

T&B Conduit Fittings

Table of Contents



General Information	4
Rigid and Intermediate Metal Conduit Fittings	5-53
Specifications for Rigid Metal Conduit	5-10
Locknuts, Sealing Fittings, Bonding and Grounding Wedges	11, 12
Bushings	13-19
Knockout Plugs	20-21
Chase® Nipple	22-23
Threaded Bullet® Hubs	24-27
T&B Hub	28-31
Threadless Fittings/Couplings	32-34
Set Screw Fittings/Couplings	35, 36
Short Elbows	37
Erickson® Threaded Couplings	38-40
Conduit Straps and Spacers	41-44
Combination Couplings, Beam Clamps, Conduit Supports	45
Methods of Bonding and Grounding	46-53
Electrical Metal Tubing (EMT) Fittings	54-59
Specifications for EMT	54-56
EMT Fittings	57-59
Flexible Cord and Cable Fittings	60-82
Specifications for Flexible Cord and Cable	60-62
Selection Guide	63, 64
Specifications for Liquidtight Flexible Cord and Cable Fittings	65
Strain Relief Fittings	66-69
Ranger™ Series Liquidtight Strain Relief Fittings	70, 71, 73, 75
Aluminum Liquidtight Strain Relief Fittings	72
SS Liquidtight Conduit Connectors	74
Silver Grip™ — TCF™ Series Tray-Cord Fitting	76, 77
Silver Grip™ Liquidtight Fittings	78, 79
iremesh Grips	80
Nonmetallic Cable Glands	81
Metric Adapters, Fittings and Plug	82

T&B Conduit Fittings

Table of Contents



Service Entrance Cable Fittings 83-87

Specifications	83-85
Service Entrance Cable Fittings	86, 87

Liquidtight Flexible Conduit Fittings 88-110

Specifications for Liquidtight Flexible Metal Conduit	88-90
High Temperature Flexible Metal Liquidtight Fittings	91
Liquidtight Flexible Metal Conduit Fittings	92-100, 103-106, 109
Specifications—Type A Nonmetallic Conduit Fittings	101
Liquidtight Flexible Nonmetallic Conduit Fittings	101, 102, 107, 108
ISO Metric Bullet™ Liquidtight Fittings	110

Armoured Cable and Flexible Metal Conduit Fittings 111-119

Specifications for Armoured Cable and Flexible Metal Conduit	111-114
Fittings for Armoured Cable and Flexible Metal Conduit	115-119

Nonmetallic Sheathed Cable Fittings 120-126

Specifications for Nonmetallic Sheathed Cable Fittings	120, 121
Fittings for Nonmetallic Sheathed Cable Fittings	122, 126

Liquatite® Flexible Conduit 127-155

Application Guide	127,128
Steel	129-135, 137, 139 142, 144, 145
Aluminum	136, 138, 143
Shielding	140, 141
Nonmetallic	146, 147
Corrlok® System	148-152
Engineering Information	153, 154
Packaging	155

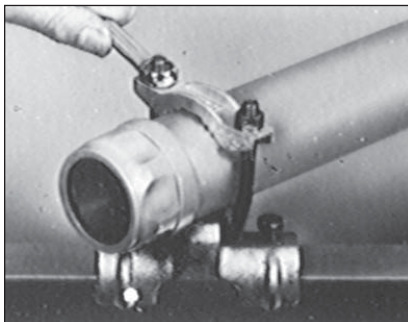
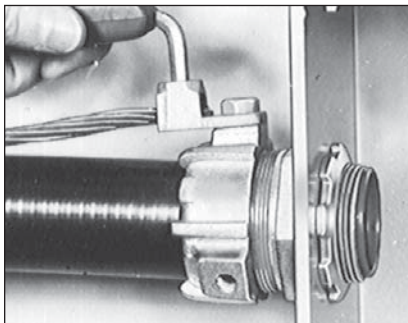
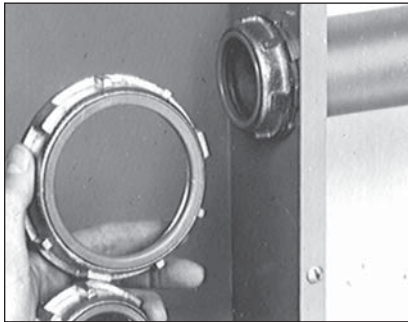
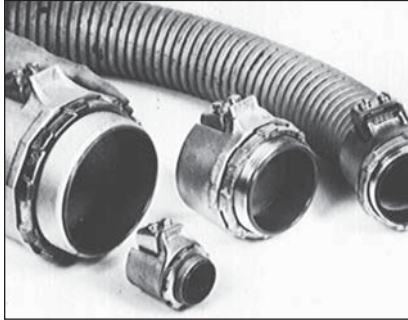
Conduit Dimensional Data 156, 157

Conduit Chemical Resistance Guide 158-161

Alphanumeric Index 162-175

T&B Conduit Fittings

General Information



Thomas & Betts... The Complete Product Line

Since the turn of the century, Thomas & Betts has been a recognized leader in electrical fittings. Industry standards such as Chase® Nipples and Erickson® Couplings were introduced by Thomas & Betts and are still registered trademarks. This leadership continues. Here's why.

Innovative Designs

The real test of product design of electrical fittings lies in two areas: job-suited installation and life-of-the-job reliability. Thomas & Betts Fittings provide both because we listen. We listen to problems and suggestions from the field. Most of the products in this section result from the good suggestions of knowledgeable electrical people. Many were custom designed to solve a customer's particular installation and performance problems. You can benefit from their experience.

Approvals and Certifications

Electrical raceways require accessory fittings that provide the mechanical strength, ground continuity, and environmental integrity of the system. As new raceways have been introduced, Thomas & Betts, engineers have designed fittings which meet the requirements of the Canadian Electrical Code, as well as the Canadian Standards Association. You can use Thomas & Betts Fittings with confidence.

Note: All dimensions in this catalogue are approximate.

High Performance Products

Quality and performance result when engineering design skills are combined with the manufacturing technologies required to produce them. The Thomas & Betts Fittings in this section are produced from many materials and by many manufacturing methods, each carefully selected for its end use suitability. This combination gives you the reliable performance you expect from Thomas & Betts Raceway Fittings.

Lower Installed Cost

Lower installed cost is a function of purchase cost, availability, installation advantage, and performance; it comes in every carton of Thomas & Betts Raceway Fittings.

T&B Conduit Fittings

Rigid Metal Conduit Fittings

Specifications—Rigid Metal Conduit/PVC Coated Rigid Metal Conduit

Ref. CEC Rule 12-1000

Rigid Metal Conduit affords maximum mechanical protection to conductors within the raceway. Rigid metal conduit can be installed indoors and outdoors, in dry locations or wet locations, exposed or concealed, in all atmospheric conditions and in hazardous locations.

Galvanized rigid steel conduit installed in concrete does not require supplementary corrosion protection. Galvanized rigid steel conduit, installed in contact with soil, does not generally require supplementary corrosion protection. However, when buried in corrosive soil (corrosive soil is characterized by low resistivity of less than 2,000 ohm-centimeter) or cinders, a protective coating of bitumastic, asphalt-based paint or a PVC coating is applied to the conduit. CEC Rule 12-934 requires that rigid steel conduit installed in or under permanently moist cinder fill be encased in at least two inches of cinder-free concrete unless the conduit is at least 18 inches below the fill. Steel conduit protected from corrosion solely by enamel can only be used indoors and in occupancies not subjected to severe corrosive influences.

Rigid nonferrous metal conduit (aluminum) cannot be directly embedded in concrete containing soluble chlorides such as calcium chloride; unwashed beach sand, seawater, or coral bearing aggregates. However, if adequately treated by a protective coating of bitumastic or asphalt-based paint or PVC coating, the conduit can be installed in concrete containing chlorides.

Supplementary nonmetallic coatings presently used on ferrous rigid metal or nonferrous metal have not been investigated for resistance to corrosion.

CEC Rule 12-920 requires that when conduit enters a box or fitting, a bushing must be provided to protect wires from abrasion unless the design of the box or fitting provides equivalent protection.

According to CEC Rule 12-906 where No. 8 or larger ungrounded conductors enter or leave a conduit, an insulating bushing with a smooth well rounded insulating surface must be provided to protect conductors unless the terminating fitting is equipped with an insulated throat, firmly secured in place providing equivalent protection. The insulating bushing or insulating material must have a temperature rating of not less than the insulation temperature rating of installed conductors. When conduit bushings are constructed wholly of insulating material, a locknut must be installed both inside and outside of the enclosure to which the conduit is attached.

Fittings and couplings are required to be of concrete-tight type when embedded in masonry or concrete or in dry locations and of the raintight type when installed in wet locations.

In wet locations or locations where walls are frequently washed or where there are surfaces of absorbent materials, the entire wiring system including boxes, fittings, conduit and cables must be supported such that there is at least 1/4 inch air space between it and the supporting surface (CEC Rule 2-122).

CEC Rule 12-3022 requires that the raceways be metallically joined together into a continuous electric conductor and must be mechanically connected to all boxes, fittings and cabinets as to provide effective electrical continuity.

Conduit is required to be supported adequately and conduit bends in one run are restricted to the equivalent of four quarter i.e. 360 degrees total.

Listed below are some of the advantages of rigid aluminum conduit over rigid steel conduit.

1. Non-sparking—eliminates hazard in explosive atmospheres
2. Non-magnetic—reduces power loss due to voltage drop
3. Resists most corrosive atmospheres and industrial environments
4. Lightweight—reduces cost of handling and installation
5. Attractive appearance

T&B Conduit Fittings

Rigid Metal Conduit Fittings

Specifications—Rigid Metal Conduit/PVC Coated Rigid Metal Conduit (continued)

For further details and complete information please refer to the following:

1. ANSI C80.1...Rigid Steel Conduit Zinc Coated, Specifications for
2. ANSI C80.2...Rigid Steel Conduit, Enameled, Specifications for
3. ANSI C80.5...Rigid Aluminum Conduit. Specifications for
4. ANSI C80.4...Fittings for Rigid Metal Conduit and Electrical Metallic Tubing, Specifications for
5. WW-C-581...Federal Specification, Conduit, Metal, Rigid & Coupling, Elbow, and Nipple, Electrical Conduit, Zinc Coated
6. WW-C-540...Federal Specification, Conduit, Metal, Rigid (Electrical, Aluminum)
7. WW-C-571...Federal Specification, Conduit, Metal, Rigid, and Coupling, Elbow, and Nipple, Electrical Conduit Enameled
8. U.L. 6...Standards for Safety. Rigid Metal Conduit
9. U.L. 2142...Standards for Safety. Intermediate Metal Conduit
10. CEC Section 12-1000...Rigid and Flexible Conduit
11. CSA C22.2 No. 45...Safety Standards for Rigid Metal Conduit
12. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings
13. NEMA FB-1...Standards Publication. Fittings and Supports for Conduit and Cable Assemblies
14. A-A-50553 Federal Specification. Fittings for Conduit Metal Rigid (Thickwall & Thinwall [EMT] Type)

Please Note

The excerpts and other material herein, whether relating to the Canadian Standards Association, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

T&B Conduit Fittings

Rigid Metal Conduit Fittings

Suggested Specifications for Rigid Metal Conduit/PVC Coated Rigid Metal Conduit and Fittings meets 2009 CEC Rule 2-112



**Cat. #CP8
KOPR-SHIELD***
* TM of Jet-Lube, Inc.



**Cat. #AP8
ALUMA-SHIELD®**



**Series 1451
Knockout Plug**



**Series 1470
Plug, Conduit/Fitting**

- Rigid ferrous metal conduit or PVC coated rigid conduit prior to coating shall be of the hot dipped galvanized type adequately protected against corrosion inside and outside including threads, and conforming to the following applicable specifications:
 - Rigid Ferrous Metal Conduit Federal Specification WW-C-581/ANSI C80.1/U.L. 6/CSA C22.2 No. 45
 - PVC Coated Ferrous Metal Conduit Applicable listed under (j) and in addition conforming to NEMA Publication No. RNI-2005 (Type A) PVC coating on conduit and associated fittings shall have no sags, blisters, lumps or other surface defects and shall be free of holes.
- Rigid nonferrous metal conduit shall conform to Federal Specification WW-C-540/ANSI C80.5/U.L. 6/CSA C22.2 No. 45.
- All field cuts shall be square, reamed and deburred. Conduit threads shall be tapered for entire length with $\frac{3}{4}$ " taper per ft. Conduit threads prior to assembly shall be clean and coated with grease metallic type conductive compounds such as series CP8 KOPR-SHIELD for ferrous conduit or series AP8 ALUMA-SHIELD for nonferrous (aluminum) conduit as manufactured by Thomas & Betts.
- To prevent ingress of plaster, dirt, trash or moisture in raceways, boxes, fittings and equipment during course of construction, all open ends shall be closed with rugged thermoplastic plugs as manufactured by Thomas & Betts, series 1470 and 1451. Plugs shall be firmly secured in place to provide adequate seal and shall be functionally unaffected by moisture. Thermoplastic plugs shall be rated at 105°C/221°F and have a U.L. flammability rating of 94V-1.

T&B Conduit Fittings

Rigid Metal Conduit Fittings

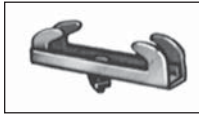
Suggested Specifications for Rigid Metal Conduit/PVC Coated Rigid Metal Conduit and Fittings (continued)



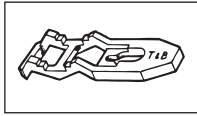
**Series 1276
Conduit Strap**



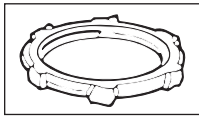
**Series 690
Conduit Supports**



**Series 700
Adjustable Beam
Clamp**



**Series 1350
Conduit Spacer**



**Series 140
Locknut**



**Series 106
Bonding Locknut**



**Series 5302
Sealing Gasket**



**Series 370
Threaded Hub
(Raintight)**



**Series 485 PVC
Coated Threaded
Hubs (Raintight)**



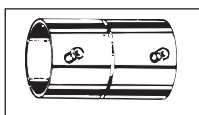
**Series 8123
Threadless Fitting
(Concretetight)**



**Series 8120
Threadless Coupling
(Concretetight)**



**Series 8125
Set Screw Fitting
(Concretetight)**



**Series 8124
Set Screw Fitting
(Concretetight)**

- Conduit shall be securely fastened in place, at intervals as specified by the code, using suitable straps, hangers and other supporting assemblies as indicated on plans and as manufactured by Thomas & Betts, series 1276, 690 and 700. All strap hangers and supporting assemblies shall be of rugged construction capable of supporting weight with a reasonable factor of safety and shall be adequately protected against corrosion. Where applicable, it shall conform to Canadian Standards Association Standard C22.2 No. 18.

- In wet locations or in locations where corrosive conditions are present, vertical and horizontal runs of conduit shall be firmly supported so that there is at least 1/4" air space between the conduit and the wall or supporting surface. Spacers and supporting straps shall be of malleable iron construction, hot dipped galvanized conforming to Canadian Standards Association Standard C22.2 No. 18 such as Thomas & Betts series 1276 straps and series 1350 spacers. Nonferrous metal straps and spacers may be substituted as required.

- Where threaded conduit terminates into a threadless opening, a locknut shall be provided both inside and outside the box or enclosure and the conduit end shall be fitted with an insulating bushing. In wet locations, a suitable gasket shall be provided between the outside locknut and the opening.

Locknuts shall be rugged, of hardened steel or malleable iron construction, electro-zinc plated and capable of cutting through protective coating on box or enclosure to ensure positive bond such as Thomas & Betts series 140.

- Where raceway and associated fittings are used as part of an equipment grounding system, terminating fittings shall be equipped with bonding type locknuts such as Thomas & Betts series 106 bonding locknuts.

Sealing gaskets shall be constructed of oil resistant/moisture resistant rubber and shall be suitably protected by and permanently bonded to a stainless steel retainer such as Thomas & Betts series 5302.

- Where threaded rigid metal conduit is installed outdoor or indoors or in locations exposed to continuous or intermittent moisture, a sealing hub type terminating fitting shall be installed. Hubs shall be of malleable iron/steel construction, electro-zinc plated and equipped with a nylon insulated throat and oil resistant/moisture resistant sealing ring as manufactured by Thomas & Betts, series 370 or series H050-TB. Female taper hub threads shall be adequately relieved to prevent bottoming of conduit.

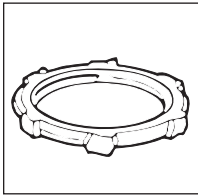
Hubs constructed of copper-free aluminum may be substituted when used with rigid nonferrous (aluminum) metal conduit, Thomas & Betts series 370AL or H050A.

For environmental conditions that are more than normally corrosive to exposed surfaces, hubs suitably protected with PVC coating such as Thomas & Betts series 485 shall be used.

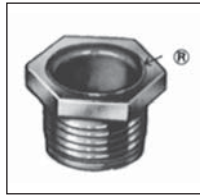
T&B Conduit Fittings

Rigid Metal Conduit Fittings

Suggested Specifications for Rigid Metal Conduit/PVC Coated Rigid Metal Conduit and Fittings (continued)



**Series 140
Locknut**



**Series 1942
Insulated Nipple**



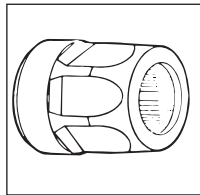
**Series 3210
Knockout Bushing**



**Series 674
Threaded Coupling**



**Series 222TB
Insulating Bushing**



**Series TRIB50
Threadless Rigid
Insulating Bushing**



**Series 3870
Insulated Grounding &
Bonding Bussing**

- Where concrete-tight requirements must be met, or in dry locations, rigid metal conduit or intermediate metal conduit fittings and couplings shall be of the concrete-tight type. Fittings shall be rugged, of ferrous metal construction, electro-zinc plated inside and outside, and furnished with a nylon bushing as manufactured by Thomas & Betts, series 8123 and 8120. Insulated set screw type fittings such as Thomas & Betts series 8125 and 8124 may be substituted unless otherwise indicated on drawings.

Components critical to performance such as set screws, split rings, and locknuts shall be hardened or adequately designed to ensure positive bond between conduit and enclosure or conduit runs.

All fittings of the system shall be capable of carrying ground fault currents per the following:
1/2" through 1-1/2" size...10,000 amps RMS (duration of fault current 3 cycles)
2" and above...20,000 amps RMS (duration of fault current 3 cycles)

- All back-to-back nipling of boxes shall be done using locknuts and nylon bushed nipples as manufactured by Thomas & Betts, series 140 locknuts and series 1942 nipples. Nipples, or suitably designed bushings such as Thomas & Betts series 3210, shall also be used where conductors pass through either factory or field punched, cut or drilled holes in metallic members.

- Where neither length of threaded conduit can be rotated, couplings such as Thomas & Betts series 674 shall be installed in conduit runs.
- Where threaded or threadless conduit terminates outside a box or an enclosure, or where conduit is stubbed up, it shall be equipped with an insulated metallic or nonmetallic bushing such as Thomas & Betts series 1222 or TRIB50.
- Where code requires bonding and grounding of single or multiple rigid metal conduits or where positive bonding and grounding of conduit to the box, enclosure or auxiliary gutter is required, the end of the conduit shall be equipped with an insulated metallic grounding and bonding bushing such as Thomas & Betts series 3870.

Insulated metallic grounding and bonding bushing shall be approved for the purpose. It shall be of malleable iron/steel construction adequately protected against corrosion, assembled with an insulator listed or certified for 150°C/302°F application and flammability rating of 94V-0 with insulator positively secured in place.

Bonding to enclosure shall not be dependent on locknut bushing type contact but by a positive bonding means such as a hardened screw or equivalent.

T&B Conduit Fittings

Rigid Metal Conduit Fittings

Specifications—Locknuts



140 Series
141AL Series



106 Series

Application

- To connect externally threaded conduit or fitting to a threadless opening in a box or enclosure.
- To effectively bond conduit or fitting to box or enclosure.

Features

- Hardened Steel/Malleable Iron/Copper-free Aluminum construction.
- Tightens without deformation.
- Locknuts specially designed to:
 - (i) Provide extended reach for clamping on thin boxes and enclosures
 - (ii) Cut through protective coating on box and enclosure thereby ensuring ground continuity
 - (iii) Permit tightening from outside
 - (iv) Prevent loosening under vibration
- 106 Series provided with a hardened cone point screw.

Standard Material

140 Series & 106 Series

³/₁₆" thru 2" Steel (hardened)
2-1/2" thru 6" Malleable Iron
All screws steel

141AL Series

All copper-free aluminum
(less than .4% copper)

Standard Finish

All Steel and Malleable Iron locknuts including bonding screws
.....Electro-zinc Plated
All Aluminum locknutsdegreased
For chromate coating use prefix 040

Range

- 3/8" through 6" conduit (all threads straight pipe [NPS]) (140 Series)
- 1/2" through 4" conduit (106 Series & 141AL Series)

Conformance

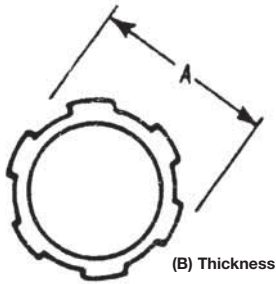
U.L. 514B
CSA C22.2 No. 18.3
NEMA FB-1
ANSI C80.4
Federal Specification W-F-408
Federal Standard H-28 (Threads)

"Case Hardened Locknuts"

Case hardened locknuts make fittings faster and easier to install. Case hardened locknuts do not slip or turn thereby protecting the biting edge. Case hardened locknuts bite through the paint on the enclosure providing excellent continuity of ground (typical T&B/Thomas & Betts fitting with case hardened locknuts successfully passed minimum fault current of 10,000 amps RMS). Case hardened locknuts when assembled in the intended manner will not vibrate loose thereby ensuring excellent ground continuity.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Steel or malleable iron (steel thru 2")
or Aluminum 624

Many of the T&B standard conduit and cable fittings are furnished with "case hardened locknuts". This exclusive feature means the locknut tightens up against the box without deforming; the locknut bites into the box providing a positive ground; the fitting can be tightened from outside the box.

Locknuts

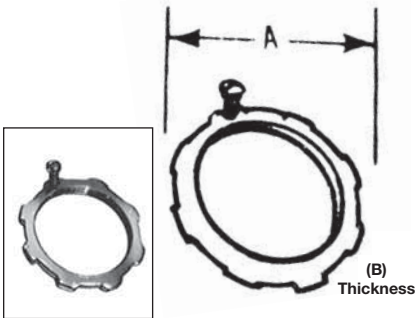
Stl. or M.I.	Cat. No.		Size	Dimensions (in.)	
	Alum.	SST		A	B
139 [†]	—	—	1/4"	27/32	5/32
140*	—	—	3/8"	15/16	5/32
141**	141AL	141SST	1/2"	1-7/64	5/32
142-TB**	142AL	142SST	3/4"	1-3/8	3/16
143	143AL	143SST	1"	1-11/16	13/64
144	144AL	144SST	1-1/4"	2-5/32	13/64
145	145AL	145SST	1-1/2"	2-1/2	13/64
146-TB	146AL	146SST	2"	3	7/32
147	147AL	147SST	2-1/2"	3-9/16	13/32
148	148AL	148SST	3"	4-3/16	13/32
149	149AL	149SST	3-1/2"	4-13/16	15/32
150	150AL	150SST	4"	5-5/16	15/32
151	151AL	151SST	4-1/2"	5-15/16	17/32
152	152AL	152SST	5"	6-1/2	17/32
153	153AL	153SST	6"	7-3/4	17/32

* Hex shape

** Case hardened locknuts

Aluminum locknuts comply with federal standard of copper-free aluminum; less than .4% copper. For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

† Not UL or CSA certified



Steel or malleable iron (steel thru 2").

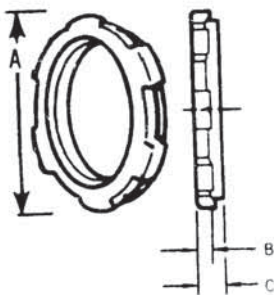
Use anywhere an ordinary locknut is installed to ensure positive bonding of conduit to box and prevent loosening due to vibration. Also can be used for Service Entrance applications in conformance with Code. T&B rigid conduit and E.M.T. (thinwall) fittings comply with Federal Specification WF 408c.

Bonding Locknuts

Cat. No.	Size	Screw Sizes	Dimensions (in.)	
			A	B
106	1/2"	8-32x 7/16"	1-3/8	.125
107	3/4"	8-32x 7/16"	1-5/8	.140
108	1"	8-32x 7/16"	1-15/16	.170
109	1-1/4"	8-32x 7/16"	2-5/32	.170
110-TB	1-1/2"	8-32x 7/16"	2-1/2	.170
111	2"	8-32x 7/16"	3	.187
112-TB	2-1/2"	1/4-20x 5/8"	3-13/32	.375
113-TB	3"	1/4-20x 5/8"	4-13/16	.375
114	3-1/2"	1/4-20x 5/8"	4-29/32	.438
115-TB	4"	1/4-20x 5/8"	5-7/16	.438

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

Steel finish: zinc plated



Molded Santoprene Seal
Color: Blue

Provides positive seal against water and oil. For use with rigid and intermediate metal conduits, or fittings to provide watertight or raintight seal at all enclosures. NPS threads.

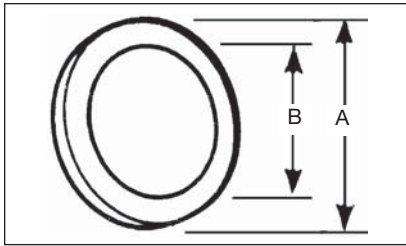
Sealing Fittings

Cat. No.	Size	Dimensions (in.)		
		A	B	C
141SL	1/2	1.140	1/8	1/4
142SL	3/4	1.420	5/32	9/32
143SL	1	1.770	11/64	9/32
144SL	1-1/4	2.281	11/64	5/16
145SL	1-1/2	2.598	11/64	9/32
146SL	2	3.175	3/16	19/64

Steel finish: zinc plated

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



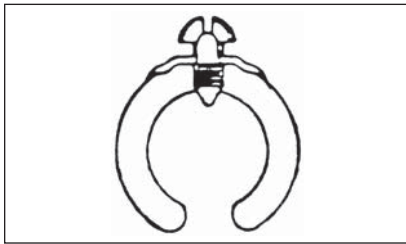
**Sealing Ring-Santoprene
Thermoplastic Rubber**

These sealing rings provide a liquid tight, dust tight, seal of fitting at enclosures.

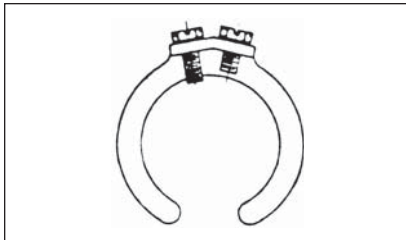
Sealing Rings with Stainless Steel Retainer

Cat. No.	Conduit Size	Dimensions (in.)	
		A	B ± 1/64
5302	1/2"	1-11/64	3/4
5303	3/4"	1-1/2	15/16
5304	1"	1-3/4	1-11/64
5305	1-1/4"	2-9/64	1-1/2
5306	1-1/2"	2-27/64	1-3/4
5307	2"	2-59/64	2-15/64
5308	2-1/2"	3-7/16	2-43/64
5309	3"	4-5/64	3-19/64
5311	4"	5-9/32	4-19/64

NEMA 3R, 4, 6 and 13



Series 3650



Series 3651



Especially suited for grounding old work, but equally convenient for new, grounding wedges provide grounding without a jumper except in concentric knockouts. When a jumper is required, it fits under a set screw in the grounding wedge.

Update existing installations to meet code requirements for bonding (CEC Section 10-806) without disconnecting wiring. Use on new wiring also.

1. Loosen bushing and position wedge.
2. Tighten bushing and bonding screw.

Bonding & Grounding Wedges

Application

To effectively bond terminating fitting or conduit to a box or enclosure.

Features

- Sizes 3/4" thru 6" equipped with an additional bonding screw to install bonding jumper where required.
- Can be added to an existing installation without disconnecting conductors.

Standard Material/Finish

1/2" sizeSteel/Electro-zinc Plated
3/4" thru 6" size.....Bronze/Tin Plated

Range

1/2" thru 6" conduit

Conformity

U.L. 467
C.S.A. C22.2 No. 41
NFPA70-2008 (ANSI)
Federal Specification A-A-50552

Bonding and Grounding Wedges



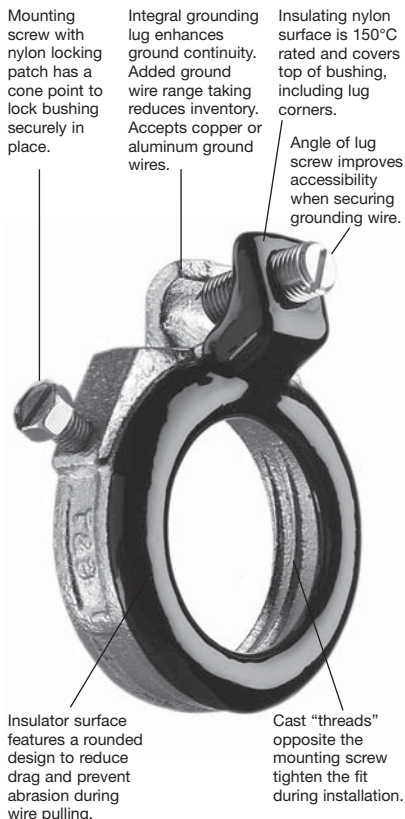
Cat. No.	Size
3650	1/2"
3651	3/4"
3652	1"
3653	1-1/4"
3654	1-1/2"
3655	2"
3656	2-1/2"
3657	3"
3658	3-1/2"
3659	4"
3661	5"
3662	6"

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Blackjack® — Conduit Grounding Bushings



Innovative design makes installation quicker, easier.

The Blackjack® Grounding Bushing never has to be threaded onto a conduit. It is simply placed in position on either a threaded or non-threaded rigid or IMC conduit, with the grounding lug in perfect position to accept the grounding wire. Even in tight installations, it's as simple as one, two, three. Compare the installation with conventional bushings that must be threaded onto the conduit. In tight areas, you may have to remove the grounding lug, keep up with the loose parts, and then reattach the lug. Then you still have to twist and turn the bushing to get the lug in position to accept the grounding wire. The Blackjack bushing does away with these needless delays for good, making it the ideal grounding bushing and the only logical choice for small spaces, corners, and multiple conduit runs. And, because the grounding lug is an integral part of the bushing, it is designed not to fall off or get lost.



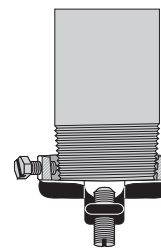
Innovative design improves performance.

The Blackjack® bushing provides superior ground continuity.

The design of the Blackjack bushing has an integral, cast-on grounding lug for better ground continuity. This means that the Blackjack bushing stands up to intense loads.

Secure grip forms lasting bond.

The Blackjack bushing's cone-point mounting screw bites securely into both threaded and non-threaded rigid conduits. And the Blackjack bushing's nylon locking patch is designed to prevent the screw from loosening due to vibration.



Reduce inventory.

Because the Blackjack Grounding Bushing is designed for threaded and non-threaded conduits, and the ground lugs are designed to handle an extended range, the number of parts in inventory is reduced by up to two-thirds without losing any application coverage.



Blackjack® – Conduit Grounding Bushing

Lug Screw:
 14-4: Slotted
 14-2/0: Slotted
 6-4/0: Internal Hex Drive

Standard Material/Finish

Body: Malleable Iron or Aluminum
 Mounting Screw: (1/2"-2") Stainless Steel, (2-1/2"-6") Brass
 Lug Screw: Stainless Steel
 Finish: Zinc Plated or Mechanical Galvanized

Range

Conduit: 1/2 thru 6" threaded or threadless rigid/IMC
 Wire Range: #14 AWG to 4/0 AWG CU/AL

Conformity

U.L. 514B & U.L. 467
 CSA C22.2 No. 18.3 & CSA C22.2 No. 41

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Blackjack® — Conduit Grounding Bushings

Zinc Plated Malleable Iron	Cat No.	Conduit Size in.	Dim.					Wire Range
			ØA Max.	ØB Max.	ØC Max.	ØD Max.	E Max.	
	Aluminum							
BG050-14-20	BGA050-14-20	1/2	1.251	.569	1.181	2.134	.696	14-2/0
BG050-14-4	BGA050-14-4	1/2	1.251	.569	1.027	1.940	.696	14-4
BG075-14-20	BGA075-14-20	3/4	1.533	.772	1.221	2.414	.696	14-2/0
BG075-14-4	BGA075-14-4	3/4	1.533	.772	1.030	2.168	.696	14-4
BG100-14-20	BGA100-14-20	1	1.783	.993	1.181	2.581	.696	14-2/0
BG100-14-4	BGA100-14-4	1	1.783	.993	1.027	2.368	.696	14-4
BG125-14-20	BGA125-14-20	1-1/4	2.220	1.319	1.181	2.987	.759	14-2/0
BG150-14-20	BGA150-14-20	1-1/2	2.470	1.553	1.181	3.236	.696	14-2/0
BG200-14-20	BGA200-14-20	2	2.830	2.010	1.181	3.766	.696	14-2/0
BG250-14-20	BGA250-14-20	2-1/2	3.148	2.412	1.181	4.341	.978	14-2/0
BG250-6-40	BGA250-6-40	2-1/2	3.148	2.412	1.524	4.526	.978	6-4/0
BG300-14-20	BGA300-14-20	3	4.042	3.022	1.181	4.966	.978	14-2/0
BG300-6-40	BGA300-6-40	3	4.042	3.022	1.524	5.139	.978	6-4/0
BG350-14-20	BGA350-14-20	3-1/2	4.542	3.491	1.181	5.467	.978	14-2/0
BG350-6-40	BGA350-6-40	3-1/2	4.542	3.491	1.524	5.639	.978	6-4/0
BG400-14-20	BGA400-14-20	4	5.042	3.975	1.181	5.966	.978	14-2/0
BG400-6-40	BGA400-6-40	4	5.042	3.975	1.524	6.139	.978	6-4/0
BG500-14-20	BGA500-14-20	5	6.136	4.991	1.181	7.045	.978	14-2/0
BG500-6-40	BGA500-6-40	5	6.136	4.991	1.524	7.207	.978	6-4/0
BG600-14-20	BGA600-14-20	6	7.199	6.009	1.181	8.087	.978	14-2/0
BG600-6-40	BGAT600-6-40	6	7.199	6.009	1.524	8.409	.978	6-4/0

Suggested Specifications

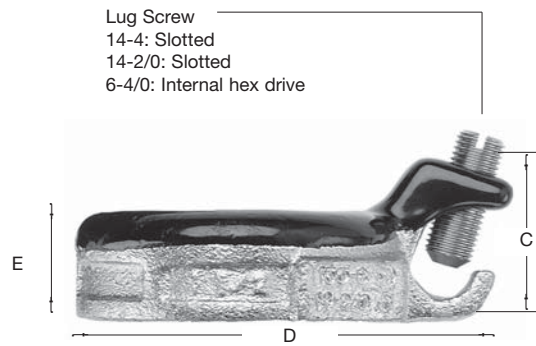
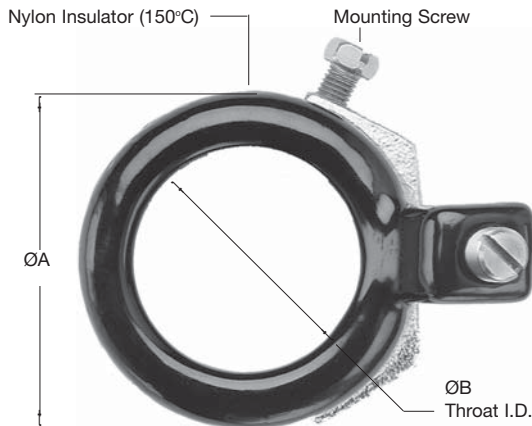
Insulated grounding and bonding bushing
(Series BG050-BG600)

Where code requires bonding and grounding of single or multiple metal conduits, or positive bonding and grounding of metal conduit to the box, enclosure or auxiliary gutter, the end of the conduit shall be equipped with an insulated metallic grounding and bonding bushing series BG050-14-20 as manufactured by Thomas & Betts.

Grounding and bonding bushings used shall be approved for the purpose and

- (i) Shall be of malleable iron/steel/aluminum construction adequately protected against corrosion.
- (ii) Bushing insulator shall be listed or certified for 150°C/302°F application with a flammability rating of 94V-O. Insulator must be positively locked in place.

* Mechanical galvanization is available in the 3870 Series; add suffix **MG** to Cat. No.



For Threaded & Threadless Rigid & IMC Conduit.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Threaded Insulated Grounding Bushing

Application

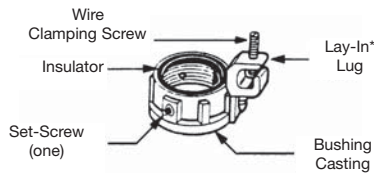
- For quick installation of bonding jumper to multiple metal conduits (Rigid and IMC).
- Designed to bush conductors and prevent insulation damage.

Standard Material / Finish

Body: Electro-zinc plated
 Lay-in lug: Aluminum/tin plated
 Insulator: Thermoplastic
 150°C/302°F
 Application with 94V-0 flammability.

Features

- Ease of installation, lay in lug design.
- Cast malleable iron body designed to lock insulator in place within body reducing common assembly problem resulting in dislodging of insulator.
- Insulator rated for 150°C/302°F application.



Threaded Insulated Grounding Bushing



Cat. No.	Conduit Size	Bushing Dia.	Throat Dia.	Lug Length	Swing Radius	Bushing Height	Wire Range AWG CU/AL
3870-TB	1/2	1.125	.560	1.310	1.212	.657	14-4
3861	1/2	1.125	.560	1.675	1.402	.657	8-2/0
3871-TB	3/4	1.420	.742	1.310	1.360	.660	14-4
3862	3/4	1.420	.742	1.675	1.550	.660	8-2/0
3872	1	1.770	.944	1.310	1.535	.735	14-4
3882	1	1.770	.944	1.675	1.725	.735	8-2/0
3873	1-1/4	2.190	1.242	1.310	1.745	.735	14-4
3883	1-1/4	2.190	1.242	1.675	1.935	.735	8-2/0
3874	1-1/2	2.468	1.449	1.310	1.884	.770	14-4
3884	1-1/2	2.468	1.449	1.675	2.074	.770	8-2/0
3875	2	3.031	1.860	1.310	2.165	.770	14-4
3889	2	3.031	1.860	1.675	2.355	.770	8-2/0
3876	2-1/2	3.516	2.222	1.310	2.408	.940	14-4
3886	2-1/2	3.516	2.222	1.675	2.598	.940	8-2/0
3993	2-1/2	3.516	2.222	2.230	2.928	.940	6-4/0
3877	3	4.234	2.761	1.310	2.767	.975	14-4
3887	3	4.234	2.761	1.675	2.957	.975	8-2/0
3994	3	4.234	2.761	2.230	3.287	.975	6-4/0
3878	3-1/2	4.781	3.193	1.310	3.040	.975	14-4
3863	3-1/2	4.781	3.193	1.675	3.230	.975	8-2/0
3995	3-1/2	4.781	3.193	2.230	3.560	.975	6-4/0
3879	4	5.328	3.623	1.310	3.314	.980	14-4
3864	4	5.328	3.623	1.675	3.504	.980	8-2/0
3996	4	5.328	3.623	2.230	3.834	.980	6-4/0
3880	5	6.328	4.542	1.310	3.814	.985	14-4
3865	5	6.328	4.542	1.675	4.000	.985	8-2/0
3998	5	6.328	4.542	2.230	4.334	.985	6-4/0
3881	6	7.406	5.458	1.310	4.353	1.200	14-4
3866	6	7.406	5.458	1.675	4.543	1.200	8-2/0
3999	6	7.406	5.458	2.230	4.875	1.200	6-4/0

Temperature rating 150°C.

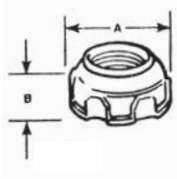
Meets Coast Guard Regulation CG293

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

*Contact customer service for copper lay in lug

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Nylon insulated
metallic bushings

Steel or malleable iron (Steel thru 1-1/2").

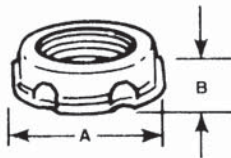
The Canadian Electric Code 10-906 (2) calls for protection of ungrounded conductors by means of smoothly rounded insulating surfaces at the entrance to raceways, pull boxes, junction boxes, etc. T&B insulated throat fittings, recognizable by the distinctive trademarked blue insulating liner in the throat, meet and surpass this Code requirement. In addition, T&B insulated fittings also reduce wire pulling effort by as much as 50%. Temperature rating 105°C.

Insulated Throat Fittings

Cat. No.	Size	Dimensions (in.)	
		A	B
1222	1/2"	1-1/32	29/64
1223	3/4"	1-9/32	31/64
1224	1"	1-19/32	19/32
1225	1-1/4"	1-15/16	21/32
1226	1-1/2"	2-3/16	23/32
1227	2"	2-11/16	7/8
1228	2-1/2"	3-3/16	31/32
1229	3"	3-27/32	15/16
1230	3-1/2"	4-7/16	1-1/16
1231	4"	4-7/8	1-3/32
1232†	4-1/2"	5-7/16	1-15/64
586	5"	5-31/32	1-9/32
587	6"	7-3/16	1-11/32

† Not CSA Certified

Catalogue series 1222 thru 1232, 586 and 587 are available in aluminum. Add suffix **AL** to Cat. No. The aluminum series are not CSA certified.



Aluminum, steel or malleable iron
(steel thru 1-1/2").

Smoothly rounded shoulder covers end of conduit; broad flange covers knockout hole. High ribs make tightening easy with fingers or with wrench. 1/2"-1-1/2" sizes, formed in steel, have extra smooth shoulders. Locknut-type base gives improved bonding and resists loosening under conditions of vibration.

Metallic Bushings



Stl. or M.I.	Cat. No.	Alum.	Size	Dimension (in.)	
				A	B
	122	122AL	1/2"	1-1/32	13/32
	123	123AL*	3/4"	1-9/32	13/32
	124	124AL	1"	1-19/32	1/2
	125-TB	125AL	1-1/4"	1-15/16	9/16
	126	126AL	1-1/2"	2-3/16	9/16
	127	127AL	2"	2-11/16	19/32
	128	128AL	2-1/2"	3-3/16	13/16
	129	129AL	3"	3-27/32	13/16
	130-TB	130AL	3-1/2"	4-7/16	15/16
	131-TB	131AL	4"	4-7/8	1
	132-TB	—	4-1/2"	5-7/16	1-5/64
	133-TB	133AL	5"	6-1/16	1-1/16
	134-TB	134AL	6"	7-3/16	1-1/16

* Not U.L. Listed or CSA Certified

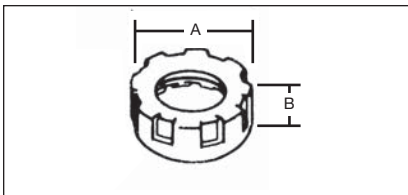
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Plastic Insulating Bushings



All Plastic Insulating Bushings

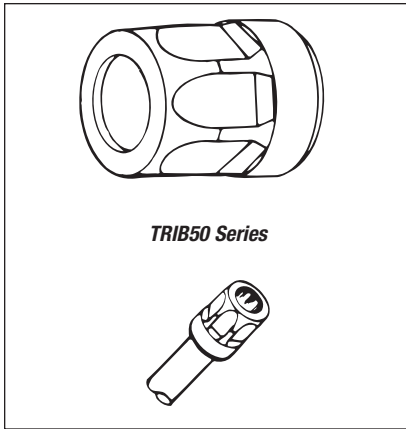
Impact-resistant plastic insulation. These bushings have ribs for gripping when installing. Perfect threads for easy thread on. U.L. Listed 105°C. NPT threaded.

Cat. No.	Size	Dimensions (in.)	
		A	B
222-TB	1/2"	1-1/16	3/8
223-TB	3/4"	1-9/32	13/32
224	1"	1-37/64	9/16
225-TB	1-1/4"	2-1/32	9/16
226	1-1/2"	2-15/64	9/16
227	2"	2-25/32	5/8
228-TB	2-1/2"	3-13/32	3/4
229-TB	3"	4-3/32	3/4
230-TB	3-1/2"	4-5/8	7/8
231	4"	5-3/16	7/8
232	4-1/2"	5-5/8	7/8
233	5"	6-3/8	1
234	6"	7-7/16	1

Flame retardant. U.L. Rated 94V-1.

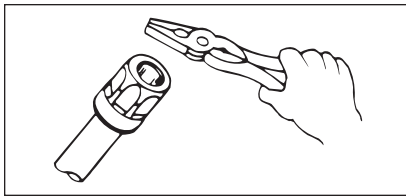
T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

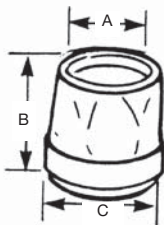
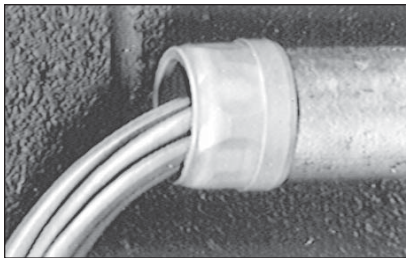


TRIB50 Series

1. Cut conduit end squarely. Remove sharp edges and burrs on inside and outside diameters by reaming or filing.
2. Slip the pop-on bushing over the end of the conduit.



3. Using the flat surface of any standard utility tool such as an electricians pliers (or a hammer with a block of wood, for the larger sizes), strike the bushing on its top surface using a series of light blows until the end of the conduit rests against the bushing throat and conduit stop.



Insulating Bushing

(For Threadless Rigid Conduit and Intermediate Metal Conduit)

Application

- When assembled to the end of a threadless conduit, provides a well rounded insulating surface over which conductors may be pulled or on which conductors may bear while in service.

Features

- Designed to be popped onto, and bush, conduit end.
- Fast easy installation without screws.
- High impact thermoplastic construction.

Standard Material

High impact thermoplastic listed for 105°C (221°F) application. Flammability Classification 94V-1.

Standard Finish

As molded.

Range

1/2" through 4" conduit

Conformity

U.L. 514B
ANSI C80.4
NFPA 70-2008 (ANSI)

Insulated Metallic Bushing



Cat. No.	Size	Dimensions (in.)		
		A	B	C
TRIB-50	1/2"	19/32	1-9/32	1-1/16
TRIB-75	3/4"	25/32	1-25/64	1-1/4
TRIB-100	1"	1	1-1/2	1-9/16
TRIB-125	1-1/4"	1-5/16	1-5/8	1-59/64
TRIB-150	1-1/2"	1-17/32	1-21/32	2-11/64
TRIB-200	2"	1-31/32	1-13/16	2-11/16
TRIB-250	2-1/2"	2-23/64	2	3-1/4
TRIB-300	3"	2-59/64	2-7/32	3-29/32
TRIB-350	3-1/2"	3-3/8	2-5/16	4-29/64
TRIB-400	4"	3-27/32	2-13/32	5

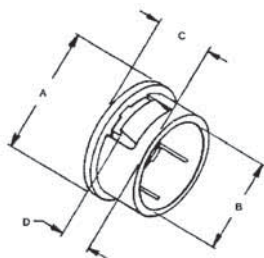
I.M.C. sizes 1/2" thru 4"
U.L. Rated flame retardant 94V-1.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



3210 Series



One-piece knockout bushing quickly snaps into outlet box, switch box, or other enclosure left vacant by wiring modifications or maintenance changes. Provides smooth, rounded insulation surface for easy wire pulling. Easily installed by hand, they are available to fit 1/2" through 2" knockouts. U.L. Listed 105°C. High impact thermoplastic.



Slip over wires—insert into bushing—snaps into place

High dielectric nylon, 105°C.

An insuliner sleeve snapped into a regular bushing makes a CSA Listed insulated bushing. For standard rigid conduit, E.M.T. (thinwall conduit) or any standard bushed outlet. Especially suitable for use with flexible metallic conduit.

Converts ordinary bushing to code approved insulated bushing without disturbing wiring.

Knockout Bushings

Application

- To bush knockout openings in metal boxes or enclosures.

Features

- One piece construction designed to snap in place.
- High impact strength self-extinguishing, non-dripping (per U.L. 94) thermoplastic construction.

Standard Material

Thermoplastic rated for 105°C (221°F) application.

Standard Finish

As molded.

Range

- .875" through 2.469" nominal diameter knockout opening (1/2" through 2" trade size knockouts).

- Wall thickness of box or enclosure .095" max. up to 1" trade size. .140" max. 1-1/4" through 2" trade size.

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NFPA 70-2008 (ANSI)



Knockout Bushing

Cat. No.	Trade Size	For use in KO* +.032/-.016	Wall Thickness of Elec. Box				
			A	B	C	D	
3210	1/2"	.875	1.000	.725	.095 MAX	.360	.180
3211	3/4"	1.109	1.215	.940	.095 MAX	.360	.180
3212	1"	1.375	1.500	1.200	.095 MAX	.360	.180
3213	1-1/4"	1.734	1.865	1.550	.140 MAX	.400	.210
3214	1-1/2"	1.984	2.240	1.760	.140 MAX	.530	.310
3215	2"	2.469	2.740	2.245	.140 MAX	.530	.310

* Per U.L. and NEMA standards.

Material: Thermoplastic

Flammability classification of 94V-1 Per UL 94

Service temperature: -40°C to 105°C.

INSULINER® Sleeves



Cat. No.	Size	Dimension (in.)	
		A	B
422	1/2"	5/8	.022
423	3/4"	11/16	.025
424	1"	7/8	.040
425	1-1/4"	1	.040
426-TB	1-1/2"	1	.050
427-TB	2"	1-1/8	.050
428-TB	2-1/2"	1-1/4	.035
429	3"	1-1/2	.035
430-TB	3-1/2"	1-25/32	.035
431	4"	2-1/32	.035
433	5"	2-1/2	.035
434	6"	2-1/2	.035

Oxygen index >28°

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



A penny under a bushing will seal the end of the conduit during construction. Made to fit any bushing. Completely salvageable.

Pennies—Steel



Cat. No.	Size
815-TB	1/2"
816	3/4"
817	1"
818	1-1/4"
819	1-1/2"
820	2"
821	2-1/2"
822	3"
824	3-1/2"
823	4"

U.L. not applicable

Knockout Plugs

Application

- To bush knockout openings in metal boxes or enclosures.

Features

- One piece construction designed to snap in place.
- High impact strength self extinguishing nondripping (per U.L. 94) thermoplastic construction.

Standard Material

Thermoplastic rated for 105°C (221°F) application.

Standard Finish

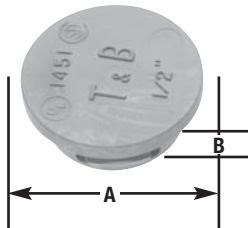
As molded.

Range

- .875" through 2.469" nominal diameter knockout opening (1/42" through 2" trade size knockouts).
- Wall thickness of box or enclosure .095" max. up to 1" trade size. .140" max. 1-1/4" through 2" trade size.

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NFPA 70-2008 (ANSI)



105°C rated by U.L. Made from flame retardant, non-dripping thermoplastic.

Knockout Plugs



Cat. No.	Size	Dimensions (in.)	
		A	B
1451	1/2"	1.060	.400
1452	3/4"	1.300	.400
1453	1"	1.590	.400
1454	1-1/4"	1.860	.450
1455	1-1/2"	2.240	.570
1456	2"	2.740	.570

Wall thickness of electrical box .095 max.
Meets Coast Guard Regulation CB293.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Plug, Conduit, Connectors (Push-Penny® Plugs)

Application

- To plug open end of conduit or fitting in order to prevent ingress of trash, dirt or moisture during construction and remodeling.

Features

- Wide range of application; can be used with rigid metal conduit, intermediate metal conduit, electrical metallic tubing, all connectors and all bushings.
- Designed to stand up to normal handling and is functionally unaffected by moisture.

Standard Material

Polyethylene

Standard Finish

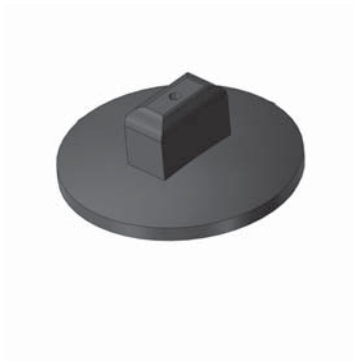
As molded.

Conformity

CSA C22.2 No. 18
ANSI C80.4
NFPA 70-2008 (ANSI)
NEMA FB-1

CEC Rule: 12-3024

"Unused openings in boxes, cabinets and fittings shall be effectively closed by plugs or plates affording protection substantially equivalent to that of the wall of the box, cabinet or fittings."



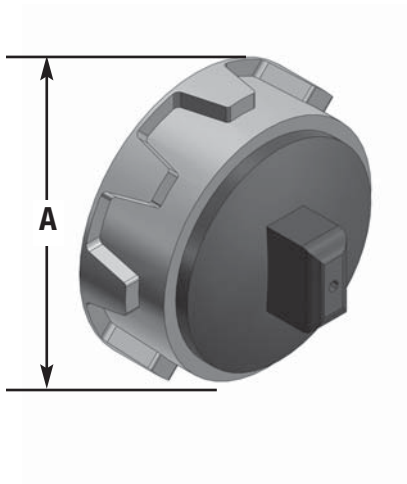
Push-Penny® Plugs

Cat. No.	Size
1470-TB	1/2"
1471	3/4"
1472	1"
1473	1-1/4"
1474	1-1/2"
1475	2"
1476*	2-1/2"
1477*	3"
1478*	3-1/2"
1479*	4"

*Not CSA Certified.

CSA File No. 2884

UL not applicable.



Bushings and Push-Penny® Plugs



Cat. No.	Size	A	Assembly consist of	
			Bushing	Push-penny
1460	1/2"	1-1/32"	122	1470-TB
1461	3/4"	1-9/32"	123	1471
1462	1"	1-19/32"	124	1472
1463	1-1/4"	1-15/16"	125	1473
1464	1-1/2"	2-3/16"	126	1474
1465*	2"	2-21/32"	127	1475

* Maleable Iron

Available in Aluminum

Add suffix **AL** to Cat. No.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



1942 Series
842AL Series (Non Insulated)

CHASE® Nipple

Application

- To effectively bush factory or field-punched, cut, or drilled holes in metal boxes or enclosures.
- To couple boxes back-to-back.

Features

- Rugged construction.
- Insulator curled over to: Bush conductors entering/leaving at any angle. Reduce wire pull effort. Protect threads against damage in handling.

Standard Material

1942 Series
Body 1/2"-Steel
3/8", 3/4" through 6"-Malleable Iron
Insulator Nylon

842AL Series

All Copper-free Aluminum
(less than .4% copper)

Standard Finish

1942 Series Electro-zinc Plated
& Chromate Coated
842AL Series Degreased

Range 1942 & 842AL Series

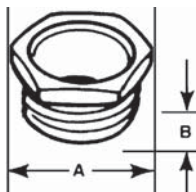
1/4" through 6"
All hub threads straight pipe (NPS).

Conformity

U.L. 514B
CSA C22.2 No. 18.3
Federal Specification W-F-408
ANSI C80.4
NFPA 70-2008 (ANSI)
NEMA FB-1
Federal Standard H-28 (Threads)



Steel, malleable iron or aluminum.



CHASE® Nipples



Stl. or M.I.	Cat. No.	Alum.	Size	Dimensions (in.)	
				A	B
841TB		—	3/8"	13/16	7/16
842TB		842ALTB [†]	1/2"	15/16	11/32
843TB		843ALTB	3/4"	1-3/16	11/32
844		844AL [†]	1"	1-7/16	21/32
845		845AL [†]	1-1/4"	1-3/4	3/4
846		846AL	1-1/2"	2-1/16	13/16
847		847AL	2"	2-1/2	31/32
848		848AL	2-1/2"	3-1/16	1-1/16
849		849AL	3"	3-13/16	1-3/16
850		850AL	3-1/2"	4-3/8	1-5/16
851		851AL	4"	4-3/4	1-5/16
853		853AL	5"	5-7/8	1-5/16
854		854AL	6"	6-15/16	1-3/8

[†] Not U.L. Listed

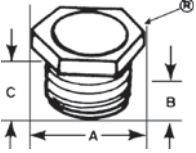
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Steel or malleable iron

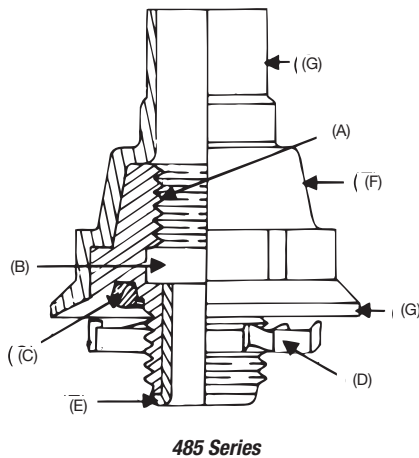
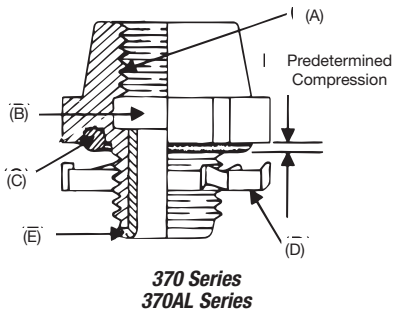


CHASE® Nipples—Nylon Insulated

Cat. No.	Size in.	Dimensions (in.)		
		A	B	C
1942	1/2	15/16	1/2	19/32
1943	3/4	1-3/16	17/32	23/32
1944	1	1-7/16	21/32	7/8
1945	1-1/4	1-3/4	25/32	1-1/32
1946	1-1/2	2-1/16	13/16	1-3/32
1947	2	2-9/16	31/32	1-11/32
1948	2-1/2	3-1/16	1-1/16	1-7/16
1949	3	3-13/16	1-3/16	1-19/32
1950	3-1/2	4-3/8	1-5/16	1-25/32
1951	4	4-5/8	1-5/16	1-13/16
1953	5	5-29/32	1-5/16	1-13/16
1954	6	6-13/16	1-3/8	1-7/8

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Threaded Hubs (Bullet® Hubs)

(For Threaded Rigid Metal Conduit/IMC/PVC Coated Rigid Metal Conduit)

Application

- To connect threaded metal conduit (ferrous rigid/nonferrous rigid/PVC coated/or intermediate metal) to a threadless opening in a box or enclosure in outdoor or indoor location exposed to continuous or intermittent moisture.

- To positively bond conduit to box or enclosure.

Features

- Rugged steel/malleable iron/copper-free aluminum construction.
- Tapered internal threads for watertight/dust tight union (A).
- Threads relieved to prevent bottoming of conduit ensuring sound assembly (B).
- Recessed sealing ring at box end. Captive sealing ring (C).
- Hardened steel/malleable iron/copper-free aluminum locknuts designed to provide high quality ground continuity; extended reach of locknut permits clamping on thin boxes and enclosures (D).
- Insulated throat protects conductors, prevents abrasion and thinning of conductor insulation, reduces wire pull effort (E).

- Suitable for hazardous location use per following:

- (i) Class II, Division 1 Groups E, F, G, CEC Rule 18-202
- Class II, Division 2 Groups E, F, G, CEC Rule 18-252
- Class III, Division 1 Rule 18-302
- Class III, Division 2 Rule 18-352

- PVC coated 485 Series

- (i) Protects fitting from extremely corrosive surroundings without affecting integrity of electrical grounding path (F).
- (ii) Provided with overlapping sleeve for additional seal (G).

Canadian Electric Code Rule 10-602 states that, "Where dissimilar metals cannot be avoided at bonding connections as indicated in Rule 2-112 (2). Connections shall be made using methods or material that will minimize deterioration from galvanic action".

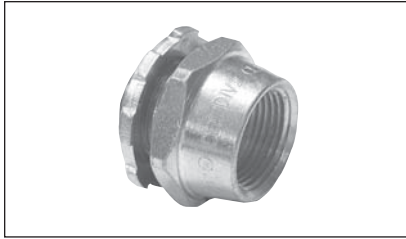
Joint Industrial Council (JIC) Electrical Standards also forbid dissimilar metals in contact for the same reason and require that the fittings for metal conduit be of malleable iron or ductile iron and have impact strength comparable to that of the conduit.

"Copper-free Aluminum"

- Copper-free aluminum castings for fittings have a maximum of 0.4% copper. The most detrimental effect of higher percentage of copper on aluminum base alloy is its decrease in corrosion resistance.

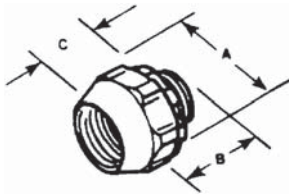
T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Nylon insulated.

Aluminum, steel, or malleable iron (steel through 1"). With Neoprene "O" Ring provides a watertight threaded hub on enclosures. U.L. Listed 105°C.



Steel/Malleable Iron and Aluminum Hub Fittings[†]

Stl. or M.I.	Cat. No.	Alum.**	Size	Dimensions (in.)			Wall Thk. (max.)in.
				A	B	C	
370	370AL		1/2	1-3/8	1-5/16	3/4	5/16
371	371AL		3/4	1-5/8	1-3/8	7/8	5/16
372	372AL		1	2-3/32	1-23/32	1-7/32	5/16
373	373AL		1-1/4	2-9/16	2	1-11/32	5/16
374	374AL		1-1/2	3-3/32	2	1-11/32	5/16
375	375AL		2	3-5/8	1-31/32	1-11/32	5/16
376	—		2-1/2	4-1/8	2-21/32	1-15/16	5/16
377	—		3	5	2-31/32	2	1/2
378	—		3-1/2	5-9/16	3-1/8	2-1/8	1/2
379-TB	—		4	6-9/16	3-1/8	2-1/8	1/2
381-TB	—		5	8	4	2-3/16	1/2
382-TB	—		6	9-3/16	4	2-3/16	1/2

** Aluminum not available with insulated throat.

[†] U.L. Listed raintight and CSA Certified watertight and dust tight.

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

Bullet® Hub Fittings with Bonding Locknut — Nylon Insulated



Cat. No.	Size (in.)	Description
401	1/2	
402	3/4	
403-TB	1	Available in steel or malleable iron
404-TB	1-1/4	(steel through 1 inch.)
405-TB	1-1/2	Used with a neoprene "O" ring to provide
407	2-1/2	Supplied with 106 series bonding nut.
408	3	Temperature rating: 105°C.
409	3-1/2	
410-TB	4	

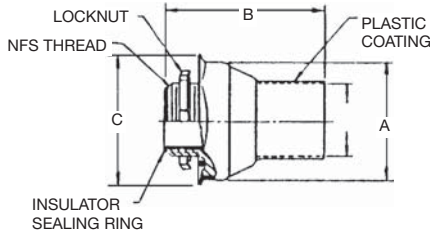
CSA certified watertight and dust tight.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Steel or malleable iron (steel thru 1-1/4").



PVC Coated Hub for Rigid Conduit

Cat. No.	Conduit Size	Dimensions (in.)		
		A	B	C
485	1/2"	1-21/64	2-1/8	1-7/8
486	3/4"	1-19/32	2-3/8	2-1/8
487	1"	1-27/32	2-3/4	2-3/8
488	1-1/4"	2-15/32	3-3/8	3-1/8
489	1-1/2"	2-29/32	3-5/8	3-1/2
490	2"	3-3/8	3-3/4	4
491	2-1/2"	3-27/32	4	4-1/2
492	3"	4-21/32	4-5/8	5-3/8
493	3-1/2"	5-9/64	4-13/16	5-7/8
494	4"	5-3/4	4-9/16	6-7/16

*485 Series are CSA Certified Watertight and Dustight for Ordinary Locations.

Spacing Chart for Bullet® Hubs



	Center to Center Spacing Conduit Sizes										Min. Space from Center of Bullet® Hub to Wall of Box	KO Diameters (min.)
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4		
1/2	1-7/16	1-5/8	1-3/4	2-1/8	2-3/8	2-5/8	2-7/8	3-5/16	3-1/2	3-7/8	3/4	7/8
3/4	—	1-3/4	1-7/8	2-1/4	2-1/2	2-3/4	3	3-1/2	3-3/4	4-1/8	7/8	1-1/8
1	—	—	2	2-3/8	2-5/8	2-7/8	3-1/8	3-5/8	3-7/8	4-1/4	1-1/8	1-3/8
1-1/4	—	—	—	2-11/16	2-15/16	3-1/4	3-1/2	4	4-1/4	4-1/2	1-3/8	1-3/4
1-1/2	—	—	—	—	3-1/8	3-1/2	3-3/4	4-1/8	4-3/8	4-3/4	1-5/8	2
2	—	—	—	—	—	3-3/4	4	4-1/2	4-3/4	5	1-7/8	2-1/2
2-1/2	—	—	—	—	—	—	4-1/4	4-3/4	5	5-3/8	2-1/8	3
3	—	—	—	—	—	—	—	5-1/8	5-3/8	5-3/4	2-5/8	3-5/8
3-1/2	—	—	—	—	—	—	—	—	5-5/8	6	2-7/8	4-1/8
4	—	—	—	—	—	—	—	—	—	6-1/4	3-1/4	4-5/8

T&B Hub Centerline Spacing Chart



Conduit Trade Size inc.	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	5"	6"
1/2"	1-9/16											
3/4"	1-43/64	1-25/32										
1"	1-27/32	1-61/64	2-1/8									
1-1/4"	2-1/32	2-9/64	2-5/16	2-1/2								
1-1/2"	2-7/32	2-21/64	2-1/2	2-11/16	2-7/8							
2"	2-15/32	2-37/64	2-3/4	2-15/16	3-1/8	3-3/8						
2-1/2"	2-23/32	2-53/64	3	3-3/16	3-3/8	3-5/8	3-7/8					
3"	3-1/32	3-9/64	3-5/16	3-1/2	3-11/16	3-15/16	4-3/16	4-1/2				
3-1/2"	3-11/32	3-21/64	3-5/8	3-13/16	4	4-1/4	4-1/2	4-13/16	5-1/8			
4"	3-19/32	3}	3-7/8	4-1/16	4-1/4	4-1/2	4-3/4	5-1/16	5-3/8	5-5/8		
5"	4-9/32	3-25/64	4-9/16	4-3/4	4-15/16	5-3/16	5-7/16	5-3/4	6-1/16	6-5/16	7	
6"	4-11/16	4-51/64	4-31/32	5-5/32	5-11/32	5-19/32	5-27/32	6-5/32	6-15/32	6-23/32	7-13/32	7-13/16

Nearest obstruction to center of hub.

27/32	61/64	1-1/8	1-5/16	1-1/2	1-3/4	2	2-5/16	2-5/8	2-7/8	2-9/16	3-31/32
-------	-------	-------	--------	-------	-------	---	--------	-------	-------	--------	---------

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



THE T&B Hub

Never before has a single hub fit like this one. Designed for unequalled performance. The innovative engineering of the T&B Hub will, quite simply, raise your performance expectations for threaded hubs. The revolution in hub design is here, and the fate of our competition is sealed.

