

Rigid and intermediate metal conduit fittings

Locknuts

—
01 140 Series
141AL Series
—
02 106 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
 - (1) Provide extended reach for clamping on thin boxes and enclosures
 - (2) Cut through protective coating on box and enclosure, thereby ensuring ground continuity
 - (3) Permit tightening from outside
 - (4) Prevent loosening under vibration
- 106 Series provided with a hardened cone point screw

Standard material

140 series and 106 series

- $\frac{3}{8}$ in. through 2 in. steel (hardened)
- 2½ in. through 6 in. malleable iron
- All screws steel

141AL series

- All copper-free aluminum (less than 0.4% copper)

Standard finish

- All steel and malleable iron locknuts including bonding screws electro-zinc plated; all aluminum locknuts degreased.

Range

- $\frac{3}{8}$ in. through 6 in. conduit (all threads straight pipe [NPS]) (140 series)
- $\frac{1}{2}$ in. through 4 in. conduit (106 series and 141AL series)

Conformance

- UL 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 ABB 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.



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01



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02

Rigid and intermediate metal conduit fittings

Locknuts

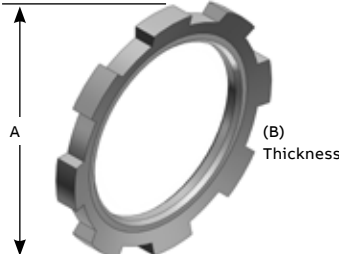
Steel or malleable iron (steel through 2 in.) or aluminum 624

Many of the ABB 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; and the fitting can be tightened from outside the box.

Locknuts



	Cat. no.			Size (in.)	Dimensions (in.)	
	Stl. or M.I.	Alum.	SST		A	B
	139*†	—	—	¼	27/32	5/32
	140*	—	—	¾	15/16	5/32
	141**	141AL	141SST	½	17/64	5/32
	142-TB**	142AL	142SST	¾	1 3/8	3/16
	143	143AL	143SST	1	1 11/16	13/64
	144	144AL	144SST	1 ¼	2 5/32	13/64
	145	145AL	145SST	1 ½	2 ½	13/64
	146-TB	146AL	146SST	2	3	7/32
	147	147AL	—	2 ½	3 9/16	13/32
	148	148AL	—	3	4 3/16	13/32
	149	149AL	—	3 ½	4 13/16	15/32
	150	150AL	—	4	5 5/16	15/32
	151	151AL	—	4 ½	5 15/16	17/32
	152	152AL	—	5	6 ½	17/32
	153	153AL	—	6	7 ¾	17/32

* Hex shape

** Case-hardened locknuts

Aluminum locknuts comply with federal standard of copper-free aluminum; less than 0.4% copper

† Not UL listed or CSA certified

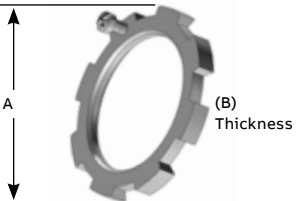
Steel or malleable iron (steel through 2 in.)

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. ABB rigid conduit and EMT (thinwall) fittings comply with Federal Specification WF 408C.

Bonding locknuts



	Cat. no.	Size (in.)	Screw Size (in.)	Dimensions (in.)	
				A	B
	106	½	8-32 x 7/16	1 3/8	0.125
	107	¾	8-32 x 7/16	1 5/8	0.140
	108	1	8-32 x 7/16	1 15/16	0.170
	109	1 ¼	8-32 x 7/16	2 5/32	0.170
	110-TB	1 ½	8-32 x 7/16	2 ½	0.170
	111	2	8-32 x 7/16	3	0.187
	112-TB	2 ½	¾-20 x 5/8	3 13/32	0.375
	113-TB	3	¾-20 x 5/8	4 13/16	0.375
	114	3 ½	¾-20 x 5/8	4 29/32	0.438
	115-TB	4	¾-20 x 5/8	5 7/16	0.438

Steel finish: zinc plated

Rigid and intermediate metal conduit fittings

Sealing rings



Molded Santoprene seal / colour: 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.

Fittings



Diagram	Cat. no.	Size (in.)	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

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 (in.)	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

Rigid and intermediate metal conduit fittings

Bonding and grounding wedges



Application

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

Features

- Sizes 3/4 in. through 6 in. 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 in. size:
 - Steel/electro-zinc plated
- 3/4 in. through 6 in. size:
 - Bronze/tin plated

Range

- 1/2 in. through 6 in. conduit

Conformity

- UL 467
- CSA C22.2 No. 41
- NFPA70-2008 (ANSI)
- Federal Specification A-A-50552

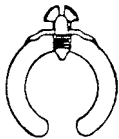
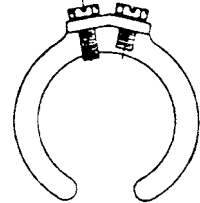
Especially suited for grounding old work, but equally convenient for new, grounding wedges provide grounding without a jumper except in concentric knockouts. When a jumper is required, it fits under a set screw in the grounding wedge.

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

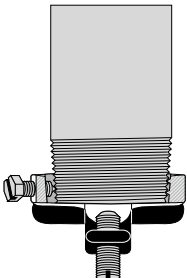
Bonding and grounding wedges



	Cat. no.	Size (in.)
Series 3650 	3650	1/2
	3651	3/4
	3652	1
	3653	1 1/4
	3654	1 1/2
	3655	2
Series 3651 	3656	2 1/2
	3657	3
	3658	3 1/2
	3659	4
	3661	5
	3662	6

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.

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: (½ in.-2 in.) stainless steel, (2½ in.-6 in.) brass
- Lug screw: Stainless steel
- Finish: Zinc plated or mechanical galvanized

Range

- Conduit: ½ in. through 6 in. threaded or threadless rigid/IMC
- Wire range: #14 AWG to 4/0 AWG Cu/Al

Conformity

- UL 514B and UL 467
- CSA C22.2 No. 18.3 and CSA C22.2 No. 41

Integral grounding lug enhances ground continuity. Added ground wire range taking reduces inventory. Accepts copper or aluminum ground wires.

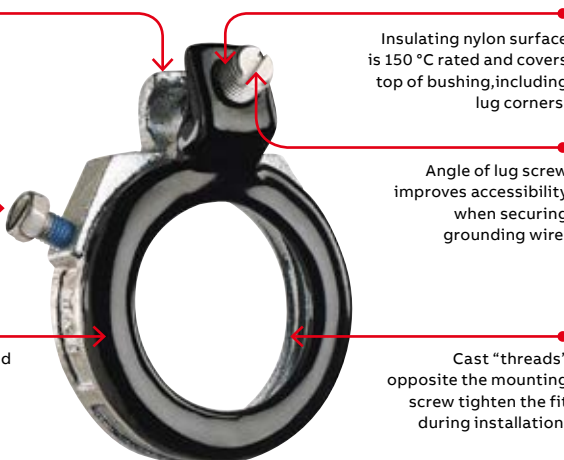
Mounting screw with nylon locking patch has a cone point to lock bushing securely in place.

Insulator surface features a rounded design to reduce drag and prevent abrasion during wire pulling.

Insulating nylon surface is 150 °C rated and covers top of bushing, including lug corners.

Angle of lug screw improves accessibility when securing grounding wire.

Cast "threads" opposite the mounting screw tighten the fit during installation.



