

Carlton®

Carlton® Electrical Non-Metallic Tubing (ENT) System

In this section...



Carlton® Electrical Non-Metallic Tubing (ENT) System

Electrical Non-Metallic Tubing	A-328
Boxes and Accessories	A-329-A-338
Flexible Raceway Systems	A-339-A-347
Flexible Raceway System Accessories	A-348-A-352
Technical Information	A-353-A-354

Thomas & Betts

www.tnb.com

Electrical Non-Metallic Tubing

Flex-Plus® ENT

Flex-Plus® ENT is a non-metallic 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.

Options:

- Sizes ½" through 2"
- Colors can designate different voltages.
Examples:
 - Yellow color for communication circuits and signaling cable
 - Red color for fire alarm circuits
 - Blue color for power circuits
- Packaging: coils or reels



LR83580
FT-4 Rated
where
noted by

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	NOM. I.D. (IN.)	NOM. O.D. (IN.)	PILL TAPE	MIN. BEND RADIUS (IN.)	REEL SIZE (IN.) (F X W)	REEL TYPE (W=WOOD)	REEL LENGTH	REEL WT. (LBS.)	WT. PER 100 FT. (LBS.)
12005AK-001	½	Blue	.56	.84	Empty	6	36 x 24	W	1500	40	10
12005AKY-001	½	Yellow	.56	.84	Empty	6	36 x 24	W	1500	40	10
12005AKR-001	½	Red	.56	.84	Empty	6	36 x 24	W	1500	40	10
12005AKC-001	½	Blue	.56	.84	Empty	6	36 x 24	W	1500	40	10
12007AA-001	¾	Blue	.76	1.05	Empty	6	36 x 24	W	1000	40	14
1207AAY-001	¾	Yellow	.76	1.05	Empty	6	36 x 24	W	1000	40	14
1207AAR-001	¾	Red	.76	1.05	Empty	6	36 x 24	W	1000	40	14
1207AAC-001	¾	Blue	.76	1.05	Empty	6	36 x 24	W	1000	40	14
12008-750	1	Blue	1.00	1.315	Empty	6	36 x 24	W	750	40	20
12008Y-750	1	Yellow	1.00	1.315	Empty	6	36 x 24	W	750	40	20
12008R-750	1	Red	1.00	1.315	Empty	6	36 x 24	W	750	40	20
12008C-750	1	Blue	1.00	1.315	Empty	6	36 x 24	W	750	40	20
12009-750	1¼	Blue	1.402	1.66	Empty	7	48 x 32	W	750	90	19
12010-750	1½	Blue	1.554	1.90	Empty	8¼	48 x 32	W	750	90	39
12010Y-750	1½	Yellow	1.554	1.90	Empty	8¼	48 x 32	W	750	90	39
12011-500	2	Blue	2.030	2.375	Empty	9½	48 x 32	W	500	90	32
12011R-500	2	Red	2.030	2.375	Empty	9½	48 x 32	W	500	90	32
12011Y-500	2	Yellow	2.030	2.375	Empty	9½	48 x 32	W	500	90	32

* 1¼"-2" available in yellow & red, made to order; consult factory.

Canada Only

Standard Stock — Coils

CAT. NO.	SIZE (IN.)	COLOR	NOM. I.D. (IN.)	NOM. O.D. (IN.)	PILL TAPE	MIN. BEND RADIUS (IN.)	COIL LENGTH (FT.)	WT. PER 100 FT. (LBS.)
12005-200	½	Blue	.56	.84	Empty	6	200	10
12005Y-200	½	Yellow	.56	.84	Empty	6	200	10
12005R-200	½	Red	.56	.84	Empty	6	200	10
12005C-370	½	Blue	.56	.84	Empty	6	200	10
12007-100	¾	Blue	.76	1.05	Empty	6	100	14
12007Y-100	¾	Yellow	.76	1.05	Empty	6	100	14
12007R-100	¾	Red	.76	1.05	Empty	6	100	14
12007C-240	¾	Blue	.76	1.05	Empty	6	100	14
12008-100	1	Blue	1.00	1.315	Empty	6	100	22
12008Y-100	1	Yellow	1.00	1.315	Empty	6	100	22
12008R-100	1	Red	1.00	1.315	Empty	6	100	22
12008C-160	1	Blue	1.00	1.315	Empty	6	100	22

Canada Only

10-ft. Lengths

CAT. NO.	SIZE (IN.)	COLOR	NOM. I.D. (IN.)	NOM. O.D. (IN.)	STD. CTN.	STD. WT. (LBS.)
12005-UPC	½	Blue	.56	.84	10 ft.	1.02
12007-UPC	¾	Blue	.76	1.05	10 ft.	1.46
12008-010	1	Blue	1.00	1.315	10 ft.	2.93

Note: The solid blue color of ENT conduit is a registered trademark of Carlon®. ENT may show color deterioration in direct sunlight when stored outdoors over an extended period of time. It is suggested that all ENT products not be stored outside. Section 362.12(B) of the NEC® prohibits ENT to be used in areas exposed to direct sunlight.

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

Boxes and Accessories

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 enabling 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 ½", ¾" and 1".



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A210D	½"	50	3.8
A210E	¾"	50	3.7
A210F	1"	50	4.8

Vertical Stub Down Transition Adapter

Carlon® Non-Metallic 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, enabling connection to other conduit system using a 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 ½", ¾" and 1".



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A200D	½" Female ENT to NPSC (Female)	50	2.3
A200E	¾" Female ENT to NPSC (Female)	50	2.8
A200F	1" Female ENT to NPSC (Female)	50	3.9

45° Stub Down

Carlon® 45° Stub Downs are designed to provide 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 enable 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° 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 ½", ¾" and 1".



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A220D	½"	25	1.8
A220E	¾"	25	2.0
A220F	1"	25	2.6
A220G	1¼"	25	2.8
A220H	1½"	25	3.3
A220J	2"	25	4.1

90° Stub Down Transition Adapter

Carlon® Non-Metallic Exclusive...Carlon® 90° Stub Downs are designed to provide 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, enabling connection to any conduit system using a terminal adapter. Carlon® 90° Stub Downs are manufactured out of polycarbonate material to provide extra strength and durability. They're concrete tight and available in sizes ½", ¾" and 1".

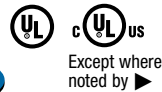


CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A230D	½" Female ENT to NPSC (Female)	25	2.0
A230E	¾" Female ENT to NPSC (Female)	25	2.4
A230F	1" Female ENT to NPSC (Female)	25	3.3

Boxes and Accessories

Mud Box Assemblies

Carlton® 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", six 3/4" and four 1/2". Using our new ENT Reducers, this product will meet ANY jobsite application.



Cement Caps Included

Mud Box Base with Blank Cover

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863BC ▶	Mud Box with Blank Cover	24	12.3

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 lbs.
- Listed for ceiling fans up to 35 lbs.

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863CF	Mud Box with Blank Cover	24	15.5
A863CFG ▶	Mud Box with Ceiling Ring & Ground Lug	24	16.1

Mud Box with One-Gang Ring

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863S	Mud Box with One-Gang Ring	24	16.8
A863SG ▶	Mud Box with One-Gang Ring & Ground Lug	24	16.2

Mud Box with Two-Gang Ring

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863D	Mud Box with Two-Gang Ring	24	15.8
A863DG ▶	Mud Box with Two-Gang Ring & Ground Lug	24	16.6

Mud Box with 4" Square Ring

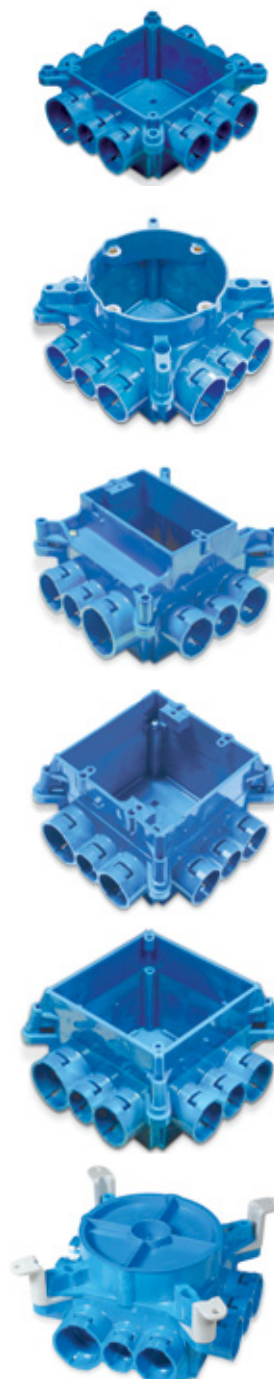
- 4" Square Ring not for luminaire

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863-4SQ ▶	Mud Box with 4-Inch Square Ring	24	15.2

