

ENT Electrical Non-Metallic Pipe & Fittings

Corrugated flexible conduit used
for electrical raceways



ENT ELECTRICAL NON-METALLIC PIPE & FITTINGS

Corrugated flexible conduit used for electrical raceways

Product Description & Applications

NAPCO manufactures a complete line of Electrical Non-Metallic Tubing (ENT) pipe and fittings. ENT is a corrugated flexible conduit that is used for electrical raceways. ENT is available in 12mm - 50mm (½" - 2") diameters and packaged in reels, coils or 10' (3m) straight lengths.

ENT is lightweight, durable and concrete tight; it is easy to pull cables and wires through the tubing. It can be installed in concrete slabs, fire-rated interior walls or direct buried. ENT pipe and fittings are used in many applications, including:



Certifications

NAPCO's complete line of ENT pipe and fittings are certified to CSA C22.2 No. 227.1/UL 1653.



FT-4 Rating

Our ENT has achieved the designation FT-4 Rating in accordance to the Vertical Char Test in CSA C22.2 No.227.1/UL 1653.

Codes

Our ENT pipe and fittings can be used when installed according to the Canadian Electrical Code (CEC) Part I, Rules 12-1500 to 12-1514.

Manufacturing

ENT pipe is manufactured in our facilities in Woodbridge, Ontario and Abbotsford, B.C. It is designed and tested to meet all necessary industry standards.

Labour Savings

ENT pipe is easy to install and simple to cut and join.

Reel Sizes

ENT pipe is available in coils, reels and 10' (3m) straight lengths. The large reels have up to 2,000ft (610m) of ENT on each and allow for long continuous runs, therefore saving time and money.

Light Weight Material

ENT pipe is much lighter than electrical metallic tubing (EMT).

ENT Specifications

Nominal Size mm (in)	ENT lb/1,000ft	EMT lb/1,000ft	Avg. Inside Diameter mm (in)	Avg. Outside Diameter mm (in)
16 (½)	100	295	15 (0.574)	21 (0.840)
21 (¾)	125	440	20 (0.778)	27 (1.050)
27 (1)	175	668	25 (1.000)	33 (1.315)
35 (1¼)	185	970	34 (1.340)	42 (1.660)
41 (1½)	220	1,100	40 (1.574)	48 (1.897)
53 (2)	319	1,517	51 (2.020)	60 (2.375)

Corrugated Interior

The inside of our ENT is corrugated therefore reducing the build-up of friction compared to pulling cable through solid wall pipe.

Outside Diameters

The outside diameter of our ENT pipe is the same as the outside diameter of rigid PVC conduit. This allows for Rigid PVC Conduit fittings to be used with ENT.





Diagram 1. ENT Pipe Attached with a Coupling and Tied to a Rebar

Concrete Tight

ENT pipe, boxes and fittings are concrete tight.

Corrosion Resistant

ENT pipe and fittings are non-metallic, therefore there is no risk of corrosion when exposed to naturally corrosive soil conditions, such as electrochemical and/or galvanic environments.

Direct Burial

ENT can be direct buried according to Rule 12-1500(A) of the Canadian Electrical Code (CEC).



Diagram 2. ENT Encased in a Concrete Application

Fittings

We offer a complete line of fittings to be used with our ENT pipe. Fast, reliable concrete tight installations can be achieved with our snap-in couplings, connectors and adapters.

Quality Control & Assurance

Our ENT pipe and fittings undergo extensive testing and inspection in our manufacturing facilities.

Installation

Cutting

Our ENT pipe can be easily cut using conduit cutters, hacksaw or a fine-toothed handsaw. Deburr the cut end using a knife or file.

Bending

ENT pipe can be bent by hand, however, the bending radius must be at least six times the internal diameter of the tubing.

Tying

All ENT pipe should be tied down to the rebar, if it is being encased in concrete. Preventing the ENT pipe from floating to the top when the concrete is poured. Tie ENT pipe down using wire or tie wraps.



Diagram 3. ENT Pipe and Fittings in a High-Rise Application

Fittings

For installation of fittings, insert the end of the ENT pipe into the fitting; ensure that 3 full corrugations snap into the fitting beyond the flexible tabs. 3-Click clip design allows for pipe to be easily disconnected and then re-connected.

Fire Separations

If ENT pipe passes through a fire rated separation, the penetration must be properly fire-stopped.

Transitions

Rigid PVC Couplings can be used as a transition from ENT pipe to conduit. Follow the procedure below.

