Way
	5W = 5 in. Width		
	6W = 6 in. Width		

Accessories

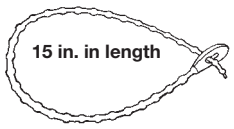
Snap-Loc™ Reducer

Cat. No.	Size (in.)	Std. Ctn. Qty.
S287F	1	100
S287J	2	100



Beaded Strap

Cat. No.	Std. Ctn. Qty.
S28612	1 Bag of 250



Technical Information

Cat. No.	Duct Size (in.)	Duct O.D. (in.)	Horizontal Duct Positions	Duct-to-Duct Spacing		Center-to-Center Spacing		Bottom of Trench to Bottom of Duct (in.)	Bottom of Trench to Center of Bottom Duct (in.)	Overall Length (in.)
				Vertical (in.)	Horizontal (in.)	Vertical (in.)	Horizontal (in.)			
SP2W20-1	2	2.375	1	2	2	2.19	2.19	3.13	4.25	4.38
SP2W30-1	2	2.375	1	3	3	2.69	2.69	4.13	5.25	5.38
SP4W15-1	4	4.500	1	1.5	1.5	3.00	3.00	3.38	5.56	6.00
SP4W20-1	4	4.500	1	2	2	3.25	3.25	3.88	6.06	6.50
SP4W30-1	4	4.500	1	3	3	3.75	3.75	4.88	7.06	7.50
SP2W20-2	2	2.375	2	2	2	4.38	4.38	3.13	4.25	8.75
SP2W30-2	2	2.375	2	3	3	5.38	5.38	4.13	5.25	10.75
SP3W20-2	3	3.500	2	2	2	5.50	5.50	3.63	5.38	11.00
SP3W30-2	3	3.500	2	3	3	6.50	6.50	4.63	6.38	13.00
SP4W15-2	4	4.500	2	1.5	1.5	6.00	6.00	3.38	5.56	12.00
SP4W20-2	4	4.500	2	2	2	6.50	6.50	3.88	6.06	13.00
SP4W30-2	4	4.500	2	3	3	7.50	7.50	4.88	7.06	15.00
SP5W20-2	5	5.500	2	2	2	7.56	7.56	4.38	7.25	15.12
SP5W30-2	5	5.500	2	3	3	8.56	8.56	5.38	8.25	17.14
SP6W20-2	6	6.625	2	2	2	8.62	8.62	4.13	7.38	17.25
SP6W30-2	6	6.625	2	3	3	9.62	9.62	5.13	8.38	19.25
SP2W20-3	2	2.375	3	2	2	6.57	6.57	3.13	4.25	13.13
SP2W30-3	2	2.375	3	3	3	8.07	8.07	4.13	5.25	16.13
SP4W15-3	4	4.500	3	1.5	1.5	9.00	9.00	3.38	5.56	18.00
SP4W20-3	4	4.500	3	2	2	9.75	9.75	3.88	6.06	19.50
SP4W30-3	4	4.500	3	3	3	11.25	11.25	4.88	7.06	22.50

Carflex® Liquidtight Flexible Conduit

Product Overview

Liquidtight Flexible Nonmetallic Conduit provides superior wire protection in harsh, damp environments. Carflex® Conduit is non-conductive, non-corrosive and resistant to oil, acid, ozone and alkaline. Carflex® Conduit is strong and lightweight and because it weighs 50% less than metallic systems, it's easy to handle, transport and install. Carflex® is ideal for industrial, air conditioning, heating and outdoor lighting applications.

Features

- Non-conductive and non-corrosive
- Lightweight for easy handling, transportation and installation
- Crush, abrasion and strain resistant
- Provides superior wire protection
- Smooth interior ideal for pulling cable
- No jagged edges
- Maintains internal I.D. even in tight radius bends
- Type LFNC-B
- Resistant to oil, acid, ozone and alkaline
- CSA Certified as per Section 12-1300 of the Canadian Electrical Code, Part 1
- Sequentially marked footage
- Suitable for use at conduit temperatures of 80°C dry, 60°C wet and 60°C oil

Note: Liquidtight flexible conduits, metallic and nonmetallic, in contrast to rigid PVC conduit and electrical nonmetallic tubing, do not have wire temperature limitations. Any temperature rated wire (for example, 90° wire) can be used as long as the temperature conditions marked on the conduit are not exceeded.

Applications

- Control and motor
- Air conditioning and heating
- Computer power distribution
- Machine tools
- Console wiring
- Transformer connections
- Outdoor lighting

Coils

Cat. No.	Nom. Size (in.)	Avg. O.D. (in.)	Avg. I.D. (in.)	Length Coil (ft.)	Std. Coil Wt. (lb.)
15004-100	3/8	0.700	0.4890	100	11.70
15005C-025	1/2	0.830	0.6270	25	3.25
15007-100	3/4	1.040	0.8250	100	18.00
15007C-025	3/4	1.040	0.8250	25	4.25
15008-100	1	1.302	1.046	100	28.00
15009-100	1-1/4	1.645	1.385	100	37.60
15010-050	1-1/2	1.882	1.580	50	22.55
15010-100	1-1/2	1.882	1.580	100	47.80
15011-050	2	2.357	2.025	50	34.10

Standard colour Grey

Reels

Cat. No.	Nom. Size (in.)	Avg. O.D. (in.)	Avg. I.D. (in.)	Length Reels (ft.)	Std. Reel Wt. (lb.)
15004-001	3/8	0.700	0.4890	1000	145.0
15005-001	1/2	0.830	0.6270	1000	157.0
15007-001	3/4	1.040	0.8250	1000	212.0
15008-500	1	1.302	1.046	500	155.0
15009-200	1-1/4	1.645	1.385	200	100.0
15010-150	1-1/2	1.882	1.580	150	95.7
15011-100	2	2.357	2.025	100	94.6

Carflex® X-Flex™ Liquidtight Flexible Tubing

Product Overview

Extra Flexible Nonmetallic Mechanical Protection Tubing is ideal for applications requiring extra strength and flexibility such as robotics and repetitive flexing arms. Carflex® X-Flex™ is non-conductive, non-corrosive and resistant to oil, acid, ozone and alkaline. It's designed for use with standard Carflex® fittings providing a complete nonmetallic system. Carflex® X-Flex™ is lightweight for easier handling, transportation and installation.

Features

- Extra strong and flexible to withstand repetitive motions
- Non-conductive and non-corrosive
- Resistant to oil, acid, ozone and alkaline
- Lightweight for easy handling, transportation and installation
- Crush, abrasion and strain resistant
- Provides superior wire protection
- Smooth interior ideal for pulling cable
- No jagged edges
- Rated for continuous use at 60°C ambient
- Type NMPT-B

Applications

- Repetitive Flexing Arms
- Robotics
- Machine Tools
- Automatic/Moving Machinery
- Control and motor

Specifications

Coils (Available in Black only) Where noted by ◆

Cat. No.	Nom. Size (in.)	Avg. O.D. (in.)	Avg. I.D. (in.)	Length Coils (ft.)	Std. Coil Wt. (lb.)
◆ 15104-100	3/8	0.700	0.489	100	9.09
◆ 15105-100	1/2	0.830	0.627	100	10.01
◆ 15107-100	3/4	1.040	0.825	100	13.91
15108-100	1	1.302	1.046	100	18.25
15109-100	1-1/4	1.645	1.385	100	27.65
15110-100	1-1/2	1.882	1.580	100	38.00
15111-050	2	2.357	2.025	50	24.22

Carflex® Liquidtight Fittings

Straight Fittings

- For Use with Carflex® conduit and Carflex® X-Flex™ conduit

Image 1

Image 2

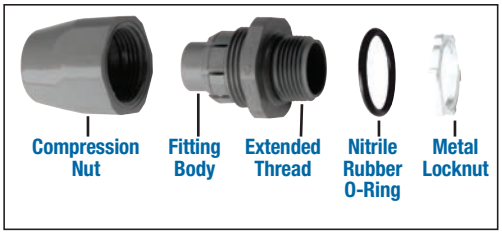
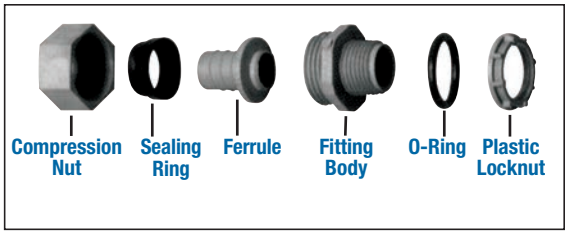


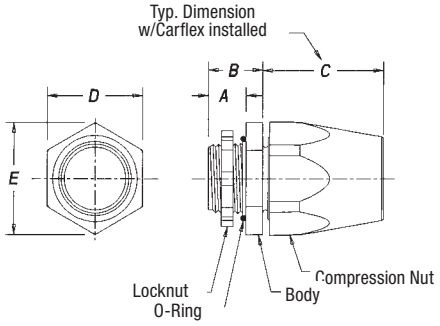
Image 3

Image 4

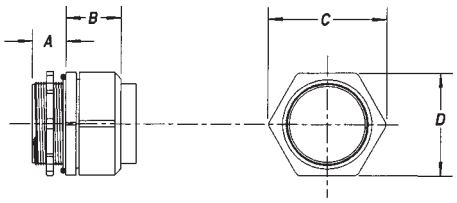


Features

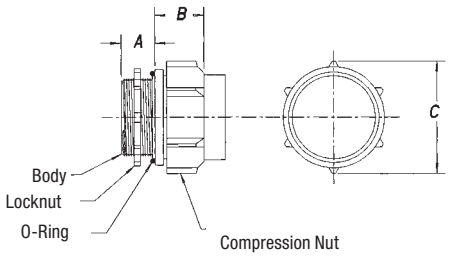
- Non-conductive and non-corrosive
- Easy to install
- Resistant to oil, acid, ozone and alkaline
- Approved for indoor and outdoor locations
- Listed for "Wet locations"
- Nitrile rubber "O" ring for a liquidtight termination
- Temperatures up to 107°C



LT43C-CAR, LT43D-NEW, LT43E-NEW, LT43F



LT43G, LT43H



LT43J

Specifications

cULus LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)					Refer to Image
				A	B	C	D	E	
LT43C	3/8	50	3.6	0.55	0.75	1.60	1.30	1.40	1–2
LT43D-NEW	1/2	50	4.2	0.56	0.91	1.62	1.30	1.40	1–2
LT43E-NEW	3/4	50	6.6	0.56	0.91	1.88	1.61	1.71	1–2
LT43F-NEW	1	25	5.5	0.70	1.00	2.20	1.90	2.04	1–2
LT43G	1-1/4	5	1.5	0.71	1.16	2.50	2.17	–	3–4
LT43H	1-1/2	5	2.0	0.75	1.36	2.78	2.43	–	3–4
LT43J	2	5	2.5	1.00	1.45	3.33	–	–	3–4

Carflex® Liquidtight Fittings

90° Fittings

- For Use with Carflex® conduit and Carflex® X-Flex™ conduit

Image 1

Assembly

Image 2

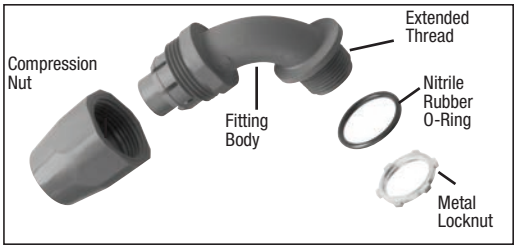
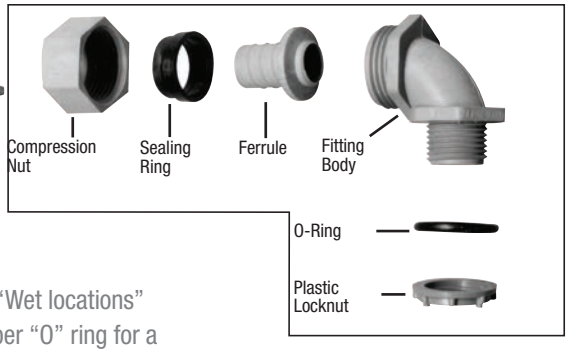