Rigid and intermediate metal conduit fittings

Blackjack® – Conduit grounding bushings

Blackjack® – Conduit grounding bushings



Cat. no. zinc plated malleable iron	Aluminum	Conduit size (in.)	ØA Max.	ØB Max.	ØC Max.	ØD Max.	Dim.	
							E Max.	Wire range
BG050-14-20	BGA050-14-20	½	1.251	0.569	1.181	2.134	0.696	14-2/0
BG050-14-4	BGA050-14-4	½	1.251	0.569	1.027	1.940	0.696	14-4
BG075-14-20	BGA075-14-20	¾	1.533	0.772	1.221	2.414	0.696	14-2/0
BG075-14-4	BGA075-14-4	¾	1.533	0.772	1.030	2.168	0.696	14-4
BG100-14-20	BGA100-14-20	1	1.783	0.993	1.181	2.581	0.696	14-2/0
BG100-14-4	BGA100-14-4	1	1.783	0.993	1.027	2.368	0.696	14-4
BG125-14-20	BGA125-14-20	1¼	2.220	1.319	1.181	2.987	0.759	14-2/0
BG150-14-20	BGA150-14-20	1½	2.470	1.553	1.181	3.236	0.696	14-2/0
BG200-14-20	BGA200-14-20	2	2.830	2.010	1.181	3.766	0.696	14-2/0
BG250-14-20	BGA250-14-20	2½	3.148	2.412	1.181	4.341	0.978	14-2/0
BG250-6-40	BGA250-6-40	2½	3.148	2.412	1.524	4.526	0.978	6-4/0
BG300-14-20	BGA300-14-20	3	4.042	3.022	1.181	4.966	0.978	14-2/0
BG300-6-40	BGA300-6-40	3	4.042	3.022	1.524	5.139	0.978	6-4/0
BG350-14-20	BGA350-14-20	3½	4.542	3.491	1.181	5.467	0.978	14-2/0
BG350-6-40	BGA350-6-40	3½	4.542	3.491	1.524	5.639	0.978	6-4/0
BG400-14-20	BGA400-14-20	4	5.042	3.975	1.181	5.966	0.978	14-2/0
BG400-6-40	BGA400-6-40	4	5.042	3.975	1.524	6.139	0.978	6-4/0
BG500-14-20	BGA500-14-20	5	6.136	4.991	1.181	7.045	0.978	14-2/0
BG500-6-40	BGA500-6-40	5	6.136	4.991	1.524	7.207	0.978	6-4/0
BG600-14-20	BGA600-14-20	6	7.199	6.009	1.181	8.087	0.978	14-2/0
BG600-6-40	BGA600-6-40	6	7.199	6.009	1.524	8.409	0.978	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 ABB.

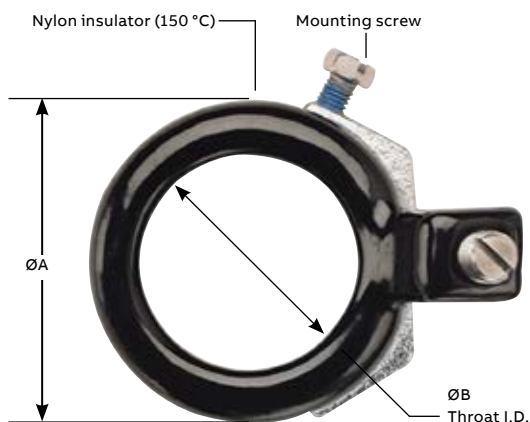
Grounding and bonding bushings used shall be approved for the purpose and

(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-0. Insulator must be positively locked in place.

* Mechanical galvanization is available in the 3870 series; add suffix MG to cat. no.

Diagrams



Rigid and intermediate metal conduit fittings

Threaded insulated grounding bushings



Application

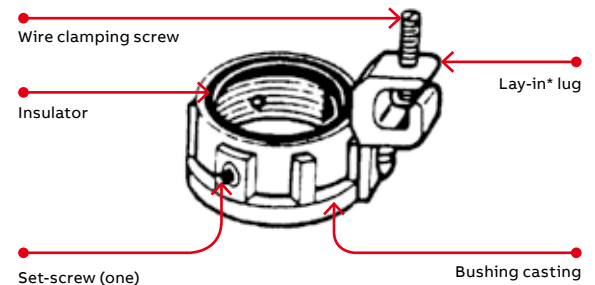
- For quick installation of bonding jumper to multiple metal conduits (rigid and IMC)
- Designed to bush conductors and prevent insulation damage

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

Standard material / finish

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



Cat. no.	Conduit size (in.)	Bushing dia. (in.)	Throat dia. (in.)	Lug length (in.)	Swing radius (in.)	Bushing height (in.)	Wire range AWG Cu/Al
3870-TB	½	1.125	0.560	1.310	1.212	0.657	14-4
3861	½	1.125	0.560	1.675	1.402	0.657	8-2/0
3871-TB	¾	1.420	0.742	1.310	1.360	0.660	14-4
3862	¾	1.420	0.742	1.675	1.550	0.660	8-2/0
3872	1	1.770	0.944	1.310	1.535	0.735	14-4
3882	1	1.770	0.944	1.675	1.725	0.735	8-2/0
3873	1¼	2.190	1.242	1.310	1.745	0.735	14-4
3883	1¼	2.190	1.242	1.675	1.935	0.735	8-2/0
3874	1½	2.468	1.449	1.310	1.884	0.770	14-4
3884	1½	2.468	1.449	1.675	2.074	0.770	8-2/0
3875	2	3.031	1.860	1.310	2.165	0.770	14-4
3889	2	3.031	1.860	1.675	2.355	0.770	8-2/0
3876	2½	3.516	2.222	1.310	2.408	0.940	14-4
3886	2½	3.516	2.222	1.675	2.598	0.940	8-2/0
3993	2½	3.516	2.222	2.230	2.928	0.940	6-4/0
3877	3	4.234	2.761	1.310	2.767	0.975	14-4
3887	3	4.234	2.761	1.675	2.957	0.975	8-2/0
3994	3	4.234	2.761	2.230	3.287	0.975	6-4/0
3878	3½	4.781	3.193	1.310	3.040	0.975	14-4
3863	3½	4.781	3.193	1.675	3.230	0.975	8-2/0
3995	3½	4.781	3.193	2.230	3.560	0.975	6-4/0
3879	4	5.328	3.623	1.310	3.314	0.980	14-4
3864	4	5.328	3.623	1.675	3.504	0.980	8-2/0
3996	4	5.328	3.623	2.230	3.834	0.980	6-4/0
3880	5	6.328	4.542	1.310	3.814	0.985	14-4
3865	5	6.328	4.542	1.675	4.000	0.985	8-2/0
3998	5	6.328	4.542	2.230	4.334	0.985	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

*Contact your regional sales office for copper lay-in lug

Rigid and intermediate metal conduit fittings

Bushings



Nylon insulated metallic bushings.

Steel or malleable iron (steel through 1½ in.)

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. ABB insulated throat fittings, recognizable by the distinctive trademarked blue insulating liner in the throat, meet and surpass this code requirement. In addition, ABB insulated fittings also reduce wire pulling effort by as much as 50%. Temperature rating 105 °C.

Insulated throat fittings



Diagram	Cat. no.	Dimensions (in.)			
	Steel or M.I.	Aluminum	Size (in.)	A	B
	1222	1222AL	½	1 ⅜	29/64
	1223	1223AL	¾	1 9/32	31/64
	1224	1224AL	1	1 19/32	19/32
	1225	1225AL	1 ¼	1 15/16	21/32
	1226	1226AL	1 ½	2 3/16	23/32
	1227	1227AL	2	2 11/16	7/8
	1228	1228AL	2 ½	3 3/16	31/32
	1229	1229AL	3	3 27/32	15/16
	1230	1230AL	3 ½	4 7/16	1 1/16
	1231	1231AL	4	4 7/8	1 3/32
	1232†	1232AL†	4 ½	5 7/16	1 15/64
	586	586AL	5	5 31/32	1 9/32
	587	587AL	6	7 3/16	1 11/32

† Not CSA Certified

The aluminum series are not CSA certified



Aluminum, steel or malleable iron (steel through 1½ in.)