Procedure to Solvent Weld ENT

- Do not use chemical primer or cleaner.
- Apply uniform coat of solvent cement.
- Use a brush to apply, not a dauber.
- Brush excess cement out of corrugations.
- While cement is wet, insert ENT into fitting until stop is reached and give tubing a quarter turn.
- Do not disturb until joint is set.

NAPCO offers adaptor to transition from ENT to EMT.

ENT Electrical Non-Metallic Slab and Wall Boxes

NAPCO launches its latest ENT Wall Boxes with state of the art features and benefits sure to meet the needs of today's contractor. ENT Wall Boxes are manufactured to save time and money by eliminating the most common installation problems. The new ENT Wall Boxes are a perfect fit for all low or high-rise construction markets.



Liberty Village Project; Shallow Single Gang Concrete Wall Box

Manufacturing

ENT Slab Boxes contain an exterior clip that can be removed or replaced when required. It is easy to insert and won't pull apart under rugged construction activities. It also features an additional angled nailing system to secure the box to the floor before the concrete is poured. Our Slab Box is manufactured with longer hubs using a 3-click insertion system to ensure a secure concrete tight fit.



NAPCO Slab Boxes Hubs are Elevated to Permit a Larger Diameter Rebar

ENT Boxes are all manufactured in a state-of-the-art facility and are designed and tested to meet all industry standards. Our complete line of ENT Slab and Wall Boxes are lightweight, concrete tight and are non-corrosive and non-conductive lowering installation and life cycle costs.



Product Features

- External removable and replaceable clip rings
- 3-Click insertion depth for concrete tight fit
- 4-Prong locking system provides a stronger grip
- Durable and crush resistant
- Made from non-metallic and non-corrosive PVC and/or PC
- Slab Boxes have 6 different hub configurations
- Slab Boxes equipped with 8 optional nail or screw holes
- Slab Box hubs elevated permitting larger diameter rebar
- Slab Boxes are available with colored Ident-a-Box® Lids
- Single and Deep Gang Wall Boxes have a rigid PE Protective Cover to prevent concrete infiltration

The Liberty Village project in Toronto, Ontario used NAPCO ENT pipe and fittings.



Certifications

NAPCO's complete line of Electrical Non-Metallic (ENT) Boxes are certified to CSA C22.2, No. 18.2 and UL 514C. NAPCO Divider Plate (Product Code RSSBH-DC) is certified to CSA C22.2 No. 18.2, when used with NAPCO RSSB-H series slab boxes.



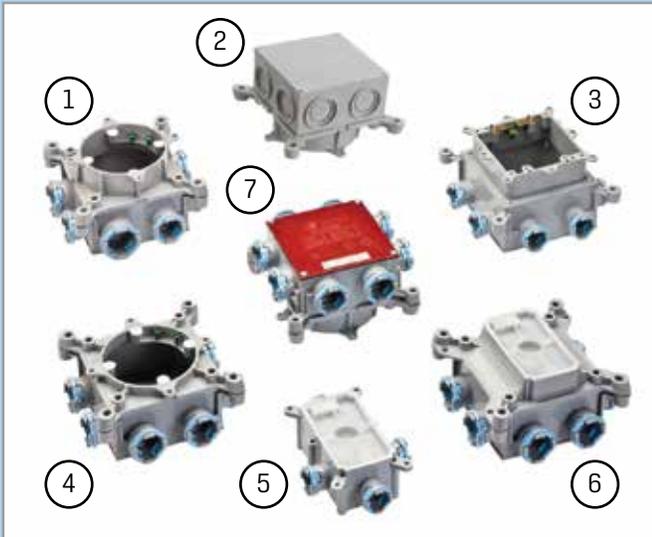
C22.2 No. 18.2



UL 514C

ENT Electrical Non-Metallic Slab Box Specs

Better equipped with features to make the job easier for all projects.