Image 3

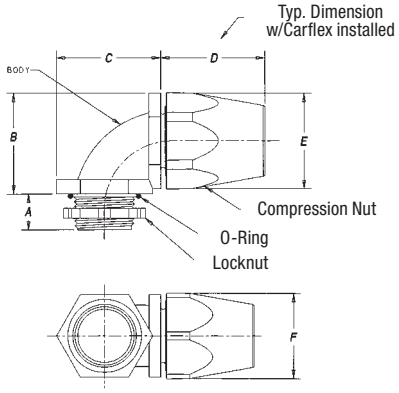
Assembly

Image 4

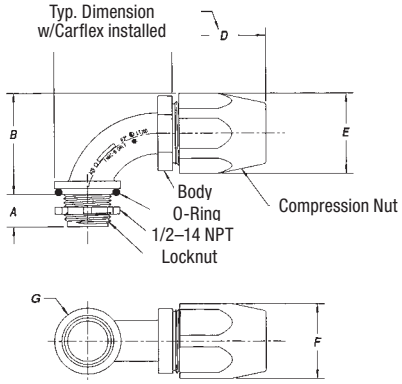


Features

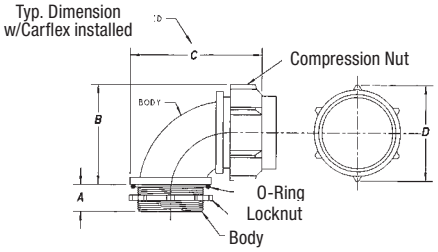
- Non-conductive and non-corrosive
- Easy to install
- Resistant to oil, acid, ozone and alkaline
- Approved for indoor and outdoor locations
- Listed for "Wet locations"
- Nitrile rubber "O" ring for a liquidtight termination
- Temperatures up to 107°C



LT20C-CAR, LT20F-NEW



LT20D-NEW, LT20E-NEW



LT20G, LT20H, LT20J

Specifications

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)							Refer to Image
				A	B	C	D	E	F	G	
LT20C	3/8	50	3.6	0.56	1.44	1.44	1.56	1.39	1.26	–	1–2
LT20D-NEW	1/2	50	4.2	0.56	1.76	2.05	1.62	1.40	1.30	1.15	1–2
LT20E-NEW	3/4	50	6.6	0.56	2.04	2.35	1.88	1.71	1.61	1.50	1–2
LT20F-NEW	1	25	5.5	0.70	2.01	2.01	2.26	2.04	1.90	–	1–2
LT20G	1-1/4	5	1.5	0.75	2.50	3.55	2.48	–	–	–	3–4
LT20H	1-1/2	5	2.0	0.75	2.80	3.98	2.77	–	–	–	3–4
LT20J	2	5	2.5	0.94	3.48	4.56	3.33	–	–	–	3–4

Carflex® One-Piece Liquidtight Fittings

Product Overview

Unique Design

The simple, one-piece body design of the Carflex® One-Piece Liquidtight Nonmetallic Fitting requires no disassembly of components for installation. The system is so strong that there is no need for a compression nut.

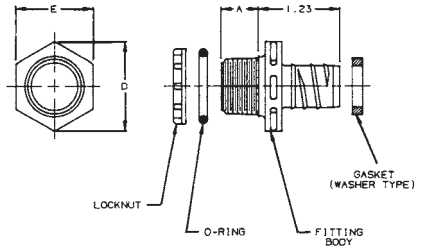
PVC Construction

PVC construction of the fitting and locknut provides unparalleled protection from water, oil and dust. Totally nonmetallic, the system is non-conductive and will not corrode or rust. Temperatures up to 60°C

Features

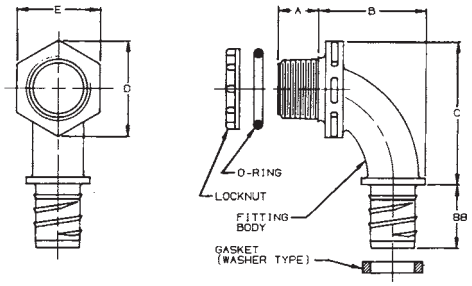
- Approved for indoor and outdoor locations
- Listed for "Wet Locations"

Straight Fittings



Cat. No.	Trade Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Thread Size	Dimensions (in.)		
					A	D	E
LN43DA	1/2	100	2.8	14 NPT	0.56	1.34	1.19
LN43EA	3/4	50	2.2	14 NPT	0.56	1.63	1.44
LN43FA	1	25	3	11-1/2 NPT	0.69	1.99	1.75

90° Fittings



Cat. No.	Trade Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Thread Size	Dimensions (in.)				
					A	B	C	D	E
LN20DA	1/2	100	4.3	14 NPT	0.56	1.50	1.99	1.34	1.19
LN20EA	3/4	50	3.1	14 NPT	0.56	1.73	2.25	1.63	1.44
LN20FA	1	25	3.2	11-1/2 NPT	0.69	1.86	2.58	1.99	1.75

Carflex® One-Piece Liquidtight Fittings

Fittings Installation Instructions

LT43C-CAR, LT43F thru J, LT20C-CAR, LT20F thru J

1. Cut the end of the Carflex conduit or Carflex® X-Flex™ tubing square.
2. Install compression nut and sealing gland ring over the end of the conduit or tubing.
3. Insert the ferrule end of the fitting into the conduit using a clockwise twisting action.
4. Screw fitting body into compression nut.
5. When installation is completed, use a wrench, tighten compression nut one-quarter (1/4) turn past hand-tight. Do not over tighten fitting.

To prevent damage to conductors, conduit and fittings, do not twist Carflex during installation.

LT43D-New, LT43E-New, LT20D-New, LT20E-New

1. Cut the end of the Carflex conduit or Carflex® X-Flex™ tubing square.
2. Install compression nut over the end of the conduit or tubing.
3. Insert the ferrule end of the fitting into the conduit using a clockwise twisting action. (Be sure conduit is fully inserted to the bottom of the fitting shoulder).
4. Screw compression nut onto fitting body.
5. Use a wrench, and tighten compression nut one (1) full turn past hand-tight. Do not over tighten fitting.

To prevent damage to conductors, conduit and fittings, do not twist Carflex during installation.

Liquidtight Conduit Technical Information

1. There shall be no more than the equivalent of four (4) quarter (90°) bends (360° total) between pull points, conduit bodies, and boxes.
2. The radius of the curve of the center of the conduit or tubing shall not be less than that shown in the table below:

Size of Conduit or Tubing		Radius to Center of Conduit or Tubing	
Inches	mm	Inches	mm
3/8	14	4	101.6
1/2	16	4	101.6
3/4	21	4-1/2	114.3
1	27	5-3/4	146.0
1-1/4	35	7-1/4	184.1
1-1/2	41	8-1/4	209.5
2	53	9-1/2	241.3

Plenum-Gard®

Product Overview

Plenum-Gard® is a nonmetallic corrugated flexible conduit for use in Plenum, Riser and General Purpose applications.

Plenum-Gard® is manufactured from PVDF resin, which is extremely durable and resistant to abrasion and mechanical damage before/after installation.

Plenum-Gard® is listed for Plenum, Riser, General Purpose and other cabling optical fiber/telecommunication applications.

Important:
Installed cables must be plenum rated.

Applications: Plenum, Riser and General Purpose.

Technical Information

UL Standard 2024	Value
Maximum Flame Propagation	5 ft.
Max. Peak Optical Smoke Density	0.5
Max. Average Optical Smoke Density	0.15

- Storage: -20ºC to 70ºC (-4ºF to 158ºF)
- Handling: -20ºC to 40ºC (-4ºF to 104ºF)
- No UV protection (not suitable for outdoor use)
- Do NOT store outside

c UL us LISTED
FT6 Rated
E151168

Standard Stock - Reels

Cat. No.	Size (in.)	Colour	Pull Tape	Reel Size (F x W) (in.)	Reel Type	Length (ft.)	Reel Wt. (lb.)	Product Wt. per 100 ft. (lb.)
CD4X1C-1500	1/2	Orange	200 lb.	34 x 23	Wood	1500	30	7
CE4X1-1000	3/4	Orange	Empty	34 x 23	Wood	1000	30	8
CE4X1-1000S			Empty	34 x 23	Wood	1000	30	8
CF4X1C-500	1	Orange	900 lb.	34 x 23	Wood	500	30	10
CF4X1C-1000			900 lb.	48 x 28	Wood	1000	79	10
CF4X1C-1500			900 lb.	48 x 28	Wood	1500	79	10
CF4X1C-5200			900 lb.	66 x 41	Wood	5200	250	10
CF4X1C-6500			900 lb.	72 x 41	Wood	6500	310	10
CF4X1C-8000			900 lb.	82 x 41	Wood	8000	365	10
CG4X1C-500	1-1/4	Orange	900 lb.	48 x 28	Wood	500	79	14
CG4X1C-900			900 lb.	48 x 45	Wood	900	96	14
CG4X1C-1600			900 lb.	48 x 45	Wood	1600	96	14
CG4X1C-3200			900 lb.	66 x 41	Wood	3200	250	14
CG4X1C-6500			900 lb.	96 x 41	Wood	6500	700	14
CG4X1C-900S			Empty	48 x 28	Wood	900	79	14
CH4X1C-350	1-1/2	Orange	900 lb.	48 x 28	Wood	350	79	16
CH4X1C-1200			900 lb.	48 x 45	Wood	1200	96	16
CH4X1C-4000			900 lb.	82 x 41	Wood	4000	365	16
CJ4X1C-225	2	Orange	900 lb.	48 x 28	Wood	225	79	21
CJ4X1C-700			900 lb.	48 x 45	Wood	700	96	21
CJ4X1C-2000			900 lb.	82 x 41	Wood	2000	365	21
CJ4X1C-2800			900 lb.	82 x 41	Wood	2800	365	21
CL4X1C-150	3	Orange	900 lb.	48 x 45	Wood	150	96	41

Plenum-Gard®

Features

- Sizes 1/2 in. through 3 in.
- Pre-installed pull tape available in sizes 1/2 in. through 3 in.
- Outside Diameters meet IPS Dimensions
- Footage sequentially marked

Standard Stock – Coils

Cat. No.	Size (in.)	Colour	Pull Tape	Coil Length (ft.)	Product Wt. per 100 ft. (lb.)
CD4X1C-500	1/2	Orange	900 lb.	500	7
CE4X1-350	3/4		Empty	350	8
CE4X1-350S			Empty/Split	350	8
CF4X1C-100	1		900 lb.	100	10
CF4X1-100S			Empty/Split	100	10
CF4X1C-250			900 lb.	250	10
CF4X1-250			Empty	250	10
CF4X1-250S			Empty/Split	250	10
CG4X1C-200	1-1/4		900 lb.	200	14
CG4X1-200S			Empty/Split	200	14
CH4X1C-150	1-1/2		900 lb.	150	16
CH4X1-150S			Empty/Split	150	16
CJ4X1C-100	2		900 lb.	100	21
CJ4X1-100S			Empty/Split	100	21
CL4X1C-150	3		920 lb.	150	24

Specifications

Size (in.)	I.D. Min. Ref. (in.)	Min. O.D. (in.)	Max. O.D. (in.)	Min. Bend Radius (in.)
1/2	0.60	0.815	0.835	2
3/4	0.74	1.025	1.045	2
1	1.00	1.292	1.312	3
1-1/4	1.35	1.630	1.650	3
1-1/2	1.50	1.868	1.888	4
2	2.00	2.329	2.439	4
3	3.00	3.422	3.452	4

How to Build a Catalogue Number:

Position 1 Product	Position 2 Size (in.)	Position 3 Type	Position 4 Wall	Position 5 Colour	Position 6 Pull Line	Position 7 Length
C = Plenum-Gard	D = 1/2 E = 3/4 F = 1 G = 1-1/4 H = 1-1/2 J = 2 L = 3	4 = Corrugated	X = Standard	1 = Orange 2 = Black 3 = Grey 4 = White 5 = Blue 7 = Yellow 8 = Red	C = 900 lb. Tape	Example -1000 = Feet -1000S = 1000 Feet Split

- Custom Orders are not returnable
- Custom lengths are available in minimum order quantities of 1000 ft.
- Custom colour runs are available in minimum order quantities of 10,000 ft.