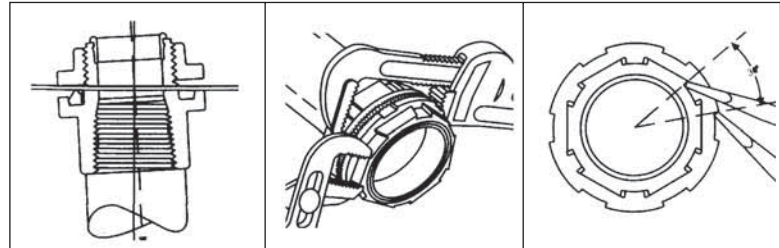
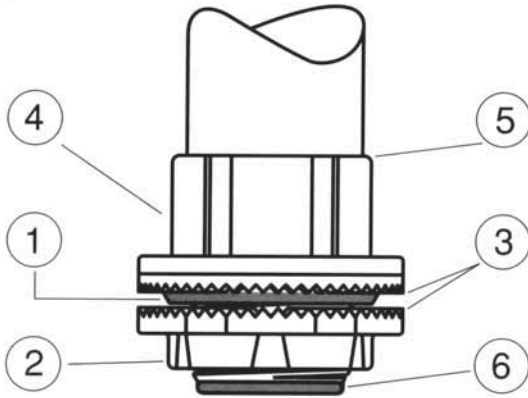


Figure 1

Figure 2

Figure 3

1. Sealing ring and groove with innovative profile outperforms standard 'O' ring design. Sealing ring is captive before installation and resists buckling or slipping during installation. The seal groove is designed for optimum compression of the sealing ring. The sealing ring is designed to provide a complete 360° seal, even when the conduit is not perpendicular with the enclosure. (See Figure 1)

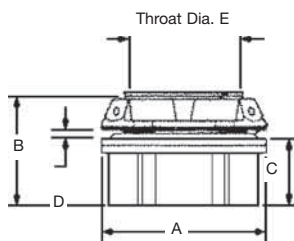
2. Locknut design with peripheral slots and a hexagonal/angled spline spaced every 30° enables easy application of torque with wrench or hammer and screwdriver. (See Figures 2 & 3)

3. Sharper and deeper teeth on locknut and body designed for a more penetrating bite for improved bonding to the enclosure.

4. Hexagonal / splined body design for fast, easy installation with wrench or hammer and screwdriver.

5. Precision machined tapered threads designed to create water-tight union.

6. Insulated throat molded from 105°C rated thermoplastic with a flammability rating of 94 V-O.



T&B Hub

Cat. No.	Trade Size (in.)	Dia.			Max. Panel Thickness D	Throat Dia. E
		A	B	C		
H050-TB	1/2	1-7/16	1-9/16	7/8	3/16	19/32
H075-TB	3/4	1-21/32	1-19/32	29/32	3/16	25/32
H100-TB	1	2	1-13/16	1-1/16	1/4	1
H125-TB	1-1/4	2-3/8	1-7/8	1-1/16	1/4	1-5/16
H150-TB	1-1/2	2-3/4	1-7/8	1-1/16	1/4	1-17/32
H200-TB	2	3-1/4	1-15/16	1-5/32	1/4	1-31/32
H250-TB	2-1/2	3-3/4	2-9/16	1-9/16	1/4	2-13/32
H300-TB	3	4-3/8	2-21/32	1-19/32	1/4	2-31/32
H350-TB	3-1/2	5	2-23/32	1-5/8	1/4	3-13/32
H400-TB	4	5-1/2	2-23/32	1-5/8	1/4	3-7/8
H500-TB	5	6-7/8	3-1/32	1-15/16	1/4	4-15/16
H600-TB	6	7-11/16	3-5/32	2	1/4	6

Material – Hub and Locknut: zinc or copper free aluminum

Insulating Throat: thermoplastic temp. rating – 105°C, Flammability Rating: – 94V-0

Sealing Ring: Nitrile (BUNA "N")

For Aluminum Hubs add suffix **A** (i.e. H050A). For Chrome Plated Hubs add suffix **CP** (i.e. H050CP). Meets NEMA sealing requirements for NEMA 3R, 4 & 13 enclosures.

U.L. Listed and CSA Certified. CSA Certified use in hazardous locations Class I, Division 2, Class II, Divisions 1 and 2, Groups E, F and G, Class III, Division 1, 2 and Type 4.

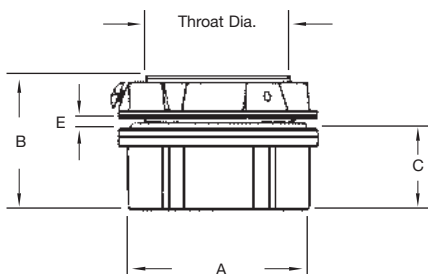
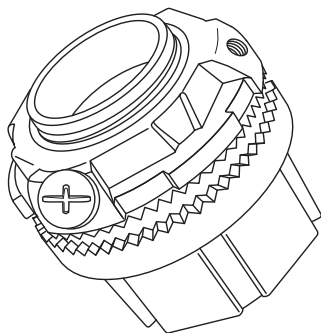
Chrome Plated Hubs (suffix-"CP") are rated NEMA 4X.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



T&B Grounding Hub



Cat. No.	Trade Size	Dimensions (in.)				
		A Dia.	B	C	D Max. Panel Thickness	E Throat Dia.
H050GR-C	1/2	17/16	19/16	7/8	3/16	19/32
H075GR-C	3/4	12-1/32	1-19/32	29/32	3/16	25/32
H100GR-C	1	2	1-13/16	1-1/16	1/4	1
H125GR-C	1-1/4	2-3/8	1-7/8	1-1/16	1/4	1-5/16
H150GR-C	1-1/2	2-3/4	1-7/8	1-1/16	1/4	1-17/32
H200GR-C	2	3-1/4	1-15/16	1-15/32	1/4	1-31/32
H250GR-C	2-1/2	3-3/4	2-9/16	1-9/16	1/4	2-13/32
H300GR-C	3	4-3/8	2-21/32	1-19/32	1/4	2-31/32
H350GR-C	3-1/2	5	2-23/32	1-5/8	1/4	3-13/32
H400GR-C	4	5-1/2	2-23/32	1-5/8	1/4	3-7/8
H500GR-C	5	6-7/8	3-1/32	1-15/16	1/4	4-15/16
H600GR-C	6	7-11/16	3-5/32	2	5/16	6

Material—Hub and Locknut: zinc or copper-free aluminum.

Insulating Throat: thermoplastic temp. rating—105°C;

flammability rating:—94V-0.

Sealing Ring: Nitrile (BUNA "N")

For Aluminum Grounding Hubs add suffix **A** (i.e. H050GRA-C).

For Chrome Plated Hubs add suffix **CP** (i.e. H050GRCP).

For 316 Stainless Steel Hubs add suffix **SST** (i.e. H050GRSST).

For PVC coating add suffix **PVC** (i.e. H050GRPVC-C).

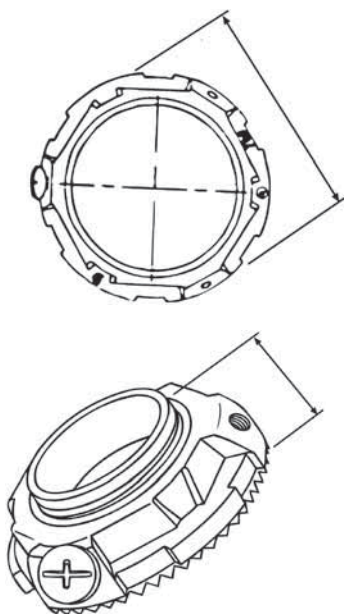
Meets NEMA sealing requirements for NEMA 3R, 4 & 13 enclosures.

U.L. Listed and CSA Certified.

CSA approved for use in hazardous locations: Class I, Division 2, Class II, Divisions 1 & 2, Groups E, F & G, Class III, Division 1, 2 and Type 4.



T&B Grounding and Bonding Locknut



Cat. No.	Trade Size	A Dia.	B Height	Ground Screw	Max. Conductor Size
L050GR-C	1/2	1-1/2	13/32	#10-32 x 1/4"	#10
L075GR-C	3/4	1-11/16	13/32	#10-32 x 1/4"	#10
L100GR-C	1	2	13/32	#10-32 x 1/4"	#10
L125GR-C	1-1/4	2-3/8	15/32	1¼-20 x 1/4"	#10
L150GR-C	1-1/2	2-3/4	15/32	1¼-20 x 5/16"	#8
L200GR-C	2	3-1/4	15/32	1¼-20 x 5/16"	#8
L250GR-C	2-1/2	3-3/4	11/16	1¼-20 x 5/16"	#6
L300GR-C	3	4-3/8	23/32	1¼-20 x 5/16"	#6
L350GR-C	3-1/2	5	23/32	1¼-20 x 5/16"	#6
L400GR-C	4	5-1/2	23/32	1¼-20 x 5/16"	#4
L500GR-C	5	6-5/8	23/32	3¼-16 x 3/8"	#2
L600GR-C	6	7-11/16	23/32	3¼-16 x 3/8"	#1

Material—Locknut: zinc or copper-free aluminum

For Aluminum Locknuts add suffix **A** (i.e. L050GRA-C)

For Chrome Plated Locknuts add suffix **CP** (i.e. L050GR-CP)

For 316 Stainless Steel Locknuts add suffix **SST** (i.e. L050GRSST).

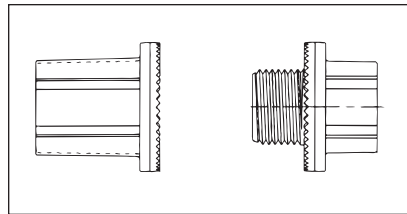
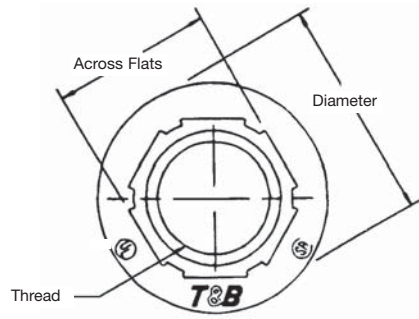
Grounding Locknut for Hubs

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

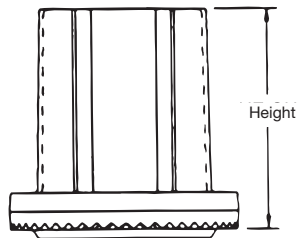


T&B Bulkhead Fittings

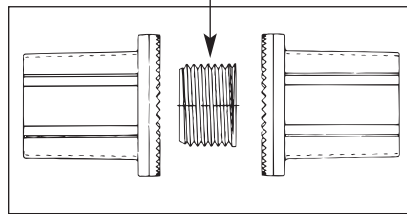


Bulkhead Fitting

Cat. No.	Trade Size
H050BHD	1/2"
H075BHD	3/4"
H100BHD	1"
H125BHD	1-1/4"
H150BHD	1-1/2"
H200BHD	2"
H250BHD	2-1/2"
H300BHD	3"
H350BHD	3-1/2"
H400BHD	4"
H500BHD	5"
H600BHD	6"



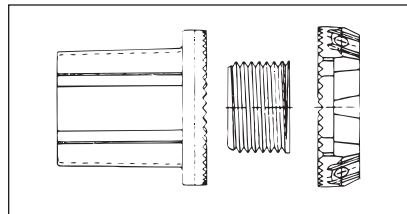
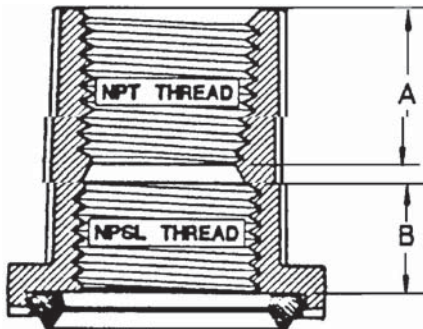
Nipple Nut
Not Included



Thru Bulkhead Fitting



Trade Cat. No.	Size
H050TBF	1/2"
H075TBF	3/4"
H100TBF	1"
H125TBF	1-1/4"
H150TBF	1-1/2"
H200TBF	2"



Thru Bulkhead Hub



Trade Cat. No.	Size
H050TBH	1/2"
H075TBH	3/4"
H100TBH	1"
H125TBH	1-1/4"
H150TBH	1-1/2"
H200TBH	2"

Trade Size	Thread	Height	Diameter	Across Flats	A	B
1/2"	1/2"-14	1-13/32	1-7/16	1	3/4	1/2
3/4"	3/4"-14	1-15/32	1-11/16	1-1/4	25/32	17/32
1"	1"-11-1/2	1-11/16	2	1-17/32	29/32	19/32
1/4"	1-1/4"-11-1/2	1-25/32	2-3/8	1-27/32	29/32	21/32
1-1/2"	1-1/2"-11-1/2	1-13/16	2-3/4	1-1/8	29/32	21/32
2"	2"-1-1/2	1-27/32	3-1/4	2-5/8	15/16	21/32
2-1/2"	2-1/2"-8	29/32	3-3/4	3-1/8	17/32	7/8
3"	3"-8	2-9/16	4-3/8	3-25/32	15/16	29/32
3-1/2"	3-1/2"-8	2-9/16	5	4-9/32	1-3/8	7/8
4"	4"-8	2-9/16	5-1/2	4-27/32	1-3/8	7/8
5"	5"-8	2-23/32	6-5/8	5-29/32	1-15/32	7/8
6"	6"-8	3	7-11/16	7-1/32	1-1/2	31/32

Material—Hub, Body and Locknut: zinc or copper-free aluminum

Insulating Throat: thermoplastic temp. rating—105°C; Flammability rating:—94V-0

Sealing Ring: Nitrile (BUNA "N")

For Aluminum Bulkhead add suffix **A**.

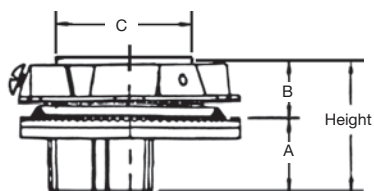
For Chrome Plated Bulkhead add suffix **CP**.

T&B Conduit Fittings

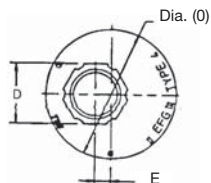
Rigid and Intermediate Metal Conduit Fittings



Offset Reducers



Dia. (Ø)



Cat. No.	Trade Size	Height	Dia. (Ø)	Dimensions (in.)				
				A	B	C	D	E
H150-075ORGR-TB	1-1/2"-3/4"	1-21/32	2-3/4	15/16	23/32	1-29/32	1-9/32	11/32
H150-100ORGR-TB	1-1/2"-1"	1-25/32	2-3/4	1-1/16	23/32	1-29/32	1-9/16	7/32
H150-125ORGR-TB	1-1/2"-1-1/4"	1-25/32	2-3/4	1-1/16	23/32	1-29/32	1-7/8	1/32
H250-200ORGR-TB	2-1/2"-2"	2-1/8	3-3/4	1-3/16	15/16	2-29/32	2-21/32	3/32

Material—Offset Reducer and Locknut: zinc or copper-free aluminum

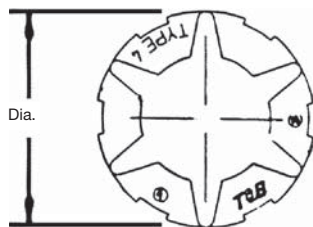
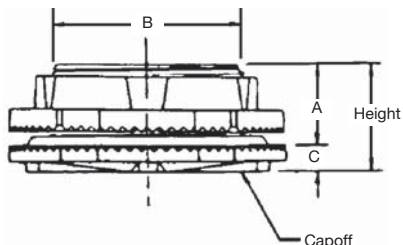
Insulating Throat: thermoplastic temp. rating—105°C; Flammability rating—94V-0

Sealing Ring: Nitrile (BUNA "N")

For Aluminum Offset Reducer add suffix **A**. (i.e. H150-125ORGRA-TB)

For Chrome Plated Offset Reducer add suffix **CP**. (i.e. H150-125ORGRCP-TB)

Capoffs



Cat. No.	Trade Size	Height	Diameter	Dimensions (in.)		
				A	B	C
H050CAP	1/2"	1-13/32	1-7/16	19/32	27/32	3/16
H075CAP	3/4"	1-15/32	1-11/16	19/32	1-1/16	3/16
H100CAP	1"	1-11/16	2	11/16	1-5/16	1/4
H125CAP	1-1/4"	1-25/32	2-3/8	23/32	1-21/32	1/4
H150CAP	1-1/2"	1-13/16	2-3/4	23/32	1-29/32	1/4
H200CAP	2"	1-27/32	3-1/4	23/32	2-3/8	1/4
H250CAP	2-1/2"	2-9/32	3-3/4	7/8	2-29/32	1/4
H300CAP	3"	2-9/16	4-3/8	7/8	3-1/32	11/32
H350CAP	3-1/2"	2-9/16	5	29/32	4-1/32	11/32
H400CAP	4"	2-9/16	5-1/2	29/32	4-1/2	11/32
H500CAP	5"	2-23/32	6-5/8	29/32	5-9/16	11/32
H600CAP	6"	3	7-5/8	31/32	6-5/8	11/32

Material—Capoff and Locknut: zinc or copper-free aluminum

Insulating Throat: thermoplastic temp. rating—105°C; flammability rating—94V-0

Sealing Ring: Nitrile (BUNA "N")

For Aluminum Capoff add suffix **A**. (i.e. H050CAPA)

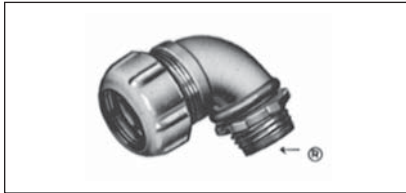
For Chrome Plated Capoff add suffix **CP**. (i.e. H050CAPCP)

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



8123 Series



8130 Series



8120 Series

Threadless Fittings/Couplings

(For Threadless Rigid Metal Conduit and Intermediate Metal Conduit)

Application

- To connect and effectively bond threadless rigid metal conduit/intermediate metal conduit to a box or enclosure, or to couple ends of threadless conduit.

Features

- Steel/Malleable Iron Construction.
- Case hardened ring bites into conduit for high quality continuity and grip.
- Nylon insulator firmly secured in place protects conductors and reduces wire pulling effort by as much as 50%; prevents thread damage in handling.
- Case hardened steel locknut or malleable iron locknut designed to provide a positive bond.
- Suitable for concrete tight application.
- Raintight application.
- Capable of carrying ground fault currents up to 10,000 amps RMS (1/2" through 1-1/2" size) and 20,000 amps RMS (2" and above sizes) duration of current 3 cycles.

Standard Material

Nut, Gland	1/2" to 1" Steel—1-1/4" to 4" Malleable Iron
Body	All Malleable Iron
Ring	Steel (case hardened)
Insulator	Nylon
Locknut	1/2" thru 2" Steel (hardened) 2" thru 4" Malleable Iron

Standard Finish

Electro Zinc Plated & Chromate Coated

Range

- 8123 & 8120 Series 1/2" through 4" Size Conduit
- 8130 Series 1/2" and 3/4" Size Conduit
- All hub threads Straight Pipe (NPS)

Conformity

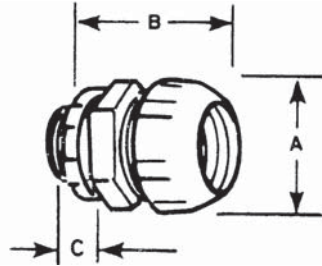
U.L. 514B
 CSA C22.2 No. 18.3
 ANSI C80.4
 NFPA 70-2008 (ANSI)
 NEMA FB-1
 Federal Specification W-F-408
 Federal Standard H-28 (Threads)

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



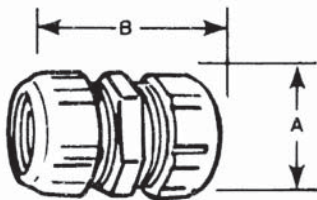
Nylon Insulated Threadless Fittings



A split steel ring with diagonal serrations grips the conduit and bites into it for positive ground. Makes a permanent connection and eliminates the need for cutting a thread on the conduit. Insulation helps to guarantee continuity of service with protection of the conductor at the critical point—the fitting bushing. Malleable iron construction.

Cat. No.		Conduit Size	Dimensions (in.)		
Nylon Insul.	Non-Insul.		A	B	C
8123	8121	1/2"	1-11/32	1-15/16	3/4
8223	8221	3/4"	1-5/8	2	3/4
8323	8321	1"	1-7/8	2-7/16	7/8
8423	8421	1-1/4"	2-3/8	2-9/16	11/16
8523	8521	1-1/2"	2-5/8	2-3/4	3/4
8623	8621	2"	3-1/4	2-15/16	27/32
8723-TB	8721	2-1/2"	3-15/16	3-15/16	1-1/8
8823-TB	8821	3"	4-11/16	4-1/8	1-7/32
8853	8851	3-1/2"	5-3/16	4-1/4	1-1/8
8973	8971	4"	5-11/16	5	1-1/8

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.



Eliminate conduit threading. When tightened with a wrench they make a U.L. Listed and CSA Certified concrete-tight connection. Malleable iron.

Threadless Couplings



Cat. No.	Size	Dimensions (in.)	
		A	B
8120	1/2"	1-9/32	2
8220	3/4"	1-19/32	2-5/16
8320	1"	1-7/8	2-11/16
8420	1-1/4"	2-3/8	2-13/16
8520	1-1/2"	2-5/8	3-5/8
8620	2"	3-1/4	3-13/16
8720	2-1/2"	3-15/16	5-3/8
8820	3"	4-11/16	5-1/2
8850	3-1/2"	5-3/16	5-1/2
8970	4"	5-11/16	5-1/2

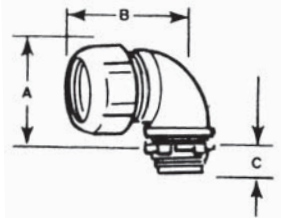
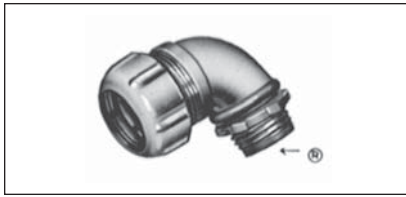
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Threadless Short Elbows—Nylon Insulated



Cat. No.	Size	Dimensions (in.)		
		A	B	C
8130	1/2"	1-11/32	1-1/2	1/2
8131	3/4"	1-5/8	1-3/4	9/16
8132	1"	1-7/8	1-15/16	11/16
8134	1-1/2"	2-23/32	3-1/8	13/16

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

Ideal for entering enclosure or conduit body at right angles. Eliminates need to thread conduit. As with straight couplings, this fitting makes a concrete-tight connection. Malleable iron.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Specifications—Set Screw Fitting/Coupling

(For Threadless Rigid Metal Conduit and Intermediate Metal Conduit)



8125 Series



8124 Series

Application

- To connect and effectively bond threadless rigid metal conduit or intermediate metal conduit to a box or enclosure or to couple ends of threadless conduit.

Features

- Thickwall steel or malleable iron body.
- Hardened hex head cup point screw to provide high quality bond.
- Captive screw, will not vibrate loose.
- Nylon insulated throat meets and exceeds all codes requirements for bushing:
 - (i) Prevents thinning of insulation.
 - (ii) Reduces installation effort.
 - (iii) Prevents first thread damage.
- Coupling provided with positive center stop.
- Suitable for concretetight application.
- Capable of carrying ground fault currents up to 10,000 amps RMS (1/42 through 1-1/2" size) and 20,000 amps RMS (2" and above sizes).

Standard Material

Body	1/2" thru 2" Steel 2-1/2" thru 4" Malleable Iron
Locknut	1/2" thru 2" Steel (hardened) 2-1/2" thru 4" Malleable Iron
Screw	Steel (hardened)
Insulator	Nylon

Standard Finish

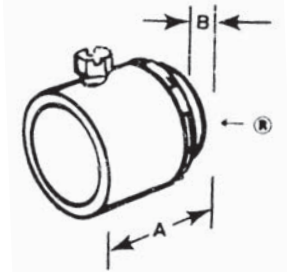
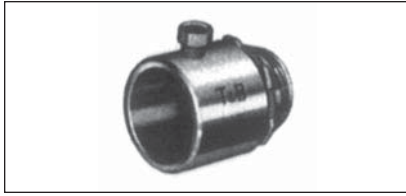
Electro Zinc Plated & Chromate Coated.

Conformity

U.L. 514B
CSA C22.2 No. 18.3
ANSI C80.4
NFPA 70-2008 (ANSI)
NEMA FB-1
Federal Specification W-F-408
Federal Standard H-28 (Threads)

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

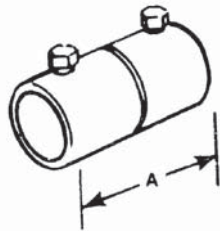


Eliminate conduit threading with these set screw fittings. Captive hex head screws tighten down onto conduit for positive holding strength and ground. The fittings are furnished with insulated throats reducing wire pulling effort by as much as 50%. Approved concrete-tight.

Insulated Set-Screw Fitting

Cat. No.	Conduit Size	Dimensions (in.)	
		A	B
8125	1/2"	1-3/8	13/32
8225	3/4"	1-1/2	7/16
8325	1"	1-13/16	35/65
8425	1-1/4"	2	5/8
8525-TB	1-1/2"	2-5/16	5/8
8625	2"	2-7/16	11/16
8725-TB	2-1/2"	3-3/8	1
8825	3"	3-7/16	1
8855	3-1/2"	3-7/8	1-1/16
8975	4"	4-3/16	1-1/8

Sizes 1/2"-2" made of steel. Sizes 2-1/2"-4" are malleable iron.
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.



Eliminate the need for threading conduit ends when joining rigid conduit with these set screw couplings. Captive hex head screws provide positive holding strength and ground continuity. Approved concrete-tight.

Set Screw Coupling



Cat. No.	Conduit Size	Dimensions (in.)
		A
8124	1/2"	2-1/2
8224-TB	3/4"	2-11/16
8324-TB	1"	2-27/32
8424	1-1/4"	3
8524	1-1/2"	3-3/8
8624	2"	3-5/8
8724-TB	2-1/2"	3-7/8
8824-TB	3"	4-1/4
8854	3-1/2"	4-15/16
8974	4"	5-3/8

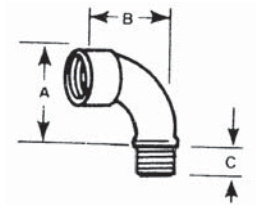
Sizes 1/2"-2" made of steel; sizes 2-1/2"-4" are malleable iron.
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Bushed Elbows



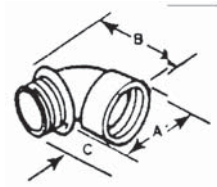
The noninsulated elbow has smoothly rounded shoulders to protect conductor insulation. Malleable iron.

Cat. No.	Size	Dimensions (in.)		
		A	B	C
460TB	1/2"	1-13/16	1-1/8	5/8
461TB	3/4"	2-1/4	1-1/2	9/16
462	1"	2-23/32	1-23/32	11/16
463	1-1/4"	3-1/8	2-1/16	25/32

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.



Short Elbows—Nylon Insulated



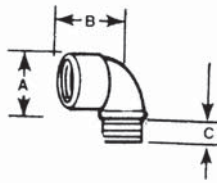
The integral insulation of the insulated elbow is a guarantee that the bushing of every fitting will be smooth. Malleable iron.

Cat. No.	Size	Dimensions (in.)		
		A	B	C
4290	1/2"	1-7/32	1-1/4	1/2
4291	3/4"	1-7/16	1-5/16	9/16
4292	1"	1-23/32	1-9/16	11/16
4293	1-1/4"	2-7/32	2-1/16	13/16
4294	1-1/2"	2-15/32	2-3/16	13/16
4295	2"	3	2-9/16	13/16

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.
Not U.L. Listed



Short Elbows



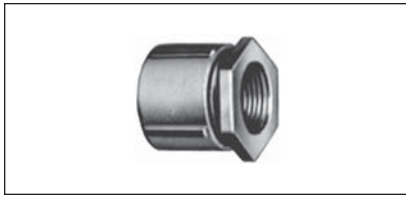
When an insulated elbow is not desired, the Noninsulated short elbow should be used. Malleable iron.

Cat. No.	Size	Dimensions (in.)		
		A	B	C
4250	1/2"	1-5/16	1-1/4	7/16
4251	3/4"	1-17/32	1-5/16	1/2
4252	1"	1-13/16	1-9/16	5/8
4253	1-1/4"	2-9/32	2-1/16	11/16
4254	1-1/2"	2-9/16	2-3/16	11/16
4255	2"	3-3/32	2-9/16	11/16

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



674 Series
675AL Series

Threaded Coupling (ERICKSON® Couplings)

(For Threaded Rigid Metal Conduit and Intermediate Metal Conduit)

Application

- To couple and effectively bond threaded ends of rigid metal conduit/intermediate metal conduit where neither length of conduit can be rotated.

Features

- Malleable Iron/Steel/Copper-free Aluminum Construction.
- Free fitting threads ensure easy assembly.
- Permits conduit coupling without rotating either conduit.
- Provides rigid in-line coupling with high quality grounding; will not loosen under vibration.
- Suitable for concrete-tight application.
- Capable of carrying ground fault currents up to 10,000 amps RMS (1/2" through 1-1/2" size) and up to 20,000 amps RMS (2" and above) (duration of fault current 3 cycles) (674 series tested).

Standard Material

674 Series

Bushing and Body Malleable Iron
Ring Steel up to 2" or Malleable Iron

675AL Series

Bushing and Body Aluminum
Ring Aluminum

Standard Finish

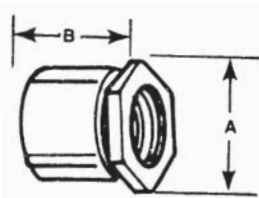
674 Series: Electro Zinc Plated & Chromate Coated
675AL Series: Degreased

Range

- 674 Series: 3/8" thru 6" Conduit
- 675AL Series: 1/2" thru 6" Conduit
- All straight pipe threads (NPS)

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NEMA FB1
ANSI C80.4
NFPA 70-2008 (ANSI)
Federal Specification W-F-408
Federal Standard H-28 (Threads)



With an Erickson coupling, a conduit run may be completed when neither conduit can be turned. A conduit run may also be broken without taking down the whole run. Conduit joined with Erickson Couplings is rigid and in line and vibration will not loosen the connections.

ERICKSON® Couplings



Cat. No.	Mal. Iron	Alum.*	Size	Dimensions (in.)	
				A	B
674		—	3/8"	1-1/8	1-1/8
675		675AL	1/2"	1-15/32	1-1/4
676		676AL	3/4"	1-9/16	1-13/32
677		677AL	1"	1-29/32	1-5/8
678		678AL	1-1/4"	2-3/8	1-13/16
679		679AL	1-1/2"	2-5/8	1-31/32
680-TB		680AL	2"	3-7/32	2-7/32
681		681AL	2-1/2"	3-3/32	2-11/16
682		682AL	3"	4-7/16	2-29/32
683		683AL	3-1/2"	5	3
684		684AL	4"	5-1/2	3-3/16
685		685AL [†]	4-1/2"	6-1/4	3-15/32
686		686AL	5"	6-25/32	3-3/4
687		687AL	6"	8	4-1/32

* Copper-free Aluminum (less than .4% Copper).

U.L. Listed and CSA Certified concrete-tight.

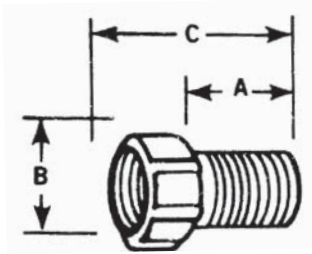
[†] Not CSA Certified.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

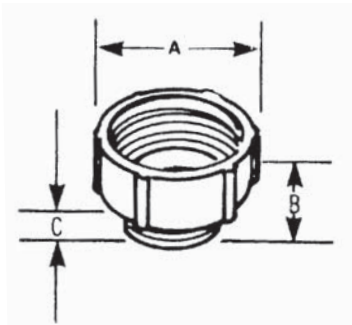


Panel Fitting Extensions



Ideal when longer thread length is needed. Will combine with any fitting having a male thread. Male thread of panel fitting extension is 1" long. Malleable iron.

Cat. No.	Size	Dimensions (in.)		
		A	B	C
1440	1/2"	1-1/4	1-3/16	1-7/8
1441	3/4"	1-1/4	1-13/32	1-15/16
1442	1"	1-3/16	1-21/32	1-15/16
1443	1-1/4"	1-1/4	2-1/8	2



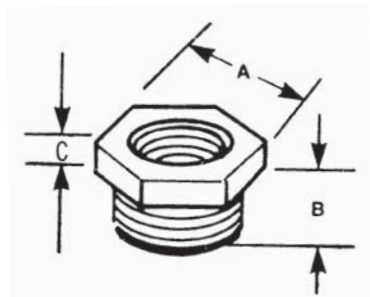
Adapt an outlet hole to the next larger size of conduit. Rough ends of conduit carefully covered by built-in bushing. Malleable iron.

Male Enlargers*



Cat. No.	Size	Dimensions (in.)		
		A	B	C
1245	1/2" to 3/4"	1-1/4	1-5/32	1/2
1246	3/4" to 1"	1-17/32	1-9/32	15/32
1244	1" to 1-1/4"	1-7/8	1-7/16	17/32
1247	1-1/4" to 1-1/2"	2-3/16	1-15/32	19/32

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.



Adapt any outlet to the next smaller size of conduit. Hex shoulder makes wrench tightening convenient. Malleable iron.

Female Reducers*

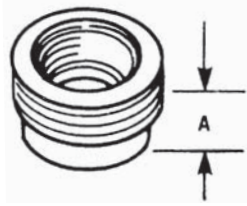


Cat. No.	Size	Dimensions (in.)		
		A	B	C
1250-TB	3/4" to 1/2"	1-1/8	5/8	3/16
1261	1" to 1/2"	1-7/16	1-7/16	3/16
1251	1" to 3/4"	1-3/8	11/16	3/16
1262	1-1/4" to 1/2"	1-13/16	21/32	3/16
1263	1-1/4" to 3/4"	1-13/16	23/32	3/16
1252	1-1/4" to 1"	1-3/4	25/32	7/32
1253	1-1/2" to 1-1/4"	2	13/16	1/4
1254	2" to 1-1/2"	2-3/8	1-3/16	9/32
1255	2-1/2" to 2"	3	1-1/4	3/8
1256	3" to 2-1/2"	3-5/8	1-1/2	1/2
1257	3-1/2" to 3"	4-1/8	1-9/16	1/2
1258	4" to 3-1/2"	4-5/8	1-3/16	1/2

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

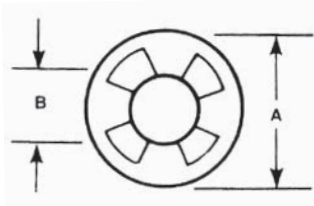
Rigid and Intermediate Metal Conduit Fittings



For reducing the threaded opening in conduit bodies or any female threaded fitting. Smooth, built-in bushing completely covers rough ends of conduit. Iron or steel construction. Steel from 600-TB thru 606-TB, also 614 & 615.

Threaded Reducers

Stl. or M.I.	Cat. No.	Alum.	Size	Dimensions (in.)	
				A	
600-TB	600AL-TB		1/2" to 3/8"	5/8	
601-TB	601AL-TB		3/4" to 1/2"	19/32	
602-TB	602AL-TB		1" to 1/2"	19/32	
603-TB	603AL-TB		1" to 3/4"	19/32	
604-TB	604AL-TB		1-1/4" to 1/2"	19/32	
605-TB	605AL		1-1/4" to 3/4"	19/32	
606-TB	606AL		1-1/4" to 1"	11/16	
607	607AL		1-1/2" to 1/2"	15/16	
608	608AL		1-1/2" to 3/4"	15/16	
609	609AL		1-1/2" to 1"	1-3/32	
610	610AL		1-1/2" to 1-1/4"	27/32	
611-TB	611AL		2" to 1/2"	23/32	
612	612AL		2" to 3/4"	1-1/16	
613	613AL		2" to 1"	1-1/16	
614-TB	614AL		2" to 1-1/4"	1-1/16	
615-TB	615AL		2" to 1-1/2"	27/32	



Washers reduce knockout hole in outlet box. Newly designed of galvanized steel. These washers, used in pairs, interlock and form a rib which centers the washers and conduit in the knockout.

Reducing Washers



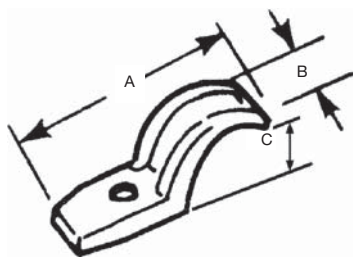
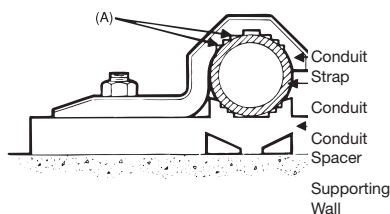
Cat. No.	Size	Dimensions (in.)	
		A	B
3700	3/4" to 3/8"	1-3/8	45/64
3701	3/4" to 1/2"	1-3/8	7/8
3702	1" to 3/8"	1-5/8	45/64
3703	1" to 1/2"	1-5/8	7/8
3704	1" to 3/4"	1-5/8	1-3/32
3705-TB	1-1/4" to 3/8"	2	45/64
3706	1-1/4" to 1/2"	2	7/8
3707	1-1/4" to 3/4"	2	1-3/32
3708	1-1/4" to 1"	2	1-23/64
3709	1-1/2" to 3/8"	2-1/4	45/64
3710	1-1/2" to 1/2"	2-1/4	7/8
3711	1-1/2" to 3/4"	2-1/4	1-3/32
3712	1-1/2" to 1"	2-1/4	1-23/64
3713	1-1/2" to 1-1/4"	2-1/4	1-23/32
3714	2" to 1/2"	2-3/4	7/8
3715-TB	2" to 3/4"	2-3/4	1-3/32
3716	2" to 1"	2-3/4	1-23/64
3717	2" to 1-1/4"	2-3/4	1-23/32
3718	2" to 1-1/2"	2-3/4	1-31/32

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



1275 Series
1276AL Series



Designed to fit each size of conduit snugly. High reinforcing ribs on each side increase strength, reduce weight. Hot-dipped galvanized finish.

Conduit Straps

(For Rigid Metal Conduit and Intermediate Metal Conduit)

Application

- To support and securely fasten rigid metal conduit and intermediate metal to the supporting surface.

Features

- Rugged malleable iron/copper-free aluminum construction—snugly fits on the conduit.
- Designed to prevent accumulation of moisture and start of corrosion on vertical run of conduit (A).

Standard Material

1275 Series
Malleable Iron

1976AL Series
All copper-free

aluminum

Standard Finish

1275 Series

Hot Dipped Galvanized

1276AL Series

As Cast

Range

- 1275 Series**
3/8" through 6" conduit
- 1276AL Series**
1/2" through 6" conduit

Conformity

CSA C22.2 No. 18.3

ANSI C80.4

NFPA 70-2008 (ANSI)

Pipe Straps—Malleable Iron or Aluminum



Cat. No.		Size	Dimensions (in.)			Screw Size
Mal. Iron	Alum.		A	B	C	
1275 [†]	1275AL	3/8"	1-15/16"	19/32"	1/4"	1/4"
1276 [†]	1276AL [†]	1/2"	2-11/32"	23/32"	1/2"	1/4"
1277 [†]	1277AL [†]	3/4"	2-11/16"	21/32"	5/8"	1/4"
1278 [†]	1278AL [†]	1"	3-3/32"	11/16"	13/16"	1/4"
1279 [†]	1279AL [†]	1-1/4"	4-1/8"	13/16"	29/32"	5/16"
1280 [†]	1280AL	1-1/2"	4-1/2"	15/16"	1-17/32"	3/8"
1281	1281AL	2"	5-3/16"	1-1/8"	1-1/4"	7/16"
1282*	1282AL	2-1/2"	5-15/16"	1-1/2"	1-3/4"	1/2"
1283*	1283AL	3"	6-11/16"	1-5/8"	2-3/16"	1/2"
1284	1284AL	3-1/2"	7-19/32"	1-3/4"	2-3/4"	5/8"
1285*	1285AL	4"	8-5/16"	1-7/8"	2-13/16"	5/8"
1286**	1286AL**	4-1/2"	9-3/16"	1-15/16"	2-15/16"	5/8"
1287	1287AL	5"	9-15/16"	2"	3-1/4"	5/8"
1288	1288AL	6"	11-1/2"	2-7/16"	4-1/8"	5/8"

* May be used with EMT of same size.

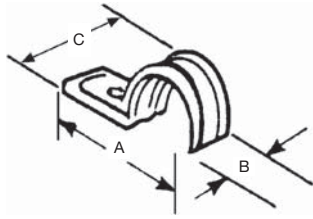
[†] Not snap on type.

U.L. not applicable.

** Not CSA Certified

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

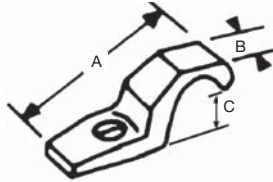


Elongated bolt hole makes alignment easy, even when holes in mounting surface are off center. Snap on features. Steel. Zinc plated

Pipe Straps—Steel

Cat. No.	Conduit Size	Dimensions (in.)			Screw Size
		A	B	C	
1210C†	3/8"	1-15/32	3/4	11/16	1/4"
1211C	1/2"	2	3/4	15/16	1/4"
1212C	3/4"	2-5/16	3/4	1"	1/4"
1213C	1"	3-13/16	3/4	1-17/64	1/4"
1214TB*	1-1/4"	2-31/32	1-9/16	1-9/16	3/8"
1215TB*	1-1/2"	3-23/32	1-13/16	1-13/16	3/8"
1216TB*	2"	4-7/16	2-5/16	2-5/16	3/8"

† Not snap on type.
U.L. not applicable.
* Not CSA Certified.



Malleable iron. Designed to fit each size of conduit snugly. High reinforcing ribs on each side increase strength, reduce weight.

Corrosion Resistant PVC Coated Rigid Conduit Straps



Cat. No.	Size	Bolt Size	Dimensions (in.)		
			A	B	C
1275CR	3/8"	1/4"	2	21/32	1/4
1276CR	1/2"	1/4"	2-13/32	25/32	1/2
1277CR	3/4"	1/4"	2-3/4	23/32	5/8
1278CR	1"	1/4"	3-5/32	3/4	13/16
1279CR	1-1/4"	3/8"	4-5/32	25/32	7/8
1280CR	1-1/2"	3/8"	4-9/16	1	1-7/32
1281CR	2"	1/2"	5-1/4	1-3/16	1-1/4

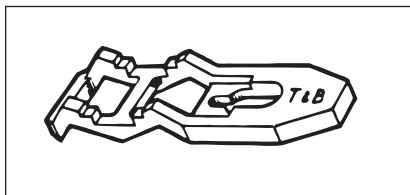
U.L. not applicable.

T&B Conduit Fittings

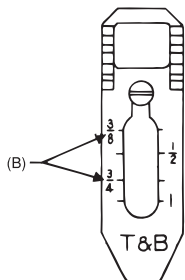
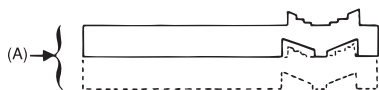
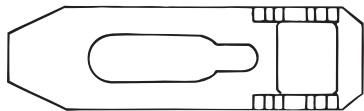
Rigid and Intermediate Metal Conduit Fittings

Conduit Spacers

(For Rigid Metal Conduit, Intermediate Metal Conduit and Electrical Metallic Tubing)



1350 Series
1350AL Series



Application

- Provides mounting surface for conduit where installation requires air space between conduit and supporting surface.

Features

- Prevents conduit rusting from wall condensation.
- Spacers can be stacked one atop the other facilitating installation and eliminating expensive conduit off setting (A).
- Designed to cover wide range; marked with accurate size marking for proper positioning (B).

Standard Material

- 1350 Series**
Malleable Iron
- 1350AL Series**
Copper-free aluminum

Standard Finish

- 1350 Series**
Hot Dipped Galvanized
- 1350AL Series**
As Cast

Range

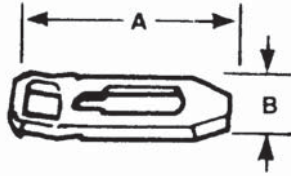
1/2" through 6" conduit

Conformity

- CSA C22.2 No. 18.3
- ANSI C80.4
- NFPA 70-2008 (ANSI)

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings



Used with T&B conduit straps to permit space between conduit and mounting surface. Eliminates need for costly offset-bending conduit and possible corrosive moisture traps when conduit is mounted directly to a surface. Hot-dipped galvanized finish, premountable and stackable to eliminate offsetting.

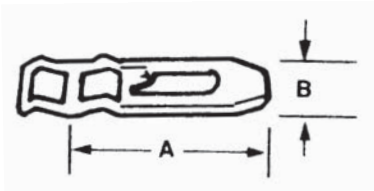
Pipe Spacers

Mal. Iron	Cat. No.		Size	Screw Size	Dimensions (in.)	
	Alum.				A	B
1350	1350AL		3/8", 1/2", 3/4", 1"	#7	3"	7/8"
1351	1351AL		1-1/4"-1-1/2"-2"	#12	5"	1-3/16"
1352	1352AL		2-1/2"-3"	#12	9-9/16"	1-3/4"
1353	1353AL		3-1/2"-4"	#14	7-9/16"	2"
1354	1354AL		4-1/2"-5"-6"	#16	10-9/16"	2-9/16"

Conforms to CEC Rule 12-012 (5)
U.L. not applicable.



Pipe Spacers—PVC Coated



Corrosion resistant PVC coated malleable iron. Pre-mountable, stackable to eliminate offsetting. Spacers can be stacked for offsets on wall or into outlet box. Prevents conduit rusting from wall condensation. Eliminates offsetting of conduit.

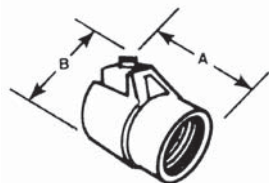
Cat. No.	Conduit Size	Screw Size	Dimensions (in.)	
			A	B
1350CR	1/2"-3/4"-1"	#7	3	7/8
1351CR	1 1/4"-1-1/2"-2"	#12	5	3/8
1352CR	2-1/2"-3"	#12	6-9/16	1-3/4
1353CR	3-1/2"-4"	#14	7-9/16	2
1354CR	4-1/2"-5"-6"	#16	10-9/16	2-9/16

U.L. not applicable.
Conforms to CEC Rule 12-012 (5)

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Tite-Bite® Combination Couplings Armoured Cable for Threaded Rigid



A one-piece fitting that couples armoured cable or flexible conduit to threaded rigid conduit. Tite-Bite wedge holds conduit securely with a double grip. With a Chase® nipple, this fitting will connect flexible conduit to outlet boxes, allowing more wiring space in the box than the usual fitting. Malleable iron.

Cat. No.	Size	Dimensions (in.)	
		A	B
440-C	1/2"	1-5/8	1-27/32
441	3/4"	1-3/4	2-1/8
442	1"	2	2-17/32



Includes bolts. Steel.

Beam Clamps Adjustable



Cat. No.	Description
700TB	Fits Flange 2-3/4"-7-3/8"
703*	Special Bolt and 3 Nuts

* Not CSA Certified



These supports will fit any flange, tapered or straight up to 5/8" thick. The broad hook holds the conduit at any desired angle. Holds standard rigid conduit, E.M.T., or I.M.C. Malleable iron.

Conduit Supports

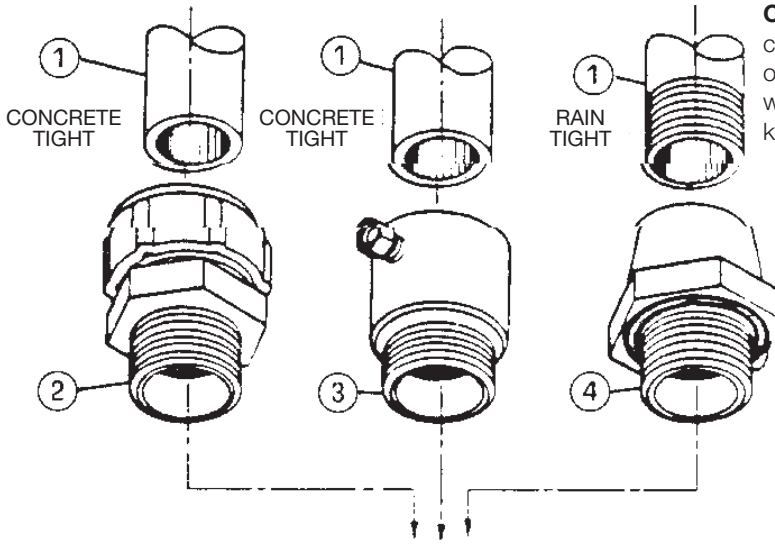


Cat. No.	Size
690TB	1/2"
691TB	3/4"
692TB	1"
693TB	1-1/4"

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding



Case 1: Where threaded or threadless conduit terminates into a threadless opening in a sheet metal box or enclosure with or without concentric or eccentric knockouts.

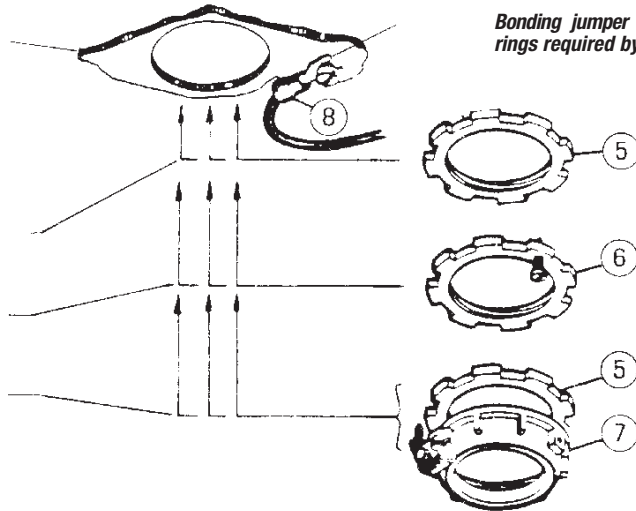
Threadless opening in a sheet metal box or enclosure.

Method of Bonding

For 120/208 volts or 120/240 volts circuits provided no unpunched rings remain around the knockout.

For under or over 250 volts circuits, service equipment and hazardous locations (where applicable) provided no unpunched rings remain around the knockout.

For under or over 250 volts circuits, service equipment and hazardous locations (where applicable) with or without unpunched rings around the knockout.



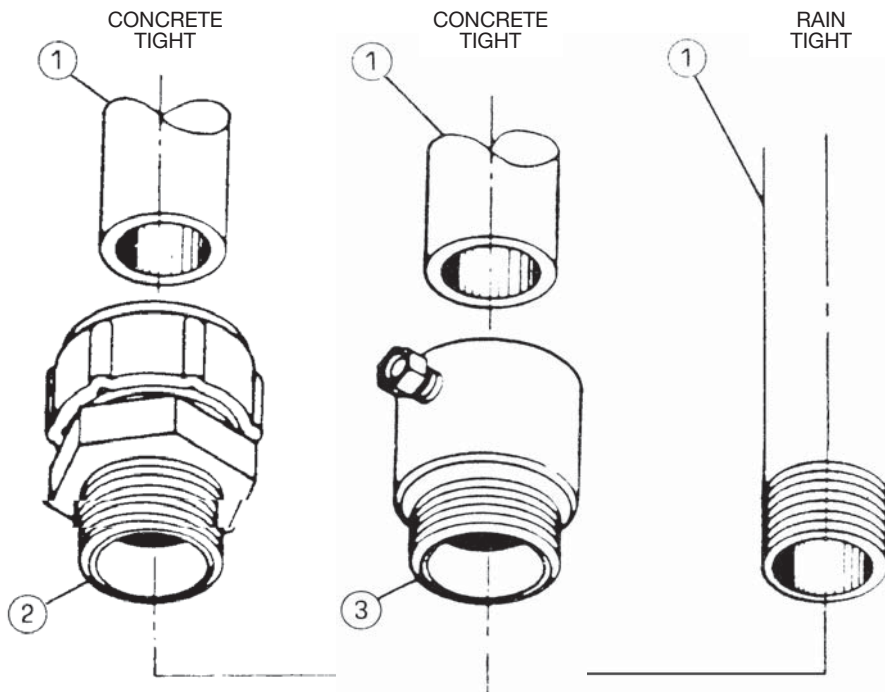
Bonding jumper around concentric or eccentric rings required by CEC Rule 10-614

- (1) Threaded or threadless rigid metal conduit or intermediate metal conduit
- (2) T&B Series 8123 or 8124 Threadless Fittings
- (3) T&B Series 8125 Set Screw Fitting
- (4) T&B Series 370 or H050-TB Sealing Hub (Bullet® Hubs)
- (5) T&B Series 140 Locknuts
- (6) T&B Series 106 Bonding Locknut
- (7) T&B Series 3870 Bonding & Grounding Bushing
- (8) T&B Sta-Kon® or Color-Keyed® lug

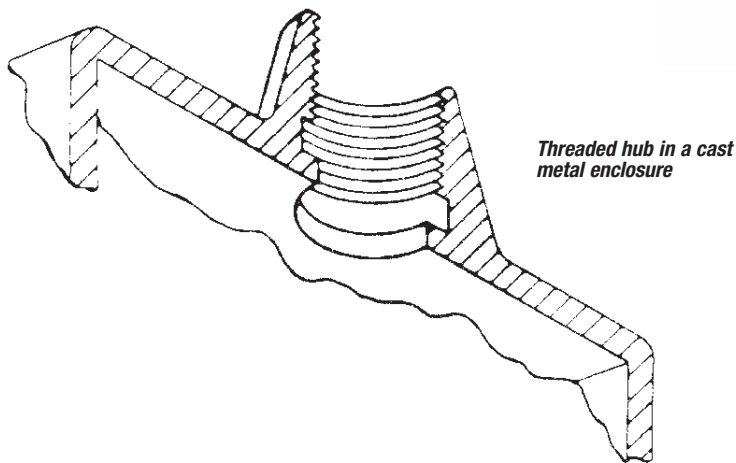
T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)



Case 2: Where threaded or threadless conduit terminates into a threaded hub in a cast metal enclosure.



Methods of Bonding

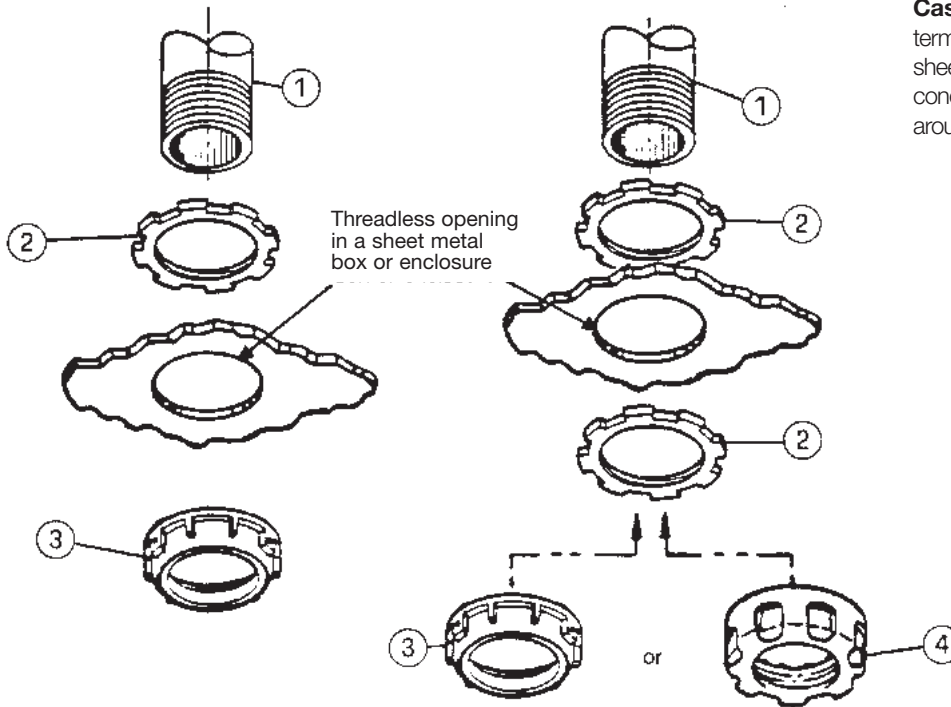
For (1) 120/208 or 120/240 volts circuits (CEC 10-610)
 (2) Over 250 volts circuits (CEC 10-610)
 (3) Service equipment (CEC 10-604)
 (4) Hazardous Locations 18-074 (where applicable)
 18-124 (Class I, Zone 1)
 18-160 (Class I, Zone 2)
 18-218 (Class II, Division 1)
 18-268 (Class II, Division 2)
 18-316 (Class III, Division 1)
 18-366 (Class III, Division 2)

- (1) Threaded or threadless rigid metal conduit or intermediate metal conduit.
- (2) T&B Series 8123 Threadless Fitting
- (3) T&B Series 8125 Set Screw Fitting

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)



Case 3: Where threaded conduit terminates into a threadless opening in a sheet metal box or enclosure with no concentric or eccentric rings remaining around knockout.

Method of bonding for 120/208 volt or 120/240 volts circuits (other than service equipment).

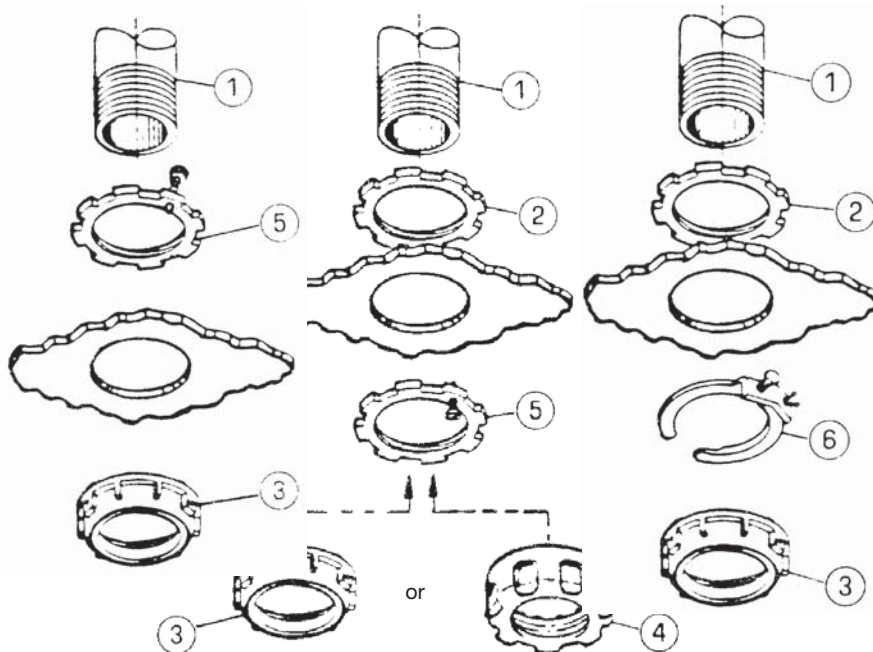
Method of bonding for over 250 volts circuits e.g. 600/347 volt systems and those operating over 600 volts (other than service equipment).

Note: Any of the bonding methods described for service equipment may also be used.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)



Case 3: (cont'd) Where threaded conduit terminates into a threadless opening in a sheet metal box or enclosure with no concentric or eccentric rings remaining around knockout.

- (1) Threaded rigid metal conduit or intermediate metal conduit
- (2) T&B Series 142 Locknuts
- (3) T&B Series 122 Bushing Metallic
- (4) T&B Series 222 Bushing Plastic
- (5) T&B Series 106 Bonding Locknut
- (6) T&B Series 3650 Bonding Wedge

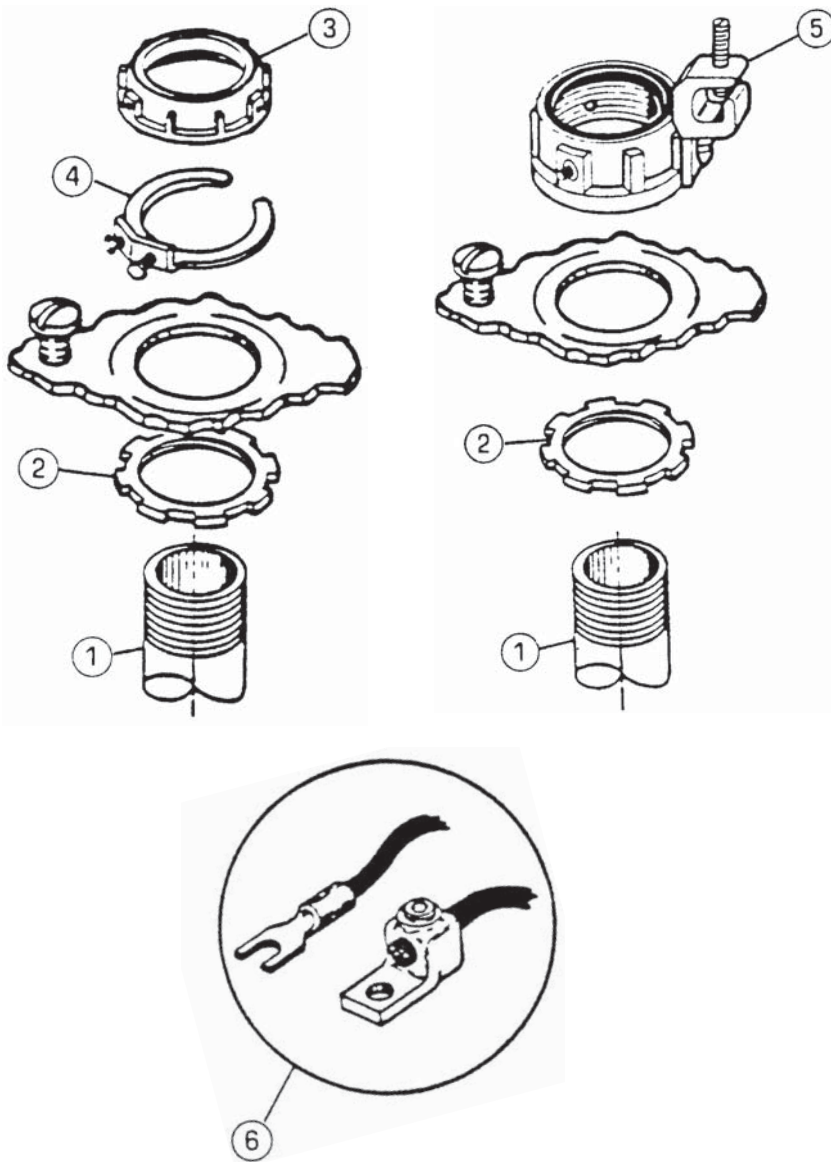
Method of Bonding

- For (i) Over 250-volts circuit e.g. 347/600-volts systems and those operating over 600 volts
 (ii) Service equipment
 (iii) Hazardous locations where applicable

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)



Case 4: Where threaded conduit terminates into a threadless opening in a sheet metal box or enclosure with concentric or eccentric rings remaining around knockout.

Methods of bonding for under or over 250-volts, for service equipment and for hazardous locations where applicable.

Note: Bonding jumper required by CEC Rule 10-614

- (1) Threaded rigid metal conduit or intermediate metal conduit
- (2) T&B Series 142 Locknuts
- (3) T&B Series 122 Bushing, Metallic
- (4) T&B Series 3650 Bonding Wedge
- (5) T&B Series 3870 Bonding & Grounding Bushing
- (6) T&B Typical Mechanical or Pressure Type Fitting

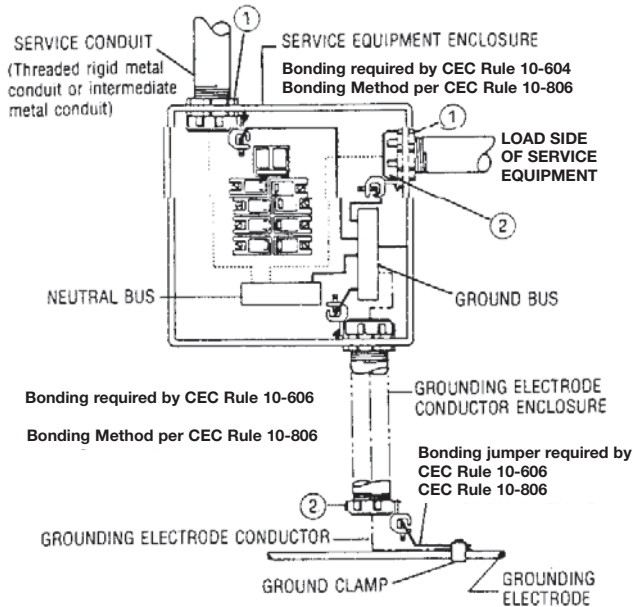
Note: For raintight applications, a sealing ring, T&B Series 5302, may be used between outside of box or enclosure and the outside locknut.

T&B Conduit Fittings

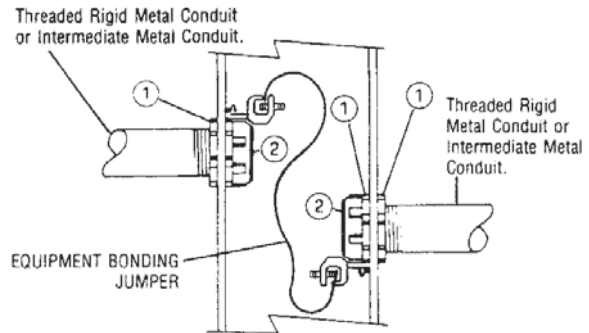
Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued) — Typical Installation Using Bonding and Grounding Bushings

**Bonding Service Equipment
(CEC Rule 10-604)**

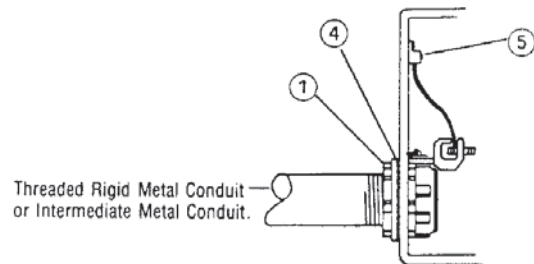
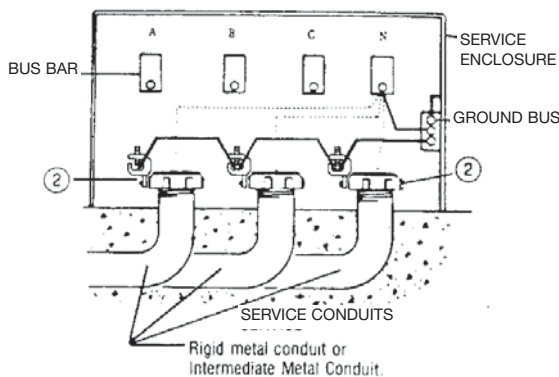


**Install Bonding Jumper to Assure Electrical Continuity
Between Isolated Sections of Raceways (CEC Rule 10-614)**



- (i) Installing bonding jumper around unpunched concentric or eccentric knockouts in sheet metal box or enclosure [CEC Rule 10-806].
- (ii) Installing bonding jumper in hazardous locations where 'locknut bushing' or 'double locknut' type of contact is unacceptable method for bonding purposes [CEC Rule 18-074]

**Multiple Bonding of Service Raceways Where
Service Entrance Conductors are Paralleled in
Two or More Raceways, CEC Rule 10-614**



- 1 T&B Series 142 Locknut
- 2 T&B Series 3870 Bonding & Grounding Bushing (Threaded)
- 3 T&B Series 5262 Sealing "O" Ring
- 4 T&B Typical Bolted or Pressure Lug

Suggested Specifications

Insulated grounding and bonding bushing (Series 3870)

Where code requires bonding and grounding of single or multiple metal conduits, or positive bonding and grounding of metal conduit to the box, enclosure or auxiliary gutter, the end of the conduit shall be equipped with an insulated metallic grounding and bonding bushing such as Series 3870 manufactured by Thomas & Betts.