Types of Slab & Wall Boxes available:

1. Slab Box
2. Slab Box without Hubs
3. Square Slab Box with Optional Divider Plate
4. Shallow Slab Box
5. Shallow Single Gang Concrete Wall Box
6. Deep Single Gang Concrete Wall Box
7. Ident-A-Box® Slab Box with specified colored lid

Ident-a-Box® Color Legend

- Grey: Generic
- Green: Security, Cable, Telephone
- White: Hydro - 600 Volt
- Blue: Hydro - 120 Volt
- Yellow: Emergency & Lighting Signs
- Red: Fire Alarm



Slab Boxes with Removable PE Protective Cover

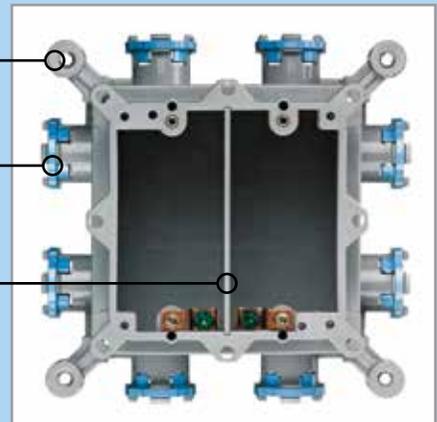
Durable and Crush Resistant

4-Prong Locking System with 3-Click Insertion Depth

Equipped with 8 Optional Nail or Screw Holes

Removable and Replaceable Clip Rings

Divider Plate can be Added at Anytime



ENT Square Slab Box with Divider Plate

NAPCO introduces the latest addition to our ENT product line. The benefits of our current square ENT slab box can now be enhanced by our new optional Divider Plate, which is sold separately. The benefit of this divider plate is it can be added at anytime and is used to divide the box into 2 side-by-side sections.

The Divider Plate allows the contractor to use different voltages, or to include power plus CAT5 data cabling, telephone and stereo controls in the same box.



Divider Plate Features and Benefits:

- Combine line voltage/low voltage (data, telephone and sound) in the same slab box.
- Combine 120vac and 6/12/24vdc for emergency lighting
- Divider plate can be added at anytime, without the use of tools
- Made from non-metallic and non-corrosive PVC
- Slab boxes come in 6 different hub configurations
- Slab boxes are equipped with 8 optional nail or screw holes
- Slab box hubs are elevated, permitting larger diameter rebar
- Slab boxes come with removable PE protective cover that fits over the Divider Plate once inserted

ENT Dimensions of Pipe

Description	Product Number	UPC Number	Size in	Feet/Coil
ENT Coils 	EC005370	14300 5	½	370
	EC007240	14310 4	¾	240
	EC010160	14320 3	1	160
	EC012500	14330 2	1¼	500
	EC015300	14335 7	1½	300
	EC020225	14340 1	2	225

Description	Product Number	UPC Number	Size in	Feet/Bundle
ENT 10 Foot Sticks <i>Sold in Full Skids or Bundles</i> 	ES00510	14325 8	½	100
	ES00710	14326 5	¾	100
	ES01010	14327 2	1	100

Description	Product Number	UPC Number	Size in	Feet/Reel
ENT Reels 	ER0052000	14350 0	½	2,000
	ER0071500	14360 9	¾	1,500
	ER0101000	14370 8	1	1,000
	ER0121000	14380 7	1¼	1,000
	ER015750	14385 2	1½	750
	ER020500	14390 6	2	500

ENT Fittings Product Information

Description	Product Number	UPC Number	Size in	Feet/ Reel
ENT Couplings (RKC) 	RKC10	49530	½	150
	RKC15	49540	¾	100
	RKC20	49550	1	50
	RKC25	49554	1¼	50
	RKC30	49556	1½	40
	RKC35	49558	2	25
ENT Terminal Adapters C/W Lock Nut (RKTA) 	RKTA10	49750	½	150
	RKTA15	49760	¾	100
	RKTA20	49770	1	50
	RKTA25	49774	1¼	50
	RKTA30	49776	1½	50
	RKTA35	49778	2	25
ENT Quick-Snap Connectors (RKTS) 	RKTS10	49700	½	150
	RKTS15	49710	¾	100
	RKTS20	49715	1	50
ENT to EMT Adapters (RKTC) 	RKTC10	49580	½	125
	RKTC15	49590	¾	100
	RKTC20	49600	1	50
	RKTC25	55000	1¼	50
	RKTC30	55002	1½	40
	RKTC35	55004	2	15
ENT Ring Clips (RKR) 				Bags x Pieces/Carton
	RKR10	55054	½	10 x 20/200
	RKR15	55056	¾	10 x 20/200
	RKR20	55058	1	10 x 20/200
	RKR25	55060	1¼	10 x 10/100
	RKR30	55062	1½	10 x 10/100
	RKR35	55064	2	10 x 5/50