Options:

- Colour: Black, Blue, Grey, Red, White and Yellow
- Two, three or four way parallel
- Split Duct
- Custom print line

Riser-Gard™

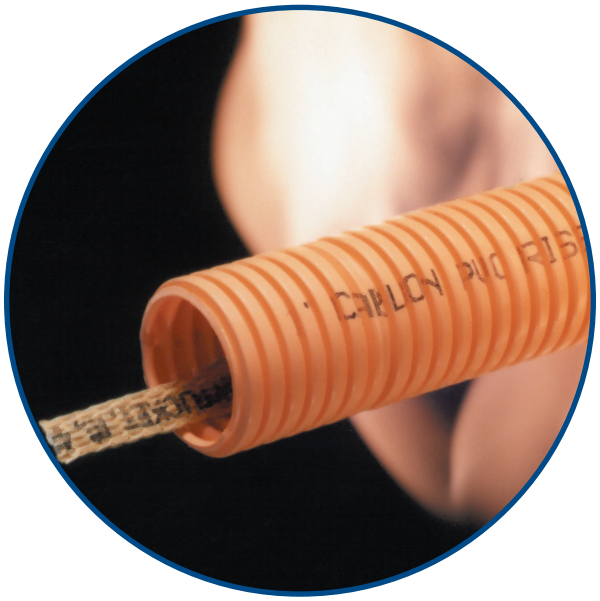
Product Overview

Riser-Gard™ is a nonmetallic flexible raceway for use in Riser and General Purpose applications. Riser-Gard™ is available with tape pre-installed.

Riser-Gard™ is listed for Riser applications or optical fiber/ telecommunication raceways.

Riser-Gard™ is listed for Riser, General Purpose and other cabling optical fiber/ telecommunication applications. Riser-Gard™ is suitable for use in vertical runs in shaft or between floors, as well as areas other than the plenum.

Important:
Installed cables must be of suitable rating for the application.



Applications: Riser and General Purpose.

Technical Information

UL Standard 2024	Maximum Value
Maximum Flame Propagation	6.0 ft.
Maximum Air Temperature at 12 ft.	189ºC (372ºF)

- Storage: -20ºC to 70ºC (-4ºF to 158ºF)
- Handling:-20ºC to 40ºC (-4ºF to 104ºF)
- No UV protection (not suitable for outdoor use)
- Do NOT store outside

- For use in Riser and General Purpose areas
- Riser-Gard™ is also suitable for poured concrete
- Not approved for exposed applications
- Available in sizes 3/4 in. through 3 in.
- Pull tape can be factory pre-installed in 1 in. through 3 in.
- Outside diameters meet IPS dimensions
- Footage sequentially marked

c UL us LISTED
FT4 Rated
E151168

Standard Stock - Reels

Cat. No.	Size (in.)	Colour	Pull Tape	Reel Size (F x W) (in.)	Reel Type	Length (ft.)	Reel Wt. (lb.)	Product Wt. per 100 ft. (lb.)
DE4X1-1000	3/4	Orange	Empty	34 x 23	Wood	1000	30	12
DF4X1C-500R	1	Orange	900 lb.	43 x 23	Wood	500	56	15
DF4X1C-1000				48 x 28	Wood	1000	79	15
DF4X1C-1500				48 x 28	Wood	1500	79	15
DF4X1C-2700				48 x 45	Wood	2700	96	15
DF4X1C-5200				66 x 41	Wood	5200	250	15
DF4X1C-6500				72 x 41	Wood	6500	310	15
DF4X1C-7000				72 x 45	Steel	7000	148	15
DF4X1C-9400				84 x 45	Steel	9400	199	15
DG4X1C-900	1-1/4	Orange		48 x 28	Wood	900	79	17
DG4X1C-500R				48 x 23	Wood	500	56	17
DG4X1C-1500				48 x 45	Wood	1500	96	17
DG4X1C-1600				48 x 45	Wood	1600	96	17
DG4X1C-3200				66 x 41	Wood	3200	250	17
DG4X1C-4500				72 x 45	Steel	4500	148	17
DG4X1C-5600				82 x 41	Wood	5600	365	17
DG4X1C-6500				96 x 41	Steel	6500	700	17
DH4X1C-1200	1-1/2	Orange		48 x 45	Wood	1200	96	22
DH4X1C-4000				82 x 45	Steel	4000	193	22
DH4X1C-4500				84 x 45	Steel	4500	199	22
DJ4X1C-700	2	Orange		48 x 45	Wood	700	96	27
DJ4X1C-2000				82 x 41	Wood	2000	265	27
DJ4X1C-2800				84 x 45	Steel	2800	199	27
DL4X1C-750	3	Orange		72 x 41	Wood	750	310	27

Riser-Gard™

Features

- Riser-Gard™ is also suitable for direct burial. Not approved for exposed applications.
- Available in sizes 3/4 in. through 3 in.
- Pull tape can be factory pre-installed in 1 in. through 3 in.
- Outside Diameters meet IPS Dimensions
- Footage sequentially marked

Standard Stock – Coils

Cat. No.	Size (in.)	Colour	Pull Tape	Coil Length (ft.)	Product Wt. per 100 ft. (lb.)
DE4X1-350	3/4	Orange	Empty	350	12
DF4X1C-125	1		900 lb.	125	15
DF4X1C-250			900 lb.	250	15
DF4X1-250			Empty	250	15
DF4X1C-500			900 lb.	500	15
DF4X1-250S			Empty/Split	250	15
DG4X1-200	1-1/4		Empty	200	17
DG4X1-200S			Empty/Split	200	17
DG4X1C-200			900 lb.	200	17
DG4X1C-500			900 lb.	500	17
DH4X1-150S	1-1/2		Empty/Split	150	22
DH4X1C-150			900 lb.	150	22
DJ4X1-100S	2		Empty/Split	100	27
DJ4X1C-100			900 lb.	100	27
DL4X1C-250	3		900 lb.	250	27

Specifications

Size (in.)	I.D. Min. Ref. (in.)	Min. O.D. (in.)	Max. O.D. (in.)	Min. Bend Radius (in.)
3/4	0.74	1.025	1.075	5
1	0.98	1.290	1.340	6
1-1/4	1.31	1.640	1.690	8
1-1/2	1.54	1.880	1.930	10
2	2.00	2.350	2.400	12
3	3.00	3.422	3.452	18

Custom Orders

How to Build a Catalogue Number:

Position 1 Product	Position 2 Size (in.)	Position 3 Configuration	Position 4 Wall	Position 5 Colour	Position 6 Pull Line	Position 7 Length
D = Riser-Gard	E = 3/4 F = 1 G = 1-1/4 H = 1-1/2 J = 2 L = 3	4 = Corrugated	X = Standard	1 = Orange 2 = Black 3 = Grey 4 = White 5 = Blue 7 = Yellow 8 = Red	C = 900 lb. Tape	Example -1000 = Feet -1000S = 1000 Feet Split

- Custom Orders are not returnable
- Custom lengths are available in minimum order quantities of 1000 ft.
- Custom colour runs are available in minimum order quantities of 10,000 ft.

Options:

- Colour: Black, Blue, Grey, Red, White and Yellow
- Two, three or four way parallel
- Split Duct
- Custom print line

Riser-Gard™

Flexible Raceway Accessories

(Approved for low voltage use only)

Low Voltage Add-On Bracket

Cat. No.	Description	Std. Carton Quantity	Std. Ctn. Wt. (lb.)
SC100SC	1 gang	24	2.3

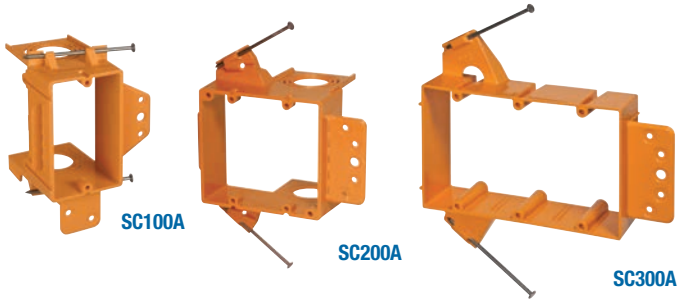
Low Voltage Adjustable Brackets

SC100ADJC

Cat. No.	Size	Std. Carton Quantity	Std. Ctn. Wt. (lb.)
SC100ADJC	1 gang	24	7.5
SC200ADJC	2 gang	20	6.9

Low Voltage Brackets

Cat. No.	Description	Resi-Rings (in.)	Std. Carton Quantity	Std. Ctn. Wt. (lb.)
SC100A	1 gang	3/4, 1, 1-1/4	24	5.3
SC200A	2 gang			7.7
SC300A	3 gang	–	5	1.6



SC100A SC200A SC300A

Cable Clips

Cat. No.	Size (in.)	Standard Order Quantity	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC14CC	1/4	1 ea. (Equals one bag of 100 clips)	10 bags of 100	2.23
SC12CC	1/2	1 ea. (Equals one bag of 25 clips)	10 bags of 25	2.31
SC34CC	3/4	1 ea. (Equals one bag of 10 clips)	20 bags of 10	2.96

Carlon's cable clips with pre-installed nails provide fast and easy installation for either a single cable, 2-3 cables or 1 bundled cable.

SC34CC SC12CC SC14CC

Conduit Clamps

Note: Each clamp requires 2 screws, 2 nuts and/or 2 bolts.

Cat. No.	Size (in.)	Standard Order Quantity	Std. Carton Quantity	Std. Ctn. Wt. (lb.)
SCE977EC	3/4	1 ea. (Equals one bag of 5 clamps)	20 bags of 5	1.5
SCE977FC	1		12 bags of 5	1.3
SCE977GC	1-1/4		8 bags of 5	1.1
SCE977HC	1-1/2		6 bags of 5	1.0
SCE977JC	2		6 bags of 5	1.5

Carlon's orange conduit clamps are designed specifically for the installation of Resi-Gard™.

Hal-Free Riser-Gard™

Product Overview

Hal-Free Riser-Gard™ is a halogen free nonmetallic flexible raceway for use in riser and general purpose applications. In the event of a fire, this product will not release halogen elements into the air, which makes it ideal for applications in tunnels, laboratories and high-tech environments.

Custom lengths and split ducts are available upon request.
Hal-Free Riser-Gard™ is available in white only.