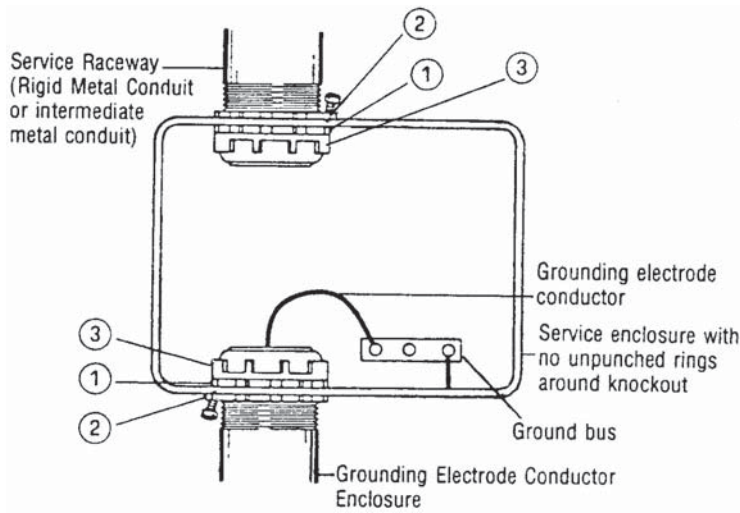
Grounding and bonding bushings used shall be approved for the purpose and

- (i) Shall be of malleable iron/steel/aluminum construction adequately protected against corrosion.
- (ii) Bushing insulator shall be listed or certified for 150°C/302°F application with a flammability rating of 94V-O. Insulator must be positively locked in place.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)— Typical Installation Using Thomas & Betts Bonding locknut



- (1) T&B Series 142 Locknut
- (2) T&B Series 106 Bonding Locknuts
- (3) T&B Series 122 Bushing

Suitable for Bonding Raceway, EMT or Terminating Fitting to a sheet metal box or enclosure where

- (a) No unpunched concentric or eccentric rings remain around the knockout.
- (b) Ordinary locknut is unacceptable for bonding purposes such as
 - (i) Service Equipment Enclosures CEC Rule 10-614
 - (ii) Bonding for circuits over 250 volts (where required) CEC Rule 10-614
 - (iii) Bonding in Hazardous Locations regardless of the voltage of the system CEC Rule 18-074

Suggested Specifications

Bonding Type Locknut (Series 106)

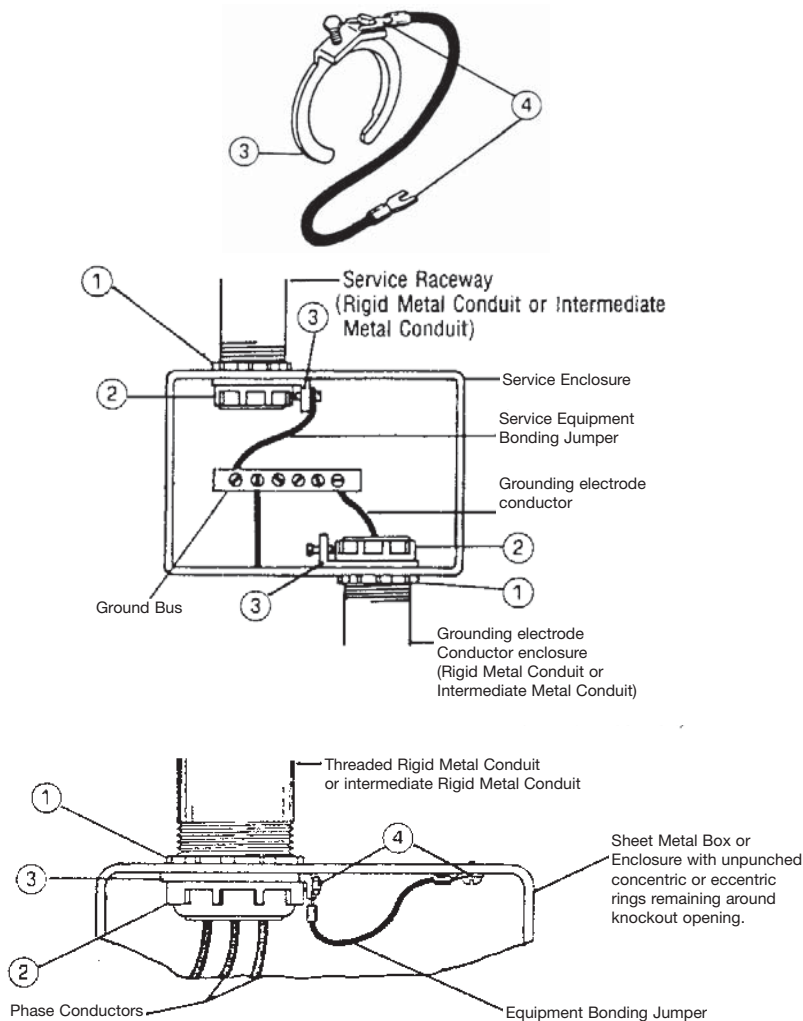
Where drawings indicate installation of a bonding type locknut to effectively bond a terminating fitting or metal conduit to a cabinet, box, enclosure or an auxiliary gutter, the locknuts installed shall be of hardened steel/malleable iron construction, electro-zinc plated, such as Series 106 manufactured by Thomas & Betts.

T&B Conduit Fittings

Rigid and Intermediate Metal Conduit Fittings

Methods of Bonding and Grounding (continued)— Typical Installations Using Thomas & Betts Bonding and Grounding Wedge

**T&B Series 3651
Bonding & Grounding Wedge**



- (1) T&B Series 142 Locknut
- (2) T&B Series 122 Metallic Bushing
- (3) T&B Series 3651 Bonding & Grounding Wedge
- (4) T&B Pressure (crimp type) Terminal Lug.

Acceptable Method for Bonding Following

- (i) Service Equipment
CEC Rule 10-614
- (ii) Bonding for Circuits over 250 volts
CEC Rule 10-614
- (iii) Bonding in Hazardous Locations
CEC Rule 18-074

When installed with a bonding jumper, acceptable method of bonding where unpunched rings remain around concentric or eccentric knockouts in sheet metal boxes or enclosures. [CEC Rule 10-614].

Suggested Specifications

Bonding and Grounding Wedge (Series 3650)

Bonding and Grounding Wedges installed to effectively bond terminating fitting or metal conduit to a cabinet, box, enclosure or an auxiliary gutter or to install bonding jumper around concentric or eccentric knockouts shall be of the type as manufactured by Thomas & Betts—Series 3650.

Bonding and Grounding Wedge shall be of rugged bronze/tin plated or steel/electro-zinc plated.

T&B Conduit Fittings

Electrical Metallic Tubing (EMT) Fittings

Specifications—Electrical Metallic Tubing (EMT)

Ref. CEC Rule 12-1400 not exceeding 750 Volts

Electrical Metallic Tubing (EMT) is similar to rigid steel conduit but is much lighter, weighing approximately 40 percent as much as rigid steel conduit of the same nominal size. EMT can be used for both exposed or concealed work provided that, during installation or afterwards, it is not subjected to severe physical damage. Use of EMT is restricted to systems not exceeding 600 volts and to non-hazardous locations except for Class II Division 2, acceptable in Class III Division 1 and Division 2 per CEC Rule 18-302 (1).

Galvanized Steel EMT installed in concrete, on grade or above, generally requires no supplementary corrosion protection. However, when installed in concrete below grade level and in contact with soil or cinders, supplementary corrosion protection consisting of a protective coating of bitumastic or asphalt base paint or plastic is generally applied. EMT run in or under permanently moist cinder fill must be encased in at least two inches of cinder-free concrete unless the conduit is at least 18 inches below the fill.

Aluminum EMT cannot be directly embedded in concrete containing soluble chlorides such as calcium chloride, unwashed beach sand, sea water or coral bearing aggregates. When adequately treated with a protective coating of bitumastic or asphalt base paint or plastic coating, the raceway can be installed in concrete containing chlorides.

In wet locations where walls are frequently washed or where there are surfaces of absorbent material, the entire

wiring system, including boxes, fittings, conduits and cables, must be supported such that there is at least 1/4 inch air space between it and the supporting surface.

Fittings and couplings are required to be of concrete tight type when embedded in masonry or concrete or in dry locations and of the raintight type when installed in wet locations (CEC Rule 12-1410).

Where No. 4 or larger underground conductors enter or leave a conduit, an insulating bushing with a smooth well-rounded insulating surface must be provided to protect conductors unless the terminating fitting is equipped with an insulated throat, firmly secured in place providing equivalent protection. The insulating bushing or insulating material must have a temperature rating of not less than the insulation temperature rating of installed conductors.

CEC Rule 12-3022 requires that the raceways be metalically joined together into a continuous electric conductor and must be mechanically connected to all boxes, fittings and cabinets as to provide effective electrical continuity.

EMT is not permitted to be threaded. Cut ends of tubing are required to be reamed. Code requires that EMT be adequately supported and restricts bends in one run to the equivalent of four quarters or 360 degrees total.

Portions of this section reprinted by permission from the Canadian Electrical Code 2009 Part I.

For further details and complete information please refer to the following:

1. NEC Article 358...Electrical Metallic Tubing
2. ANSI C80.3...Electrical Metallic Tubing, Zinc Coated
3. U.L.797...Standards for Safety, Electrical Metallic Tubing
4. ANSI C80.4...Fittings for Rigid Metal Conduit and Electrical Metallic Tubing
5. U.L. 514, Standards for Safety, Outlet Boxes and Fittings
6. WW-C-563...Conduit, Metal, Rigid, and Bend and Elbow, Electrical Conduit, Thinwall Type (EMT)
7. W-F-408...Fittings for Conduit, Metal, Rigid, (Thickwall & Thinwall (EMT) Type)
8. NEMA FB-1...Standards Publication, Fittings and Supports for Conduit & Cable Assemblies
9. CEC Section 12-1400...Electrical Metallic Tubing
10. CSA C22.2 No. 83...Safety Standards for Electrical Metallic Tubing
11. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Please Note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2002 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

T&B Conduit Fittings

Electrical Metallic Tubing (EMT) Fittings

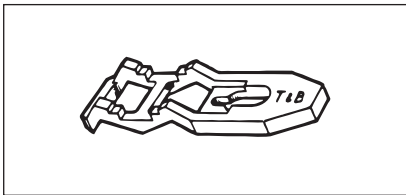
Suggested Specifications for Electrical Metallic Tubing (EMT) Fittings



**Series 5123 Insulated
EMT Fitting (Raintight)
(Compression Type)**



**Series 5120
EMT Coupling (Raintight)
(Compression Type)**



Series 1350 Pipe Spacers



**Series 106
Bonding Locknut**



**Series 4176
Pipe Straps**

- Ferrous Electrical Metallic Tubing (EMT) shall be of the hot dipped galvanized type conforming to applicable specifications WW-563/ANSI C80.3/U.L. 797/CSA C22.2 No. 83. EMT protected solely by enamel shall not be used.
- Where lengths of EMT are coupled together or connected to boxes or enclosures or where EMT is coupled to threaded rigid metal conduit or IMC, fittings approved for intended applications shall be used, and:
 - (1) Shall be of rugged steel/malleable iron construction electro-zinc plated inside/outside including threads. Fitting throat shall be bushed with a nylon insulator.
 - (2) Shall be of raintight type for installations exposed to weather or wet locations such as Thomas & Betts series 5123, 5120 and 530. Raintight type fittings may be substituted for concrete tight application.
- Where electrical metallic tubing and associated fittings are used as part of equipment grounding system:
 - (1) A bonding type locknut such as Thomas & Betts series 106 shall be installed where hub type fitting terminates into a threadless opening
 - (2) Compression ring type fittings such as Thomas & Betts series 5123 and 5120 shall be used for terminating and coupling.
- EMT shall be securely fastened in place at intervals as specified by the code using straps, hangers and other supporting assemblies as indicated on plans, and as manufactured by Thomas & Betts, series 4176 straps. In wet locations or where supporting surfaces are of absorbent materials vertical and horizontal runs of conduit shall be firmly supported such that there is at least 1/4" air space between conduit and supporting surface
- Spacers and supporting straps shall be of rugged malleable iron or steel construction, hot dipped galvanized, and conforming to requirements of Canadian Standards Association Standard C22.2 No. 18.3 as manufactured by Thomas & Betts, series 4176 straps and series 1350 spacers.

T&B Conduit Fittings

Electrical Metallic Tubing (EMT) Fittings

Specifications—Fittings for Electrical Metallic Tubing (EMT) Compression Type, Raintight



5123 Series*



5120 Series

* 4230 Series—90° Fittings

Application

- To connect and effectively bond electrical metallic tubing to a box or an enclosure.
- To provide a raintight connection between tubing and the fitting.
- To couple ends of tubing.

Features

- Rugged all steel construction.
- Rings designed to positively bond conduit to fitting; unique locknut design provides effective bond between fitting and box or enclosure; ground continuity is assured.
- Nylon insulator firmly secured in place—protects conductors, reduces wire pulling effort and prevents thread damage in handling.
- Locknuts are designed with extended reach to lock fitting on to a thin box or an enclosure.
- Locknuts tighten without deformation; will not vibrate loose.

Standard Material

All Steel except Insulator.
Insulator Thermoplastic, U.L.
Rated 105°C

Standard Finish

All Steel Parts Electro Zinc Plated
& Chromate Coated
Insulator As Molded

Range

- Conduit Size 1/2" thru 2"
- Hub Size 1/2" thru 2" NPS
Hubs provided with straight pipe threads NPS.

Conformity

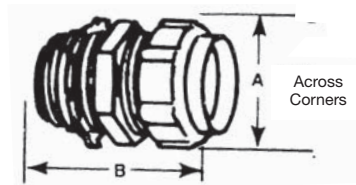
U.L. 514B
CSA 22.2 No. 18.3
NFPA 70-2008 (ANSI)
NEMA FB-1
Federal Specification W-F-408
Federal Standard H-28 (Threads)

T&B Conduit Fittings

EMT Fittings

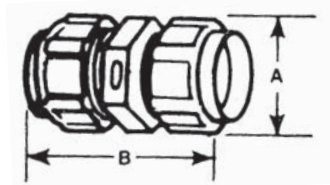


EMT Fittings—Nylon Insulated



Cat. No.	Size	Dimensions (in.)	
		A	B
5123	1/2"	1-3/64	1-21/32
5223	3/4"	1-21/64	1-27/32
5323	1"	1-11/16	1-7/8
5423	1-1/4"	2-1/16	2-11/32
5523	1-1/2"	2-5/16	2-23/32
5623	2"	2-25/32	2-13/16

U.L. Listed and CSA Certified raintight.

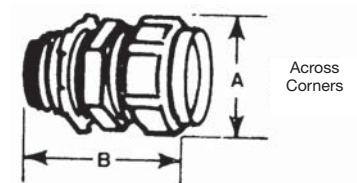


EMT Couplings



Cat. No.	Size	Dimensions (in.)	
		A	B
5120	1/2"	1-1/16	1-27/32
5220	3/4"	1-5/16	2-1/8
5320	1"	1-11/16	2-1/8
5420	1-1/4"	2-1/16	2-29/32
5520	1-1/2"	2-5/16	3-1/16
5620	2"	2-3/4	3-7/32

U.L. Listed and CSA Certified raintight.



EMT Fittings



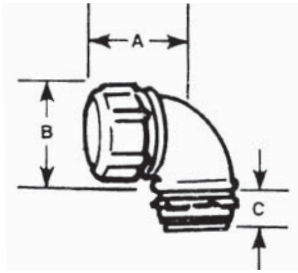
Cat. No.	Size	Dimensions (in.)	
		A	B
5121-TB	1/2"	1-1/16	1-9/16
5221	3/4"	1-5/16	1-21/32
5321	1"	1-11/16	1-3/4
5421	1-1/4"	2-1/16	1-11/32
5521-TB	1-1/2"	2-5/16	2-9/16
5621	2"	2-3/4	2-3/4

U.L. Listed and CSA Certified raintight.

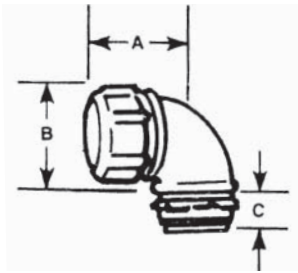
T&B E.M.T. (thinwall) fittings comply with Federal Spec. WF408B.

T&B Conduit Fittings

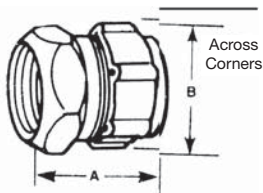
EMT Fittings



Ideal for cramped locations or tight corners where large radius conduit elbows will not fit or would appear unworkmanlike. Shoulders on body of 1/2" size are hex-shaped to provide positive holding for standard installation tools. Use insulated type for simple, and safe, installations. Malleable iron. CSA rated 105°C.



Ideal for cramped locations or tight corners where large radius conduit elbows will not fit or would appear unworkmanlike. Shoulders on body of 1/2" size are hex-shaped to provide positive holding for standard installation tools.



For connecting EMT to threaded rigid and intermediate metal conduit.

Short Elbows—Insulated



Cat. No.	Size	Dimension (in.)		
		A	B	C
4240	1/2"	1-7/8	1-1/8	11/16
4241-TB	1/2"	1-11/16	1-3/8	1/2
4242	1"	1-7/8	1-5/8	5/8
4243-TB	1-1/4"	2-3/4	2-5/16	11/16
4244	1-1/2"	3-1/16	2-5/8	11/16
4245	2"	3-3/8	3-7/32	3/4

U.L. Listed and CSA Certified raintight.

Short Elbows Malleable Iron



Cat. No.	Size	Dimension (in.)		
		A	B	C
4230	1/2"	1-7/16	1-9/32	7/16
4231	3/4"	1-11/16	1-19/32	1/2
4232	1"	1-7/8	1-27/32	5/8
4233	1-1/4"	2-3/4	2-15/32	11/16
4234	1-1/2"	3-1/16	2-3/4	11/16
4235	2"	3-3/8	3-5/16	11/16

U.L. Listed and CSA Certified raintight.

Combination Coupling—Steel



Cat. No.	Size	Dimension (in.)	
		A	B
530-TB	1/2"	1-3/8	1-1/16
531	3/4"	1-1/2	1-11/32
532	1"	1-19/32	1-21/32

U.L. Listed and CSA Certified raintight.

T&B Conduit Fittings

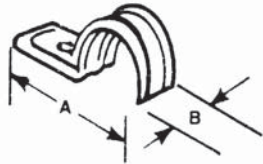
EMT Fittings



Pipe Straps—Steel



Oval Hole for Screw Size (C)



Elongated bolt hole makes alignment easy, even when holes in mounting surface are out of alignment. Snap on features hold strap in place.

Cat. No.	Size	Dimensions (in.)		
		A	B	C (Bolt Hole)
4159C	1/2"	1-27/32	3/4	1/4
4160C	3/4"	2-1/32	3/4	1/4
4161C	1"	2-11/32	3/4	1/4
4162*	1-1/4"	2-7/8	3/4	1/4
4163*	1-1/2"	3-11/16	1-1/4	11/32
4164*	2"	4-1/16	1-1/8	13/32

Not U.L. Listed

*Not CSA

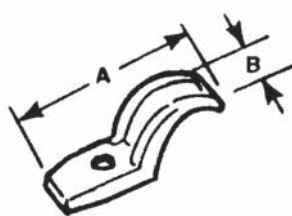
Conform to CEC 12-1404



Pipe Straps—Malleable Iron



Oval Hole for Screw Size (C)



Designed to fit each size of conduit snugly. High reinforcing ribs on each side increase strength, reduce weight. Hot dipped galvanized finish.

Cat. No.	Size	Dimensions (in.)		
		A	B	C (Bolt Hole)
4176	1/2"	2-5/32	2-1/32	1/4
4177	3/4"	2-9/16	1-1/16	1/4
4178	1"	3	3/4	1/4
4179	1-1/4"	3-3/4	1-3/16	5/16
4180	1-1/2"	4-3/16	1-5/16	3/8
4181	2"	5-3/16	1-1/8	7/16
1282*	2-1/2"	5-15/16	1-1/2	1/2
1283*	3	6-11/16	1-5/8	1/2
1284*	3-1/2	7-19/32	1-3/4	5/8
1285*	4"	8-5/16	1-7/8	5/8

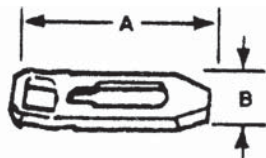
Not U.L. Listed.

*Not CSA

Conforms to CEC 12-1404



Pipe Spacers



Used with T&B conduit straps to permit space between conduit and mounting surface. Eliminates need for costly offset-bending conduit and possible corrosive moisture traps when conduit is mounted directly to a surface. Malleable iron. Hot-dipped galvanized finish, pre-mountable and stackable to eliminate offsetting.

Cat. No.	Size	Dimensions (in.)	
		A	B
1350	1/2", 3/4", 1"	3"	7/8"
1351	1-1/4", 1-1/2", 2"	5"	1-3/16"
1352	2-1/2", 3"	9-9/16"	1-3/4"
1353	3-1/2", 4"	7-9/16"	2"
1354	4-1/2", 5", 6"	10-9/16"	2-9/16"

Conforms to CEC 12-012 (5).

T&B Conduit Fittings

Flexible Cord and Cable Fittings

Specifications—Flexible Cord and Cables

Ref. CEC Section 4 (Conductors)

The Canadian Electrical Code, Flexible Cords are known by their trade names “Hard Service Cord,” “Junior Hard Service Cord” and “Vacuum Cleaner Cord.”

Depending on jacket material, flexible cords listed are suitable for use where immersed in water or where occasionally or continuously in contact with oil or immersed in oil, or outdoors and in mobil-homes and recreational vehicles.

Flexible cord is permitted by Code for use in portable appliances or stationary equipment requiring movement for service and repair and for wiring in cranes, hoists and elevators. Flexible cord is also permitted to be used to prevent transmission of noise or vibration.

Flexible cord is not permitted as a substitute for fixed wiring of structures or where concealed behind building walls, ceilings or floors. Running flexible cord through holes in walls, ceilings, floors or through doorways, windows or similar openings is also prohibited.

CEC Section 4 requires that flexible cords be so connected to devices and to fittings that tension is not transmitted to joints or terminal screws. Use of suitable strain relief fittings designed for the purpose is one of the recommended alternatives.

Please refer to the following for further details and complete information:

1. U.L. 62, ANSI C33.1...Safety Standard for Flexible Cord and Fixture Wire
2. U.L. 514B, Safety Standard for Outlet Boxes and Fittings
3. CEC Section 4...Conductors
 - 4.010...Uses of Flexible Cord
 - 4.038...Uses of Portable Power Cable
 - 12-010 (4)...Flexible Cords in Ducts and Plenum Chambers
 - 22-108 (2)...Bonding conductor for Flexible Cords for Portable Equipment

- Portable Stage Equipment
- 50-016...Flexible Cord for Attachment Plugs and Similar Wiring Devices
- 70-108...Power Supply Cord-Factory-Built Relocatable Structures and Non-relocatable Structures
- 76-002...Temporary Wiring
- 76-010...Feeders
- 78-058 (2)...Marinas and Yacht Clubs
- 78-104 (2)...Marine Wharves, Structures, and Fishing Harbours
- 4. CSA C22.2 No. 49...Safety Standards for Flexible Cords and Cables and Fixture Wires
- 5. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Following is a brief description of the three cords.

44-350 (1) (b)...Flexible Cords for

	Hard Service Cord	Junior Hard Service Cord	Vacuum Cleaner Cord
1. Use	Extra Hard Pendant, Portable	Hard Pendant, Portable	Light Pendant, Portable
2. Voltage Rating	Up to 600 volts	Up to 300 volts	Up to 300 volts
3. Conductor Material	Copper (Stranded)	Copper (Stranded)	Copper (Stranded)
4. Type Designation (Depends on Jacket Material)			
i. Rubber Jacket	Type S	Type SJ	Type SV
ii. Oil Resistant Rubber Jacket	Type SO	Type SJO	Type SVO
iii. Thermoplastic Jacket	Type ST	Type SJT	Type SVT
iv. Oil Resistant Thermoplastic Jacket	Type STO	Type SJTO	Type SVTO

Please Note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2009 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

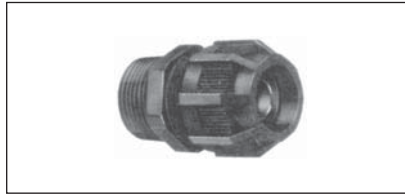
T&B Conduit Fittings

Flexible Cord and Cable Fittings

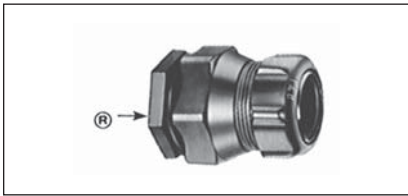
Suggested Specifications for Flexible Cord and Cable Fittings



**2520 and 2530 Series
Liquidtight Flexible
Cord & Cable Fittings**



**2920NM Series
Nonmetallic Liquidtight
Flexible Cord & Cable Fittings
The Ranger™ Series**



**2631 Series
Liquidtight Flexible
Cord & Cable Fittings**



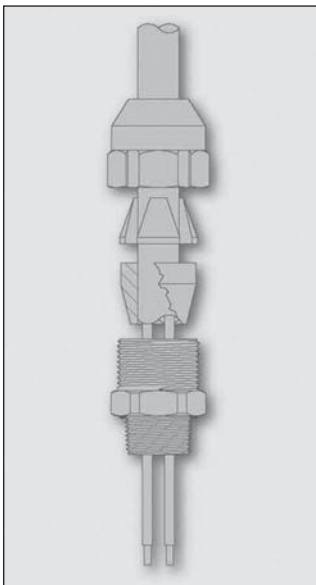
**2920AL Series
Aluminum Liquidtight
Flexible Cord & Cable Fittings
The Ranger™ Series**



**2672 Series
Flexible Cord Fittings
(Plastic)**



**2920S Series
Steel Liquidtight
Flexible Cord & Cable Fittings
The Ranger™ Series**



**TCF Series
Aluminum Tray/Cord Fitting**



**2920SST Series
Stainless Steel Liquidtight
Flexible Cord & Cable Fittings**

- Flexible cord or cable and associated fittings shall be suitable for conditions of use and location and approved for the purpose by a nationally recognized testing laboratory, inspection agency or product evaluation organization.
- Flexible cord or cable shall be so connected to the device or fitting that tension will not be transmitted to joints or terminal screws. Sufficient slack shall be provided to avoid sharp flexing and straining. Cord or cable shall be installed in such a manner that liquid will tend to run off the surface instead of draining towards the fitting.
- Where flexible cord or cable exposed to intermittent or constant moisture and subjected to mechanical strain is terminated into a threaded or threadless opening, terminating fittings shall be of watertight strain relief type such as Thomas & Betts series 2920, 2920AL, 2920NM, 2520, 2631 or 2672. Fittings shall be equipped with a beveled moisture resistant/oil resistant synthetic rubber bushing.
- Where space is limited inside the enclosure, a female hub type fitting such as Thomas & Betts series 2631 shall be furnished. A captive resilient sealing 'O' ring shall be included to positively protect against damage from overtorquing.

T&B Conduit Fittings

Flexible Cord and Cable Fittings

Suggested Specifications for Flexible Cord and Cable Fittings—continued



Series 3300
Nonmetallic Sheathed
Cable & Flexible Cord
Fitting



Series 3210
Knockout Bushings



Series 1942
Insulated Nipple



Series 5262
Sealing Gasket

- Where flexible cord or cable exposed to moisture is terminated into a threadless opening using male threaded hub type fittings such as Thomas & Betts series 2520 or 2920, a suitable moisture resistant/oil resistant synthetic rubber gasket such as Thomas & Betts series 5262 shall be provided between the outside of box or enclosure and fitting shoulder. Resilient gasket shall be adequately protected by and permanently bonded to a metallic retainer.
- Where exposed to environmental conditions that are more than normally corrosive, watertight strain relief fittings shall be of high impact thermoplastic construction such as Thomas & Betts series 2672 or 2920NM.
- Where flexible cord or cable passes through either factory or field punched, cut or drilled holes in metal members, the cord or cable shall be protected by thermoplastic bushing such as Thomas & Betts series 3210, 3300. Bushing shall be firmly secured in opening. Nylon bushed metallic fittings such as Thomas & Betts series 1942 may be substituted as required.
- For wet location, fittings furnished with synthetic rubber bushing such as Thomas & Betts series 2530 or 2672 shall be installed.

T&B Conduit Fittings

Flexible Cord and Cable Fittings



How to Select T&B Flexible Cord Fittings

Step 1.

Determine Diameter Range in chart by using cord size and type or by measuring the diameter of your cord.

Step 2.

Determine catalogue number by choosing the hub size and type (straight or 90°) for the diameter range determined by step 1.

This chart can be used as a guide for selecting the proper fitting for the U.L. Listed and CSA Certified cords. Cords vary in sizes and cord diameter should be measured whenever possible.

Cat. No.		Hub Size	Diameter Range	SV, SVO, SVT, SVTO		
Straight	90°			Cord Sizes		
2671	2680	3/8	.125-.275	18-2, 18-3		
Cat. No.		Hub Size	Diameter Range	S, SO, ST, STO		SJO, SJT, SJTO, SJ
Straight	90°			Cord Sizes		
2920NM	4960NM	1/2	.125-.375	18-2, 18-3*		18-2, 18-3, 18-4, 16-2,
2930NM	4970NM	3/4				16-3, 16-4*, 14-2, 14-3*
2921NM	4961NM	1/2				18-3, 18-4, 18-5, 18-6, 18-7*
2931NM	4971NM	3/4	.310-.560	18-3, 18-4*, 18-5, 16-2*		16-3, 16-4, 16-5, 16-6*, 14-2,
2940NM	—	1				14-3, 14-4, 12-2, 12-3, 12-4, 10-2
2922NM	—	1/2		16-5, 16-6, 14-2, 14-3, 14-4,		
2932NM	4972NM	3/4	.500-.750	14-5, 12-2, 12-3, 12-4, 12-5,		12-4, 10-2, 10-3, 10-4
2941NM	—	1		10-2, 10-3, 10-4, 8-2		
2942NM	—	1	.700-.950	10-4, 10-5, 8-3, 8-4		
—	2688	1	.560-.690	14-3*, 14-4, 14-5*, 12-2, 12-3,		10-2*, 10-3, 10-4
				12-4*, 10-2, 10-3*		
—	2685	1	.660-.780	14-5, 12-4*, 12-5, 10-3*, 10-4		10-4
2696	—	3/4	.770-.895	10-5, 8-2, 8-3*		
—	2686	1				
2678	2687	1	.870-1.020	8-3*, 8-4*		
2699	—	1	.890-1.090	8-4, 8-5*, 6-2, 6-3*, 6-4*, 4-2*		
2702	—	1-1/4				
2703	—	1-1/4		4-2*, 4-3, 2-2*		
2704	—	1-1/4	1.270-1.470	4-4, 2-2*		
2705	—	1-1/2	.890-1.150	8-4, 8-5, 6-2, 6-3, 6-4*, 4-2*		
2706	—	1-1/2	1.140-1.400	6-5, 6-4*, 4-2*, 4-3, 4-4*,		2-2, 2-3*
2707	—	1-1/2	1.390-1.650	4-4*, 2-3*, 2-4		
2708	—	2	1.190-1.530	6-5, 4-2*, 4-3, 4-4, 2-2, 2-3,		2-4*
2709	—	2	1.520-1.860	2-4*		
2710	—	2	1.850-2.190			

* Actual cord diameter must be determined before proper fitting can be selected. Measure cord, if available, or refer to cord manufacturer's catalogue.

T&B Conduit Fittings

Flexible Cord and Cable Fittings

Flexible Cord and Power Cable Chart

Type of Cord	AWG Size of Conductors	Number of Conductors and Approximate O.D. (in.)		
		2 Conductor	3 Conductor	4 Conductor
SV, SVO, SVT	18	.250	.260	—
SJ, SJO, SJT, SJTO	18	.300	.330	.360
	16	.330	.360	.390
	14	.375	.395	.420
S, SO, ST, STO, and Portable Power Cables	18	.385	.400	.430
	16	.400	.425	.480
	14	.530	.560	.605
	12	.600	.635	.665
	10	.640	.690	.745
	8	.700-.840	.750-.910	.820-.990
	6	.820-.930	.885-1.010	.975-1.100
	4	1.080	1.170	1.270
	3	1.170	1.240	1.340
	2	1.270	1.340	1.480
	1	1.440	1.510	1.680
	1/0	1.520	1.650	1.790
	2/0	1.650	1.750	1.930
	3/0	1.770	1.890	2.070
	4/0	1.920	2.070	2.260
	250	2.160	2.390	—
	14	—	—	.410
	12	—	—	.450
	10	—	—	.530
Bus Drop Cables	8	—	—	.670
	6	—	—	.850
	4	—	—	.950
	2	—	—	1.000

Note: The above dimensions are approximate and may vary depending upon the manufacturer.

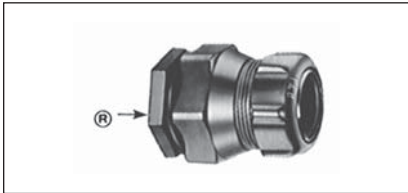
T&B Conduit Fittings

Flexible Cord and cable Fittings

Specifications—Liquidtight Flexible Cord and Cable Fittings



2520 Series



2631 Series

Application

- A liquidtight fittings to connect flexible cord or power cable to a box or enclosure and provide adequate strain relief.

Features

- Liquidtight connection with box or enclosure is assured by:
 - (1) Taper threaded hub on 2520 series for female hub application (A).
 - (2) Using sealing ring series 5262 with 2520 series for knockout application (B).
 - (3) Captivated sealing 'O' ring on 2631 series (C).
- Neoprene bushing makes liquidtight installation; applies pressure against cable the full length of bushing (D).
- Thermoplastic or stainless steel retaining ring (E).
 - (1) Will not abrade cord/cable jacket.
 - (2) Reduces installing torque effort.
- U.L. Listed for liquidtightness, strain relief and as an outlet bushing; CSA certified watertight.

Standard Material

Gland, Body	Steel/Malleable Iron/Zinc Die Cast
Retaining Ring	Thermoplastic/ Stainless Steel
Bushing	Neoprene
'O' Ring	Buna N

Standard Finish

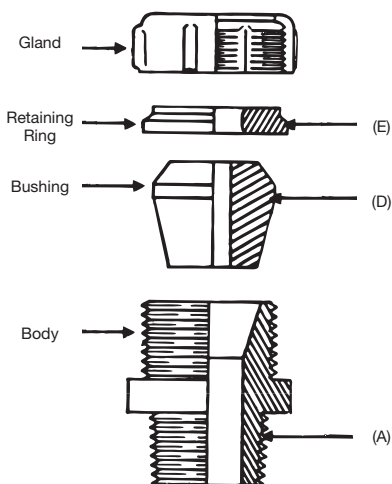
Electro Zinc Plated & Chromate Coated

Range

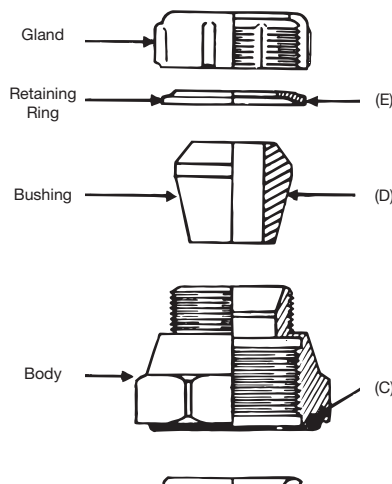
- 2520 Series, straight
0.125" outside diameter to 3.200" outside diameter Cord or Cable
- 2200 Series, 45°
0.125" outside diameter to 1.485" outside diameter Cord or Cable
- 2267 Series, 90°
0.125" outside diameter to 1.875" outside diameter Cord or Cable
Cord/Cable Type S, SO, SV, ST, STO, SJ, SJO, SJT, SJTO, SVO & SVT

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NFPA 70-2008 (ANSI)



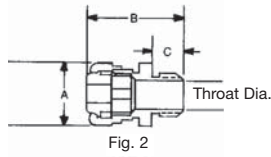
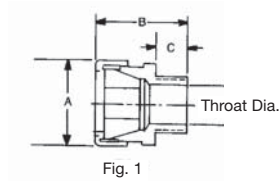
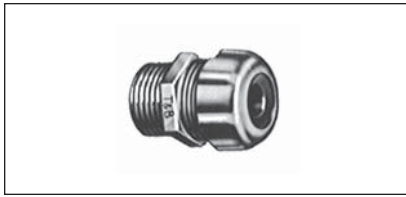
2520 Series



2631 Series

T&B Conduit Fittings

Flexible Cord and Cable Fittings



Liquidtight Strain Relief Fittings

Cat. No.	Cable Size Range min.-max.	Hub Size	Throat Dia. (min.)	Fig.	Dimensions (in.)		
					A	B	C
2516 [†]	(.060-.125)	1/4"	23/64"	2	53/64	1-7/16	15/32
2517 [†]	(.120-.250)	1/4"	23/64"	2	53/64	1-7/16	15/32
2518 [†]	(.060-.150)	3/8"	29/64"	2	31/32	1-1/2	15/32
2519 ^{**}	(.150-.300)	3/8"	29/64"	2	31/32	1-1/2	15/32
2520	(.125-.250)	1/2"	9/16"	1	1-5/32	1-11/16	5/8
2521	(.250-.375)	1/2"	9/16"	1	1-5/32	1-11/16	5/8
2522	(.375-.500)	1/2"	9/16"	1	1-5/32	1-11/16	5/8
2523	(.450-.560)	1/2"	9/16"	1	1-5/32	1-11/16	5/8
2524 [*]	(.500-.625)	1/2"	5/8"	1	1-3/8	1-3/4	5/8
2525 [*]	(.625-.750)	1/2"	5/8"	1	1-3/8	1-3/4	5/8
2530	(.125-.250)	3/4"	13/16"	1	1-3/8	1-3/4	9/16
2531	(.250-.375)	3/4"	13/16"	1	1-3/8	1-3/4	9/16
2532	(.375-.500)	3/4"	13/16"	1	1-3/8	1-3/4	9/16
2534	(.500-.625)	3/4"	13/16"	1	1-3/8	1-3/4	9/16
2535	(.625-.750)	3/4"	13/16"	1	1-3/8	1-3/4	9/16
2536 [*]	(.750-.880)	3/4"	3/4"	1	1-11/16	1-15/16	5/8
2541	(.250-.375)	1"	49/64"	1	1-3/8	1-23/32	9/16
2542	(.375-.500)	1"	49/64"	1	1-3/8	1-23/32	9/16
2544	(.500-.625)	1"	49/64"	1	1-3/8	1-23/32	9/16
2545	(.625-.750)	1"	49/64"	1	1-3/8	1-23/32	9/16
2546	(.750-.875)	1"	63/64"	1	1-11/16	1-7/8	23/32
2547	(.875-.985)	1"	63/64"	1	1-11/16	1-7/8	9/16
2548 [*]	(.880-1.065)	1"	29/32"	1	2-3/32	2-3/8	25/32
2549 [*]	(1.065-1.205)	1"	29/32"	1	2-3/32	2-3/8	25/32
2558	(.880-1.065)	1-1/4"	1-17/64"	1	2-3/32	2-5/32	13/16
2559	(1.065-1.205)	1-1/4"	1-17/64"	1	2-3/32	2-5/32	13/16
2556 [*]	(1.187-1.375)	1-1/4"	1-1/4"	1	2-11/32	2-1/2	13/16
2557 [*]	(1.375-1.485)	1-1/4"	1-1/4"	1	2-11/32	2-1/2	13/16
2562	(.812-1.000)	1-1/2"	1-7/16"	1	2-11/32	2-1/2	11/16
2563	(1.000-1.187)	1-1/2"	1-7/16"	1	2-11/32	2-7/16	11/16
2564	(1.187-1.375)	1-1/2"	1-7/16"	1	2-11/32	2-7/16	11/16
2565 [*]	(1.375-1.625)	1-1/2"	1-29/64"	1	2-13/16	2-5/8	13/16
2573	(1.125-1.375)	2"	1-7/8"	1	2-13/16	2-5/8	13/16
2574	(1.375-1.625)	2"	1-7/8"	1	2-13/16	2-5/8	11/16
2575	(1.625-1.875)	2"	1-7/8"	1	2-13/16	2-5/8	11/16
2576 [*]	(1.750-1.965)	2"	1-29/32"	1	3-7/32	3-1/2	27/32
2577 [*]	(1.937-2.187)	2"	1-29/32"	1	3-7/32	3-1/2	27/32
2584	(1.750-1.965)	2-1/2"	2"	1	3-7/32	3-3/4	1-1/32
2585 [*]	(1.937-2.187)	2-1/2"	2"	1	3-7/32	3-3/4	1-1/32
2586 [*]	(2.156-2.360)	2-1/2"	2-5/32"	1	3-15/16	4-1/4	1-1/32
2587 [*]	(2.350-2.565)	2-1/2"	2-5/32"	1	3-15/16	4-1/4	1-1/32
2592	(2.156-2.360)	3"	2-13/32"	1	3-15/16	4-1/4	1-1/32
2593	(2.350-2.565)	3"	2-13/32"	1	3-15/16	4-1/4	1-1/32
2594	(2.535-2.750)	3"	2-13/32"	1	3-15/16	4-1/4	1-1/32
2595 [*]	(2.735-2.985)	3"	2-13/16"	1	4-11/16	4-13/16	1-1/8
2596 [*]	(2.970-3.220)	3"	2-13/16"	1	4-11/16	4-13/16	1-1/8

* Remove sufficient outer covering of cable to permit conductors to pass thru fitting body.

[†] U.L. not applicable.

** Not CSA Certified.

Complies with JIC standards.

U.L. Listed as liquidtight strain relief, and outlet bushing. CSA certified watertight when used with 5262 Series Sealing Ring Gasket (Sold separately).

Temperature rating: 105°C.

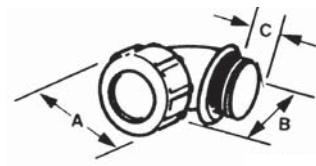
For Wiremesh Grips refer to page 80.



5262 Series
Sealing Ring Gasket
sold separately

T&B Conduit Fittings

Flexible Cord and Cable Fittings



Swing Radius
90° with neoprene bushings, tapered hub threads, malleable iron.

Strain Relief Fittings

Cat. No.	Cable Size min.-max.	Hub Size	Dimensions (in.)			Throat Dia.
			A	B	C	
2267	(.125-.250)	1/2"	1-5/32	1-23/32	5/8	19/32
2268	(.250-.375)	1/2"	1-5/32	1-23/32	5/8	19/32
2269	(.375-.500)	1/2"	1-5/32	1-23/32	5/8	19/32
2270	(.450-.560)	1/2"	1-5/32	1-23/32	5/8	19/32
2250*	(.500-.625)	1/2"	1-3/8	1-11/16	9/16	39/64
2251*	(.625-.750)	1/2"	1-3/8	1-11/16	9/16	39/64
2252	(.125-.250)	3/4"	1-3/8	1-3/4	41/64	25/32
2271	(.250-.375)	3/4"	1-3/8	1-5/8	41/64	25/32
2272	(.375-.500)	3/4"	1-3/8	1-5/8	41/64	25/32
2273	(.500-.625)	3/4"	1-3/8	1-5/8	41/64	25/32
2274*	(.620-.750)	3/4"	1-3/8	1-5/8	41/64	25/32
2253*	(.750-.880)	3/4"	1-11/16	1-31/32	9/16	25/32
2254	(.375-.500)	1"	1-3/8	2	13/16	1
2255	(.500-.625)	1"	1-3/8	2	13/16	1
2256*	(.625-.750)	1"	1-3/8	2	13/16	1
2275	(.750-.875)	1"	1-11/16	2	13/16	1
2276	(.875-.985)	1"	1-11/16	2	13/16	1
2257*	(.880-1.065)	1"	2-3/32	2-21/32	25/32	15/16
2258*	(1.065-1.205)	1"	2-3/32	2-21/32	25/32	15/16
2277	(.880-1.065)	1-1/4"	2-3/32	2-7/8	27/32	1-5/16
2278	(1.065-1.205)	1-1/4"	2-3/32	2-7/8	27/32	1-5/16
2279*	(1.187-1.375)	1-1/4"	2-11/32	2-13/16	13/16	1-11/32
2280*	(1.375-1.485)	1-1/4"	2-11/32	2-13/16	13/16	1-11/32
2281	(.812-1.000)	1-1/2"	2-11/32	2-7/8	13/16	1-15/32
2282	(1.000-1.187)	1-1/2"	2-11/32	2-7/8	13/16	1-15/32
2283*	(1.187-1.375)	1-1/2"	2-11/32	2-7/8	13/16	1-15/32
2284	(1.125-1.375)	2"	2-13/16	3-1/4	27/32	1-31/32
2285	(1.375-1.625)	2"	2-13/16	3-1/4	27/32	1-31/32
2286	(1.625-1.875)	2"	2-13/16	3-1/4	27/32	1-31/32

* Remove sufficient outer covering of cable to permit conductors to pass through fitting body.

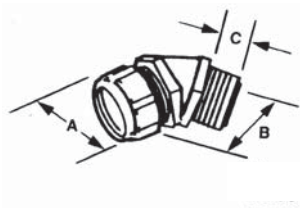
Complies with J.I.C. standards and Federal Specs W-F-406B, W-F-408B.

Meets Coast Guard CG293

For Wiremesh Grips refer to page 80.

T&B Conduit Fittings

Flexible Cord and Cable Fittings



Swing Radius
45° with neoprene bushings, tapered hub threads, malleable iron.

Strain Relief Fittings

Cat. No.	Cable Size min.-max.	Hub Size	Dimensions (in.)			Throat Dia.
			A	B	C	
2200	(.125-.250)	1/2"	1-5/32	1-9/32	9/16	37/64
2201	(.250-.375)	1/2"	1-5/32	1-9/32	9/16	37/64
2202	(.375-.500)	1/2"	1-5/32	1-9/32	9/16	37/64
2203	(.450-.560)	1/2"	1-5/32	1-9/32	9/16	37/64
2204*	(.500-.625)	1/2"	1-3/8	1-13/32	9/16	37/64
2205*	(.625-.750)	1/2"	1-3/8	1-13/32	9/16	37/64
2206-TB	(.125-.250)	3/4"	1-3/8	1-13/32	5/8	25/32
2207-TB	(.250-.375)	3/4"	1-3/8	1-13/32	5/8	25/32
2208-TB	(.375-.500)	3/4"	1-3/8	1-13/32	5/8	25/32
2209	(.500-.625)	3/4"	1-3/8	1-13/32	5/8	25/32
2210	(.625-.750)	3/4"	1-3/8	1-13/32	5/8	25/32
2211*	(.750-.880)	3/4"	1-11/16	1-1/2	1-1/2	3/4
2213	(.375-.500)	1"	1-3/8	1-1/2	25/32	15/16
2214	(.500-.625)	1"	1-3/8	1-1/2	25/32	15/16
2215	(.625-.750)	1"	1-3/8	1-1/2	25/32	15/16
2216	(.750-.875)	1"	1-11/16	1-15/32	25/32	15/16
2217*	(.875-.985)	1"	1-11/16	1-15/32	25/32	15/16
2218*	(.880-1.065)	1"	2-3/32	1-31/32	25/32	15/16
2219*	(1.065-1.205)	1"	2-3/32	1-31/32	25/32	15/16
2220-TB*	(.880-1.065)	1-1/4"	2-3/32	1-29/32	13/16	1-5/16
2221*	(1.065-1.205)	1-1/4"	2-3/32	1-29/32	13/16	1-5/16
2222*	(1.187-1.375)	1-1/4"	2-11/32	2-1/4	13/16	1-21/64
2223*	(1.375-1.485)	1-1/4"	2-11/32	2-1/4	13/16	1-21/64

* Remove sufficient outer covering of cable to permit conductors to pass through fitting body.

U.L. Listed as liquidtight strain relief, and outlet bushing.
CSA certified watertight.

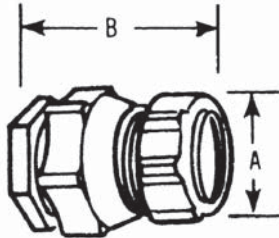
For Wiremesh Grips refer to page 80.

T&B Conduit Fittings

Flexible Cord and Cable fittings



CHASE® Liquidtight Cord Fittings

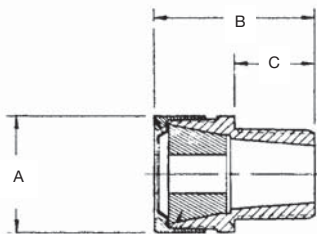


Cat. No.	Cable Size Range min.-max.	Hub Size	Throat Diam.	Dimensions (in.)	
				A	B
2631	(.125-.250)	1/2"	9/16"	1-1/16	1-5/8
2632	(.250-.375)	1/2"	9/16"	1-1/16	1-5/8
2633	(.375-.500)	1/2"	9/16"	1-1/16	1-5/8
2634	(.450-.560)	1/2"	9/16"	1-1/16	1-5/8
2637	(.125-.250)	3/4"	25/32"	1-3/8	1-3/16
2638	(.250-.375)	3/4"	25/32"	1-3/8	1-3/16
2639	(.375-.500)	3/4"	25/32"	1-3/8	1-3/16
2640	(.500-.625)	3/4"	25/32"	1-3/8	1-3/16
2641	(.625-.750)	3/4"	25/32"	1-3/8	1-3/16

CSA certified watertight. U.L. Listed as liquidtight strain relief, and outlet bushing.

Temperature Rating: 105°C.

Chase Liquidtight Cord Fittings are ideal for installation where space is limited inside the enclosure.



Multi-Hole Cord Grip

Cat. No.	Hub Size	No. of Diam.	Cord Diam.	Dimensions (in.)		
				A	B	C
2520-2	1/2"	2	.220	1.125	1.687	.625
2530-2	3/4"	2	.220	1.375	1.750	.625
2531-2	3/4"	2	.260	1.375	1.750	.625
2531-3	3/4"	3	.260	1.375	1.750	.625
2541-2*	1"	2	.300	1.625	1.718	.781
2542-2*	1"	2	.375	1.625	1.718	.781
2540-3	1"	3	.225	1.625	1.718	.781
2541-3	1"	3	.300	1.625	1.718	.781
2540-4	1"	4	.220	1.625	1.718	.781
2555-2	1-1/4"	2	.500	2.093	2.375	.812

Range of cord diameter $\pm .010$ ".

In many applications you have only room for one fitting but you need to run two cables, for example, proximity switches. Now you can provide strain relief and liquidtight protection with T&B's new multi-hole liquidtight strain relief fittings. With the ever increasing number of signal cables, now you have a solution to the problem of how to strain relieve multiple cables in one fitting.

*UL Listed only

Temperature Rating: 105°C.

T&B Conduit Fittings

Flexible Cord and Cable Fittings

The Ranger® Series—Liquidtight Strain Relief Fittings

The only fitting to take a .250 inch cable range.

New materials and computer aided designs helped T&B develop a strain relief fitting that will take twice the cable range of ordinary strain relief fittings.

Features

- Extended range with superior strain relief.
- Reduced overall size, fits into tighter spaces.
- Gland nut designed to restrict cable bending.

Application

A liquidtight fitting to secure flexible cord or power cable to a box or enclosure and provide strain relief.

Range

	Series	Hub Size
.125" thru .950"	2920S	1/2 thru 1"
	4920	1/2 thru 1"
	4960	1/2 thru 1"
	2920AL	1/2 thru 1"
	4960AL	1/2 thru 1"
	2920NM	1/2 thru 1"
.125 thru .750"	4960NM	1/2 thru 3/4"

Standard Material/Finish

	2920S Series 4920 Series 4960 Series	2920NM Series 4960NM Series	2920AL Series 4960AL Series
Body	Steel (ST) 45° & 90° (Malleable Iron)	Nylon (Weather Stabilized)	Aluminum (ST) Malleable Iron (90°)
Gland	Steel	Nylon (Weather Stabilized)	Aluminum
Grip	Plastic	Nylon (Weather Stabilized)	Aluminum
Bushing	Santoprene	Oil Resistant Elastomer	Aluminum

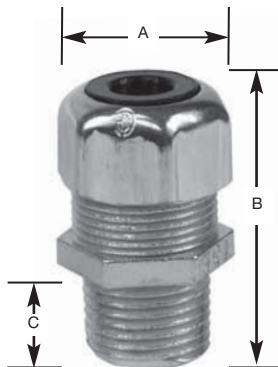


Liquidtight Strain Relief Fittings—Straight



Cat. No.	Hub Size	Throat Dia.	Cord Range min.-max.	Dimensions (in.)		
				A	B	C
2920S	1/2	9/16	.125-.375	1-1/8	1-3/4	5/8
2921S	1/2	9/16	.310-.560	1-1/8	1-3/4	5/8
2922S*	1/2	9/16	.500-.750	1-3/8	1-3/4	5/8
2930S	3/4	13/16	.125-.375	1-3/8	1-25/32	3/4
2931S	3/4	13/16	.310-.560	1-3/8	1-25/32	3/4
2932S	3/4	13/16	.500-.750	1-3/8	1-25/32	3/4
2940S	1	1-1/16	.310-.560	1-3/8	1-3/4	1-3/16
2941S	1	1-1/16	.500-.750	1-3/8	1-3/4	1-3/16
2942S	1	31/32	.700-.950	1-5/8	1-7/8	1-3/16

*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body.



Liquidtight Strain Relief Fittings

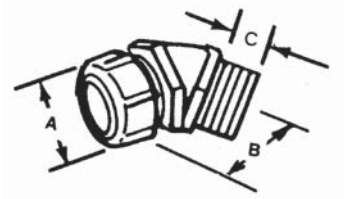


Cat. No.	Hub Size	Throat Dia.	Color Range min.-max.	Dimensions (in.)		
				A	B	M
2920	1/2	9/16	.125-.375	1-1/8	1-3/4	5/8
2921	1/2	9/16	.310-.560	1-1/8	1-3/4	5/8
2922	1/2	9/16	.500-.750	1-3/8	1-3/4	5/8
2930	3/4	13/16	.125-.375	1-3/8	1-25/32	3/4
2931	3/4	13/16	.310-.560	1-3/8	1-25/32	3/4
2932	3/4	13/16	.500-.750	1-3/8	1-25/32	3/4
2940	1	1-1/16	.310-.560	1-3/8	1-3/4	1-3/16
2941	1	1-1/16	.500-.750	1-3/8	1-3/4	1-3/16
2942	1	31/32	.700-.950	1-5/8	1-7/8	1-3/16

T&B Conduit Fittings

Flexible Cord and Cable Fittings

The Ranger® Series



Liquidtight Strain Relief Fittings—45° Angle



Cat. No.	Hub Size	Throat Dia.	Cord Range	Dimensions (in.)		
				A	B	C
4920	1/2	37/64	.125-.375	1-1/8	1-5/16	9/16
4921	1/2	37/64	.310-.560	1-1/8	1-5/16	9/16
4922	1/2	37/64	.500-.750	1-3/8	1-7/16	9/16
4932	3/4	25/32	.500-.750	1-3/8	1-7/16	5/8
4933	3/4	25/32	.700-.950	1-5/8	1-17/32	1-1/2



Swing Radius

Liquidtight Strain Relief Fittings—90° Angle



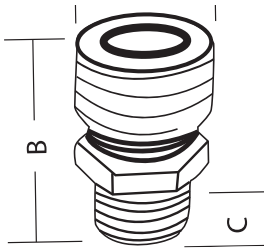
Cat. No.	Hub Size	Throat Dia.	Cord Range	Dimensions (in.)		
				A	B	C
4960	1/2	19/32	.125-.375	1-1/8	1-3/4	5/8
4961	1/2	19/32	.310-.560	1-1/8	1-3/4	5/8
4962	1/2	19/32	.500-.750	1-3/8	1-24/64	5/8
4970	3/4	25/32	.125-.375	1-3/8	1-25/32	11/16
4971	3/4	25/32	.310-.560	1-3/8	1-25/32	11/16
4972	3/4	25/32	.500-.750	1-3/8	1-25/32	11/16

T&B Conduit Fittings

Flexible Cord and Cable Fittings



Body and gland nut are aluminum.

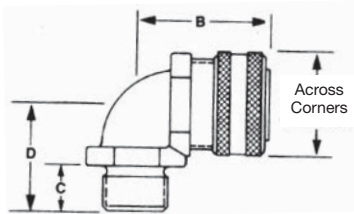


Aluminum Liquidtight Strain Relief Fittings— Straight



Cat. No.	Hub Size	Throat Diam.	Cord Range	Dimensions (in.)		
				A	B	C
2920AL	1/2	9/16	.125-.375	1-1/8	1-3/4	5/8
2921AL	1/2	9/16	.310-.560	1-1/8	1-3/4	5/8
2922AL*	1/2	9/16	.500-.750	1-5/16	1-3/4	5/8
2930AL	3/4	13/16	.125-.375	1-5/16	1-25/32	3/8
2931AL	3/4	13/16	.310-.560	1-5/16	1-25/32	3/4
2932AL	3/4	13/16	.500-.750	1-5/16	1-25/32	3/4
2940AL	1	1-1/16	.310-.560	1-5/16	1-3/4	1-1/16
2941AL	1	1-1/16	.500-.750	1-5/16	1-3/4	1-1/16
2942AL	1	31/32	.700-.950	1-9/16	1-7/8	31/32

* It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through fitting body.



Body: malleable iron
Gland Nut: aluminum

Aluminum Liquidtight Strain Relief Fittings— 90° Elbow



Cat. No.	Trade or Hub Size	Throat Diam.	Cord Range	Dimensions (in.)			
				A	B	C	D
4960AL	1/2	9/16	.125-.375	1-1/8	1-3/4	5/8	1-5/16
4961AL	1/2	9/16	.360-.560	1-1/8	1-3/4	5/8	1-5/16
4962AL*	1/2	9/16	.500-.750	1-5/16	1-23/64	5/8	1-3/8
4970AL	3/4	25/32	.125-.375	1-5/16	1-25/32	11/16	1-15/32
4971AL	3/4	25/32	.310-.560	1-5/16	1-25/32	11/16	1-15/32
4972AL	3/4	25/32	.500-.750	1-5/16	1-25/32	11/16	1-15/32
4980AL	1	15/16	.310-.560	1-5/16	2-1/32	13/16	1-3/4
4981AL	1	15/16	.500-.750	1-5/16	2-1/32	13/16	1-3/4
4982AL	1	15/16	.700-.950	1-9/16	2-11/16	13/16	2

* It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through fitting body.

T&B Conduit Fittings

T&B Ranger® Stainless Steel Liquidtight Cord Fittings



NEW!

Food Processing

Pharmaceutical Processing

Pulp & Paper Mills

Wastewater Treatment

Saltwater Applications

Petrochemical Refining

Beveled Rubber Bushing Ensures Superior Compression and Sealing



Type 304 Stainless Steel Construction for Your Harshest Environments!

Until now, there has been no ideal solution for liquidtight connections of portable cord to a box or enclosure in corrosive environments. Steel fittings rust and non-metallic fittings cannot withstand high temperatures or ultraviolet exposure.

In response to customer demand, Thomas & Betts has developed the latest addition to its high-performance line of T&B Ranger® Cord Fittings. Made of Type 304 stainless steel, T&B Ranger® Stainless Steel Liquidtight Cord Fittings stand up to highly corrosive environments – such as washdown areas in food and beverage or pharmaceutical processing – as well as high temperatures and UV exposure.

Like all T&B Ranger® Liquidtight Cord Fittings, the new stainless steel fittings offer twice the cord diameter range of similar fittings, so you can do more with fewer sizes to order and stock. They form a non-slip mechanical grip, providing a liquidtight seal and the strain relief required for flexible portable cord connections.

Also available in other materials to meet all your cord-fitting needs!

- 2920 Series steel/malleable iron in straight, 45° and 90°
- 2920AL Series aluminum in straight and 90°
- 2920NM Series non-metallic in straight and 90°



- Each fitting covers a 0.25" cord diameter range – twice that of ordinary strain relief fittings
- Superior corrosion resistance in washdown areas and other corrosive environments
- Stands up to heat and UV exposure better than non-metallic fittings
- Beveled, moisture and oil resistant synthetic rubber bushing system ensures superior compression and sealing of fitting to cord
- Bushing marked with cord range for easy identification out of box



T&B Stainless Steel Cord Fittings – 1/4" - 3/8" Hub Sizes

Catalogue Number	Hub Size (in.)	Cord Dia. Range (in.)	Dimensions (in.)		
			A	B	C
2918SST	1/4	0.118 - 0.256	1.000	0.250	0.625
2919SST	3/8	0.157 - 0.315	1.313	0.438	0.750

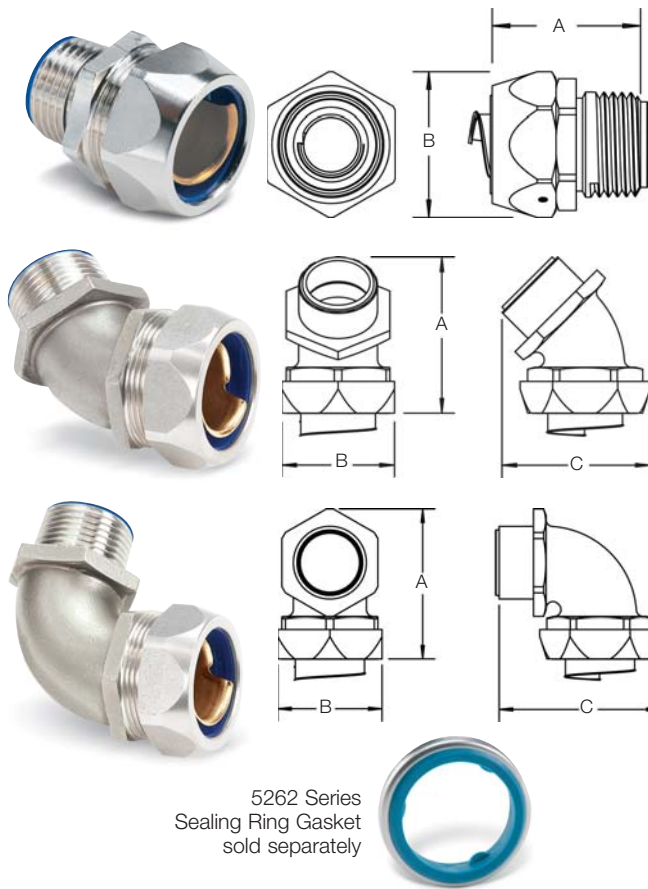


T&B Stainless Steel Cord Fittings – 1/2" - 1" Hub Sizes

Catalogue Number	Hub Size (in.)	Cord Dia. Range (in.)	Dimensions (in.)		
			A	B	C
2920SST	1/2	0.125 - 0.375	1.935	0.610	1.125
2921SST	1/2	0.310 - 0.560	1.935	0.610	1.125
2922SST	1/2	0.500 - 0.750	2.003	0.610	1.125
2930SST	3/4	0.125 - 0.375	2.063	0.630	1.125
2931SST	3/4	0.310 - 0.560	2.063	0.630	1.125
2932SST	3/4	0.500 - 0.750	2.063	0.630	1.125
2940SST	1	0.310 - 0.560	2.178	0.785	1.500
2941SST	1	0.500 - 0.750	2.218	0.785	1.500
2942SST	1	0.700 - 0.950	2.218	0.785	1.500

T&B Conduit Fittings

Stainless Steel Liquidtight Conduit Connectors



5262 Series
Sealing Ring Gasket
sold separately

The Strength of Steel — with Superior Corrosion-Resistance!

Until now, there's been no ideal conduit fitting solution for use in heavily corrosive environments. Traditional metallic fittings corrode and require frequent replacement. Non-metallic fittings offer less strength, lower UV-resistance, and don't stand up well in extreme temperatures.

T&B Stainless Steel Liquidtight Conduit Connectors are constructed of 304 stainless steel to resist corrosion while offering high strength, high UV-resistance, and high endurance. Choose among a full range of fittings in straight, 45°, and 90° angled configurations for 3/8" to 2" conduit sizes. Look for the distinctive blue insulator and sealing ring for assurance of T&B quality.