ENT Fittings Product Information

Description	Product Number	UPC Number	Size in	Carton Quantity
Stubbys 	RECM10	49610	½	150
	RECM15	49620	¾	150
	RECM20	49630	1	200
	RECM25	49640	1¼	200
45° Angled Formed Stubby 	RKASTB10	55016	½	50
	RKASTB15	55018	¾	50
	RKASTB20	55020	1	50
	RKASTB25	55022	1¼	50
	RKASTB30	55024	1½	50
	RKASTB35	55026	2	50
Tapered Plugs 	RTP10	49780	½	250
	RTP15	49790	¾	100
	RTP20	49800	1	100
Heavy Duty Lock Nut 	RLN10	49670	½	200
	RLN15	49680	¾	200
	RLN20	49690	1	200
	RLN25	49672	1¼	200
	RLN30	49674	1½	200
	RLN35	49676	2	200
Slab Box 1" Extension Ring C/w Long Screws 	R SMBEXTENSION	49996	-	20

ENT Fittings Product Information

Description	Product Number	UPC Number	Size in	Carton Quantity
Shallow Single Gang Concrete Wall Box 	RSVSB-H-10	55036	½	70
	RSVSB-H-15	55038	¾	70
	RSVSB-H-20	55040	1	70
Deep Single Gang Concrete Wall Box 	RSVDB-H-10	55029	8 x ½	25
	RSVDB-H-15	55034	8 x ¾	25
	RSVDB-H-10-15	55028	4 x ½ - 4 x ¾	25
	RSVDB-H-15-20	55030	4 x ¾ - 4 x 1	25
	RSVDB-H-10-20	55032	4 x ½ - 4 x 1	25
	RSVDB-H-10-15-20	55031	4 x ½ - 2 x ¾	25
			- 2 x 1	
Square Slab Box 	RSSB-H-10	55070	8 x ½	20
	RSSB-H-15	55072	8 x ¾	20
	RSSB-H-10-15	55074	4 x ½ - 4 x ¾	20
	RSSB-H-15-20	55076	4 x ¾ - 4 x 1	20
	RSSB-H-10-20	55078	4 x ½ - 4 x 1	20
	RSSB-H-10-15-20	55080	4 x ½ - 2 x ¾	20
			- 2 x 1	
Isolator Module Slab Box 	RSMB-10-IMB	49999	8 x ½	20
	RSMB-15-IMB	49997	8 x ¾	20
	RSMB-10-15-IMB	49998	4 x ½ - 4 x ¾	20
	RSMB-15-20-IMB	55001	4 x ¾ - 4 x 1	20
	RSMB-10-20-IMB	55003	4 x ½ - 4 x 1	20
	RSMB-10-15-20-IMB	55005	4 x ½ - 2 x ¾	20
			- 2 x 1	
Shallow Slab Boxes 	RSMBS-H-10	55006	8 x ½	25
	RSMBS-H-15	55012	8 x ¾	25
	RSMBS-H-10-15	55010	4 x ½ - 4 x ¾	25
	RSMBS-H-15-20	55014	4 x ¾ - 4 x 1	25
	RSMBS-H-10-20	55008	4 x ½ - 4 x 1	25
	RSMBS-H-10-15-20	55015	4 x ½ - 2 x ¾	25
			- 2 x 1	
Divider Plate 	RSSBH-DC	55065	-	20

NAPCO Slab Ident-A-Box® – Quick Snap PVC Slab Box with Hub Extensions Comes with Moulded Connectors and Extra Large Body Design (51.0 in³)

Description	Product Number	UPC Number	Lid Colour	Carton Quantity
 8 x 1/2"	RSMB-H-10G	49721	Grey	25
	RSMB-H-10	49720	Green	25
	RSMB-H-10W	49722	White	25
	RSMB-H-10B	49723	Blue	25
	RSMB-H-10Y	49724	Yellow	25
	RSMB-H-10R	49725	Red	25
 8 x 3/4"	RSMB-H-15G	49802	Grey	25
	RSMB-H-15	49801	Green	25
	RSMB-H-15W	49803	White	25
	RSMB-H-15B	49804	Blue	25
	RSMB-H-15Y	49805	Yellow	25
	RSMB-H-15R	49806	Red	25
 4 x 1/2" 4 x 3/4"	RSMB-H-10-15G	49731	Grey	25
	RSMB-H-10-15	49730	Green	25
	RSMB-H-10-15W	49732	White	25
	RSMB-H-10-15B	49733	Blue	25
	RSMB-H-10-15Y	49734	Yellow	25
	RSMB-H-10-15R	49735	Red	25
 New 4 x 3/4" 4 x 1"	RSMB-H-15-20G	49837	Grey	25
	RSMB-H-15-20	49836	Green	25
	RSMB-H-15-20W	49838	White	25
	RSMB-H-15-20B	49839	Blue	25
	RSMB-H-15-20Y	49846	Yellow	25
	RSMB-H-15-20R	49847	Red	25
 4 x 1/2" 4 x 1"	RSMB-H-10-20G	49841	Grey	25
	RSMB-H-10-20	49742	Green	25
	RSMB-H-10-20W	49842	White	25
	RSMB-H-10-20B	49843	Blue	25
	RSMB-H-10-20Y	49844	Yellow	25
	RSMB-H-10-20R	49845	Red	25
 4 x 1/2" 2 x 3/4" 2 x 1"	RSMB-H-10-15-20G	49831	Grey	25
	RSMB-H-10-15-20	49740	Green	25
	RSMB-H-10-15-20W	49832	White	25
	RSMB-H-10-15-20B	49833	Blue	25
	RSMB-H-10-15-20Y	49834	Yellow	25
	RSMB-H-10-15-20R	49835	Red	25