Applications: Riser and General Purpose

Technical Information:

UL Standard 2024	Maximum Value
Maximum Flame Propagation	3 ft. 6 in.
Maximum Air Temperature	197°C (387°F)

- Storage and Handling: -20°C to 66°C (-4°F to 150°F)
- No UV protection (not suitable for outdoor use)
- Do NOT store outside
- Free from halogen elements
- Available in sizes 1 in. through 2 in.
- Available in white only
- Sequentially marked footage

Standard Stock - Reels

c UL us LISTED

Cat. No.	Size (in.)	Colour	Nom. I.D. (in.)	Nom. O.D. (in.)	Pull Tape	Reel Size (F x W) (in.)	Reel Type	Reel Length (ft.)	Reel Wt. (lb.)	Product Wt. per 100 ft. (lb.)
HF4X4C-5000	1	White	1.049	1.365	900 lb.	72 x 41	Wood	5000	310	7.5
HG4X4C-4000	1-1/4		1.250	1.550				4000	310	7.5
HH4X4C-2000	1-1/2		1.500	1.850		66 x 41		2000	250	12
HJ4X4C-2000	2		2.000	2.425		82 x 41		2000	365	21

Resi-Gard™

Nonmetallic Adapters and Couplings

- For use with Riser-Gard™ and General Purpose

Couplings

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
SCA240E	3/4	Orange	25	0.783
SCA240F	1		20	0.972

Threaded Adapters

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
SCA243E	3/4	Orange	100	2.30
SCA243F	1		50	2.00

Snap-In Adapters

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
SCA253E	3/4	Orange	100	2.90
SCA253F	1		50	2.30

Nonmetallic Adapters and Couplings

- For use with Plenum-Gard®

Coupling

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
A340F	1	Orange	50	2.50

Threaded Adapter

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
A343F	1	Orange	50	1.55

Snap-In Adapter

Cat. No.	Size (in.)	Colour	Standard Carton Quantity	Standard Carton Weight (lb.)
A353F	1	Orange	50	3.00

Resi-Gard™

Flexible Raceway

(Approved for low voltage use only)

Ideal for providing a main chase from the main distribution panel to a secondary hub in the attic or basement. Resi-Gard™ nonmetallic flexible raceway is available in 3/4 in. to 2 in. diameter sizes with factory installed pull tape in sizes 1 in. to 2 in. The raceway is hand bendable, lightweight and easily cut to length to reduce scrap. Bright orange colour clearly signifies a low voltage installation.

Standard Length Coils

Cat. No.	Size (in.)	Pull Tape	Coil Length	Prod. Wt. (lb.) Coil
SCE4X1-100	3/4	Empty	100	11.5
SCF4X1C-100	1	900 lb.		17.9
SCG4X1C-100	1-1/4			21.5
SCH4X1C-50	1-1/2		50	11.2
SCJ4X1C-50	2			13.4

Standard Length Reels

Cat. No.	Size (in.)	Pull Tape	Reel Length	Prod. Wt. (lb.) Reel
SCE4X1-1000	3/4	Empty	1000	115.0
SCF4X1C-1500	1	900 lb.	1500	268.5
SCJ4X1C-500	2		500	133.5

Resi-Gard™ Fittings

A complete line of Carlon® one-piece quick connect couplings, threaded adapters and snap-in terminator adapters are available for quick, easy professional installation of Resi-Gard™ flexible raceway.

Quick Connect Couplings

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SCA240E	3/4	25	0.783
SCA240F	1	20	0.972

Quick Connect Threaded Adapters

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SCA243E	3/4	25	0.633
SCA243F	1	20	0.778

Quick Connect Snap-In Adapters

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SCA253E	3/4	25	0.783
SCA253F	1	20	0.918

Male Terminal Adapters*

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SCE943G	1-1/4	50	3.0
SCE943H	1-1/2	25	2.5
SCE943J	2	50	6.8

Standard Couplings*

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SCE940G	1-1/4	30	3.5
SCE940H	1-1/2	25	3.9
SCE940J	2	30	5.2

*Must be cemented to Resi-Gard™ Flexible Raceway using ONLY Resi-Gard™ Solvent Cement.

Micro-Gard™

Plenum & Micro-Gard™ Riser

Carlon® Micro-Gard™ Plenum and Micro-Gard™ Riser are specifically designed to provide fiber pathways in plenum and riser applications in Multi-Dwelling Units (MDUs) and other premise structures.

The 8/6 and 12/10 mm size conduits can be installed individually or used to optimize space in existing duct structures. And the small size significantly reduces the structural damage caused during pass-throughs.

Micro-Gard™ Plenum and Riser are listed for plenum and riser applications. They're easy to handle, easy to install and easy to conceal, thus making them the ideal MDU cable management system.

Carlon® Micro-Gard™ Plenum and Micro-Gard™ Riser. Small. Slick. Speedy. Ideal for Telecom Installs!

Micro-Gard™ Plenum

Micro-Gard™ Riser

Features

- cUL Listed for Plenum and Riser applications
- Two Sizes: 8/6 mm and 12/10 mm. The smaller sizes accommodate the size constraints of multi-dwelling units and make installations faster and easier.
- Smooth interior wall eliminates snag points and provides low coefficient of friction regardless of whether jetting or pull-tape is used
- Superior burn-through resistance for longer cable pulls
- Pre-installed pull-tape makes installing cable faster and easier (option available for empty duct)
- Sequentially marked footage to easily identify lengths and reduce waste
- Reel sizes from 1000 to 5000 feet for easy handling on the jobsite
- Future-proofing raceway system for fast, easy wire/cable upgrades, changes and moves
- Used in cable bundles

Micro-Gard™

Plenum & Micro-Gard™ Riser

Cat. No.	Size	Type	Colour	Pre-Installed Tape	Min. Bend Radius (in.)*	Feet/Reel	Reel Size (in.)
MGP08MT-1000	8/6 mm	Plenum	White	200 lb.	2	1000	24
MGP08MT-2500	8/6 mm				2	2500	24
MGP08MT-5000	8/6 mm				2	5000	36
MGP12MT-1000	12/10 mm				4	1000	24
MGP12MT-2500	12/10 mm				4	2500	24
MGR08JT-1000	8/6 mm	Riser	Orange		2	1000	24
MGR08JT-2500	8/6 mm				2	2500	24
MGR08JT-5000	8/6 mm				2	5000	36
MGR12JT-1000	12/10 mm				4	1000	24
MGR12JT-2500	12/10 mm				4	2500	24
MGR12JT-5000	12/10 mm				4	5000	36

* Important: Do not exceed the minimum bend radius during installation of the product.

How to Interpret a Catalogue Number

Position 1 Product	Position 2 Type	Position 3 Size	Position 4 Colour	Position 5 Pull Line	Position 6 Length
MG = Micro-Gard	P = Plenum R = Riser	08 = 8/6 mm 12 = 12/10 mm	J = Orange M = White	T = 200 lb. Tape	Example -1000 = 1000 Feet

Flex-Plus® Blue™ ENT

Flex-Plus® Blue™ ENT is a nonmetallic flexible raceway for use in walls, floors and non-plenum ceilings. It's lightweight, hand bendable and free from sharp edges, which reduces installation time and saves money.

- Ideal storage conditions down to -20°C

(See page I59 for technical information.)

Options

- Sizes 1/2 in. through 2 in.
- Colours can designate different voltages
- Yellow colour for communication circuits and signaling cable
- Red colour for fire alarm circuits
- Blue colour for power circuits

FT-4 Rated where noted by

Standard Stock – Reels

Cat. No.	Size (in.)	Colour	Nom. I.D. (in.)	Nom. O.D. (in.)	Pull Tape	Min. Bend Radius	Reel Type (W=Wood)	Reel Length	Reel Wt. (lb.)	Wt. per 100 ft. (lb.)
1205AKC-001	1/2	Blue	0.56	0.84	Empty	36 x 24	W	1500	40	10
1207AAC-001	3/4		0.76	1.05				1000	40	14
12008C-750	1		1.00	1.315				750	40	20
12009C-750	1-1/4		1.402	1.66		48 x 32		750	90	19
12009C-500	1-1/4		1.402	1.66				500	90	19
12010C-750	1-1/2		1.554	1.90				750	90	39
12011C-500	2		2.030	2.375				500	90	32
12011C-225	2		2.030	2.375				225	90	32

1-1/4 in. - 2 in. available in yellow & red, made to order; contact your Regional Sales Office.

Standard Stock – Coils

Cat. No.	Size (in.)	Colour	Nom. I.D. (in.)	Nom. O.D. (in.)	Pull Tape	Min. Bend Radius	Coil Length (ft.)	Wt. per 100 ft. (lb.)
12005C-200	1/2	Blue	0.56	0.84	Empty	6	200	10
12005C-370	1/2		0.56	0.84		6	370	10
12007C-100	3/4		0.76	1.05		6	100	14
12007C-240	3/4		0.76	1.05		6	240	14
12008C-160	1		1.00	1.315		6	160	22
12009C-500C	1-1/4		1.402	1.66		7	500	19
12010C-300C	1-1/2		1.554	1.90		8-1/4	300	39
12011C-225C	2		2.030	2.375		9-1/2	225	32

NOTE: The solid blue colour of ENT conduit is a registered trademark of Carlon®.
ENT may show colour deterioration in direct sunlight when stored outdoors over an extended period of time. It is suggested that all ENT products not be stored outside.

Stub Downs

Vertical Stub Down

Carlon Vertical Stub Downs are designed to provide a quick, easy connection to a wood deck or transition from slab-to-slab using Carlon's "Quick Connect" snap-in design…simply snap the ENT in place. The integral snaps provide a secure mount – preventing the ENT from pulling out while maintaining the ability for easy removal of the fitting once the deck is removed. All in a concrete-tight application. The underside of this fitting provides ample room to attach a Carlon coupling to the ENT to continue the run. Carlon Vertical Stub Downs are manufactured out of a highly engineered thermoplastic material to provide extra strength and durability and are available in sizes 1/2 in., 3/4 in. and 1 in.

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A210D	1/2	50	3.8
A210E	3/4		3.7
A210F	1		4.8

45° Stud Down

Carlon 45 Degree Stub Downs are designed to allow a smooth transition from cross deck ENT runs to vertical applications. The integral snaps provide a secure mount – preventing the ENT from slipping or pulling out- but also allow the stub to easily be removed. The underside of this fitting provides ample room to attach a Carlon coupling to the ENT to continue the run. Carlon 45 Degree Stub Downs are manufactured out of a highly engineered thermoplastic material to provide extra strength and durability. They're concrete-tight and available in sizes 1/2 in., 3/4 in. and 1 in.

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A220D	1/2	25	1.8
A220E	3/4		2.0
A220F	1		2.6
A220G	1-1/4		2.8
A220H	1-1/2		3.3
A220J	2		4.1

Vertical Stub Down Transition Adapter

CARLON NONMETALLIC EXCLUSIVE…Carlon Vertical Stub Down Transition Adapters like our Vertical Stub Downs, provide a means to transition from ENT to another wire management product where code requires other wire management means. The integral snaps provide a secure mount – preventing the ENT from slipping or pulling out, while the deck mount flange has a threaded port allowing connection to other conduit system using terminal adapter. Carlon Vertical Stub Down Transition Adapters are manufactured out of polycarbonate material to provide extra strength and durability. They're concrete-tight and available in sizes 1/2 in., 3/4 in. and 1 in.

c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A200D	1/2	50	3.8
A200E	3/4		3.7
A200F	1		4.8

90° Stub Down Transition Adapter

CARLON NONMETALLIC EXCLUSIVE…Carlon 90 Degree Stub Downs are designed to allow a smooth transition from cross deck ENT runs to vertical applications where code requires other wire management means. The integral snaps provide a secure mount – preventing the ENT from slipping or pulling out, while the deck mount flange has a threaded port allowing connection to any conduit system using a terminal adapter. Carlon 90 Degree Stub Downs are manufactured out of polycarbonate material to provide extra strength and durability. They're concrete-tight and available in sizes 1/2 in., 3/4 in. and 1 in.

c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A230D	1/2 Female ENT to NPSC (Female)	25	2.0
A230E	3/4 Female ENT to NPSC (Female)		2.4
A230F	1 Female ENT to NPSC (Female)		3.3

ENT Accessories

Transition Adapters

Male ENT to Schedule 40 PVC Conduit

CARLON EXCLUSIVE…Carlon Male ENT to Schedule 40 PVC Conduit Transition Adapters are designed to connect Schedule 40 conduit to Carlon Flex-Plus® Blue™ ENT boxes and fittings. Simply solvent cement the PVC adapter to the Schedule 40 conduit and snap the adapter into the Carlon's "Quick Connect" snap-in connector on the box or fitting. Carlon Male ENT to Schedule 40 Adapters are concrete-tight and available in sizes 1/2 in., 3/4 in. and 1 in.

c UL us LISTED

Cat. No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A263D	1/2 ENT to 1/2 Sch. 40	100	2.4
A263E	3/4 ENT to 3/4 Sch. 40		3.2
A263F	1 ENT to 1 Sch. 40		4.5

