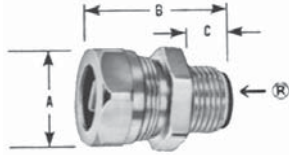


# T&B Conduit Fittings

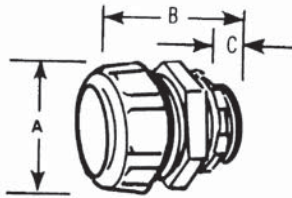
## Liquidtight Flexible Metal Conduit Fittings



### 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 <sup>†</sup>	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.

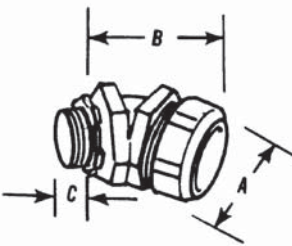
For Dura-Plate™ finish, add prefix 040- to Cat. No. Consult Customer Service for details.

\* Not CSA Certified.

♦ Steel

+ Malleable Iron

### 45° Angle Fittings\*



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

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.

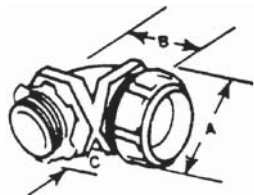
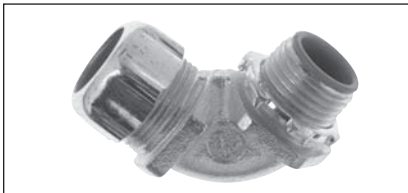
For Wiremesh Grips refer to page 80.

# T&B Conduit Fittings

## Liquidtight Flexible Metal Conduit Fittings



### 90° Angle Fittings

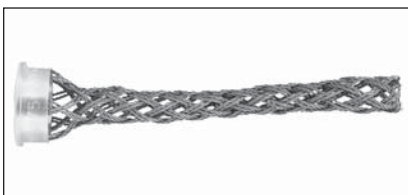


Insulated	Cat. No.		Hub Size	Conduit Size	Dimensions (in.)		
	Noninsulated	Aluminum			A	B	C
	<b>5251</b>	<b>5251AL</b>	1/2"	3/8"	1-5/32	1-3/8	9/16
	<b>5252</b>	<b>5252AL</b>	1/2"	1/2"	1-3/8	1-9/16	9/16
	<b>5253</b>	<b>5253AL</b>	3/4"	3/4"	1-21/32	1-3/4	9/16
	<b>5254</b>	<b>5254AL</b>	1"	1"	1-7/8	2-3/16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

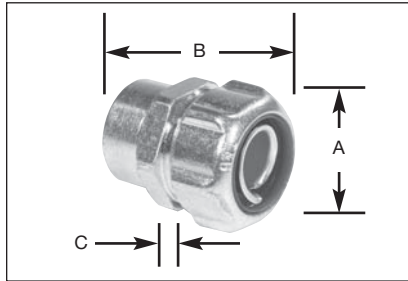


Cat. No.	Conduit Size	Liquidtight Fittings			90° Chase	Chase	Adapter
		Straight	45°	90°			
<b>WMG-LT1</b>	3/8"	5331	5341	5351	5361	5371	5271
<b>WMG-LT2</b>	1/2"	5332	5342	5352	5362	5372	5272
<b>WMG-LT3</b>	3/4"	5333	5343	5353	5363	5373	5273
<b>WMG-LT4</b>	1"	5334	5344	5354	5364	5374	5274
<b>WMG-LT5</b>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

Order wiremesh grip separately: no need to duplicate inventory.

# T&B Conduit Fittings

## Liquidtight Flexible Metal Conduit Fittings



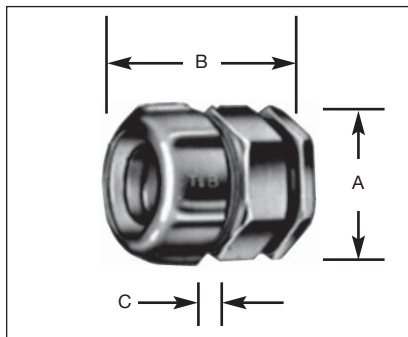
### Liquidtight Adapter To Connect Liquidtight to Threaded Rigid Conduit