Ident-A-Box® Colour Legend

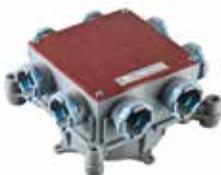


Grey: Generic
 Green: Security, Cable, Telephone
 White: Hydro - 600 Volt
 Blue: Hydro - 120 Volt
 Yellow: Emergency and Lighting Signs
 Red: Fire Alarm

NAPCO Slab Ident-A-Box® – Quick Snap PVC Slab Box with Knockouts Extra Large Body Design (51.0 in³)

Description	Product Number	UPC Number	Lid Colour	Carton Quantity
 8 x 1/2"	RFCUT	49560	Grey	25
	RFCUTB	49570	Green	25
	RSMB-10G	49853	White	25
	RSMB-10	49852	Blue	25
	RSMB-10W	49854	Yellow	25
	RSMB-10B	49855	Red	25
 8 x 3/4"	RSMB-10Y	49856	Grey	25
	RSMB-10R	49857	Green	25
	RSMB-15G	49871	White	25
	RSMB-15	49870	Blue	25
	RSMB-15W	49872	Yellow	25
	RSMB-15B	49873	Red	25
 4 x 1/2" 4 x 3/4"	RSMB-15Y	49874	Grey	25
	RSMB-15R	49875	Green	25
	RSMB-10-15G	49861	White	25
	RSMB-10-15	49860	Blue	25
	RSMB-10-15W	49862	Yellow	25
	RSMB-10-15B	49863	Red	25
 4 x 1/2" 4 x 3/4" 2 x 1"	RSMB-10-15Y	49864	Grey	25
	RSMB-10-15R	49865	Green	25
	RSMB-10-15-20G	49892	White	25
	RSMB-10-15-20	49891	Blue	25
	RSMB-10-15-20W	49893	Yellow	25
	RSMB-10-15-20B	49894	Red	25
 4 x 3/4" 2 x 1/2" 2 x 1"	RSMB-10-15-20Y	49895	Grey	25
	RSMB-10-15-20R	49896	Green	25
	RSMB-15-20-10G	49991	White	25
	RSMB-15-20-10	49990	Blue	25
	RSMB-15-20-10W	49992	Yellow	25
	RSMB-15-20-10B	49993	Red	25
ENT CUTTERS Price each  Cutter will cut up to 1 1/4" ENT. 4 x 1/2" 2 x 3/4" 2 x 1"			Size	25
	RSMB-15-20-10Y	49994	ó - 1.	25
	RSMB-15-20-10R	49995	1	25

Ident-A-Box® Colour Legend



Grey: Generic
 Green: Security, Cable, Telephone
 White: Hydro - 600 Volt
 Blue: Hydro - 120 Volt
 Yellow: Emergency and Lighting Signs
 Red: Fire Alarm

Our various pipe and fittings solutions have been manufactured to meet the need of our customers and their applications. Contact one of the Sales Centres for more information:

Sales & Distribution Centres:

Langley, BC, Canada
T/F 1.800.663.0696
F 1.800.663.6564

Woodbridge, ON, Canada
T/F 1.866.769.7473
F 905.856.3986

Laval, QC, Canada
T/F 1.800.465.9754
F 450.688.6624

Distribution Centres:

Calgary, AB, Canada
T/F 1.800.663.0696
F 1.800.663.6564

Winnipeg, MB, Canada
T/F 1.800.663.0696
F 1.800.663.6564



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