Mud Box Assemblies with Mounting Feet

Carlton® 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 enable 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.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863-4SQF	4-Square Ring	24	17.15
A863CFF	Ceiling Ring	24	16.61
A863CFGF	Ceiling Ring and Ground Lug	24	17.46
A863DF	Double-Gang	24	17.42
A863DGF	Double-Gang and Ground Lug	24	17.99
A863SF	Single-Gang	24	17.15
A863SGF	Single-Gang and Ground Lug	24	17.44

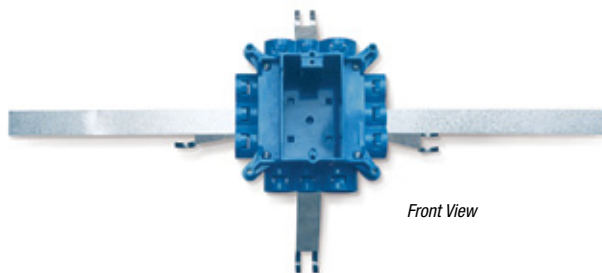


Boxes and Accessories

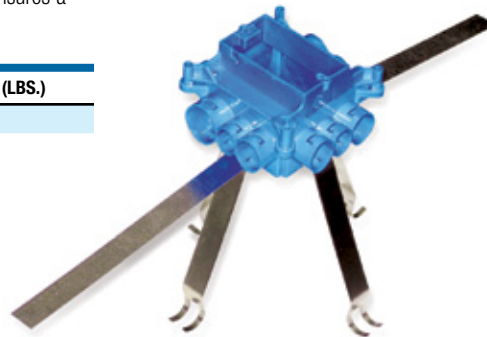
Mounting Brackets

CARLON® EXCLUSIVE...The Carlton® ENT Mounting Bracket is specifically designed for use with Carlton® 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 enables the outlet box to be secured to rebar. The bracket combination ensures a straight box opening and a concrete-tight fit. Mud Box not included.

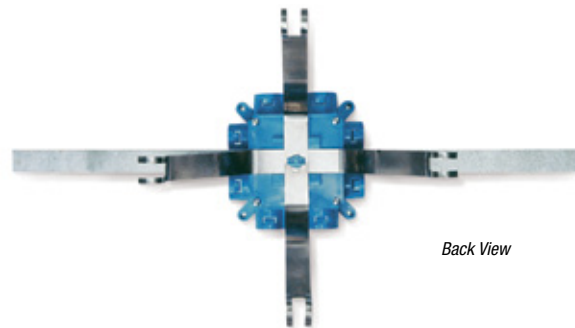
CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A863MB	Mud Box Mounting Kit	1	.98



Front View



Carlton
Exclusive



Back View

ENT Bridge

CARLON® EXCLUSIVE...The Carlton® 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 Carlton® ENT Bridge is manufactured out of a highly engineered thermoplastic material to provide extra strength and durability and can accommodate ENT sizes 1/2", 3/4" and 1". (The Carlton® ENT bridge can be used with rigid non-metallic conduit too.)

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A293DEF	ENT Bridge	50	9.0



Carlton
Exclusive

Boxes and Accessories

Transition Adapters

Male ENT to Schedule 40 and 80 PVC Conduit

CARLON® EXCLUSIVE...Carlon® Male ENT to Schedule 40 & 80 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 Carlon's® "Quick Connect" snap-in connector on the box or fitting. Carlon® Male ENT to Schedule 40 & 80 Adapters are concrete tight and available in sizes ½", ¾" and 1".



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A263D	½" ENT to ½" Sch. 40 or Sch. 80	100	2.4
A263E	¾" ENT to ¾" Sch. 40 or Sch. 80	100	3.2
A263F	1" ENT to 1" Sch. 40 or Sch. 80	100	4.5



ENT to EMT

Carlon® ENT to EMT Transition Adapters are designed to easily transition from Carlon® Flex-Plus® Blue™ 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 ½", ¾" and 1".

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A245D	½" ENT to ½" EMT	100	3.4
A245E	¾" ENT to ¾" EMT	100	4.1
A245F	1" ENT to 1" EMT	100	5.4



Reducers

CARLON® EXCLUSIVE...Carlon® ENT Reducers are designed to provide an easy transition from 1" Carlon® ENT to ¾" ENT or from ¾" Carlon® ENT to ½" 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.



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A273DE	¾"-½"	100	3.2
A273EF	1"-¾"	100	2.4



Boxes and Accessories

Outlet and Switch Boxes — Eccentric Knockouts

CARLON® EXCLUSIVE...Carlton® ENT Outlet and Switch Boxes with Eccentric Knockouts are designed to enable selective ENT openings — ½", ¾" and 1" — based on application needs. They provide the largest capacity available on the market today — 22 cu. in. Single-Gang, and 38 cu. in. Double-Gang — and can be mounted to wood or steel studs. Carlton® ENT Outlet and Switch Boxes with Eccentric Knockouts are manufactured out of a highly engineered thermoplastic material to provide extra strength and durability and are available in single-gang and double-gang styles.

Note: The double-gang version is also a 4-in. square box.



Single-Gang — 22 Cu. In.

CAT. NO.	SIZE	CAPACITY CU. IN.	STD. CTN.	STD. WT. (LBS.)
A122	Single-Gang	22	25	6.8

UL Classified for 2-hour-or-less fire-resistant fire wall assemblies

Combination Two-Gang/Four-Inch Square Box — 38 Cu. In.

CAT. NO.	SIZE	CAPACITY CU. IN.	STD. CTN.	STD. WT. (LBS.)
A238	Two-Gang	38	25	8.9

UL Classified for 2-hour-or-less fire-resistant fire wall assemblies

Outlet Box Divider

Carlton® ENT Outlet Box Divider is specifically designed for applications where a combined high- and low-voltage closed-back box is needed, such as for placement in a fire-rated wall. Just slip the divider into place to get the split box you need. The Carlton® ENT Outlet Box Divider is UL® Recognized for use with the Carlton® A238 Box only.



CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A238DIV	—	50	1.87



Boxes and 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 non-metallic conduit fittings are compatible with ENT when using ENT cement
- Rigid non-metallic conduit fittings are recommended for use with Carlon® 1 1/4" –2" Flex-Plus® Blue™ ENT
- Use of ENT Blue™ Quick-Set Cement is required. See **page A-338** for details

- When One-Piece Quick-Connect Snap-In Terminator Adapters are installed in a concrete application, Carlon® flat sealing washers must be used on the box connection ends



Couplings

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
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.	STD. WT. (LBS.)
A243D	1/2	150	2.55
A243E	3/4	100	2.30
A243F	1	50	2.00

Snap-In Adapters

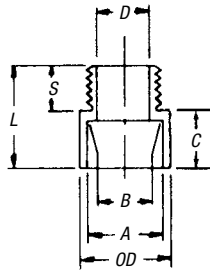
CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A253D	1/2	150	2.70
A253E	3/4	100	2.90
A253F	1	50	2.30



Rigid Non-Metallic Conduit Adapters and Couplings

Male Terminal Adapters

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

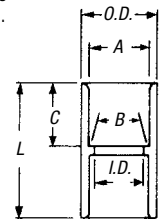


Standard Couplings

All socket fittings should be attached using ENT Blue™ Quick-Set Cement (**page A-338**). Using Carlon® fittings with Carlon® non-metallic conduit ensures system integrity.



Socket type for joining non-metallic conduit.



CAT. NO.	SIZE	STD. CTN.	TYPICAL		MIN. D	MAX. OD	TYPICAL			STD. WT. (LBS.)
			A	B			C	S	L	
E943D	1/2	150	.852	.836	.597	1 1/8	3/8	1 1/8	1 1/8	2.8
E943E	3/4	125	1.064	1.046	.800	1 1/2	3/4	1 1/2	1 1/2	3.5
E943F	1	50	1.330	1.310	1.018	1 3/4	1	1 1/2	1 3/4	3
E943G	1 1/4	50	1.677	1.655	1.332	2 1/2	1	3/4	1 1/2	4
E943H	1 1/2	25	1.918	1.894	1.566	2 3/4	1 1/8	3/4	2 1/2	2.5
E943J	2	50	2.393	2.369	2.000	2 3/4	1 3/8	3/4	2 1/2	7

*All measurements in inches, unless otherwise noted.

CAT. NO.	SIZE	STD. CTN.	TYPICAL		MIN. D	MAX. OD	TYPICAL		STD. WT. (LBS.)
			A	B			C	L	
E940D	1/2	150	.852	.836	.728	1 1/4	1 1/8	1 1/2	2.8
E940E	3/4	100	1.064	1.046	.840	1 1/2	3/4	1 1/2	3.5
E940F	1	50	1.330	1.310	1.210	1 3/4	1	1 1/2	3
E940G	1 1/4	30	1.677	1.655	1.535	2 1/2	1	2 1/2	4
E940H	1 1/2	25	1.918	1.894	1.755	2 3/4	1 1/8	2 1/2	2.5
E940J	2	30	2.393	2.369	2.190	2 3/4	1 3/8	2 1/2	7

*All measurements in inches, unless otherwise noted.