Smoothly rounded shoulder covers end of conduit; broad flange covers knockout hole. High ribs make tightening easy with fingers or with wrench.

½ in.–1½ in. sizes, formed in steel, have extra smooth shoulders. Locknut-type base gives improved bonding and resists loosening under conditions of vibration.

Metallic bushings



Diagram	Cat. no.	Dimensions (in.)			
	Steel or M.I.	Aluminum	Size (in.)	A	B
	122	122AL	½	1 ⅜	13/32
	123	123AL*	¾	1 9/32	13/32
	124	124AL	1	1 19/32	½
	125-TB	125AL	1 ¼	1 15/16	9/16
	126	126AL	1 ½	2 3/16	9/16
	127	127AL	2	2 11/16	13/32
	128	128AL	2 ½	3 3/16	13/16
	129	129AL	3	3 27/32	13/16
	130-TB	130AL	3 ½	4 7/16	15/16
	131-TB	131AL	4	4 7/8	1
	132-TB	—	4 ½	5 7/16	1 5/64
	133-TB	133AL	5	6 3/16	1 1/16
	134-TB	134AL	6	7 3/16	1 1/16

* Not UL Listed or CSA Certified

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. UL Listed 105 °C. NPT threaded.

Plastic insulating bushings



Diagram	Cat. no.	Size (in.)	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

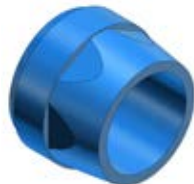
Flame retardant. UL rated 94V-1

Rigid and intermediate metal conduit fittings

Insulating bushings for threadless rigid conduit and intermediate metal conduit



TRIB50 Series



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

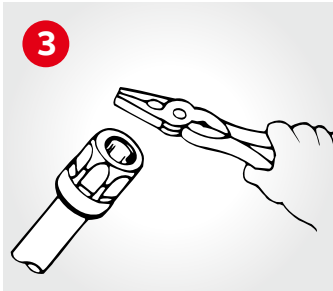
- ½ in.–4 in. conduit

Conformity

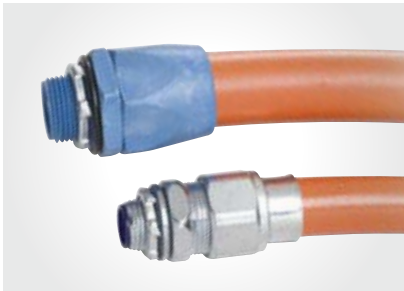
- UL 514B
- ANSI C80.4
- NFPA 70-2008 (ANSI)



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.

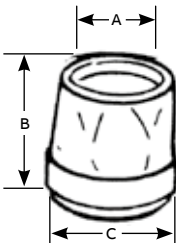


3. Using the flat surface of any standard utility tool such as an electricians pliers (or a hammer with a block of wood, for the larger sizes), strike the bushing on its top surface using a series of light blows until the end of the conduit rests against the bushing throat and conduit stop.



Insulated metallic bushing



Dimensions (in.)					
	Cat. no.	Size (in.)	A	B	C
	TRIB-50	½	19/32	1 9/32	1 1/16
	TRIB-75	¾	25/32	1 25/64	1 ¼
	TRIB-100	1	1	1 ½	1 9/16
	TRIB-125	1 ¼	1 5/16	1 5/8	1 59/64
	TRIB-150	1 ½	1 17/32	1 21/32	2 11/64
	TRIB-200	2	1 31/32	1 13/16	2 11/16
	TRIB-250	2 ½	2 23/64	2	3 ¼
	TRIB-300	3	2 59/64	2 7/32	3 29/32
	TRIB-350	3 ½	3 3/8	2 5/16	4 29/64
	TRIB-400	4	3 27/32	2 13/32	5

IMC sizes ½ in.–4 in.
UL Rated flame retardant 94V-1

Rigid and intermediate metal conduit fittings

Knockout bushings



3210 Series

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 UL 94) thermoplastic construction

Standard material

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

Standard finish

- As molded

Range

- 0.875 in. through 2.469 in. nominal diameter knockout opening ($\frac{1}{2}$ in. through 2 in. trade size knockouts)
- Wall thickness of box or enclosure 0.095 in. max. up to 1 in. trade size, 0.140 in. max. $1\frac{1}{4}$ in. through 2 in. trade size

Conformity

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

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 $\frac{1}{2}$ in. through 2 in. knockouts. UL Listed 105 °C. High impact thermoplastic.

Knockout bushings



	Cat. no.	Trade size (in.)	For use in KO* +0.032/ -0.16 (in.)	Max. wall thickness of elec. box (in.)	Dimensions (in.)			
					A	B	C	D
	3210	$\frac{1}{2}$	0.875	0.095	1.000	0.725	0.360	0.180
	3211	$\frac{3}{4}$	1.109	0.095	1.215	0.940	0.360	0.180
	3212	1	1.375	0.095	1.500	1.200	0.360	0.180
	3213	$1\frac{1}{4}$	1.734	0.140	1.865	1.550	0.400	0.210
	3214	$1\frac{1}{2}$	1.984	0.140	2.240	1.760	0.530	0.310
	3215	2	2.469	0.140	2.740	2.245	0.530	0.310

* Per UL and NEMA standards
 Material: Thermoplastic
 Flammability classification of 94V-1 Per UL 94
 Service temperature: -40 °C to 105 °C

Rigid and intermediate metal conduit fittings
INSULINER® sleeves



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, EMT

(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.

INSULINER sleeves



	Cat. no.	Size (in.)	Dimensions (in.)	
			A	B
	422	½	5⁄8	0.022
	423	¾	1 1⁄16	0.025
	424	1	7⁄8	0.040
	425	1 ¼	1	0.040
	426-TB	1 ½	1	0.050
	427-TB	2	1 ⅞	0.050
	428-TB	2 ½	1 ¼	0.035
	429	3	1 ½	0.035
	430-TB	3 ½	1 25⁄32	0.035
	431	4	2 1⁄32	0.035
	433	5	2 ½	0.035
	434	6	2 ½	0.035

Oxygen index >28°

Rigid and intermediate metal conduit fittings

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 non-dripping (per UL 94) thermoplastic construction

Standard material

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

Standard finish

- As molded

Range

- 0.875 in. through 2.469 in. nominal diameter knockout opening ($\frac{1}{2}$ in. through 2 in. trade size knockouts)
- Wall thickness of box or enclosure:
 - 0.095 in. max. up to 1 in. trade size
 - 0.140 in. max. $1\frac{1}{4}$ in. through 2 in. trade sizes

Conformity

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

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



	Cat. no.	Knockout trade size (in.)	Dimensions (in.)	
			A	B
	1451	$\frac{1}{2}$	1.060	0.400
	1452	$\frac{3}{4}$	1.300	0.400
	1453	1	1.590	0.400
	1454	$1\frac{1}{4}$	1.860	0.450
	1455	$1\frac{1}{2}$	2.240	0.570
	1456	2	2.740	0.570

Wall thickness of electrical box 0.095 max.
Meets Coast Guard Regulation CB293

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 (in.)
815-TB	$\frac{1}{2}$
816	$\frac{3}{4}$
817	1
818	$1\frac{1}{4}$
819	$1\frac{1}{2}$
820	2
821	$2\frac{1}{2}$
822	3
824-TB	$3\frac{1}{2}$
823	4

UL not applicable

Rigid and intermediate metal conduit fittings

Bushings and 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 applications; 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

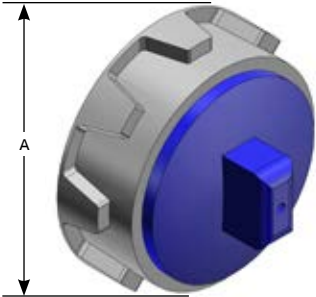
- CSA C22.2 No. 18
- ANSI C80.4
- NFPA 70-2008 (ANSI)
- NEMA FB-1

CEC Rule: 12-3024

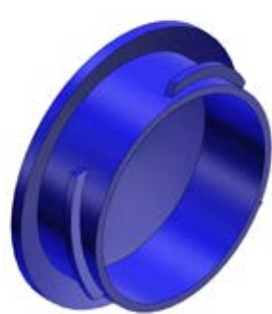
- “Unused openings in boxes, cabinets and fittings shall be effectively closed by plugs or plates affording protection substantially equivalent to that of the wall of the box, cabinet or fittings.”