- Ideal for industrial MRO and OEM applications in food and beverage, pharmaceutical, petrochemical, waste water, salt water, and other corrosive environments
- Connects metallic-cored liquidtight conduit to a box or enclosure
- 304 stainless steel body and gland-nut resists corrosion far better than other metallic fittings
- Stronger, more UV-resistant than nonmetallic fittings
- Available in straight, 45°, and 90° angled configurations to fit conduit from 3/8" to 2"
- UL® Listed Ratings: 3, 3R, 4, 4X
- 5262 Sealing Ring Gasket (sold separately) includes a stainless steel retaining ring to prevent elongation of the gasket and is made from Santoprene™ material, ensuring a superior seal



Liquidtight Conduit Connectors

Cat. Number	Size	Dimensions			Std. Pkg. Qty.	UPC Number	Cat. Number	Size	Dimensions			Std. Pkg. Qty.	UPC Number
		A	B	C					A	B	C		
Straight							90° Angled						
5331SST *	3/8"	1.360"	1.02"	—	25	78621097764	5351SST *	3/8"	1.95"	1.02"	1.84"	25	78621097768
5332SST	1/2"	1.360"	1.18"	—	25	78621084482	5352SST	1/2"	2.12"	1.18"	2.07"	25	78621097769
5333SST	3/4"	1.388"	1.37"	—	25	78621074480	5353SST	3/4"	2.47"	1.37"	2.44"	10	78621097770
5334SST	1"	1.562"	1.77"	—	5	78621096334	5354SST	1"	2.98"	1.77"	2.90"	5	78621097771
5335SST	1 1/4"	1.720"	2.12"	—	20	78621097765	5355SST	1 1/4"	3.53"	2.12"	3.36"	5	78621097772
5336SST	1 1/2"	2.020"	2.48"	—	5	78621097766	5356SST	1 1/2"	4.16"	2.48"	3.88"	2	78621097773
5337SST	2"	2.335"	3.04"	—	2	78621097767	5357SST	2"	8.60"	3.04"	4.69"	1	78621097774
45° Angled							Sealing Gasket						
5341SST *	3/8"	1.84"	1.02"	1.43"	25	78621097775	5261	3/8"	—	—	—	50	78621005261
5342SST	1/2"	1.62"	1.18"	2.04"	25	78621097776	5262	1/2"	—	—	—	50	78621005262
5343SST	3/4"	2.32"	1.37"	1.93"	10	78621097777	5263	3/4"	—	—	—	25	78621005263
5344SST	1"	2.86"	1.77"	2.37"	5	78621097778	5264	1"	—	—	—	25	78621005264
5345SST	1 1/4"	3.33"	2.12"	2.80"	5	78621097779	5265	1 1/4"	—	—	—	5	78621005265
5346SST	1 1/2"	3.94"	2.48"	3.39"	2	78621097780	5266	1 1/2"	—	—	—	5	78621005266
5347SST	2"	4.73"	3.04"	4.23"	1	78621097781	5267	2"	—	—	—	5	78621005267

Locknut not included

* 3/8" conduit fitting has 3/8" hub

T&B Conduit Fittings

Flexible Cord and Cable Fittings

The Ranger® Series — Nylon Cord Grip Fitting

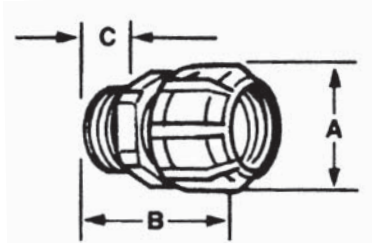


A T&B “RANGER” Exclusive

Smaller shape: 30% smaller envelope

Wide range: twice the cable range

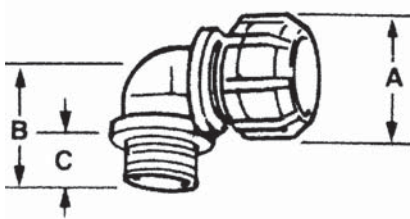
- Reduced size means fittings can be placed closer together.
- Wider range means one fitting can cover twice the cable range of others.
- Nonmetallic means corrosion resistance.



- Weather Stabilized Nylon
- U.L. 94-V2
- Temperature Rating: -34PC to +105PC
- Meets Coast Guard CG293
- New Reduced Size
- Smaller Footprint

Nonmetallic Liquidtight Strain Relief Fitting—Straight

Cat. No.	Trade or Hub Size	Throat Diam.	Cord Range	Dimensions (in.)		
				A	B	C
2920NM	1/2"	9/16	.125-.375	1-7/32	2-1/8	5/8
2921NM	1/2"	9/16	.310-.560	1-7/32	2-1/8	5/8
2922NM	1/2"	9/16	.500-.750	1-13/32	2-5/32	5/8
2930NM	3/4"	3/4	.125-.375	1-13/32	2-3/16	5/8
2931NM	3/4"	3/4	.310-.560	1-13/32	2-3/16	5/8
2932NM	3/4"	3/4	.500-.750	1-13/32	2-3/16	5/8
2940NM	1"	29/32	.310-.560	1-13/32	2-11/32	25/32
2941NM	1"	29/32	.500-.750	1-13/32	2-11/32	25/32
2942NM	1"	29/32	.700-.950	1-43/64	2-3/8	25/32



90° elbow, new reduced size, smaller footprint.

- Weather Stabilized Nylon
- U.L. 94-V2
- Temperature Rating: -34PC to +105PC
- Meets Coast Guard CG293

Nonmetallic Liquidtight Strain Relief fitting—90° Elbow



Cat. No.	Trade or Hub Size	Throat Diam.	Cord Range	Dimensions (in.)		
				A	B	C
4960NM	1/2"	9/16	.125-.375	1-7/32	1-1/4	5/8
4961NM	1/2"	9/16	.310-.560	1-7/32	1-1/4	5/8
4970NM	3/4"	3/4	.125-.375	1-13/32	1-3/8	5/8
4971NM	3/4"	3/4	.310-.560	1-13/32	1-3/8	5/8
4972NM	3/4"	3/4	.500-.750	1-13/32	1-3/8	5/8

T&B Conduit Fittings

Flexible Cord and Cable Fittings

Silver Grip™ — TCF™ Series Tray-Cord Fitting



One heck of a grip! **Increased Safety** **for Hazardous Locations**

Introducing the Silver Grip™ Tray-Cord Fitting™ - the safe, yet cost-efficient choice for increased safety when terminating portable cord and tray cable in hazardous locations.

Designed for use in Class I, Gas and Vapour environments, the Silver Grip™ Tray-Cord Fitting™ provides efficient strain relief for cables entering enclosures and raceways, and for cords used on portable equipment.

- **Corrosion-resistant, non-magnetic aluminum construction**
- **Tapered neoprene bushing and O-ring seal out moisture and dirt ingress**
- **Chuck grip provides high mechanical pull-out performance. Exceeds applicable requirements.**
- **Hand-tightens — no tools required**
- **Now available in 316 stainless steel**
- **90°C temperature rating**

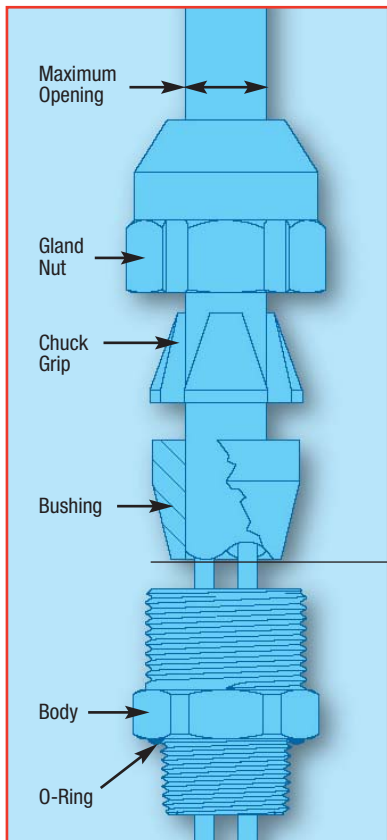
Tray Cable Applications

Portable Cord Applications

T&B Conduit Fittings

Silver GRIP®

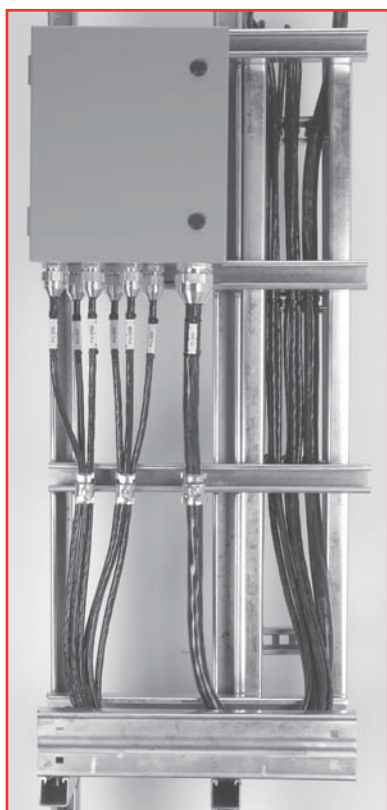
TCF® Series — Tray/Cord Fitting



Ordering Information

Hub Size NPT	Catalogue Number	Throat Diameter (in.)	Minimum Cable Dia. (in.)	Maximum Opening (in.)
1/2	TCF050-27AL	0.330	0.150	0.270
1/2	TCF050-40AL	0.540	0.250	0.400
1/2	TCF050-54AL	0.540	0.400	0.540
1/2	TCF050-67AL	0.540*	0.540	0.670
1/2	TCF050-78AL	0.540*	0.660	0.780
3/4	TCF075-40AL	0.540	0.250	0.400
3/4	TCF075-54AL	0.540	0.400	0.540
3/4	TCF075-67AL	0.780	0.540	0.670
3/4	TCF075-78AL	0.780	0.660	0.780
3/4	TCF075-88AL	0.765*	0.770	0.880
1	TCF100-78AL	0.980	0.660	0.780
1	TCF100-88AL	0.980	0.770	0.880
1	TCF100-100AL	0.980*	0.870	1.000
1	TCF100-109AL	0.980	0.940	1.090
1-1/4	TCF125-109AL	1.255	0.890	1.090
1-1/4	TCF125-128AL	1.255*	1.080	1.280
1-1/4	TCF125-147AL	1.255*	1.270	1.470
1-1/2	TCF150-115AL	1.470	0.890	1.150
1-1/2	TCF150-140AL	1.470	1.140	1.400
1-1/2	TCF150-165AL	1.470*	1.390	1.650
2	TCF200-153AL	1.896	1.190	1.530
2	TCF200-186AL	1.896	1.520	1.860
2	TCF200-219AL	2.062*	1.850	2.190
2-1/2	TCF250-252AL	2.466*	2.120	2.520
3	TCF300-278AL	2.780	2.380	2.780
3	TCF300-304AL	3.050	2.640	3.040
3	TCF300-330AL	3.068*	2.900	3.300

* When cord will not fit through body, strip cord jacket and trim fillers if required. Insert cable ensuring the outer jacket reaches the end of the bushing as shown. Tighten gland nut onto body.



Applications

For stainless steel (316), replace AL for SS6 (up to 1" only)

Tray Cable

Complies with IEC requirements for Class I, Zone 2 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF® fittings must be used in combination with a certified Class I hazardous location sealing fitting.

Portable Cord

Complies with IEC requirements for Class I, Zone 1 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF® fittings must be used in combination with a certified Class I hazardous location sealing fitting.



- File Number LR4484, Certificate Number 1388229
- CSA Class 4418-05 Fittings for Hazardous Locations Class I, Zone 1 Ex e II, IP66; Type 4/4X, (CSA)
- CSA_{US} Class 4418-85 Fittings for Hazardous Locations Class I, Zone 1, A Ex e II, IP66; Type 4/4X, (CSAus)

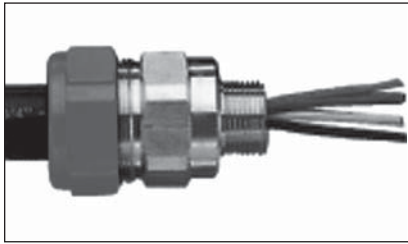
N.B.: Tray cable is not suitable for use in Zone 1 locations.
Portable cord can be used in Zone 1 applications only when installed on portable equipment.

Utilisation

- For use with unarmored cable Types suitable for use in Class I, Zone 1 (e.g.) Extra Hard Usage Cord)
- Series TCF Cable Glands, when used with Tray Cables are suitable to be installed in Class I, Zone 2/Div. 2 Classified Hazardous Locations Areas according to CEC/NEC Wiring Method, or subject to Local Inspection Authority having jurisdiction.

T&B Conduit Fittings

Flexible Cord and Cable Fittings



Outside Tray—tray cable must be protected within conduit and flexible liquidtight metallic conduit. In this case, the connector bushing is simply replaced with a ground cone/sealing ring to terminate the assembly.

The Canadian Electrical Code states that tray cable in hazardous locations can be used either within the cable tray, or outside the tray - provided there is additional protection. The TrayStar™ fitting was designed and engineered for either application and comes complete with the bushing, ground cone and sealing ring for different product applications.

selection for various types of installations. The sealing compounds cure in just a few hours. The TrayStar™ fitting also has disconnect capability: the cable can be disconnected and reconnected after being sealed.

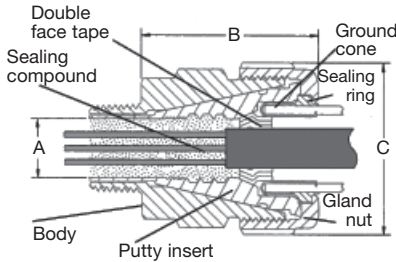
The unique hexagonal gland nut is conveniently grooved for screwdriver installation in extremely cramped areas. The gland nut is also clearly identified with the catalogue number and CSA approvals. It is also anodized an aqua-blue colour to identify it as a Hazardous Location, Tray Cable Fitting.

Superior Construction

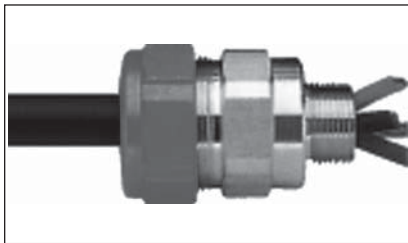
TrayStar™ fittings have a low-profile compact design and are made of copper-free aluminum for long-lasting trouble-free service. Fittings are precision machined for superior fit and ease of installation.

Ease of Installation

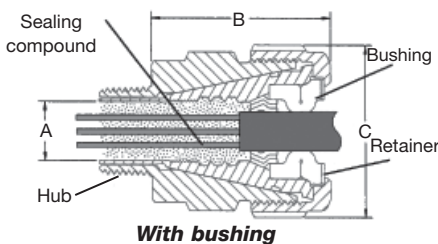
Installation is quick and easy. When used on metallic liquidtight conduit, the fitting hub size correlates with that of the conduit trade size. (i.e. 1/2" fitting accommodates 1/2" conduit). The bushings, when utilized, are designed to accommodate a broad range of tray cable diameters. Either liquid or putty sealing compound can be used for a positive, gastight seal. The compound is ordered separately to allow for flexibility in making the correct



With conduit



Inside Tray—Used with a neoprene bushing, TrayStar™ terminates tray cable within the tray itself.



With bushing

Silver Grip® — Liquidtight Fittings for Tray Cable

Cat. No.	Hub Size N.P.T.	Range Over Jacket (in.)		Conduit Trade Size (in.)	Approx Compound Required*		A Throat Dia. (in.)	B Overall (in.)	C Dim. (in.)
		min.	max.		Putty / Liquid SC65/SC4-KIT cc				
HLT050DATA	1/2	0.250	0.310	1/2	7	0.505	1.870	1.625	
HLT050	1/2	0.300	0.400	1/2	7	0.505	1.870	1.625	
HLT075	3/4	0.320	0.570	3/4	15	0.707	2.140	2.075	
HLT100	1	0.400	0.750	1	23	0.932	2.270	2.290	
HLT125	1-1/4	0.625	1.000	1-1/4	45	1.263	2.750	2.840	
HLT150	1-1/2	0.780	1.200	1-1/2	68	1.493	3.000	3.275	
HLT200	2	1.000	1.560	2	112	1.950	3.200	3.640	
4-250TC	2-1/2	1.700	2.200	2-1/2	175	2.250	3.800	4.000	
4-300TC	3	2.150	2.700	3	359	2.750	3.860	4.690	
4-350TC	3-1/2	2.650	3.230	3-1/2	536	3.280	4.100	5.220	
4-400TC	4	3.180	3.790	4	690	3.840	4.000	5.630	

† Not UL Listed

* Sealing compound not included with HLT-series. Order separately.

SC65 putty supplied with each TC-series fitting. SC4-Kit liquid sealing compound not approved for use with TC-series. TC-series is suitable for use with tray cable only and cannot be used with conduit.

Materials

Aluminum: The above listed catalogue numbers relate to aluminum fittings.

Steel: HLT-series is also available in steel. Add the suffix "S" to the catalogue number (example HLT050S).

Certifications

Type HLA, CSA Certified Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups E, F and G; Class III, Division 2, Enclosure Type 4 SL (integral seal). CSA File 23086.

Sealing Compounds

Cat. No.	Description	Volume (cubic centimeter)
SC4-KIT	Liquid type sealing compound (includes pouch of sealing compound with integral spout, fiber and damming material).	66 cc
Use SC4-KIT liquid compound for shielded cables.		

Cat. No.	Description	Volume (cubic centimeter)
SC65	Putty type sealing compound (cut-to-length stick)	34 cc
Suitable for use on cables with a maximum of four conductors (including ground). We do not recommend SC65 for use with shielded cables.		
Quantity of compound required will vary according to cable conductor fill.		
U.L. File No. E-82038 CSA File No. LR-23086		

Note - Thomas & Betts hazardous locations fittings with integral seals (STX, STEX, HLT and TC series) are UL and CSA certified **only** when used with SC4-KIT or SC65 sealing compounds. **No other sealing compounds have been tested, certified or listed.**



SC4-KIT



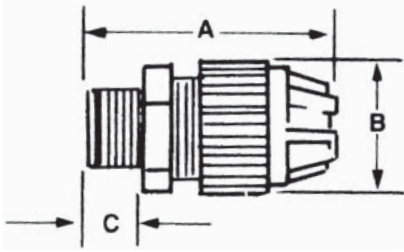
SC65

For more details, refer to the installation/Instruction sheet.

T&B Conduit Fittings

Flexible Cord and Cable Fittings

Nonmetallic Liquidtight Strain Relief Fitting—Straight

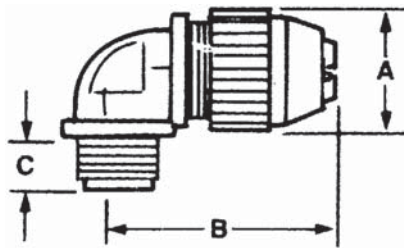


- Weather Stabilized Nylon
- U.L. 94-V2
- Temperature Rating: -34°C to +105°C
- Meets Coast Guard CG293

Cat. No.	Trade or Hub Size	Throat Diam.	Cord Range	Dimensions (in.)		
				A	B	C
2671	3/8"	0.33	.125-.275	2	29/32	15/32
2690	1/2"	0.33	.125-.275	2-4/16	29/32	19/32
2672	1/2"	0.55	.250-.400	2-19/32	19/32	19/32
2673*	1/2"	0.55	.400-.560	2-19/32	19/32	19/32
2691*	1/2"	0.54	.560-.690	3	1-9/10	19/32
2692*	1/2"	0.54	.660-.780	3	1-9/16	19/32
2693	3/4"	0.55	.250-.400	2-11/16	1-9/32	5/8
2694*	3/4"	0.55	.400-.560	2-11/16	1-9/32	5/8
2674	3/4"	0.79	.560-.690	3	1-9/16	5/8
2675	3/4"	0.79	.660-.780	3	1-9/16	5/8
2696*	3/4"	0.76	.770-.895	3-3/16	1-7/8	5/8
2676	1"	0.98	.660-.780	3-5/16	1-7/8	25/32
2677	1"	0.98	.770-.895	3-5/10	1-7/8	25/32
2678*	1"	0.98	.870-1.020	3-5/10	1-7/8	25/32
2699	1"	0.98	.890-1.090	3-3/10	2-19/32	25/32
2702	1-1/4"	1.25	.890-1.090	3-5/16	1-7/8	25/32
2703	1-1/4"	1.25	1.080-1.280	4	2-19/32	13/16
2704	1-1/4"	1.25	1.270-1.470	4	2-19/32	13/16
2705TB	1-1/2"	1.47	.890-1.150	4-3/16	2-31/32	13/16
2706	1-1/2"	1.47	1.140-1.400	4-5/16	2-31/32	13/16
2707	1-1/2"	1.47	1.390-1.650	4-5/16	2-31/32	13/16
2708	2"	1.89	1.190-1.530	5-3/32	3-1/2	27/32
2709	2"	1.89	1.520-1.860	4-29/32	3-1/2	27/32
2710*	2"	1.89	1.850-2.190	4-29/32	3-1/2	27/32

* Remove sufficient outer covering of cable to permit conductors to pass thru fitting body.

Nonmetallic Liquidtight Strain Relief Fitting—90° Elbow



90° angle, standard size body.

- Weather Stabilized Nylon
- U.L. 94-V2
- Temperature Rating: -34°C to +105°C
- Meets Coast Guard CG293

Cat. No.	Trade or Hub Size	Throat Diam.	Cord Range	Dimensions (in.)		
				A	B	C
2680	3/8"	.33	.125-.275	.90	1.8	.460
2681	1/2"	.55	.250-.400	1.27	2.5	.610
2682*	1/2"	.55	.400-.560	1.27	2.5	.610
2683	3/4"	.78	.560-.690	1.57	2.8	.610
2684	3/4"	.78	.660-.780	1.57	2.8	.610
2688	1"	.98	.560-.690	1.89	3.0	.770
2685	1"	.98	.660-.780	1.89	3.2	.770
2686	1"	.98	.770-.895	1.89	3.2	.770
2687*	1"	.98	.870-1.020	1.89	3.2	.770

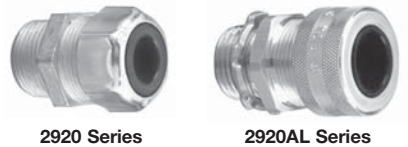
* Remove sufficient outer covering of cable to permit conductors to pass thru fitting body. 90° angle, standard size body.

T&B Conduit Fittings

Portable Cord and Cable Fittings



Wiremesh grips support the following Liquidtight Cord Fittings Series.



2920 Series

2920AL Series



2516 Series

WMG-PC Series Wiremesh Grips for Portable Cord

T&B Wiremesh grips are ordered separately and fit with your existing inventory of Ranger™ fittings and liquidtight strain relief fittings. There's no need to duplicate inventory.

Application

- Provides high gripping strength for adequate cable support and strain relief without damage to the cable sheath
- Compression of a tapered neoprene bushing, assures the watertight integrity of the fittings

Cord and Cable Type

- S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVD

Features

- Prevents severe cord bends and pullouts
- Used in aluminum and/or steel fittings

How to select proper wiremesh grip:

1. Determine O.D. of portable cord e.g. .200
2. Determine size of knockout or threaded hub e.g. 1/2"

Material

Wiremesh made of stainless steel. Retaining rings made of aluminum.

Environment Classification

- Ordinary Locations

Range

.187 – 3.220



3. Select Cat. No. of strain relief fitting e.g. 2520, 2920AL.
4. Match up O.D. with grip range and strain relief to determine Cat. No. of Wiremesh Grip (e.g. .200 + 2520 = WMP-PC1)

Wiremesh Grips for Portable Cord



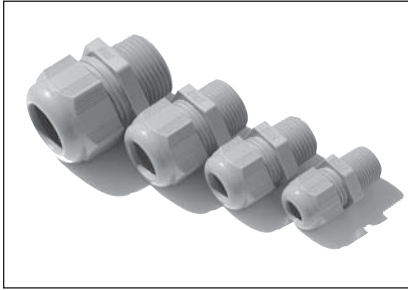
Cat. No.	Grip Range	Strain Relief Fitting							
		Straight		45°		90°		T&B Steel	T&B Steel
		Ranger™ Steel	Ranger™ Aluminum	T&B Steel	Ranger™ Malleable Iron	T&B Steel	Ranger™ Malleable Iron		
WMG-PC1	.187-.250	2920S	2920AL	2520	4920	2200	4960	4960AL	2267
WMG-PC2	.250-.375	2920S	2920AL	2521	4920	2201	4960	4960AL	2268
WMG-PC3	.375-.500	2921S	2921AL	2522	4921	2202	4961	4961AL	2269
WMG-PC4	.500-.625	2922S	2922AL	2524	4922	2204	4962	4962AL	2250
		2932S	2932AL	2534	4932	2209	4972	4972AL	2273
		2941S	2941AL	2544	4941	2214	4981	4981AL	2255
		2922S	2922AL	2525	4922	2205	4962	4962AL	2251
WMG-PC5	.625-.750	2932S	2932AL	2535	4932	2210	4972	4972AL	2274
		2941S	2941AL	2545	4941	2215	4981	4981AL	2256
WMG-PC6	.187-.250	2930S	2930AL	2530	4930	2206	4970	4970AL	2252
WMG-PC7	.250-.375	2930S	2930AL	2531	4930	2207	4970	4970AL	2271
				2541					
WMG-PC8	.375-.500	2931S	2931AL	2532	4931	2208	4961	4961AL	2272
		2940S	2940AL	2542	4940	2213	4980	4980AL	2254
WMG-PC9	.750-.875			2536		2211			2253
		2942S	2942AL	2546	4942	2216	4982	4982AL	2275
WMG-PC10	.875-1.000			2547		2217			2276
WMG-PC11	.875-1.000			2548		2218			2257
				2558		2220			2277
				2548		2218			2257
WMG-PC12	1.000-1.125			2558		2220			2277
				2549		2219			2258
				2559		2221			2278
				2549		2221	2258	2258	2219
WMG-PC13	1.125-1.250			2559		2221			2278
				2556			2279	2279	2222
WMG-PC14	1.125-1.250			2563		—			2282
				2564		—			2283
WMG-PC15	1.250-1.375			2256		2222			2279
WMG-PC16*	1.375-1.500			2564		—			2283
				2557		2223			2280
WMG-PC17*	1.125-1.250			2573		—			2284

Cat. No.	Grip Range	Strain Relief Fitting	
		Straight T&B Steel	90° T&B Steel
WMG-PC18*	1.250-1.375	2573	2284
WMG-PC19*	1.375-1.500	2565	2285
		2574	
WMG-PC20*	1.500-1.625	2565	2285
		2574	
WMG-PC21*	1.625-1.750	2575	2286
WMG-PC22*	1.750-1.875	2575	2286

*Replacement Gland Nut Supplied With These Catalogue Numbers only

T&B Conduit Fittings

Portable Cord and Cable Fittings



Sturdy Nylon 6 for strong, lightweight construction.
Gray colour shown, also available in black.

Nonmetallic Cable Glands—Low Profile for Tight Spots

T&B Nylon Cable Glands have a sturdy cable sealing mechanism which results in superior strain relief. The compact size ensures quick and easy installation in cramped spaces. The nonmetallic construction provides excellent corrosion, chemical and impact resistance. The glands have long threads and locknuts are available.

- Halogen free
- Flame retardant material rated UL 94-V0
- Rated IP 68 5 BAR, suitable for NEMA 4 enclosures
- UL Listed, CSA listed for certain ranges of cable
- Working Temperatures: -30°C (-86°F) to +80°C (176°F) Continuous, 150°C (276°F) Intermittent
- Meets VDE ratings

Nonmetallic Cable Glands



Cat no.	Hub Size	Colour	Cable Range		Length of Thread		USE T&B Locknut cat. no.	Unit pkg.	Std. pkg.	UPC code
			in.	mm	in.	mm				
NPT Threads										
CC-NPT38-B	3/8"	BLACK	.197 - .394	5-10	0.590	15	CI-1703PL*	50	250	786210-95582
CC-NPT38-G	3/8"	GREY	.197 - .394	5-10	0.590	15	CI-1703PL*	50	250	786210-07817
CC-NPT12-B	1/2"	BLACK	.394 - .551	10-14	0.590	15	LN501	50	250	786210-95583
CC-NPT12-G	1/2"	GREY	.394 - .551	10-14	0.590	15	LN501	50	250	786210-07824
CC-NPT34-B	3/4"	BLACK	.512 - .709	13-18	0.590	15	LN502	25	100	786210-95584
CC-NPT34-G	3/4"	GREY	.512 - .709	13-18	0.590	15	LN502	25	100	786210-07853
CC-NPT1-B	1"	BLACK	.709 - .984	18-25	0.709	18	LN503	20	100	786210-95586
CC-NPT1-G	1"	GREY	.709 - .984	18-25	0.709	18	LN503	20	100	786210-14682
ISO/Metric Threads										
CC-ISO-16-G	M16	GREY	.197 - .394	5-10	0.394	10	LN-ISO16-G	50	250	786210-21170
CC-ISO-20-G	M20	GREY	.236 - .473	6-12	0.590	15	LN-ISO20-G	50	250	786210-21173
CC-ISO-25-G	M25	GREY	.512 - .709	13-18	0.590	15	LN-ISO25-G	25	250	786210-21174
CC-ISO-32-G	M32	GREY	.709 - .984	18-25	0.590	15	LN-ISO32-G	20	250	786210-21175
CC-ISO-40-G	M40	GREY	.748 - 1.10	22-32	0.709	18				
PG Threads										
CC-PG7-G	7	GREY	.118 - .256	3-6.5	0.315	8	LN-PG7-G	50	200	786210-21160
CC-PG9-G	9	GREY	.157 - .315	4-8	0.315	8	LN-PG9-G	50	200	786210-21162
CC-PG11-G	11	GREY	.197 - .394	5-10	0.315	8	LN-PG11-G	25	100	786210-21163
CC-PG135-G	13-1/2	GREY	.236 - .473	6-12	0.354	9	LN-PG135-G	25	100	786210-21164
CC-PG16-G	16	GREY	.394 - .551	10-14	0.394	10	LN-PG16-G	25	100	786210-21165
CC-PG21-G	21	GREY	.512 - .709	13-18	0.433	11	LN-PG21-G	10	50	786210-21166
CC-PG29-G	29	GREY	.709 - .984	18-25	0.433	11	LN-PG29-G	10	50	786210-21167
CC-PG36-G	36	GREY	.867 - 1.26	22-32	0.512	13	LN-PG36-G	10	50	786210-21168

* Not CSA Certified.

T&B Conduit Fittings

Portable Cord and Cable Fittings



Supplied standard with all hoods and bases.
Special sizes/hood combinations available.

Metric PG-to-N.P.T. Thread Adapters

Cat. No.	N.P.T. Thread (mating)	Thread (at housing)
PG11-38	3/8"	PG11
PG16-50	1/2"	PG16
PG21-75	3/4"	PG21
PG29-100	1"	PG29
PG29-125	1-1/4"	PG29
PG36-125	1-1/4"	PG36
PG36-150	1-1/2"	PG36



Style may vary depending on size.

Metric Two-Screw Clamp Fittings

Cat. No.	Cable O.D. (in.)		Thread (at housing)
	Min.	Max.	
CC11-38	.400"	.470"	PG11
CC11-38P*	.250"	.325"	PG11
CC135-50	.400"	.535"	PG13.5
CC16-50	.455"	.625"	PG16
CC21-75	.513"	.815"	PG21
CC29-100	.800"	.175"	PG291
CC36-125	1.050"	.450"	PG361
CC42-150	1.500"	.800"	PG421

* Plastic



Standard European style—can be specified/
supplied with hoods and bases.

Metric Cord Grip Fittings

Cat. No.	Cable O.D. (in.)		Thread (at housing)
	Min.	Max.	
CG11-38	.200"	.470"	PG11
CG11-38P*	.325"	.340"	PG11
CG135-50	.285"	.545"	PG13.5
CG16-50	.285"	.625"	PG16
CG21-75	.395"	.790"	PG21
CG29-100	.780"	.060"	PG291
CG36-125	.960"	.375"	PG361
CG42-150	1.630"	.650"	PG421

* Plastic



Conduit Entry Blind Plug

Cat. No.	Thread (at housing)
CXP722	PG13.5
CXP723	PG16
CXP724	PG21
CXP725	PG29
CXP726	PG36
CXP727	PG42

T&B Conduit Fittings

Service Entrance Cable Fittings

Suggested Specifications for Service Entrance Fittings



**Series 4175
Pipe Strap (EMT)**



**Series 1275/1275AL Pipe Strap
(Rigid Metal Conduit & I.M.C.)**



**Series 1350/1350AL Pipe Spacer
(Rigid Metal Conduit I.M.C. & EMT)**



**Series 3870
Bonding & Grounding Bushing—Insulated**



**Series 106
Bonding Locknut**

- All service fittings shall be approved for the purpose by a nationally recognized testing laboratory, inspection agency, or product evaluation organization.
- Where service raceway consists of a rigid metal conduit, intermediate metal conduit, electrical metallic tubing or where service entrance cable is used as service conductors a suitable raintight service head conforming to Federal Standard W-C-586 shall be provided.
- Service raceway shall be securely fastened in place to the supporting surface at intervals as specified by the Code using suitable straps and spacers; straps and spacers shall be of malleable iron or steel construction, hot dipped galvanized or electro zinc plated conforming to Canadian Standards Association Standard C22.2 No. 18.4 and as manufactured by Thomas & Betts: series 1275 or 4175 straps and series 1350 spacers; aluminum straps or spacers such as series 1275AL and series 1350AL may be substituted when installed in environmental conditions that are more than normally corrosive.
- For grounding and bonding of service raceway, end of raceway or the terminating fitting shall be equipped with bonding locknuts and insulated metallic grounding and bonding bushing as required.

Bonding locknuts shall be of hardened steel or malleable iron construction, electro zinc plated, and provided with hardened bonding screws as manufactured by Thomas & Betts, series 106 bonding locknuts.

Insulated metallic grounding and bonding bushing shall be of malleable iron/steel construction, electro zinc plated and assembled with an insulator listed or certified for 150°C/302°F service as manufactured by Thomas & Betts, series 3870.

T&B Conduit Fittings

Service Entrance Cable Fittings

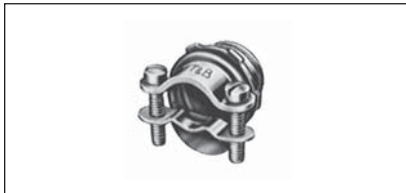
Suggested Specifications for Service Entrance Fittings—continued



Series 2111
Service Entrance Cable Fitting



Series 2116
Underground Feeder Cable Fitting



Series 3302M
Two Screw Fitting (Insulated)



Series 5262, 5302
Sealing Gasket



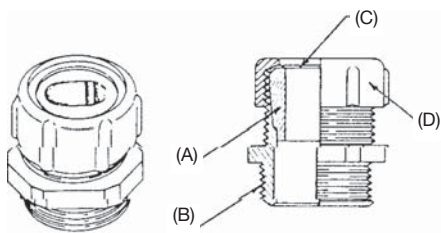
Series 1341
Cable Strap

- Where service entrance cable is used as overhead service conductors and code requires use of a service head, entrance caps shall be installed; caps shall be cast metal type of suitable ferrous or non ferrous metal equipped with thermoset insulators and proper knockout openings; when installed with proper drip loop, caps must assure raintight conditions.
- Terminating fittings for service entrance cable (Type SE or USE) or underground feeder and branch—circuit cable (Type UF) in locations where exposed to intermittent or constant moisture or in dry locations and subjected to mechanical strain shall be of watertight strain relief type as manufactured by Thomas & Betts, series 2111 or 2116; fittings shall be constructed of ferrous or non ferrous metal and equipped with taper-threaded hub, beveled moisture resistant/oil resistant synthetic rubber bushing. In dry locations, nylon insulated two screw type fittings of malleable iron/steel construction, electro zinc plated inside and outside including threads, such as series 3302M manufactured by Thomas & Betts may be substituted.
- Where service entrance cable is terminated into a threadless opening using hub type fittings, a gasket shall be provided between the outside of box or enclosure and fitting shoulder; gasket shall be of moisture resistant/ oil resistant synthetic rubber type adequately protected by and permanently retained to a metallic retainer as manufactured by Thomas & Betts, series 5262 or 5302.
- Service entrance cable shall be adequately supported at intervals enumerated in code using cable straps conforming to requirements of CSA Standard C22.2 No.18.4; cable straps shall be of malleable iron/steel construction, hot dipped galvanized or electro zinc plated as manufactured by Thomas & Betts, series 1341.
- At the point where the service cable enters the building, a suitable sill plate shall be provided; sill/wall plate shall be sealed to assure raintight conditions.

T&B Conduit Fittings

Service Entrance Cable Fittings

Service Entrance Cable Fittings



2111 Series

(Type SE/Type Use)

Application

- To connect service entrance cables to a meter box or an enclosure.

Standard Material/Finish

Body	Zinc Die Cast/As cast
Gland	Steel/Electro Zinc Plated & Chromate Coated
Retaining Ring	Stainless Steel/Passivated
Bushing	Neoprene/As molded

Range

- Oval (Flat) Cable Size
0.260 x 0.500 thru 1.062 x 1.765
- Type USE Cable Size
3 #12 thru 3-4/0 AWG Conductors
- Hub Size
1/4" thru 2" NPT (taper pipe threads)

Features

- Neoprene bushing, resists oil and water; grips cable the full length of the bushing providing adequate strain relief without damaging outer jacket (A).

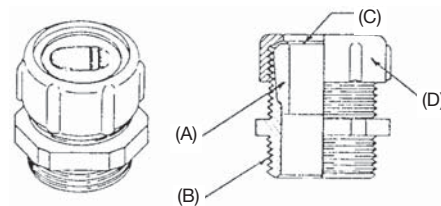
- Taper-threaded body (B).
- Stainless steel retaining ring protects cable jacket against abrasion; reduces installing torque effort (C).
- Rugged ribbed steel gland construction (D).
- Suitable for Type USE I75, USE I90 and USE B90 (CEC Table 19) Service Entrance Cable.

Listing/Certification

CEC Rule 6-300 (1) add (b) use underground service entrance with mechanical protection as per CEC Rule 12-012

Conformity

U.L.514B, NEMA FB-1, Federal Standard H-28 (Threads), NFPA70-2009 (ANSI) CSA C22.2 No. 18.3



2116 Series

Underground Feeder Cable Fittings

Application

- To connect underground feeder cables to a box or an enclosure.

Standard Material/Finish

Body	Zinc Die Cast/As cast
Gland	Steel/Electro Zinc Plated & Chromate Coated
Retaining Ring	Stainless Steel/Passivated
Bushing	Neoprene/As molded

Range

- Oval (Flat) Cable Size
0.235 x 0.500 thru 0.260 x 0.740
- Hub Size 1/2" thru 1" NPT (tapered pipe threads)

Features

- Neoprene bushing resists oil and water; grips cable the full length of the bushing providing adequate strain relief without damaging outer jacket (A).
- Taper-threaded body (B).
- Stainless steel retaining ring protects cable jacket against abrasion; reduces installing torque effort (C).
- Rugged ribbed steel gland construction (D).

Listing/Certification

CEC Rule 30-1004 (d) Wiring method, underground, where deviation has been allowed for permanent outdoor floodlighting installation.

Conformity

U.L.514B, NEMA FB-1, Federal Standard H-28 (Threads), NFPA70-2009 (ANSI) CSA C22.2 No. 18.3

T&B Conduit Fittings

Service Entrance Cable Fittings



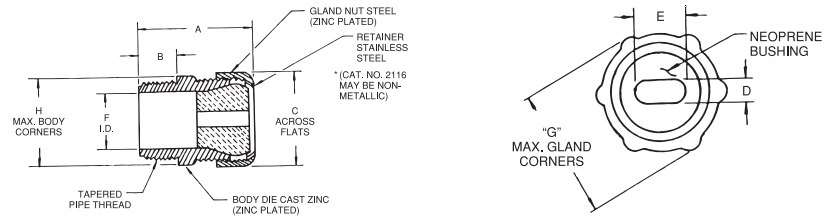
Oil and water resistant neoprene bushing is especially designed for sealing around underground feeder cable. Stainless steel retaining ring provides a bearing surface for the glandnut and eliminates cable twist. Ribbed glandnut is strong and easily tightened with a wrench to make a connection of high strength.

Underground Liquidtight Feeder Cable Fittings



Cat. No.	Hub Size	Cable Opening	Dimensions (in.)									
			A	B	C	D		E		F	G	H
						min.	max.	min.	max.			
2116*	1/2"	.235 x .500	1-11/16	5/8	1	.060	.235	.350	.500	9/16	1-1/8	1-1/8
2237	3/4"	.230 x .430	1-9/16	9/16	1-7/32	.080	.230	.320	.430	13/16	1-3/8	1-3/8
2238	3/4"	.235 x .465	1-9/16	9/16	1-7/32	.050	.235	.340	.465	13/16	1-3/8	1-3/8
2239	3/4"	.240 x .685	1-9/16	9/16	1-7/32	.060	.240	.500	.685	13/16	1-3/8	1-3/8

* Not CSA Certified.

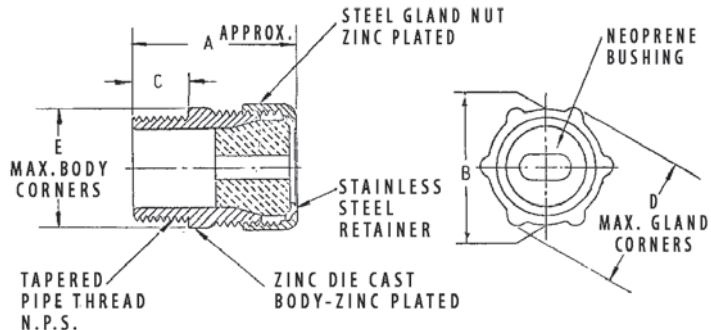


A design with two tapers inside the body—a slow one and a fast one—permits the stocking of fewer fittings for varied cable sizes and allows maximum take-up. The tapered neoprene bushings are resistant to oil, sunlight, and water. Hex gland and body take the same wrench opening and a stainless steel slip ring prevents cable from twisting as gland ring is being tightened. Threads on the body are tapered for watersealing.

Watertight Fittings for Oval Cables



Cat. No.	Hub Size	Dimensions (in.)					Oval Cable Range	
		A	B	C	D	E	max.	min.
2111	1/2"	1-3/4	1-1/4	5/8	1-3/8	1-3/8	.420 x .560	.380 x .520
2232	3/4"						.385 x .600	.260 x .500
2233	3/4"	1-11/16	1-1/4	9/16	1-3/8	1-3/8	.500 x .750	.375 x .625
2234	3/4"						.555 x .800	.490 x .675
2432	1"						.385 x .600	.260 x .500
2433	1"	1-11/16	1-1/4	9/16	1-3/8	1-3/4	.500 x .750	.375 x .625
2434	1"						.555 x .800	.430 x .675
2438	1"	1-3/4	1-1/2	25/32	1-11/16	1-3/4	.565 x .855	.440 x .730
2439	1"						.635 x .975	.510 x .850
2442	1-1/4"						.635 x .975	.510 x .850
2443	1-1/4"	2-1/16	1-15/16	5/8	2-1/16	2-1/8	.640 x 1.050	.490 x .900
2446	1-1/4"						.750 x 1.150	.565 x .965
2454	1-1/2"	2-1/4	2-1/8	11/16	2-5/16	2-5/16	.840 x 1.275	.655 x 1.090
2447	1-1/2"						.880 x 1.425	.695 x 1.240
2448	2"						.968 x 1.500	.790 x 1.390
2449	2"	2-3/8	2-5/8	11/16	2-3/4	2-13/32	1.062 x 1.765	.850 x 1.550
2450	2"						1.820 x 1.190	1.700 x 1.050

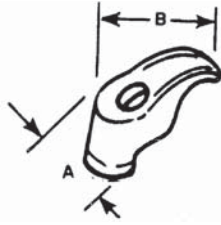


T&B Conduit Fittings

Service Entrance Cable Fittings



Cable Straps



Each strap takes a wide range of sizes because of the rocking action of the foot. Hole is for 1/4" screw. Malleable iron, hot dipped galvanized construction.

Cat. No.	Wire Size	Dimensions (in.)	
		A	B
1341	2-#10	5/8	1-1/8
1344	3-#6 or 3-#8	5/8	1-15/16
1345*	3-#4 or 3-#2	13/16	1-59/64
1346	3-1/0	3/4	2-7/16
1347	3-4/0	3/4	2-25/32

* Steel, hot dipped galvanized.

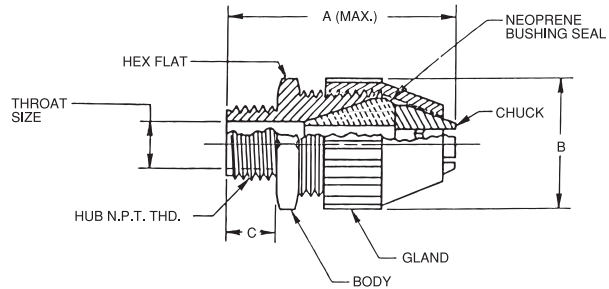


- Tapered threaded hub.
- Liquidtight and dust-tight; hand tightens—no tools required.
- Corrosive and weather resistant nylon for outdoor and indoor applications.

Nylon UF Cable Fittings for Corrosive Environments



Cat. No.	Hub Size	UF Cable Range		Dimensions (in.)		
		max.	min.	A max.	B ± .060	C ± .060
2827	1/2"	.550 x .280	.400 x .190	2.60	1.270	.600
2828	3/4"	.675 x .280	.525 x .190	3.00	1.570	.620
2829	3/4"	.775 x .280	.625 x .190	3.00	1.570	.620



T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings

Specifications—Liquidtight Flexible Metal Conduit

Ref. CEC Rule 12-1300

Liquidtight flexible metal conduit is a raceway of circular cross section having an outer liquidtight nonmetallic, sunlight resistant jacket over a flexible metal core.

Liquidtight flexible metal conduit is permitted to be used for exposed or concealed work, in dry, damp or wet locations indoors and outdoors. With the exception of Class I Division I locations, liquidtight flexible metal conduit is considered an acceptable wiring method in hazardous locations Class 1 Division 2 (CEC Rule J18-152(6)).

Liquidtight flexible metal conduit is not permitted where subjected to mechanical injury. The conduit is not permitted to be used underground or embedded in cinder fill or concrete. It cannot be used as a general purpose raceway.

Use of liquidtight conduit is not permitted where any combination of ambient or conductor temperature will produce temperature in excess of that for which the jacket is rated or in locations where flexing at low temperature will injure jacket. Liquidtight flexible metal conduit is not permitted for conductors over 600 volts.

Liquidtight flexible conduit is available in 3/8" through 6" trade size. Conduit is constructed with galvanized steel or aluminum core, regular or extra flex. Outer jacket is available for a variety of applications, e.g. oil resistant where exposed to cutting oils and for service temperature ranging from -50°C to 150°C.

Listed and certified conduits are constructed of galvanized steel core and thermoplastic jacket rated for maximum service temperature of 60°C and suitable for exposure to mineral oils but not to gasoline and similar solvents.

Conduit is required to be supported adequately, and bending is restricted to 360 degrees total.

Please refer to the following for further details and complete information:

1. U.L. 360...Safety Standards for Liquidtight Flexible Steel Conduit
2. U.L. 514, Safety Standards for Outlet Boxes and Fittings
3. W-F-406...Federal Specification: Fittings for Cable, Power, Electrical and Conduit, Metal, Flexible
4. NEMA FB-1...Standards Publication: Fittings and Supports for Conduit and Cable Assemblies
5. EMP-1...JIC Electrical Standards for Mass Production Equipment
6. EGP-1...JIC Electrical Standards for General Purpose Machine Tools
7. CEC Section 12-1300...Wiring Methods (Liquidtight Metal Conduit)
8. CSA C22.2 No. 56...Safety Standard for Flexible Metallic Conduit and Liquidtight Flexible Metal Conduit
9. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Please Note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2009 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

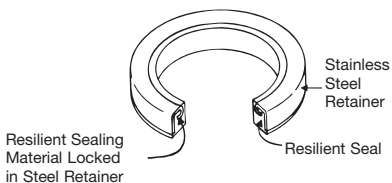
T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings

Suggested Specifications for Liquidtight Flexible Metal Conduit Fittings



**Series 5331; Series 5231AL
Liquidtight Flexible Metal
Conduit Fittings**



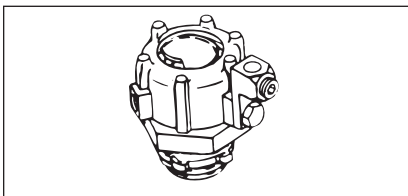
**Series 5262
Sealing Gasket**



**Series 3321
PVC Coated Liquidtight Flexible
Metal Conduit Fittings**



**Series 41
Liquidtight Union**



**5331GR Series
External Bonding**

- Liquidtight Flexible Metal conduit used shall be of the type with galvanized steel core inside and outside and outer thermoplastic jacket suitable for the ambient environmental conditions. Jacket shall be positively locked to core to prevent sleeving. Where used as an equipment grounding conductor, the conduit shall conform to applicable standards U.L. 360/CSA C22.2 No. 56.
- Flexible conduit when installed shall have sufficient slack to avoid sharp flexing and straining due to vibration and thermal expansion/constriction. Conduit shall be installed in such a manner that liquids will tend to run off the surface instead of draining toward the fittings.
- Where liquidtight flexible metal conduit terminates into a threaded or threadless opening, the conduit shall be assembled with approved liquidtight fittings. Fittings used shall be reusable type of malleable iron/steel construction, electro-zinc plated inside and outside, furnished with nylon insulated throat and taper threaded hub as manufactured by Thomas & Betts, series 5331.
- Where liquidtight flexible metal conduit is terminated into a threadless opening using a threaded hub fitting such as Thomas & Betts series 5331, a suitable moisture resistant/oil resistant synthetic rubber gasket such as Thomas & Betts series 5262 shall be provided between the outside of box or enclosure and fitting shoulder. Gasket shall be adequately protected by and permanently bonded to a metallic retainer.
- Where liquidtight flexible metallic raceway is installed in outdoor or indoor locations and is exposed to environmental conditions that are more than normally corrosive to exposed surfaces, PVC coated liquidtight flexible metal conduit fittings such as series 3321 manufactured by Thomas & Betts shall be used. Fittings shall be coated with a nominal thickness of .040 PVC and must meet the general requirements for liquidtight flexible metal conduit fittings indicated above.
- Liquidtight fittings required to couple threaded end of a fitting or pipe where rotation of fitting or pipe is limited or restricted shall be reusable type of malleable iron/steel construction, electro-zinc plated inside /outside with taper threaded hub as manufactured by Thomas & Betts, series 41. Fittings shall be equipped with a moisture resistant/oil resistant synthetic rubber gasket. Metal to metal seal or metal to thermoplastic seal for this application shall be considered unacceptable.

Approved fittings installed shall be:

- (1) Designed to prevent sleeving, assure plastic (raceway jacket) to plastic (gasket) seal.
- (2) Equipped with grounding device to assure ground continuity irrespective of raceway core construction. Grounding device if inserted into raceway and directly in contact with conductors shall have rolled over edges for sizes under 5 inches.

At the point of flexing (i.e. where raceway leaves fitting) the thermoplastic raceway jacket shall not be permitted to be in direct contact with metal.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



5331 Series
5231 AL Series



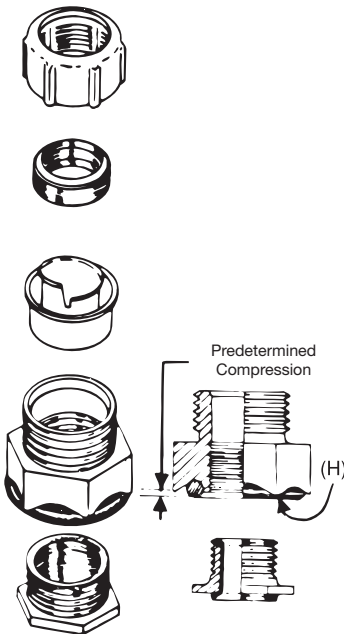
5361 Series



5271 Series

5341 Series...
same as 5331, except 45° Fittings

5351 Series...
same as 5331, except 90° Fittings



5361 Series
Chase Style

Specifications

Application

- Used where flexible metal raceway is installed in outdoor or indoor locations where exposed to continuous or intermittent moisture.
- To positively bond conduit to box or enclosure.

Features

- Ability to install quickly with low torque effort.
- Ground cone design offers following advantages:
 - (1) Compresses metallic convolutions; provides high quality ground contact with low impedance and high raceway holding power (A).
 - (2) Single helical thread on ground cone is easy to install without cross threading; accepts variations in raceway diameters and convolution pitch (B).
 - (3) Rolled over edge protects conductors (C).

Sealing ring design has following exclusive features:

- (1) Grips and seals at leading and trailing edge—will not abrade raceway jacket (D).
- (2) Provided with grooves on inside diameter for anti-sleeving (E).
- (3) Shoulders on both ends for extra sealing (F).
- (4) Symmetrical shape assures foolproof assembly.

- Can be disconnected and reused

- Watertight/oiltight installation at box or enclosure termination is assured by:
 - (1) External taper thread hub on 5331 series and use of sealing gasket 5262 series (G).
 - (2) Captive sealing 'O' ring on 5361 series (H).
 - (3) Taper tapped hole on 5271series.

- Suitable for use in Class I Division 2, Class II Division 1 and 2 and Class III Division 1 and 2 Hazardous Locations per CEC Section 18.
 - Class I, Zone 2, CEC Rule 18-152 (6)
 - Class I, Div. 2, CEC Rule J18-152 (6)
 - Class II, Div. 1 CEC Rule 18-202 (4) (b)
 - Class II, Div. 2, CEC Rule 18-252 (4)
 - Class III, Div.1 CEC Rule 18-302 (4)
 - Class III, Div. 2 CEC Rule 18-352

- CEC Rule 12-1306 stipulates “a separate bonding conductor shall be installed in liquidtight flexible conduit in accordance with section 10”.

- 1/2” and 1-1/4” sizes Laboratory tested to carry ground fault current of up to 1000 amps RMS with duration of fault current 3 cycles.

- Conforms with JIC requirements.

- Available with imperial, I.S.O. and PG threaded hub.

Standard Material

5331-5361-5271 Series

Body, Gland, Locknut and Ground

Cones: All steel or malleable iron.

Sealing Ring and Insulator:

All thermoplastic rated min. -20°C

max. 105°C

Sealing Gasket: Stainless Steel and

Buna N

5231 AL Series

All Copper-free Aluminum

(non-insulated)

Standard Finish

5331-5361-5271 Series

Electro Zinc Plated and Chromate Coated

5231 AL Series

Copper-free Aluminum

Range

- 5331 Series 3/8” thru 6” conduit
 - 5341 Series 3/8” thru 4” conduit
 - 5351 Series 3/8” thru 4” conduit
 - 5361 Series 3/8” thru 4” conduit
 - 5271 Series 3/8” thru 1-1/4” conduit
 - 5231 AL Series 3/8” thru 4” conduit
- All hubs provided with taper pipe threads (NPT).

Conformity

U.L. 514B

CSA C22.2 No. 18.3

NEMA FB-1

NFPA 70-2008 (ANSI)

JIC EGP1, JIC EMP1

Federal Specification W-F-406

Federal standard H-28 (Threads)

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings

High Temperature Flexible Metal Liquidtight Fittings

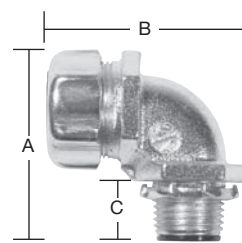
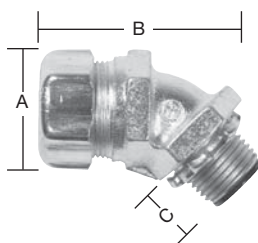
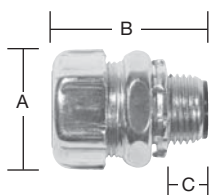


T&B HT-Series Liquidtight Fittings are available straight, 45°, and 90°.

Suggested Specification

Where Liquidtight flexible metal fittings are required in high temperature environments up to 150°C:

- Fitting's body, gland, locknut and ground cone shall be constructed from steel or malleable iron, electro-zinc plated and chromate coated for corrosion protection.
- Fitting's sealing ring and throat insulator will be molded from high temperature nylon suitable for temperatures up to 150°C and a minimum UL flammability rating of UL94-V2.
- The fitting shall be constructed to accept high temperature flexible metal liquidtight conduit rated to 150°C (works with our ATX Series conduit, p. 135).
- The fitting shall have a plastic throat insulator to protect conductors.
- The fitting shall have a steel ground cone to:
 - provide high quality ground contact
 - single helical thread for easy installation into conduit
 - rolled over edge to protect conductors
- The fitting shall have a plastic sealing ring to:
 - grip and seal at leading and trailing edge (double bevel up to 2") of conduit jacket
 - provide a watertight/oiltight seal
- The fittings shall be capable to terminate the conduit in either a threaded or threadless opening.
- For applications where termination into a threaded opening is required the fitting shall have external tapered NPT threads.
- For applications where termination into a threadless opening is required use an acceptable sealing ring.
- Fittings shall conform to UL 514B.
- Accepted Manufacturers: Thomas & Betts — 5331-HT straight series, 5341-HT 45° series, 5351-HT 90° series; 5262 sealing ring series.



Straight Liquidtight Fittings

Cat. No.	Conduit Size (in.)	Dimensions (in.)		
		A	B	C
5331-HT	3/8	1-5/32	1-1/2	9/16
5332-HT	1/2	1-3/8	1-9/16	9/16
5333-HT	3/4	1-21/32	1-5/8	9/16
5334-HT	1	1-7/8	2-1/16	3/4
5335-HT	1-1/4	2-9/32	2-1/2	13/16
5336-HT	1-1/2	2-22/32	2-11/16	13/16
5337-HT	2	3-1/4	3-1/16	7/8
5338-HT	2-1/2	3-3/4	4-1/8	1
5339-HT	3	4-1/2	4-1/4	1
5340-HT	4	5-1/2	4-1/2	1-1/8

45° Liquidtight Fittings

Cat. No.	Conduit Size (in.)	Dimensions (in.)		
		A	B	C
5341-HT	3/8	1-5/32	1-9/16	9/16
5342-HT	1/2	1-3/8	1-7/8	9/16
5343-HT	3/4	1-21/32	2-1/8	9/16
5344-HT	1	1-7/8	2-1/4	3/4
5345-HT	1-1/4	2-9/32	2-3/4	13/16
5346-HT	1-1/2	2-22/32	2-3/8	13/16
5347-HT	2	3-1/4	3-7/8	7/8

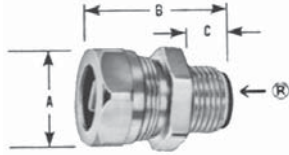
90° Liquidtight Fittings

Cat. No.	Conduit Size (in.)	Dimensions (in.)		
		A	B	C
5351-HT	3/8	1-5/32	1-3/8	9/16
5352-HT	1/2	1-3/8	1-9/16	9/16
5353-HT	3/4	1-21/32	1-3/4	9/16
5354-HT	1	1-7/8	2-3/16	3/4
5355-HT	1-1/4	2-9/32	2-3/4	13/16
5356-HT	1-1/2	2-22/32	2-15/16	13/16
5357-HT	2	3-1/4	3-7/16	7/8

Please note: There is no CSA and UL Standards applicable for High Temperature Fittings or Conduits. Therefore neither HT Fittings nor HT Conduit bear these Certifications/Listings.

T&B Conduit Fittings

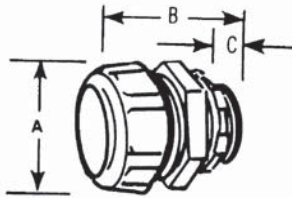
Liquidtight Flexible Metal Conduit Fittings



Liquidtight Flexible Metal Conduit Fittings For Control and Power Cable Applications

Cat. No.	Hub Size	Conduit Size	Dimensions (in.)		
			A	B	C
5229*	1/4"	1/4	27/32	1-3/8	15/32
5330*	3/8"	5/16	63/64	1-3/8	15/32

* U.L. and CSA not applicable.



Steel, malleable iron, or aluminum tapered hub threads. With safe-edge ground thru 4" cone and double bevel sealing ring (through 2").

Straight Fittings



Insulated	Cat. No.		Conduit Size	Dimensions (in.)		
	Aluminum [†]	Noninsulated		A	B	C
5331**♦	5231AL	5231	3/8	1-5/32	1-1/2	9/16
5332♦	5232AL	5232	1/2	1-3/8	1-9/16	9/16
5333♦	5233AL	5233	3/4	1-21/32	1-5/8	9/16
5334♦	5234AL	5234	1	1-7/8	2-1/16	3/4
5335♦	5235AL	5235	1-1/4	29/32	2-1/2	13/16
5336+	5236AL	5236	1-1/2	2-23/32	2-11/16	13/16
5337+	5237AL	5237	2	3-1/4	3-1/16	7/8
5338+	5238AL	5238	2-1/2	3-3/4	4-1/8	1
5339+	5239AL	5239	3	4-1/2	4-1/4	1
5340+	5240AL	5240	4	5-1/2	4-1/2	1-1/8
5385*+	—	5285*	5	8-3/4	7	1-7/8
5386*+	—	—	6	8-3/4	8-1/2	2

Suitable for hazardous locations use in CEC Rule 18-152 (6) Class I, Zone 2;
CEC Rule J18-152 (6) Class I, Division 2; CEC Rule 18-202 (4) Class II, Division 1;
CEC Rule 18-252 (4) Class II, Division 1

** 3/8" Conduit Fitting has 1/2" hub.

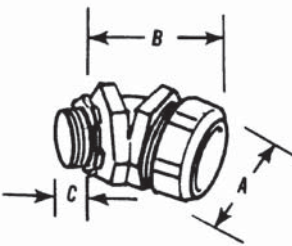
U.L. Listed liquidtight; and CSA Certified watertight.

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

* Not CSA Certified.

♦ Steel

+ Malleable Iron



Malleable iron, tapered hub threads. With safe-edge ground cone and double bevel sealing ring (through 2").

45° Angle Fittings*



Insulated	Cat. No.		Conduit Size	Dimensions (in.)		
	Noninsulated			A	B	C
5341**	5241		3/8	1-5/32	1-9/16	9/16
5342	5242		1/2	1-3/8	1-7/8	9/16
5343	5243		3/4	1-21/32	2-1/8	9/16
5344	5244		1	1-7/8	2-1/4	3/4
5345	5245		1-1/4	29/32	2-3/4	1-3/16
5346	5246		1-1/2	2-23/32	3-3/8	1-3/16
5347	5247		2	3-1/4	3-7/8	7/8
5348	5248		2-1/2	3-3/4	4-1/4	1
5349	5249		3	4-1/2	4-1/4	1
5350	5250		4	5-1/2	4-5/8	1-1/8

* Suitable for hazardous locations use CEC Rule 18-152 (6) Class I, Zone 2;
CEC Rule J18-152 (6) Class I, Division 2; CEC Rule 18-202 (4) Class II, Division 1;
CEC Rule 18-252 (4) Class II, Division 1

** 3/8" Conduit Fitting has 1/2" hub.

U.L. Listed liquidtight; and CSA Certified watertight.

For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

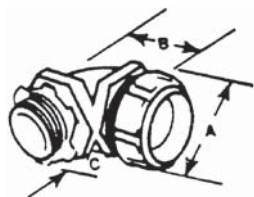
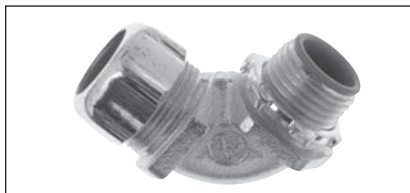
For Wiremesh Grips refer to page 80.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



90° Angle Fittings



Insulated	Cat. No.		Hub Size	Conduit Size	Dimensions (in.)		
	Noninsulated	Aluminum			A	B	C
	5251	5251AL	1/2"	3/8"	1-5/32	1-3/8	9/16
	5252	5252AL	1/2"	1/2"	1-3/8	1-9/16	9/16
	5253	5253AL	3/4"	3/4"	1-21/32	1-3/4	9/16
	5254	5254AL	1"	1"	1-7/8	2-3/16	3/4
	5255	5255AL	1-1/4"	1-1/4"	29/32	2-3/4	13/16
	5256	5256AL	1-1/2"	1-1/2"	2-23/32	2-15/16	13/16
	5257	5257AL	2"	2"	3-1/4	3-7/16	7/8
	5258	5258AL*	2-1/2"	2-1/2"	3-3/4	8-7/8	1
	5259	—	3"	3"	4-1/2	10-1/4	1
	5260	—	4"	4"	5-1/2	12-5/8	1-1/8

Suitable for hazardous locations use in CEC Rule 18-152 (6) Class I, Zone 2; CEC Rule J18-152 (6) Class I, Division 2; CEC Rule 18-202 (4) Class II, Division 1; CEC Rule 18-252 (4) Class II, Division 2.

U.L. Listed liquidtight; and CSA Certified watertight.

* Not CSA Certified.



Prevents severe conduit bends and pullout.

Wiremesh Grips for Liquidtight Fittings

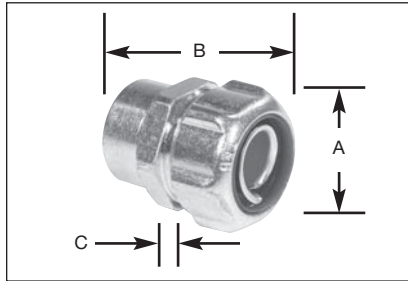


Cat. No.	Conduit Size	Liquidtight Fittings			90° Chase	Chase	Adapter
		Straight	45°	90°			
WMG-LT1	3/8"	5331	5341	5351	5361	5371	5271
WMG-LT2	1/2"	5332	5342	5352	5362	5372	5272
WMG-LT3	3/4"	5333	5343	5353	5363	5373	5273
WMG-LT4	1"	5334	5344	5354	5364	5374	5274
WMG-LT5	1-1/4"	5335	5345	5355	5365	—	5275
WMG-LT6	1-1/2"	5336	5346	5356	5366	—	5276
WMG-LT7	2"	5337	5347	5357	5367	—	5277
WMG-LT8	2-1/2"	5338	5348	5358	5368	—	5278
WMG-LT9	3"	5339	5349	5359	5369	—	5279
WMG-LT10	4"	5340	5350	5360	5370	—	5282

Order wiremesh grip separately: no need to duplicate inventory.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



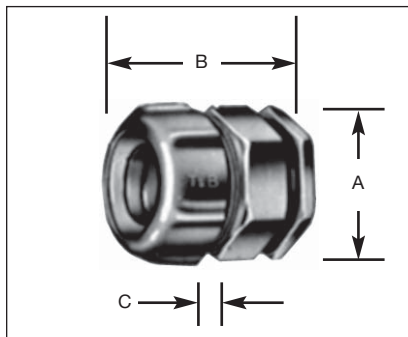
Liquidtight Adapter To Connect Liquidtight to Threaded Rigid Conduit



Cat. No.	Conduit Size (in.)	Dimensions (in.)			Std. Pkg.
		A	B	C	
5271	3/8	1-5/32	1-9/16	1-3/8	50
5272	1/2	1-3/8	1-11/16	1-3/8	50
5273	3/4	1-21/32	1-3/4	1-3/8	50
5274	1	1-7/8	2-1/8	1-3/8	25
5275	1-1/4	2-9/32	2-1/2	1-3/8	25
5276	1-1/2	2-3/4	2-11/16	1-3/8	10

With SAFE-EDGE™ ground cone and double bevel sealing ring (through 2").
Suitable for hazardous locations use in CEC Rule 18-152 (6) Class I, Zone 2;
CEC Rule J18-152 (6) Class I, Division 2; CEC Rule 18-202 (4) Class II, Division 1;
CEC Rule 18-252 (4) Class II, Division 2.

Nylon Insulated CHASE® Fittings Steel or Malleable Iron



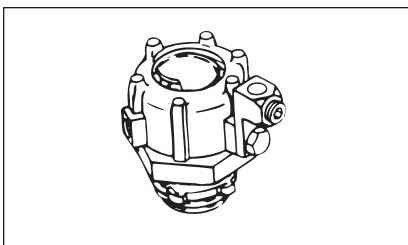
Cat. No.	Conduit Size (in.)	Dimensions (in.)			Std. Pkg.
		A	B	C	
5361	3/8	1-3/32	1-3/8	1/8	100
5362	1/2	1-3/8	1-3/8	3/16	100
5363	3/4	1-11/16	1-5/8	1/4	50
5364	1	2-1/32	2-1/16	1/4	25
5365	1-1/4	2-3/8	2-3/8	5/16	25
5366	1-1/2	2-15/16	2-3/4	3/8	10
5367	2	2-9/16	3	3/8	5
5368	2-1/2	4-3/8	3-15/16	7/16	5
5369	3	5-1/8	4-1/8	1/2	5
5370	4	5-1/8	4-3/8	1/2	5

With SAFE-EDGE™ ground cone and double bevel sealing ring (through 2").
Note: UL Listed Liquidtight; and CSA Certified Watertight.
Suitable for hazardous locations use in CEC Rule 18-156 (6) Class I, Zone 2;
CEC Rule J18-156 (3) Class I, Division 2; CEC Rule 18-202 (4) Class II, Division 1;
CEC Rule 18-252 (4) Class II, Division 2.