ENT to EMT

Carlon ENT to EMT Transition Adapters are designed to easily transition from Carlon Flex-Plus® BlueTM ENT to EMT using Carlon's "Quick Connect" snap-in design. The EMT is held securely in place using the small screw provided. This helps prevent the EMT from slipping/shifting out of the adapter. All ENT to EMT adapters are manufactured out of polycarbonate material to provide extra strength and durability. They're concrete-tight and available in sizes 1/2 in., 3/4 in. and 1 in.

c UL us LISTED

Cat. No.	Size	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A245D	1/2 ENT to 1/2 EMT	100	3.4
A245E	3/4 ENT to 3/4 EMT		4.1
A245F	1 ENT to 1 EMT		5.4

Reducer

CARLON EXCLUSIVE…Carlon ENT Reducers are designed to provide an easy transition from 1 in. Carlon ENT to 3/4 in. ENT or from 3/4 in. Carlon ENT to 1/2 in. ENT. They're concrete-tight and manufactured out of polycarbonate material to provide extra strength and durability. Carlon ENT Reducers provide flexibility while on the jobsite by minimizing the need to carry size specific boxes and fittings. Carlon ENT Reducers provide the versatility to convert Carlon fittings and boxes to many different sizes and configurations.

c UL us LISTED

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A273DE	3/4 to 1/2	100	3.2
A273EF	1 to 3/4		2.4

ENT Accessories

Quick Connect Adapters and Couplings

- Carlon One-Piece ENT Quick Connect Couplings, Threaded Adapters and Snap-In Terminator Adapters are suitable for damp locations. Quick Connect Couplings and Threaded Adapters are concrete-tight when used with Carlon ENT.
- All sizes of rigid nonmetallic conduit fittings are compatible with ENT when using ENT cement
- Rigid nonmetallic conduit fittings are recommended for use with Carlon 1-1/4 in. – 2 in. Flex-Plus Blue ENT
- Use of ENT Blue Quick-Set Cement is required. See page I65 for details.
- When One-Piece Quick Connect Snap-In Terminator Adapters are installed in a concrete application, Carlon's flat sealing washers must be used on the box connection ends

Couplings

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A240D	1/2	150	2.90
A240E	3/4	100	3.00
A240F	1	50	2.30

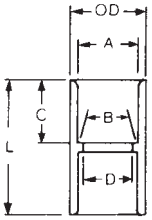
Threaded Adapters

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A243DC	1/2	150	2.55
A243EC	3/4	100	2.30
A243FC	1	50	2.00

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A253D	1/2	150	2.70
A253E	3/4	100	2.90
A253F	1	50	2.30

Rigid Nonmetallic Conduit Adapters and Couplings

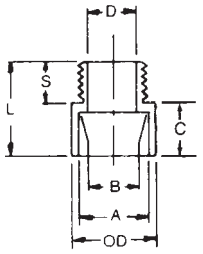
All socket fittings should be attached using Carlon solvent cement. Using Carlon fittings with Carlon nonmetallic conduit insures system integrity. Socket type for joining nonmetallic conduit.



Standard Couplings

Cat. No.	Size (in.)	Std. Ctn. Qty.	A	B	Min. D (in.)	Max. O.D. (in.)	C	L	Std. Ctn. Wt. (lb.)
			Typical (in.)				Typical (in.)		
CE940DR-CTN	1/2	150	0.852	0.836	0.728	1-7/64	11/16	1-1/2	4.1
CE940ER-CTN	3/4	100	1.064	1.046	0.840	1-5/16	3/4	1-5/8	4.4
CE940F-UPC	1	50	1.330	1.310	1.210	1-5/8	15/16	2	3.5
E940G	1-1/4	30	1.677	1.655	1.535	1-63/64	1	2-1/8	3.5
E940H	1-1/2	25	1.918	1.894	1.755	2-15/64	1-1/8	2-3/8	3.9
E940J	2	30	2.393	2.369	2.190	2-47/64	1-3/16	2-1/2	5.3

For adapting nonmetallic conduits to boxes threaded fittings, metallic systems. Male threads on one end, socket end on other.



Male Terminal Adapter

Cat. No.	Size (in.)	Std. Ctn. Qty.	A	B	Min. D (in.)	Max. O.D. (in.)	C	S	L	Std. Ctn. Wt. (lb.)
			Typical (in.)				Typical (in.)			
E943D	1/2	150	0.852	0.836	0.597	1-1/8	5/8	9/16	1-5/16	2.8
E943E	3/4	100	1.064	1.046	0.800	1-11/32	3/4	9/16	1-3/8	3.5
E943F	1	50	1.330	1.310	1.018	1-5/8	1	11/16	1-25/32	3
E943G	1-1/4	30	1.677	1.655	1.332	2-1/32	1	3/4	1-15/16	4
E943H	1-1/2	25	1.918	1.894	1.566	2-5/32	1-3/16	3/4	2-1/16	2.5
E943J	2	30	2.393	2.369	2.000	2-21/32	1-3/16	3/4	2-1/8	7

Mud Box Assemblies

Carlon Mud Box Assemblies are available in five unique styles… blank, ceiling ring, one-gang, two-gang and 4-inch square. All Mud Box Assemblies are manufactured out of polycarbonate material to provide extra strength and durability, are concrete-tight and have twelve integral connectors…two-1 in., six-3/4 in. and four-1/2 in. Using our new ENT Reducers (see page I54), this product will meet ANY jobsite application.

CEMENT CAPS INCLUDED

Mud Box with Ceiling Ring

- Threaded brass inserts for fan (#10-32 screws and fixture (#8-32 screws) mountings
- Listed for fixture support up to 50 lb.
- Listed for ceiling fans up to 35 lb.

c UL us LISTED

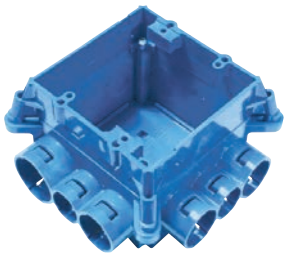
Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A863CFG	Mud Box w/Ceiling Ring and Ground Lug	24	16.1

Mud Box with One-Gang Ring

c UL us LISTED

Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A863SG	Mud Box w/One-Gang Ring and Ground Lug	24	16.2

Mud Box Assemblies



Mud Box with Two-Gang Ring

Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A863DG	Mud Box w/Two-Gang Ring and Ground Lug	24	16.6

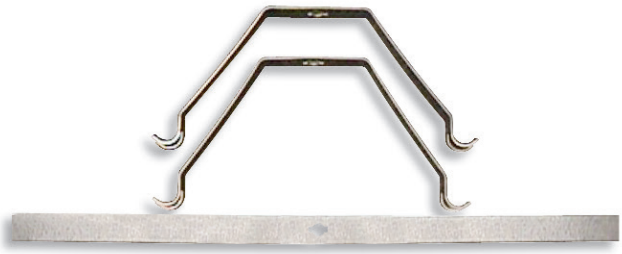
Mud Box Assemblies with Mounting Feet

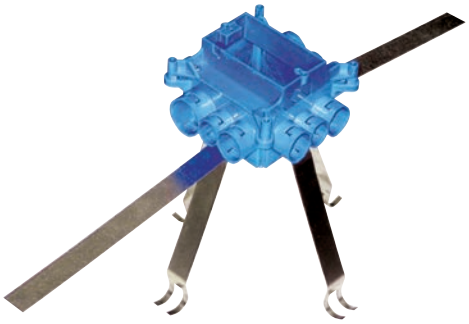
Carlon Mud Box Assemblies with Mounting Feet are specifically engineered and designed for use in Tunnel Form applications. The mounting feet are located on all four corners and allow the box to attach directly to the wall of the form using pop rivets. The pop rivets help keep the box in position during the pour and provide a safe, secure, and rust resistant mount.

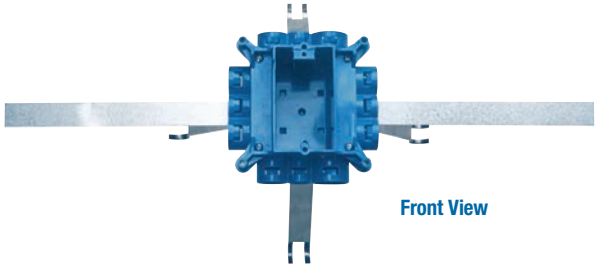
Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A863CFGF	Ceiling Ring and Ground Lug	24	17.46
A863DGF	Double Gang and Ground Lug		17.99
A863SGF	Single Gang and Ground Lug		17.44

Mounting Brackets and ENT Bridge

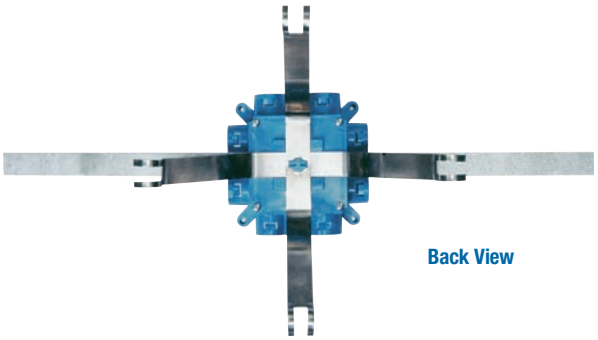
Mounting Brackets







Front View

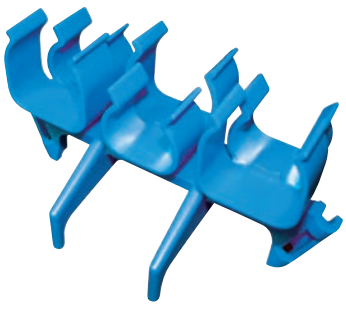


Back View

CARLON EXCLUSIVE…The Carlon ENT Mounting Bracket is specifically designed for use with Carlon ENT Mud Box Assemblies in vertical concrete walls where one- or two-gang boxes are needed. The stainless steel spring-loaded mechanism provides a secure outlet box between concrete forms while the soft steel strap allows for the outlet box to be secured to rebar. The bracket combination assures a straight box opening and a concrete-tight fit. Mud Box not included.

Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A863MB	Mud Box Mounting Kit	1	0.98

ENT Bridge



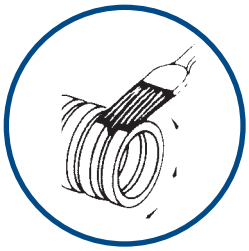
CARLON EXCLUSIVE…The Carlon ENT Bridge is designed to support long ENT runs in concrete pour applications. This makes pulling wire/cable a snap Installation is easy… simply mount the ENT bridge, using nails or screws, to the wood deck mounting and snap the ENT into place. The bridge is designed to hold the conduit in place while minimizing dips in the conduit over long runs. The Carlon ENT Bridge is manufactured out of a highly engineered thermoplastic material to provide extra strength and durability and can accommodate ENT sizes 1/2 in., 3/4 in. and 1 in. (The Carlon ENT bridge can be used with rigid nonmetallic conduit too.)

Cat. No.	Description	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
A293DEF	ENT Bridge	50	9.0

ENT Technical Information

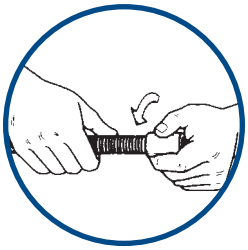
Concrete Encasement Guidelines

1. Cut ENT square and cleanly.
2. Insert end into fitting, making sure two (2) full corrugations are snapped into fitting beyond flexible tabs (2 clicks).
3. ENT should be tied to rebar at 2-3 foot intervals to prevent flotation. Keep ENT straight. Small deflections over a long run may accumulate significant degrees of bend which will affect conductor installation. Suitable materials include wire, cable ties and tape.
4. When using rigid nonmetallic conduit fittings for concrete-tight performance:



A. Do not use chemical primer or cleaner.
B. Apply a light, uniform coat of cement labeled for use with ENT on the coupling and ENT.
C. Do not use a dauber.
D. Brush excess cement out of ENT grooves.