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



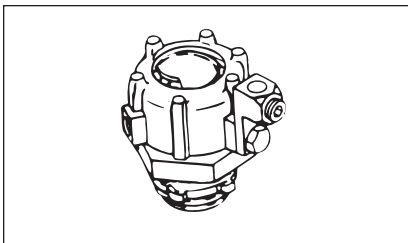
Cat. No.	Conduit Size (in.)	Dimensions (in.)			Std. Pkg.
		A	B	C	
5361	3/8	1-3/32	1-3/8	1/8	100
5362	1/2	1-3/8	1-3/8	3/16	100
5363	3/4	1-11/16	1-5/8	1/4	50
5364	1	2-1/32	2-1/16	1/4	25
5365	1-1/4	2-3/8	2-3/8	5/16	25
5366	1-1/2	2-15/16	2-3/4	3/8	10
5367	2	2-9/16	3	3/8	5
5368	2-1/2	4-3/8	3-15/16	7/16	5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

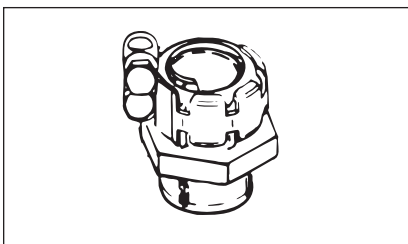
# T&B Conduit Fittings

## Liquidtight Flexible Metal Conduit Fittings

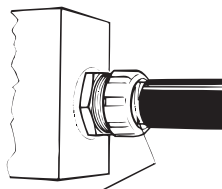
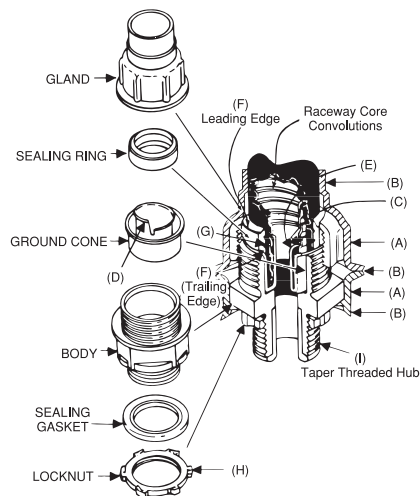
### Specifications—External Bonding



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

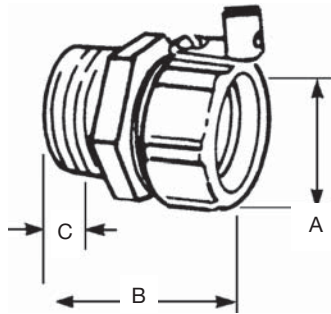
- 5331GR Series (straight fittings with male hub):  $\frac{3}{4}$ ” thru 6” conduit.
  - 5341GR Series (45°):  $\frac{3}{4}$ ” thru 4” conduit
  - 5351GR Series (90°):  $\frac{3}{4}$ ” thru 4” conduit.
  - 5271GR Series (straight fittings with female hub):  $\frac{3}{4}$ ” thru 1-1/4” conduit.
- All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



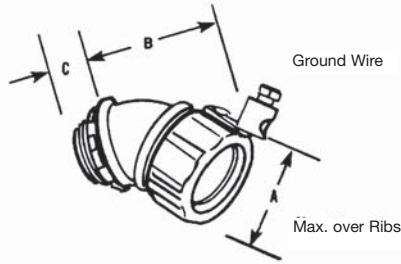
Malleable iron, tapered hub threads.

### 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

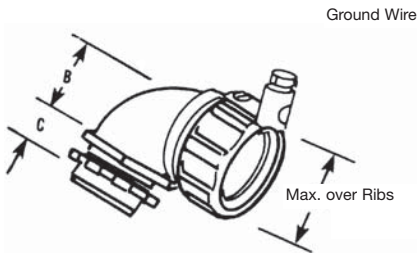


Malleable iron, tapered hub threads.

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").

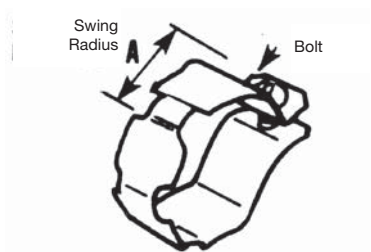
Suitable for hazardous locations use in Class I, Division 2; Class II, Division 1 and 2; Class III, Division 1 and 2, where general purpose equipment is specifically permitted per CEC Rule 18-152 (6) Class I, Zone 2; CEC Rule J18-156 (3) Class I, Division 2;