Bushings and Push-Penny plugs



Assembly consist of					
	Cat. no.	Size (in.)	A (in.)	Bushing	Push-Penny
	1460	½	1⅜	122	1470-TB
	1461	¾	1⅝	123	1471
	1462	1	1⅞	124	1472
	1463	1¼	1⅝	125	1473
	1464	1½	2⅜	126	1474
	1465*	2	2⅞	127	1475

* Malleable Iron
Available in aluminum
Add suffix AL to cat. no.



Push-Penny plugs

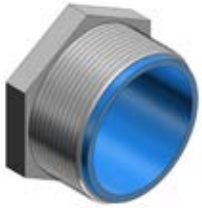


Cat. no.	Size (in.)
1470-TB	½
1471	¾
1472	1
1473	1¼
1474	1½
1475	2
1476*	2½
1477*	3
1478*	3½
1479*	4

*Not CSA Certified
UL not applicable

Rigid and intermediate metal conduit fittings

Chase nipples



—
1942 series
842AL series
(non-insulated)

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:
 - ½ in. – Steel
 - ¾ in., 1 in. through 6 in. – Malleable iron
- Insulator: Nylon
- 842AL Series: All copper-free aluminum (less than 0.4% copper)

Standard finish

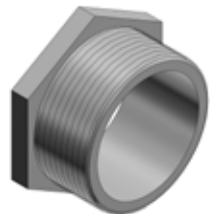
- 1942 Series: Electro-zinc plated and chromate coated
- 842AL Series: Degreased

Range 1942 and 842AL series

- ½ in. through 6 in.
- All hub threads straight pipe (NPS)

Conformity

- UL 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 – Non-insulated

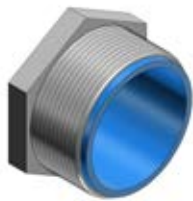


	Cat. no.		Dimensions (in.)		
	Stl. or M.I.	Alum.	Size (in.)	A	B
Diagram 	841TB	—	¾	13/16	7/16
	842TB	842ALTB†	½	15/16	11/32
	843TB	843ALTB	¾	1 3/16	11/32
	844	844AL†	1	1 7/16	21/32
	845	845AL†	1 ¼	1 ¾	¾
	846	846AL	1 ½	2 1/16	13/16
	847	847AL	2	2 ½	31/32
	848	848AL	2 ½	3 1/16	1 1/16
	849	849AL	3	3 13/16	1 3/16
	850	850AL	3 ½	4 ¾	1 5/16
	851	851AL	4	4 ¾	1 5/16
	853	853AL	5	5 7/8	1 5/16
	854	854AL	6	6 13/16	1 7/8

† Not UL Listed

Rigid and intermediate metal conduit fittings

CHASE nipples



Steel or malleable iron

CHASE nipples – Nylon insulated



	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
Diagram 	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

Rigid and intermediate metal conduit fittings

Threaded hubs (Bullet® hubs) for threaded rigid metal conduit/IMC/PVC-coated rigid metal conduit

— 01 370 Series
370AL Series
— 02 485 Series

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:
 - (1) 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

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

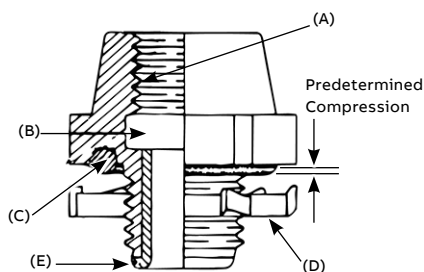
Canadian Electric Code Rule 10-602 states that, “Where dissimilar metals cannot be avoided at bonding connections as indicated in Rule 2-112 (2). Connections shall be made using methods or material that will minimize deterioration from galvanic action.”

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.

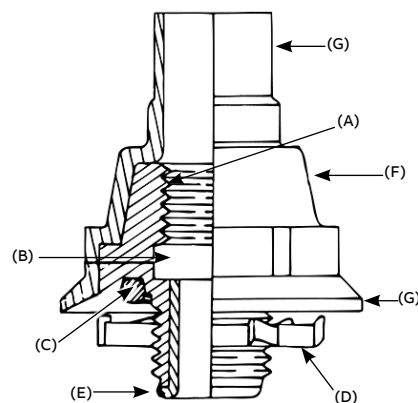
“Copper-free aluminum”

- 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.

Diagrams



— 01



— 02

Rigid and intermediate metal conduit fittings

Threaded hubs (Bullet hubs) for threaded rigid metal conduit/IMC/PVC-coated rigid metal conduit

Standard material

370-485 Series		370AL Series
Body	½ in. through 1 in. steel 1¼ in. through 6 in. malleable iron	All copper-free aluminum
Locknut	½ in. through 2 in. steel (hardened) 2½ in. through 6 in. malleable iron	½ in. through 2 in. steel (hardened) 2-½ in. through 4 in. copper-free aluminum
Screws	Steel (hardened)	
O-ring	Buna N	
Insulator	Nylon	
Coating	PVC	

Standard finish

	370 Series	370AL Series	485 Series
Hub	Electro-zinc plated	As cast chromate coated	PVC – outside electro-zinc
Locknuts	All ferrous locknuts electro-zinc plated and chromate coated		Plated chromate coated – inside
Screws	All electro-zinc plated and chromate coated		

Range

370 Series	½ in. through 6 in. conduit
370AL and 485 Series	½ in. through 4 in. conduit All hub threads – straight pipe All female threads – taper pipe (NPT)

Conformity

UL 514B
CSA 22.2 No. 18.3
ANSI C80.4
NFPA 70-2008 (ANSI)
NEMA FB-1
JIC EGP1; JIC EMP 1
Federal Specification W-F-408
Federal Standard H-28 (threads)

Rigid and intermediate metal conduit fittings

Hubs



Nylon insulated

Aluminum, steel or malleable iron (steel through 1 in.). With neoprene O-ring provides a watertight threaded hub on enclosures. UL Listed 105 °C.

Steel/malleable iron and aluminum hub fittings†



Diagram	Cat. no.		Size (in.)	Dimensions (in.)			Wall thk. max. (in.)
	Stl. or M.I.	Alum.**		A	B	C	
	370	370AL	1/2	1 3/8	1 5/16	3/4	5/16
	371	371AL	3/4	1 3/8	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 3/8	1/2
	379-TB	—	4	6 9/16	3 1/8	2 3/8	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

† UL Listed raintight and CSA Certified watertight and dust tight



Bullet hub fittings with bonding locknut – Nylon insulated



Cat. no.	Size (in.)	Description
401	1/2	Available in steel or malleable iron Supplied with 106 Series bonding nut. Temperature rating: 105 °C.
402	3/4	
403-TB	1	
407	2 1/2	
408	3	
409	3 1/2	
410-TB	4	

CSA certified watertight and dust tight

Rigid and intermediate metal conduit fittings

Hubs



Steel or malleable iron (steel through 1¼ in.)