E. Promptly insert ENT into fitting while cement is wet, until the stop is reached, and give a quarter turn.
F. Do not disturb until joint is set.



Features

- ENT rated for 75°C Canada (90°C conductors US and 75ºC Canada)
- Recognized for use with PVC rigid nonmetallic conduit fittings with all sizes of ENT
- One piece ENT Coupling, Threaded Terminator and RNC Transition Fitting are rated concrete-tight without tape
- Recognized for use in 2-hour fire resistive nonload bearing and load bearing wall assemblies
- Recognized for use in 1-hour fire resistive nonload bearing wall assemblies
- Recognized for use in a fire resistive ceiling assembly (up to 3 hours)
- Conductors easily push through the raceway (up to approximately 50 feet)
- For use in buildings in accordance with CEC Section 12-1500
- Outside Diameters meet IPS Dimensions
- Storage: -20°C to 70°C
- Handling: -20°C to 40°C

Typical Applications

- Residential: Low or high rise – multi or single family
- Commercial: Low or high rise – office, retail, hotel/motel, restaurant, etc.
- Schools, classrooms, dormitories, offices
- Fire Alarm Systems
- Recreational vehicles and parks
- Solar Photovoltaic systems
- Marinas and boatyards
- Other uses per the current CEC

Low Voltage Brackets and Kits

Low Voltage Kit

The Carlon Low Voltage Adjustable Floor Bracket is specifically designed for the low voltage, structured cabling market... the floor box is industry standard orange to identify low voltage applications, the open design provides the space needed for low voltage bend radius requirements and the Leviton QuickPort® Quad 106® Insert provides up to four low voltage outlets ports. The Carlon Low Voltage Adjustable Floor Bracket is ideal for any residential or commercial low voltage application.

The floor bracket also features a patented screw design allowing it to be adjusted to most finished floor heights by simply turning the screw clockwise or counterclockwise and adjusting flush to the floor.

The floor bracket kit comes complete with a nonmetallic (white or ivory) or brass cover, a Leviton QuickPort® Quad 106® Insert, new work and old work metal mounting brackets and mounting screws.

- White, Ivory or Brass Cover
- Orange – Identifies Low Voltage Installations
- Open Design Floor Bracket – Accommodates Low Voltage Bend Radius Requirements
- Bracket Adjusts to Most Finished Floor Depths
- Leviton QuickPort® Quad 106® Insert – Install up to 4 Low Voltage Inserts
- Two-Door Design

Cat. No.	Cover	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC100FBWC	Nonmetallic – White	8	5.62
SC100FBVC	Nonmetallic – Ivory		5.62
SC100FBBC	Brass		13.78

Installation

Install clip over subfloor.

Screw in to adjust to height of flooring or carpet.

Beautiful flush fit every time!

Low Voltage Brackets

SC100ADJC

One-Gang and Two Gang – Low Voltage

Cat. No.	Description	Size W x H (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC100ADJC	One-Gang Adjustable Backless Bracket	3-7/8 x 3-3/4	24	7.5
SC200ADJC	Two-Gang Adjustable Backless Bracket	5-5/8 x 3-5/8	20	6.9

Old Work Backless Brackets – One-Gang

Cat. No.	Description	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC100RR	One-Gang Backless Old Work Bracket with swing clamps	2-1/4 x 3-1/4	12	1.4

One-Gang

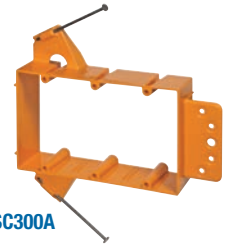
Cat. No.	Description	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
B100R-CRD	One-Gang Backless Old Work Bracket with swing clamps	2-1/4 x 3	12	1.4

Two-Gang

Cat. No.	Description	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC200RR	Two-Gang Backless Old Work Bracket with swing clamps	3.92 x 4.00	6	0.9

Low Voltage Backless Bracket

SC100A



SC300A

SC200A

Open-backed to easily accommodate the bend radiuses required for low voltage cabling and deep devices such as volume controls and is designed to fit a standard one-gang faceplate. It also features an easy nail-on mounting or screw-in bracket, while the hard shell provides increased durability and no racking. Resi-Rings accept 3/4 in., 1 in. and 1-1/4 in. Resi-Gard.

Cat. No.	Description	Size W x H (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC100A	One-Gang Backless Bracket	2.32 x 3.73	24	7.5
SC200A	Two Gang Backless Bracket	5.35 x 3.81	24	7.7
SC300A	Three Gang Backless Bracket	8.69 x 7.20	5	1.6

Low Voltage Add-On Bracket

This low voltage bracket provides a low voltage outlet next to a previously installed high voltage outlet. Great for both new construction and rework, it attaches easily to most electrical boxes and is designed to fit a standard two-gang faceplate. Resi-Rings accept 3/4 in. Resi-Gard only

Cat. No.	Description	Size W x L (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
SC100SC	One-Gang Add-On Bracket	1.80 x 3.68	24	2.3

3–Gang Recessed Plate

The New Carlon RDV 3-Gang Old Work Plate

Cat. No. CSC300PR, has been developed to simplify today's in-home entertainment/networking needs. The box is designed to accommodate the wires, cables and cords used with flat panel display installations.

It features a two-gang low voltage opening and a one-gang opening complete with device box (devices and plates not included).

The hi-gloss, recessed design eliminates unsightly wires, cables and cords and blends with any décor. The RDV Old Work Plate makes installing flat panel displays faster and easier!

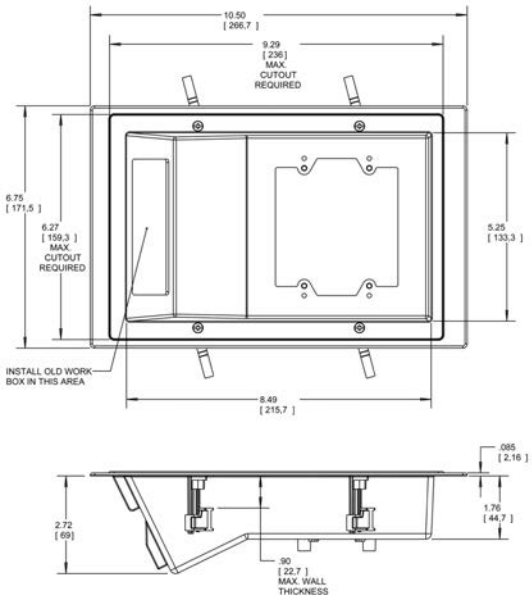
3-Gang Recessed Plate

Features

- 3-Gang dual service capability: Accommodates (1) high and (2) low voltage services using one plate (boxes, devices and plates not included)
- Recessed low profile design: Eliminates unsightly wires and plug heads
- Universal 1-gang outlet / switch opening: Including the box you need
- Pre-assembled box and frame: Reduces labor time and saves money
- Shallow design: Provides ample room behind the dry wall and between the studs and accommodates cable bend requirements
- 4 Swing out clamps: Locks the plate securely to the wall – horizontal or vertical mount
- Superior hi-gloss, paintable finish: Professional appearance. Blends with any décor
- Nonmetallic, ABS material: Lightweight and easy to handle

Specifications

Cat. No.	Description	Std. Carton Qty.	Std. Carton Wt. (lb.)
CSC300PR	RDV 3-Gang Old Work Plate with Outlet Box	6	4.84



Installed

Top view showing ample room between drywall and studs.

Cements

Medium – Clear

Recommended pipe application and sizes	Set-up time (Evaporation Rate)	Recommended installation temp.	Lap Shear @ 23˚C	Viscosity at 24˚C as manufactured
Recommended for all grades and types of Carlon PVC conduit, duct, wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Nonmetallic Tubing.) Up through 6 in. diameter.	Under -12˚C not recommended -1 to 10˚C 5-6 minutes 10 to 21˚C 3-4 minutes 21 to 32˚C 1-2 minutes	5 to 37.7˚C	2 hrs. 350 psi 16 hrs. 800 psi 72 hrs. 1,500 psi	500-900 cps

Cat. No.	Size	Applicator	Description	Ctn. Qty.	Ctn. Wt. (lb.)
VC9963C	473 ml	Dauber	PVC Medium Clear	24	29.0

Regular – Clear

Recommended pipe application and sizes	Set-up time (Evaporation Rate)	Recommended installation temp.	Lap Shear @ 23˚C	Viscosity at 24˚C as manufactured
Recommended for all grades and types of Carlon PVC conduit, duct, wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Nonmetallic Tubing.) Up through 6 in. diameter.	Under -12˚C not recommended -1 to 10˚C 5-6 minutes 10 to 21˚C 3-4 minutes 21 to 32˚C 1-2 minutes	5 to 37.7˚C	2 hrs. 350 psi 16 hrs. 800 psi 72 hrs. 1,500 psi	500-900 cps

Cat. No.	Size	Applicator	Description	Ctn. Qty.	Ctn. Wt. (lb.)
VC9965C	118 ml	Dauber	PVC Regular Clear	24	8.4

Cements

All Weather – "Quick-Set" Cement

Recommended pipe application and sizes	Set-up time (Evaporation Rate)	Recommended installation temperature	Lap Shear @ 23˚C	Viscosity at 24˚C as manufactured
Recommended for all grades and types of Carlon PVC conduit, duct, wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Nonmetallic Tubing.) Up through 6 in. diameter.	-20 to -12˚C 6-8 minutes -12 to -1˚C 4-5 minutes -1 to 10˚C 3-4 minutes 10 to 21˚C 1-2 minutes 21 to 32˚C 1/2-11/2 minutes	-20 to 37.7˚C	2 hrs. 350 psi 16 hrs. 800 psi 72 hrs. 1,500 psi	400-700 cps

Cat. No.	Size	Applicator	Ctn. Qty.	Ctn. Wt. (lb.)
VC9983C	473 ml	Dauber	24	30.0
VC9985C	118 ml			7.5

Meets ASTM D-2564

Primers

Multi-Purpose Spray — On PVC Cement

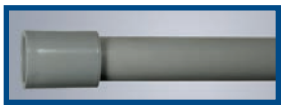
No Waste • Sprays on in seconds • Fast setting

- Equivalent to a medium bodied low-VOC, quick setting clear cement
- No more spills
- Reuse can until empty
- Installation: 10 to 26°C
  Storage: 1 to 48°C
- Meets ASTM D-2564
- 3 year shelf life
- One 120 ml can is equivalent to 120 ml of non-aerosol PVC cement*

*Equivalence is subject to usage and will vary

Applications

- For use up to 4 in. dia. Sch 40 PVC electrical conduit
- For use with PVC Raceways only. Not recommended for use on water, sewer, natural gas, compressed gas or air connections.



Temperature Range	Recommended Set Time		
	Pipe Sizes 1/2 in. to 1-1/4 in.	Pipe Sizes 1-1/2 in. to 2 in.	Pipe Sizes 2-1/2 in. to 4 in.
15 to 37.7°C	2 min.	5 min.	30 min.
4 to 15°C	5 min.	10 min.	2 hrs.
-17 to 4°C	10 min.	15 min.	12 hrs.

Recommended set time may vary depending on humidity

Cat. No.	Size	Ctn. Qty.	Ctn. Wt. (lb.)
VC9AC5C	120 ml	12	5.6

Sealers

Multi-Purpose Weather-Gard™ Spray-On Rubber Film

No Waste • Sprays on in seconds • Fast setting

- Weatherproof
- Forms a protective weatherproof seal on electrical connections
- Dries in minutes to crystal clear rubber film
- Prevents corrosion on electrical connections
- Recommended installation temperatures 10 to 26°C
- Can be used on wood and plastic
- 2 year shelf life

Applications

- Electrical connections
- Outdoor lighting
- Panel boxes
- Pool motors and timers
- Water valves and connections
- Sprinkler connections and control box
- Marine applications

Cat. No.	Size	Ctn. Qty.	Ctn. Wt. (lb.)
VC9WG5C	120 ml	12	5.6

Multi-Purpose Spray-On Rubber Thread Gasket

No Waste • Sprays on in seconds • Fast setting

- Dries to rubber gasket to seal pipe threads
- Seals out leaks
- Protects against rust and corrosion
- UV Resistant
- Weatherproof
- 2 year shelf life

Applications

- PVC
- Copper
- Iron
- Brass

Cat. No.	Size	Ctn. Qty.	Ctn. Wt. (lb.)
VC9TS5C	120 ml	12	5.6

Installation Instructions

Cement Joints

Carlon nonmetallic products are joined by means of solvent cement joints. Sizes 1/2 in. through 1-1/2 in. should be cut square (using a fine tooth handsaw) and deburred.