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

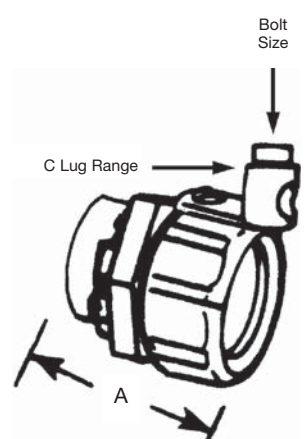
## Liquidtight Flexible Metal Conduit Fittings



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



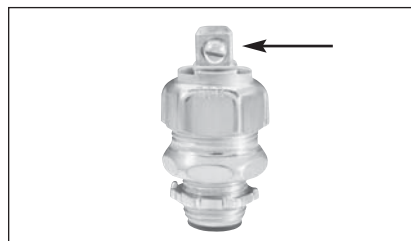
### Liquidtight to Rigid External Ground Adaptor



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

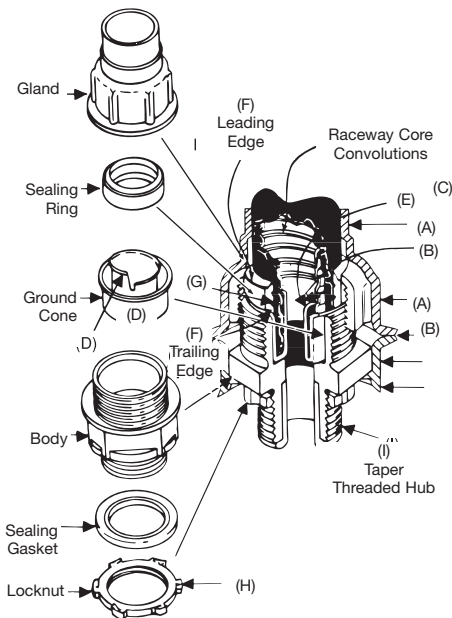
Outside of body and gland: PVC Coated .040 min. Thickness  
Inside of body and gland: Electro Zinc Plated and Chromate Coated  
Locknut, Sealing Gasket, and Retainer: Electro Zinc Plated and Chromate Coated

#### 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)

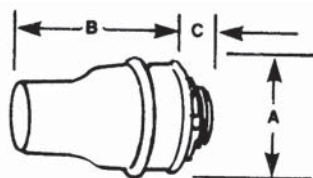


3321 Series

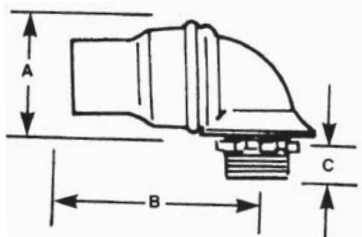
- Sealing ring design has following exclusive features:
  - (1) Grips and seals at leading and trailing edge—will not abrade raceway jacket (F).
  - (2) Provided with grooves on inside diameter for anti-sleeving (G).
  - (3) Shoulders on both ends for extra sealing.
  - (4) Symmetrical shape assures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

# T&B Conduit Fittings

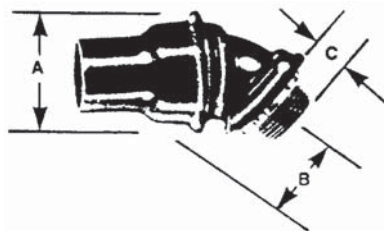
## Liquidtight Flexible Metal Conduit Fittings



**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



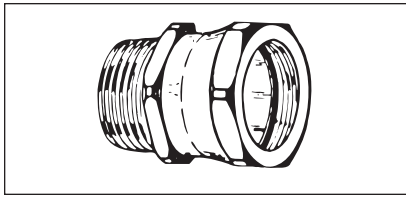
Cat. No.	Conduit Size	Dimensions (in.)		
		A	B	C
<b>Straight PVC Coated</b>				
3321	3/8	1-15/32	2-5/16	9/16
3322	1/2	1-5/8	2-1/2	9/16
3323	3/4	1-15/16	2-25/32	9/16
3324	1	2-1/4	3-15/32	3/4
3325	1-1/4	2-11/16	4-1/4	13/16
3326	1-1/2	3-1/8	4-11/16	13/16
3327	2	3-5/8	5-5/16	7/8
3328-TB	2-1/2	4-3/8	6-3/8	1
3329	3	5-3/16	6-1/2	1
3331	4	6-7/16	6-3/4	1-1/8
<b>90° PVC Coated</b>				
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
<b>45° PVC Coated</b>				
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.