PVC-coated hub for rigid conduit



Diagram	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
	485	½	1 ²¹ / ₆₄	2 ¹ / ₈	1 ⁷ / ₈
	486	¾	1 ¹⁹ / ₃₂	2 ³ / ₈	2 ¹ / ₈
	487	1	1 ²⁷ / ₃₂	2 ³ / ₄	2 ³ / ₈
	488	1¼	2 ¹⁵ / ₃₂	3 ³ / ₈	3 ¹ / ₈
	489	1½	2 ²⁹ / ₃₂	3 ⁵ / ₈	3½
	490	2	3 ³ / ₈	3¾	4
	491	2½	3 ²⁷ / ₃₂	4	4½
	492	3	4 ²¹ / ₃₂	4 ⁵ / ₈	5 ³ / ₈
	493	3½	5 ⁹ / ₆₄	4 ¹³ / ₁₆	5 ⁷ / ₈
	494	4	5¾	4 ⁹ / ₁₆	6 ⁷ / ₁₆

*485 Series are CSA Certified watertight and dust-tight for ordinary locations

Spacing chart for Bullet hubs



Center to center spacing conduit sizes (in.)										Min. space from center of Bullet hub to wall of box (in.)	KO diameter min. (in.)
½	¾	1	1¼	1½	2	2½	3	3½	4		
½	1 ⁷ / ₁₆	1 ⁵ / ₈	1¾	2 ¹ / ₈	2 ³ / ₈	2 ⁵ / ₈	2 ⁷ / ₈	3 ⁵ / ₁₆	3½	3 ³ / ₈	¾
¾	—	1¾	1 ⁷ / ₈	2¼	2½	2¾	3	3½	3¾	4 ¹ / ₈	7 ¹ / ₈
1	—	—	2	2 ³ / ₈	2 ⁵ / ₈	2 ⁷ / ₈	3 ¹ / ₈	3 ⁵ / ₈	3 ⁷ / ₈	4¼	1 ¹ / ₈
1¼	—	—	—	2 ¹¹ / ₁₆	2 ¹⁵ / ₁₆	3¼	3½	4	4¼	4½	1 ³ / ₈
1½	—	—	—	—	3 ¹ / ₈	3½	3¾	4 ¹ / ₈	4 ³ / ₈	4¾	1 ⁵ / ₈
2	—	—	—	—	—	3¾	4	4½	4¾	5	1 ⁷ / ₈
2½	—	—	—	—	—	—	4¼	4¾	5	5 ³ / ₈	2 ¹ / ₈
3	—	—	—	—	—	—	—	5 ¹ / ₈	5 ³ / ₈	5¾	2 ⁵ / ₈
3½	—	—	—	—	—	—	—	—	5 ⁵ / ₈	6	2 ⁷ / ₈
4	—	—	—	—	—	—	—	—	—	6¼	3¼

T&B Fittings hub centerline spacing chart



Conduit trade size (in.)	½ (in.)	¾ (in.)	1 (in.)	1¼ (in.)	1½ (in.)	2 (in.)	2½ (in.)	3 (in.)	3½ (in.)	4 (in.)	5 (in.)	6 (in.)
½	1 ⁹ / ₁₆	—	—	—	—	—	—	—	—	—	—	—
¾	1 ⁴³ / ₆₄	1 ²⁵ / ₃₂	—	—	—	—	—	—	—	—	—	—
1	1 ²⁷ / ₃₂	1 ⁶¹ / ₆₄	2 ¹ / ₈	—	—	—	—	—	—	—	—	—
1¼	2 ¹ / ₃₂	2 ⁹ / ₆₄	2 ⁵ / ₁₆	2½	—	—	—	—	—	—	—	—
1½	2 ⁷ / ₃₂	2 ²¹ / ₆₄	2½	2 ¹¹ / ₁₆	2 ⁷ / ₈	—	—	—	—	—	—	—
2	2 ¹⁵ / ₃₂	2 ³⁷ / ₆₄	2¾	2 ¹⁵ / ₁₆	3 ¹ / ₈	3 ³ / ₈	—	—	—	—	—	—
2½	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	3½	3 ¹¹ / ₁₆	3 ¹⁵ / ₁₆	4 ³ / ₁₆	4½	—	—	—	—
3½	3 ¹¹ / ₃₂	3 ²¹ / ₆₄	3 ⁵ / ₈	3 ¹³ / ₁₆	4	4¼	4½	4 ¹³ / ₁₆	5 ¹ / ₈	—	—	—
4	3 ¹⁹ / ₃₂	3 ⁴⁵ / ₆₄	3 ⁷ / ₈	4 ¹ / ₁₆	4¼	4½	4¾	5 ¹ / ₁₆	5 ³ / ₈	5 ⁵ / ₈	—	—
5	4 ⁹ / ₃₂	3 ²⁵ / ₆₄	4 ⁹ / ₁₆	4¾	4 ¹⁵ / ₁₆	5 ¹ / ₁₆	5 ⁷ / ₁₆	5¾	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												
	2 ⁷ / ₃₂	6 ¹ / ₆₄	1 ¹ / ₈	1 ¹ / ₁₆	1½	1¾	2	2 ⁵ / ₁₆	2 ⁵ / ₈	2 ⁷ / ₈	2 ⁹ / ₁₆	3 ³¹ / ₃₂

Rigid and intermediate metal conduit fittings

Hubs

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.

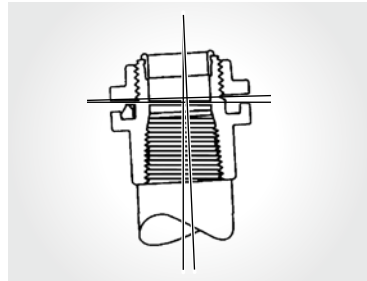
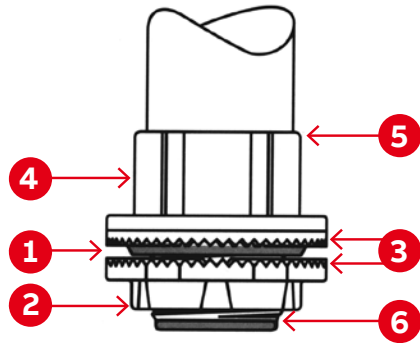
5. Precision machined tapered threads designed to create watertight union.