Boxes and Accessories

2½" and 4" Mud Boxes and Covers

- UL Classified for 2-hour-or-less fire-resistant floor/ceiling assemblies

Base Rings

Listed for use with ceiling fans up to 35 lbs. and for fixture support up to 50 lbs.



E42728

LR31146

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A861	Without Ground Lug	10	2.5
C861G	With Ground Lug	10	2.0



Covers

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A862D	2½ Deep (½" KOs)	10	2.5
A862E	2½ Deep (¾" KOs)	10	2.1
A864D	4 Deep (½" KOs)	10	2.9
A864E	4 Deep (¾" KOs)	10	2.9
A864F	4 Deep (1" KOs)	10	3.0

Quick-Connect Outlet and Switch Boxes

- Suitable for masonry walls
- Meets NEMA OS-2
- UL Classified for 2-hour-or-less fire-resistant wall assemblies



E42728

Single-Gang — 16 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A58381D	3 x 2¼ x 3 (½" KOs)	25	4.6
A58381E	3 x 2¼ x 3 (¾" KOs)	25	4.6



4" Square — 20 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A52151D	4 x 4 x 1½ (½" KOs)	100	22.6
A52151E	4 x 4 x 1½ (¾" KOs)	100	22.6
A521DE	4 x 4 x 1½ (½" & ¾" KOs)	100	22.6



4" Square — 30.3 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A52171D	4 x 4 x 2¾ (½" KOs)	25	7.6
A52171E	4 x 4 x 2¾ (¾" KOs)	25	7.6
A5217DE	4 x 4 x 2¾ (½" & ¾" KOs)	25	7.6



Boxes and Accessories

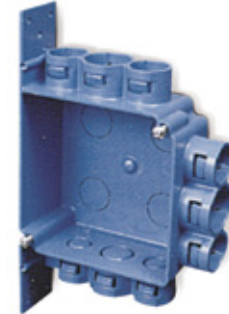
ENT Box with Adapters

- UL Classified for 2-hour-or-less fire-resistant wall assemblies

4" Square — 24.75 Cu. In. ENT Box with Adapters

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A5329DE	4 x 4 x 1 3/4 (1/2" & 3/4" KOs)	50	14.8

UL Listed E42728



Box Back Wall Support

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
A540DS	For use with 1/2" Knockout	100	2.1



ENT Box Extenders

- UL Classified for 2-hour-or-less fire-resistant wall assemblies

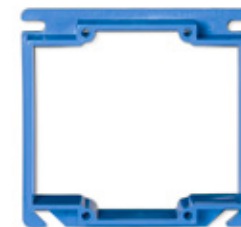
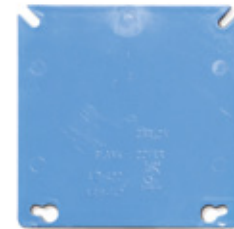
Single-Gang E42728

CAT. NO.	RISE (IN.)	CU. IN.	STD. CTN.	STD. WT. (LBS.)
A410	1/2	3.5	100	7.7
A411	3/8	4.2	50	4.6
A412	3/4	5.0	50	5.1
A413	1	6.6	40	5
A414	1 1/4	8.1	30	4.4



Two-Gang

CAT. NO.	RISE (IN.)	CU. IN.	STD. CTN.	STD. WT. (LBS.)
A400	Blank	—	100	7.7
A420	1/2	6.1	75	5.0
A421	3/8	7.4	50	4.2
A422	3/4	8.8	50	4.8



Boxes and Accessories

Round Covers for Octagon Ceiling Boxes

Round Plaster Rings

- Listed for fixture support up to 50 lbs.
- UL Classified for 2-hour-or-less fire-resistant assemblies



CAT. NO.	RISE (IN.)	CU. IN.	STD. CTN.	STD. WT. (LBS.)
A471	½	3.2	100	3.3
A472	¾	4.0	100	3.7



Round Blank Covers

CAT. NO.	RISE	CU. IN.	STD. CTN.	STD. WT. (LBS.)
E460R-CAR	Blank	—	35	2.2
A470D	Blank with ½" KO	—	100	4.7



Quick Connect 4" Octagon Ceiling Boxes

- Carlton® ceiling boxes and round plaster rings are produced from a special high heat-resistant engineered plastic material developed specifically for fixture support
- Listed for fixture support up to 50 lbs.
- UL Classified for 2-hour-or-less fire resistant floor/ceiling assemblies



Ceiling Box — 20.5 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A615D	(4) 2½ Deep (½" KOs)	50	6.4
A615E	(4) 2½ Deep (¾" KOs)	50	6.4
A615DE	(4) 2½ Deep (½" & ¾" KOs)	50	6.4



Ceiling Box with J Mount — 20.5 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A615DJ	(4) 2½ Deep (½" KOs)	50	18.7



Ceiling Box with L Bracket — 20.5 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A615DL	(4) 2½ Deep (½" KOs)	50	6.4



Ceiling Box with Adjustable Hanger Bar — 20.5 Cu. In.

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
A615DH	(4) 2½ Deep (½" KOs)	25	13.6

Adjust from 14¼" to 23¼"



Boxes and Accessories

PVC Conduit Cutters

Small Cutter

For fast, smooth field cuts of ½" through 1" Flex-Plus® Blue™ ENT.



CAT. NO.	SIZE (IN.)	STD. CTN.
CC120B	8	10

Medium Cutter

Handheld cutter makes fast, square, smooth field cuts on conduit from ½" through 1¼". Produces burr-free cut with no shavings. Fits into pocket or pouch.



CAT. NO.	SIZE (IN.)	STD. CTN.
CC125	9	12

Large Cutter

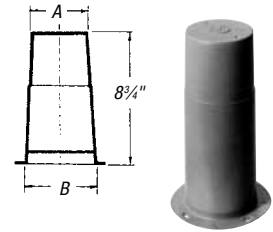
For clean cuts of conduit ½" through 2".



CAT. NO.	SIZE (IN.)	STD. CTN.
CC122	17½	1

Concrete Sleeves

Non-metallic 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. Concrete sleeves are adjustable to any slab thickness.



CAT. NO.	MIN. O.D. A (IN.)	B (IN.)	STD. CTN.	STD. WT. (LBS.)
E92CSH	1½	1¾	20	3
E92CSJ	2	2½	25	6
E92CSL	3	3½	25	8
E92CSN	4	4½	18	8
E92CSP	5	5½	15	8
E92CSR	6	6½	12	8

Tape

Prelubricated, woven polyester tape made from low-friction, high abrasion-resistant yarns, providing a low coefficient of friction. Tape is printed with sequential footage markings for accurate measurements.



CAT. NO.	SIZE (IN.)	TENSILE STRENGTH (LBS.)	REEL LENGTHS (FT.)
TL14505	½	1250	5000
TL14510	½	1250	10000
TL38203	¾	1800	3000
TL38265	¾	1800	6500
TL38210	¾	1800	10000

Other tapes are available. Consult your sales service location for additional information.

Carlon® Low VOC Cement

(MSDS sheets available at www.carlon.com)

All Weather — ENT Blue

RECOMMENDED PIPE APPLICATION AND SIZES	SET-UP TIME (EVAPORATION RATE)	RECOMMENDED INSTALLATION TEMP.	LAP SHEAR @ 73° F	VISCOSITY AT 75° F AS MANUFACTURED
Required for use with Flex-Plus® ENT (Electrical Non-Metallic Tubing), Riser-Gard®, P&C Flex™ and Carlon® PVC fittings. <i>Up through 6" diameter.</i>	-5°–10° F	6–8 Minutes	-5° to 100° F	2 Hrs. 350 PSI
	10°–30° F	4–5 Minutes		16 Hrs. 800 PSI
	30°–50° F	3–4 Minutes		72 Hrs. 1500 PSI
	50°–70° F	1–2 Minutes		
	70°–90° F	½–1½ Minutes		



ENT cement required for use with ENT and Rigid Non-Metallic Conduit Fittings.

CAT. NO.	SIZE	APPLICATOR	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
VC9992	Quart	Dauber	All-Weather "Quick-Set" Blue	12	29.0

Meets ASTM D-2564.

Flexible Raceway Systems

Carlton® Plenum-Gard® Raceway

Plenum-Gard® is a UL® Listed non-metallic 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 cable installation.

Plenum-Gard® is listed to UL® 2024 in accordance with the National Electrical Code® for plenum, riser, general purpose and other cabling/optical fiber/telecommunication applications as defined in Articles 725, 770, 800 and 820.

Important: Installed cables must be plenum rated and the UL® Listing must be printed on the product. Abandoned cables MUST be removed (reference NEC®).