For sizes 2 in. through 6 in. a miter box or similar saw guide should be utilized to keep the material steady. After cutting and deburring, wipe ends clean of dust, dirt and shavings.

Joining process as follows: Be sure that conduit end is clean and dry. Apply coat of Carlon Solvent Cement (use dauber) to end of conduit, the length of the socket to be attached. Push conduit firmly into fitting while rotating conduit slightly about one-quarter turn to spread cement evenly. Allow joint to set approximately 10 minutes.

Carlon recommends the use of Carlon cement for proper solvent cement joints. Since this cement is prepared particularly for our product compounds and tolerances, we cannot guarantee joints assembled with cement materials supplied by other manufacturers. Regular grade grey solvent cement will accommodate most application situations being of a general purpose nature. In situations requiring an extremely fast-setting joint (low temperature or difficult installation conditions), Carlon All Weather Quick-Set Cement is recommended. Standard grade clear cement is recommended for non-critical utility applications where gap filling and leak testing are not required.

Average number of joints per can						
Trade Size (in.)	237 ml	473 ml	946 ml	3.78 L	120 ml	480 ml
1/2	140	275	550	2,200	70	275
3/4	90	180	360	1,440	45	180
1	70	140	280	1,120	35	140
1-1/4	50	100	200	800	25	100
1-1/2	37	75	150	600	18.5	75
2	20	40	80	320	10	40
2-1/2	17	35	70	280	8.5	35
3	15	30	60	240	7.5	30
3-1/2	13	27	54	216	6.5	27
4	12	25	50	200	6	25
5	9	19	38	150	N/A	N/A
6	6	12	24	95	N/A	N/A

CAN: Average shelf-life of all Carlon cement is 24 months (unopened cans stored below 26˚C.)
SPRAY: Average shelf-life of all Carlon Spray PVC Cement is 3 years.
All Carlon cements are specially formulated to be used with Carlon PVC products, and do not require primers when parts are clean of dirt and moisture.

Cementing PVC Conduit

1. Make square saw cut with fine tooth saw.
2. Deburr and round inside edge of the cut end.
3. Clean socket ID and spigot OD of dirt and moisture.
4. Apply a uniform coat of cement to spigot end and push onto socket bottom, rotating 1/4 turn.
5. Allow time to set before disturbing. This will depend upon temperature.

Cementing PVC Conduit for Submerged Areas Requiring Air or Water Tightness

1. Follow the procedure outlined above for cementing conduit.
2. Test workmanship by conducting a low pressure air (3.0 - 5.0 psi) test after system is installed and cemented joints are set.
3. Plug and block ends to prevent movement prior to pressurization.
4. Check for leaks with soap solution.
5. Even low pressure air can cause high thrust loads and caution must be observed.

Cementing ENT for Concrete-Tight Applications

1. Use Carlon Socket tight fittings or couplings.
2. Do not use chemical primer or cleaner.
3. Apply a light uniform coat of cement, labeled for use with ENT.
4. A brush shall be used to apply the cement.
5. Brush excess cement out of ENT grooves.
6. Promptly insert ENT into fitting while cement is wet, until the fitting stop is reached, and give 1/4 turn.
7. Do not disturb until the joint is set.

Conduit Cutters

Kwikcut Cutter

For fast, smooth field cuts of 1/2 in. through 1 in. Innerduct.

Cat. No.	Size (in.)	Std. Ctn. Qty.
CC120B	8	10

Medium Cutter

Hand held cutter makes fast square, smooth field cuts on Innerduct sizes 1/2 in. through 1-1/4 in.

Cat. No.	Size (in.)	Std. Ctn. Qty.
CC125	9	1

Large Cutter

For clean cuts of Innerduct sizes 1/2 in. through 2 in.

Cat. No.	Size (in.)	Std. Ctn. Qty.
CC122	17- 1/2	1

EZ BEND™ Conduit Bending Equipment

For field bending of small and large diameter nonmetallic conduit, the easy answer is Carlon EZ BEND* conduit bending equipment.

- Lightweight
- Fast, Simple and Safe
- Includes complete instructions and a convenient bending chart
- Portable
- Less expensive than factory bends

* EZ BEND is a registred Trademark of Bradshaw Manufacturing, Inc.

EZ BEND™ Conduit Bender, Jr.

A practical, convenient portable conduit bender for 1/2 in. through 2 in. diameter nonmetallic conduit allows bends up to 14 in. radius and to 90° elbows. The EZ BEND* Conduit Bender, Jr. is a time-saving, easy-to-carry unit featuring a bracket to store the power cord, a carrying handle, and a clasped cover. The unit operates on a standard 20 amp, 120 V circuit.

Dimensions: 7-1/2 in. x 8-1/2 in. x 31 in.
Operating Temperature: 82° - 93°C

Carlon's EZ BEND Conduit Bending Equipment is designed with the electrical contractor in mind. The completely portable and fully encased EZ BEND benders and plug kits can be transported from job to job without damage or harm to the equipment. Additionally, the heavy duty construction and integrity of Carlon's EZ BEND Conduit Bending Equipment ensures that it will last for years to come.

Cat. No.	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
G280J	1	10

Field Bending Rigid Nonmetallic Conduit

1. Heating

Conduit section to be bent must be heated evenly over the entire length of the curve. Carlon offers EZ BEND electric heaters designed specifically for the purpose, in sizes to accommodate all conduit diameters. These devices employ infra-red heat energy which is most quickly absorbed by the conduit. Small sizes are ready to bend after a few seconds, while larger diameters require two or three minutes, or more, depending on conditions. The use of torches or other flame-type devices is not recommended. PVC conduit exposed to excessively high temperatures may take on a brownish colour. Sections showing evidence of such scorching should be discarded.

2. Forming The Bend

1/2 in. thru 1-1/2 in. Diameters – When properly heated the conduit is very flexible and can be shaped to almost any configuration. The conduit is then cooled by sponging with water, and the bend is ready to install.

2 in. and Larger Diameters – Larger sizes of conduits and ducts require internal support to prevent "crimping" or deforming during the bending process. Bending plugs are inserted in each end of the conduit section before heating. The plugs expand to provide an airtight seal. (Note: Carlon does not offer bending plugs.)

Minimum practice is required to master the three steps in bending nonmetallic conduits and ducts.

3. Cooling

As the conduit is heated, the retained air expands, and the increased internal pressure allows the conduit to be bent without deforming. The conduit must be cooled before the plugs are removed. For an immediate cool and set, sponge with cold water.

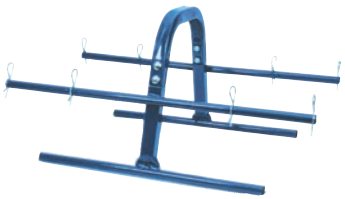
Special Bends

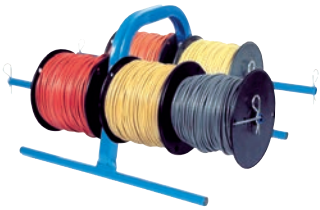
For "blind" bends or for compound turns in a conduit run, the heated conduit may be solvent cemented in place while still flexible.

Caddies and Karts

Wire Kaddy™

- Dispense small quantities of spooled wire
- Convenient hand carrying design
- Constructed of steel tubing with premium powder coat finish
- 3/8 in. hitch pin clip allows easy spool changes

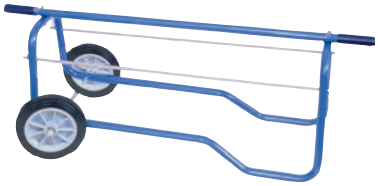




Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7001	22.75 L x 14 W x 11 H	4	25	8	7 in. Diameter x 5 in. wide
				4	7 in. Diameter x 6 in. – 10 in. wide

Wire Handling Kart

- Dispense small quantities of spooled wire
- Constructed of steel tubing with premium powder coat finish
- 3/8 in. hitch pin clip allows easy spool changes



Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7101	44.25 L x 16 W x 17.5 H	2	47	12	7 in. Diameter x 5 in. wide
				6	7 in. Diameter x 6 in. – 10 in. wide

Multi-Purpose Wire Kart

- Dispense large quantities of spooled wire
- Heavy-duty construction with premium powder coat finish
- 5 wire spool axles
- 3/8 in. hitch pin clip allows easy spool changes
- Built-in wire guide on handle allows horizontal dispensing
- Large 8 in. heavy-duty wheels with adjustable axle position
- Designed to pass through a 28 in. opening

Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7103	25 L x 28 W x 55 H	1	58.6	6	2500 ft. – up to 16 in. diameter
				15	500 ft. – 7 in. diameter x 5 in. wide

Wire Handling Products

Cable Dispenser

- Two mounting styles in one product vs competitive offering
- Floor, or stud mount
- Smoothly dispense coils of armored cable or NM-B
- Swivel eyelet prevents tangles while paying out
- Wide base for stability
- Easy assembly, no tools required

Floor mount

Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7203	15.5 H x 19 W	3	45.5	Inside	5.50 in. min, inside coil dia.
				Outside	17 in. max. outside coil dia.
				Max. Weight	50 lb.

Stud mount

Wire Handling Products

6 Reel Wire Dispenser

- Dipense large quantities of spool wire
- Heavy-duty construction with premium powder coat finish
- 6 angled spindles keep reels in place without locking
- Built in wire guide
- 2 fixed wheels, 1 locking swivel wheel
- Designed to pass through a 30 in. opening

Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7201	44 L x 29 W x 33 H	1	80	6	2500 ft. – up to 18 in. diameter

10 Reel Wire Dispenser

- All-steel construction
- Premium powder coated finish
- Easy loading, dispensing and changing of spooled wire
- Adjustable wire guide
- Two fixed and two swivel locking casters for stability
- Angled spindles keep spools in place during use
- 360º rotating reel frame
- Fits through a 36 in. door opening
- Heavy duty
- Easy assembly

Cat. No.	Dimensions (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Capacity	
				Qty. of Spools	Spool Dimensions
WK7202	50 L x 32 W x 57.5 H	1	190	10	2500 ft. – up to 18 in. diameter

PV-Mold®

PV-Mold® Nonmetallic Pole Riser System

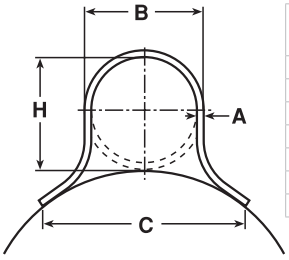
RUS Accepted

Carlon PV-Mold is a non-metallic pole riser system designed to protect communications or power cable installed on poles.

Features

- Meets or exceeds requirements outlined in the National Electric Safety Code (NESC)
- Designed in accordance with NEMA TC-19 specifications
- Ultraviolet, cold temperature and corrosive atmosphere resistant
- No grounding required
- Belled end fits over each added section or conduit
- Requires no maintenance
- PV-Mold acts as an insulator against electrical shock
- Interchangeable parts and accessories to match the needs of specific requirements

Flanged Overall Length 10 Feet, Including Bell



Size (in.)	Depth of Bell (in.)
1	2 – 2-1/4
1-1/2	2 – 2-1/4
2	2 – 2-1/4
3	3 – 2-1/4
4	4 – 2-1/4
5	4 – 2-1/4
6	5 – 2-1/4

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)				Actual Impact @ 0ºC 20 Pound Tup
				A	B	C	H	
Standard Duty								
59208N	1	294	1059	0.100	1-5/8	2-3/8	1-5/8	40 ft. - lb.
59211N	2	136	726	0.100	2-3/8	4-1/2	2-3/8	100 ft. - lb.
59213N	3	66	761	0.150	3-1/2	6	3-1/2	110 ft. - lb.
59215N	4	65	910	0.150	4-1/2	6-1/2	4-1/2	110 ft. - lb.
59216N	5	30	515	0.150	5-1/2	7-1/2	5-1/2	110 ft. - lb.