6. Insulated throat molded from 105 °C rated thermoplastic with a flammability rating of 94V-0.

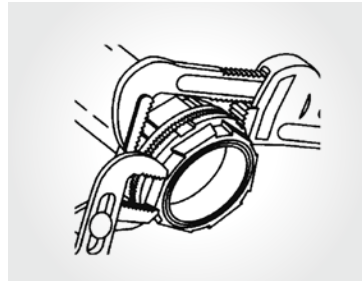
01 Figure 1

02 Figure 2

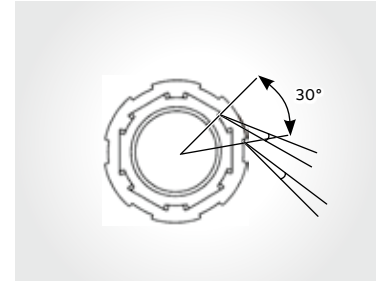
03 Figure 3



01



02



03



The hub



Diagram	Cat. no. zinc	Cat. no. aluminum	Trade size (in.)	Dimensions (in.)			Max. panel thickness D (in.)	Throat dia. E (in.)
				A	B	C		
	H050-TB	H050A	1/2	1 7/16	1 9/16	7/8	3/16	1 9/32
	H075-TB	H075A	3/4	1 21/32	1 19/32	29/32	3/16	2 5/32
	H100-TB	H100A	1	2	1 13/16	1 1/16	1/4	1
	H125-TB	H125A	1 1/4	2 3/8	1 7/8	1 1/16	1/4	1 5/16
	H150-TB	H150A	1 1/2	2 3/4	1 7/8	1 1/16	1/4	1 17/32
	H200-TB	H200A	2	3 1/4	1 15/16	1 5/32	1/4	1 31/32
	H250-TB	H250A	2 1/2	3 3/4	2 9/16	1 9/16	1/4	2 13/32
	H300-TB	H300A	3	4 3/8	2 21/32	1 19/32	1/4	2 31/32
	H350-TB	H350A	3 1/2	5	2 23/32	1 7/8	1/4	3 13/32
	H400-TB	H400A	4	5 1/2	2 23/32	1 7/8	1/4	3 7/8
	H500-TB	H500A	5	6 7/8	3 1/32	1 15/16	1/4	4 15/16
	H600-TB	H600A	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 chrome-plated hubs add suffix **CP** (i.e. H050CP).

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

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

Chrome-plated hubs (suffix-**CP**) are rated NEMA 4X.

For aluminum hubs add suffix **A** (i.e. H050A).

Rigid and intermediate metal conduit fittings

Hubs



Grounding hub



Diagram	Cat. no. zinc	Cat. no. aluminum	Trade size (in.)	Dimensions (in.)				
				Dia. (in.)			D Max. Panel Thickness	E Throat dia.
				A	B	C		
	H050GR-C	H050GRA-C	1/2	1 1/16	1 1/16	7/8	3/16	19/32
	H075GR-C	H075GRA-C	3/4	1 1/16	1 19/32	29/32	3/16	25/32
	H100GR-C	H100GRA-C	1	2	1 13/16	1 1/16	1/4	1
	H125GR-C	H125GRA-C	1 1/4	2 3/8	1 7/8	1 1/16	1/4	1 1/16
	H150GR-C	H150GRA-C	1 1/2	2 3/4	1 7/8	1 1/16	1/4	1 17/32
	H200GR-C	H200GRA-C	2	3 1/4	1 15/16	1 15/32	1/4	1 31/32
	H250GR-C	H250GRA-C	2 1/2	3 3/4	2 3/16	1 9/16	1/4	2 13/32
	H300GR-C	H300GRA-C	3	4 3/8	2 21/32	1 19/32	1/4	2 31/32
	H350GR-C	H350GRA-C	3 1/2	5	2 23/32	1 5/8	1/4	3 13/32
	H400GR-C	H400GRA-C	4	5 1/2	2 23/32	1 5/8	1/4	3 7/8
	H500GR-C	H500GRA-C	5	6 7/8	3 1/32	1 15/16	1/4	4 15/16
	H600GR-C	H600GRA-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 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
 UL 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.



Grounding and bonding locknut



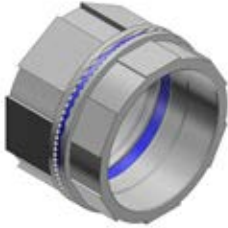
Diagram	Cat. no. with lay-in lug	Cat. no. without lay-in lug	Trade size (in.)	A dia. (in.)	B height (in.)	Ground screw (in.)	Max. conductor size (AWG)
	L050GRL	L050GR-C	1/2	1 1/2	13/32	#10-32 x 1/4	#10
	L075GRL	L075GR-C	3/4	1 11/16	13/32	#10-32 x 1/4	#10
	L100GRL	L100GR-C	1	2	13/32	#10-32 x 1/4	#10
	L125GRL	L125GR-C	1 1/4	2 3/8	15/32	1/4-20 x 1/4	#10
	L150GRL	L150GR-C	1 1/2	2 3/4	15/32	1/4-20 x 5/16	#8
	L200GRL	L200GR-C	2	3 1/4	15/32	1/4-20 x 5/16	#8
	L250GRL	L250GR-C	2 1/2	3 3/4	11/16	1/4-20 x 5/16	#6
	L300GRL	L300GR-C	3	4 3/8	23/32	1/4-20 x 5/16	#6
	L350GRL	L350GR-C	3 1/2	5	23/32	1/4-20 x 5/16	#6
	L400GRL	L400GR-C	4	5 1/2	23/32	1/4-20 x 5/16	#4

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).

Rigid and intermediate metal conduit fittings

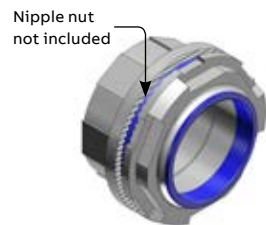
Bulkhead fittings



Bulkhead fittings



	Cat. no. zinc	Cat. no. aluminum	Trade size (in.)
Diagram 	H050BHD	H050BHDA	½
	H075BHD	H075BHDA	¾
	H100BHD	H100BHDA	1
	H125BHD	H125BHDA	1¼
	H150BHD	H150BHDA	1½
	H200BHD	H200BHDA	2
	H250BHD	H250BHDA	2½
	H300BHD	H300BHDA	3
	H350BHD	H350BHDA	3½
	H400BHD	H400BHDA	4
	H500BHD	H500BHDA	5
	H600BHD	H600BHDA	6



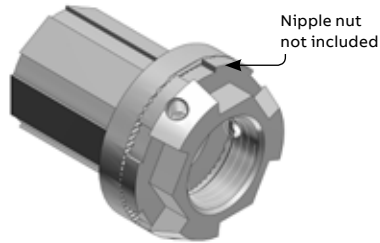
Thru-bulkhead fittings



Cat. no. zinc	Cat. no. aluminum	Size (in.)
H050TBF	H050TBFA	½
H075TBF	H075TBFA	¾
H100TBF	H100TBFA	1
H125TBF	H125TBFA	1¼
H150TBF	H150TBFA	1½
H200TBF	H200TBFA	2

Rigid and intermediate metal conduit fittings

Bulkhead fittings



Thru-bulkhead hub



Cat. no. zinc	Cat. no. aluminum	Size (in.)
H050TBH	H050TBHA	$\frac{1}{2}$
H075TBH	H075TBHA	$\frac{3}{4}$
H100TBH	H100TBHA	1
H125TBH	H125TBHA	$1\frac{1}{4}$
H150TBH	H150TBHA	$1\frac{1}{2}$
H200TBH	H200TBHA	2