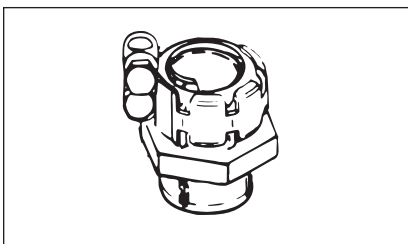
T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings

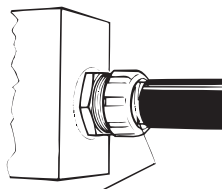
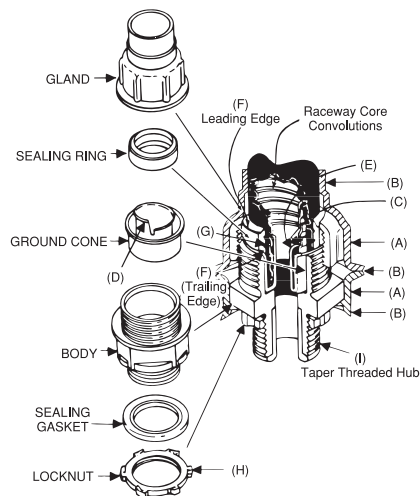
Specifications—External Bonding



Series 5331GR



Series 5271GR



Sleeving

Raceway Jacket pulls off—exposing core and affecting liquidtight termination. Feature (E) on sealing ring helps overcome this problem.

Application

- Used where external bonding jumper is required around liquidtight flexible metal conduit.
- To positively bond conduit to box or enclosure.
- Used where flexible raceway is installed in outdoor or indoor locations where exposed to continuous or intermittent moisture.

Features

- Designed with provision to install bonding jumper in several positions.
- Designed to accept mechanical or compression lug.
- Ability to install quickly with low torque effort.
 - (i) Compresses metallic convolutions; assures ground contact with low impedance and high raceway holding power (A).
 - (ii) Single helical thread on ground cone is easy to install without cross threading; accepts variations in raceway diameters and convolution pitch (B).
 - (iii) Rolled over edge protects conductors (C).
- Sealing ring design has following exclusive features:
 - (i) Grips and seals at leading and trailing edge—will not abrade raceway jacket (D).
 - (ii) Provided with grooves on inside diameter for anti-sleeving (E).
 - (iii) Shoulders on both ends for extra sealing (F).
 - (iv) Symmetrical shape assures foolproof assembly.

- Can be disconnected and reused.

- Watertight/oiltight installation at box or enclosure termination is assured by:
 1. External taper thread hub on 5331GR series and use of sealing gasket 5262 series (G).
 2. Taper tapped hole on 5271 series.

- Suitable for use in Class I Division 2, Class II Division 1 & 2 and Class III Division 1 & 2 Hazardous Locations per CEC Section 18.

- Conforms with JIC requirements.
- CEC Rule 12-1306 stipulates “a separate bonding conductor shall be installed in liquidtight flexible conduit in accordance with section 10”.
- CEC Rule 10-618 (3) “The armour of flexible metal conduit and liquidtight flexible metal conduit shall not be considered as fulfilling the requirements of a bonding conductor for the purposes of this rule, **and a separate bonding conductor shall be run within the conduit**”.

Standard Material

Lugs: High conductivity copper (for copper conductor only).
 Body, Gland, Locknut & Ground Cones: All steel or malleable iron.
 Sealing Ring and Insulator: All thermoplastic
 Sealing Gasket: Stainless Steel & Buna N
 Strap: Steel

Standard Finish

All Electro Zinc Plated and Chromate Coated except lugs.
 Lugs: Bright Dipped

Range

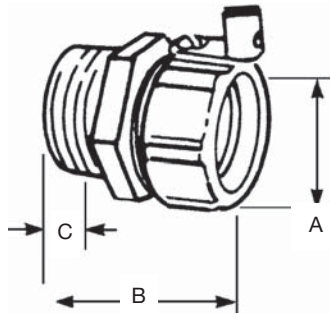
- 5331GR Series (straight fittings with male hub): $\frac{3}{4}$ " thru 6" conduit.
 - 5341GR Series (45°): $\frac{3}{4}$ " thru 4" conduit
 - 5351GR Series (90°): $\frac{3}{4}$ " thru 4" conduit.
 - 5271GR Series (straight fittings with female hub): $\frac{3}{4}$ " thru 1-1/4" conduit.
- All hubs provided with taper pipe threads (NPT)

Conformity

U.L. 467
 U.L. 514B
 CSA C22.2 No. 18.3
 CSA C22.2 No. 41
 NEMA FB-1
 NFPA 70-2008 (ANSI)
 JIC EGP1
 JIC EMP1
 Federal Specification W-F-406
 Federal Standard H-28 (threads)

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



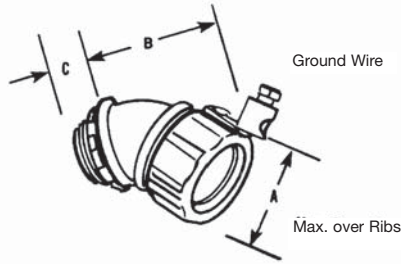
Malleable iron, tapered hub threads.

Straight Grounding Fittings*

Steel Insulated	Cat. No.		Conduit Size	Dimensions (in.)			Ground Wire D
	Steel Non-insulated	Aluminum Non-insulated		A	B	C	
5331GR**	5231GR	5231ALGR*	3/8"	1-5/32	1-1/2	9/16	14-8
5332GR	5232GR	5232ALGR*	1/2"	1-3/8	1-9/16	9/16	14-8
5333GR	5233GR	5233ALGR*	3/4"	1-21/32	1-5/8	9/16	14-4
5334GR	5234GR	5234ALGR*	1"	1-7/8	2-1/16	3/4	14-4
5335GR	5235GR		1-1/4"	2-1/4	2-1/2	13/16	8-1/0
5336GR	5236GR		1-1/2"	3-1/4	2-11/16	13/16	4-2/0
5337GR	5237GR		2"	3-13/16	3-1/16	7/8	4-2/0
5338GR	5238GR		2-1/2"	4-7/16	4-1/8	1	2-4/0
5339GR	5239GR		3"	5-3/16	4-1/4	1	2-4/0
5340GR	5240GR		4"	6-1/8	4-1/2	1-1/8	2-4/0
5385GR	5285GR		5"	8-9/16	7	1-7/8	2-4/0
5386GR	—		6"	8-17/32	8-1/2	2	2-4/0



45° Angle Grounding Fittings

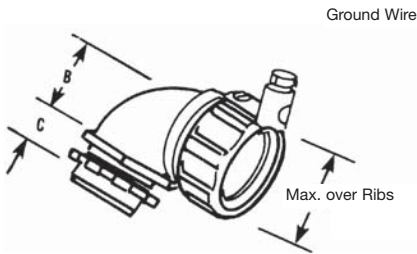


Malleable iron, tapered hub threads.

Insulated	Cat. No.		Conduit Size	Dimensions (in.)			Ground Wire D
	Non-insulated			A	B	C	
5341GR**	5241GR**		3/8"	1-5/32	1-9/16	9/16	14-8
5342GR	5242GR		1/2"	1-3/8	1-7/8	9/16	14-8
5343GR	5243GR		3/4"	1-21/32	2-1/8	9/16	14-4
5344GR	5244GR		1"	1-7/8	2-1/4	3/4	14-4
5345GR	5245GR		1-1/4"	2-1/4	2-3/4	13/16	8-1/0
5346GR	5246GR		1-1/2"	3-1/4	3-3/8	13/16	4-2/0
5347GR	5247GR		2"	3-13/16	3-7/8	7/8	4-2/0
5348GR	5248GR		2-1/2"	4-7/16	4-1/4	1	2-4/0
5349GR	5249GR		3"	5-3/16	4-1/4	1	2-4/0
5350GR	5250GR		4"	6-1/8	4-5/8	1-1/8	2-4/0



90° Angle Grounding Fittings



Malleable iron tapered hub threads.

Steel Insulated	Cat. No.		Conduit Size	Dimensions (in.)			Ground Wire D
	Steel Non-insulated	Aluminum Non-insulated		A	B	C	
5351GR**	5251GR**	5251ALGR*	3/8"	1-5/32	1-1/4	9/16	14-8
5352GR	5252GR	5252ALGR*	1/2"	1-3/8	1-7/16	9/16	14-8
5353GR	5253GR	5253ALGR*	3/4"	1-21/32	1-13/16	9/16	14-4
5354GR	5254GR	5254ALGR*	1"	1-7/8	2-1/16	3/4	14-4
5355GR	5255GR		1-1/4"	2-1/4	2-1/2	13/16	8-1/0
5356GR	5256GR		1-1/2"	3-1/4	2-15/16	13/16	4-2/0
5357GR	5257GR		2"	3-13/16	3-7/16	7/8	4-2/0
5358GR	5258GR		2-1/2"	4-7/16	8-7/8	1	2-4/0
5359GR	5259GR		3"	5-3/16	10-1/4	1	2-4/0
5360GR	5260GR		4"	6-1/8	12-5/8	1-1/8	2-4/0

* Not CSA Certified

** 3/8" conduit fittings have 1/2" trade size hub. With safe-edge ground cone (through 4") and double bevel sealing ring (through 2").

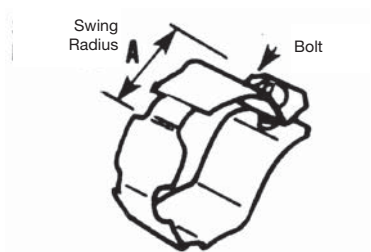
Suitable for hazardous locations use in Class I, Division 2; Class II, Division 1 and 2; Class III, Division 1 and 2, where general purpose equipment is specifically permitted per CEC Rule 18-152 (6) Class I, Zone 2; CEC Rule J18-156 (3) Class I, Division 2;

CEC Rule 18-202 (4) Class II, Division. 1; CEC Rule 18-252 (4) Class II, Division 2.

Note: 3/8"-1" fittings include Revolver™ grounding device. For sizes 1-1/4" and up, fittings are supplied with a copper mechanical lug.

T&B Conduit Fittings

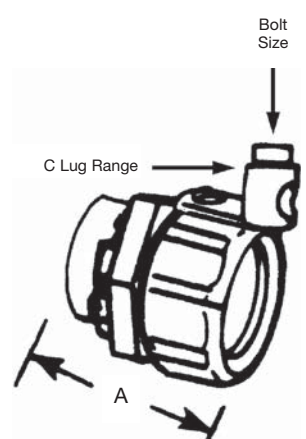
Liquidtight Flexible Metal Conduit Fittings



For retrofit applications. Includes strap, nut and bolt.

External Grounding Strap

Cat. No.	Conduit Size	A Swing Radius	B Bolt Size
GR1W	3/8"	1	10-24
GR2W	1/2"	1-1/16	10-24
GR3W	3/4"	1-3/8	1/4-20
GR4W	1"	1-1/2	1/4-20
GR5W	1-1/4"	1-7/8	5/16-18



Liquidtight to Rigid External Ground Adaptor



Cat. No.	Conduit Size	A Overall Length	B Bolt Size	C Lug Range
5271GR*	3/8"	1-15/32	10-24	14-8
5272GR	1/2"	1-3/8	10-24	14-8
5273GR	3/4"	1-21/32	1/4-20	14-4
5274GR	1"	1-7/8	1/4-20	14-4
5275GR	1-1/4"	2-1/4	5/16-18	8-1/0
5276GR	1-1/4"	2-29/32	3/8-16	3/8-16

* 3/8" conduit fittings have 1/4" trade size hub.

For Dura-Plate™ finish add prefix 040- to Cat. No. Consult Customer Service for details.



Revolver® Grounding Device

Cat. No.	Conduit Size
38GR-TB	3/8"
12GR-TB	1/2"
34GR-TB	3/4"
1GR-TB	1"

The grounding device is a combination of a set screw and a grounding lug that can be used to retrofit any existing liquidtight fitting to an externally grounded version.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



3321 Series*

*3361 Series...same as 3321, except 90°
3341 Series...same as 3321, except 45°

Specifications— PVC Coated

Application

- Used where liquidtight flexible metal conduit is installed in outdoor or indoor locations where exposed to environmental conditions that are more than normally corrosive to exposed surfaces.
- To positively bond conduit to box or enclosure.

Features

- PVC coated to protect fitting from extremely corrosive surroundings without affecting integrity of electrical grounding path (A).
- Provided with overlapping sleeve for additional seal (B).
- Ability to install quickly with low torque effort.
- Ground cone design offers following advantages:
 - (1) Compresses metallic convolutions; provides high quality ground contact with low impedance and high raceway holding power (C).
 - (2) Single helical thread on ground cone is easy to install without cross threading; accepts variations in raceway diameters and convolution pitch (D).
 - (3) Rolled over edge protects conductors (E).

- Watertight/oiltight installation at box or enclosure termination is provided by external taper thread hub and sealing gasket (I).
- Suitable for use in Class I Division 2, Class II Division 1, 2 and Class III Division 1, 2 Hazardous Locations per CEC Rule 18-152 (6) Class I, Zone 2; CEC Rule J18-156 (3) Class I, Div. 2; CEC Rule 18-202 (4) Class II, Div. 1; CEC Rule 18-252 (4) Class II, Div. 2.

- Conforms with JIC requirements.

Standard Material

Body, Gland, Locknut and Ground Cones: All steel or malleable iron.
Sealing Ring and Insulator: All thermoplastic
Sealing Gasket, Retainer: Stainless Steel
Resilient Seal: Buna N
Coating: PVC

Standard Finish

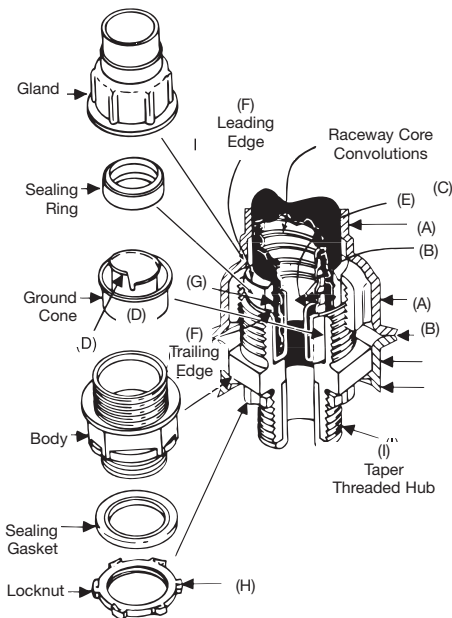
Outside of body and gland: PVC Coated .040 min. Thickness
Inside of body and gland: Electro Zinc Plated and Chromate Coated
Locknut, Sealing Gasket, and Retainer: Electro Zinc Plated and Chromate Coated

Range

- 3321, 3361 and 3341 Series $\frac{3}{4}$ " thru 4" conduit.
All hubs provided with taper pipe threads (NPT).

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NEMA FB-1
NFPA 70-2008 (ANSI)
JIC EGP1
JIC EMP1
Federal Specification W-F-406
Federal Standard H-28 (THREADS)

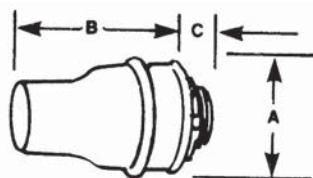


3321 Series

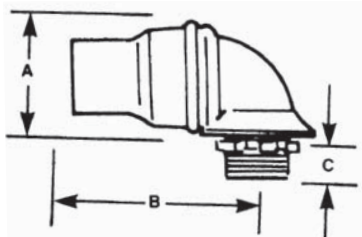
- Sealing ring design has following exclusive features:
 - (1) Grips and seals at leading and trailing edge—will not abrade raceway jacket (F).
 - (2) Provided with grooves on inside diameter for anti-sleeving (G).
 - (3) Shoulders on both ends for extra sealing.
 - (4) Symmetrical shape assures foolproof assembly.
- Hardened steel or malleable iron locknut (H).
- Can be disconnected and reused.

T&B Conduit Fittings

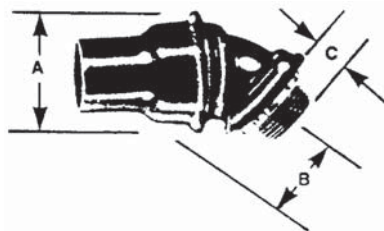
Liquidtight Flexible Metal Conduit Fittings



**Straight PVC Coated
Nylon Insulated
Steel or Malleable Iron
NPT hub threads**



**90° PVC Coated
Nylon Insulated
NPT hub threads**



**45° PVC Coated
Nylon Insulated
NPT hub threads**

Corrosion Resistant PVC Jacketed Liquidtight Fittings

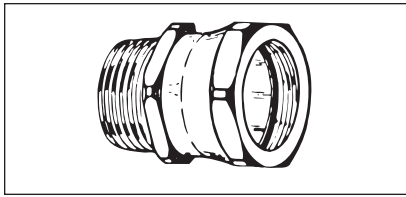


Cat. No.	Conduit Size	Dimensions (in.)		
		A	B	C
Straight PVC Coated				
3321	3/8	1-15/32	2-5/16	9/16
3322	1/2	1-5/8	2-1/2	9/16
3323	3/4	1-15/16	2-25/32	9/16
3324	1	2-1/4	3-15/32	3/4
3325	1-1/4	2-11/16	4-1/4	13/16
3326	1-1/2	3-1/8	4-11/16	13/16
3327	2	3-5/8	5-5/16	7/8
3328-TB	2-1/2	4-3/8	6-3/8	1
3329	3	5-3/16	6-1/2	1
3331	4	6-7/16	6-3/4	1-1/8
90° PVC Coated				
3361	3/8	1-15/32	2-3/16	9/16
3362	1/2	1-5/8	2-1/2	9/16
3363	3/4	1-15/16	2-29/32	9/16
3364	1	2-1/4	3-19/32	3/4
3365	1-1/4	2-11/16	4-1/2	13/16
3366	1-1/2	3-1/8	4-15/16	13/16
3367	2	3-5/8	5-11/16	7/8
3368	2-1/2	4-3/8	11-1/8	1
3369	3	5-3/16	12-1/2	1
3371	4	6-7/16	14-7/8	1-1/8
45° PVC Coated				
3341	3/8	1-15/32	1-1/8	9/16
3342	1/2	1-5/8	1-1/4	9/16
3343	3/4	1-15/16	1-7/16	9/16
3344-TB	1	2-1/4	1-13/16	3/4
3345	1-1/4	2-11/16	2-1/16	13/16
3346	1-1/2	3-1/8	2-11/16	13/16
3347	2	3-5/8	3-3/16	7/8
3348-TB	2-1/2	4-3/8	3-13/16	1
3349	3	5-3/16	4-9/16	1
3352	4	6-7/16	5-3/4	1-1/8

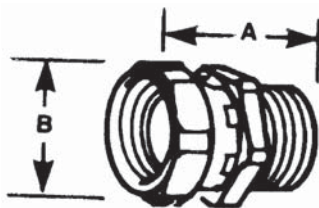
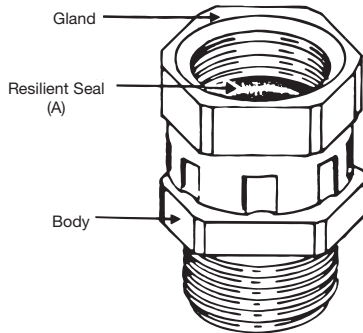
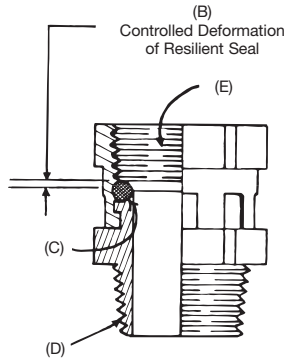
Complies with J.I.C. standards and Federal Specs W-F-406B, W-F-408B
Suitable for hazardous locations use in Class I, Div. 2; Class II, Div. 1 and 2; Class III, Div. 1 and 2, where general purpose equipment is specifically permitted per CEC Rule 18-156 (6) Class I, Zone 2; CEC Rule J18-152 (3) Class I, Div. 2; CEC Rule 18-202 (4) Class II, Div. 1; CEC Rule 18-252 (4) Class II, Div. 2.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



41 Series



Steel, zinc plated and chromated. Ideal for angle fittings where swing clearance is not available.

Specifications—Liquidtight Union for Threaded Hub

Application

- To couple threaded end of a fitting or a pipe to a tapped opening in a box or enclosure where rotation of fitting or pipe is limited or restricted.

Features

- Provides high quality bond between fitting or pipe to the union.
- Provided with resilient seal (A).
- Resilient seal subjected to controlled deformation; positive seal and reusability are assured (B).
- Unique design centralizes throat openings of threaded hub and union (C).
- Permits orientation of fitting in any predetermined direction for a safe, functional and neat assembly.
- Provided with taper-threaded hub for liquidtight assembly (D).
- Straight pipe threads on gland accept a straight-or taper-threaded hub on fitting or pipe to be coupled (E).

- Suitable for hazardous location use per
CEC Rule J18-106 Class I, Div. 1;
CEC Rule 18-202 Class II, Div. 1;
CEC Rule 18-252 Class II, Div. 2;
CEC Rule 18-302 Class III, Div. 1;
CEC Rule 18-352 Class III, Div. 2;

Standard Material/Finish

Gland	Steel/Electro Zinc Chromate Coated
Body	Steel/Electro Zinc Chromate Coated
'O' Ring	Buna N/As Molded

Range

- Hub (External Thread)
1/2" and 3/4" NPT
- Gland (Internal Threads)
1/2" and 3/4" NPS

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NEMA FB-1
ANSI C80.4
NFPA 70-2008 (ANSI)
Federal Specification W-F-408
Federal Specification W-F-406
Federal Standard H-28 (Threads)

Liquidtight Union for Threaded Hub

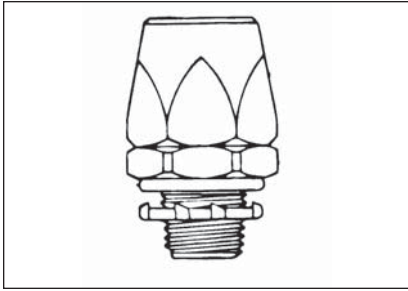


Cat. No.	Conduit Size	Dimensions (in.)	
		A	B
41TB	1/2"	1-29/64	1
42TB	3/4"	1-15/16	1-1/4

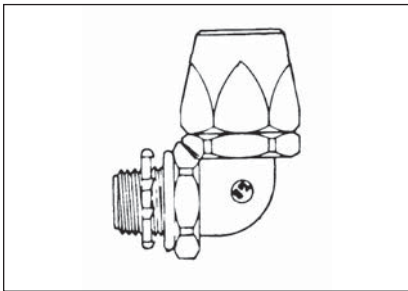
T&B Conduit Fittings

Liquidtight Flexible Nonmetallic Conduit Fittings

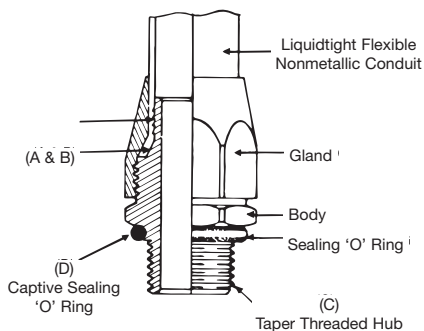
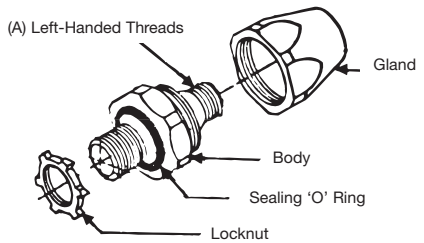
Specifications—Type A Conduit Fittings



Series 6302
Liquidtight Flexible Nonmetallic
Conduit Fittings



Series 6322
Liquidtight Flexible Nonmetallic
Conduit Fittings



Application

- To provide a liquidtight, dusttight connection between flexible, nonmetallic conduit and a box or an enclosure.

Features

- Serrated design provides high mechanical pullout strength (A).
- Unique component parts (body/gland) design insures positive seal between conduit and fitting (B).
- Tapered thread hub and sealing 'O' ring provide a liquidtight/dust tight seal to a box or an enclosure (C).
- High strength, chemical resistant, non-burning, non-dripping thermoplastic construction.
- Smooth insulated body throughout for maximum dielectric strength.
- Captive 'O' ring and reduced number of parts save installation time (D).

Standard Material

Body	Thermoplastic
Gland	Thermoplastic
'O' Ring	Neoprene
Locknut	Steel (Case Hardened)

Standard Finish

Body, Gland & 'O' Ring	As Molded
Locknut	Electro Zinc

Range

- Conduit Size 1/2" thru 1-1/4"
- Hub Size 1/2" thru 1-1/4" N.P.T.

Suggested Specifications for Type A Conduit and Fittings

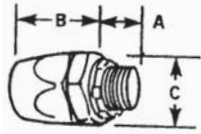
- Type A Liquidtight Flexible Nonmetallic Conduit shall be seamless type adequately reinforced with one or more layers of flexible braided reinforcing cords. Conduit jacket shall be of non-kinking oil resistant/water resistant flame retardant material suitable for ambient environmental conditions.
- Where Type A Flexible Nonmetallic Conduit terminates into a threaded or threadless opening, the conduit shall be cut square, deburred, installed with sufficient slack to reduce effects of vibration and assembled with approved fittings such as series 6302 or 3720 manufactured by

Thomas & Betts. Fittings shall be of malleable iron/steel/thermoplastic construction with taper-threaded hub and:

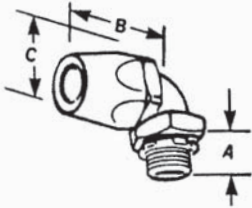
- (1) Ferrous metallic fittings shall be electro-zinc plated inside outside and equipped with a nylon insulated throat.
- (2) Thermoplastic fittings shall be of high impact chemical resistant, non-burning, non-dripping thermoplastic.
- (3) Fittings shall be provided with a captive, moisture resistant/oil resistant synthetic rubber gasket.

T&B Conduit Fittings

Liquidtight Flexible Nonmetallic Conduit Fittings



Straight Fitting

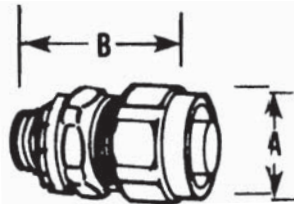


90° Angle Fitting

Designed especially for the Type A, all-plastic raceways now in use for dynamic machine tool applications.

Fittings are constructed of a high-strength, chemically resistant thermoplastic tougher than the raceway itself.

Neoprene sealing ring is furnished with fitting providing a liquidtight seal for knockout applications.



- Nylon insulated throat.
- T&B Sealing Ring to seal knockouts.
- Steel or malleable iron.
- U.L. Listed.
- NPT hub threads to seal in female threads.
- High mechanical pull-out strength.
- Provides positive seal against water, oil and dust.

Thermoplastic Fittings for Liquidtight Flexible Nonmetallic Conduit Type A



Cat. No.	Conduit Size	Dimensions (in.)		
		A	B	C Cross Corners
Straight Fitting				
6302	1/2"	.60	1.68	1.48
6303	3/4"	.61	1.85	1.76
6304	1"	.77	1.89	2.10
6305	1-1/4"	.79	2.30	2.67
90° Angle Fitting				
6322	1/2"	.60	1.56	1.48
6323	3/4"	.61	1.74	1.76
6324	1"	.77	1.78	2.10
6325	1-1/4"	.79	2.13	2.67

Corrosion Resistant Applications

Meets Coast Guard CG293

*Use with our LNM-P Conduit on p. 146

Liquidtight Flexible Nonmetallic Conduit Type A



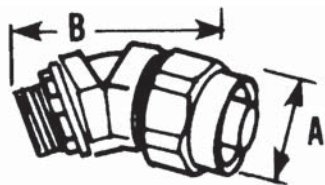
Cat. No.	Conduit Size	Hub Thread	Dimensions (in.)	
			A	B
3720-TB*	3/8	1/2-14 NPT	1-5/32	2
3721-TB	1/2	1/2-14 NPT	1-3/8	2-1/8
3722-TB	3/4	3/4-14 NPT	1-5/8	2-1/4
3723	1	1-11-1/2 NPT	1-7/8	2-1/2
3724-TB	1-1/4	1-1/4-11-1/2 NPT	2-3/8	2
3725	1-1/2	1-1/2-11-1/2 NPT	2-3/4	3-3/8
3726	2	2-11-1/2 NPT	3-17/32	3-5/8

* Not U.L. Listed

For Dura-Plate™ Finish, add prefix 040- to Cat. No. Consult Customer Service for details.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings

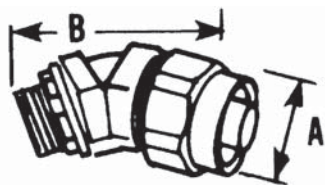


45° Metallic Fittings

Cat. No.	Conduit Size	Hub Thread	Dimensions (in.)	
			A	B
3730-TB*	3/8	1/2-14 NPT	1-5/32	2-13/32
3731-TB	1/2	1/2-14 NPT	1-3/8	2-9/16
3732	3/4	3/4-14 NPT	1-5/8	3
3733-TB	1	1-11-1/2 NPT	1-7/8	3-1/2
3734-TB	1-1/4	1-1/4-11-1/2 NPT	2-3/8	4-1/8
3735-TB	1-1/2	1-1/2-11-1/2 NPT	2-3/4	4-7/8
3736	2	2-11-1/2 NPT	3-17/32	5-1/2

* Not U.L. Listed

Available with Dura-Plate™ Finish. Consult Customer Service for details.



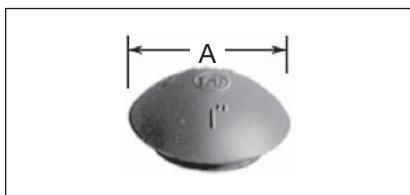
90° Metallic Fittings



Cat. No.	Conduit Size	Hub Thread	Dimensions (in.)	
			A	B
3740*	3/8	1/2-14 NPT	1-5/32	1-5/8
3741	1/2	1/2-14 NPT	1-3/8	1-3/4
3742	3/4	3/4-14 NPT	1-5/8	2-1/4
3743-TB	1	1-11-1/2 NPT	1-7/8	2-9/16
3744-TB	1-1/4	1-1/4-11-1/2 NPT	2-3/8	3-1/4
3745	1-1/2	1-1/2-11-1/2 NPT	2-3/4	3-1/2
3746-TB	2	2-11-1/2 NPT	2-17/32	4-1/8

* Not U.L. Listed

Available with Dura-Plate™ Finish. Consult Customer Service for details..



NEMA 3R, 4, 6 & 13

Temperature range — -30°C to 105°C.

Liquidtight K.O. Plugs



Cat. No.	Size	Dimensions (in.)
		A
5710	1/2"	1-9/32"
5711	3/4"	1-1/2"
5712	1"	1-27/32"
5713	1-1/4"	27/32"
5714	1-1/2"	2-1/2"
5715	2"	3-3/32"
5716	2-1/2"	3-21/32"
5717	3"	4-19/64"
5718	4"	5-19/64"

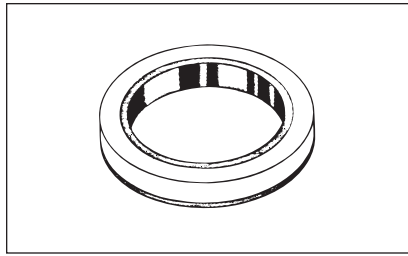
U.L. Listed liquidtight

CSA not applicable

Meets Coast Guard Regulation CG293

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



5262 Series

Specifications — Liquidtight Sealing Gaskets

Application

- When used with an externally threaded fitting provides a tight seal against oil, fumes or moisture at the knockout opening.

Features

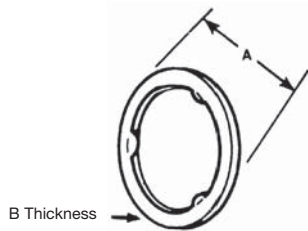
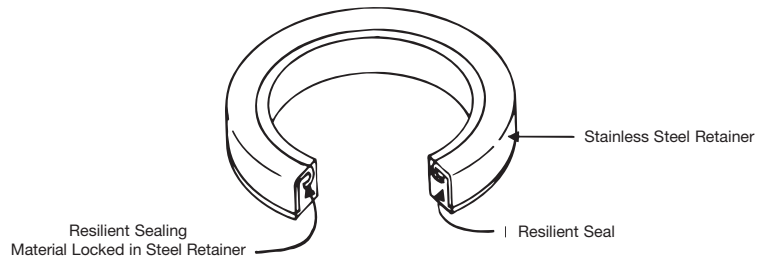
- Locks resilient sealing material in steel.
- Steel retainer protects seal from extruding out under torque and limits compression to an optimum predetermined value; provides high quality seal.
- Resilient material flows and seals rough surfaces.

Standard Material

Retainer	Stainless Steel
Sealing Material	Buna N

Range

- 1/2" thru 4" Hub Size



NEMA 3R, 4, 6 & 13

For use with T&B Fittings. Sealing material resists oil, coolants, and hydraulic fluids as well as water.

Sealing Ring with Stainless Steel Retainer



Cat. No.	Conduit Size	Dimensions (in.)	
		A	B
5299**	1/4"	.80	.11
5261**	3/8"	.95	.11
5262	1/2"	1.16	.18
5263	3/4"	1.49	.19
5264	1"	1.75	.19
5265	1-1/4"	2.15	.22
5266	1-1/2"	2.42	.23
5267	2"	2.92	.23
5268	2-1/2"	3.44	.23
5269	3"	4.08	.23
5270	4"	5.29	.31

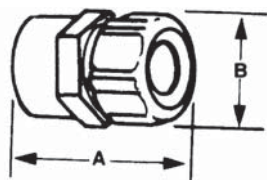
** U.L. not applicable

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



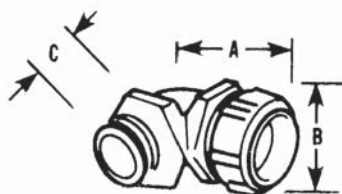
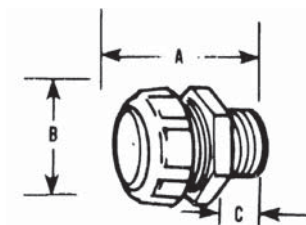
Liquidtight Flexible Metal/MS Fittings



T&B Liquidtight flexible metal and Liquidtight flexible nonmetallic fittings with internal threads to accept AN-MS fitting shells.

Material: Steel

Cat. No.	Trade Size	AN-MS Conn. Shell Size	Internal Thread Thread Size	Dimensions (in.)	
				A	B
LTA03810	3/8	10SL, 12, 12S	5/8—24 UNEF-2B	1-5/32	1
LTA03814	3/8	14, 14S	3/4—20 UNEF-2B	1-5/32	1
LTA05014	1/2	14, 14S	3/4—20 UNEF-2B	1-5/16	1-1/4
LTA05016	1/2	16, 16S	7/8—20 UNEF-2B	1-5/16	1-1/4
LTA05018	1/2	18	1—20 UNEF-2B	1-5/16	1-1/4
LTA07516	3/4	16, 16S	7/8—20 UNEF-2B	1-7/16	1-1/2
LTA07518	3/4	18	1—20 UNEF-2B	1-7/16	1-1/2
LTA07520	3/4	20, 22	1-3/16—18 UNEF-2B	1-7/16	1-1/2
LTA10020	1	20, 22	1-3/16—18 UNEF-2B	1-3/4	1-23/32
LTA10024	1	25, 28	1-7/16—18 UNEF-2B	1-3/4	1-23/32



Fittings for Liquidtight flexible metal conduit with metric threads of PG Form (DIN 40430).

PG Metric Thread Liquidtight Fittings*



Cat. No.	Flexible Conduit Size	Metric PG Thread	Dimensions (mm)		
			A	B	C
Nylon insulated straight fittings					
7330**	1/4"	9	36	21	12
7360**	5/16"	9	36	26	12
7361*	3/8"	11	40	29	14
7362*	3/8"	13.5	40	29	14
7363*	1/2"	16	41	35	14
7364*	3/4"	21	43	42	14
7365	1"	29	56	47	19
7366	1-1/4"	36	67	58	21
7367	1-1/2"	42	72	69	21
7368	2"	48	81	83	21
Nylon insulated 45° angle fittings					
7341	3/8"	11	27	29	14
7342	3/8"	13.5	27	29	14
7343	1/2"	16	30	35	14
7344-TB	3/4"	21	34	42	14
7345	1"	29	44	47	19
7346	1-1/4"	36	51	58	19
7347	1-1/2"	42	60	69	21
7348-TB	2"	48	73	76	24
Nylon insulated 90° angle fittings					
7351	3/8"	11	37	29	14
7352	3/8"	13.5	37	29	14
7353	1/2"	16	40	35	14
7354	3/4"	21	44	42	14
7355	1"	29	56	47	21
7356	1-1/4"	36	70	58	21
7357	1-1/2"	42	75	69	21
7358	2"	48	87	83	24

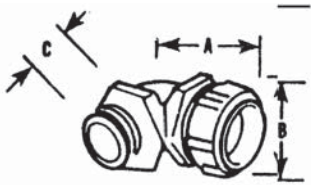
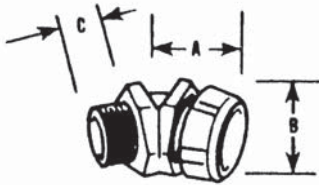
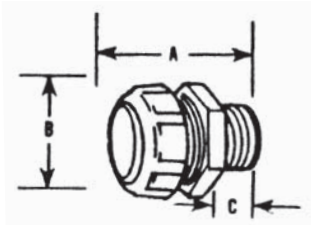
U.L. Listed liquidtight.

*CSA Certified dusttight and watertight.

**U.L. not applicable and not CSA Certified.

T&B Conduit Fittings

Liquidtight Flexible Metal Conduit Fittings



Fittings for Liquidtight flexible metal conduit with metric threads of ISO Form (BS-4568-SA BS 162).

ISO Metric Thread Liquidtight Fittings*

Cat. No.	Flexible Conduit Size	Metric ISO Thread	Dimensions (mm)		
			A	B	C
Nylon insulated straight fittings					
9330	1/4"	16	36	21	12
9331	1/4"	20	36	21	12
9306	5/16"	16	36	26	12
9360	3/8"	16	40	29	16
9361	3/8"	20	40	29	16
9362	1/2"	20	42	35	16
9363	3/4"	25	45	42	16
9364	1"	32	54	47	23
Nylon insulated 45° angle fittings					
9340	3/8"	16	27	29	16
9341	3/8"	20	27	29	16
9342	1/2"	20	27	35	16
9343TB	3/4"	25	31	42	16
9344	1"	32	34	47	23
Nylon insulated 90° angle fittings					
9350	3/8"	16	35	29	16
9351	3/8"	20	35	29	16
9352TB	1/2"	20	39	35	16
9353TB	3/4"	25	43	42	16
9354TB	1"	32	48	47	23

U.L. Listed Liquidtight.



NPT/MS Fitting Adaptors

Cat. No.	N.P.T. Thread	AN-MS Fitting Shell Size	Thread Size	Dimensions (in.)		
				A	Fig.	B
MSA05014	1/2"	14, 14S	3/4-20 UNEF-2B	1.000	1	1.175
MSA05016	1/2"	16, 16S	7/8-20 UNEF-2B	1.000	2	1.175
MSA05018	1/2"	18	1-20 UNEF-2B	1.125	3	1.175
MSA07516	3/4"	16, 16S	7/8-20 UNEF-2B	1.250	1	1.356
MSA07518	3/4"	18	1-20 UNEF-2B	1.250	1	1.300
MSA07520	3/4"	20, 22	1-3/16-18 UNEF-2B	1.375	3	1.300
MSA10020	1	20, 22	1-3/16-18 UNEF-2B	1.500	1	1.431
MSA10024	1	24, 28	1-7/16-18 UNEF-2B	1.625	3	1.313
MSA10032	1	32	1-3/4-18 UNS-2B	2.000	3	1.576
MSA10036	1	36	2-18 UNS-2B	2.250	3	1.738

Not CSA Certified.

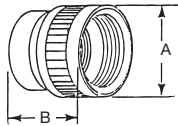


Fig. 1

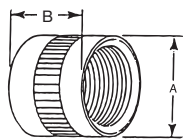


Fig. 2

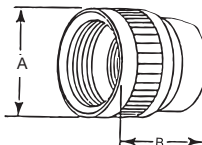


Fig. 3

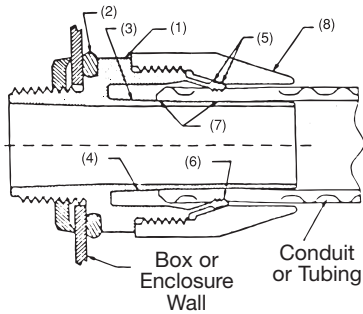
Mechanical adaptor with internal threads to mate with NPT threaded fittings and MS type fittings.

Material: aluminum

T&B Conduit Fittings

Liquidtight Flexible Nonmetallic Conduit Fittings

Specification Sheet—Bullet® Liquidtight Fittings for Liquidtight Flexible Nonmetallic Conduit and Tubing



Application:

A series of nonmetallic fittings designed to provide a liquidtight seal when terminating liquidtight nonmetallic conduit (U.L. Type B) or liquidtight nonmetallic tubing to a box or enclosure with knockout opening or a threaded hub.

Plastic Bullet® Liquidtight Fittings Feature:

- Fitting assembles to conduit without disassembly and is designed to be installed with positive installation criteria (gland bottoms on body shoulder).
- Rugged low profile nonmetallic body and gland construction (1); the fitting is equipped with a steel locknut to firmly secure fitting to box or an enclosure and a sealing "O" ring.
- Captive sealing "O" ring (2) with predetermined compression for a reliable seal at enclosure.
- Fitting ferrule designed to accept variations in conduit inside diameter and is tolerant of field conduit cuts (3).
- Ferrule profile designed to reduce friction between conduit I.D. and ferrule (4) allowing conduit to seat properly for an effective seal.
- Outer surface of clamping fingers provided with friction reducing ridges (5) for ease of installation; the inner surface is designed with conduit biting teeth to enhance clamping and sealing action (6).
- Performance of fittings tested to simulate adverse installation conditions.
- Provides a double sealing action (7).
- Elongated gland nut profile (8) designed to provide additional strain relief for 90° pull and an easy hand grip.

- Performance of fitting unaffected by exposure to detergents, cleaners, and sanitizers commonly encountered in food processing plants and typical industrial environment; also unaffected by cutting fluids, wiring pulling compounds and Marine environment.

- Meets industry standards for cold impact and simulated hammer blow.

Standard Material/Finish:

- Body Gland—weather stabilized thermoplastic (black).
- "O" Ring—nitrile (blue)
- Locknut—Steel/electro-zinc plated
- Material temperature rating—thermoplastic -40°C to 105°C.

Material Flammability Rating:

U.L.94-V2.

Conformity

- CSA C22.2 #227.2 & CSA C22.2 #227.3
- U.L.514B
- Watertight requirements of NEMA Type 4 and Type 4X.
- Federal Standard H-28 (NPT threads)
- There is no CEC Rule to use Nonmetallic liquidtight conduit and fittings in Class I, Zone 2 or Class I, Division 2; Rule 18-202 (4) (b) Class II, Division 1; Rule 18-252 (4) Class II, Division 2; Rule 18-302 (4) Class III, Division 1.

T&B Conduit Fittings

Liquidtight Flexible Nonmetallic Conduit Fittings

Plastic Bullet® Liquidtight Fittings for T&B NMC Nonmetallic Liquidtight Conduit Type B and T&B NMT Flexible Tubing



Cat. No.	Fig.	Trade Size	A ±.015 (.040) in. (mm)	*B ±.035 (0.90) in. (mm)	C ±.015 (0.40) Across Corners in. (mm)	Min. Throat Dia. D in. (mm)	E Thread NPT	F* (in.) (mm) Approx.
LT38P	1		.570	1.595 (40.51)	1.354	.417		—
LT438P	2	3/8	(14.48)	2.012 (51.10)	(34.39)	(10.59)	1/2-14	1.534 (38.95)
LT938P	3			1.380 (35.05)				1.880 (47.75)
LT50P	1		.570	1.636 (41.55)	1.448	.550		—
LT450P	2	1/2	(14.48)	2.092 (53.14)	(36.78)	(13.97)	1/2-14	1.590 (40.39)
LT950P	3			1.489 (37.82)				1.986 (50.44)
LT75P	1		.582	1.757 (44.63)	1.740	.740		—
LT475P	2	3/4	(14.78)	2.452 (62.28)	(44.20)	(18.80)	3/4-14	1.821 (46.25)
LT975P	3			1.790 (45.47)				2.212 (56.00)
LT100P	1		.726	1.923 (48.84)	2.068	.940		—
LT4100P	2	1	(18.44)	2.684 (68.17)	(52.53)	(23.88)	1-11-1/2	2.034 (51.66)
LT9100P	3			2.104 (53.44)				2.508 (63.70)
LT125P	1		.750	2.164 (54.97)	2.494	1.257		—
LT4125P	2	1-1/4	(19.05)	3.264 (82.91)	(63.35)	(31.93)	1-1/4-11-1/2	2.385 (60.58)
LT9125P	3			2.564 (65.13)				2.856 (72.54)
LT150P	1		.767	3.353 (85.77)	2.784	1.453		—
LT4150P	2	1-1/2	(19.48)	3.605 (91.57)	(70.71)	(36.91)	1-1/2-11-1/2	2.604 (66.14)
LT9150P	3			2.854 (72.49)				3.144 (79.86)
LT200P	1		.794	2.605 (66.17)	3.362	1.883		—
LT4200P	2	2	(20.17)	4.210 (106.93)	(85.39)	(47.83)	2-8	3.050 (77.47)
LT9200P	3			3.432 (87.17)				3.675 (93.34)

* After Assembly

Suggested Specification:

Where liquidtight flexible nonmetallic conduit (U.L. and CSA Type B) or liquidtight flexible nonmetallic tubing is terminated to a box or enclosure, the nonmetallic fittings used shall be able to be installed without disassembly and provide a positive installation criteria. In

the installed condition, the fitting must provide a seal meeting watertight requirements of NEMA Type 4 and Type 4X. The performance of fittings shall be unaffected by exposure to detergents, sanitizers, cutting fluids, wire pulling compounds and oil-based industrial

paints. The fitting must also be capable of withstanding marine environment and cold impact simulating a hammer blow. Installed fittings shall be of the elongated gland type as manufactured by Thomas & Betts LT38P series.

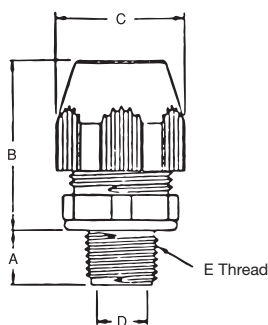


Figure 1

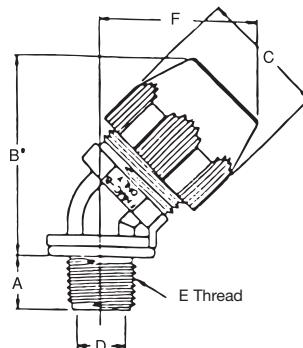


Figure 2

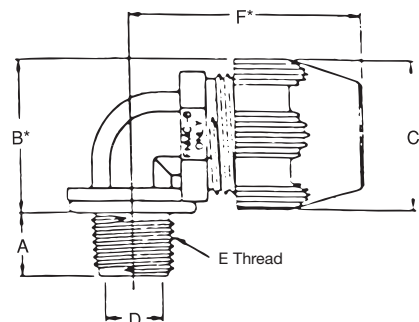


Figure 3

T&B Conduit Fittings

Liquidtight Flexible Conduit Fittings

Metallic Bullet® Liquidtight Fittings for T&B NMC Nonmetallic Liquidtight Conduit Type B and T&B NMT Flexible Tubing



Cat. No.	Fig.	Trade Size	A $\pm .030^*$		B $\pm .060$		C $\pm .045$		D	Thread
			(.80)	(mm)	(1.50)	(mm)	(1.15)	(mm)		
LT38M	1				1.500	(38.1)	0.562	(14.3)	—	
LT438M	2	3/8	1.156	(29.4)	1.962	(49.8)	0.562	(14.3)		1/2-14
LT938M	3				1.312	(33.3)	0.625	(15.9)	1.375	(34.9)
LT50M	1				1.562	(39.7)	0.562	(14.3)	—	
LT450M	2	1/2	1.375	(34.9)	1.875	(47.6)	0.562	(14.3)		1/2-14
LT950M	3				1.437	(36.5)	0.625	(15.9)	1.562	(39.7)
LT75M	1				1.625	(41.2)	0.625	(15.9)	—	
LT475M	2	3/4	1.656	(42.1)	2.125	(54.0)	0.562	(14.3)		3/4-14
LT975M	3				1.750	(44.4)	0.625	(15.9)	1.750	(44.4)
LT100M	1				2.062	(52.4)	0.750	(19.0)	—	
LT4100M	2	1	1.875	(47.6)	2.250	(57.1)	0.812	(20.6)		1-11-1/2
LT9100M	3				1.937	(49.2)	0.812	(20.6)	2.187	(55.5)
LT125M	1				2.500	(63.5)	0.812	(20.6)	—	
LT4125M	2	1-1/4	2.375	(60.3)	2.750	(69.8)	0.812	(20.6)		1-1/4-11-1/2
LT9125M	3				2.500	(63.5)	0.812	(20.6)	2.750	(69.8)
LT150M	1				2.687	(68.2)	0.812	(20.6)	—	
LT4150M	2	1-1/2	2.750	(69.8)	2.750	(69.8)	0.812	(20.6)		1-1/2-11-1/2
LT9150M	3				2.812	(71.4)	0.812	(20.6)	2.937	(74.6)
LT200M	1				3.062	(77.8)	0.812	(20.6)	—	
LT4200M	2	2	3.468	(88.1)	3.875	(98.4)	0.875	(22.2)		2-11-1/2
LT9200M	3				3.500	(88.9)	0.875	(22.2)	3.437	(87.3)

* After Assembly

Suggested Specification:

Where liquidtight flexible nonmetallic conduit (U.L. and CSA Type B) or liquidtight flexible nonmetallic tubing is terminated to a box or enclosure, the metallic fittings used shall be able to be installed without disassembly and provide positive installation criteria. In the installed

condition, the fitting must provide a seal, meeting watertight requirements of NEMA Type 4 and Type 4X with conduit and NEMA Type 4 enclosures with tubing. Installed fittings shall be as manufactured by Thomas & Betts LT38M series.

Material: Body/Gland—Steel/MI
Insert—Nylon

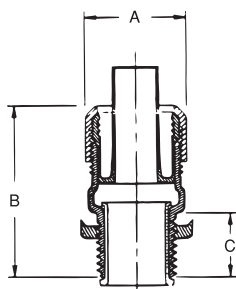


Figure 1

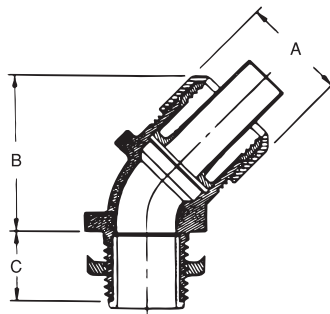


Figure 2

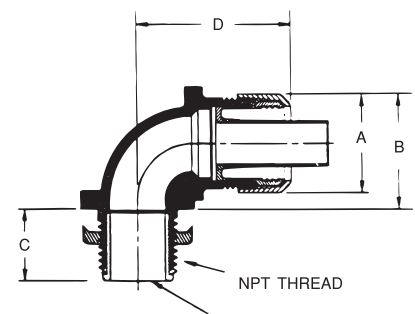


Figure 3

T&B Conduit Fittings

Liquidtight Flexible Nonmetallic Conduit Fittings

ISO Metric Bullet™ Liquidtight Fittings

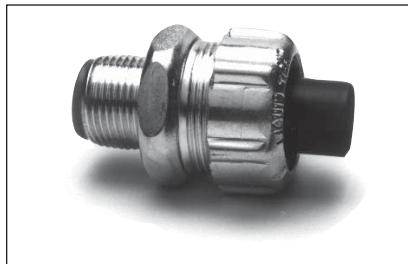


When you have a conduit application in a liquidtight environment, it's time to load up the T&B Bullet®. Thomas & Betts introduces the ISO Metric Bullet® liquidtight fittings for use with the 3/8", 1/2", and 3/4" NMT and NMC nonmetallic liquidtight conduit series.

The T&B Bullet® liquidtight fitting and NMT nonmetallic conduit are suited for OEM applications as in the machine tool industry where environments include continuous motion, vibration, and exposure to moisture, oil, dirt and dust.

The T&B Bullet® liquidtight fitting and NMT nonmetallic conduit are also suitable for construction applications where ISO metric threading and liquidtight systems are installed.

The Xtraflex® system offers a lightweight, liquidtight flexible conduit solution for industrial applications. The Xtraflex® system allows fast, easy installation and high performance in demanding industrial applications.



ISO Metric Bullet® Liquidtight Fitting



Cat. No.	Angle of Fitting	Conduit Size (in.)	Knockout Size (in.)	Unit Package	Standard Package	UPC Number
LT38M-ISO20	Straight	3/8	1/2	25	100	786210-62281
LT50M-ISO20	Straight	1/2	1/2	25	100	786210-62282
LT75M-ISO25	Straight	3/4	3/4	25	50	786210-62283
LT438M-ISO20	45°	3/8	1/2	25	50	786210-62284
LT450M-ISO20	45°	1/2	1/2	25	50	786210-62285
LT475M-ISO25	45°	3/4	3/4	10	50	786210-62286
LT938M-ISO20	90°	3/8	1/2	25	50	786210-62288
LT950M-ISO20	90°	1/2	1/2	25	50	786210-62289
LT975M-ISO25	90°	3/4	3/4	10	50	786210-62290



ISO Metric Bullet® Liquidtight Fitting Nonmetallic

Cat. No.	Angle of Fitting	Conduit Size	Knockout Size	Unit Package	Standard Package	UPC Number
LT38P-ISO20	Straight	3/8"	1/2"	25	100	786210-66444
LT50P-ISO20	Straight	1/2"	1/2"	25	100	786210-66613
LT75P-ISO25	Straight	3/4"	3/4"	25	50	786210-66443
LT938P-ISO20	90°	3/8"	1/2"	25	50	786210-66612
LT950P-ISO20	90°	1/2"	1/2"	25	50	786210-66640
LT975M-ISO25	90°	3/4"	3/4"	10	50	786210-66611

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings

Specifications—Armoured Cable and Flexible Metal Conduit

Armoured Cable (Type AC90)

Ref. CEC Rule 12-600

The Canadian Electric Code 2009 Part I defines type AC armoured cable as, “A fabricated assembly of insulated conductors in a flexible metallic enclosure.”

All armoured cables may employ copper or aluminum or copperclad aluminum conductors with the following sizes and are rated for 600 volts or less: No. 14 AWG to No. 1 AWG Copper No. 12 AWG to No. 1 AWG Aluminum or Copperclad Aluminum

Armoured cable can be used for both exposed or concealed locations.

Armoured cable is not permitted in locations where it will be subjected to physical damage or corrosive fumes. Armoured cable cannot be used for direct burial in earth.

Codes require that cable shall be supported with straps or staples without damaging conductors. Certain precautions are prescribed in code where cable is installed through joist rafters or similar wood members.

According to CEC Rule 12-610

(1) Where conductors issue from armour, they shall be protected from abrasion by bushings of insulating material or equivalent devices.

(2) Where conductors are No. 10 AWG or larger, copper or aluminum, such protection shall consist of:

(a) Insulated type bushings, unless the equipment is equipped with a hub having a smoothly rounded throat; or

(b) Insulating material fastened securely in place which will separate the conductors from armoured cable fittings and afford adequate resistance to mechanical injury.

(3) Where armoured cable is fastened to equipment, the conductor or clamp shall be of such design as to leave the insulating bushing or its equivalent visible for inspection.

(4) Where conductors connected to open wiring issue from the ends of armouring, they shall be protected with boxes or with fittings having a separately bushed hole for each conductor.

Please refer to the following for further details and complete information:

1. U.L. 4, ANSI C33.9.....Safety Standards for Armoured Cable
2. U.L. 514.....Safety Standards for Outlet Boxes and Fittings
3. W-F-406... ..Federal Specification: Fittings for Cable, Power, Electrical and Conduit, Metal, Flexible
4. NEMA FB-1... ..Standards Publication: Fittings & Supports for Conduit and Cable Assemblies
5. CEC Section 12-600... ..Wiring Methods (Armoured Cable)
6. CSA C22.2 No. 51... ..Safety Standards for Armored Cables
7. CSA C22.2 No. 18... ..Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Please Note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2009 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings

Specifications—Armoured Cable and Flexible Metal Conduit (continued)

Flexible Metal Conduit

Ref. CEC Rule 12-1000

Flexible metal conduit can be used for exposed or concealed work in dry locations. It can be used for wet locations provided conductors within are lead covered or other approved type.

Flexible metal conduit cannot be used underground or embedded in poured concrete or aggregate. With rubber covered conductors the conduit cannot be exposed to oil, gasoline or other materials having a deteriorating effect on rubber.

With minor exceptions use of flexible metal conduit is not permitted in hoists, in storage battery rooms and in any hazardous locations. Use of flexible metal conduit is restricted to systems under 600 volts.

Flexible metal conduit longer than six feet is permitted to be used as a grounding means provided the conduit and the fitting are approved for the purpose. To date there is no flexible metal conduit approved for the purpose by the Underwriters Laboratories or CSA.

In Class II Zone 2 and Division 2 hazardous areas, **the conduit itself cannot be used as the grounding means.** Class I Zone 2, flexible connections at motor terminals and similar places, ref.: CEC Rule 18-152 (6) and Bonding CEC Rule 18-074 (1)(a). Class I Division 2, flexible connections at motor terminals and similar places, ref: CEC Rule J18-152 (3) and Bonding CEC Rule J18-072 (1)(a). Flexible metal conduit is available with steel or aluminum armour in trade size 5/16" to 4". With few exceptions where 5/16 and 3/8 trade sizes are used, Code prohibits use of conduit less than 1/2" trade size. Bends in concealed work are restricted to four 90° bends CEC Rule 12-940. No angle fittings are permitted in concealed raceway installations.

Please refer to the following for further details and complete information:

1. U.L. 1, ANSI C33.92.....Safety Standards for Flexible Metal Conduit
2. U.L. 514.....Safety Standards for Outlet Boxes and Fittings
3. W-F-406... ..Federal Specification: Fittings for Cable, Power, Electrical and Conduit, Metal Flexible
4. WW-C-566... ..Federal Specification: Conduit, Metal, Flexible
5. NEMA FB1... Standards Publication: Fittings and Supports for Conduit and Cable Assemblies
6. CEC 12-1000... ..Wiring Method (Rigid & Flexible Conduit)
7. CSA C22.2 No. 56... ..Safety Standards for Flexible Metallic Conduit and Liquid-Tight Flexible Metal Conduit
8. CSA C22.2 No. 18... ..Safety Standards for Outlet Boxes, Conduit Boxes and Fittings
9. CEC Rule 12-1000 Rule 18-152 (6) and Bonding Rule 18-074 (1)(a) Class I, Zone 2 Flexible connections at motor terminals and similar places. Rule J18-152 (6) and Bonding Rule J18-072 (1)(a) Class I, Division 2 Flexible connections at motor terminals and similar places. Rule 12-940.....Not more than the equivalent of four 90° bends CEC

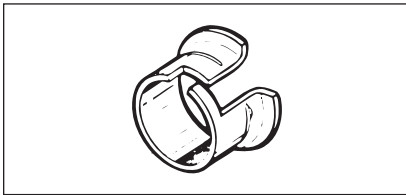
T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings

Suggested Specifications for Armoured Cable and Flexible Metal Conduit Fittings



Series 3110
**Armoured Cable Fitting
& Flexible Metal Conduit**



Series 422
Insuliner Sleeve



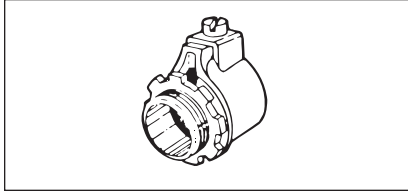
Series 390
Anti Short Bushing

- Armoured cable and flexible metal conduit shall conform to provisions of following applicable standards:
Armoured Cable...U.L. 4/ANSI C33.9/CSA C22.2 No. 51
Flexible Metal Conduit...U.L. 1/ANSI C33.92/WW-C-566/CSA C22.2 No.56
- Type of cable used and conductors within flexible metal conduit shall be suitable for conditions of use and location.
- Where armoured cable or flexible metal conduit terminates into a threadless or threaded opening it shall be assembled with approved fittings; fittings shall be of malleable iron/steel construction, electro-zinc plated inside outside, equipped with nylon insulated throat and shall be of angled saddle type as manufactured by Thomas & Betts, series 3110. Direct bearing screw type fittings shall not be used.
- Suitable bushing as manufactured by Thomas & Betts, series 422 or 390, shall be provided between the conductors and armour.
- Where approved armoured cable or flexible metal conduit is used as an equipment grounding conductor terminating fitting used shall be of the grounding type as manufactured by Thomas & Betts, series 3110.

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings

Specifications



3110 Series

Application

- To connect and effectively bond armoured cable or flexible metal conduit to a box or an enclosure.

Features

- Provided with a saddle designed to:
 - (1) Firmly secure conduit in place without damaging cable armour (Mechanical holding power of angled wedge assembly increases with increased strain.).
 - (2) Provide high quality bond between conduit or cable and are unaffected by vibrations.
 - (3) Centralize conduit or cable with respect to throat opening for conductors.
- Insulated throat protects conductors during and after installation, reduces wire pull effort and prevents thread damage in handling.
- Locknuts designed to provide effective bond between fitting and box or enclosure, will not vibrate loose.
- Designed with fewer screws—reduces installation time and cost.

- Rugged all steel or malleable iron construction.
- CEC Rule 18-152 (6) and Bonding Rule 18-074 (1)(a) Class I, Zone 2 Flexible connections at motor terminals and similar places. CEC Rule J18-152 (6) and Bonding Rule J18-072 (1)(a) Class I, Division 2 Flexible connections at motor terminals and similar places.

Standard Material/Finish

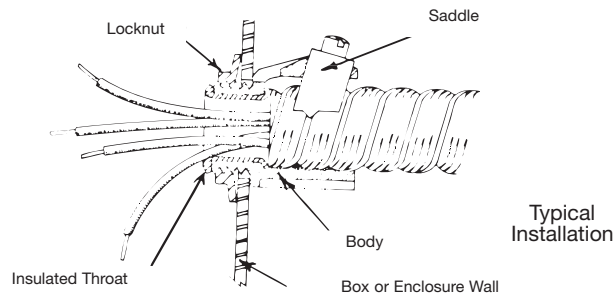
- Body: Steel or malleable iron/
Electro Zinc Plated &
Chromate Coated
- Saddle: Steel/Electro Zinc Plated
& Chromate Coated
- Screws: Steel/Electro Zinc Plated
& Chromate Coated
- Insulator: Thermoplastic/As
Molded

Conformity

- U.L. 514B
CSA C22.2 No. 18.3
NEMA FB-1

Series	Hub Size	Conduit Size	Cable Opening
3110 Series Straight Fittings	1/2" thru 5" NPS	3/8" thru 5"	.437" to 5.500"
3130 Series 90° Fittings	1/2" thru 4" NPS	3/8" thru 4" 4.560"	.437" to

(All hubs provided with straight pipe threads NPS.)

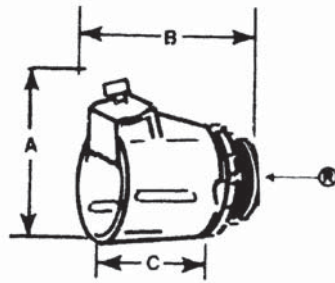


T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings



Tite-Bite® Fittings—Nylon Insulated



Steel or malleable iron.

The tough lining of insulation and the Tite-Bite principles make these fittings a "must" when conductors are subject to conditions of vibration or strain.

Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
3110-C*	.656	.437	3/8"	1/2"	1-7/16	1-5/16	7/16
3112	.937	.750	1/2"	1/2"	1-25/32	1-3/4	1-9/32
3115*	1.125	.906	3/4"	3/4"	2	1-3/4	1-9/32
3117*	1.468	1.250	1"	1"	2-3/8	1-3/4	1-7/32
3118†	1.750	1.562	1-1/4"	1-1/4"	2-3/4	2	1-11/32
3119†	2.031	1.812	1-1/2"	1-1/2"	3-1/8	2-5/8	1-7/8
3120†	2.500	2.312	2"	2"	3-3/4	2-3/4	1-15/16
3121†	3.062	2.812	2-1/2"	2-1/2"	4-3/8	3-1/4	2-3/8
3122†	3.562	3.312	3"	3"	5	3-1/4	2-3/8
3123‡	4.060	3.620	3-1/2"	3-1/2"	5-1/4	3-11/16	2-15/32
3124**†	4.560	4.120	4"	4"	5-3/4	3-25/32	2-1/2
3125**	5.500	4.600	5"	5"	6-7/8	4-27/32	3

Material: Steel thru 3/4" trade size.

* U.L. Listed for armoured cable only.

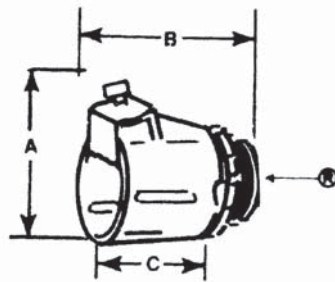
† U.L. Listed for flexible metal conduit only.

‡ CSA not applicable.

** Not U.L. Listed or CSA Certified.



Tite-Bite® Fittings



Steel or malleable iron.

Easy to install with double grip saddle. These fittings are completely salvageable. The 2/3" and 1/2" sizes are made of formed steel which produce a uniform high quality and a smooth throat that protects conductor insulation. 3/4" and larger size are malleable iron.

Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
300-TBC*	.656	.437	3/8"	1/2"	7/16	1-5/16	7/16
302-C	.937	.750	1/2"	1/2"	1-7/64	1-11/16	3/4
304	1.093	.906	3/4"	3/4"	1-7/32	1-11/16	29/32
306	1.468	1.250	1"	1"	1-1/8	1-3/4	1-1/4
308†	1.750	1.562	1-1/4"	1-1/4"	1-1/4	2-1/32	1-9/16
310†	2.031	1.812	1-1/2"	1-1/2"	1-3/4	2-9/16	1-13/16
312†	2.500	2.312	2"	2"	1-13/16	2-13/16	2-5/16
314†	3.062	2.812	2-1/2"	2-1/2"	2-1/4	3-1/8	2-13/16
316†	3.562	3.312	3"	3"	2-1/4	3-3/16	3-5/16

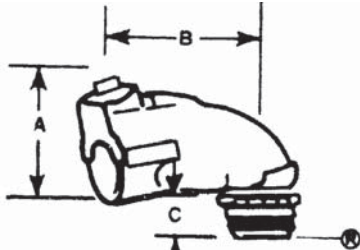
Material: Steel thru 3/4" trade size.