Technical Info

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

- Storage: -4° to 158° F
- Handling: -4° to 104° F
- No UV protection (not suitable for outdoor use)
- Do not store outside

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	REEL SIZE (F X W) (IN.)	REEL TYPE	REEL LENGTH (FT.)	REEL WT.(LBS.)	REEL WT. PER 100 FT. (LBS.)
CD4X1C-1500	½	Orange	200 lb.	34 x 23	Wood	1,500	30	7
CE4X1-1000		Orange	Empty	34 x 23	Wood	1,000	30	8
CE4X1-1000S	¾	Orange	Empty/Split	34 x 23	Wood	1,000	30	8
CE4X1C-1000		Orange	900 lb.	34 x 23	Wood	1,000	30	8
CF4X1C-500		Orange	900 lb.	34 x 23	Wood	500	30	10
CF4X1C-1000		Orange	900 lb.	48 x 28	Wood	1,000	79	10
CF4X1C-1500	1	Orange	900 lb.	48 x 28	Wood	1,500	79	10
CF4X1C-5200		Orange	900 lb.	66 x 41	Wood	5,200	250	10
CF4X1C-6500		Orange	900 lb.	72 x 41	Wood	6,500	310	10
CF4X1C-8000		Orange	900 lb.	82 x 41	Wood	8,000	365	10
CG4X1C-500		Orange	900 lb.	48 x 28	Wood	500	79	14
CG4X1-500S		Orange	Empty/Split	48 x 28	Wood	500	79	10
CG4X1C-900		Orange	900 lb.	48 x 45	Wood	900	96	14
CG4X1C-1600	1¼	Orange	900 lb.	48 x 45	Wood	1,600	96	14
CG4X1C-3200		Orange	900 lb.	66 x 41	Wood	3,200	250	14
CG4X1C-6500		Orange	900 lb.	96 x 41	Wood	6,500	700	14
CG4X1-900S		Orange	Empty/Split	48 x 28	Wood	900	79	14
CH4X1C-350		Orange	900 lb.	48 x 28	Wood	350	79	16
CH4X1C-1200	1½	Orange	900 lb.	48 x 45	Wood	1,200	96	16
CH4X1C-4000		Orange	900 lb.	82 x 41	Wood	4,000	365	16
CJ4X1-200S		Orange	Empty/Split	48 x 28	Wood	200	79	21
CJ4X1C-225		Orange	900 lb.	48 x 28	Wood	225	79	21
CJ4X1C-700	2	Orange	900 lb.	48 x 45	Wood	700	96	21
CJ4X1C-1400		Orange	900 lb.	82 x 41	Wood	1,400	365	21
CJ4X1C-2000		Orange	900 lb.	82 x 41	Wood	2,000	365	21
CJ4X1C-2800		Orange	900 lb.	82 x 41	Wood	2,800	365	21
CL4X1C-150	3	Orange	900 lb.	48 x 45	Wood	150	96	41



Applications: Plenum, Riser and General Purpose

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.



Flexible Raceway Systems

Carlon® Plenum-Gard® Raceway (continued)

Features:

- For use in plenum areas per NEC® Articles 725, 770, 800 and 820
- Sizes ½” through 3”
- Pre-installed pull tape available in sizes ½” through 3”
- Outside diameters meet IPS dimensions
- UL® Listed raceway meeting UL 2024
- Footage sequentially marked
- Single-peak design

Standard Stock — Coils

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	COIL LENGTH (FT.)	PRODUCT WT. PER 100 FT.(LBS.)
CD4X1C-500	½	Orange	900 lb.	500	7
CE4X1-350*	¾	Orange	Empty	350	8
CE4X1-350S		Orange	Empty/Split	350	8
CF4X1C-100*		Orange	900 lb.	100	10
CF4X1-100S*		Orange	Empty/Split	100	10
CF4X1C-250*	1	Orange	900 lb.	250	10
CF4X1-250		Orange	Empty	250	10
CF4X1-250S*		Orange	Empty/Split	250	10
CG4X1C-200*	1¼	Orange	900 lb.	200	14
CG4X1-200S		Orange	Empty/Split	200	14
CH4X1C-150*	1½	Orange	900 lb.	150	16
CH4X1-150S		Orange	Empty/Split	150	16
CJ4X1C-100*	2	Orange	900 lb.	100	21
CJ4X1-100S		Orange	Empty/Split	100	21

* Overnight Shippable

Specifications

SIZE (IN.)	I.D. MIN. REF. (IN.)	MIN. O.D. (IN.)	MAX. O.D. (IN.)	MIN. BEND RADIUS (IN.)
½	.60	.815	.835	2
¾	.74	1.025	1.045	2
1	1.00	1.292	1.312	3
1¼	1.35	1.630	1.650	3
1½	1.50	1.868	1.888	4
2	2.00	2.329	2.439	4
3	3.00	3.422	3.452	4

Custom Orders — How to Build a Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 TYPE	POSITION 4 WALL	POSITION 5 COLOR	POSITION 6 PULL LINE	POSITION 7 LENGTH
C = Plenum-Gard	D = ½ E = ¾ F = 1 G = 1¼ H = 1½ J = 2 L = 3	4 = Corrugated	X = Standard	1 = Orange 2 = Black 3 = Gray 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 1,000 ft.
- Custom color runs are available in minimum order quantities of 10,000 ft.

- Options:**
- Color: Black, Blue, Gray, Red, White and Yellow
 - Two-, three- or four-way parallel
 - Split duct
 - Custom print line

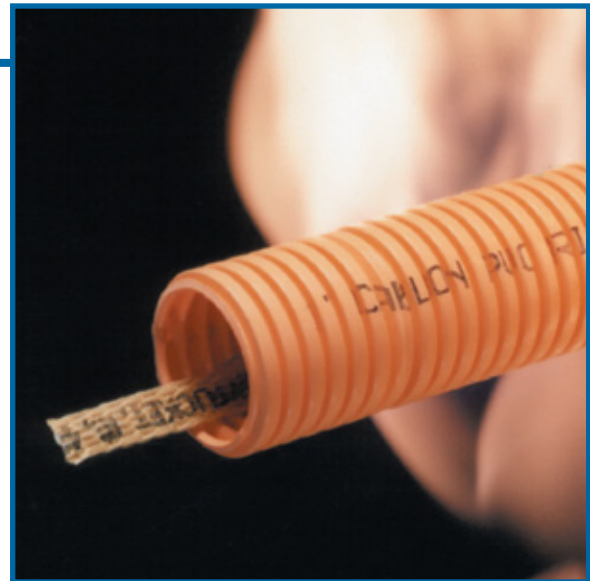
Flexible Raceway Systems

Carlton® Riser-Gard® Raceway

Riser-Gard® is a non-metallic flexible raceway for use in riser and general purpose applications. Riser-Gard® is UL® Listed and is available with tape pre-installed. Riser-Gard is listed to UL® 2024 Standard for riser applications or optical fiber/communications raceways.

Riser-Gard® is listed to UL® 2024 in accordance with the National Electrical Code® per Articles 725, 770, 800 and 820 for riser, general purpose and other cabling/optical fiber/telecommunication applications. Riser-Gard® is suitable for use in vertical runs in a 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

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.



Technical Info

UL LISTED TO 2024	TEST METHOD	MAXIMUM VALUE
Maximum Flame Propagation	UL 2024	6.0 ft.
Maximum Air Temperature at 12 ft.	UL 2024	372° F

- Storage: -4° to 158° F
- Handling: -4° to 104° F
- No UV protection (not suitable for outdoor use)
- Do not store outside

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	REEL SIZE (F X W) (IN.)	REEL TYPE	REEL LENGTH (FT.)	REEL WT.(LBS.)	REEL WT. PER 100 FT. (LBS.)
DE4X1-1000	¾	Orange	Empty	34 x 23	W	1,000	30	12
DF4X1C-500R		Orange	900 lb.	43 x 23	W	500	56	15
DF4X1C-1000		Orange	900 lb.	48 x 28	W	1,000	79	15
DF4X1C-1500		Orange	900 lb.	48 x 28	W	1,500	79	15
DF4X1C-2700	1	Orange	900 lb.	48 x 45	W	2,700	96	15
DF4X1C-5200		Orange	900 lb.	66 x 41	W	5,200	250	15
DF4X1C-6500		Orange	900 lb.	72 x 41	W	6,500	310	15
DF4X1C-7000		Orange	900 lb.	72 x 45	S	7,000	148	15
DF4X1C-9400		Orange	900 lb.	84 x 45	S	9,400	199	15
DG4X1C-900		Orange	900 lb.	48 x 28	W	900	79	17
DG4X1C-500R		Orange	900 lb.	48 x 23	W	500	56	17
DG4X1C-1500		Orange	900 lb.	48 x 45	W	1,500	96	17
DG4X1C-1600	1¼	Orange	900 lb.	48 x 45	W	1,600	96	17
DG4X1C-3200		Orange	900 lb.	66 x 41	W	3,200	250	17
DG4X1C-4500		Orange	900 lb.	72 x 45	S	4,500	148	17
DG4X1C-5600		Orange	900 lb.	82 x 41	W	5,600	365	17
DG4X1C-6500		Orange	900 lb.	96 x 41	S	6,500	700	17
DH4X1C-1200		Orange	900 lb.	48 x 45	W	1,200	96	22
DH4X1C-4000	1½	Orange	900 lb.	82 x 45	S	400	193	22
DH4X1C-4500		Orange	900 lb.	84 x 45	S	4,500	199	22
DJ4X1C-700		Orange	900 lb.	48 x 45	W	700	96	27
DJ4X1C-2000	2	Orange	900 lb.	82 x 41	W	200	265	27
DJ4X1C-2800		Orange	900 lb.	84 x 45	S	2,800	199	27
DL4X1C-750	3	Orange	900 lb.	72 x 41	W	750	310	27

W = Wood

S = Steel

Flexible Raceway Systems

Carlon® Riser-Gard® Raceway (continued)

Features:

- For use in riser and general purpose areas per NEC® Articles 725, 770, 800 and 820
- Riser-Gard® is also suitable for direct burial, not approved for exposed applications
- UL® Listed raceway meeting UL 2024
- Available in sizes ¾" through 3"
- Pull tape can be factory pre-installed in 1" through 3"
- Outside diameters meet IPS dimensions
- Footage sequentially marked

Note: UL has not evaluated Riser-Gard® for this application.