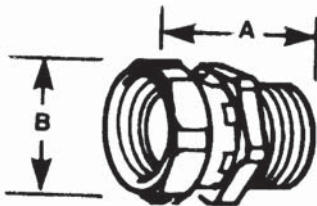
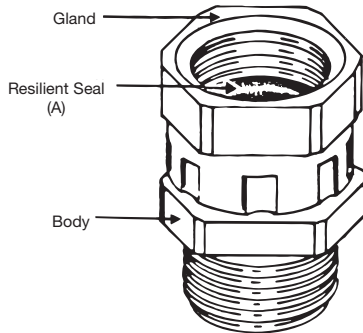
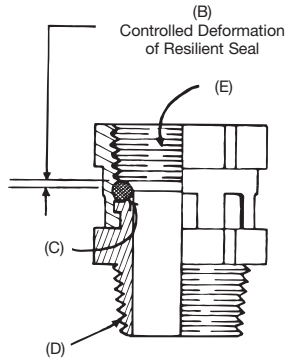


# T&B Conduit Fittings

## 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

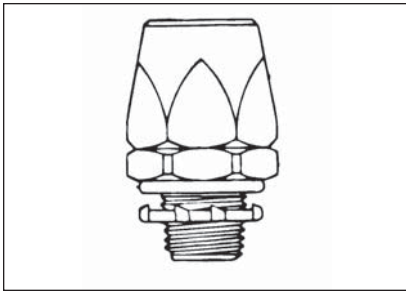


Cat. No.	Conduit Size	Dimensions (in.)	
		A	B
41TB	1/2"	1-29/64	1
42TB	3/4"	1-15/16	1-1/4

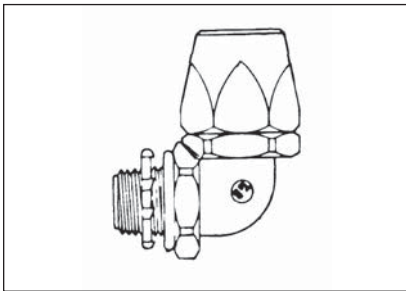
# T&B Conduit Fittings

## Liquidtight Flexible Nonmetallic Conduit Fittings

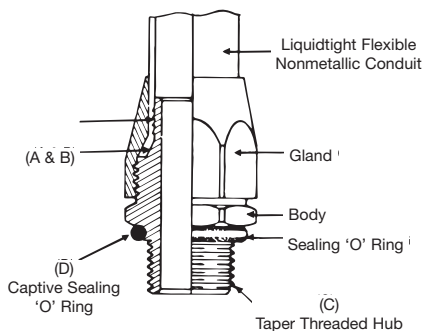
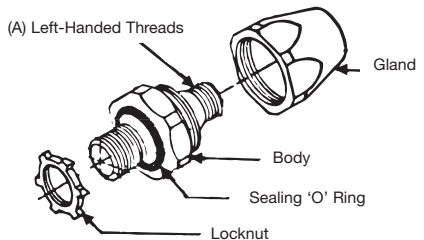
### Specifications—Type A Conduit Fittings



**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

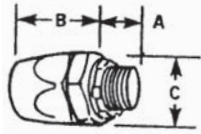
- Type A Liquidtight Flexible Nonmetallic Conduit shall be seamless type adequately reinforced with one or more layers of flexible braided reinforcing cords. Conduit jacket shall be of non-kinking oil resistant/water resistant flame retardant material suitable for ambient environmental conditions.
- 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:

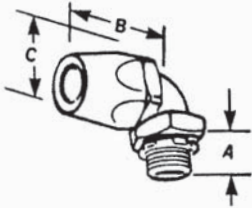
- (1) Ferrous metallic fittings shall be electro-zinc plated inside outside and equipped with a nylon insulated throat.
- (2) Thermoplastic fittings shall be of high impact chemical resistant, non-burning, non-dripping thermoplastic.
- (3) Fittings shall be provided with a captive, moisture resistant/oil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

# T&B Conduit Fittings

## Liquidtight Flexible Nonmetallic Conduit Fittings



Straight Fitting

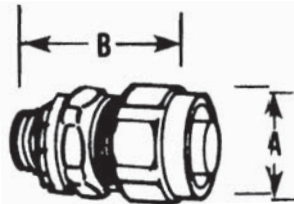


90° Angle Fitting

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
<b>Straight Fitting</b>				
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
<b>90° Angle Fitting</b>				
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