* U.L. Listed for armoured cable only.

† U.L. Listed for flexible metal conduit only.

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings



Steel or malleable iron.

Available with or without insulated throat, this Tite-Bite fitting line is by far the easiest and best to install when making sharp bends at the enclosure or equipment. It has all of the advantages of the straight fitting with only one screw to tighten, except in the larger sizes where there are two. A peep hole on top provides for easy inspection of the ABC bushing. Narrow design makes it easy to install fittings in adjacent knockouts.

Tite-Bite® Fittings—90° Angle Nylon Insulated

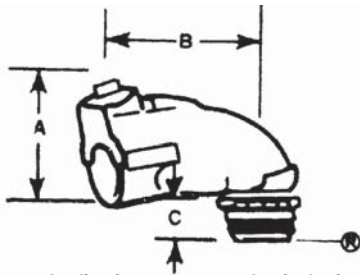
Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
3130-C	.563	.437	3/8"	1/2"	1-11/32	1-19/32	5/32
3132	.937	.750	1/2"	1/2"	1-7/8	2-5/16	1-5/32
3135	1.093	.906	3/4"	3/4"	2	2-1/8	1-5/32
3137	1.468	1.250	1"	1"	2-21/32	2-1/8	1/2
3138[†]	1.750	1.562	1-1/4"	1-1/4"	3-1/8	2-7/8	3/4
3139[†]	2.031	1.812	1-1/2"	1-1/2"	4-3/8	4	1-3/16
3140[†]	2.500	2.312	2"	2"	5-9/16	4-7/8	1
3141[†]	3.062	2.812	2-1/2"	2-1/2"	5-25/32	6	21
3142[†]	3.562	3.312	3"	3"	6	7	1
3143[‡]	4.060	3.620	3-1/2"	3-1/2"	6	6-7/8	1-1/16
3144-TB[‡]	4.560	4.120	4"	4"	6-29/32	7-1/4	1-1/8

[†] U.L. Listed for flexible metal conduit only.

[‡] Not U.L. Listed or CSA Certified.



Tite-Bite® Fittings—90° Angle



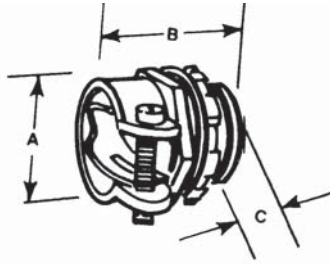
The angle clip gives secure mechanical grip that tightens under tension or vibration. Throat is long enough to install in cast housing knockouts. The 3/8" and 1/2" sizes are of steel construction. The 3/4" and larger sizes are malleable iron.

Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
321-C	.656	.437	3/8"	1/2"	1-11/32	1-1/2	3/8
323	.937	.750	1/2"	1/2"	1-7/8	2-3/8	1-7/32
325	1.093	.906	3/4"	3/4"	2-1/8	2-1/8	3/4
326-TB	1.468	1.250	1"	1"	2-21/32	2-1/8	1
327[†]	1.750	1.562	1-1/4"	1-1/4"	3-1/8	3-5/8	—
328[†]	2.031	1.812	1-1/2"	1-1/2"	4-1/8	4-1/8	—
329[†]	2.500	2.312	2"	2"	4-3/8	4-31/32	—
330-TB[†]	3.062	2.812	2-1/2"	2-1/2"	6-1/2	6	—
331[†]	3.562	3.312	3"	3"	5-25/32	7	—

[†] U.L. Listed for flexible metal conduit only.

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings

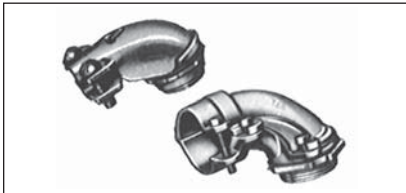


T&B squeeze fittings will fit every size of armoured cable, leaded cable and flexible conduit. Malleable iron or steel construction. Part No. 253-TB is steel.

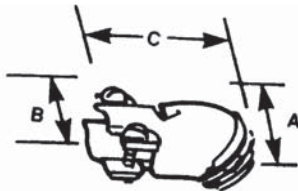
Squeeze Fittings

Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
252	.531	.437	5/16"	3/8"	13/16	25/32	11/32
253-TB [†]	.585	.455	3/8"	1/2"	31/32	1-13/64	5/8
254-C [†]	.938	.812	1/2"	1/2"	1-7/32	1-3/8	13/32
255	1.094	.938	3/4"	3/4"	1-1/4	1-17/32	7/16
256	1.375	1.250	1"	1"	1-19/32	1-5/8	1/2
257	1.656	1.500	1-1/4"	1-1/4"	1-7/8	1-23/32	17/32
258	1.875	1.688	1-1/2"	1-1/2"	2-1/4	1-7/16	9/16
259	2.500	2.313	2"	2"	2-31/32	2-5/8	11/16
249	3.062	2.812	2-1/2"	2-1/2"	3-5/16	2-11/16	3/4
277	3.563	3.312	3"	3"	3-13/16	2-7/8	3/4

[†] U.L. Listed for armoured cable only. Fitting material steel.



3/8" and 1/2" sizes made in steel. Cap lifts off by simply loosening screws part way. Only two screws to tighten. 3/4" size and larger made of malleable iron.



Squeeze Fittings—90° Angle



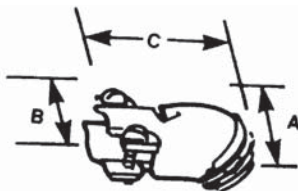
Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
266-C*	.656	.406	3/8"	1/2"	1-1/2	1-13/32	1-7/16
272 [†]	.812	.688	3/8"	1/2"	1-9/16	1-7/8	1-9/16
268-C	.937	.813	1/2"	1/2"	1-11/16	1-13/16	1-7/8
279	1.000	.875	3/4"	3/4"	1-13/16	2-1/16	1-13/16
270	1.125	1.000	3/4"	3/4"	1-7/8	1-3/4	1-13/16
273-TB	1.406	1.187	1"	1"	2-3/8	2-7/32	2-7/16
274 [‡]	1.656	1.375	1-1/4"	1-1/4"	3	2-9/16	2-7/8
275 [‡]	1.875	1.625	1-1/2"	1-1/2"	3-7/32	3-1/16	4-1/8
276 [‡]	2.500	2.125	2"	2"	4-5/8	3-5/8	4-7/8

[†] U.L. Listed for armoured cable only.

[‡] U.L. Listed for flexible metal conduit only.



3/8" and 1/2" sizes made in steel. Cap lifts off by simply loosening screws part way.



Squeeze Fittings—45° Angle



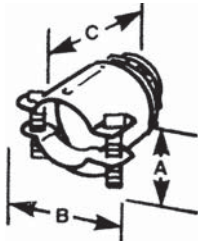
Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
265*	.656	.406	3/8"	1/2"	1-7/16	1-5/32	1-1/8
267	.937	.813	1/2"	1/2"	1-3/16	1/2	1-1/4
269	1.125	1.000	3/4"	3/4"	1-7/8	17/32	1-9/16

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings



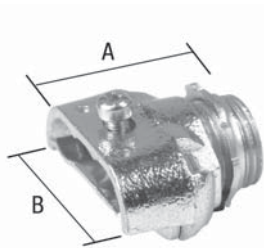
Two-Screw Fittings



Formed steel body with carefully round bushing. The armour gripping saddle stays open by itself when cable is being inserted.

Cat. No.	Cable Opening (in.)		Trade Size	K.O. Size	Dimensions (in.)		
	max.	min.			A	B	C
3301-C*	.656	.250	3/8"	1/2"	5/8	1-5/16	1-3/16
3312-C	.937	.500	1/2"	1/2"	5/8	1-5/16	1-3/16

* U.L. Listed for armoured cable only.



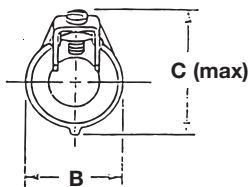
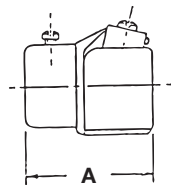
Malleable iron.
For nonmetallic and armoured cable.

Duplex Clamp Fitting



Cat. No.	K.O. Size	Dimensions (in.)	
		A	B
291-C	1/2"	1-13/32"	1-11/16"

U.L. Listed as grounding means under NEC 350-5.



Tite-Bite® fitting design holds flexible metal cable firmly in place with a single screw rather than two screws.

Adaptor—EMT to Flex



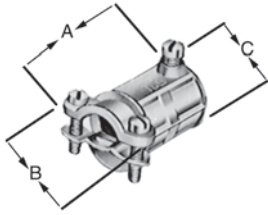
Cat. No.	K.O. Size	Dimensions (in.)		
		A	B	C
503-TB	1/2" - 1/2"	1-21/32	1-3/16	1-7/8
504	3/4" - 3/4"	1-25/32	1-7/16	2-1/8
505-TB	1" - 1"	2-1/32	2-1/16	2-5/8

T&B Conduit Fittings

Armoured Cable and Flexible Metal Conduit Fittings



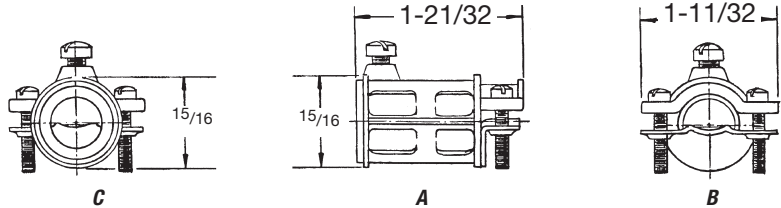
Combination Coupling



Cat. No.	Size Flex to EMT	Dimension (in.)		
		A	B	C
449C	3/8" - 1/2"	1-21/32	1-11/32	15/16

Cable opening: max. .656, min. .250

A one piece fitting that couples 3/8" flexible metal conduit to 1/2" electrical metallic tubing (EMT)



Anti-short bushings are made of smooth plastic, and designed to protect conductor insulation from rough edges of armoured cable and flexible metal conduit.

Anti-Short Bushing

Cat. No.	Size
390	14-2, 14-3, 12-2
391	14-4, 12-3, 6-1, and 4-1
392	12-4, 10-2, 10-3 and 2-1
393	10-4, 8-2, 8-3, and 1-1
394	8-4, 6-2, 6-3, 4-2, 4-3, and 6-4

Colorized
Temperature Rating: 240°F
U.L. not applicable.



Strap



Cat. No.	Bolt Hole Dia.	Size
65C	.265"	3/8" Flex

T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings

Specifications—Nonmetallic (NM) Sheathed Cable

Ref. CEC Rule 12-500

Canadian Electrical Code 2009 Part I, defines Nonmetallic Sheathed Cable as, “A factory assembly of two or more insulated conductors having an outer sheath of moisture resistant, flame retardant, nonmetallic material.”

Nonmetallic sheathed cable is constructed of insulated conductors (14 to 2 AWG copper), and an outer nonmetallic sheath classified as Types NMD90, NMW and NMWU.

Nonmetallic sheathed cable is provided with bare bonding conductor. Nonmetallic sheathed cable is rated for 90°C service with voltage limitation of 300 volts.

Type NMW and NMWU have a flame retardant, moisture resistant sheath.

Type NMD90, NMW and NMWU applications are described in Table 19 of CEC 2009 Part I.

Nonmetallic sheathed cable is permitted by code to be used exposed or concealed in one, two or multifamily dwellings or other structures not exceeding three floors. Use of Type NMD90 cable is restricted to dry locations.

Nonmetallic sheathed cables are not permitted to be used as a service conductor. Nonmetallic sheathed cables are also prohibited in hazardous locations.

NM cables need to be secured in place by suitable means so as not to injure the cable. Adequate protection for cable is also required when run is exposed, through joists or rafters, through floors, in unfinished basements and accessible attics.

NM cables shall be protected from physical damage when it passes through factory or field punched, cut or drilled holes in metal members. A bushing or grommet firmly secured in place is recommended (CEC Rule 12-516).

Please refer to the following for further details and complete information:

1. U.L. 719, ANSI C33.56Safety Standards for Nonmetallic Sheathed Cable
2. U.L. 514.....Safety Standards for Outlet Boxes and Fittings
3. NEMA FB-1... ..Standards Publication: Fittings and Supports for Conduit and Cable Assemblies
4. CEC Section 12-500.....Wiring methods (Nonmetallic Sheathed Cable)
5. CSA C22.2 No. 48... ..Safety Standards for Nonmetallic Sheathed Cable
6. CSA C22.2 No. 18... ..Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

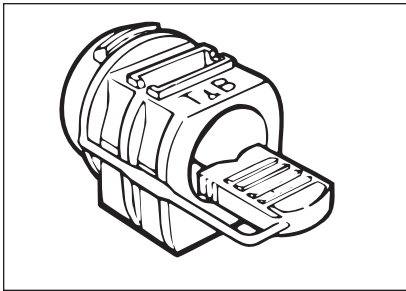
Please Note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2009 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, is not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

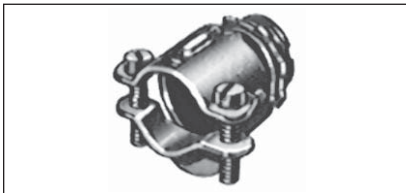
T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings

Suggested Specifications for Nonmetallic Sheathed Cable



Series 3300
Nonmetallic Sheathed Cable
and Flexible Cord Fittings
(All Plastic)



Series 3302M
Nonmetallic Sheathed Cable
and Flexible Cord Fittings
(Steel)



Series 3210
Knockout Bushings



Series 1942
Insulated Nipples

- Where nonmetallic sheathed cable or flexible cord terminates into a threaded or threadless opening, terminating fittings used shall be approved for the purpose by nationally recognized laboratory, inspection agency or product evaluation organization.

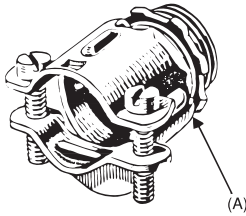
- Terminating fittings shall be of malleable iron, steel, or thermoplastic construction designed to provide adequate strain relief and positively prevent damage to jacket or conductor insulation such as series 3300 or 3302M manufactured by Thomas & Betts. Ferrous metal fittings shall be electro-zinc plated inside and outside including threads and bushed with a nylon insulated throat.

Thermoplastic material used for fitting construction shall be of high impact strength suitable for 105°C/221°F service with a U.L. flammability rating of 94V-1.

- Where nonmetallic sheathed cable passes through either factory or field punched, cut or drilled holes in metallic members, the cable shall be protected by thermoplastic bushing such as series 3210 manufactured by Thomas & Betts. Bushing shall be firmly secured in opening. Nylon bushed metallic fittings such as Thomas & Betts series 1942 may be substituted as required.

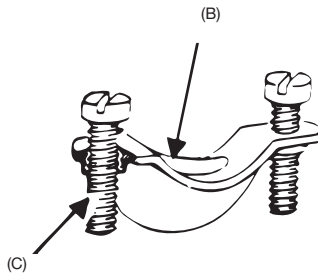
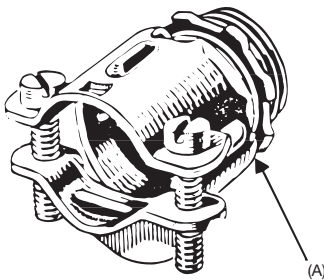
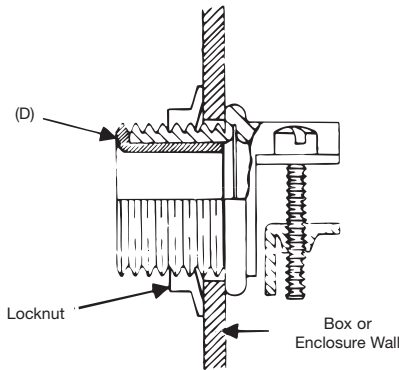
T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings



**3302M Series
Nonmetallic Sheathed
Cable Fitting**

Typical Installation



Nonmetallic Sheathed Cable & Flexible Cord Fittings (Steel)

Application

- To connect nonmetallic sheathed cable and flexible cord to a box or an enclosure.

Features

- Rugged all steel/malleable iron construction (A).
- Rounded cable clamp grip provides superior mechanical holding power without damaging conductor insulation or outer jacket (B).
- Clamp designed to cover body opening for a neat and safe installation.
- Screws thread into clamp and not body; screw heads are snug with body and ends of screws do not project beyond the body (C).
- Insulator firmly secured in place protects conductors and reduces wire pulling effort; protects threads from damage during handling (D).
- Locknut designed to secure fitting to a box or enclosure; will not vibrate loose.

Standard Material

Body	1/2" thru 1" Steel; 1-1/4" thru 2" Malleable Iron
Clamp	1/2" thru 1-1/4" Steel; 1-1/4" thru 2" Malleable Iron
Locknut	All Steel
Insulator	Thermoplastic

Standard Finish

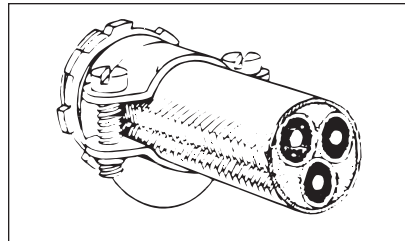
All steel and malleable iron parts—
Electro Zinc Plated & Chromate Coated

Range

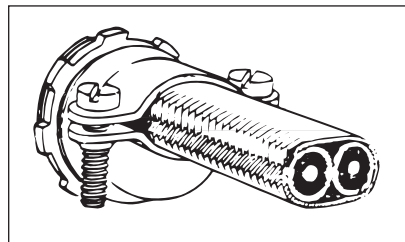
- Hub Size 1/2" thru 2" Hubs provided with straight pipe threads (NPS.)
- Cable 2 #14 thru 4 #4 Type NM
- Cable Outside Diameter 0.250" to 1.150"

Conformity

U.L. 514B
CSA C22.2 No. 18.3
NFPA 70-2008 (ANSI)
NEMA FB-1
Federal Standard H-28 (Threads)



**Typical Installation
(Flexible Cord)**



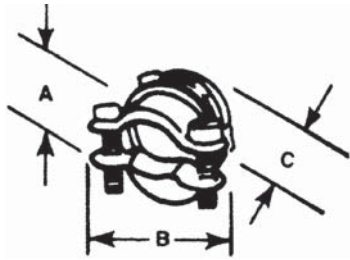
**Typical Installation
(NM-Sheathed Cable)**

T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings



Two-Screw Fittings



Steel or malleable iron.

Rounded cable grip and smooth bushing protect the cable sheath and wire insulation. Since saddle is threaded, screws do not travel or extend beyond the fitting body as it is clamped to the cable. An extra lip on the saddle closes the unused part of the fitting opening.

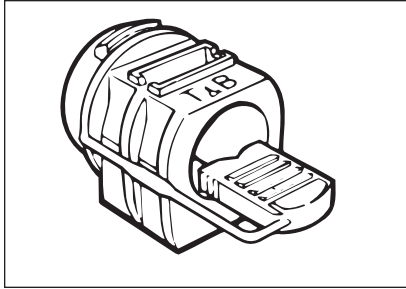
Cat. No.		K.O. Size	U.L. Listed & CSA Certified for the following Single (1) and Pairs of (2) NM & NMC Cable	U.L. Listed & CSA Certified for the following Service Entrance Cables	Dimensions (in.)			Cable Opening		
Noninsulated	Insulated				A	B	C	max.	min.	
3302*	3302M-C	1/2"	(1) 2#14, 2#12, 2#10, 3#14, 3#12, 3#10, (2) 2#14, 2#12	2#12 thru 2#4, 3#12, 3#10	31/32"	1-3/8"	1"	.590	.250	
3303-C	3303M	3/4"	(1) 2#8, 2#6, 3#8 (2) 2#12, 2#10, 2#8, 3#14	2#8 thru 2#1/0, 3#8, 3#6, 2#6 + #8 GND	1-1/4"	1-5/8"	1-3/16"	.750	.530	
3304	3304M	1"	(1) 3#8, 3#6, 3#4 (2) 2#8, 3#10	2#1, 2#1/0, 3#6 thru 3#2, 2#4 + #6 GND, 2#3 + #5 GND, 2#2 + #4 GND	1-15/32"	1-7/8"	1-1/4"	.990	.690	
3305	3305M	1-1/4"	(1) 3#8, 3#6, 3#4 (2) 2#8, 2#6, 2#4, 3#8	3#2 thru 3#2/0, 2#1 + #3 GND, 2#1/0 + #2 GND, 2#2/0 + #1 GND	1-15/16"	2-7/32"	1-9/32"	1.320	.850	
3306	3306M	1-1/2"	(1) 3#4	3#3/0, 3#4/0, 2#3/0 + #1/0 GND, 2#4/0 + #2/0 GND	2-5/32"	2-21/32"	1-5/8"	1.515	.930	
3307	3307M	2"	Max. 1.98", Min. 1.15"							
3308†	—	2-1/2"	Max. 2.38", Min. 1.5"							
3309†	—	3"	Max. 2.88", Min. 1.75"							
3310†	—	3-1/2"	Max. 3.38", Min. 2.25"							
3311†	—	4"	Max. 3.88", Min. 2.5"							
						2-25/32"	3-5/16"	1-29/32"	1.980	1.150

* U.L. Listed for use with rubber and thermoplastic flexible cords (both single and multiple cords and 2 oval cables).
 U.L. Listed for multiple cords and cables.

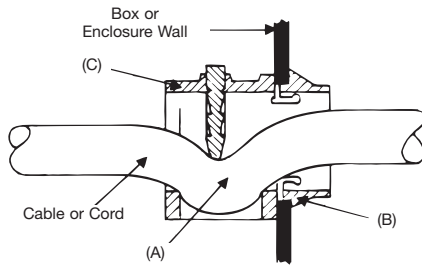
T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings

Nonmetallic Sheathed Cable and Flexible Cord Fittings (All Plastic)



3300 Series



Application

- To connect nonmetallic sheathed cable and flexible cord to a box or an enclosure.

Features

- Provides strain relief by partially deflecting cable (A); therefore:
 - (1) Fitting will not damage outer covering or jacket of cable, or conductor insulation; designed to give safe trouble-free installation.
 - (2) Holding power and cable strain relief are not effected by surface finish of outer covering or cable jacket.
 - (3) Fitting provides superior holding power far in excess of listing agency requirements.
- Snap-in one piece design; accommodates variation in knockout dimensions, saves installation time (B).

- All high impact thermoplastic construction provides:
 - (1) Insulated throat; conductors are protected from abrasion.
 - (2) Improved dielectric strength, and elimination of potential shorts.
 - (3) Corrosion resistance.

- Wide range—reduces inventories

- Fitting may be pre-installed in box K.O., or on cable.

Standard Material

All high impact thermoplastic—U.L. Class 94V-1 suitable for 105°C application.

Standard Finish

As Molded

Listing/Certification

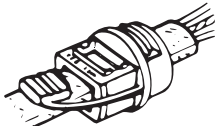
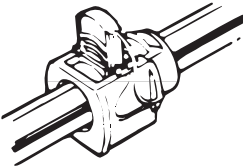



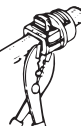
Cat. No. 3201, 3350 for factory installation

Conformity

U.L. 514B
CSA C22.2 No.18.3
NFPA 70-2008 (ANSI)



Typical Installation

 <p>1. Remove sheath from end of cable (4" or more as required). Insert cable through fitting as shown (Cable under button).</p>	 <p>2. Insert button into cavity.</p>	 <p>3. With grooved pliers, or parallel jaw type pliers (commercially available) squeeze button into cord or wires as far into fitting body as possible.</p> <p>Note: It may be necessary to re-adjust pliers to insure button is properly installed.</p>
 <p>4. Snap fitting into knockout box. If desired this step can be done prior to Step 1.</p>	 <p>5. To remove from knockout box depress ears.</p>	 <p>6. To remove from cable cut fitting as shown</p>

Range

Cat. No.	Knockout Size	Cable/ Cord Range
3300	1/2"	10-2, 12-2 & 14-2 type NM Cable .125" to .300" outside diameter cord
		10-3, 12-3, 14-3, 10-2, 12-2, 14-2 Type NM Cable; also multiple (2) 12-2 and 14-2 Type NM Cable; .300" to .600" outside diameter cord 8-3 and 6-3 type
3201 & 3350	1/2"	NM cables; also Multiple (2) 14-3 and 10-2 Type NM Cable; .500" to .850" outside diameter cord

T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings



All Plastic Fitting for NM Cable and Flexible Cord

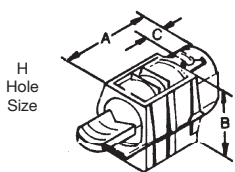


Figure 1

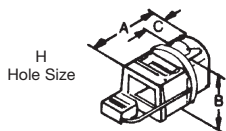


Figure 2

High impact thermoplastic. U.L. 94-V1.

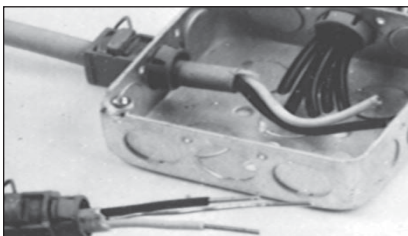
Features push-in design. Captive locking wedge secures cable with single squeeze of standard electrician's pliers. Provides excellent insulation, strain-relief and high pull-out value.



Snap captive locking wedge into fitting's cavity.



Press locking wedge into cavity which locks onto cable.



Cat. No. 3201 is ideal for multiple flexible cords and cable.

Cat. No.	Size Range	K.O. Size	Fig.	Dimensions (in.)					F Max. Thk. Enclosure	H
				A	B	C	D	E		
3300	For use with 10-2, 12-2 and 14-2 NM cables; 18-2 and 18-3 SJ and SJO cords and 18-2 SV, SVO, SJT and SJTO cords, single or multiple; cord capacity .125-.300 diameter	1/2"	2	1-1/32	15/16	3/8	.880	.795	.080	5/16 x 9/16
3350	For use with 10-3, 12-3, 14-3, 10-2, 12-2, 4-2 NM cables; multiple (2) 12-2 and 14-2 N M cables; single and multiple flexible cords in wire range .300 in. to .600 in.	1/2"	1	1-11/32	1	7/16	.880	.795	.080	21/32 dia.
3202	For use with 8-3 and 6-3 NM cables; (2) 14-3, 14-2, 12-2 and 10-2 NM cables; single and multiple flexible cords in wire range .500 in. to .850 in.	3/4"	1	1-1/2	1-5/16	7/16	1.100	1.005	.090	7/8 dia.

Temperature Rating: 105°C

T&B Conduit Fittings

Nonmetallic Sheathed Cable Fittings



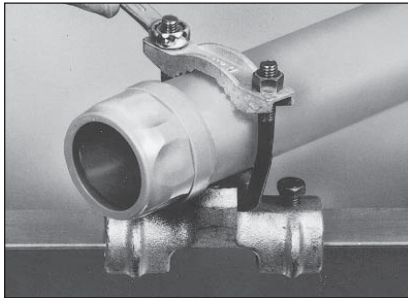
No locknut required. No special tools required.
High impact thermoplastic with steel insert.

Snap-in Fitting for Flexible Metal Conduit



Cat. No.	Conduit Size	K.O. Size	A	B	C
100TB	3/8"	1/2"	27/32	1-13/32	1-31/32
100BP	3/8"	1/2"	27/32	1-13/32	1-31/32

Temperature Rating: 105°C
U.L. 94-V1



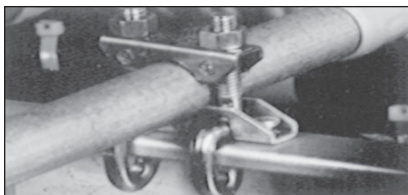
Swivel cable tray clamps for aluminum and steel trays with regular or reinforced flanges.

- Serrations and biting teeth on clamping saddle provides a high quality bond between conduit and clamp
- 1/2" to 6" sizes that can be clamped to any position in a 90° arc
- Hardened steel screws bite into tray and provide positive bond
- Malleable iron hub and steel u-bolt accepts conduit from any angle

Swivel Tray Clamp



Cat. No.	Conduit Size
6209	1/2"-3/4"
6211	1"-1-1/4"
6214	1-1/2"-2"
6216	2-1/2"-3"
6218	3-1/2"-4"





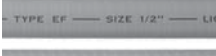
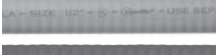
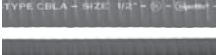
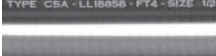
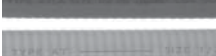
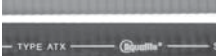





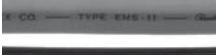






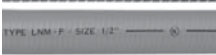









Cable Tray Clamp



Cat. No.	Conduit Size
6210	1/2"-3/4"
6212	1"-1-1/4"

T&B Conduit Fittings

Liquatite® Flexible Conduit—Application Guide

Conduit Type	Page	Flexibility*	Metal Used**	Plastic***	High Mech. Strength	Listed for Direct Burial	Halogen Free	Low Fire Hazard	Accepts Std. Liquidtight Fittings	Self Extinguish	EMI/RFI Shielding	Approval
 TYPE-LT	129	B	S	P					pp.92-94			JIC
 TYPE-LOR	130	B	S	P					pp.92-94			JIC
 TYPE-EF	130	B	S	P					pp.92-94			JIC
 TYPE-LA	131	C	S	P	X	X			pp.92-94	X		UL SF
 TYPE-CBLA	132	C	S	P	X	X			pp.92-94	X		UL SF
 TYPE-CSA	133	C	S	P	X				pp.92-94	X		SF
 TYPE-ATLA	134	C	S	P	X	X			pp.92-94	X		UL SF
 TYPE-AT	135	B	S	P					pp.92-94			
 TYPE-ATX	135	B	S	T			X		p.91			
 TYPE-ALT	136	C	A	P					pp.92-94			
 TYPE-CEA	137	C	S	U			X	X	pp.92-94	X		
 TYPE-ACEA	138	C	A	U			X	X	pp.92-94	X		
 TYPE-ZHLA	139	C	S	U	X	X	X	X	pp.92-94	X		UL
 TYPE-LAS	140	C	S	P	X	X			pp.92-94	X	X	UL
 TYPE-EMS	141	C	B	P					pp.92-94	X	X	
 TYPE-EMSP	141	C	B	P					pp.92-94	X	X	
 TYPE-BR	142	C	S		X				pp.115-119			UL SF -3/8
 TYPE-ABR	143	C	A						pp.115-119			UL SF -3/8
 TYPE-USL	144	B	S						pp.115-119			RU
 TYPE-SL	144	A, B	S						pp.115-119			
 TYPE-VJC	145	A, B	S	P					pp.115-119			
 TYPE-UG	145	C	S						pp.115-119			
 TYPE-LNM-P	146	A		P					p.102	X		UL SF
 TYPE-NMC	147	C		P	X	X			pp.108-110	X		UL SF
 TYPE-NMT	147	A		P	X				pp.108-110	X		UL SF
 TYPE-CL	148	C		N	X		X		p.150	X		RU
 TYPE-CLL	148	B		N			X		p.150	X		RU
 TYPE-CCG	149	B		N			X		p.150			
 TYPE-CLR	149	A		N			X		p.150	X		RU
 TYPE-CLFR	149	C		N	X		X	X	p.150	X		RU

* A=Continuous flexing
B= Small bend radius









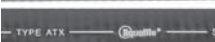





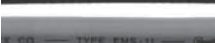







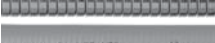







C=Flexible
D=Pliable (static)

** S=Steel
A=Aluminum
B= Bronze

*** P=PVC
U=Pu
T=TPR
N=Nylon

T&B Conduit Fittings

Liquatite® Flexible Conduit—Application Guide

Conduit Type	Temperature Range												General Chemical Resistance See chart on page 156	
	°C °F	-60 -76	-40 -40	-20 -4	0 +32	+50 +122	+60 +140	+75 +167	+80 +176	+90 +194	+105 +221	+150 +302	Oils	Acids
 TYPE-LT													X	X
 TYPE-LOR													X	X
 TYPE-EF													X	X
 TYPE-LA													X	X
 TYPE-CBLA													X	X
 TYPE-CSA													X	X
 TYPE-ATLA													X	X
 TYPE-AT													X	X
 TYPE-ATX													X	
 TYPE-ALT													X	X
 TYPE-CEA													X	
 TYPE-ACEA													X	
 TYPE-ZHLA													X	
 TYPE-LAS													X	X
 TYPE-EMS													X	X
 TYPE-EMSP													X	X
 TYPE-BR														
 TYPE-ABR														
 TYPE-USL														
 TYPE-SL														
 TYPE-VJC													X	X
 TYPE-UG														
 TYPE-LNM-P													X	X
 TYPE-NMC													X	X
 TYPE-NMT													X	X
 TYPE-CL													X	
 TYPE-CLL													X	
 TYPE-CCG													X	
 TYPE-CLR													X	
 TYPE-CLFR													X	

T&B Conduit Fittings

Liquatite® Flexible Conduit — Steel

JIC

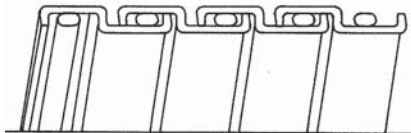
Type LT



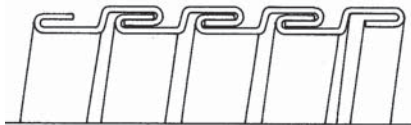
Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat No.	Reel Content* (m)	Cat No.	Reel Content* (m)	Inside Bend Radius		Weight kg/30m
							in.	(mm)	
1/4	LT025-75	75	-	-	-	-	1.0	(25.4)	8
5/16	LT032-75	75	-	-	-	-	1.0	(25.4)	8
3/8	LT038-30	30	LT038-150	150	LT038-300	300	1.5	(38.1)	9
1/2	LT050-30	30	LT050-150	150	LT050-300	300	2.0	(50.8)	11
3/4	LT075-30	30	LT075-150	150	LT075-300	300	2.5	(63.5)	15
1	LT100-30	30	LT100-120	120	-	-	3.0	(76.2)	24
1-1/4	LT125-15	15	LT125-75	75	-	-	3.5	(88.9)	31
1-1/2	LT150-15	15	LT150-45	45	-	-	4.5	(114.3)	40
2	LT200-15	15	LT200-30	30	-	-	5.5	(139.7)	53
2-1/2	LT250-8	8	LT250-80	80	-	-	8.0	(203.2)	76
3-1/2	LT350-8	8	LT350-50	50	-	-	11.0	(279.4)	132
4	LT400-8	8	LT400-30	30	-	-	12.0	(304.8)	156
5	LT500-8	8	-	-	-	-	17.5	(444.5)	212
6	LT600-8	8	-	-	-	-	22.5	(571.5)	259

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.



Squarelock with Filler
5/16" - 2"



Interlock
2-1/2" - 6"

Type LT

A general purpose, flexible liquidtight steel conduit designed for a variety of installations requiring motion, vibration and bending. It offers good mechanical and moisture protection to enclosed conductors.

Construction

The flexible inner core is made from a spiral wound strip of corrosion resistant plating steel. The 1/4 through 2 inch trade sizes are squarelock formed and, with the exception of the 1/4 inch size, contain a nylon cord packing within the convolutions.

The larger sizes are constructed with a fully interlocked strip to add strength and to prevent unraveling.

A flexible yet durable PVC jacket is extruded over this core creating a liquid-tight conduit resistant to most oils, acids and vapors present in industrial environments.

Refer to the Conduit — Chemical Resistance Chart beginning on p.158.

Applications

This conduit is used extensively in the machine tool and other industrial environments where flexibility is necessary for installation and maintenance or where vibration and movement must be absorbed. The inherent sunlight resistance of PVC enables this product to be used in outdoor applications.

Compatible with standard liquidtight fittings. The construction of this conduit conforms to, and is suitable for use with Sections 16 & 17.7 of the Electrical Standard for Industrial Machinery (ANSI/NFPA-79).

Working Temperatures

-20°C to 80°C

Listing/Certification

JIC — manufactured in accordance with the dimensions and specifications as outlined by the Joint Industrial Council Standard for Mass Production Equipment and Machine Tools.

Standard Colours

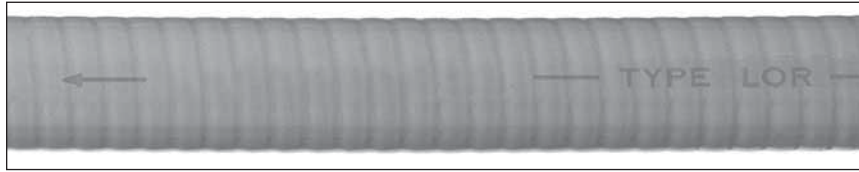
Machine tool grey and black. Other colours available upon request. Part numbers listed designate grey jacket.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Steel

JIC

Type LOR



Type LOR

This product is offered as a non-UL oil-resistant conduit that incorporates a high quality PVC jacket.

Applications

The LOR is ideally used in situations where a UL listing or CSA certification is not a factor but where a flexible conduit must withstand exposure to many harsh chemicals, oils, UV, etc. This conduit conforms to Section 17.7 of the Electrical Standard for Industrial Machinery. (ANSI/NFPA-79) **Compatible with Standard Liquidtight Fittings.**

Working Temperatures

-20°C to 60°C intermitting to 90°C

Standard Colours

Machine tool grey and black. Other colours available upon request. Part numbers listed designate grey jacket.

Note

For a UL listed version, consult your Regional Sales Office for Type LA/LOR.

Trade Size (in.)	Cat. No.	Carton Content*		Carton Content*		Inside Bend Radius		Wt. Kg/30m
		(m)	Cat. No.	(m)	Cat. No.	in.	(mm)	
3/8	LOR038-30	30	LOR038-150	150	LOR038-300	300	2.0 (50.8)	19
1/2	LOR050-30	30	LOR050-150	150	LOR050-300	300	2.5 (63.5)	11
3/4	LOR075-30	30	LOR075-150	150	LOR075-300	300	3.0 (76.2)	15
1	LOR100-30	30	LOR100-120	120	-	-	4.0 (101.6)	24
1-1/4	LOR125-15	15	LOR125-60	60	-	-	4.5 (114.3)	31
1-1/2	LOR150-15	15	-	-	-	-	5.5 (139.7)	40
2	LOR200-15	15	-	-	-	-	7.0 (177.8)	53
2-1/2	LOR250-8	8	-	-	-	-	9.5 (241.3)	76
3	LOR300-8	8	-	-	-	-	11.5 (292.1)	118
3-1/2	LOR350-8	8	-	-	-	-	13.0 (330.2)	132
4	LOR400-8	8	-	-	-	-	14.0 (356.6)	156
5	LOR500-8	8	-	-	-	-	20.0 (508.0)	221
6	LOR600-8	8	-	-	-	-	22.5 (571.5)	259

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type EF



Type EF

This flexible liquidtight conduit is a competitive grade version of our Type LT. It conforms to both the JIC standards for dimensions and general construction, and to Section 17.7 of the Electrical Standard for Industrial Machinery (ANSI/NFPA-79).

Construction

The flexible inner core is constructed from a helically formed strip of corrosion resistant steel. A liquidtight PVC jacket is then extruded over the core.

Applications

General installations requiring some movement and protection for contained conductors. Forms a liquidtight system when installed with standard fittings for use indoors or out.

Working Temperatures

-20°C to 80°C

Standard Colour

Machine tool grey

Trade Size (in.)	Cat. No.	Carton Content*		Carton Content*		Inside Bend Radius		Wt. kg/30m
		(m)	Cat. No.	(m)	Cat. No.	in.	(mm)	
3/8	EF038-30	30	EF038-150	150	EF038-300	300	1.5 (38.1)	9
1/2	EF050-30	30	EF050-150	150	EF050-300	300	2.0 (50.8)	11
3/4	EF075-30	30	EF075-150	150	EF075-300	300	3.0 (63.5)	14
1	EF100-30	30	EF100-120	120	-	-	3.0 (76.2)	20
1-1/4	EF125-15	15	EF125-75	75	-	-	3.5 (88.9)	25
1-1/2	EF150-15	15	EF150-45	45	-	-	4.5 (114.3)	41
2	EF200-15	15	EF200-30	30	-	-	5.5 (139.7)	5

See Chart on p.155 for dimensions and tolerances.

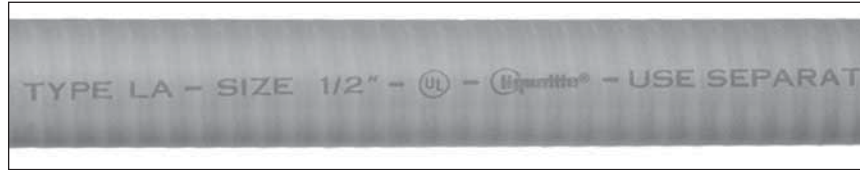
* See p.155 for label and packaging detail.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Steel



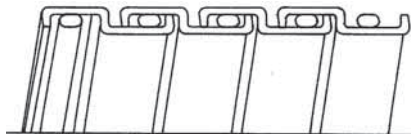
Type LA



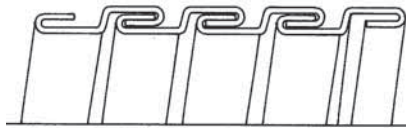
Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Reel Content* (m)	Cat. No.	Reel Content* (m)	Inside Bend Radius		Weight kg/30m
							in.	(mm)	
3/8	LA038-30	30	LA038-150	150	LA038-300	300	2.0	(50.8)	13
1/2	LA050-30	30	LA050-150	150	LA050-300	300	3.0	(76.2)	15
3/4	LA075-30	30	LA075-150	150	LA075-300	300	4.2	(106.7)	24
1	LA100-30	30	LA100-120	120	-	-	5.5	(139.7)	37
1-1/4	LA125-15	15	LA125-60	60	-	-	7.0	(177.8)	46
1-1/2	LA150-15	15	LA150-45	45	-	-	4.5	(114.3)	47
2	LA200-15	15	LA200-30	30	-	-	6.0	(152.4)	66
2-1/2	LA250-8	8	LA250-80	80	-	-	8.0	(203.2)	87
3	LA300-8	8	LA300-50	50	-	-	10.0	(254.0)	114
3-1/2	LA350-8	8	LA350-50	50	-	-	11.0	(279.4)	140
4	LA400-8	8	LA400-30	30	-	-	12.0	(304.8)	154

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.



Squarelock with filler
3/8" - 1-1/4"



Interlock
1-1/2" - 4"

Type LA

A flexible liquidtight steel conduit which is both listed UL and certified CSA. It offers outstanding protection against wet, oily conditions and is permitted for use in exposed or concealed locations.

Construction

The flexible inner core is made from a spiral wound strip of heavy gauge, corrosion resistant, hot-dipped galvanized steel. The 3/8 through 1-1/4 inch trade sizes are square lock formed and include an integral bonding strip of copper that is enclosed within the convolutions throughout its entire length. The 1-1/2 through 4 inch trade sizes are designed with a fully interlocked strip.

The liquidtight jacketing material is of a high quality, rugged, flame retardant flexible PVC compound which resists oils, mild acids and exposure to sunlight. For further information, refer to the Conduit—Chemical Resistance chart beginning on p. 158.

Applications

This conduit is intended for installation with Rule 12-1300 of Canadian Electrical Code (CEC) Part I 2009.

The use of a separate bonding conductor is mandatory in accordance with CEC Rule 12-1306 for Ordinary Locations.

The use of Liquidtight Flexible Conduit with sign and Outline Lighting are in accordance with CEC Rule 34-400 (2).

- Listed and marked for direct burial and in poured concrete.
- For containment of 600-volt and lower potential circuits
- Sunlight resistant

Working Temperatures

-20°C to 60°C intermitting to 90°C

Listing/Certification

Listed. Conforms to UL Standard ANSI/UL-360 for Liquidtight Flexible Steel Conduit.

Certified. Conforms to CSA 22.2 No. 56 for use per CEC C22.1 Section 12-1300.

Standard Colours

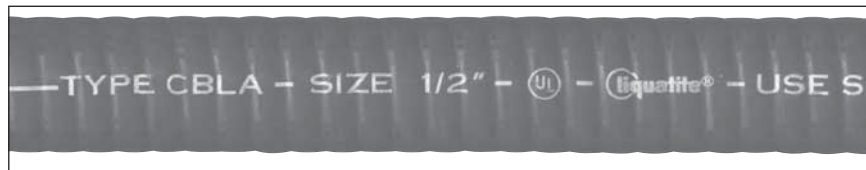
Machine tool grey, and black. Other colours available upon request. Blue is commonly used for computer room installations. See TYPE CBLA on p.132.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Steel



Type CBLA—Computer Blue



Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Reel Content* (m)	Cat. No.	Reel Content* (m)	Inside Bend Radius		Wt. kg/30m
							in.	(mm)	
3/8	CBLA038-30	30	CBLA038-150	150	CBLA038-300	300	2.0	(50.8)	13
1/2	CBLA050-30	30	CBLA050-150	150	CBLA050-300	300	3.0	(76.2)	15
3/4	CBLA075-30	30	CBLA075-150	150	CBLA075-300	300	4.2	(106.7)	24
1	CBLA100-30	30	CBLA100-120	120	-	-	5.5	(139.7)	37
1-1/4	CBLA125-15	15	CBLA125-60	60	-	-	7.0	(177.8)	46
1-1/2	CBLA150-15	15	CBLA150-45	45	-	-	4.5	(114.3)	47
2	CBLA200-15	15	CBLA200-30	30	-	-	6.0	(152.4)	66
2-1/2	CBLA250-8	8	CBLA250-80	80	-	-	8.0	(203.2)	87
3	CBLA300-8	8	CBLA300-50	50	-	-	10.0	(254.0)	114
3-1/2	CBLA350-8	8	CBLA350-50	50	-	-	11.0	(279.4)	140
4	CBLA400-8	8	CBLA400-30	30	-	-	12.0	(304.8)	154

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type CBLA

Computer Blue LA is a liquidtight flexible steel conduit commonly used for computer room installations. The blue jacket colour easily identifies circuitry for computer power wiring.

Construction

CBLA has a flexible inner core made from a spiral wound strip of heavy gauge, hot-dipped galvanized steel. The 3/8 through 1-1/4 inch trade sizes contain an integral bonding strip of copper. The 1-1/2 and larger sizes are designed with a fully interlocked strip.

The jacketing material is a rugged flame retardant flexible blue PVC. For installations which do not allow the use of PVC, see TYPE ZHLA on P. 139.

Applications

Listed and marked for direct burial and in poured concrete.

Working Temperatures

-20°C to 60°C

Listing / Certification



Listed. Conforms to UL Standard ANSI/UL-360 for Liquidtight Flexible Steel Conduit.



Certified. Conforms to CSA 22.2 No. 56 for use per CEC C22.1 Section 12-1300.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Steel



Type CSA



Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Reel Content* (m)	Cat. No.	Reel Content* (m)	Inside Bend Radius		Weight kg/30m
							in.	(mm)	
3/8	CSA038-30	30	CSA038-150	150	CSA038-300	300	2.0	(50.8)	11
1/2	CSA050-30	30	CSA050-150	150	CSA050-300	300	3.0	(76.2)	16
3/4	CSA075-15	15	-	-	-	-	-	-	-
3/4	CSA075-30	30	CSA075-150	150	CSA075-300	300	4.0	(101.6)	24
1	CSA100-30	30	CSA100-120	-	-	-	5.0	(127.0)	27
1-1/4	CSA125-15	15	CSA125-60	60	-	-	6.2	(157.5)	39
1-1/2	CSA150-15	15	CSA150-45	45	-	-	4.5	(114.3)	55
2	CSA200-15	15	CSA200-30	30	-	-	6.0	(152.4)	70
2-1/2	CSA250-8	8	-	-	-	-	8.0	(203.2)	93
3	CSA300-8	8	-	-	-	-	10.0	(254.0)	120
4	CSA400-8	8	-	-	-	-	12.0	(304.8)	181

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type CSA

This flexible liquidtight steel conduit is certified CSA. Its design and function is similar to that of type LA except that it cannot be used as a ground return path per CEC. It also offers a wider operating temperature range.

Construction

The flexible inner core is made from a spiral wound strip of heavy gauge, corrosion resistant, hot-dipped galvanized steel. The 3/8 through 1-1/4 inch trade sizes are cord packed.

The durable PVC flame retardant jacket is designed for good flexibility and impact resistance at low temperatures.

Applications

This conduit is intended for use according to CEC as described in section 12-1300 for dry, damp or wet locations where flexibility is necessary.

This conduit is intended for installation with Rule 12-1300 of Canadian Electrical Code (CEC) Part I 2009.


The use of a separate bonding conductor is mandatory in accordance with CEC Rule 12-1306 for Ordinary Locations.

The use of Liquidtight Flexible Conduit with sign and Outline Lighting are in accordance with CEC Rule 34-400 (2).

Working Temperatures

-40°C to 75°C

Listing / Certification

 Certified. Conforms to CSA Standard C22.2, No. 56. Flame Test Rating FT-4 per CSA Standard C22.2, No. 0.3.

Standard Colour

Black

T&B Conduit Fittings

Liquatite® Flexible Conduit—Steel



Type ATLA—All Temperature



Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Reel Content* (m)	Cat. No.	Reel Content* (m)	Inside Bend Radius		Wt. kg/30m
							in.	(mm)	
3/8	ATLA038-30	30	ATLA038-150	150	ATLA038-300	300	2.0	(50.8)	13
1/2	ATLA050-30	30	ATLA050-150	150	ATLA050-300	300	3.0	(76.2)	15
3/4	ATLA075-30	30	ATLA075-150	150	ATLA075-300	300	4.2	(106.7)	24
1	ATLA100-30	30	ATLA100-120	120	-	-	5.5	(139.7)	37
1-1/4	ATLA125-15	15	ATLA125-60	60	-	-	7.0	(177.8)	46
1-1/2	ATLA150-15	15	ATLA150-45	45	-	-	4.5	(114.3)	47
2	ATLA200-15	15	ATLA200-30	30	-	-	6.0	(152.4)	66
2-1/2	ATLA250-8**	8	-	-	-	-	8.0	(203.2)	87
3	ATLA300-8**	8	-	-	-	-	10.0	(254.0)	114
3-1/2	ATLA350-8**	8	-	-	-	-	11.0	(279.4)	140
4	ATLA400-8**	8	-	-	-	-	12.0	(304.8)	154

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

** Not CSA Certified.

Type ATLA

A liquidtight flexible steel conduit designed specifically for extreme hot or cold environments. The flexible inner core is identical to that found in Type LA. The specially formulated PVC jacket remains flexible at low temperatures and resists ageing at elevated temperatures. It is listed UL and certified CSA.

Construction

ATLA has a flexible inner core made from a spiral wound strip of heavy gauge, hot-dipped galvanized steel. The 3/8 through 1-1/4 inch trade sizes contain an integral bonding strip of copper. The 1-1/2 and larger sizes are designed with a fully interlocked strip.

The jacketing material is a rugged flame retardant flexible PVC resistant to weathering, UV, oils and many chemicals. Refer to the Conduit—Chemical Resistance Guide beginning on p.158.

Applications

Designed to be used with high temperature machine tool wiring. Ideal for outdoor installations in cold climates. This conduit is intended for installation with Rule 12-1300 of Canadian Electrical Code (CEC) Part I 2002.

The use of a separate bonding conductor is mandatory in accordance with CEC Rule 12-1306 for Ordinary Locations.

The use of Liquidtight Flexible Conduit with sign and Outline Lighting are in accordance with CEC Rule 34-400 (2).


- Listed and marked for direct burial and in poured concrete.
- For containment of 600-volt and lower potential circuits.

Working Temperatures

-55°C to 105°C Air/60°C Wet/70°C Oil

Listing/Certification

 Listed. Conforms to UL Standard ANSI/UL-360 for Liquidtight Flexible Steel Conduit.

 Certified. Conforms to CSA 22.2 No. 56 for use per the CEC C22.1 Section 12-1300.

Conforms to the requirements of Section 16 & 17.7 of the ANSI/NFPA-79 Electrical Standard for Industrial Machinery.

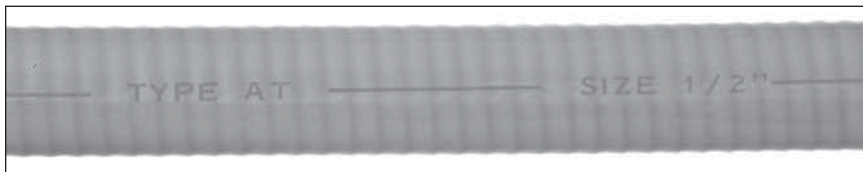
Standard Colour

Machine tool grey

T&B Conduit Fittings

Liquatite® Flexible Conduit—Steel

Type AT—High and Low Temperatures



Trade Size (in.)	Cat. No.	Carton Content*		Cat. No.	Carton Content* (m)	Cat. No.	Carton Content* (m)	Inside Bend radius		Wt. kg/30m
		Cat. No.	Carton Content* (m)					in.	(mm)	
3/8	AT038-30	30	AT038-150	150	AT038-300	300	1.5	(38.1)	9	
1/2	AT050-30	30	AT050-150	150	AT050-300	300	2.0	(50.8)	11	
3/4	AT075-30	30	AT075-150	150	AT075-300	300	2.5	(63.5)	15	
1	AT100-30	30	AT100-120	120	-	-	3.0	(76.2)	24	
1-1/4	AT125-15	15	AT125-60	60	-	-	3.5	(88.9)	31	
1-1/2	AT150-15	15	AT150-45	45	-	-	4.5	(114.3)	40	
2	AT200-15	15	AT200-30	30	-	-	5.5	(139.7)	53	
2-1/2	AT250-8	8	-	-	-	-	8.0	(203.2)	76	
3	AT300-8	8	-	-	-	-	10.0	(254.0)	118	
3-1/2	AT350-8	8	-	-	-	-	11.0	(279.4)	132	
4	AT400-8	8	-	-	-	-	12.0	(304.8)	156	
5	AT500-8	8	-	-	-	-	17.5	(444.5)	221	
6	AT600-8	8	-	-	-	-	22.5	(571.5)	259	

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type AT

A flexible steel conduit which uses a jacketing material specifically designed for hot or cold environments.

Applications

Type AT is well suited for exposure to extreme climatic conditions. It is also widely used on industrial process equipment such as annealing ovens, lumber kilns, foundries and refrigeration, etc. The construction of this conduit conforms to, and is suitable for use with Sections 16 & 17.7 of the Electrical Standard for Industrial Machinery (ANSI/NFPA-79). Uses standard liquid-tight fittings.

Working Temperatures

-55°C to 105°C intermitting to 120°C

Standard Colour

Machine tool grey

Note

For a UL listed and CSA certified version, see **TYPE ATLA** on p. 134.

Type ATX—Extreme Temperature



Trade Size (in.)	Cat. No.	Carton Content*		Cat. No.	Carton Content* (m)	Cat. No.	Carton Content* (m)	Inside Bend radius		Wt. kg/30m
		Cat. No.	Carton Content* (m)					in.	(mm)	
3/8	ATX038-30	30	ATX038-150	150	ATX038-300	300	1.5	(38.1)	10	
1/2	ATX050-30	30	ATX050-150	150	ATX050-300	300	2.0	(50.8)	12	
3/4	ATX075-30	30	ATX075-150	150	ATX075-300	300	2.5	(63.5)	18	
1	ATX100-30	30	ATX100-120	120	-	-	3.0	(76.2)	25	
1-1/4	ATX125-15	15	ATX125-60	60	-	-	3.5	(88.9)	33	
1-1/2	ATX150-15	15	ATX150-45	45	-	-	4.5	(114.3)	47	
2	ATX200-15	15	ATX200-30	30	-	-	5.5	(139.7)	62	
2-1/2	ATX250-8	8	-	-	-	-	8.0	(203.2)	85	
3	ATX300-8	8	-	-	-	-	10.0	(254.0)	111	
4	ATX400-8	8	-	-	-	-	12.0	(304.8)	151	

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

*New High Temperature Fittings available. Refer to p. 91.

Type ATX

A conduit designed to withstand an extreme temperature range.

Construction

Utilizes the flexibility of our standard LT core, coupled with the advantage of a thermoplastic rubber jacket that is virtually unaffected by temperature extremes and contains no halogens. The material has a UL 94-HB flammability rating.

Applications

Used in situations where there are concerns of resistance to temperature exposure. These include heavy outdoor equipment, boilers and furnaces, etc. Refer to the Conduit—Chemical Resistance Guide beginning on p.158.

Working Temperatures

-60°C to 150°C intermitting to 165°C

Standard Colour

Black

T&B Conduit Fittings

Liquatite® Flexible Conduit—Aluminum

Type ALT—Lightweight Aluminum



Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat No.	Reel Content* (m)	Cat No.	Reel Content* (m)	Inside Bend Radius		Wt. kg/30m
							in.	(mm)	
3/8	ALT038-30	30	ALT038-150	150	ALT038-300	300	2.0	(50.8)	5
1/2	ALT050-30	30	ALT050-150	150	ALT050-300	300	2.5	(63.5)	7
3/4	ALT075-30	30	ALT075-150	150	ALT075-300	300	3.0	(76.2)	9
1	ALT100-30	30	ALT100-120	120	-	-	4.0	(101.6)	13
1-1/4	ALT125-15	15	ALT125-60	60	-	-	4.5	(114.3)	18
1-1/2	ALT150-15	15	ALT150-45	45	-	-	5.5	(139.7)	25
2	ALT200-15	15	ALT200-30	30	-	-	7.0	(177.8)	33
2-1/2	ALT250-8	8	-	-	-	-	9.5	(241.3)	47
3	ALT300-8	8	-	-	-	-	11.5	(292.1)	60
3-1/2	ALT350-8	8	-	-	-	-	13.0	(330.2)	74
4	ALT400-8	8	-	-	-	-	14.0	(355.6)	81
5	ALT500-8	8	-	-	-	-	20.0	(508.0)	114
6	ALT600-8	8	-	-	-	-	22.5	(571.5)	143

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type ALT

This version of Liquidtight Flexible Conduit is similar to our standard type LT but weighs considerably less due to the use of an aluminum inner core instead of steel.

Applications

Type ALT is often used where weight or corrosive atmospheres are an issue. When comparing identical trade sizes, Type ALT weighs approximately 37% less than type LT. Uses standard liquidtight fittings.

Working Temperatures

-20°C to 80°C

Standard Colours

Machine tool grey and black. Other colours available upon request. Part numbers listed designate grey jacket.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Steel

Type CEA — Non-Halogen, Low Smoke, Flame Retardant



Type CEA

This liquidtight flexible steel conduit is designed for applications where safety concerns exist regarding a material's reaction in a fire situation.

Construction

The flexible inner core of this product is made from a galvanized steel strip. As in type LT, this core contains string packing between the helical convolutions in trade sizes 3/8" through 2". The specially formulated thermoplastic polyurethane jacket has excellent flame retardant characteristics as well as low smoke and toxicity generation characteristics. Acidic gases such as hydrogen chloride, hydrogen fluoride and hydrogen bromide are virtually eliminated as products of combustion.

Applications

This product is ideally suited for installation in confined or enclosed areas where construction materials must generate very little smoke, and have a low flame spread as well as low toxic gas emissions in the event of fire. Such applications include mass transit vehicles where CEA is extensively used for wiring harnesses within and under passenger rail cars. Other applications include use in underground subway structures and tunnels.

Working Temperatures

-40°C to 80°C

Standard Colours

Grey and black. Other colours available upon request. Part numbers listed designate grey jacket.

Trade Size	Cat. No.	Carton Content* (m)	Cat. No.	Carton Content* (m)	Minimum Jacket Thickness	Inside Bend Radius		Wt. kg/30m
						in.	(mm)	
3/8	CEA038-30	30	CEA038-300	300	0.8	1.5	(38.1)	9
1/2	CEA050-30	30	CEA050-300	300	0.8	2.0	(50.8)	11
3/4	CEA075-30	30	CEA075-150	150	0.9	2.5	(63.5)	15
1	CEA100-30	30	CEA100-120	120	0.9	3.0	(76.2)	24
1-1/4	CEA125-15	15	CEA125-60	60	0.9	3.5	(88.9)	31
1-1/2	CEA150-15	15	CEA150-45	45	1.0	4.5	(114.3)	40
2	CEA200-15	15	CEA200-30	30	1.0	5.5	(139.7)	53
2-1/2	CEA250-8	8	-	-	1.3	8.0	(203.2)	76
3	CEA300-8	8	-	-	1.3	10.0	(254.0)	118
4	CEA400-8	8	-	-	1.5	12.0	(304.8)	156
5	CEA500-8**	8	-	-	2.5	17.5	(444.5)	212
6	CEA600-8**	8	-	-	2.5	22.5	(635.0)	259

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

**Available on request.

Type ACEA also available (liquidtight flexible aluminum conduit).

Aluminum core weighs approximately one third less than steel core.

Type CEA Combustion & Flammability Properties

Combustion & Flammability Properties**	Test	Value
-Vertical Burn (Material)	UL94	V-0 Rating No Flaming Drips
-Vertical Burn (Conduit)	UL360	Pass No Flaming Drips
-Oxygen Index %	D2863	28.5
-Flame Spread Index	ASTM E162	4.0 No Flaming Drips
-Flame Propagation	ASTM C542 (NFPA-130)	Pass No Flaming Drips
-Smoke Generation (Flaming)	ASTM E662 (NFPA 258)	Ds 41 @ 1.5 min Ds 94 @ 4.0 min
-Smoke Generation (Non-Flaming)	ASTM E662 (NFPA 258)	Ds 7 @ 1.5 min Ds 45 @ 4.0 min
-Toxic Gas Generation	BOMBARDIER SMP 800-C	Pass
-Toxicity Index	NES 713	3.9

**Test data is based on controlled laboratory conditions and does not necessarily reflect performance in actual fire conditions. Additional product information available upon request.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Aluminum

Type ACEA—Non-Halogen, Low Smoke, Flame Retardant



Type ACEA

This liquidtight flexible aluminum conduit is designed for applications where safety concerns exist regarding a material's reaction in a fire situation.

Trade Size	Type	Min. Jacket Thick. (mm)	Inside Bend Radius (mm)	Weight Kilogram 30 m	Length		Carton		Reel		Length	
					(m)	Cat. No.	(m)	Cat. No.	(m)	Cat. No.	(m)	Cat. No.
3/8	ACEA038	0.8	50.8	5	60	ACEA038-30	-	-	300	ACEA038-300	-	-
1/2	ACEA050	0.8	63.5	7	30	ACEA050-30	30	-	300	ACEA050-300	-	-
3/4	ACEA075	0.9	76.2	9	30	ACEA075-30	45	ACEA075-45	150	ACEA075-150	-	-
1	ACEA100	0.9	101.6	13	30	ACEA100-30	-	-	120	ACEA100-120	-	-
1-1/4	ACEA125	0.9	114.3	18	15	ACEA125-15	-	-	75	ACEA125-75	-	-
1-1/2	ACEA150	1.0	139.7	25	15	ACEA150-15	-	-	45	ACEA150-45	-	-
2	ACEA200	1.0	177.8	33	15	ACEA200-15	-	-	30	ACEA200-30	-	-
2-1/2	ACEA250	1.3	241.3	47	8	ACEA250-8	-	-	-	-	-	-
3	ACEA300	1.3	330.2	60	8	ACEA300-8	-	-	-	-	-	-
4	ACEA400	1.5	355.6	87	8	ACEA400-8	-	-	-	-	-	-
5	ACEA500	2.5	508.0	114	8	**	-	-	-	-	-	-
6	ACEA600	2.5	571.5	143	8	**	-	-	-	-	-	-

Construction

The flexible inner core of this product is made from an aluminum strip. As in type CEA, this core contains string packing between the helical convolutions in trade sizes 3/8" through 1-1/4". The specially formulated thermoplastic polyurethane jacket has excellent flame retardant characteristics as well as low smoke and toxicity generation characteristics. Acidic gases such as hydrogen chloride, hydrogen fluoride and hydrogen bromide are virtually eliminated as products of combustion.

Applications

This product is ideally suited for installation in confined or enclosed areas where construction materials must generate very little smoke, and have a low flame spread as well as low toxic gas emissions in the event of fire. Such applications include mass transit vehicles where ACEA is extensively used for wiring harnesses within and under passenger rail cars. Other applications include use in underground subway structures and tunnels.

Working Temperatures

-40°C to 80°C

Standard Colours

Machine Tool Grey. Other colours available upon request.

Note

A UL listed version is pending. Consult factory for availability of type ZHLA.

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

**Available on request.

Type ACEA Combustion & Flammability Properties

Combustion & Flammability Properties**	Test	Value
-Vertical Burn (Material)	UL94	V-0 Rating No Flaming Drips
-Vertical Burn (Conduit)	UL360	Pass No Flaming Drips
-Oxygen Index %	D2863	28.5
-Flame Spread Index	ASTM E162	9.8
-Flame Propagation	ASTM C542 (NFPA-130)	Pass No Flaming Drips
-Smoke Generation (Flaming)	ASTM E662 (NFPA 258)	Dm 103 (Corrected) Ds 47 @ 4.0 min
-Smoke Generation (Non-Flaming)	ASTM E662 (NFPA 258)	Dm 91 (Corrected) Ds 5 @ 1.5 min
-Toxic Gas Generation	SMP 801	Pass
-Toxicity Index	NES 713	3.9

**Test data is based on controlled laboratory conditions and does not necessarily reflect performance in actual fire conditions. Additional product information available upon request.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Steel



Type ZHLA — Non-Halogen, Low Smoke, Flame Retardant



Trade Size (in.)	Cat. No.	Carton Content*		Carton Content* (m)	Cat. No.	Carton Content* (m)	Inside Bend Radius		Wt. kg/30m
		Cat. No.	(m)				in.	(mm)	
3/8	ZHLA038-30	30	ZHLA038-150	150	ZHLA038-300	300	2.0	(50.8)	13
1/2	ZHLA050-30	30	ZHLA050-150	150	ZHLA050-300	300	3.0	(76.2)	15
3/4	ZHLA075-30	30	ZHLA075-150	150	ZHLA075-300	300	4.2	(106.7)	24
1	ZHLA100-30	30	ZHLA100-120	120	-	-	5.5	(139.7)	37
1-1/4	ZHLA125-15	15	ZHLA125-60	60	-	-	7.0	(177.8)	46
1-1/2	ZHLA150-15	15	ZHLA150-45	45	-	-	4.5	(114.3)	47
2	ZHLA200-15	15	ZHLA200-30	30	-	-	6.0	(152.4)	66
2-1/2	ZHLA250-8	8	-	-	-	-	8.0	(203.2)	87
3	ZHLA300-8	8	-	-	-	-	10.0	(254.0)	114
3-1/2	ZHLA350-8	8	-	-	-	-	11.0	(279.4)	140
4	ZHLA400-8	8	-	-	-	-	12.0	(304.8)	154

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type ZHLA Combustion & Flammability Properties

Combustion & Flammability Properties**	Test	Value
-Vertical Burn (Material)	UL94	V-0 Rating No Flaming Drips
-Vertical Burn(Conduit)	UL360	Pass No Flaming Drips
-Oxygen Index %	D2863	28.5
-Flame Spread Index	ASTM E162	4.0 No Flaming Drips
-Flame Propagation	ASTM C542 (NFPA-130)	Pass No Flaming Drips
-Smoke Generation (Flaming)	ASTM E662 (NFPA 258)	Ds 41 @ 1.5 min Ds 94 @ 4.0 min
-Smoke Generation (Non-Flaming)	ASTM E662 (NFPA 258)	Ds 7 @ 1.5 min Ds 45 @ min
-Toxic Gas Generation	BOMBARDIER SMP 800-C	Pass
-Toxicity Index	NES 713	3.9

** Test data is based on controlled laboratory conditions and does not necessarily reflect performance in actual fire conditions. Additional product information available upon request.