Diagrams	Trade size (in.)	Thread (in.)	Height (in.)	Diameter (in.)	Across Flats (in.)	A (in.)	B (in.)
	$\frac{1}{2}$	$\frac{1}{2}$ -14	$1\frac{13}{32}$	$1\frac{7}{16}$	1	$\frac{3}{4}$	$\frac{1}{2}$
	$\frac{3}{4}$	$\frac{3}{4}$ -14	$1\frac{15}{32}$	$1\frac{11}{16}$	$1\frac{1}{4}$	$\frac{25}{32}$	$\frac{17}{32}$
	1	1-11 $\frac{1}{2}$	$1\frac{11}{16}$	2	$1\frac{17}{32}$	$\frac{29}{32}$	$\frac{19}{32}$
	$\frac{1}{4}$	1 $\frac{1}{4}$ -11 $\frac{1}{2}$	$1\frac{25}{32}$	$2\frac{3}{8}$	$1\frac{27}{32}$	$\frac{29}{32}$	$\frac{21}{32}$
	$1\frac{1}{2}$	1 $\frac{1}{2}$ -11 $\frac{1}{2}$	$1\frac{13}{16}$	$2\frac{3}{4}$	$1\frac{1}{8}$	$\frac{29}{32}$	$\frac{21}{32}$
	2	2-1 $\frac{1}{2}$	$1\frac{27}{32}$	$3\frac{1}{4}$	$2\frac{5}{8}$	$\frac{15}{16}$	$\frac{21}{32}$
	$2\frac{1}{2}$	$2\frac{1}{2}$ -8	$2\frac{9}{32}$	$3\frac{3}{4}$	$3\frac{1}{8}$	$\frac{17}{32}$	$\frac{7}{8}$
	3	3-8	$2\frac{9}{16}$	$4\frac{3}{8}$	$3\frac{25}{32}$	$\frac{15}{16}$	$\frac{29}{32}$
	$3\frac{1}{2}$	$3\frac{1}{2}$ -8	$2\frac{9}{16}$	5	$4\frac{9}{32}$	$1\frac{3}{8}$	$\frac{7}{8}$
	4	4-8	$2\frac{9}{16}$	$5\frac{1}{2}$	$4\frac{27}{32}$	$1\frac{3}{8}$	$\frac{7}{8}$
	5	5-8	$2\frac{23}{32}$	$6\frac{5}{8}$	$5\frac{29}{32}$	$1\frac{15}{32}$	$\frac{7}{8}$
	6	6-8	3	$7\frac{11}{16}$	$7\frac{1}{32}$	$1\frac{1}{2}$	$\frac{31}{32}$

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 chrome-plated bulkhead add suffix CP

Rigid and intermediate metal conduit fittings

XD expansion/deflection couplings for rigid conduit



Watertight, flexible connections support movement and thermal expansion.

Use the XD expansion/deflection coupling to join two conduit runs in applications where movement in any direction is required. The coupling provides a flexible, watertight connection, accommodating axial or parallel movement of up to $\frac{3}{4}$ in. and angular movement of up to 30° from normal position. While similar fittings exist on the market today, this XD expansion/deflection coupling ships complete with an Erickson® conduit union to significantly reduce installation time and effort and includes a stainless steel inner sleeve for extreme durability, protection and easier wire pulling.

The hubs are zinc-plated and then coated with aluminum acrylic paint for dual-layer corrosion protection. In addition, the copper ground mounting plates and internal grounding bonding jumper are entirely enclosed inside the coupling for added security against vandalism and theft.

- Accommodates axial expansion/contraction up to $\frac{3}{4}$ in., parallel deflection up to $\frac{3}{4}$ in. and angular misalignment up to 30°

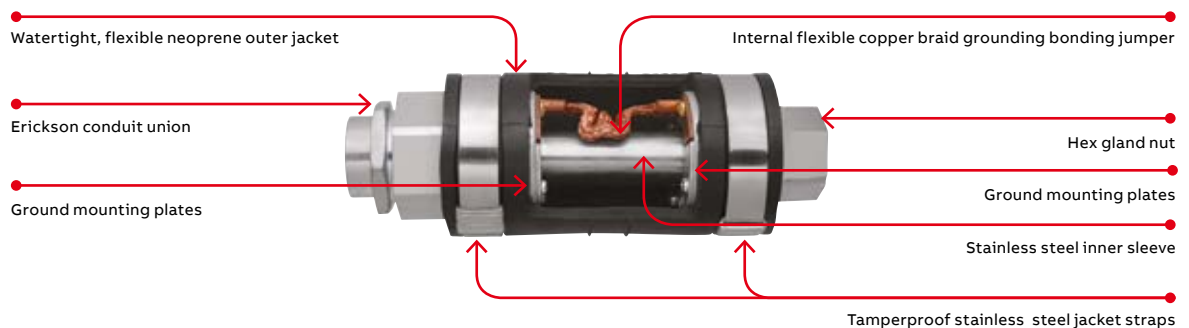
- Suitable for use indoors, outdoors, direct buried or embedded in concrete
- Watertight, flexible neoprene outer jacket, zinc-plated and acrylic-painted hubs and stainless steel tamper-proof straps ensure superior corrosion resistance – ideal for use in harsh environments
- Copper ground mounting plates and internal grounding bonding jumper both entirely enclosed to safeguard against theft
- Includes an Erickson conduit union for faster, easier installation to reduce labor costs
- Durable stainless steel inner sleeve provides a constant, smooth inner diameter in any position to ease wire pulling and protect wire insulation from damage
- NPT threaded hubs fit standard threaded rigid metal conduit
- Can also be used with rigid PVC conduit with the use of standard adapters (not supplied)

Standard material/finish

- Hub: Ductile cast iron, zinc-plated and aluminum acrylic painted
- Inner sleeve: Stainless steel
- Internal grounding bonding jumper: Flexible copper braid
- Ground mounting plates: Copper
- Hub rings: Zinc-plated steel
- Outer jacket: Molded neoprene (natural black)
- Jacket straps: Stainless steel

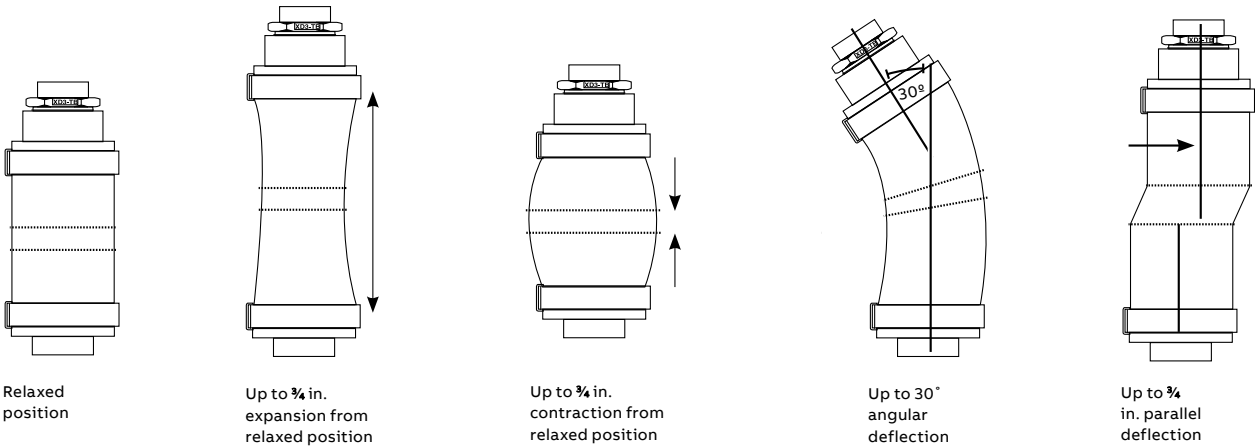
Certifications/compliances

- CSA Certified to C22.2 and UL Listed to UL 514B No. 18
- Suitable for wet locations (hub sizes 1 in.–2½ in.)
- Watertight
- NEC Article 250.98 compliant