Standard Stock — Coils

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	COIL LENGTH (FT.)	PRODUCT WT. PER 100 FT.(LBS.)
DE4X1-350*	¾	Orange	Empty	350	12
DF4X1C-125		Orange	900 lb.	125	15
DF4X1C-250*		Orange	900 lb.	250	15
DF4X1-250	1	Orange	Empty	250	15
DF4X1C-500		Orange	900 lb.	500	15
DF4X1-250S*		Orange	Empty/Split	250	15
DG4X1-200		Orange	Empty	200	17
DG4X1-200S*	1¼	Orange	Empty/Split	200	17
DG4X1C-200*		Orange	900 lb.	200	17
DG4X1C-500		Orange	900 lb.	500	17
DH4X1-150S	1½	Orange	Empty/Split	150	22
DH4X1C-150*		Orange	900 lb.	150	22
DJ4X1-100S	2	Orange	Empty/Split	100	27
DJ4X1C-100*		Orange	900 lb.	100	27
DL4X1C-250	3	Orange	900 lb.	250	27

* Overnight Shippable

Specifications

SIZE (IN.)	I.D. MIN. REF. (IN.)	MIN. O.D. (IN.)	MAX. O.D. (IN.)	MIN. BEND RADIUS (IN.)
¾	.74	1.025	1.075	5
1	.98	1.290	1.340	6
1¼	1.31	1.640	1.690	8
1½	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 Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 TYPE	POSITION 4 WALL	POSITION 5 COLOR	POSITION 6 PULL LINE	POSITION 7 LENGTH
D = Riser-Gard	E = ¾ F = 1 G = 1¼ H = 1½ J = 2 L = 3	4 = Corrugated	X = Standard	1 = Orange 2 = Black 3 = Gray 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 1,000 ft.
- Custom color runs are available in minimum order quantities of 10,000 ft.
- Options:**
 - Color: Black, Blue, Gray, Red, White and Yellow
 - Two-, three- or four-way parallel
 - Split duct
 - Custom print line

Flexible Raceway Systems

Carlton® Hal-Free Riser-Gard® Raceway

Hal-Free Riser-Gard® is a halogen-free non-metallic 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. Hal-Free Riser-Gard® is listed to UL® 2024 in accordance with NEC® Articles 725, 770, 800 and 820. Custom lengths and split ducts are available upon request. Hal-Free Riser-Gard® is available in white only.

Features:

- Free from halogen elements
- Compliant with NEC® Articles 725, 770, 800 and 820
- Available in sizes 1" through 2"
- Available in white only
- Sequentially marked footage



Applications: Riser and General Purpose

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Technical Info

UL LISTED TO 2024	TEST METHOD	MAXIMUM VALUE
Maximum Flame Propagation	UL 2024	3' 6" ft.
Maximum Air Temperature	UL 2024	387° F

- Storage and Handling: -4° to 150° F
- No UV protection (not suitable for outdoor use)
- Do not store outside



Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	NOM. I.D. (IN.)	NOM. O.D. (IN.)	PULL TAPE	REEL SIZE (F X W) (IN.)	REEL TYPE	REEL LENGTH (FT.)	REEL WT. (LBS.)	PRODUCT WT. PER 100 FT. (LBS.)
HF4X4C-5000	1	White	1.049	1.365	900 lb.	72" x 41"	W	5,000	310	7.5
HG4X4C-4000	1¼	White	1.250	1.550	900 lb.	72" x 41"	W	4,000	310	7.5
HH4X4C-2000	1½	White	1.500	1.850	900 lb.	66" x 41"	W	2,000	250	12
HJ4X4C-2000	2	White	2.000	2.425	900 lb.	82" x 41"	W	2,000	365	21

Custom Orders — How to Build a Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 TYPE	POSITION 4 WALL	POSITION 5 COLOR	POSITION 6 PULL LINE	POSITION 7 LENGTH
H = Hal-Free	F = 1 G = 1¼ H = 1½ J = 2	4 = Corrugated	X = Standard	4 = White	C = 900 lb. Tape	Example -1000 = Feet -1000S = 1000 Feet Split

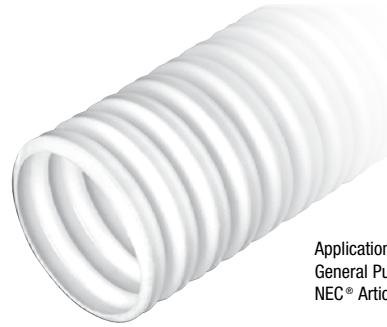
- Custom orders are not returnable
- Custom lengths are available in minimum order quantities of 1,000 ft.

Flexible Raceway Systems

Carlon® Plenum Duct

Technical Info:

- Maximum flame propagation distance is less than 5.0 ft.
- Peak optical density of smoke is less than 0.50
- Average optical density of smoke is less than 0.15
- UL® Listed to UL 2024 Standard
- FT-6 Rated



Applications: Plenum, Riser and General Purpose Applications per NEC® Articles 725, 770, 800 and 820

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	REEL SIZE (IN.)	REEL LENGTH (FT.)	REEL WT. (LBS.)	PRODUCT WT. PER 100 FT. (LBS.)
PLM100T-500	1	White	900 lb.	34 x 23	500	30	10
PLM100T-1800		White	900 lb.	48 x 28	1,800	79	10
PLM100T-5000		White	900 lb.	72 x 41	5,000	310	10
PLM100T-8000	1¼	White	900 lb.	82 x 41	8,000	365	10
PLM125T-500		White	900 lb.	34 x 23	500	30	14
PLM125T-1000		White	900 lb.	48 x 30	1,000	83	14
PLM125T-5000	1½	White	900 lb.	72 x 41	5,000	310	14
PLM125T-6000		White	900 lb.	82 x 41	6,000	365	14
PLM150T-2000		White	900 lb.	66 x 41	2,000	250	14
PLM150T-4000	2	White	900 lb.	82 x 41	4,000	365	14
PLM200T-2000		White	900 lb.	82 x 41	2,000	365	21

Standard Stock — Coils/Box

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	BOX SIZE (IN.)	COIL LENGTH (FT.)	PRODUCT WT. PER 100 FT. (LBS.)
PLM100T-250B2	1	White	900 lb.	34 x 14 x 34	250	10
PLM125T-250B4	1¼	White	900 lb.	39 x 15 x 39	250	14

Specifications

SIZE	I.D. MIN. REF.	MIN. O.D.	MAX. O.D.	MIN. BEND RADIUS
½	.60	.815	.835	2
¾	.74	1.025	1.045	2
1	1.00	1.292	1.312	3
1¼	1.35	1.630	1.650	3
1½	1.50	1.868	1.888	4
2	2.00	2.329	2.439	4

Custom Orders — How to Build a Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 PULL LINE	POSITION 4 LENGTH
PLM = PLENUM	100 = 1 125 = 1¼ 150 = 1½ 200 = 2	T = 900 lb. Tape	Example -1000 = Feet

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Flexible Raceway Systems

Carlon® Riser Duct

Technical Info:

- Maximum flame propagation: 6.0 ft. max. value
- Do not store outside
- No UV protection
- UL® Listed to UL 2024
- FT-4 Rated



Applications: Riser and General Purpose Applications per NEC® Articles 725, 770, 800 and 820. Suitable for vertical runs in a shaft or between floors.