Type ZHLA

Non-halogen, low smoke and low flame spread are what makes Type ZHLA a proven choice for applications where limiting toxic combustion materials is an important issue. Since ZHLA is also UL Listed, it is ideal for field installation in confined, public areas such as subways, tunnels, etc.

Construction

ZHLA has a flexible inner core made from a spiral wound strip of heavy gauge, hot-dipped galvanized steel. The 3/8 through 1-1/4 inch trade sizes contain an integral bonding strip of copper. The 1-1/2 inch and larger sizes are designed with a fully interlocked strip.

The specially formulated thermoplastic black polyurethane jacket has excellent flame resistance and low smoke and toxicity generation characteristics. It is also resistant to ozone, hydrocarbons, moderate chemicals, oils and fuels. Refer to the Conduit — Chemical Resistance Guide beginning on p. 156.

Applications

There are many situations and areas where PVC is not allowed for electrical construction. The jacketing material used for ZHLA virtually eliminates the release of acidic gases found in PVC products.

- Meets the requirements of Bombardier SMP 800-C for Toxic Gas Generation
- Meets the requirements of both ASTM E162 for Flame Spread and ASTM E662 for Smoke Generation.
- Listed and marked for direct burial and in poured concrete.
- For containment of 600-volt and lower potential circuits.
- Sunlight resistant

Working Temperatures

-40°C to 80°C Air / 60°C Wet / 70°C Oil

Listing / Certification

Listed. Conforms to UL Standard ANSI/ UL-360 for Liquidtight Flexible Steel Conduit.

Standard Colour

Black

T&B Conduit Fittings

Liquatite® Flexible Conduit—Shielding

Thomas & Betts offers three types of flexible liquidtight conduits designed for wiring applications requiring shielding effectiveness from Electro-Magnetic and Radio Frequency Interference (EMI/RFI).

This series of shielding conduits consists of three configurations: Type LAS, Type EMS and Type EMSP.

These conduits are used to protect sensitive electronic circuits such as communications, radar, and data transmission from outside interference or “noise”. The reverse situation is also

an issue. Today’s Original Equipment Manufacturers (OEMs) are finding that, if they wish to ship electrical equipment into the European community, they may need to be in compliance with recently developed CE standards which reduce the allowable amount of EMI/RFI emissions from electrical apparatus.

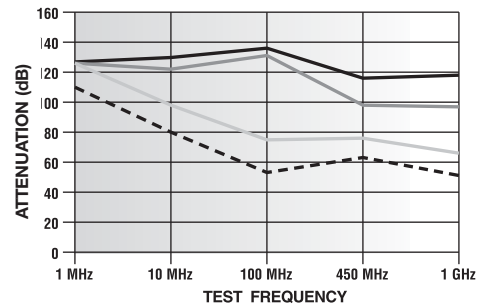
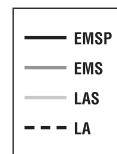
All three are designed to accept industry standard liquidtight fittings and address the problems of assembly and grounding. Fittings of this type include a grounding ferrule which contacts the internal metallic material of

the conduit and the fitting body. This produces a direct shield-to-drain or ground, simply by tightening the fitting.

The graph below depicts the shielding effectiveness (attenuation in dBs) of all three types. The dotted line shows a comparison to standard unshielded liquidtight flexible conduit, Type LA. The spectrum of test frequency is from 1 MHz to 10 MHz Electric Field, to 100 MHz to 1 GHz (1000 MHz) Planewave Field. Tests were performed per MIL-STD-285 on 1/2 inch trade size conduit.

Shielding Effectiveness

	1 MHz	10 MHz	100 MHz	450 MHz	1 GHz
EMSP	127	130	136	116	118
EMS	126	122	131	98	97
LAS	126	98	75	76	66
LA	110	80	53	63	51



Type LAS



Type LAS

Type LAS is identical to standard UL Listed liquidtight flexible steel conduit but is augmented with a tinned copper shielding braid located over the inner steel core and under its protective PVC jacket. The braid offers a minimum of 90% coverage resulting in a shielding effectiveness range from 126 dB @ 1 MHz to 66 dB @ 1 GHz.

Applications

PVC jacket is resistant to a wide variety of oils, acids, alkalines and ultraviolet light.

Working Temperatures

-20°C to 60°C

Listing / Certifications

Listed. Conforms to UL360 for liquidtight flexible steel conduit.

Standard Colours

Black. Other colours and jacketing materials available. Consult your Regional Sales Office for details.

Trade Size (in.)	Cat. No.	Carton Content*		Inside Bend Radius		Wt. kg/30m
		(m)	Cat. No.	(m)	in. (mm)	
3/8	LAS038-30	30	LAS038-150	150	2.0 (50.8)	13
1/2	LAS050-30	30	LAS050-150	150	3.0 (76.2)	15
3/4	LAS075-30	30	LAS075-150	150	4.2 (106.7)	24
1	LAS100-30	30	LAS100-120	120	5.5 (139.7)	37

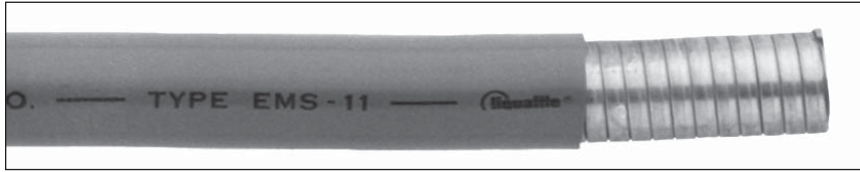
See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Shielding

Type EMS



Type EMS

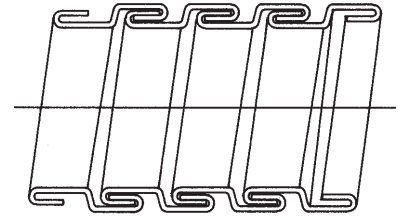
Type EMS has an inner core that is made from a fully interlocked bronze strip. Even though it does not contain a braided shield, it offers a shielding effectiveness from 126 dB @ 1 MHz to nearly 100 dB @ 1 GHz.

Working Temperatures

-55°C to 105°C

Standard Colour

Grey. Other colours and jacketing materials available. Consult your Regional Sales Office for details.



INTERLOCK

Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Carton Content* (m)	Inside Bend Radius		Wt. kg/30m
					in.	(mm)	
3/8	EMS038-30	30	EMS038-150	150	3.0	(76.2)	12
1/2	EMS050-30	30	EMS050-150	150	3.0	(76.2)	16
3/4	EMS075-30	30	EMS075-150	150	4.0	(101.6)	20
1	EMS100-30	30	EMS100-120	120	4.0	(101.6)	39
1-1/4	EMS125-15	15	EMS125-60	60	4.5	(114.3)	46
1-1/2	EMS150-15	15	EMS150-45	45	7.0	(177.8)	64
2	EMS200-15	15	EMS200-30	30	9.5	(241.3)	82
2-1/2	EMS250-8	8	-	-	12.0	(304.8)	105
3	EMS300-8	8	-	-	13.5	(342.9)	145
4	EMS400-8	8	-	-	17.0	(431.8)	176

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Type EMSP



Type EMSP

Type EMSP is a hybrid of LAS and EMS. It utilizes the same bronze core and PVC jacket as EMS but gets further screening protection from a tinned copper braid as found in the LAS product. Its range of shielding effectiveness is from 126 dB @ 1 MHz to 120 dB @ 1 GHz.

Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Carton Content* (m)	Inside Bend Radius		Wt. kg/30m
					in.	(mm)	
3/8	EMSP038-30	30	EMSP038-150	150	3.0	(76.2)	12
1/2	EMSP050-30	30	EMSP050-150	150	3.0	(76.2)	16
3/4	EMSP075-30	30	EMSP075-150	150	4.0	(101.6)	20
1	EMSP100-30	30	EMSP100-120	120	4.0	(101.6)	39

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Steel



Type BR



Type BR

This non-jacketed flexible steel conduit has many universal wiring applications. It is often referred to as “Greenfield” or “Reduced Wall Flex”.

Construction

Type BR is formed from high corrosion resistant hot-dipped galvanized steel. Its profile and helical shape allow it to withstand impact and crushing forces.

Applications

General Use:

In accordance with CEC Rule 12-1002 (1) the flexible metal conduit is permitted in or on buildings of either combustible or non-combustible constructions.

Restriction and Exception:

CEC Rule 12-1004 (a) states: “12 (3/8) trade size flexible metal conduit shall be permitted to be used for runs of not more than 1.5 m (5 ft) for the connection of equipment.”

and CEC Rule 12-1004 (b) states: “12 (3/8) trade size liquidtight flexible conduit may be used as permitted by this code.”

Securement with straps:

CEC Rule 12-1010 (3) states: “When flexible metal conduit is installed, it shall be secured at intervals not exceeding 1.5 m (5 ft) and within 300 mm (12 in.) on each side of every outlet box or fitting except where flexible metal conduit is fished and except for lengths of not over 900 mm (3 ft) at terminals where flexibility is necessary.”

Conductor fill:

CEC Rule 12-1014 defines the maximum number of conductor, the CEC Tables 6 provides the maximum number of conductors of one size in trade sizes of conduit, CEC Table 8 provides the maximum allowable per cent conduit fill, and CEC Table 9 provides the cross-sectional areas of conduit.

Specific Use and applications:

Elevators, Hoistways, in accordance with CEC Rules 38-021 (1) (a) (1) and 38-0221 (1)

(a) (iv)

Elevators, Cars, in accordance with CEC Rules 38-021 (1) (b) (v)

Elevators, Within Machine Rooms, Control Rooms and Machinery Spaces and Control Spaces, in accordance with CEC Rule 38-021 (1) (c) (1)

Elevators, Counterweights, in accordance with CEC Rule 38-021 (1) (d)

EScalators, in accordance with CEC Rule 38-021 (2)

Lifts for persons with physical disabilities, in accordance with CEC Rule 38-021 (3)

Theater installation, in accordance with CEC Rule 44-102 (1)

Listing / Certification

Listed. (sizes 3/8 through 3 in.)
Conforms to UL Standard ANSI/UL-1 for Flexible Metal Conduit.

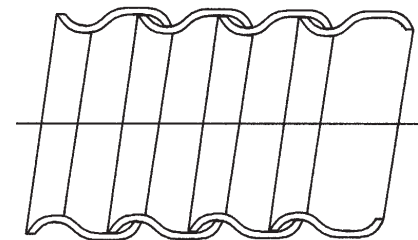
Certified. (3/8 inch size only).
Conforms to CSA 22.2 No. 56 for use per CEC C22.1 Section 12-1000.

Meets Federal Specification WW-C-566c Type II

Flexible metal conduit is also permitted for use on industrial machinery where temperatures exceed the limits of liquidtight flexible conduit. (ANSI/NFPA-79) Section 16.3.4 (exception) and Section 17.9.

Trade Size (in.)	Cat. No.	Inner Diameter		Outer Diameter	
		Min. in. (mm)	Max. in. (mm)	Min. in. (mm)	Max. in. (mm)
3/8	BR038*	0.375 (9.5)	0.393 (10.0)	0.560 (14.2)	0.610 (15.5)
1/2	BR050	0.625 (15.9)	0.645 (16.4)	0.860 (21.8)	0.920 (23.4)
3/4	BR075	0.812 (20.6)	0.835 (21.2)	1.045 (26.5)	1.105 (28.1)
1	BR100	1.000 (25.4)	1.040 (26.4)	1.300 (33.0)	1.380 (35.1)
1-1/4	BR125	1.250 (31.8)	1.300 (33.0)	1.550 (39.4)	1.630 (41.4)
1-1/2	BR150	1.500 (38.1)	1.575 (40.0)	1.850 (47.0)	1.950 (49.5)
2	BR200	2.000 (50.8)	2.080 (52.8)	2.350 (59.7)	2.454 (62.3)
2-1/2	BR250	2.500 (63.5)	2.700 (68.6)	2.860 (72.6)	3.060 (77.7)
3	BR300	3.000 (76.2)	3.200 (81.3)	3.360 (85.3)	3.560 (90.4)
3-1/2	BR350	3.500 (88.9)	-	3.860 (98.0)	4.060 (103.1)
4	BR400	4.000 (101.6)	-	4.360 (110.7)	4.560 (115.8)

* CSA Certified.



Types BR and ABR Strip Profile

Min. Trade Size (in.)	Cat. No.	Coil Content (m)	Cat. No.	Coil Content (m)	Cat. No.	Coil Content (m)	Cat. No.	Coil Content (m)	Cat. No.	Coil Content (m)	Inside Bend Radius		Wt. kg/30m
											in.	(mm)	
3/8	BR038-8*	8	BR038-15*	15	BR038-30*	30	BR038-75*	75	BR038-300*	300	2.0	(50.8)	18
1/2	BR050-8	8	BR050-15	15	BR050-30	30	-	-	BR050-300	300	3.0	(76.2)	13
3/4	BR075-8	8	BR075-15	15	BR075-30	30	-	-	BR075-150	150	4.0	(101.6)	15
1	-	-	BR100-15	15	-	-	-	-	BR100-120	120	5.0	(127.0)	24
1-1/4	-	-	BR125-15	15	-	-	-	-	BR125-120	120	6.2	(157.5)	29
1-1/2	-	-	BR150-8	8	-	-	-	-	BR150-90	90	7.5	(190.5)	36
2	-	-	BR200-8	8	-	-	-	-	BR200-45	45	10.0	(254.0)	45
2-1/2	-	-	BR250-8	8	-	-	-	-	-	-	12.5	(317.5)	68
3	-	-	BR300-8	8	-	-	-	-	-	-	15.0	(381.0)	82
3-1/2	-	-	BR350-8	8	-	-	-	-	-	-	17.5	(444.5)	100
4	-	-	BR400-8	8	-	-	-	-	-	-	20.0	(508.0)	122

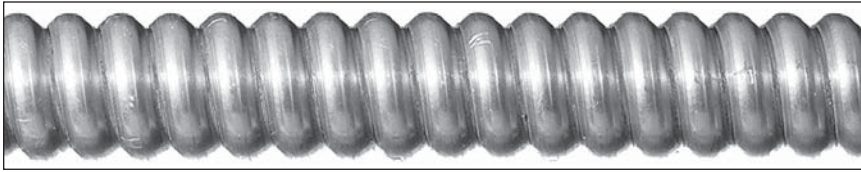
* CSA Certified.

T&B Conduit Fittings

Liquatite® Flexible Conduit— Aluminum



Type ABR



Trade Size (in.)	Cat. No.	Coil Length (m)	Cat. No.	Coil Length (m)	Cat. No.	Coil Length (m)	Cat. No.	Reel Content* (m)	Wt. kg/30m
-	-	-	-	-	ABR716-30	30	ABR716-300	300	-
3/8	ABR038-8	8	ABR038-15	15	ABR038-30	30	ABR038-300	300	7.0
1/2	ABR050-8	8	ABR050-15	15	ABR050-30	30	ABR050-300	300	9.5
3/4	ABR075-8	8	ABR075-15	15	ABR075-30	30	ABR075-150	150	13.5
1	-	-	ABR100-15	15	-	-	ABR100-120	120	24.0
1-1/4	-	-	ABR125-15	15	-	-	ABR125-120	120	31.0
1-1/2	-	-	ABR150-8	8	-	-	ABR150-90	90	47.0
2	-	-	ABR200-8	8	-	-	ABR200-45	45	67.0
2-1/2	-	-	ABR250-8	8	-	-	-	-	92.0
3	-	-	ABR300-8	8	-	-	-	-	107.0
3-1/2	-	-	ABR350-8	8	-	-	-	-	122.0
4	-	-	ABR400-8	8	-	-	-	-	142.0

See Chart on p.155 for dimensions and tolerances.

* See p.155 for label and packaging detail.

Note: Dimensions and Bend Radii are identical to Type BR, p. 140.

† CSA Certified.

Type ABR

This non-jacketed flexible aluminum conduit has many universal wiring applications. It is often referred to as "Greenfield" or "Reduced Wall Flex".

Construction

Type ABR is formed using a high strength aluminum alloy strip. The result is a conduit with similar characteristics to those of type BR steel but at about 1/3 the weight.

Applications

General Use:

In accordance with CEC Rule 12-1002 (1) the flexible metal conduit is permitted in or on buildings of either combustible or non-combustible constructions.

Restriction and Exception:

CEC Rule 12-1004 (a) states: "12 (3/8) trade size flexible metal conduit shall be permitted to be used for runs of not more than 1.5 m (5 ft) for the connection of equipment." and CEC Rule 12-1004 (b) states: "12 (3/8)

trade size liquidtight flexible conduit may be used as permitted by this code."

Securements with straps:

CEC Rule 12-1010 (3) states: "When flexible metal conduit is installed, it shall be secured at intervals not exceeding 1.5 m (5 ft) and within 300 mm (12 in.) on each side of every outlet box or fitting except where flexible metal conduit is fished and except for lengths of not over 900 mm (3 ft) at terminals where flexibility is necessary."

Conductor fill:

CEC Rule 12-1014 defines the maximum number of conductor, the CEC Tables 6 provides the maximum number of conductors of one size in trade sizes of conduit, CEC Table 8 provides the maximum allowable per cent conduit fill, and CEC Table 9 provides the cross-sectional areas of conduit.

Applications: refer to Type BR, p. 142.

Listing / Certification



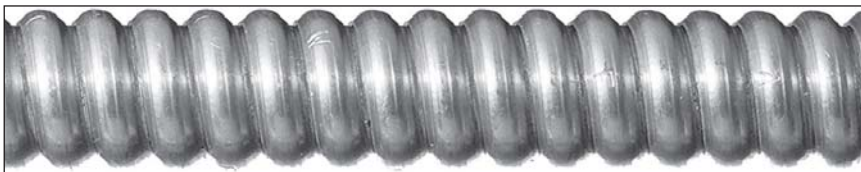
Listed. (sizes 3/8 through 3 in.)
Conforms to UL Standard ANSI/UL-1 for Flexible Metal Conduit.



Certified. (3/8 inch size only).
Conforms to CSA 22.2 No. 56 for use per CEC C22.1 Section 12-1300.
Meets Federal Specification WW-C-566C Type II



Type ABRH



Trade Size	CSA Metric Desig.	T&B Type	Internal Diameter (in.)		Outer Diameter (in.)		Inside Bend Radius	WT. Lbs. per 100 Ft.	Coil Length Mtr.
			Min.	Max.	Min.	Max.			
3/8	12	ABRH038	0.375	0.393	0.560	0.610	2	7	30, 150, 300
7/16	14	ABRH716	0.437	0.457	-	0.675	2.25	8	30, 150, 300
1/2	16	ABRH050	0.625	0.645	0.860	0.920	3	16	30, 150, 300
3/4	21	ABRH075	0.812	0.835	1.045	1.105	4	18	30, 150, 300
1	27	ABRH100	1.000	1.040	1.300	1.380	5	35	15, 120
1-1/4	35	ABRH125	1.250	1.300	1.550	1.630	6.2	43	15, 120
1-1/2	41	ABRH150	1.500	1.575	1.850	1.950	7.5	55	8, 15, 30
2	53	ABRH200	2.000	2.080	2.350	2.454	10	73	8, 15
2-1/2	63	ABRH250	2.500	2.700	2.860	3.060	12.5	90	8, 15
3	78	ABRH300	3.000	3.200	3.360	3.560	15	107	8, 15
4	103	ABRH400	4.000	-	4.360	4.560	20	142	8, 15

TYPE - ABRH

This non-jacketed flexible aluminum conduit has many universal wiring applications.

Construction

Type ABRH is formed from a heavy gauge aluminum strip. Its profile and helical shape allow it to withstand substantial impact and crushing forces.

Applications

This conduit is intended as a metal raceway for wires and cable where CSA Certification is required. Suitable for use with connectors intended for "FMC (Flexible Metal Conduit).



File # LL 18858 Conforms to CSA 22.2 No. 56 for use per the Canadian Electrical Code C22.1 Section 12-1300.

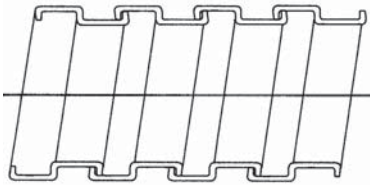
T&B Conduit Fittings

Liquatite® Flexible Conduit— Steel

Type SL



Trade Size (in.)	(mm)	Content Cat. No.	Coil		Inside Diameter		Min.		Outside Diameter		Bend Radius		Min. Inside Wt.		kg/30m
			Min. (m)	in.	Max. (mm)	in.	Min. (mm)	in.	Max. (mm)	in.	(mm)	in.	(mm)	(in)	
-	-	SL316-75	75	0.172	(4.35)	0.202	(5.13)	0.280	(7.11)	0.310	(7.87)	0.75	(19.5)	2	
-	-	SL140-75	75	0.235	(5.97)	0.265	(6.73)	0.328	(8.33)	0.358	(9.09)	0.75	(19.5)	3	
5/16	-	SL516-75	75	0.297	(7.54)	0.327	(8.31)	0.391	(9.93)	0.421	(10.69)	0.75	(19.5)	3	
-	-	SL380-75	75	0.360	(9.14)	0.390	(9.91)	0.485	(12.32)	0.515	(13.08)	1.00	(25.4)	4	
-	-	SL716-75	75	0.422	(10.72)	0.452	(11.48)	0.547	(13.89)	0.577	(14.66)	1.00	(25.4)	4	
3/8	16	SL038-75	75	0.492	(12.50)	0.512	(13.00)	0.617	(15.67)	0.637	(16.18)	1.00	(25.4)	5	
-	-	SL916-45	45	0.547	(13.89)	0.577	(14.66)	0.672	(17.07)	0.702	(17.83)	1.25	(31.8)	5	
1/2	-	SL050-45	45	0.622	(15.80)	0.642	(16.31)	0.747	(18.97)	0.767	(19.48)	1.50	(38.1)	7	
-	20	SL050M-45	45	0.650	(16.51)	0.670	(17.01)	0.775	(19.69)	0.795	(20.19)	1.50	(38.1)	7	
-	-	SL340-45	45	0.735	(18.67)	0.765	(19.43)	0.865	(21.97)	0.895	(22.73)	1.50	(38.1)	8	
3/4	25	SL075-30	30	0.827	(21.00)	0.847	(21.51)	0.957	(24.31)	0.977	(24.82)	2.00	(50.8)	8	
1	-	SL100-15	15	1.041	(26.44)	1.066	(27.07)	1.181	(30.00)	1.206	(30.63)	2.00	(50.8)	9	
-	32	SL100M-15	15	1.102	(27.99)	1.122	(28.50)	1.242	(31.55)	1.262	(32.05)	2.00	(50.8)	-	



Squarelock

Type SL

This “extra-flexible” product, available in the smaller diameters, is designed for tightspot installation and where continuous flexing is required of a steel wound hose.

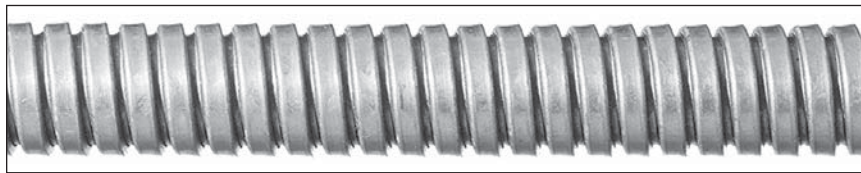
Construction

Type SL is helically wound from a formed strip of Electro-Galvanized steel. It is sized to be used with a variety of set-screw and clamp type fittings.

Applications

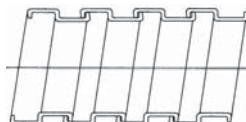
Offers good mechanical protection to wiring in a variety of O.E.M. applications.

Type USL



Cat. No.	Inner Dia.		Outer Dia.		Cat. No.	Coil Contents (m)	Min. Inside Bend Radius in. (mm)	Wt. kg/30m
	Min. in. (mm)	Max. in. (mm)	Min. in. (mm)	Max. in. (mm)				
USL516	0.297(7.54)	0.327(8.30)	0.457(11.60)	0.487(12.37)	USL516-75	75	1.25 (31.75)	5
USL380	0.360(9.14)	0.390(9.91)	0.520(13.20)	0.550(13.97)	USL380-75	75	1.25 (31.75)	6
USL716	0.422(10.7)	0.452(11.48)	0.582(14.78)	0.612(15.54)	USL716-75	75	1.50 (38.10)	7
USL120	0.485(12.3)	0.515(13.08)	0.645(15.86)	0.675(17.15)	USL120-75	75	1.50 (38.10)	8
USL916	0.557(14.1)	0.577(14.65)	0.707(17.96)	0.737(18.72)	USL916-75	75	1.50 (38.10)	9

Squarelock— Type USL



Type USL

This extra-flexible steel conduit is recognized UL and CSA for use within listed and certified assemblies.

Construction

Helically formed from hot-dipped galvanized steel, type USL offers good corrosion resistance and provides excellent mechanical protection to enclosed circuits.

Applications

This product is intended as a factory installed component of various assemblies. Typical uses include modular office partitions, showcase lighting, range tops and other appliances.



Listing / Certification
UL Recognized.

T&B Conduit Fittings

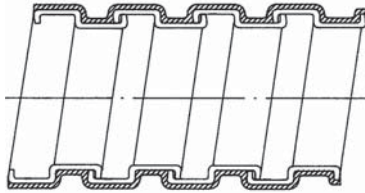
Liquatite® Flexible Conduit—Steel

Type VJC—with PVC Jacket



Trade Size (in.)	Cat. No.	Carton Content* (m)	Outside Dia. Over Jacket		Internal Bend radius		Wt. kg/30m
			Min. in. (mm)	Max. in. (mm)	Static in. (mm)	Dynamic in. (mm)	
3/8	VJC038-30	30	0.647 (16.43)	0.677 (17.20)	1.0 (25.4)	5 (127.0)	5
1/2	VJC050-30	30	0.777 (19.74)	0.807 (20.50)	1.5 (38.1)	6 (152.4)	7
-	VJC050M-30	30	0.805 (20.45)	0.835 (21.21)	1.5 (38.1)	6 (152.4)	7
3/4	VJC075-30	30	0.987 (25.07)	1.017 (25.83)	2.0 (51.0)	10 (254.0)	9
1	VJC100-30	30	0.221 (5.61)	1.246 (31.65)	3.0 (76.0)	10 (254.0)	11
-	VJC100M-30	30	1.272 (32.31)	1.302 (33.07)	3.0 (76.0)	10 (254.0)	-

* Reels available. Consult factory.



Type VJC

Vacuum jacketed steel conduit for high-flex installations.

Construction

A unique vacuum extrusion process allows this product to have a thin PVC jacket which does not restrict the great flexibility characteristics of the inner core. The core material is the same as type SL. VJC is designed with dimensions that will accept standard liquidtight fittings.

Applications

VJC is suitable for use in both static applications where a tight bend diameter is needed and in dynamic use such as machining centers and robotics.

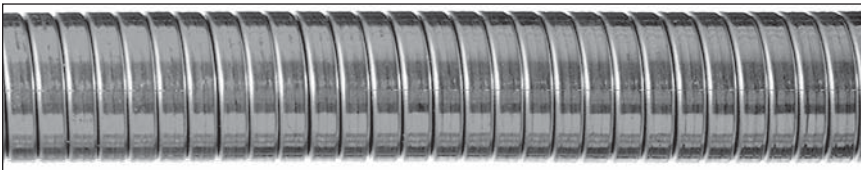
Working Temperatures

-20°C to 80°C

Standard Colour

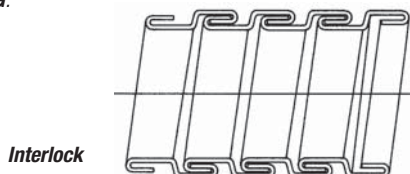
Black. Other colours available upon request. Consult your Regional Sales Office for details.

Type UG



Cat. No.	Coil Content (m)	Inside diameter		Outside Diameter	Diameter		Bend Radius in. (mm)	Wt. kg/30m
		Min. in. (mm)	Max. in. (mm)		Min. in. (mm)	Max. in. (mm)		
UG380-15	15	0.443(11.25)	0.473(12.01)	0.563(14.30)	0.593(15.06)	2.5 (63.5)	7	
UG120-15	15	0.755(19.18)	0.785(19.94)	0.875(22.23)	0.905(22.99)	3.0 (76.2)	10	
UG340-15	15	0.943(23.95)	0.973(24.71)	1.063(28.70)	1.093(27.76)	3.5 (89.0)	14	
UG100-15	15	1.208(30.68)	1.238(31.45)	1.328(33.73)	1.358(34.50)	4.5 (114.3)	16	
UG125-15	15	1.485(37.72)	1.515(38.48)	1.578(40.08)	1.608(40.84)	5.5 (139.7)	23	
UG150-15	15	1.735(44.07)	1.765(44.83)	1.843(46.81)	1.873(47.57)	6.5 (165.1)	27	
UG200-15	15	2.235(56.77)	2.265(57.53)	2.390(60.71)	2.420(61.47)	8.5 (216.0)	36	
UG250-15	15	2.735(69.47)	2.765(70.23)	2.937(74.60)	2.967(75.36)	10.5 (267.0)	39	
UG300-15	15	3.360(85.34)	3.390(86.11)	3.438(87.33)	3.468(88.09)	13.0 (330.2)	48	

Note: Trade sizes do not apply to Type UG.



Type UG

A fully-interlocked flexible steel conduit designed for high strength in "tight-spot" installations.

Construction

This conduit is manufactured from a bright tin plated steel strip which is fully interlocked at the edges to produce a strong, yet flexible product. The interlock feature does not allow the conduit to unravel if twisted and permits the conduit to retain its shape when bent. This lightweight product is compatible with many set-screw and clamp type fittings.

Applications

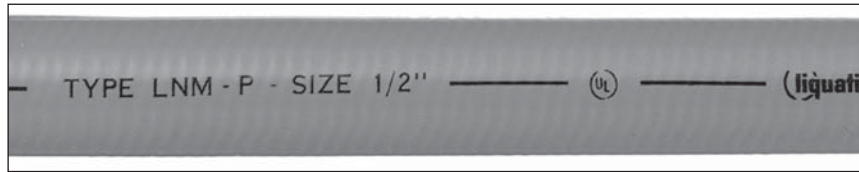
The bright appearance of the finished product lends itself to installations where the conduit may be visible after final assembly.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Nonmetallic



Type LNM-P



Trade Size (in.)	Carton Content (m)	Reel Content (m)	Reel Content (m)	Inside Dia. Min. in. (mm)	Inside Dia. Max. in. (mm)	Outside Dia. Min. in. (mm)	Outside Dia. Max. in. (mm)	Inside Bend Radius in. (mm)	Wt. kg/30m
3/8	75	150	300	0.485(12.32)	0.505(12.83)	0.755(19.18)	0.775(19.69)	2.5 (63.5)	7
1/2	60	150	300	0.620(5.08)	0.640(16.26)	0.910(23.11)	0.930(23.62)	3.0 (76.2)	10
3/4	50	150	-	0.815(20.70)	0.835(21.21)	1.150(29.21)	1.170(29.72)	4.0 (101.6)	14
1	30	120	-	1.030(26.16)	1.055(26.80)	1.415(35.94)	1.440(36.58)	6.0 (152.4)	19
1-1/4	30	60	-	1.370(34.80)	1.395(35.43)	1.800(45.72)	1.825(46.36)	7.0 (177.8)	28
1-1/2	15	45	-	1.585(40.26)	1.620(41.15)	2.045(51.94)	2.080(52.83)	8.0 (203.2)	36
2	15	30	-	2.075(52.71)	2.100(53.34)	2.555(64.90)	2.590(65.79)	9.0 (228.6)	54

Type LNM-P

This nonmetallic liquidtight conduit is ideally suited for continuous flexing situations. It is often specified in "Power Track" or cable carrier installations and on industrial robots. It does not contain a metal core which could fatigue from repeated flexing or vibration.

Construction

LNM-P is of the Layered, Type-A construction which incorporates a smooth seamless inner core of flexible PVC that is bonded to a covering of flexible PVC. Between these layers is a woven nylon mesh for added reinforcement. The PVC material is a high quality flame-retardant compound which resists oils, mild acids and exposure to sunlight.

Applications

General Use:

In accordance with CEC Rule 12-1002 (1) the flexible metal conduit is permitted in or on buildings of either combustible or non-combustible constructions.

Restriction and Exception:

CEC Rule 12-1004 (a): "12 (3/8) trade size flexible metal conduit shall be permitted to be used for runs of not more than 1.5 m (5 ft) for the connection of equipment." and CEC Rule 12-1004 (b): "12 (3/8) trade size liquidtight flexible conduit may be used as permitted by this code."

Securement with straps:

CEC Rule 12-1010 (3): "When flexible metal conduit is installed, it shall be secured at intervals not exceeding 1.5 m (5 ft) and within 300 mm (12 in.) on each side of every

outlet box or fitting except where flexible metal conduit is fished and except for lengths of not over 900 mm (3 ft) at terminals where flexibility is necessary."

Conductor fill:

CEC Rule 12-1014 defines the maximum number of conductor, the CEC Tables 6 provides the maximum number of conductors of one size in trade sizes of conduit, CEC Table 8 provides the maximum allowable per cent conduit fill, and CEC Table 9 provides the cross-sectional areas of conduit.

Specific Use and applications:

Elevators, Hoistways, in accordance with CEC Rules 38-021 (1) (a) (1) and 38-0221 (1) (a) (iv)

Elevators, Cars, in accordance with CEC Rules 38-021 (1) (b) (v)

Elevators, Within Machine Rooms, Control Rooms and Machinery Spaces and Control Spaces, in accordance with CEC Rule 38-021 (1) (c) (1)

Elevators, Counterweights, in accordance with CEC Rule 38-021 (1) (d)

EScalators, in accordance with CEC Rule 38-021 (2)

Lifts for persons with physical disabilities, in accordance with CEC Rule 38-021 (3)

Theater installation, in accordance with CEC Rule 44-102 (1)

Working temperatures

-20°C to 60°C

Listing / Certification

Listed. Conforms to UL Standard ANSI/UL 1660 type A



Certified. Conforms to CSA 22.2 No. 227.2 type A



Standard Colour

Safety Orange. Also available in Black and Grey. Part numbers listed designate Orange jacket.

Fittings

Fittings for Layered Conduit are for that conduit only and are so identified by the marking "FNMC-A".

Recommendation:

"Suitable for use with 3700 Series, Type A, Metal Fittings from Thomas & Betts". Refer to pgs. 101, 102.



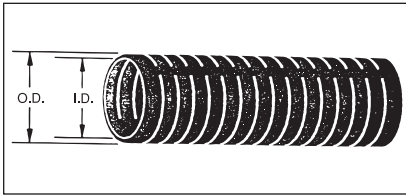
LNM-P TYPE A

T&B Conduit Fittings

Liquatite® Flexible Conduit—Nonmetallic



Type NMC



Recommended industrial applications:

- Machine tools.
- Motor hookups.
- Food processing equipment.
- Extensions from wireways.
- Sensor and microswitch wiring found in control consoles.

Type NMC

A general purpose nonmetallic liquidtight conduit offers excellent protection to wiring from abrasion, sunlight, mild acids, alkaline and oils. Often used for air conditioning hook-ups and other outdoor applications.

Construction Type B

NMC is of the helically wound integral Type B construction. It contains a spiral of rigid PVC reinforcement imbedded within the flexible PVC wall.

Type	Trade Size	Inside Bend Radius	Weight (lb/100ft)	Coil footage Length	I.D. (in.)		O.D. (in.)	
					Min.	Max.	Min.	Max.
NMC038TB	3/8"	2.00"	10	100	.484	.504	.690	.710
NMC050TB	1/2"	3.25"	11	100	.622	.642	.820	.840
NMC075TB	3/4"	4.25"	15	100	.820	.840	1.030	1.050
NMC100TB	1"	6.50"	25	100	1.041	1.066	1.290	1.315
NMC125TB	1-1/4"	8.00"	34	100	1.380	1.410	1.630	1.660
NMC150TB	1-1/2"	9.00"	42	50	1.575	1.600	1.865	1.900
NMC200TB	2"	11.00"	60	50	2.020	2.045	2.340	2.375
NMC050-1000TB	1/2"	3.25"	11	1000	.622	.642	.820	.840
NMC075-500TB	3/4"	4.25"	15	500	.820	.840	1.030	1.050

See technical data next page.

Use with Bullet® Liquidtight Fittings.

*Available in other colours. Consult Customer Service for details.

Type NM Specifications

Type NMC is intended for installation in accordance with CEC Rule 12-1300 to 12-1306 for Liquidtight Flexible Conduit.

-For containment of 600 volt and lower potential circuits.

Working Temperature



-20°C to 80°C/Dry 60°C/Wet 70°C/Oil

Listed. Conforms to Underwriters Laboratories Standard ANSI/UL 1660 type B



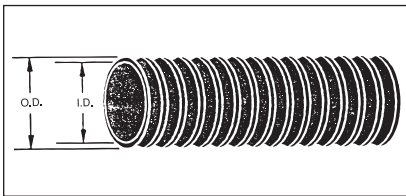
Certified. Conforms to CSA 22.2 No. 227.2 type B.

The 3/8 through 1-1/4 in. trade sizes are listed and marked for direct burial and in poured concrete.

Standard Colour

Black

Type NMT



Recommended industrial applications:

- Protection of fiber optic cable.
- Installation of instrumentation and control cable.
- Indoor/outdoor lighting.
- Packaging equipment.
- Marine and shipboard wiring.
- Flexing—component wiring protection on robots, graphic arts equipment, etc.

Type NMT

Type NMT is an Extra Flexible Liquidtight Nonmetallic Tubing. This lightweight tubing cuts easily and installs quickly. It is ideal for wiring protection in tight quarters and for tight bends. The thin flexible PVC skin allows greater movement for many OEM applications. Used for wiring harnesses, laboratory, equipment, fiber optics, etc.

Type	Trade Size	Inside Bend Radius	Weight (lb/100ft)	Coil footage Length	I.D. (in.)		O.D. (in.)	
					Min.	Max.	Min.	Max.
NMT038TB	3/8"	.7"	6	100	.484	.504	.690	.710
NMT050TB	1/2"	.9"	8	100	.622	.642	.820	.840
NMT075TB	3/4"	1.1"	10	100	.820	.840	1.030	1.050
NMT100TB	1"	1.3"	15	100	1.041	1.066	1.290	1.315
NMT125TB	1-1/4"	1.7"	20	100	1.380	1.410	1.630	1.660
NMT150TB	1-1/2"	1.9"	26	50	1.575	1.600	1.865	1.900
NMT200TB	2"	2.4"	36	50	2.020	2.045	2.340	2.375

*Available in other colours. Consult Customer Service for details.

Construction

Co-extruded from both flexible and rigid PVC. The rigid spiral PVC reinforcement is imbedded within the wall of the tubing.

Working Temperature

-20°C to 70°C

UL Recognized.

Standard Colour

Black.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Nylon

The Corrlok® System

The Corrlok® System is comprised of five types of nylon, flexible corrugated conduits designed for a wide range of applications and are intended for use with the new Kopex® series of fittings and adapters. They are produced by an extrusion/corrugation process resulting in

a flexible, seamless corrugated tube. The internal corrugations are well rounded to facilitate easier wire pulling.

The Corrlok® System provides a very light weight, liquidtight flexible raceway alternative that's easy to work with and stands up to tough environments.

Because the specially formulated nylons used are nontoxic and self-extinguishing, Corrlok® is a proven choice in confined areas where hazards from fire are a concern.

Features/Benefits

- UL recognized
- Halogen free
- Flame resistant
- High impact and crush strength
- Resistant to many chemicals
- Sunlight resistant
- Extreme temperature range

Applications

- Passenger rail vehicle wiring
- Industrial control equipment
- Machine tools
- Textile machinery
- Molding/extrusion equipment
- Fiber optics
- Medical equipment

Type CL—Standard Weight



Type CL

Provides the best mechanical strength and protection of the Corrlok conduits.

Material

Halogen Free Nylon 6

Working Temperatures

-40°C to 105°C

Fitting Pullout

150 lb (1/2" and larger). To be used with Kopex® fittings of the Corrlok® System.

Listing/Certification

UL Recognized Component, 600 V, 105°C, Vertical Flame, Liquidtight, UV and Impact Tested.

Standard Colour

Black. Other colours available upon request.

Cat. No.	Conduit size			Nominal Dimensions				Min. Inside Bend Radius Static	Wt. kg/30m	Standard Length (m)
	(in.)	MM	MW	Inside in. (mm)	Outside in. (mm)	in. (mm)				
CL140-30	1/4	10	7	0.226 (6.5)	0.394 (10.0)	0.8 (20.3)	2.1 (53.3)	2.1	30	
CL516-30	5/16	12	10	0.374 (9.5)	0.512 (13.0)	1.0 (25.4)	2.5 (63.5)	2.5	30	
CL10-30	3/8	16	12	0.452 (11.5)	0.622 (15.8)	1.5 (38.1)	3.0 (76.2)	3.0	30	
CL11-30	1/2	20	17	0.633 (16.1)	0.826 (21.0)	1.7 (43.2)	3.5 (88.9)	7.0	30	
CL12-30	3/4	25	23	0.846 (22.5)	1.122 (28.5)	2.0 (50.8)	4.0 (101.6)	9.5	30	
CL13-15	1	32	29	1.063 (27.0)	1.358 (34.5)	2.5 (63.5)	5.0 (127.0)	13.0	15	
CL14-15	1-1/4	40	36	1.380 (35.0)	1.673 (42.5)	2.8 (71.1)	6.3 (160.0)	16.0	15	
CL15-15	1-1/2	50	48	1.810 (46.0)	2.145 (54.5)	3.3 (83.8)	8.3 (210.8)	19.0	15	

Type CLL—Light Weight



Type - CLL

This light weight version provides many of the same qualities of Type CL but with Type CLL improved flexibility.

Material

Halogen Free Nylon 6

Working temperatures

-40°C to 105°C intermitting to 150°C

Fitting Pullout

40 lb (1/2" and larger). To be used with Kopex® fittings of the Corrlok® System.

Listing/Certification

UL Recognized Component, 600 V, 105°C, Vertical Flame, Liquidtight, UV and Impact Tested.

Standard Colour

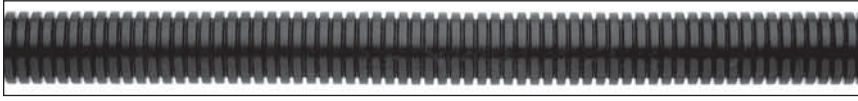
Black. Other colours available upon request.

Cat. No.	Conduit size			Nominal Dimensions				Min. Inside Bend Radius Static	Wt. kg/30m	Standard Length (m)
	(in.)	MM	MW	Inside in. (mm)	Outside in. (mm)	in. (mm)				
CLL10-30	3/8	16	12	0.452 (11.5)	0.622 (15.8)	0.7 (17.8)	3.4 (86.3)	3.4	30	
CLL11-30	1/2	20	17	0.633 (16.1)	0.826 (21.0)	0.8 (20.3)	4.4 (111.8)	4.4	30	
CLL12-30	3/4	25	23	0.865 (22.0)	1.122 (28.5)	1.2 (30.4)	6.7 (170.1)	6.7	30	
CLL13-15	1	32	29	1.087 (27.6)	1.358 (34.5)	1.4 (35.6)	9.1 (230.7)	9.1	15	
CLL14-15	1-1/4	40	36	1.420 (36.0)	1.673 (42.5)	2.4 (61.0)	11.0 (279.4)	11.0	15	
CLL15-15	1-1/2	50	48	1.850 (47.0)	2.145 (54.5)	2.8 (71.1)	16.0 (406.4)	16.0	15	
CLL17-10	2-1/2	70	70	2.645 (67.0)	3.150 (80.0)	6.3 (160.0)	32.0 (812.8)	32.0	10	
CLL350-10	3-1/2	95	95	3.600 (91.5)	4.170 (106.0)	8.3 (210.8)	52.0 (1320.8)	52.0	10	

T&B Conduit Fittings

Liquatite® Flexible Conduit—Nylon

Corrlok® System—Type CLFR, Low Fire Hazard



Cat. No.	Conduit size			Nominal Dimensions				Min. Inside Bend Radius Static		Wt. kg/30m	Standard Length (m)
	(in.)	MM	MW	Inside		Outside		in.	(mm)		
CLFR516-30	5/16	12	10	0.370	(9.4)	0.512	(13.0)	1.0	(25.4)	2.5	30
CLFR10-30	3/8	16	12	0.460	(11.7)	0.622	(15.8)	1.5	(38.1)	5.0	30
CLFR11-30	1/2	20	17	0.653	(16.6)	0.826	(21.0)	1.7	(43.2)	7.0	30
CLFR12-30	3/4	25	23	0.854	(21.7)	1.122	(28.5)	2.0	(51.0)	9.5	30
CLFR13-15	1	32	29	1.090	(27.7)	1.358	(34.5)	2.5	(63.5)	13.0	15
CLFR14-15	1-1/4	40	36	1.381	(35.1)	1.673	(42.5)	2.8	(71.1)	16.0	15
CLFR15-15	1-1/2	50	48	1.835	(46.6)	2.145	(54.5)	3.3	(83.8)	19.0	15

Type CLFR Combustion & Flammability Properties

Test	Value		
Vertical Burn (Material)	UL94	V-O Rating	No Flaming Drips
Vertical Burn (Conduit)	UL360	Pass	No Flaming Drips
Flame Spread Index	ASTM E162	1.0	No Flaming Drips
Smoke Generation (Flaming)	ASTM E662 (NFPA-258)	Ds 35@1.5 Min. Ds 85@4.0 Min.	
Smoke Generation (Non-Flaming)	ASTM E662 (NFPA-258)	Ds 5@1.5 Min. Ds 24@4.0 Min.	
Toxic Gas Generation	BOMBARDIER SMP 800-C	Pass	

Test data is based on controlled laboratory conditions and does not necessarily reflect performance in actual fire conditions. Additional product information available upon request.

Corrlok® System—Type CLR, Robotics



Cat. No.	Conduit size			Nominal Dimensions				Min. Inside Bend Radius Static		Wt. kg/30m	Standard Length (m)
	(in.)	MM	MW	Inside		Outside		in.	(mm)		
CLR10-30	3/8	16	12	0.452	(11.5)	0.622	(15.8)	0.7	(17.8)	3.4	30
CLR11-30	1/2	20	17	0.633	(16.1)	0.826	(21.0)	0.8	(20.3)	4.4	30
CLR12-30	3/4	25	23	0.866	(22.0)	1.122	(28.5)	1.2	(30.5)	6.7	30
CLR13-15	1	32	29	1.087	(27.6)	1.358	(34.5)	1.4	(35.6)	9.1	15
CLR14-15	1-1/4	40	36	1.420	(36.0)	1.673	(42.5)	2.4	(61.0)	11.0	15
CLR15-15	1-1/2	50	48	1.850	(47.0)	2.145	(54.5)	2.8	(71.1)	16.0	15
CLR17-10	2-1/2	70	70	2.645	(67.0)	3.150	(80.0)	6.3	(160.0)	32.0	10
CLR350-10	3-1/2	95	95	3.000	(91.5)	4.170	(106.0)	8.3	(210.8)	52.0	10

Corrlok® System—Type CCG, Commercial Grade



Cat. No.	Conduit size			Nominal Dimensions				Min. Inside Bend Radius Static		Wt. kg/30m	Standard Length (m)
	(in.)	MM	MW	Inside		Outside		in.	(mm)		
CCG10-30	3/8	16	12	0.452	(11.5)	0.622	(15.8)	1.0	(25.4)	3.0	30
CCG11-30	1/2	20	17	0.633	(16.1)	0.826	(21.0)	1.5	(38.1)	4.0	30
CCG12-30	3/4	25	23	0.870	(22.0)	1.122	(28.5)	1.8	(45.7)	6.0	30
CCG13-15	1	32	29	1.100	(27.9)	1.358	(34.5)	2.0	(51.0)	8.2	15
CCG14-15*	1-1/4	40	36	1.420	(36.0)	1.673	(42.5)	2.4	(61.0)	10.5	15
CCG15-15	1-1/2	50	48	1.850	(47.0)	2.145	(54.5)	2.8	(71.1)	15.3	15

* Not available

Type CLFR

A new addition to the Corrlok® System family of conduits, Type CLFR conduit is made from a specially modified Nylon Material with excellent self-extinguishing characteristics and minimal smoke and toxic gas generation. CLFR is an excellent choice for confined inhabited areas such as Public Transit/Rail Vehicles, Subway Stations, Tunnels, Etc.

Material: Halogen Free Nylon 6 UL94 VO

Fitting Pullout

150 lb. (68 kg) and larger. To be used with Kopex fittings of the Corrlok® System.

Listing / Certification

UL Recognized Component, 600 V, 105°C, Vertical Flame, Liquidtight, UV and Impact Tested.

Standard Colour: Black. Other colours available upon request.

Type CLR

Very light weight and extremely flexible. Ideally suited for robotic equipment. This tubing is intended for applications requiring continuous, repeated flexible motion.

Material: Halogen Free Nylon 12

Working temperatures

-50°C to 95°C intermitting to 150°C

Fitting Pullout: 65 lb. To be used with Kopex fittings of the Corrlok® System.

Listing / Certification

UL Recognized Component, 600 V, 105°C, Vertical Flame, Liquidtight, UV and Impact Tested.

Standard Colour: Black. Other colours available upon request.

Type CCG

This commercial grade product is exceptionally light weight and provides a cost effective alternative.

Material: Halogen Free Nylon 16

Working temperatures: -20°C to 90°C

Standard Colour: Black. Other colours available upon request.

To be used with Kopex fittings of the Corrlok® System.




T&B Conduit Fittings

Liquatite® Flexible Conduit—Nylon

The Corrlok® System now features KOPEX® Fittings

The new, improved slim fitting is great for use in tight areas and is molded in high impact Nylon. The two piece design is easier than ever to assemble

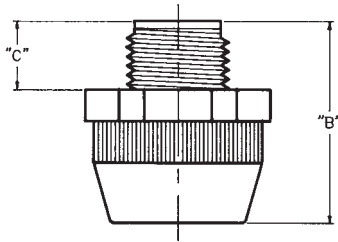
and to re-use. After sliding the backshell onto the conduit, simply seat the conduit into the fitting body and click together. No tools required!

- Fast Installation
-  Recognized
- Liquidtight — Equivalent to IP 65 and NEMA 4
- 360° Retention — High pullout strength
- Fitting Pullout — Minimum 150 lb

Straight



NPT Threaded Fittings					PG Thread		Metric Thread	
Cat. No.	Fitting size			Thread Size	Cat. No.	Thread Size	Cat. No.	Thread Size
	(in.)	MM	MW					
CF-140	1/4	10	7	PG-7	-	-	-	-
CF-516	5/16	12	10	PG-9	-	-	CFM-516	12 mm
CF-10	3/8	16	12	1/2NPT	CFP-10	PG-11	CFM-10	16 mm
CF-11	1/2	20	17	1/2NPT	CFP-11	PG-13.5	CFM-11	20 mm
CF-12	3/4	25	23	3/4NPT	CFP-12	PG-21	CFM-12	25 mm
CF-13	1	32	29	1NPT	CFP-13	PG-29	CFM-13	32 mm
CF-14	1-1/4	40	36	1-1/4NPT	CFP-14	PG-36	CFM-14	40 mm
CF-15	1-1/2	50	48	1-1/2NPT	CFP-15	PG-48	CFM-15	50 mm

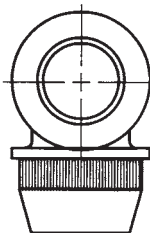
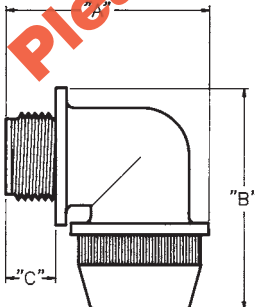


Cat. No.	Approx. Dimensions		
	A	B	C
CF-140	31/32	1-13/32	15/32
CF-516	1-3/32	1-3/8	15/32
CF-10	1-1/16	1-1/2	1/2
CF-11	1-5/16	1-1/2	1/2
CF-12	1-5/8	1-17/32	9/16
CF-13	2	1-21/32	21/32
CF-14	2-5/16	1-13/16	23/32
CF-15	2-13/16	1-13/16	23/32

90° Angle



NPT Threaded Fittings						PG Thread		Metric Thread		
Cat. No.	Fitting size			Thread Size	Unit Pack	Standard Carton	Cat. No.	Thread Size	Cat. No.	Thread Size
	(in.)	MM	MW							
CF-140A	1/4	10	7	PG-7	1	-	-	-	-	-
CF-516A	5/16	12	10	PG-9	1	-	-	-	CFM-516A	12 mm
CF-20	3/8	16	12	1/2NPT	25	100	CFP-20	PG-11	CFM-20	16 mm
CF-21	1/2	20	17	1/2NPT	25	50	CFP-21	PG-13.5	CFM-21	20 mm
CF-22TB	3/4	25	23	3/4NPT	10	30	CFP-22	PG-21	CFM-22	25 mm
CF-23	1	32	29	1NPT	10	20	CFP-23	PG-29	CFM-23	32 mm
CF-24	1-1/4	40	36	1-1/4NPT	5	10	CFP-24	PG-36	CFM-24	40 mm
CF-25	1-1/2	50	48	1-1/2NPT	2	10	CFP-25	PG-48	CFM-25	50 mm



Cat. No.	Approx. Dimensions		
	A	B	C
CF-140A	1-3/8	19/32	15/32
CF-516A	1-15/32	1-11/16	15/32
CF-20	1-5/8	1-27/32	1/2
CF-21	1-3/4	2	1/2
CF-22	2-3/16	2-5/16	9/16
CF-23	2-1/2	2-9/16	21/32
CF-24	2-3/4	3	23/32
CF-25	3-3/8	3-1/2	23/32

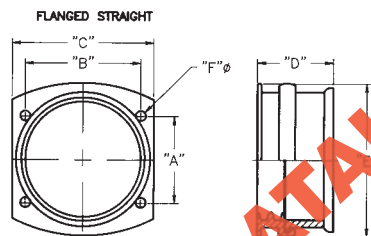
T&B Conduit Fittings

Liquatite® Flexible Conduit—Nylon

Corrlok® System—Flange, Jumbo Straight



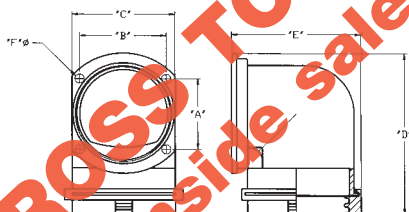
Cat. No.	Fitting size			Unit Pack	Nominal Dimensions				Screw Required	
	(in.)	MM	MW		A	B	C	D	E	F
CFF-17	2-1/2	70	70	1	2.362	3.149	3-7/8	2-1/16	4-3/16	17/64
CF-350	3-1/2	95	95	1	2.913	4.251	4-31/32	2-1/16	5-7/32	17/64



Corrlok® System—Flange, Jumbo 90° Angle

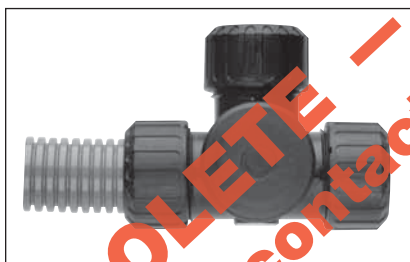


Cat. No.	Fitting size			Unit Pack	Nominal Dimensions				Screw Required	
	(in.)	MM	MW		A	B	C	D	E	F
CFF-27	2-1/2	70	70	1	2.362	3.149	3-25/32	5-1/32	4-11/32	17/64
CFF-350A	3-1/2	95	95	1	2.913	4.251	4-31/32	6-17/32	5-11/16	17/64

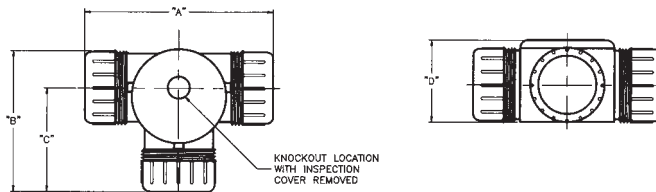


Both the Flanged Straight and Flanged 90° Angle fittings on this page do not have threaded ends but are intended to be mounted as a bulkhead device. Part numbers include clamps. Seals are provided for liquidtight connections.

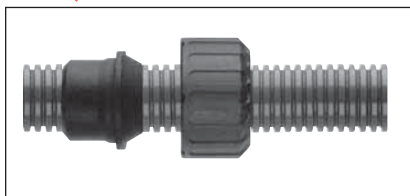
Corrlok® System—Type CTC, T Fitting



Cat. No.	Fitting size			Nominal Dimensions				Weight Oz.
	(in.)	MM	MW	A	B	C	D	
CTC-140	1/4 X 3	10	7	2-11/16	1-31/32	1-17/32	1-1/16	0.8
CTC-516	5/16 X 3	12	10	2-11/16	1-31/32	1-17/32	1-1/16	0.8
CTC-10	3/8 X 3	16	12	2-3/4	2	1-1/2	1-7/32	0.9
CTC-11	1/2 X 3	20	17	3-5/32	2-9/32	1-11/16	1-3/8	1.3
CTC-12	3/4 X 3	25	23	3-3/4	2-13/16	2-1/32	1-11/16	2.3
CTC-13	1 X 3	32	29	4-5/16	3-5/16	2-13/32	2	2.3



Corrlok® System—Type TR, T Reducer



Cat. no.	Trade Size (in.)	reduce to	U.S. Trade	MM (NW)	reduce to	MM (NW)
TR-516-140	5/16	-	1/4	12 (10)	-	10 (7)
TR-10-516	3/8	-	5/16	16 (12)	-	12 (10)
TR-11-516	1/2	-	5/16	20 (17)	-	12 (10)
TR-11-10	1/2	-	3/8	20 (17)	-	16 (12)
TR-12-516	3/4	-	5/16	25 (23)	-	12 (10)
TR-12-10	3/4	-	3/8	25 (23)	-	16 (12)
TR-12-11	3/4	-	1/2	25 (23)	-	20 (17)
TR-13-11	1	-	1/2	32 (29)	-	20 (17)

OBSOLETE — CROSS TO PMA CATALOG
Please contact your inside sales for assistance

T&B Conduit Fittings

Liquatite® Flexible Conduit—Nylon

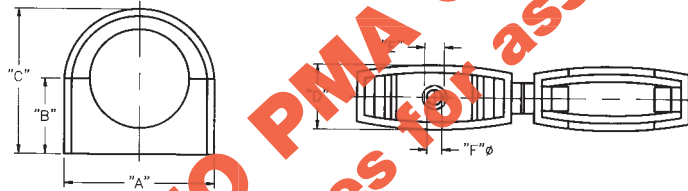
The Corlok® System—Accessories

The Corlok components provide Designers and Electricians with many options for configuring and installing this raceway system. These accessories allow a simplified, quick method of assembly and are perfectly suited for pre-wiring of harnesses.

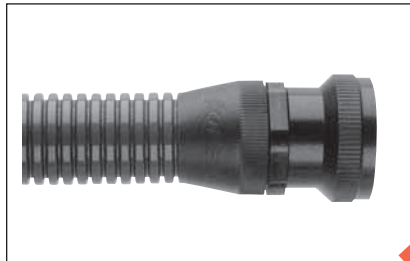
Type MB—Mounting Bracket



Cat. No.	Corlok Conduit Size			Nominal Dimensions						Weight Oz.
	(in.)	MM	MW	A	B	C	D	E	F	
MB-140	1/4	10	7	7/8	1/2	15/16	15/32	5/16	5/32	0.1
MB-516	5/16	12	10	7/8	1/2	15/16	15/32	5/16	5/32	0.1
MB-10TB	3/8	16	12	1-1/16	19/32	1-1/16	17/32	11/32	3/16	0.1
MB-11	1/2	20	17	1-11/32	3/4	1-3/8	11/16	13/32	1/4	0.2
MB-12	3/4	25	23	1-23/32	15/16	1-23/32	13/16	3/32	1/4	0.3
MB-13	1	32	29	2-3/32	1-1/16	2-1/32	15/16	13/32	1/4	0.4
MB-14	1-1/4	40	36	2-17/32	1-9/32	2-15/32	1-1/16	13/32	1/4	0.7
MB-15	1-1/2	50	48	3-3/16	1-1/2	3-1/32	1-9/32	13/32	1/4	1.2



Type FTA—Female Threaded Adapter



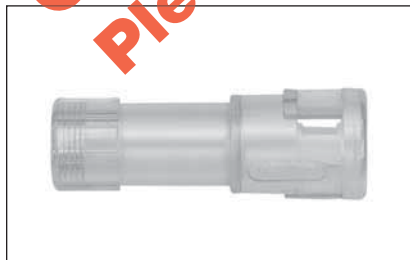
Cat. No.	Corlok Conduit Size			Internal Thread UNEF
	in.	MM	MW	
FTA-U12516				1/2-28
FTA-U15016	5/16	12	10	5/8-24
FTA-U18516				3/4-20
FTA-U1810	3/8	16	12	3/4-20
FTA-U2310				15/16-20
FTA-U2311				15/16-20
FTA-U2411	1/2	20	17	1-20
FTA-U2911				1 1/16-18
FTA-U3411				1-3/8-18
FTA-U2312				15/16-20
FTA-U2912	3/4	25	23	1-3/16-18
FTA-U3412				1-3/8-18
FTA-U3512				1-7/16-18

Type FTA adapters have internal, female UNEF threads which are sized to match those of commonly used circular pin fittings. This component provides a secure means to attach these quick disconnect multi-pin fittings to the Corlok System.

This assembly eliminates the need for back shells and heat shrinkable boots while providing excellent protection to circuit conductors.

Other thread sizes and types available. Consult your Regional Sales Office for further details.

Type PSA—Proximity Sensor Adapters



Cat. No.	Corlok Conduit Size			Internal Thread UNEF
	in.	MM	MW	
PSA-M8140				M8 X 1
PSA-M12140				M12 X 1
PSA-M18140	1/4	10	7	M12 X 1
PSA-M130140				M18 X 1
				M30 X 1.5
PSA-M12516				M12 X 1
PSA-M18516	3/4	16	12	M18 X 1

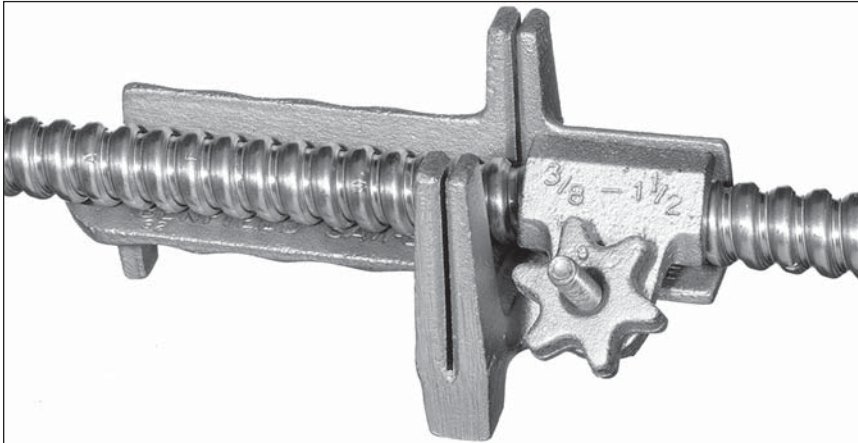
Type PSA adapters have internal ISO Metric threads which match those found on most barrel type proximity sensors. Like the FTA series, this adapter provides a means to mate proximity sensors to the Corlok System protect the sensor's cable.

The adapter is molded in transparent nylon which permits monitoring of the LED indicator built into many sensor designs.

T&B Conduit Fittings

Liquatite® Flexible Conduit—Engineering Information

Conduit Cutting



Benfield Vise

The Benfield cutting vise is recommended for accurate, straight cuts in the field. This light weight cast iron vise can either be bench mounted or carried in the tool box. The clamping mechanism securely holds the flexible conduit while the slots guide a hack saw to ensure a clean square cut. Suitable for conduit trade sizes of 3/8" to 1-1/2". Works well on other tubings and materials too.

Order #BLC-1

Weight 2.4 lb

Cutting Flexible Conduits

Proper cutting methods for flexible conduits are important to ensure a sealed connection when assembled with intended fittings. Furthermore, in the case of flexible conduits containing steel, a clean, square cut is necessary for establishing a good connection for continuity of the ground path.

Hand Cutting in the Field

When using a hand held hack saw, care should be taken to make a square clean cut. This can be easily achieved through the use of the cutting vise shown on this page. For best results, a blade having 24 to 32 teeth per inch with no-set is recommended.

Repetitive Production Cutting

It has been our experience that in order to achieve the best results, a band saw having a blade with 24 to 32 teeth per inch at a speed of 300 to 350 feet per minute should be used. A no-set blade will produce the cleanest cut. Conduit should be held and supported in a safe manner. Abrasive cut-off wheels and chop saws are not recommended.