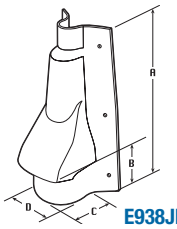
Slots are 1/2 in. from side to side allow for expansion and contraction.
Slot Dimensions: for sizes 2 in. through 6 in. are 5/16 in. wide, 3/4 in. long.
Slot Dimensions: for 1 in. and 1-1/2 in. are 3/16 in. wide, 3/4 in. long.
Slot Spacing: 18 in. from center, beginning 6 in. from end.

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)				Actual Impact @ 0ºC 20 Pound Tup
				A	B	C	H	
Heavy Duty Schedule 40								
59010N	1-1/2	200	1142	0.145	1-29/32	3-1/2	1-29/32	100 ft. - lb.
59011N	2	136	1214	0.154	2-3/8	4-1/2	2-3/8	150 ft. - lb.
59013N	3	66	934	0.216	3-1/2	6	3-1/2	150 ft. - lb.
59015N	4	65	1621	0.237	4-1/2	6-1/2	4-1/2	260 ft. - lb.
59016N	5	30	870	0.258	5-1/2	7-1/2	5-1/2	260 ft. - lb.
59017N	6	30	1160	0.280	6-5/8	8-3/4	6-5/8	260 ft. - lb.

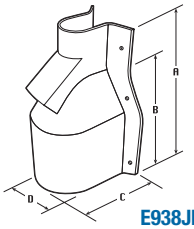
PV-Mold®

Polyethylene Vented Boots and Adapters

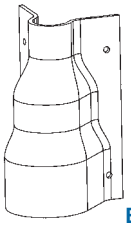
1. A field cut may be needed to accommodate different boot or adapter to Carlon U-Mold size combinations.
2. Recommendation: 2 sets of mounting holes per boot/fitting. To add mounting holes, use a 3/8 in. drill bit and drill out where needed.
3. When 3 in. or smaller conduit is being used, it's recommended that the bottom (largest section) of the boot or adapter section be buried 2 in. to 3 in. below ground surface.

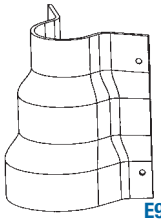


E938JR



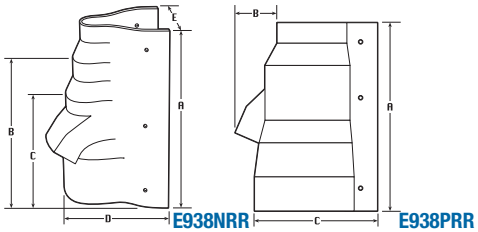
E938JR

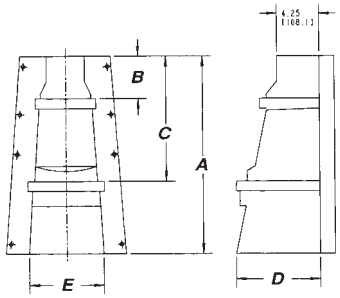

E939JN


E939NR

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)			
				A	B	C	D
Vented Boots							
E938JR	2 x 6	4	13.5	20.50	4.80	6.13	6.20
E938NT	4 x 8		21.0	21.00	15.00	11.34	9.76

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)			
				A	B	C	D
Adapters							
E939JN	2 x 4	8	10.0	11.00	6.75	5.88	5.07
E939NR	4 x6	6	11.7	11.00	6.75	7.08	7.13





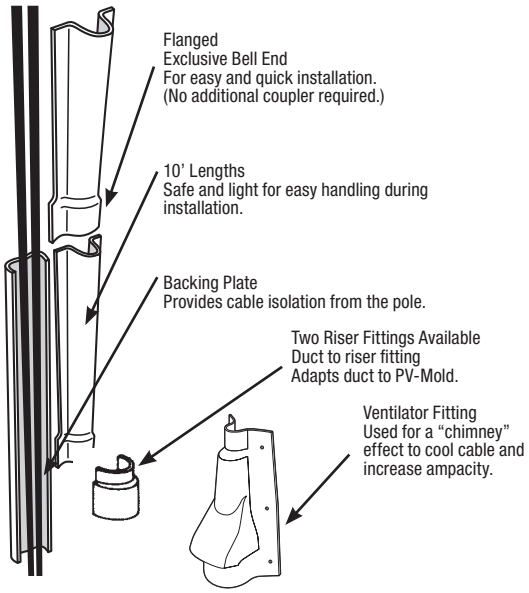
Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)				
				A	B	C	D	E
Vented Boots								
E938NRR	4 x 6	6	26.4	20.87	16.57	12.87	11.68	11.43
E938PRR	5 x 6		23.2	16.74	3.65	10.84	11.43	–

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)	Dimensions (in.)				
				A	B	C	D	E
Adapters								
E939NRT	4 x 6	3	14.0	19.75	4.25	12.50	8.50	7.40

Cat. No.	Size (in.)	Std. Ctn. Qty.	Std. Ctn. Wt. (lb.)
Duct to Riser Fitting			
E939NL	4 x 3	15	5.6
E939N	4 x 4		5.3

PV-Mold®

PV-Mold® Installation Instructions



Installation is easy with PV-Mold Pole Risers

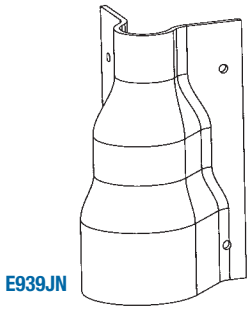
1. Install ventilator or duct to riser fittings at the base of the pole.
2. Nail backing plate sections to the surface of the pole. Three nail holes are provided in each section. Place the "U" sections over the cable and backing plate, with belled end at the bottom and attach using 1/4 in. lag bolts.

Field Installation Instructions for Carlon PV-Mold Adapters

For Adapters (E939JN, E939NR, E939NRT)

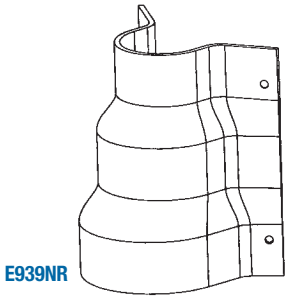
E939JN

To transition from 4 in. Conduit to 2 in. PV-Mold
Place Adapter over conduit, attach to pole using the top and bottom mounting holes, place PV-Mold over top section of Adapter and secure PV-Mold to pole.
To transition from 4 in. Conduit to 3 in. PV-Mold
Measure 6.3 in. up from bottom (large end) of adapter and cut. Assemble to pole as described above.
To transition from 3 in. Conduit to 2 in. PV-Mold*
Measure 4.75 in. up from bottom (large end) of adapter and cut. Assemble to pole as described above.


E939JN

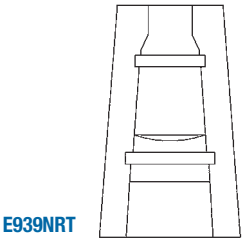
E939NR

To transition from 5 in. Conduit to 4 in. PV-Mold
Place Adapter over conduit, attach to pole using the top and bottom mounting holes, place PV-Mold over top section of Adapter and secure PV-Mold to pole.
To transition from 6 in. Conduit to 5 in. PV-Mold
Measure 7.25 in. up from bottom (large end) of adapter and cut. Assemble to pole as described above.
To transition from 5 in. Conduit to 5 in. PV-Mold*
Measure 4.5 in. down from the top of adapter and cut. Assemble to pole as described above.
*For these transitions it is not necessary to cut the Adapter. If the Adapter is not modified, it is recommended that the bottom 3 in. of the Adapter be buried below grade.


E939NR

E939NRT

To transition from 6 in. Conduit to 4 in. PV-Mold
Place Adapter over conduit and attach to pole using the top and bottom mounting holes, place PV-Mold over top section of Adapter and secure PV-Mold to pole.
To transition from 6 in. Conduit to 5 in. PV-Mold
Measure 5.25 in. down from the top of the adapter and cut. Assemble to pole as described above.
To transition from 6 in. Conduit to 6» PV-Mold
Measure 9.5 in. up from the bottom of the adapter and cut. Assemble to pole as described above.

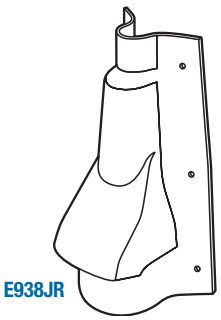

E939NRT

PV-Mold®

PV-Mold® Installation Instructions

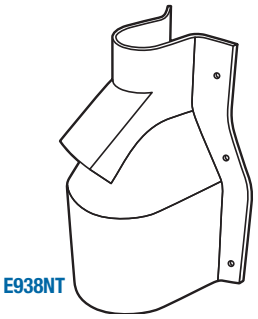
Field Installation Instructions for Carlon PV-Mold Vented Boots

For Vented Boots (E938JR, E938NT, E938NRR, E938PRR)


E938JR

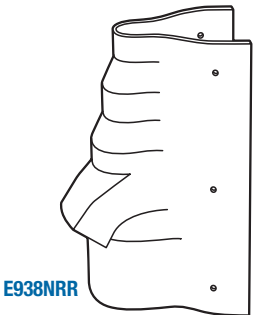
E938JR

To transition from 5 in. or smaller Conduit to 2 in. PV-Mold
Place Vented Boot over conduit, attach to pole using the top and bottom mounting holes, place PV-Mold over top section of Vented Boot and secure PV-Mold to pole.
To transition from 5 in. or smaller Conduit to 3 in. and larger PV-Mold
For 3 in. PV-Mold: Measure 3.75 in. from the TOP of the Boot and cut. Place the Boot over the Conduit and attach to the pole. Place belled end of PV-Mold over the top end of the boot and secure.
For 4 in. and 5 in. PV-Mold: Measure 12 in. up from the BOTTOM of the Boot and cut.
Place the Boot over the conduit and attach to the pole. Place the Belled end of the PV-Mold AGAINST the top edge of the vent protrusion and secure to the pole.


E938NT

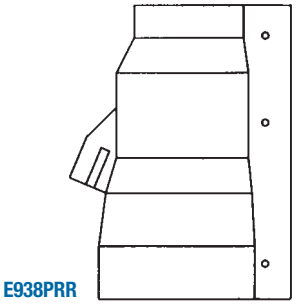
E938NT

To transition from 6 in. to 8 in. Conduit to 4 in. PV-Mold
Place Boot over conduit and attach to the pole using the mounting holes.
Place PV-Mold over top section of Vented Boot and secure to the pole.
It is recommended that for conduit sizes smaller than 8 in., the bottom 3 in. of the boot be buried below grade. The E938NT can also be used to transition multiple smaller conduits to PV-Mold.


E938NRR

E938NRR

To transition from 6 in. or smaller conduit to 4 in. PV-Mold
Place Vented Boot over conduit and attach to pole using the top and bottom mounting holes.
Place PV-Mold over top section of Vented Boot and secure PV-Mold to pole
To transition from 6 in. or smaller conduit to 5 in. PV-Mold
Measure 4.125 in. down from the top of the vented boot and cut. Assemble to pole as described above.
To transition from 6 in. or smaller conduit to 6 in. PV-Mold
Measure 8.25 in. down from the top of the vented boot and cut. Assemble to pole as described above.


E938PRR

E938PRR

To transition from 6 in. or smaller conduit to 5 in. PV-Mold
Assemble to pole as described above.