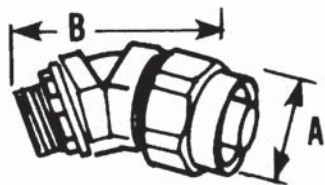
Cat. No.	Conduit Size	Hub Thread	Dimensions (in.)	
			A	B
3720-TB*	3/8	1/2-14 NPT	1-5/32	2
3721-TB	1/2	1/2-14 NPT	1-3/8	2-1/8
3722-TB	3/4	3/4-14 NPT	1-5/8	2-1/4
3723	1	1-11-1/2 NPT	1-7/8	2-1/2
3724-TB	1-1/4	1-1/4-11-1/2 NPT	2-3/8	2
3725	1-1/2	1-1/2-11-1/2 NPT	2-3/4	3-3/8
3726	2	2-11-1/2 NPT	3-17/32	3-5/8

\* 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

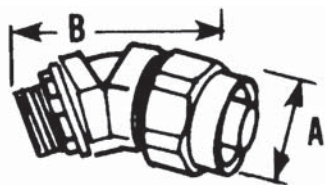


### 45° Metallic Fittings

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.



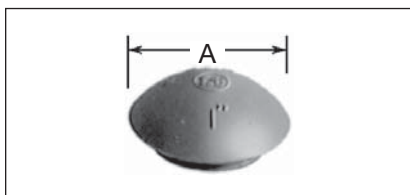
### 90° Metallic Fittings



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"

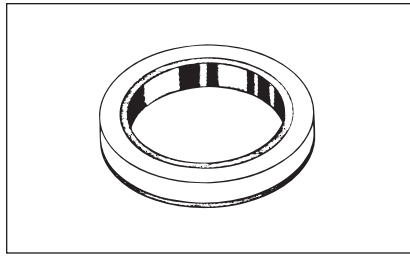
U.L. Listed liquidtight

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

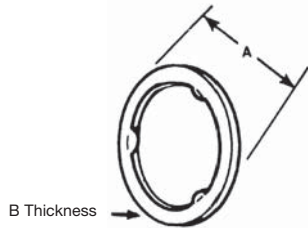
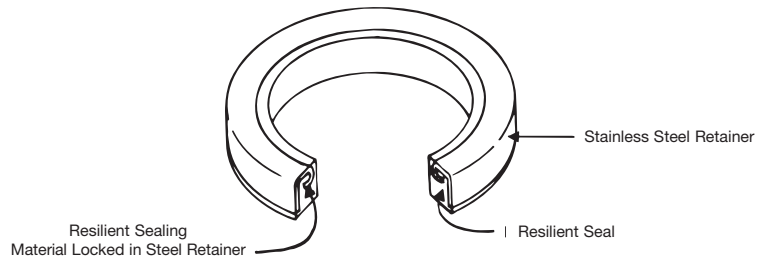
- Locks resilient sealing material in steel.
- Steel retainer protects seal from extruding out under torque and limits compression to an optimum predetermined value; provides high quality seal.
- Resilient material flows and seals rough surfaces.

#### 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

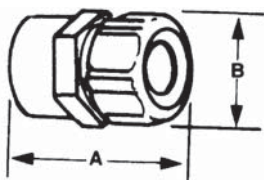
\*\* U.L. not applicable

# T&B Conduit Fittings

## Liquidtight Flexible Metal Conduit Fittings



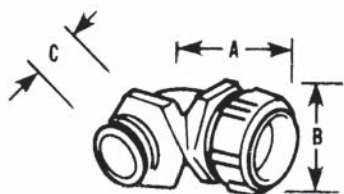
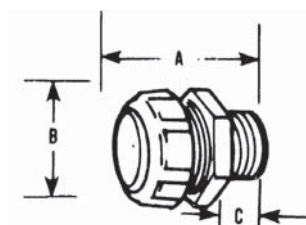
### Liquidtight Flexible Metal/MS Fittings



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
<b>Nylon insulated straight fittings</b>					
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
<b>Nylon insulated 45° angle fittings</b>					
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
<b>Nylon insulated 90° angle fittings</b>					
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

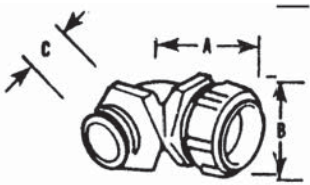
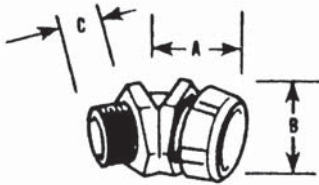
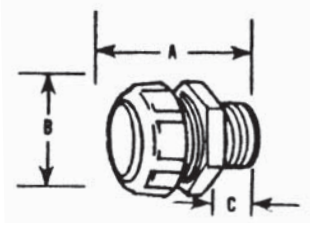
U.L. Listed liquidtight.