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	REEL SIZE (IN.)	REEL LENGTH (FT.)	REEL WT. (LBS.)	PRODUCT WT. PER 100 FT. (LBS.)
RIS100T-5000	1	Orange	900 lb.	66 x 41	5,000	250	15
RIS125T-4000	1¼	Orange	900 lb.	72 x 41	4,000	310	17
RIS150T-2000	1½	Orange	900 lb.	66 x 41	2,000	250	22
RIS200T-2000	2	Orange	900 lb.	66 x 41	2,000	250	27

Specifications

SIZE (IN.)	I.D. MIN. REF. (IN.)	MIN. O.D. (IN.)	MAX. O.D. (IN.)	MIN. BEND RADIUS (IN.)
¾	.74	1.025	1.075	6
1	.98	1.290	1.340	6
1¼	1.31	1.640	1.690	7
1½	1.54	1.880	1.930	8¼
2	2.00	2.350	2.400	9½

Custom Orders — How to Build a Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 PULL LINE	POSITION 4 LENGTH
RIS = Riser	100 = 1 125 = 1¼ 150 = 1½ 200 = 2	T = 900 lb. Tape	Example -1000 = Feet

Carlon® Hal-Free Riser Duct

Technical Info:

- Maximum flame propagation: 6.0 ft. max. value
- Do not store outside
- No UV protection
- UL® Listed to UL 2024 Standard
- FT-4 Rated



Applications: Riser and General Purpose Applications per NEC Articles 725, 770, 800 and 820.

Standard Stock — Reels

CAT. NO.	SIZE (IN.)	COLOR	PULL TAPE	REEL SIZE (IN.)	REEL LENGTH (FT.)	REEL WT. (LBS.)	PRODUCT WT. PER 100 FT. (LBS.)
RHF100T-5000	1	White	900 lb.	66 x 41	5,000	250	15
RHF125T-4000	1¼	White	900 lb.	72 x 41	4,000	310	17
RHF150T-2000	1½	White	900 lb.	66 x 41	2,000	250	22
RHF200T-2000	2	White	900 lb.	82 x 41	2,000	365	27

Specifications

SIZE (IN.)	I.D. MIN. REF. (IN.)	MIN. O.D. (IN.)	MAX. O.D. (IN.)	MIN. BEND RADIUS (IN.)
¾	.74	1.025	1.075	6
1	.98	1.290	1.340	6
1¼	1.31	1.640	1.690	7
1½	1.54	1.880	1.930	8¼
2	2.00	2.350	2.400	9½

Custom Orders — How to Build a Part Number:

POSITION 1 PRODUCT	POSITION 2 SIZE (IN.)	POSITION 3 PULL LINE	POSITION 4 LENGTH
RHF = Hal-Free Riser	100 = 1 125 = 1¼ 150 = 1½ 200 = 2	T = 900 lb. Tape	Example -1000 = Feet

Flexible Raceway Systems

Small. Slick. Speedy. Ideal for Telecom Installs!

Carlon® Micro-Gard® Plenum and Micro-Gard® Riser Duct

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

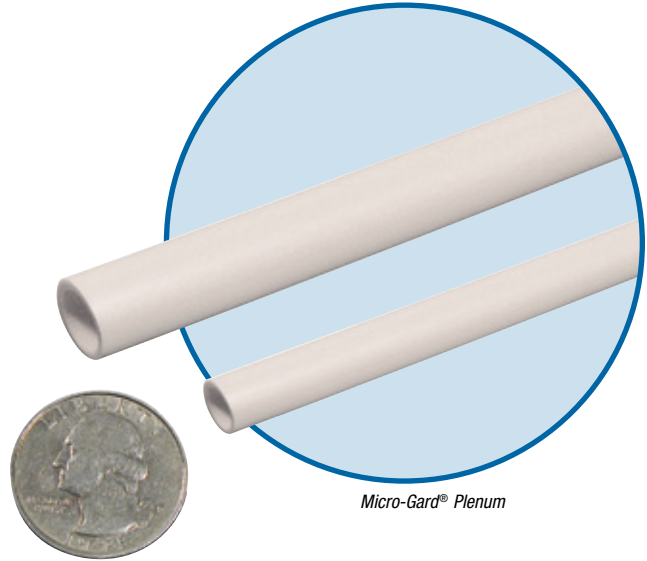
The 8/6 and 12/10 mm size conduits can be installed individually or used to optimize space in existing duct structures. And the small size significantly reduces the structural damage caused during pass-throughs.

Micro-Gard® Plenum and Riser is UL® Listed for plenum and riser applications. It's easy to handle, easy to install and easy to conceal, making it the ideal MDU cable management system.

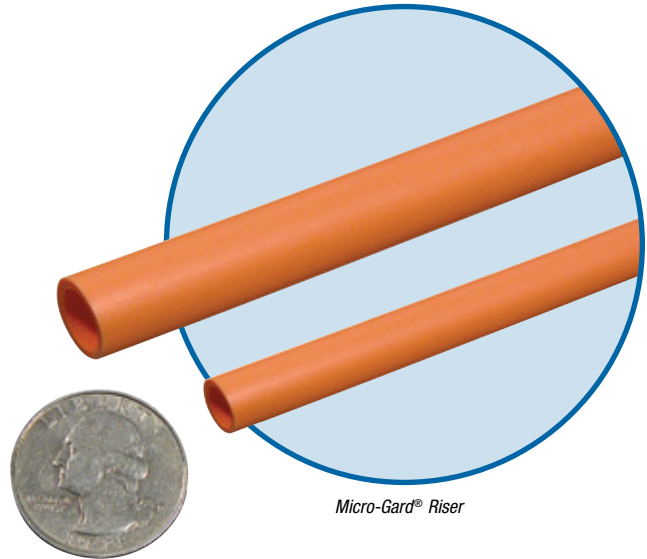
Features:

- UL® and cUL Listed to UL 2024 for plenum and riser applications
- Compliant with NEC® Articles 725, 770, 800 and 820
- Two sizes: 8/6mm and 12/10mm. 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-lubricated, factory 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 1,000 to 5,000 feet for easy handling on the jobsite
- Future-proofing raceway system for fast, easy wire/cable upgrades, changes and moves
- Used in cable bundles

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.



Micro-Gard® Plenum



Micro-Gard® Riser



Flexible Raceway Systems

Carlton® Micro-Gard® Plenum and Micro-Gard® Riser

CAT NO.	SIZE	TYPE	COLOR	FACTORY INSTALLED	PRE-LUBRICATED RADIUS (IN.)*	MIN. BEND FEET/REEL	REEL SIZE (IN.)
MGP08MT-1000	8/6 mm	Plenum	White	50 lb. Cord	2	1,000	24
MGP08MT-2500	8/6 mm	Plenum	White	50 lb. Cord	2	2,500	24
MGP08MT-5000	8/6 mm	Plenum	White	50 lb. Cord	2	5,000	36
MGP12MT-1000	12/10 mm	Plenum	White	50 lb. Cord	4	1,000	24
MGP12MT-2500	12/10 mm	Plenum	White	50 lb. Cord	4	2,500	24
MGP12MT-5000	12/10 mm	Plenum	White	50 lb. Cord	4	5,000	36
MGR08JT-1000	8/6 mm	Riser	Orange	50 lb. Cord	2	1,000	24
MGR08JT-2500	8/6 mm	Riser	Orange	50 lb. Cord	2	2,500	24
MGR08JT-5000	8/6 mm	Riser	Orange	50 lb. Cord	2	5,000	36
MGR12JT-1000	12/10 mm	Riser	Orange	50 lb. Cord	4	1,000	24
MGR12JT-2500	12/10 mm	Riser	Orange	50 lb. Cord	4	2,500	24
MGR12JT-5000	12/10 mm	Riser	Orange	50 lb. Cord	4	5,000	36

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

Micro-Gard® Plenum Dimensions — Smooth O.D./Ribbed I.D.

CAT. NO.	OUTSIDE DIAMETER		WALL		INSIDE DIA. (MIN.)			STD. WT. (LB./100 FT.)
	INCH	MM	INCH	MM	INCH	MM	# RIBS	
MGP12RMT	.472 +/- .004	12 +/- .1	.047 +0/- .004	1 +0/- .1	.354	8.9	26	4.92
MGP08RMT	.315 +/- .004	8 +/- .1	.040 +0/- .004	1 +0/- .1	.212	5.4	16	2.68

Micro-Gard® Riser Dimensions — Smooth O.D./Ribbed I.D.