Conduit Wire Fill Charts

Per Canadian Electrical Code

Flexible Metal Conduit

Trade Size (in.)	Internal Diameter		Total Area 100%		2 Wires 31%		Over 2 Wires 40%		1 Wire 53%	
	(in.)	(mm)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)
5/16	0.312	(7.92)	0.076	(1.9)	0.024	(0.6)	0.031	(0.8)	0.041	(1.0)
3/8	0.375	(9.53)	0.110	(2.8)	0.034	(0.9)	0.044	(1.1)	0.059	(1.5)
7/16	0.437	(11.10)	0.150	(3.8)	0.046	(1.2)	0.060	(1.5)	0.079	(2.0)
1/2	0.625	(15.88)	0.307	(7.8)	0.095	(2.4)	0.123	(3.1)	0.163	(4.1)
3/4	0.812	(20.62)	0.518	(13.2)	0.161	(4.1)	0.207	(5.3)	0.274	(7.0)
1	1.000	(25.40)	0.785	(19.9)	0.243	(6.2)	0.314	(8.0)	0.416	(10.6)
1-1/4	1.250	(31.75)	1.227	(31.2)	0.380	(9.7)	0.491	(12.5)	0.650	(16.5)
1-1/2	1.500	(38.10)	1.767	(44.9)	0.548	(13.9)	0.707	(18.0)	0.937	(23.8)
2	2.000	(50.80)	3.142	(79.8)	0.974	(24.7)	1.257	(31.9)	1.665	(42.3)
2-1/2	2.500	(63.50)	4.909	(124.7)	1.522	(38.7)	1.964	(49.9)	2.602	(66.1)
3	3.000	(76.20)	7.069	(179.5)	2.191	(55.7)	2.827	(71.8)	3.746	(95.2)
3-1/2	3.500	(88.9)	9.621	(244.4)	2.983	(75.8)	3.848	(97.8)	5.099	(129.5)
4	4.000	(101.60)	12.566	(319.2)	3.896	(98.9)	5.027	(127.7)	6.660	(169.2)

Liquidtight Flexible Metal Conduit

Trade Size (in.)	Internal Diameter		Total Area 100%		2 Wires 31%		Over 2 Wires 40%		1 Wire 53%	
	(in.)	(mm)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)
3/8	0.484	(12.29)	0.184	(4.7)	0.057	(1.4)	0.074	(1.9)	0.098	(2.5)
1/2	0.622	(15.80)	0.304	(7.7)	0.094	(2.4)	0.122	(3.1)	0.161	(4.1)
3/4	0.820	(20.83)	0.528	(13.4)	0.164	(4.2)	0.211	(5.4)	0.280	(7.1)
1	1.041	(26.44)	0.851	(21.6)	0.264	(6.7)	0.340	(8.6)	0.451	(11.5)
1-1/4	1.380	(35.05)	1.496	(38.0)	0.464	(11.8)	0.598	(15.2)	0.793	(20.1)
1-1/2	1.575	(40.01)	1.948	(49.5)	0.604	(15.3)	0.779	(19.8)	1.033	(26.2)
2	2.020	(51.31)	3.205	(81.4)	0.993	(25.2)	1.282	(32.6)	1.699	(43.1)
2-1/2	2.480	(62.99)	4.831	(122.7)	1.497	(38.0)	1.932	(49.1)	2.560	(65.0)
3	3.070	(77.98)	7.402	(188.0)	2.295	(58.3)	2.961	(75.2)	3.923	(99.6)
3-1/2	3.500	(88.90)	9.621	(244.4)	2.983	(75.8)	3.848	(97.8)	5.099	(129.5)
4	4.000	(101.60)	12.566	(319.2)	3.896	(98.9)	5.027	(127.7)	6.660	(169.2)

T&B Conduit Fittings

Liquatite® Flexible Conduit—Engineering Information

Conduit Wire Fill Charts (continued)

Per Canadian Electrical Code

Liquidtight Non-Metallic Conduit—Type A

Total Trade Size (in.)	Internal Diameter		Total Area 100%		2 Wires 31%		Over 2 Wires 40%		1 Wire 53%	
	(in.)	(mm)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)
3/8	0.485	(12.32)	0.185	(4.7)	0.057	(1.5)	0.074	(1.9)	0.098	(2.5)
1/2	0.620	(15.75)	0.302	(7.7)	0.094	(2.4)	0.121	(3.1)	0.160	(4.1)
3/4	0.855	(20.70)	0.522	(13.3)	0.162	(4.1)	0.209	(5.3)	0.276	(7.0)
1	1.030	(26.16)	0.833	(21.2)	0.258	(6.6)	0.333	(8.5)	0.442	(11.2)
1-1/4	1.370	(34.80)	1.474	(37.4)	0.457	(11.6)	0.590	(15.0)	0.781	(19.8)
1-1/2	1.585	(40.26)	1.973	(50.1)	0.612	(15.5)	0.789	(20.0)	1.046	(26.6)
2	2.045	(51.94)	3.285	(83.4)	1.018	(25.9)	1.314	(33.4)	1.741	(44.2)

Liquidtight Non-Metallic Conduit—Type B

Total Trade Size (in.)	Internal Diameter		Total Area 100%		2 Wires 31%		Over 2 Wires 40%		1 Wire 53%	
	(in.)	(mm)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)	(in. ²)	(mm ²)
3/8	0.485	(12.32)	0.185	(4.7)	0.057	(1.5)	0.074	(1.9)	0.098	(2.5)
1/2	0.620	(15.75)	0.302	(7.7)	0.094	(2.4)	0.121	(3.1)	0.160	(4.1)
3/4	0.855	(20.70)	0.522	(13.3)	0.162	(4.1)	0.209	(5.3)	0.276	(7.0)
1	1.030	(26.16)	0.833	(21.2)	0.258	(6.6)	0.333	(8.5)	0.442	(11.2)
1-1/4	1.370	(34.80)	1.474	(37.4)	0.457	(11.6)	0.590	(15.0)	0.781	(19.8)
1-1/2	1.585	(40.26)	1.973	(50.1)	0.612	(15.5)	0.789	(20.0)	1.046	(26.6)
2	2.045	(51.94)	3.285	(83.4)	1.018	(25.9)	1.314	(33.4)	1.741	(44.2)

Knockout Hole Sizes NPT Threaded Fittings

Fitting (in.)	Knockout Thread (in.)	Diameter (in. (mm))
3/8	1/2 NPT (12.7)	7/8 (22.2)
1/2	1/2 NPT (12.7)	7/8 (22.2)
3/4	3/4 NPT (19.1)	1 ³ / ₃₂ (27.8)
1	1 NPT (25.4)	1 ²⁹ / ₆₄ (34.5)
1-1/4	1-1/4 NPT (31.8)	1-23/32 (34.5)
1-1/2	1-1/2 NPT (38.1)	2 (50.8)
2	2 NPT (50.1)	2-1/2 (63.5)

Common Conversion

Length	
English Measure	Metric Measure
1 Foot	0.305 Meters
1 Meter	3.281 Feet
1 Inch	25.4 Millimeters
1 Millimeter	0.039 Inches
1 Inch	2.54 Centimeters
1 Centimeter	0.394 Inches

Weight	
English Measure	Metric Measure
1 Pound	454 Grams
1 Pound	0.454 Kilograms
1 Kilogram	2.205 Pounds
1 Gram	0.035 Ounces
1 Ounce	28.349 Grams

Temperature

C° = Degrees Centigrade
F° = Degrees Fahrenheit
$C^{\circ} = \frac{(F^{\circ} - 32)}{9} \times 5$
$F^{\circ} = \frac{(C^{\circ} \times 9)}{5} + 32$

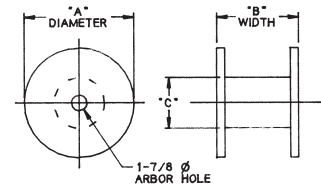
T&B Conduit Fittings

Liquatite® Flexible Conduit

Standard Dimensions and Packaging—Types

LT - LOR - EF - LA - CSA - ALT - AT
 ATLA - ATX - CEA - ZHLA - LAS
 EMS - EMSP - NMC - NMT - ACEA

Reel Sizes



Trade Size (in.)	Type	Inner dia.		Outer Dia.	
		Min.	Max.	Min.	Max.
1/4	-	0.245	0.265	0.450	0.470
5/16	-	0.385	0.405	0.570	0.590
3/8	10	0.484	0.504	0.690	0.710
1/2	11	0.622	0.642	0.820	0.840
3/4	12	1.820	0.840	1.030	1.050
1	13	1.041	1.066	1.290	1.315
1-1/4	14	1.380	1.410	1.630	1.660
1-1/2	15	1.575	1.600	1.865	1.900
2	16	2.020	2.045	2.340	2.375
2-1/2	17	2.480	2.505	2.840	2.875
3	18	3.070	3.100	3.460	3.500
1-1/2	350	3.500	3.540	3.960	4.000
4	19	4.000	4.040	4.460	4.500
5	500	4.975	5.035	5.505	5.565
6	600	6.015	6.075	6.565	6.625

Approx. Reel Dimensions in. (mm)

"A"	"B"	"C"
24 (610)	19-1/2 (495)	12 (305)
31 (760)	19-1/2 (495)	12 (305)
31 (760) Special	19-1/2 (495)	15 (381)
42 (1029)	20 (508)	24 (610)
58 (1421)	29-1/2 (749)	28 (711)

Trade Size (in.)	58"		42"		LT	31"		31" Special			24"	
	LT-LA-EF	LT-LA-EF	LA	LA		EF	LT	LA	EF	LT-LA-EF	LT-LA-EF	
3/8	6,000	-	1,000	1,000	1,000	-	-	-	-	-	500	-
1/2	4,500	-	1,000	1,000	1,000	-	-	-	-	-	500	-
3/4	2,500	1,000	500	500	500	-	-	-	-	-	-	-
1	1,500	-	400	400	400	-	-	-	-	-	-	-
1-1/4	1,000	-	200	-	200	-	200	-	-	-	-	-
1-1/2	750	-	-	-	-	150	150	150	-	-	-	-
2	500	-	-	-	-	100	100	100	-	-	-	-
2-1/2	275	-	-	-	-	-	-	-	-	-	-	-
3	175	-	-	-	-	-	-	-	-	-	-	-
3-1/2	175	-	-	-	-	-	-	-	-	-	-	-
4	100	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-

Cartons



Cat. No.	Trade Size (in.)	Standard Carton All types	Standard Carton Type LNM-P
038	3/8	30	75
050	1/2	30	60
075	3/4	30	50
100	1	30	30
125	1-1/4	15	30
150	1-1/2	15	15
200	2	15	15
250	2-1/2	8	-
300	3	8	-
350	3-1/2	8	-
400	4	8	-
500	5	8	-
600	6	8	-

All standard lengths packaged in specially-designed, functional cartons to eliminate knots and tangles. These compact cartons save storage and warehouse space, making handling easier. Each carton label is clearly marked and colour coded with conduit size, type, colour, and footage as well as the NEMA and NAED bar code standards.

Special Cut Lengths Available

Thomas & Betts can supply "cut-to-length" orders. Consult your Regional Sales Office for details.

T&B Conduit Fittings

Conduit Dimensional Data

Rigid Metal Conduit (Extract from CSA C22.2 No. 45.1)

Metric Trade Designator (As per CEC 2009)	Imperial Trade Size	Threads per in.	Nominal Internal Dia. (mm)	Nominal Internal Dia. (in.)	External Diameter (mm)	External Diameter (in.)	Wall Thickness (mm)	Wall Thickness (in.)
12	3/8	18	12.52	0.493	17.1	0.675	2.31	0.091
16	1/2	14	16.05	0.632	21.3	0.840	2.64	0.104
21	3/4	14	21.23	0.836	26.7	1.050	2.72	0.107
27	1	11-1/2	27.60	1.063	33.4	1.315	3.20	0.126
35	1-1/4	11-1/2	35.41	1.394	42.2	1.660	3.38	0.133
41	1-1/2	11-1/2	41.25	1.624	48.3	1.900	3.51	0.138
53	2	11-1/2	52.91	2.083	60.3	2.375	3.71	0.146
63	2-1/2	8	63.22	2.489	73.0	2.875	4.90	0.193
78	3	8	78.49	3.090	88.9	3.500	5.21	0.205
91	3-1/2	8	90.69	3.570	101.6	4.000	5.46	0.215
103	4	8	102.87	4.050	114.3	4.500	5.72	0.225
129	5	8	128.85	5.073	141.3	5.563	6.22	0.245
155	6	8	154.76	6.093	168.3	6.625	6.76	0.266

Knockout (sliphole) Sizes for Electrical Conduits and Fittings

Metric Trade Designator Diameter (As per CEC 2009)	Imperial Trade Size	Knockout Diameter					
		Minimum		Nominal		Maximum	
		(mm)	(in.)	(mm)	(in.)	(mm)	(in.)
16	1/2	21.84	0.860	22.33	0.875	23.01	0.906
21	3/4	27.79	1.094	28.17	1.109	28.96	1.140
27	1	34.52	1.359	34.93	1.375	35.71	1.406
35	1-1/4	43.66	1.719	44.04	1.734	44.83	1.765

Electrical Metallic Tubing (Extract from CSA C22.2 No. 83.1)

Metric Trade Designator (As per CEC 2009)	Imperial Trade Size	Nominal Internal Dia. (mm)	Nominal Internal Dia. (in.)	Outside Diameter (mm)	Outside Diameter (in.)	Wall Thickness (mm)	Wall Thickness (in.)
16	1/2	15.80	0.622	21.79	0.705	1.07	0.042
21	3/4	20.93	0.824	23.4	0.921	1.24	0.049
27	1	26.64	1.049	29.5	1.161	1.45	0.057
35	1-1/4	35.05	1.380	38.4	1.512	1.65	0.065
41	1-1/2	40.89	1.610	44.2	1.740	1.65	0.065
53	2	52.50	2.067	55.8	2.197	1.65	0.065
63	2-1/2	69.37	2.731	73.0	2.874	1.83	0.072
78	3	85.24	3.355	88.9	3.500	1.83	0.072
91	3-1/2	97.38	3.834	101.6	4.000	2.11	0.083
103	4	110.08	4.334	114.3	4.500	2.11	0.083

T&B Conduit Fittings

Conduit Dimensional Data

Flexible Metal Conduit (Extract from CSA C22.2 No. 56)

Imperial Trade Size	Minimum Internal Diameter (mm)	Minimum Internal Diameter (in.)	Maximum External Diameter (mm)	Maximum External Diameter (in.)
5/16	7.92	0.312	12.95	0.510
3/8	9.52	0.375	15.49	0.610
7/16	11.10	0.437	17.15	0.675
1/2	15.88	0.625	23.37	0.920
3/4	20.62	0.812	28.07	1.105
1	25.40	1.000	35.05	1.380
1-1/4	31.75	1.250	41.40	1.630
1-1/2	38.10	1.500	49.53	1.950
2	50.80	2.000	62.23	2.450
2-1/2	63.50	2.500	77.72	3.060
3	76.20	3.000	90.42	3.560
3-1/2	88.90	3.500	103.12	4.060
4	101.60	4.000	115.82	4.560

Liquidtight Flexible Conduit (Extract from CSA C22.2 No. 56)

Imperial Trade Size	Minimum Internal Dia. (mm)	Minimum Internal Dia. (in.)	Minimum Overall Diameter (mm)	Minimum Overall Diameter (in.)	Maximum Overall Diameter (mm)	Maximum Overall Diameter (in.)
3/8	12.29	0.484	17.5	0.690	18.0	0.710
1/2	15.80	0.622	20.8	0.820	21.3	0.840
3/4	20.83	0.820	25.2	1.030	26.7	1.050
1	26.44	1.041	32.8	1.290	33.4	1.315
1-1/4	35.05	1.380	41.4	1.630	42.2	1.660
1-1/2	40.01	1.575	47.4	1.865	48.3	1.900
2	51.31	2.020	59.4	2.340	60.3	2.375
2-1/2	62.99	2.480	72.1	2.840	73.0	2.875
3	77.98	3.070	87.9	3.460	88.9	3.500
3-1/2	88.90	3.500	100.6	3.960	101.6	4.000
4	101.60	4.000	113.3	4.460	114.3	4.500

Flexible Liquidtight Nonmetallic Conduit (Extract from CSA C22.2 No. 227.2)

Imperial Trade Size	Minimum Internal Dia. (mm)	Minimum Internal Dia. (in.)	Maximum Internal Dia. (mm)	Maximum Internal Dia. (in.)	Minimum Dia. (mm)	Minimum Dia. (in.)	Maximum Dia. (mm)	Maximum Dia. (in.)
3/8	12.32	0.485	13.83	0.505	19.18	0.755	19.69	0.775
1/2	15.75	0.620	16.26	0.640	23.11	0.910	23.62	0.930
3/4	20.70	0.815	21.21	0.835	29.21	1.150	29.72	1.170
1	26.16	1.030	27.05	1.065	35.94	1.415	36.58	1.440
1-1/4	34.80	1.370	35.43	1.395	45.72	1.800	46.36	1.825
1-1/2	40.26	1.585	41.15	1.620	51.94	2.045	52.83	2.080
2	51.94	2.045	52.83	2.080	66.17	2.605	67.06	2.640

T&B Conduit Fittings

Conduit—Chemical Resistance Guide

CHEMICAL	%	PVC	PU	NYLONS		CHEMICAL	%	PVC	PU	NYLONS	
				6	12					6	12
A											
ASTM Fuel A			C	A							
ASTM Fuel B			D	B							
ASTM Fuel C				B							
ASTM Oil No. 1			B	B							
ASTM Oil No. 2				B							
ASTM Oil No. 3		C	B	A	A						
Acetaldehyde	40%		D	B	A						
Acetamide	50%			A	A						
Acetate Solvents		D									
Acetic Acid (Glacial)		C	D	D	C						
Acetic Acid	40%		D	D	C						
Acetic Acid	10%	B		C	B						
Acetic Anhydride			D	D	B						
Acetone		D	D	A	A						
Acetyl Bromide			C								
Acetyl Chloride			C								
Acetylene			B	A	A						
Acrylonitrile	A										
Adipic Acid			A								
Alcohols				A	A						
Alcohols (Aliphatic)		C									
Alkalies		A									
Allyl Alcohol				B	B						
Aluminium Salts				A	A						
Aluminum Chloride		A	B								
Aluminum Sulfate (Alums)		A	B								
Aluminum Sulfide			B								
Alums				B	A						
Ammonia			B	A	A						
Ammonia	10%			A	A						
Ammonia (Anhydrous Liquids)		D									
Ammonia (Aqueous)		A									
Ammoniated Latex		A									
Ammonium Acetate			B								
Ammonium Carbonate			B								
Ammonium Chloride	10%			A	A						
Ammonium Chloride		A									
Ammonium Hydroxide		A	A								
Ammonium Nitrate			B								
Ammonium Persulfate			B								
Ammonium Salts				B	A						
Ammonium Sulfate			B								
Ammonium Sulfide			B								
Ammonium Thiocyanide			B								
Amyl Acetate		D	D	A	B						
Amyl Alcohol			C	A	A						
Amyl Chloride			C								
Aniline			D	B	B						
Aniline Hydrochloride			D								
Aniline Oils		D									
Animal Fats & Oils		A	B								
Aniseed Oil				A	A						
Anthracene		D									
Antifreeze Compounds				A	A						
Antimony Salts			B								
Aqua Regia				D	D						
Aromatic Fuels		D									
Aromatic Hydrocarbons		D									
Arsenic Salts			A								
Asphalt		D									
Attar of Roses				A	A						
B											
Banana Oil			D								
Barium Carbonate								B			
Barium Chloride			A								
Barium Hydroxide			A	B							
Barium Salts									A	A	
Barium Sulfide			A								
Battery Acid	30%									C	B
Benzaldehyde	0.3 %									A	A
Benzaldehyde				D	C	B					
Benzene			D	D	A	A					
Benzine (Petroleum Ether)			C	B							
Benzoic Acid				C	B	B					
Benzole						A	A				
Benzyl						C	C				
Bitumen						A	A				
Borax		A				A	A				
Bordeaux Mixture		A									
Boric Acid		A	B	B	A						
Brake Fluid						A	A				
Brake Fluid A				B							
Brine		A									
Bromine				B	C	C					
Bunker Oil				B							
Butane				B	A	A					
Butanol					A	B					
Butyl Acetate			D	D	A	A					
Butyl Alcohol			B	B							
Butylene Glycol					B	A					
Butyric Acid					B	A					
C											
Calcium Carbonate						B					
Calcium Chloride	10%					A	A				
Calcium Chloride	20%	A	B	D	C						
Calcium Hydroxide		A	B								
Calcium Hypochlorite		A									
Calcium Nitrate			B								
Calcium Sulfate			B								
Camphor						A	A				
Carbolic Acid (Phenol)		B									
Carbon Dioxide		A	A								
Carbon Disulfide		D	B	A	A						
Carbon Tetrachloride		D	D	A	B						
Carbonic Acid		A									
Casein		A									
Castor Oil		A	B								
Catechol	6%					C	B				
Caustic Soda	40%	A				A	A				
Cello - Solv		D									
Chlorinated Hydrocarbons		D									
Chlorinated Lime						D	D				
Chlorine			B	D	D						
Chlorine (water solution)	< 5%	C		C	B						
Chlorine Gas (dry & wet)	< 5%	D		C	B						
Chloroacetic Acid			C	D	D						
Chlorobenzene		D		A	C						
Chlorobromomethane				B	B						
Chloroform			D	C	C						
Chrome Baths				D	C						
Chromic Acid	1%		D	C	B						
Chromic Acid	10%	B	D	D	C						

A- Good to excellent
B- Fair to Good

C- Fair to Limited
D- Unsatisfactory

PVC- Polyvinyl chloride
PU- Polyurethane

T&B Conduit Fittings

Conduit—Chemical Resistance Guide

CHEMICAL	%	PVC	PU	NYLONS		CHEMICAL	%	PVC	PU	NYLONS	
				6	12					6	12
J											
P-4 Oil			C								
Jet Fuels (JP-3,4, and 5)		C									
K											
Kerosene		C	B	A	A						
Ketones		D									
L											
Lacquer Thinners		D									
Lactic Acid	50%			C	B						
Lactic Acid	5%		B	B	A						
Lactic Acid	90%			D	B						
Lanolin				A	A						
Lead Acetate			B								
Lead Salts				A	A						
Linseed Oil		A	B	A	A						
Lox			B								
Lubricating Oils, Greases, Soaps	A	B	A	A							
M											
MIL-D-5606 Oil			C								
MIL-L-7808 Oil		B									
Magnesium Chloride		A									
Magnesium Hydroxide	10%	A		A	A						
Magnesium Salts	10%		B	A	A						
Magnesium Sulfate		A									
Malathion 50 in Aromatics		D									
Malic Acid		A	C								
Mercury			A	A	A						
Mercury Salts				A	A						
Methanol			B	A	B						
Methyl Acetate		D									
Methyl Alcohol		C									
Methyl Bromide		D									
Methylene Chloride		D	D	B	C						
Methyl Ethyl Ketone		D	D	A	A						
Mineral Oil		A	A	A	A						
Monochlorobenzene		D									
Motor Fuels				A	A						
Motor Oil 20W			B	A	A						
Muriatic Acid (See Hydrochloric Acid)											
N											
Naphtha		C	B								
Naphthalene		D		A	A						
Natural Gas			B								
Nickel Salts			C	A	A						
Nitric Acid			D	D	D						
Nitric Acid	10%	A									
Nitric Acid	35%	A									
Nitric Acid	70%	D									
Nitrobenzene			D	B	B						
Nitrogen			A								
Nitromethane				A	A						
O											
Octane				A	A						
Oil of Turpentine				A	A						
Oleic Acid		A	B	A	A						
Oleum		D		D	D						
Oxalic Acid	10%	A	A	B	A						
Oxygen			A	A	A						
Oxygen - Liquid		D									
Ozone	<1 PPM		A	A	A						
P											
Paint			D	B							
Paint Thinners			D								
Palmitic Acid			A								
Paper Chemicals			A								
Paraffin Oil									A	A	
Pentachlorophenol in Oil			B								
Pentane			C								
Perchloric Acid								D			
Perchloroethylene		D		D	A	A					
Petroleum				B	A	A					
Petroleum Ether		C			A	A					
Petroleum Spirits		D									
Phenol		B	D	C	C						
Phenyl Ethyl Alcohol				B	C						
Phosphoric Acid	10%			B	C	B					
Phosphoric Acid	50%				C	C					
Phosphoric Acid	85%	A									
Photographic Developer		A									
Phthalates		D									
Pitch		B									
Plasticizers (Phthalates, Phosphates)						A	A				
Polyester Resin with Styrene						A	A				
Potash						A	A				
Potassium Bromide	10%					A	A				
Potassium Chlorate	7%					C	B				
Potassium Chlorate	5%					B	A				
Potassium Cyanide						B					
Potassium Hydroxide		A									
Potassium Hydroxide	50%					A	A				
Potassium Iodide	10%					A	A				
Potassium Nitrate	10%					A	A				
Potassium Permanganate	1%					D	D				
Potassium Salts						B					
Potassium Sulfate	10%					A	A				
Propane		A	B	A	A						
Propanol				A	B						
Propyl Alcohol		B	C								
Propylene Glycol			B								
Pydraul		D									
Pydraul Oil			D								
Pyridine						A	A				
R											
Resorcinol						D	D				
Ritchfield "A" Weed Killer		C									
S											
SEA No. 10 Oil						B					
Salicylic Acid						A	A				
Salt						A	A				
Seawater		A	B	A	A						
Silicic Acid			B								
Silicone Oil		A		A	A						
Silver Nitrate		C	B								
Silver Salts						A	A				
Skydrol Oil - Type B		D	D	A	A						
Soap			B								
Soap Solution	10%					A	A				
Sodium Acetate			B								
Sodium Bicarbonate			B	A	A						
Sodium Bisulfite	10%		B	A	A						
Sodium Borate			B								
Sodium Bromide	10%					B	A				

A- Good to excellent
B- Fair to Good

C- Fair to Limited
D- Unsatisfactory

PVC- Polyvinyl chloride
PU- Polyurethane

T&B Conduit Fittings

Conduit—Chemical Resistance Guide

CHEMICAL	%	PVC	PU	NYLONS		CHEMICAL	%	PVC	PU	NYLONS	
				6	12					6	12
Sodium Carbonate			B			U					
Sodium Carbonate	10%			A	A	Urea	20%		B	A	A
Sodium Chlorate			B			V					
Sodium Chloride			B	A	A	Varnish			B		
Sodium Chlorite	5%			C	C	Varsol		D			
Sodium Cyanide		A	B			Vaseline				A	A
Sodium Dichromate			B			Vegetable Oils and Juices		A	B	A	A
Sodium Ferrocyanide			B			Vinegar		A		B	A
Sodium Fluoride			B			Vinyl Chloride			D		
Sodium Hydrosulfite			B			W					
Sodium Hydroxide			B			Water		A		A	A
Sodium Hydroxide	40%			A	A	Water 23°C			B		
Sodium Hydroxide	50%	A				Water 70°C			B		
Sodium Hypochlorite	5%			C	B	Wax				A	A
Sodium Nitrate			B			Wood Preservatives			D		
Sodium Nitrate	10%			A	A	X					
Sodium Nitrite	5%			C	B	Xylene		D	C	A	A
Sodium Perborate	5%			B	A	Xylols			D		
Sodium Phosphate	10%			A	A	Z					
Sodium Silicate			B			Zinc Chloride	10%	A	B	B	A
Sodium Sulfate	10%			A	A	Zinc Sulfate		A	B		
Sodium Sulfide	10%		B	A	A						
Sodium Sulfite	10%			A	A						
Sodium Thiosulfite				A	A						
Solvent Naphtha				A	A						
Solvesso		D									
Stoddard Solvent		D									
Styrene		D	B								
Sulfur				A	A						
Sulfur Dioxide	<5%		B	C	B						
Sulfur Dioxide (Liquid)		D									
Sulfuric Acid	2%			D	B						
Sulfuric Acid	10%			D	B						
Sulfuric Acid	20%		D								
Sulfuric Acid	25%			D	C						
Sulfuric Acid	50%	A									
Sulfuric Acid	98%	D									
Sulfurous Acid		B									
T											
Tall Oil		D									
Tallow				A	A						
Tannic Acid		A	C								
Tar				A	A						
Tartaric Acid	10%		B	A	A						
Tea				A	A						
Tetra Ethyl Lead		D									
Tetra Hydro Furan		D		A	A						
Tetraline				A	A						
Thionyl Chloride				D	D						
Tin Salts			B								
Titanium Salts			B								
Toluene		D	D	A	A						
Toluol		D									
Transformer Oil			C	A	A						
Transmission Oil			B								
Trichloroethane		D									
Trichloroethylene		D		B	B						
Trichloroacetic Acid			D								
Trichloroethylene			D								
Tricresyl Phosphate			D								
Tricresyl Phosphate (Skydrol)		D									
Triethanol Amine		C	B								
Trisodium Phosphate			B								
Tung Oil		C									
Turpentine		C	B	A	A						

CHEMICAL Resistance Chart - Type ATX Thermoplastic Rubber jacket

	Test Method		% Tensile	% Elongation	% Volume
			Strength	Increase	Increase
ASTM #2 OIL	UL - 1581	7 days/60°C	90	98	N/A
		4 days/100°C	66	70	N/A
		18 hrs./120°C	45	40	N/A
Brake Fluid	ASTM D - 471	72 hrs./100°C	80	90	-7
Ethylene Glycol	ASTM D - 471	72 hrs./100°C	95	90	2
Methanol	ASTM D - 471	72 hrs./100°C	95	90	0
Silicone Oil	ASTM D - 471	72 hrs./100°C	100	80	-14
5% Salt Water	ASTM D - 471	72 hrs./100°C	80	100	1
Vegetable Oil	ASTM D - 471	18 hrs./120°C	60	70	N/A
Animal Oil	ASTM D - 471	18 hrs./120°C	70	75	N/A
10W-40 Motor Oil	ASTM D - 471	72 hrs./100°C	50	55	25
Gasoline	ASTM D - 471	72 hrs./100°C	40	35	17
Transmission Oil	ASTM D - 471	72 hrs./100°C	50	50	32
Freon2	ASTM D - 471	72 hrs./50°C	93	84	N/A

This information is provided as a guide line only. No guarantee is implied. Results are based on controlled laboratory tests and not on installed end-product applications. Electri-Flex recommends that samples be exposed to and observed in actual service conditions for extreme or unusual situations.

- A- Good to excellent
- B- Fair to Good
- C- Fair to Limited
- D- Unsatisfactory

PVC- Polyvinyl chloride
PU- Polyurethane

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
ABR038-15	143	ACEA200	138	AT400-8	135
ABR038-30	143	ACEA200-15	138	AT500-8	135
ABR038-300	143	ACEA200-30	138	AT600-8	135
ABR038-8	143	ACEA250	138	ATLA038-150	134
ABR050-15	143	ACEA250-8	138	ATLA038-30	134
ABR050-30	143	ACEA300	138	ATLA038-300	134
ABR050-300	143	ACEA300-8	138	ATLA050-150	134
ABR050-8	143	ACEA400	138	ATLA050-30	134
ABR075-15	143	ACEA400-8	138	ATLA050-300	134
ABR075-150	143	ACEA500	138	ATLA075-150	134
ABR075-30	143	ACEA600	138	ATLA075-30	134
ABR075-8	143	ALT038-150	136	ATLA075-300	134
ABR100-120	143	ALT038-30	136	ATLA100-120	134
ABR100-15	143	ALT038-300	136	ATLA100-30	134
ABR125-120	143	ALT050-150	136	ATLA125-15	134
ABR125-15	143	ALT050-30	136	ATLA125-60	134
ABR150-8	143	ALT050-300	136	ATLA150-15	134
ABR150-90	143	ALT075-150	136	ATLA150-45	134
ABR200-45	143	ALT075-30	136	ATLA200-15	134
ABR200-8	143	ALT075-300	136	ATLA200-30	134
ABR250-8	143	ALT100-120	136	ATLA250-8	134
ABR300-8	143	ALT100-30	136	ATLA300-8	134
ABR350-8	143	ALT125-15	136	ATLA350-8	134
ABR400-8	143	ALT125-60	136	ATLA400-8	134
ABRH038	143	ALT150-15	136	ATX038-150	135
ABRH050	143	ALT150-45	136	ATX038-30	135
ABRH075	143	ALT200-15	136	ATX038-300	135
ABRH100	143	ALT200-30	136	ATX050-150	135
ABRH125	143	ALT250-8	136	ATX050-30	135
ABRH150	143	ALT350-8	136	ATX050-300	135
ABRH200	143	ALT400-8	136	ATX075-150	135
ABRH250	143	ALT500-8	136	ATX075-30	135
ABRH300	143	ALT600-8	136	ATX075-300	135
ABRH400	143	AT038-150	135	ATX100-120	135
ABRH716	143	AT038-30	135	ATX100-30	135
ACEA038	138	AT038-300	135	ATX125-15	135
ACEA038-60	138	AT050-150	135	ATX125-60	135
ACEA050	138	AT050-30	135	ATX150-15	135
ACEA050-30	138	AT050-300	135	ATX150-45	135
ACEA050-300	138	AT075-150	135	ATX200-15	135
ACEA075	138	AT075-30	135	ATX200-30	135
ACEA075-150	138	AT075-300	135	ATX250-8	135
ACEA075-30	138	AT100-120	135	ATX300-8	135
ACEA075-45	138	AT100-30	135	ATX400-8	135
ACEA100	138	AT125-15	135	BG050-14-20	14
ACEA100-120	138	AT125-60	135	BG050-14-4	14
ACEA100-30	138	AT150-15	135	BG075-14-20	14
ACEA125	138	AT150-45	135	BG075-14-4	14
ACEA125-15	138	AT200-15	135	BG100-14-20	14
ACEA125-75	138	AT200-30	135	BG100-14-4	14
ACEA150	138	AT250-8	135	BG125-14-20	14
ACEA150-15	138	AT300-8	135	BG150-14-20	14
ACEA150-45	138	AT350-8	135	BG200-14-20	14

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
BG250-14-20	14	BR125-120	142	CC-PG11-G	81
BG250-6-40	14	BR125-15	142	CC-PG135-G	81
BG300-14-20	14	BR150	142	CC-PG16-G	81
BG300-6-40	14	BR150-8	142	CC-PG21-G	81
BG350-14-20	14	BR150-90	142	CC-PG29-G	81
BG350-6-40	14	BR200	142	CC-PG36-G	81
BG400-14-20	14	BR200-45	142	CC-PG7-G	81
BG400-6-40	14	BR200-8	142	CC-PG9-G	81
BG500-14-20	14	BR250	142	CCG10-30	149
BG500-6-40	14	BR250-8	142	CCG11-30	149
BG600-14-20	14	BR300	142	CCG12-30	149
BG600-6-40	14	BR300-8	142	CCG13-15	149
BGA050-14-20	14	BR350	142	CCG14-15	149
BGA050-14-4	14	BR350-8	142	CCG15-15	149
BGA075-14-20	14	BR400	142	CC11-38	82
BGA075-14-4	14	BR400-8	142	CC11-38P	82
BGA100-14-20	14	CBLA038-150	132	CC135-50	82
BGA100-14-4	14	CBLA038-30	132	CC16-50	82
BGA125-14-20	14	CBLA038-300	132	CC21-75	82
BGA150-14-20	14	CBLA050-150	132	CC29-100	82
BGA200-14-20	14	CBLA050-30	132	CC36-125	82
BGA250-14-20	14	CBLA050-300	132	CC42-150	82
BGA250-6-40	14	CBLA075-150	132	CEA038-30	137
BGA300-14-20	14	CBLA075-30	132	CEA038-300	137
BGA300-6-40	14	CBLA075-300	132	CEA050-30	137
BGA350-14-20	14	CBLA100-120	132	CEA050-300	137
BGA350-6-40	14	CBLA100-30	132	CEA075-150	137
BGA400-14-20	14	CBLA125-15	132	CEA075-30	137
BGA400-6-40	14	CBLA125-60	132	CEA100-120	137
BGA500-14-20	14	CBLA150-15	132	CEA100-30	137
BGA500-6-40	14	CBLA150-45	132	CEA125-15	137
BGA600-14-20	14	CBLA200-15	132	CEA125-60	137
BGAT600-6-40	14	CBLA200-30	132	CEA150-15	137
BR038	142	CBLA250-8	132	CEA150-45	137
BR038-15	142	CBLA250-80	132	CEA200-15	137
BR038-30	142	CBLA300-50	132	CEA200-30	137
BR038-300	142	CBLA300-8	132	CEA250-8	137
BR038-75	142	CBLA350-50	132	CEA300-8	137
BR038-8	142	CBLA350-8	132	CEA400-8	137
BR050	142	CBLA400-30	132	CEA500-8	137
BR050-15	142	CBLA400-8	132	CEA600-8	137
BR050-30	142	CC-ISO-16-G	81	CF-10	150
BR050-300	142	CC-ISO-20-G	81	CF-11	150
BR050-8	142	CC-ISO-25-G	81	CF-12	150
BR075	142	CC-ISO-32-G	81	CF-13	150
BR075-15	142	CC-NPT1-B	81	CF-14	150
BR075-150	142	CC-NPT1-G	81	CF-140	150
BR075-30	142	CC-NPT12-B	81	CF-140A	150
BR075-8	142	CC-NPT12-G	81	CF-15	150
BR100	142	CC-NPT34-B	81	CF-20	150
BR100-120	142	CC-NPT34-G	81	CF-21	150
BR100-15	142	CC-NPT38-B	81	CF-22	150
BR125	142	CC-NPT38-G	81	CF-22TB	150

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
CF-23	150	CLFR11-30	149	CTC-140	151
CF-24	150	CLFR12-30	149	CTC-516	151
CF-25	150	CLFR13-15	149	EF038-150	130
CF-350	151	CLFR14-15	149	EF038-30	130
CF-516	150	CLFR15-15	149	EF038-300	130
CF-516A	150			EF050-150	130
CFF-17	151	CLFR516-30	149	EF050-30	130
CFF-27	151	CLL10-30	148	EF050-300	130
CFF-350A	151	CLL11-30	148	EF075-150	130
CFM-10	150	CLL12-30	148	EF075-30	130
CFM-11	150	CLL13-15	148	EF075-300	130
CFM-12	150	CLL14-15	148	EF100-120	130
CFM-13	150	CLL15-15	148	EF100-30	130
CFM-14	150	CLL17-10	148	EF125-15	130
CFM-15	150	CLL350-10	148	EF125-75	130
CFM-20	150	CLR10-30	149	EF150-15	130
CFM-21	150	CLR11-30	149	EF150-45	130
CFM-22	150	CLR12-30	149	EF200-15	130
CFM-23	150	CLR13-15	149	EF200-30	130
CFM-24	150	CLR14-15	149	EMS038-150	141
CFM-25	150	CLR15-15	149	EMS038-30	141
CFM-516	150	CLR17-10	149	EMS050-150	141
CFM-516A	150	CLR350-10	149	EMS050-30	141
CFP-10	150	CSA038-150	133	EMS075-150	141
CFP-11	150	CSA038-30	133	EMS075-30	141
CFP-12	150	CSA038-300	133	EMS100-120	141
CFP-13	150	CSA050-150	133	EMS100-30	141
CFP-14	150	CSA050-30	133	EMS125-15	141
CFP-15	150	CSA050-300	133	EMS125-60	141
CFP-20	150	CSA075-150	133	EMS150-15	141
CFP-21	150	CSA075-30	133	EMS150-45	141
CFP-22	150	CSA075-300	133	EMS200-15	141
CFP-23	150	CSA100-120	133	EMS200-30	141
CFP-24	150	CSA100-30	133		
CFP-25	150	CSA125-15	133	EMS250-8	141
CI-1703PL	81	CSA125-60	133	EMS300-8	141
CG11-38	82	CSA150-15	133	EMS400-8	141
CG11-38P	82	CSA150-45	133	EMSP038-150	141
CG135-50	82	CSA200-15	133	EMSP038-30	141
CG16-50	82	CSA200-30	133	EMSP050-150	141
CG21-75	82	CSA250-8	133	EMSP050-30	141
CG29-100	82	CSA300-8	133	EMSP075-150	141
CG36-125	82	CSA400-8	133	EMSP075-30	141
CG42-150	82	CXP722	82	EMSP100-120	141
CL10-30	148	CXP723	82	EMSP100-30	141
CL11-30	148	CXP724	82	FTA-U12516	152
CL12-30	148	CXP725	82	FTA-U15516	152
CL13-15	148	CXP726	82	FTA-U1810	152
CL14-15	148	CXP727	82	FTA-U18516	152
CL140-30	148	CTC-10	151	FTA-U2310	152
CL15-15	148	CTC-11	151	FTA-U2311	152
CL516-30	148	CTC-12	151	FTA-U2312	152
CLFR10-30	149	CTC-13	151	FTA-U2411	152

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
FTA-U2911	152	H250GR-C	29	LA150-15	131
FTA-U2912	152	H300-TB	28	LA150-45	131
FTA-U3411	152	H300BHD	30	LA200-15	131
FTA-U3412	152	H300CAP	31	LA200-30	131
FTA-U3512	152	H300GR-C	29	LA250-8	131
GR1W	97	H350-TB	28	LA250-80	131
GR2W	97	H350BHD	30	LA300-50	131
GR3W	97	H350CAP	31	LA300-8	131
GR4W	97	H350GR-C	29	LA350-50	131
GR5W	97	H400-TB	28	LA350-8	131
H050-TB	28	H400BHD	30	LA400-30	131
H050BHD	30	H400CAP	31	LA400-8	131
H050CAP	31	H400GR-C	29	LAS038-150	140
H050GR-C	29	H500-TB	28	LAS038-30	140
H050TBF	30	H500BHD	30	LAS050-150	140
H050TBH	30	H500CAP	31	LAS050-30	140
H075-TB	28	H500GR-C	29	LAS075-150	140
H075BHD	30	H600-TB	28	LAS075-30	140
H075CAP	31	H600BHD	30	LAS100-120	140
H075GR-C	29	H600CAP	31	LAS100-30	140
H075TBF	30	H600GR-C	29	LN501	81
H075TBH	30	HLT050DATA	78	LN502	81
H100-TB	28	HLT050	78	LN503	81
H100BHD	30	HLT075	78	LN-PG11-G	81
H100CAP	31	HLT100	78	LN-PG16-G	81
H100GR-C	29	HLT125	78	LN-PG135-G	81
H100TBF	30	HLT150	78	LN-PG21-G	81
H100TBH	30	HLT200	78	LN-PG29-G	81
H125-TB	28	L050GR-C	29	LN-PG36-G	81
H125BHD	30	L075GR-C	29	LN-PG7-G	81
H125CAP	31	L100GR-C	29	LN-PG9-G	81
H125GR-C	29	L125GR-C	29	LN-ISO16-G	81
H125TBF	30	L150GR-C	29	LN-ISO20-G	81
H125TBH	30	L200GR-C	29	LN-ISO25-G	81
H150-075ORGR-TB	31	L250GR-C	29	LN-ISO32-G	81
H150-100ORGR-TB	31	L300GR-C	29	LNMP038-150	146
H150-125ORGR-TB	31	L350GR-C	29	LNMP038-300	146
H150-TB	28	L400GR-C	29	LNMP038-75	146
H150BHD	30	L500GR-C	29	LNMP050-150	146
H150CAP	31	L600GR-C	29	LNMP050-300	146
H150GR-C	29	LA038-150	131	LNMP050-60	146
H150TBF	30	LA038-30	131	LNMP075-150	146
H150TBH	30	LA038-300	131	LNMP075-50	146
H200-TB	28	LA050-150	131	LNMP100-120	146
H200BHD	30	LA050-30	131	LNMP100-30	146
H200CAP	31	LA050-300	131	LNMP125-30	146
H200GR-C	29	LA075-150	131	LNMP125-60	146
H200TBF	30	LA075-30	131	LNMP150-15	146
H200TBH	30	LA075-300	131	LNMP150-45	146
H250-200ORGR-TB	31	LA100-120	131	LNMP200-15	146
H250-TB	28	LA100-30	131	LNMP200-30	146
H250BHD	30	LA125-15	131		
H250CAP	31	LA125-60	131	LOR038-150	130

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
LOR038-30	130	LT38M	109	LTA03814	105
LOR038-300	130	LT38M-ISO20	110	LTA05014	105
LOR050-150	130	LT38P	108	LTA05016	105
LOR050-300	130	LT38P-ISO20	110	LTA05018	105
LOR050-50	130	LT400-30	129	LTA07516	105
LOR075-150	130	LT400-8	129	LTA07518	105
LOR075-30	130	LT4100M	109	LTA07520	105
LOR075-300	130	LT4100P	108	LTA10020	105
LOR100-120	130	LT4125M	109	LTA10024	105
LOR100-30	130	LT4125P	108	MB-10TB	152
LOR125-15	130	LT4150M	109	MB-11	152
LOR125-60	130	LT4150P	108	MB-12	152
LOR150-15	130	LT4200M	109	MB-13	152
LOR200-15	130	LT4200P	108	MB-14	152
LOR250-8	130	LT438M	109	MB-140	152
LOR300-8	130	LT438M-ISO20	110	MB-15	152
LOR350-8	130	LT438P	108	MB-516	152
LOR400-8	130	LT450M	109	MSA05014	106
LOR500-8	130	LT450M-ISO20	110	MSA05016	106
LOR600-8	130	LT450P	108	MSA05018	106
LT025-75	129	LT475M	109	MSA07516	106
LT032-75	129	LT475M-ISO25	110	MSA07518	106
LT038-150	129	LT475P	108	MSA07520	106
LT038-30	129	LT500-8	129	MSA10020	106
LT038-300	129	LT50M	109	MSA10024	106
LT050-150	129	LT50M-ISO20	110	MSA10032	106
LT050-30	129	LT50P	108	MSA10036	106
LT050-300	129	LT50P-ISO20	110	NMC038TB	147
LT075-150	129	LT600-8	129	NMC050-1000TB	147
LT075-30	129	LT75M	109	NMC050TB	147
LT075-300	129	LT75M-ISO25	110	NMC075-500TB	147
LT100-120	129	LT75P	108	NMC075TB	147
LT100-30	129	LT75P-ISO25	110	NMC100TB	147
LT100M	109	LT9100M	109	NMC125TB	147
LT100P	108	LT9100P	108	NMC150TB	147
LT125-15	129	LT9125M	109	NMC200TB	147
LT125-75	129	LT9125P	108	NMT038TB	147
LT125M	109	LT9150M	109	NMT050TB	147
LT125P	108	LT9150P	108	NMT075TB	147
LT150-15	129	LT9200M	109	NMT100TB	147
LT150-45	129	LT9200P	108	NMT125TB	147
LT150M	109	LT938M	109	NMT150TB	147
LT150P	108	LT938M-ISO20	110	NMT200TB	147
LT200-15	129	LT938P	108	PG11-38	82
LT200-30	129	LT938P-ISO20	110	PG16-50	82
LT200M	109	LT950M	109	PG21-75	82
LT200P	108	LT950M-ISO20	110	PG29-100	82
LT250-8	129	LT950P	108	PG29-125	82
LT250-80	129	LT950P-ISO20	110	PG36-125	82
LT300-50	129	LT975M	109	PG36-150	82
LT300-8	129	LT975M-ISO25	110	PSA-M12140	152
LT350-50	129	LT975P	108	PSA-M12516	152
LT350-8	129	LTA03810	105	PSA-M130140	152

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
PSA-M18140	152	TR-516-140	151	WMG-PC16	80
PSA-M18516	152	TRIB-100	18	WMG-PC17	80
PSA-M30516	152	TRIB-125	18	WMG-PC18	80
PSA-M8140	152	TRIB-150	18	WMG-PC19	80
SC4-KIT	78	TRIB-200	18	WMG-PC2	80
SC65	78	TRIB-250	18	WMG-PC20	80
SL038-75	144	TRIB-300	18	WMG-PC21	80
SL050-45	144	TRIB-350	18	WMG-PC22	80
SL050M-45	144	TRIB-400	18	WMG-PC3	80
SL075-30	144	TRIB-50	18	WMG-PC4	80
SL100-15	144	TRIB-75	18	WMG-PC5	80
SL100M-15	144	UG100-15	145	WMG-PC6	80
SL140-75	144	UG120-15	145	WMG-PC7	80
SL316-75	144	UG125-15	145	WMG-PC8	80
SL340-45	144	UG150-15	145	WMG-PC9	80
SL380-75	144	UG200-15	145	ZHLA038-150	139
SL516-75	144	UG250-15	145	ZHLA038-30	139
SL716-75	144	UG300-15	145	ZHLA038-300	139
SL916-45	144	UG340-15	145	ZHLA050-150	139
TCF050-27AL	77	UG380-15	145	ZHLA050-30	139
TCF050-40AL	77	USL120	144	ZHLA050-300	139
TCF050-54AL	77	USL120-75	144	ZHLA075-150	139
TCF050-67AL	77	USL380	144	ZHLA075-30	139
TCF050-78AL	77	USL380-75	144	ZHLA075-300	139
TCF075-40AL	77	USL516	144	ZHLA100-120	139
TCF075-54AL	77	USL516-75	144	ZHLA100-30	139
TCF075-67AL	77	USL716	144	ZHLA125-15	139
TCF075-78AL	77	USL716-75	144	ZHLA125-60	139
TCF075-88AL	77	USL916	144	ZHLA150-15	139
TCF100-100AL	77	USL916-75	144	ZHLA150-45	139
TCF100-109AL	77	VJC038-30	145	ZHLA200-15	139
TCF100-78AL	77	VJC050-30	145	ZHLA200-30	139
TCF100-88AL	77	VJC050M-30	145	ZHLA250-8	139
TCF125-109AL	77	VJC075-30	145	ZHLA300-8	139
TCF125-128AI	77	VJC100-30	145	ZHLA350-8	139
TCF125-147AL	77	VJC100M-30	145	ZHLA400-8	139
TCF150-115AL	77	WMG-LT1	93	100BP	126
TCF150-140AL	77	WMG-LT10	93	100TB	126
TCF150-165AL	77	WMG-LT2	93	106	11
TCF200-153AL	77	WMG-LT3	93	107	11
TCF200-186AL	77	WMG-LT4	93	108	11
TCF200-219AL	77	WMG-LT5	93	109	11
TCF250-252AL	77	WMG-LT6	93	110-TB	11
TCF300-278AL	77	WMG-LT7	93	111	11
TCF300-304AL	77	WMG-LT8	93	112-TB	11
TCF300-330AL	77	WMG-LT9	93	113-TB	11
TR-10-516	151	WMG-PC1	80	114	11
TR-11-10	151	WMG-PC10	80	115-TB	11
TR-11-516	151	WMG-PC11	80	1210C	42
TR-12-10	151	WMG-PC12	80	1211C	42
TR-12-11	151	WMG-PC13	80	1212C	42
TR-12-516	151	WMG-PC14	80	1213C	42
TR-13-11	151	WMG-PC15	80	1214TB	42

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
1215TB	42	1279AL	41	1353CR	44
1216TB	42	1279CR	42	1354	44, 59
122	16	127AL	16	1354AL	44
1222	16	128	16	1354CR	44
1223	16	1280	41	139	11
1224	16	1280AL	41	140	11
1225	16	1280CR	42	141	11
1226	16	1281	41	141AL	11
1227	16	1281AL	41	141SL	11
1228	16	1281CR	42	141SST	11
1229	16	1282	41, 59	142-TB	11
122AL	16	1282AL	41	142AL	11
123	16	1283	41, 59	142SL	11
1230	16	1283AL	41	142SST	11
1231	16	1284	41, 59	143	11
1232	16	1284AL	41	143AL	11
123AL	16	1285	41, 59	143SL	11
124	16	1285AL	41	143SST	11
1244	39	1286	41	144	11
1245	39	1286AL	41	1440	39
1246	39	1287	41	1441	39
1247	39	1287AL	41	1442	39
124AL	16	1288	41	1443	39
125-TB	16	1288AL	41	144AL	11
1250-TB	39	128AL	16	144SL	11
1251	39	129	16	144SST	11
1252	39	129AL	16	145	11
1253	39	12GR-TB	97	1451	20
1254	39	130-TB	16	1452	20
1255	39	130AL	16	1453	20
1256	39	131-TB	16	1454	20
1257	39	131AL	16	1455	20
1258	39	132-TB	16	1456	20
125AL	16	133-TB	16	145AL	11
126	16	133AL	16	145SL	11
1261	39	134-TB	16	145SST	11
1262	39	1341	87	146-TB	11
1263	39	1344	87	1460	21
126AL	16	1345	87	1461	21
127	16	1346	87	1462	21
1275	41	1347	87	1463	21
1275AL	41	134AL	16	1464	21
1275CR	42	1350	44, 59	1465	21
1276	41	1350AL	44	146AL	11
1276AL	41	1350CR	44	146SL	11
1276CR	42	1351	44, 59	146SST	11
1277	41	1351AL	44	147	11
1277AL	41	1351CR	44	147AL	11
1277CR	42	1352	44, 59	147SST	11
1278	41	1352AL	44	1470-TB	21
1278AL	41	1352CR	44	1471	21
1278CR	42	1353	44, 59	1472	21
1279	41	1353AL	44	1473	21

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
1474	21	2215	68	231	17
1475	21	2216	68	232	17
1476	21	2217	68	233	17
1477	21	2218	68	234	17
1478	21	2219	68	2432	86
1479	21	222-TB	17	2433	86
148	11	2220-TB	68	2434	86
148AL	11	2221	68	2438	86
148SST	11	2222	68	2439	86
149	11	2223	68	2442	86
149AL	11	223-TB	17	2443	86
149SST	11	2232	86	2446	86
150	11	2233	86	2447	86
150AL	11	2234	86	2448	86
150SST	11	2237	86	2449	86
151	11	2238	86	2450	86
151AL	11	2239	86	2454	86
151SST	11	224	17	249	117
152	11	225-TB	17	2516	66
152AL	11	2250	67	2517	66
152SST	11	2251	67	2518	66
153	11	2252	67	2519	66
153AL	11	2253	67	252	117
153SST	11	2254	67	2520	66
1942	23	2255	67	2520-2	69
1943	23	2256	67	2521	66
1944	23	2257	67	2522	66
1945	23	2258	67	2523	66
1946	23	226	17	2524	66
1947	23	2267	67	2525	66
1948	23	2268	67	253-TB	117
1949	23	2269	67	2530-2	69
1950	23	227	17	2530	66
1951	23	2270	67	2531	66
1953	23	2271	67	2531-2	69
1954	23	2272	67	2531-3	69
1GR-TB	97	2273	67	2532	66
2111	86	2274	67	2534	66
2116	86	2275	67	2535	66
2200	68	2276	67	2536	66
2201	68	2277	67	254-C	117
2202	68	2278	67	2540-3	69
2203	68	2279	67	2540-4	69
2204	68	228-TB	17	2541-2	69
2205	68	2280	67	2541-3	69
2206-TB	68	2281	67	2541	66
2207-TB	68	2282	67	2542	66
2208-TB	68	2283	67	2542-2	69
2209	68	2284	67	2544	66
2210	68	2285	67	2545	66
2211	68	2286	67	2546	66
2213	68	229-TB	17	2547	66
2214	68	230-TB	17	2548	66

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
2549	66	2683	79	2930	70
255	117	2684	79	2930AL	72
2555-2	69	2685	63, 79	2930NM	63, 75
2556	66	2686	63, 79	2930S	70
2557	66	2687	63, 79	2930SST	73
2558	66	2688	63, 79	2931	70
2559	66	269	117	2931AL	72
256	117	2690	79	2931NM	63, 75
2562	66	2691	79	2931S	70
2563	66	2692	79	2931SST	73
2564	66	2693	79	2932	70
2565	66	2694	79	2932AL	72
257	117	2696	63, 79	2932NM	63, 75
2573	66	2699	63, 79	2932S	70
2574	66	270	117	2932SST	73
2575	66	2702	63, 79	2940	70
2576	66	2703	63, 79	2940AL	72
2577	66	2704	63, 79	2940NM	63, 75
258	117	2705	63	2940S	70
2584	66	2705TB	79	2940SST	73
2585	66	2706	63, 79	2941	70
2586	66	2707	63, 79	2941AL	72
2587	66	2708	63, 79	2941NM	63, 75
259	117	2709	63, 79	2941S	70
2592	66	2710	63, 79	2941SST	73
2593	66	272	117	2942	70
2594	66	273-TB	117	2942AL	72
2595	66	274	117	2942NM	63, 75
2596	66	275	117	2942S	70
2631	69	276	117	2942SST	73
2632	69	277	117	300-TBC	115
2633	69	279	117	302-C	115
2634	69	2827	87	304	115
2637	69	2828	87	306	115
2638	69	2829	87	308	115
2639	69	291-C	118	310	115
2640	69	2918SST	73	3110-C	115
2641	69	2919SST	73	3112	115
265	117	2920	70	3115	115
266-C	117	2920AL	72	3117	115
267	117	2920NM	63, 75	3118	115
2671	63, 79	2920S	70	3119	115
2672	79	2920SST	73	312	115
2673	79	2921	70	3120	115
2674	79	2921AL	72	3121	115
2675	79	2921NM	63, 75	3122	115
2676	79	2921S	70	3123	115
2677	79	2921SST	73	3124	115
2678	63, 79	2922	70	3125	115
268-C	117	2922AL	72	3130-C	116
2680	63, 79	2922NM	63, 75	3132	116
2681	79	2922S	70	3135	116
2682	79	2922SST	73	3137	116

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
3138	116	3329	99	3713	40
3139	116	3331	99	3714	40
314	115	3341	99	3715-TB	40
3140	116	3342	99	3716	40
3141	116	3343	99	3717	40
3142	116	3344-TB	99	3718	40
3143	116	3345	99	372	26
3144-TB	116	3346	99	372AL	26
316	115	3347	99	3720-TB	102
3201	124	3348-TB	99	3721-TB	102
3202	124, 125	3349	99	3722-TB	102
321-C	116	3350	124, 125	3723	102
3210	19	3352	99	3724-TB	102
3211	19	3361	99	3725	102
3212	19	3362	99	3726	102
3213	19	3363	99	373	26
3214	19	3364	99	373AL	26
3215	19	3365	99	3730-TB	103
323	116	3366	99	3731-TB	103
325	116	3367	99	3732	103
326-TB	116	3368	99	3733-TB	103
327	116	3369	99	3734-TB	103
328	116	3371	99	3735-TB	103
329	116	34GR-TB	97	3736	103
330-TB	116	3650	12	374	26
3300	124, 125	3651	12	374AL	26
3301-C	118	3652	12	3740	103
3302	123	3653	12	3741	103
3302M-C	123	3654	12	3742	103
3303-C	123	3655	12	3743-TB	103
3303M	123	3656	12	3744-TB	103
3304	123	3657	12	3745	103
3304M	123	3658	12	3746-TB	103
3305	123	3659	12	375	26
3305M	123	3661	12	375AL	26
3306	123	3662	12	376	26
3306M	123	370	26	377	26
3307	123	370AL	26	378	26
3307M	123	3700	40	379-TB	26
3308	123	3701	40	381-TB	26
3309	123	3702	40	382-TB	26
331	116	3703	40	3861	15
3310	123	3704	40	3862	15
3311	123	3705-TB	40	3863	15
3312-C	118	3706	40	3864	15
3321	99	3707	40	3865	15
3322	99	3708	40	3866	15
3323	99	3709	40	3870-TB	15
3324	99	371	26	3871-TB	15
3325	99	371AL	26	3872	15
3326	99	3710	40	3873	15
3327	99	3711	40	3874	15
3328-TB	99	3712	40	3875	15

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
3876	15	4230	58	493	27
3877	15	4231	58	4932	71
3878	15	4232	58	4933	71
3879	15	4233	58	494	27
3880	15	4234	58	4960	71
3881	15	4235	58	4960AL	72
3882	15	424	19	4960NM	63, 75
3883	15	4240	58	4961	71
3884	15	4241-TB	58	4961AL	72
3886	15	4242	58	4961NM	63, 75
3887	15	4243-TB	58	4962	71
3889	15	4244	58	4962AL	72
38GR-TB	97	4245	58	4970	71
390	119	425	19	4970AL	72
391	119	4250	37	4970NM	63, 75
392	119	4251	37	4971	71
393	119	4252	37	4971AL	72
394	119	4253	37	4971NM	63, 75
3993	15	4254	37	4972	71
3994	15	4255	37	4972AL	72
3995	15	426-TB	19	4972NM	63, 75
3996	15	427-TB	19	4980AL	72
3998	15	428-TB	19	4981AL	72
3999	15	429	19	4982AL	72
4-250TC	78	4290	37	503-TB	118
4-300TC	78	4291	37	504	118
4-350TC	78	4292	37	505-TB	118
4-400TC	78	4293	37	5120	57
401	26	4294	37	5121-TB	57
402	26	4295	37	5123	57
403-TB	26	430-TB	20	5220	57
404-TB	26	431	19	5221	57
405-TB	26	433	19	5223	57
407	26	434	19	5229	92
408	26	440-C	45	5231	92
409	26	441	45	5231AL	92
41TB	100	442	45	5231ALGR	96
410-TB	26	449C	119	5231GR	96
4159C	59	460TB	37	5232	92
4160C	59	461TB	37	5232AL	92
4161C	59	462	37	5232ALGR	96
4162	59	463	37	5232GR	96
4163	59	485	27	5233	92
4164	59	486	27	5233AL	92
4176	59	487	27	5233ALGR	96
4177	59	488	27	5233GR	96
4178	59	489	27	5234	92
4179	59	490	27	5234AL	92
4180	59	491	27	5234ALGR	96
4181	59	492	27	5234GR	96
42TB	100	4920	71	5235	92
422	19	4921	71	5235AL	92
423	19	4922	71	5235GR	96

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
5236	92	5255GR	96	5323	57
5236AL	92	5256	93	5330	92
5236GR	96	5256AL	93	5331	92
5237	92	5256GR	96	5331-HT	91
5237AL	92	5257	93	5331GR	96
5237GR	96	5257AL	93	5331SST	74
5238	92	5257GR	96	5332	92
5238AL	92	5258	93	5332-HT	91
5238GR	96	5258AL	93	5332GR	96
5239	92	5258GR	96	5332SST	74
5239AL	92	5259	93	5333	92
5239GR	96	5259GR	96	5333-HT	91
5240	92	5260	93	5333GR	96
5240AL	92	5260GR	96	5333SST	74
5240GR	96	5261	74-104	5334	92
5241	92	5262	74-104	5334-HT	91
5241GR	96	5263	74-104	5334GR	96
5242	92	5264	74-104	5334SST	74
5242GR	96	5265	74-104	5335	92
5243	92	5266	74-104	5335-HT	91
5243GR	96	5267	74-104	5335GR	96
5244	92	5268	104	5335SST	74
5244GR	96	5269	104	5336	92
5245	92	5270	104	5336-HT	91
5245GR	96	5271	94	5336GR	96
5246	92	5271GR	97	5336SST	74
5246GR	96	5272	94	5337	92
5247	92	5272GR	97	5337-HT	91
5247GR	96	5273	94	5337GR	96
5248	92	5273GR	97	5337SST	74
5248GR	96	5274	94	5338	92
5249	92	5274GR	97	5338-HT	91
5249GR	96	5275	94	5338GR	96
5250	92	5275GR	97	5339	92
5250GR	96	5276	94	5339-HT	91
5251	93	5276GR	97	5339GR	96
5251AL	93	5285	92	5340	92
5251ALGR	96	5285GR	96	5340-HT	91
5251GR	96	5299	104	5340GR	96
5252	93	530-TB	58	5341	92
5252AL	93	5302	12	5341GR	96
5252ALGR	96	5303	12	5341-HT	91
5252GR	96	5304	12	5341SST	74
5253	93	5305	12	5342	92
5253AL	93	5306	12	5342GR	96
5253ALGR	96	5307	12	5342-HT	91
5253GR	96	5308	12	5342SST	74
5254	93	5309	12	5343	92
5254AL	93	531	58	5343GR	96
5254ALGR	96	5311	12	5343-HT	91
5254GR	96	532	58	5343SST	74
5255	93	5320	57	5344	92
5255AL	93	5321	57	5344GR	96

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
5344-HT	91	5360GR	96	609	40
5344SST	74	5361	94	609AL	40
5345	92	5362	94	610	40
5345GR	96	5363	94	610AL	40
5345-HT	91	5364	94	611-TB	40
5345SST	74	5365	94	611AL	40
5346	92	5366	94	612	40
5346GR	96	5367	94	612AL	40
5346-HT	91	5368	94	613	40
5346SST	74	5369	94	613AL	40
5347	92	5370	94	614-TB	40
5347GR	96	5385	92	614AL	40
5347-HT	91	5385GR	96	615-TB	40
5347SST	74	5386	92	615AL	40
5348	92	5386GR	96	6209	126
5348GR	96	5420	57	6210	126
5349	92	5421	57	6211	126
5349GR	96	5423	57	6212	126
5350	92	5520	57	6214	126
5350GR	96	5521-TB	57	6216	126
5351	93	5523	57	6218	126
5351GR	96	5620	57	6302	102
5351-HT	91	5621	57	6303	102
5351SST	74	5623	57	6304	102
5352	93	5710	103	6305	102
5352GR	96	5711	103	6322	102
5352-HT	91	5712	103	6323	102
5352SST	74	5713	103	6324	102
5353	93	5714	103	6325	102
5353GR	96	5715	103	65C	119
5353-HT	91	5716	103	674	38
5353SST	74	5717	103	675	38
5354	93	5718	103	675AL	38
5354GR	96	586	16	676	38
5354-HT	91	587	16	676AL	38
5354SST	74	600-TB	40	677	38
5355	93	600AL-TB	40	677AL	38
5355GR	96	601-TB	40	678	38
5355-HT	91	601AL-TB	40	678AL	38
5355SST	74	602-TB	40	679	38
5356	93	602AL-TB	40	679AL	38
5356GR	96	603-TB	40	680-TB	38
5356-HT	91	603AL-TB	40	680AL	38
5356SST	74	604-TB	40	681	38
5357	93	604AL-TB	40	681AL	38
5357GR	96	605-TB	40	682	38
5357-HT	91	605AL	40	682AL	38
5357SST	74	606-TB	40	683	38
5358	93	606AL	40	683AL	38
5358GR	96	607	40	684	38
5359	93	607AL	40	684AL	38
5359GR	96	608	40	685	38
5360	93	608AL	40	685AL	38

Alphanumeric Index

Catalogue Number	Page Number	Catalogue Number	Page Number	Catalogue Number	Page Number
686	38	8220	33	8721	33
686AL	38	8221	33	8723-TB	33
687	38	8223	33	8724-TB	36
687AL	38	8224-TB	36	8725-TB	36
690TB	45	8225	36	8820	33
691TB	45	823	22	8821	33
692TB	45	824	20	8823-TB	33
693TB	45	8320	33	8824-TB	36
700TB	45	8321	33	8825	36
703	45	8323	33	8850	33
7330	105	8324-TB	36	8851	33
7341	105	8325	36	8853	33
7342	105	841TB	22	8854	36
7343	105	8420	33	8855	36
7344-TB	105	8421	33	8970	33
7345	105	8423	33	8971	33
7346	105	8424	36	8973	33
7347	105	8425	36	8974	36
7348-TB	105	842ALTB	22	8975	36
7351	105	842TB	22	9306	106
7352	105	843ALTB	22	9330	106
7353	105	843TB	22	9331	106
7354	105	844	22	9340	106
7355	105	844AL	22	9341	106
7356	105	845	22	9342	106
7357	105	845AL	22	9343TB	106
7358	105	846	22	9344	106
7360	105	846AL	22	9350	106
7361	105	847	22	9351	106
7362	105	847AL	22	9352TB	106
7363	105	848	22	9353TB	106
7364	105	848AL	22	9354TB	106
7365	105	849	22	9360	106
7366	105	849AL	22	9361	106
7367	105	850	22	9362	106
7368	105	850AL	22	9363	106
8120	33	851	22	9364	106
8121	33	851AL	22		
8123	33	8520	33		
8124	36	8521	33		
8125	36	8523	33		
8130	34	8524	36		
8131	34	8525-TB	36		
8132	34	853	22		
8134	34	853AL	22		
815-TB	20	854	22		
816	20	854AL	22		
817	20	8620	33		
818	20	8621	33		
819	20	8623	33		
820	20	8624	36		
821	20	8625	36		
822	20	8720	33		