\*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
<b>Nylon insulated straight fittings</b>					
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
<b>Nylon insulated 45° angle fittings</b>					
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
<b>Nylon insulated 90° angle fittings</b>					
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.

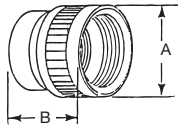


Fig. 1

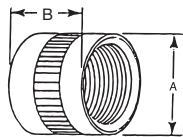


Fig. 2

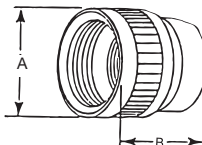


Fig. 3

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

Material: aluminum

### NPT/MS Fitting Adaptors



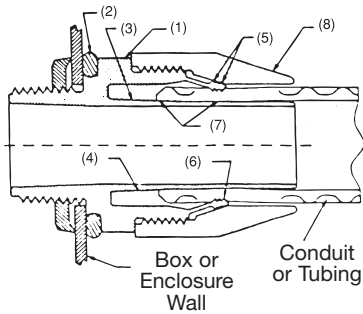
Cat. No.	N.P.T. Thread	AN-MS Fitting Shell Size	Thread Size	Dimensions (in.)		
				A	Fig.	B
MSA05014	1/2"	14, 14S	3/4-20 UNEF-2B	1.000	1	1.175
MSA05016	1/2"	16, 16S	7/8-20 UNEF-2B	1.000	2	1.175
MSA05018	1/2"	18	1-20 UNEF-2B	1.125	3	1.175
MSA07516	3/4"	16, 16S	7/8-20 UNEF-2B	1.250	1	1.356
MSA07518	3/4"	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.

# 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.

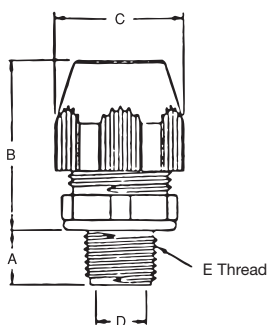


Figure 1

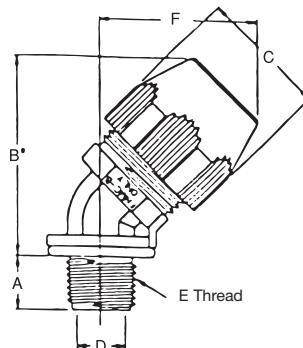


Figure 2

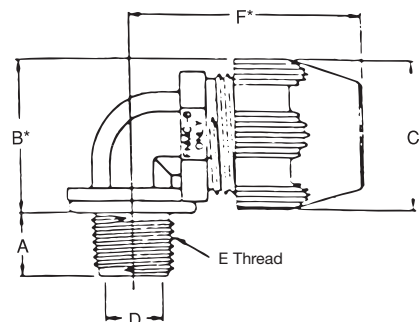


Figure 3

# 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 $\pm 0.030^*$		B $\pm 0.060$		C $\pm 0.045$		D (mm)	Thread NPT
			(.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

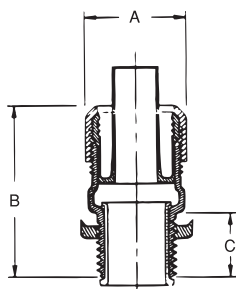


Figure 1

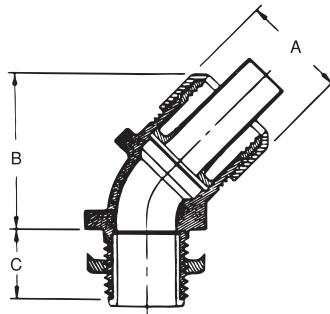


Figure 2

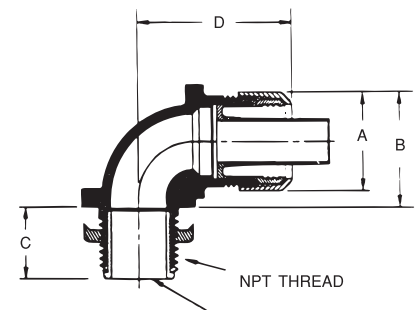


Figure 3