CAT. NO.	OUTSIDE DIAMETER		WALL		INSIDE DIA. (MIN.)			STD. WT. (LB./100 FT.)
	INCH	MM	INCH	MM	INCH	MM	# RIBS	
MGR12RJT	.472 +/- .004	12 +/- .1	.047 +0/- .004	1 +0/- .1	.354	8.9	26	2.86
MGR08RJT	.315 +/- .004	8 +/- .1	.040 +0/- .004	1 +0/- .1	.212	5.4	16	1.55

How to Interpret a Catalog Number

POSITION 1 PRODUCT	POSITION 2 TYPE	POSITION 3 SIZE	POSITION 4 COLOR	POSITION 5 PULL LINE	POSITION 6 LENGTH
MG = Micro-Gard	P = Plenum R = Riser	08 = 8/6mm 12 = 12/10mm	J = Orange M = White	T = 50 lb. Cord	Example -1000 = Feet

Flexible Raceway System Accessories

For use with Riser-Gard® and General Purpose Non-Metallic Adapters and Couplings



Couplings

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
SCA240E	¾	Orange	25	.783
SCA240F	1	Orange	20	.972



Threaded Adapters

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
SCA243E	¾	Orange	100	2.30
SCA243F	1	Orange	50	2.00



Snap-In Adapters

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
SCA253E	¾	Orange	100	2.90
SCA253F	1	Orange	50	2.30



For use with Plenum-Gard® Non-Metallic Adapters and Couplings



Couplings

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
A340F	1	Orange	50	2.50



Threaded Adapters

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
A343F	1	Orange	50	1.55



Snap-In Adapters

CAT. NO.	SIZE (IN.)	COLOR	STD. CTN.	STD. WT. (LBS.)
A353F	1	Orange	50	3.00



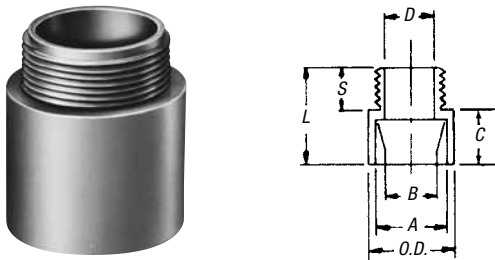
Flexible Raceway System Accessories

For use with Riser-Gard® and General Purpose



Non-Metallic Male Terminal Adapters

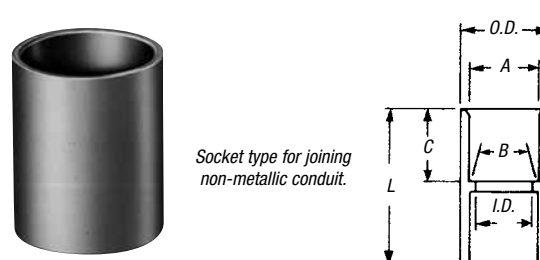
For adapting non-metallic conduits to boxes, threaded fittings, metallic systems. Male threads on one end, socket end on other.



CAT. NO.	SIZE (IN.)	STD. CTN.	COLOR	DIMENSIONS (IN.)					STD. WT. (LBS.)		
				TYPICAL		MIN.	MAX.	TYPICAL			
				A	B	D	O.D.	C	T	L	
E943E	3/4	125	Gray	1.064	1.046	.800	1 1/32	3/4	1/16	1 1/8	3.5
E943F	1	50	Gray	1.330	1.310	1.018	1 1/8	1	1/16	1 5/8	3
E943G	1 1/4	50	Gray	1.677	1.655	1.332	2 1/32	1	3/4	1 15/16	4
E943H	1 1/2	25	Gray	1.918	1.894	1.566	2 5/32	1 3/16	3/4	2 1/16	2.5
E943J	2	50	Gray	2.393	2.369	2.000	2 1/2	1 3/16	3/4	2 1/2	7
SCE943G	1 1/4	50	Orange	1.677	1.655	1.332	2 1/32	1	3/4	1 15/16	4
SCE943H	1 1/2	25	Orange	1.918	1.894	1.566	2 5/32	1 3/16	3/4	2 1/16	2.5
SCE943J	2	50	Orange	2.393	2.369	2.000	2 1/2	1 3/16	3/4	2 1/2	7

Non-Metallic Standard Couplings

All socket fittings should be attached Using Carlon® solvent cement. Using Carlon® fittings with Carlon® non-metallic conduit ensures system integrity.

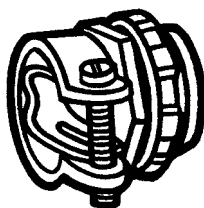


Socket type for joining non-metallic conduit.

CAT. NO.	SIZE (IN.)	STD. CTN.	COLOR	DIMENSIONS (IN.)					STD. WT. (LBS.)	
				TYPICAL		MAX.	TYPICAL			
				A	B	MIN. D	O.D.	C	L	
E940E	3/4	100	Gray	1.064	1.046	.840	1 1/16	3/4	1 1/8	4.4
E940F	1	50	Gray	1.330	1.310	1.210	1 1/8	1 1/16	2	3.5
E940G	1 1/4	30	Gray	1.677	1.655	1.535	1 9/16	1	2 1/8	3.5
E940H	1 1/2	25	Gray	1.918	1.894	1.755	2 5/16	1 1/8	2 3/8	3.9
E940J	2	30	Gray	2.393	2.369	2.190	2 1/4	1 3/16	2 1/2	5.25
SCE940G	1 1/4	30	Orange	1.677	1.655	1.535	1 9/16	1	2 1/8	3.5
SCE940H	1 1/2	25	Orange	1.918	1.894	1.755	2 5/16	1 1/8	2 3/8	3.9
SCE940J	2	30	Orange	2.393	2.369	2.190	2 1/4	1 3/16	2 1/2	5.25

For use with Plenum-Gard®

Metallic Terminal Adapter



CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
▶ 255	3/4	10	12
▶ 256	1	100	25
▶ 257	1 1/4	100	28
▶ 258	1 1/2	100	35
▶ 259	2	50	19

Flat Sealing Washer

Where a waterproof termination is required into any enclosure (metallic or non-metallic), 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.	STD. WT. (LBS.)
▶ E943EW	3/4	125	.45
▶ E943FW	1	100	.46
▶ E943GW	1 1/4	50	.44
▶ E943HW	1 1/2	50	.45
▶ E943JW	2	25	.42

Flexible Raceway System Accessories

Low-Voltage Boxes and Brackets



Dual-Voltage Box/Bracket*

CAT. NO.	COVER	VOLUME	STD. CTN.	STD. WT. (LBS.)
SC200DV	1-Gang	20.5 cu. in	16	6.4

*U.S. Patent D463,376.



Low-Voltage Add-On Bracket*

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
SC100SC	1-Gang	24	2.3

*U.S. Patent D459,312.
U.S. Patent 6,710,245.
U.S. Patent 6,872,884.



Low-Voltage Adjustable Brackets*

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
SC100ADJC	1-Gang	24	7.5
SC200ADJC	2-Gang	20	6.9

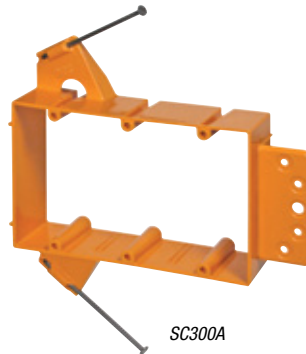
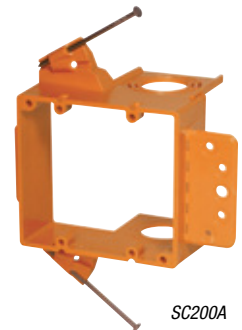
*U.S. Patent 5,289,934.



Low-Voltage Brackets*

CAT. NO.	SIZE	RESI-RINGS	STD. CTN.	STD. WT. (LBS.)
SC100A	1-Gang	¾, 1, 1¼	24	5.3
SC200A	2-Gang	¾, 1, 1¼	24	7.7
SC300A	3-Gang	—	5	1.6

*U.S. Patent D457,140.
U.S. Patent D462,664.
U.S. Patent 6,812,405.



For other Carlton® Flexible Raceway System Accessories, refer to the following pages:

- Mud Box Assemblies — p. A-330
- Mud Boxes and Covers — p. A-335
- Quick-Connect Outlet and Switch Boxes — p. A-335
- ENT Box and Extenders — p. A-336
- Octagon Ceiling Boxes and Covers — p. A-337
- Cutting Tools — p. A-338

Flexible Raceway System Accessories

Carlton® Low-VOC Cements

*Meets ASTM D2564

Medium — Clear

RECOMMENDED PIPE APPLICATION AND SIZES	SET-UP TIME (EVAPORATION RATE)		RECOMMENDED INSTALLATION TEMP.	LAP SHEAR @ 73° F	VISCOSITY AT 75° AS MANUFACTURED
Recommended for all grades and types of Carlton® wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Non-Metallic Tubing.)	10°–30° F	Not recommended	40° to 100° F	2 hrs. 350 psi	500–900 cps
	30°–50° F	5–6 minutes		16 hrs. 800 psi	
	50°–70° F	3–4 minutes		72 hrs. 1,500 psi	
	70°–90° F	1–2 minutes			

Up through 6" diameter.

CAT. NO.	SIZE	APPLICATOR	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
VC9963	Pint	Dauber	PVC Medium Clear	24	29.0
VC9962	Quart	Dauber	PVC Medium Clear	12	27.5
VC9961P	Gallon	—	PVC Medium Clear	6	53.5

Meets ASTM D-2564.



Regular — Clear

RECOMMENDED PIPE APPLICATION AND SIZES	SET-UP TIME (EVAPORATION RATE)		RECOMMENDED INSTALLATION TEMP.	LAP SHEAR @ 73° F	VISCOSITY AT 75° AS MANUFACTURED
Recommended for all grades and types of Carlton® wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Non-Metallic Tubing.)	10°–30° F	Not recommended	40° to 100° F	2 hrs. 350 psi	500–900 cps
	30°–50° F	5–6 minutes		16 hrs. 800 psi	
	50°–70° F	3–4 minutes		72 hrs. 1,500 psi	
	70°–90° F	1–2 minutes			

Up through 6" diameter.

CAT. NO.	SIZE	APPLICATOR	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
VC9964	½ Pint	Dauber	PVC Regular Clear	10	6.5

Meets ASTM D-2564.



Flexible Raceway System Accessories

Carlon® Low-VOC Cements (*continued*)

All Weather — Clear

RECOMMENDED PIPE APPLICATION AND SIZES	SET-UP TIME (EVAPORATION RATE)		RECOMMENDED INSTALLATION TEMP.	LAP SHEAR @ 73° F		VISCOSITY AT 75° AS MANUFACTURED
Recommended for all grades and types of Carlon® wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Non-Metallic Tubing.) <i>Up through 6" diameter.</i>	-5°-10° F	6-8 Minutes	-5° to 100° F	2 Hrs.	350 PSI	400-700 CPS
	10°-30° F	4-5 Minutes		16 Hrs.	800 PSI	
	30°-50° F	3-4 Minutes		72 Hrs.	1,500 PSI	
	50°-70° F	1-2 Minutes				
	70°-90° F	½-1½ Minutes				

CAT. NO.	SIZE	APPLICATOR	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
VC9984	½ Pint	Dauber	All Weather "Quick-Set" Cement	10	7.0
VC9983	Pint	Dauber	All Weather "Quick-Set" Cement	24	30.0
VC9982	Quart	Dauber	All Weather "Quick-Set" Cement	12	29.0
VC9981P	Gallon	—	All Weather "Quick-Set" Cement	6	54.0

Meets ASTM D-2564.



Gray

RECOMMENDED PIPE APPLICATION AND SIZES	SET-UP TIME (EVAPORATION RATE)		RECOMMENDED INSTALLATION TEMP.	LAP SHEAR @ 73° F	VISCOSITY AT 75° AS MANUFACTURED
Recommended for all grades and types of Carlon® wireway and fittings, except Flex-Plus® Blue™ ENT (Electrical Non-Metallic Tubing.) <i>Up through 6" diameter.</i>	10°-30°F	Not recommended	40° to 100°F	2 hrs. 350 psi	500-900 cps
	30°-50°F	5-6 minutes		16 hrs. 800 psi	
	50°-70°F	3-4 minutes		72 hrs. 1,500 psi	
	70°-90°F	1-2 minutes			

VOC emission of 490 grams/liter per the Bay and South Coast test method.

CAT. NO.	SIZE	APPLICATOR	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
VC9LV4-24	½ Pint	Dauber	Low VOC Gray	24	15.5
VC9LV3	Pint	Dauber	Low VOC Gray	24	27.0
VC9LV2	Quart	Dauber	Low VOC Gray	12	26.0

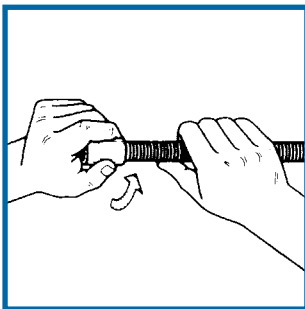
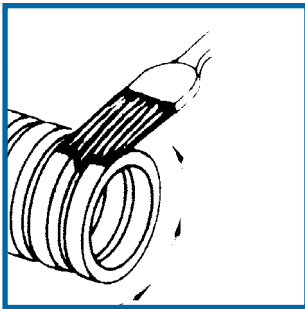
Meets ASTM D-2564.



Technical Information

Concrete Encasement Guidelines for Carlon® ENT

1. Cut ENT square and clean.
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 that will affect conductor installation. Suitable materials include wire, tie wraps and tape.
4. When using rigid non-metallic conduit fittings for concrete tight performance:



- A. Do not use chemical primer or cleaner.
- B. Use a brush to 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.

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

Specifications:

- 1.1 Electrical Non-Metallic Tubing (ENT) is designed to replace EMT, flexible metal conduit or other raceway or cable systems, for installation in accordance with Article 362 of the National Electrical Code® Section 12-1500 of the CEC, other applicable sections of the Code and local codes.
- 1.2 Any ENT used shall be listed to the requirements of UL Standard UL 1653 in accordance with Article 362 of the NEC® and Section 12-1500 of the CEC.
- 1.3 Any ENT used shall meet the requirements of BI National Standard CAN/CSA-C22.2 No. 227.1-UL1653 and shall be Listed/Certified in accordance to the Electrical Codes.
- 1.4 Carlon's® ENT shall be installed per the technical assessment prepared by fire cause analysis for use in 1-hour and 2-hour rated construction.
- 1.5 Penetration of fire-rated walls, floors or ceilings shall use Classified Through-Penetration Firestop Systems described in the current Underwriters Laboratories Fire Resistance Directory.
- 1.6 Fittings and outlet boxes designed for use with ENT shall be listed. All fittings, boxes and accessories shall be from one manufacturer.
- 1.7 Only Carlon® ENT Blue™ cement recommended specifically for use with ENT and rigid non-metallic fittings shall be used.
- 1.8 Unless indicated differently on drawings, ENT systems shall be color coded: BLUE for branch and feeder circuit wiring, YELLOW for communications and RED for fire alarm and emergency systems, or colors can designate different voltages.
- 1.9 ENT, fittings and accessories shall be manufactured by Carlon®.

Features:

- Recognized for use with PVC rigid non-metallic conduit fittings with all sizes of ENT
- ENT rated for 90° C conductors U.S., and 75° C Canada
- 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 three hours)
- Recognized for Through-Penetration Firestop systems as classified by UL to meet ICC building codes.
- Conductors easily push through the raceway (up to approximately 50 feet)*
- For use in buildings in accordance with NEC® Article 362/CEC Section 12-1500
- Outside Diameters meet IPS Dimensions
- Storage -4° F to 158° F
- Handling -4° F to 104° F

Continued on next page

Technical Information

Continued from previous page

Approved Uses:

- Concrete slab — NEC® Article 362/CEC Section 12-1500
- Walls — wood stud, masonry and metal stud — NEC® Article 362/CEC Section 12-1500
- Ceilings — permanent or dropped (free air only) — NEC® Article 362/CEC Section 12-1500
- Exposed — NEC® Article 362/CEC Section 12-1500
- Public assembly — NEC® Section 518.4, in non-fire rated and certain fire rated structures
- Prewired — NEC® Article 362/CEC Section 12-1500
- Classified by UL 1479 for Through Penetration Firestop Systems in UL Guide Category XHEZ and current UL Fire Resistance Directory
- Three-hour rated floor/ceiling assembly
- Raised floors — NEC® Section 645.5(E)(2)
- Exposed or concealed in building above three floors when a fire sprinkler system is installed in accordance with NFPA 13 — NEC® Section 362.10(2)

- For use in residential attics up to three feet above the bottom of the ceiling joist
- Maximum ambient temperature 140° F (60° C)

Typical Applications:

- Residential: low or high rise — multi or single family
- Commercial: low or high rise — office, retail, hotel/motel, restaurant, etc.
- Nursing homes/hospitals in non-patient care areas only
- Schools, classrooms, dormitories, offices
- Fire alarm systems
- Recreational vehicles and parks
- Solar photovoltaic systems
- Marinas and boatyards
- Other uses per the current NEC® and CEC

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

Carlon® Innerduct Guide

When Innerduct is being used inside the building...

Plenum

- Must be UL® Listed
- Plenum cable must be installed
- Color: Industry standard orange
- Pull tape pre-installed in sizes ½" through 3"

CARLON®		PYRAMID®	
CAT. NO.	SIZE (IN.)	CAT. NO.	SIZE (IN.)
CD4X1C	½	PLM100T	1
CE4X1C	¾	PLM125T	1¼
CF4X1C	1	PLM150T	1½
CG4X1C	1¼	PLM200T	2
CH4X1C	1½		
CJ4X1C	2		
CL4X1C	3		

Note: HDPE innerduct will not meet code

Specifying and installing UL Listed innerducts with the anticipation of future upgrades provides the building owner with a low-cost solution for the removal of abandoned cables.

General Purpose and Riser

- Must be UL® Listed
- Riser rated cable must be used in riser applications
- Color: Industry-standard orange

CARLON®		PYRAMID®	
CAT. NO.	SIZE (IN.)	CAT. NO.	SIZE (IN.)
DE4X1C	¾	RIS100T	1
DF4X1C	1	RIS125T	1¼
DG4X1C	1¼	RIS150T	1½
DH4X1C	1¼	RIS200T	2
DJ4X1C	2		
DL4X1C	3		