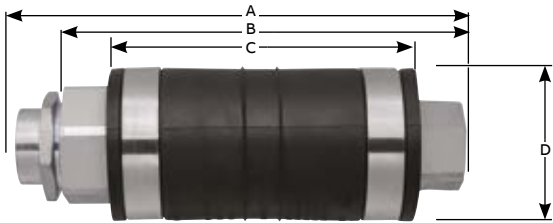


Rigid and intermediate metal conduit fittings

XD expansion/deflection couplings for rigid conduit



Dimensions (in.)					
Cat. no. (in.)	Hub size	A	B	C	D
XD3-TB	1	9 ¹³ / ₁₆	8 ¹⁵ / ₃₂	6 ⁷ / ₁₆	3 ¹¹ / ₃₂
XD4-TB	1 ¹ / ₄	9 ³ / ₁₆	8 ³ / ₈	6 ⁷ / ₈	3 ⁷ / ₈
XD5-TB	1 ¹ / ₂	9 ¹ / ₄	8 ⁷ / ₃₂	6 ³ / ₄	4 ⁵ / ₃₂
XD6-TB	2	9 ³ / ₄	8 ²¹ / ₃₂	7 ¹ / ₄	4 ¹¹ / ₁₆
XD7-TB	2 ¹ / ₂	11 ³ / ₄	11 ³ / ₈	8 ¹ / ₂	4 ⁷ / ₈
XD8-TB	3	10 ¹ / ₂	9 ²¹ / ₃₂	7 ²¹ / ₃₂	5 ¹⁵ / ₁₆
XD9-TB	3 ¹ / ₂	10 ⁹ / ₁₆	9 ³ / ₄	7 ³ / ₄	6 ⁵ / ₈
XD010-TB	4	13 ³ / ₁₆	11 ²⁷ / ₃₂	8 ⁷ / ₈	7 ⁹ / ₃₂
XD012-TB	5	14	12 ¹⁵ / ₁₆	11	8 ⁹ / ₃₂
XD014-TB	6	14 ⁵ / ₁₆	13 ³ / ₈	11 ³ / ₈	9 ¹⁹ / ₃₂



Rigid and intermediate metal conduit fittings

XJG conduit expansion couplings for rigid conduit

01 Slide the fitting onto the conduit until it stops at the internal sliding bushing. Tighten and you're ready. No parts to reassemble.

02 With a wrench, tighten the gland nut to compress the Teflon® packing, creating a raintight seal around the conduit.

03 Thread the next length of conduit into the other end of the fitting and tighten. You're done.

04 4" movement shown

05 8" Movement shown

Easy to install – save time and money on the job. No disassembly required.

Used where:

- Raceways require expansion fittings to compensate for thermal expansion and contraction
- Expansion fittings and telescoping sections of metal raceway must be made electrically continuous by bonding jumpers or other means

Suggested specifications for expansion fittings for rigid steel or intermediate metal conduit.

- Fitting will be constructed from cast iron with exterior and interior zinc plating for corrosion protection
- The fitting shall be constructed so that disassembly is not required during installation
- Fitting shall be raintight after installation

- The fitting shall have an internal bonding jumper constructed of a copper braid, sized to meet UL fault current test requirements and comply with bonding requirements – CEC article 10-612 and 10-614
- External bonding jumper shall not be required to comply with CEC requirements
- Accepted manufacturer: ABB – XJG-TB Series

Standard material/finish

- Body: Malleable or ductile iron, available PVC coated
- Internal bonding jumper: Copper braid
- Exterior and interior finish: Zinc plating, aluminum acrylic paint
- Packing: PTFE/synthetic fiber material (Teflon coated)

Teflon is a trademark of DuPont.



01



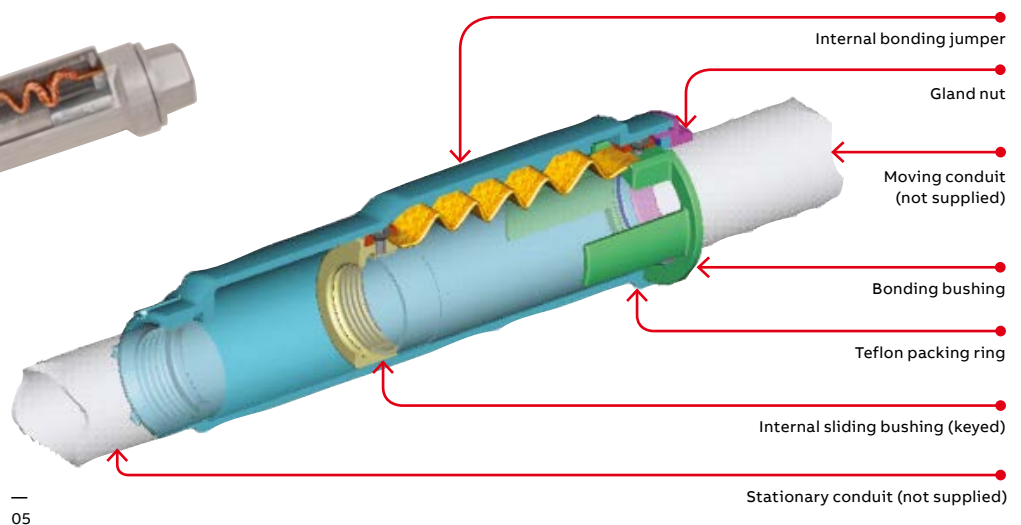
02



03



04



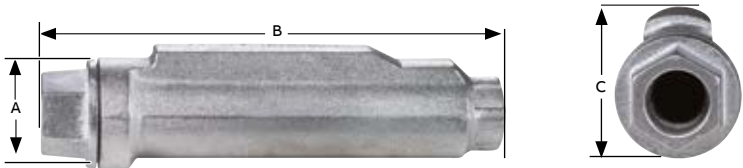
05

Rigid and intermediate metal conduit fittings

XJG conduit expansion couplings for rigid conduit



Cat. no.	Size (in.)	Movement (in.)	Dimensions (in.)		
			A	B	C
XJG24-TB	¾	4	2.43	10.00	2.75
XJG28-TB	¾	8	2.43	14.00	2.75
XJG34-TB	1	4	2.67	10.00	2.99
XJG38-TB	1	8	2.67	14.00	2.99
XJG44-TB	1¼	4	3.36	10.56	3.68
XJG48-TB	1¼	8	3.36	14.56	3.68
XJG54-TB	1½	4	3.36	10.56	3.68
XJG58-TB	1½	8	3.36	14.56	3.68
XJG64-TB	2	4	3.86	11.25	4.18
XJG68-TB	2	8	3.86	15.25	4.18
XJG74-TB	2½	4	4.96	12.12	5.25
XJG78-TB	2½	8	4.96	16.12	5.25
XJG84-TB	3	4	4.96	12.12	5.25
XJG88-TB	3	8	4.96	16.12	5.25
XJG94-TB	3½	4	6.37	12.87	6.75
XJG98-TB	3½	8	6.37	16.87	6.75
XJG104-TB	4	4	6.37	12.87	6.75
XJG108-TB	4	8	6.37	16.87	6.75
XJG1208-TB	5	8	7.99	18.87	8.56



Also available in Ocal™ PVC coating and for EMT.

Rigid and intermediate metal conduit fittings

XJG-EMT conduit expansion couplings for EMT



Features

- Fast and easy installation – no disassembly required
- No external grounding strap needed – internal bonding jumper is protected from tampering and the environment

Standard material/finish

- Body: Malleable or ductile iron
- Internal bonding jumper: Tinned copper braid
- Exterior and interior finish: Zinc plating, aluminum acrylic paint
- Packing: PTFE/synthetic fiber material

Certifications/compliances

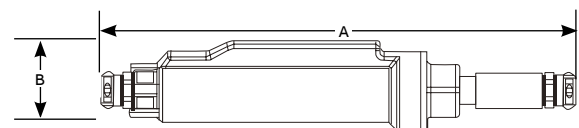
- CSA certified to C22.2 and UL Listed to UL 514B No. 18
- Suitable for wet locations (hub sizes 1 in.–2½ in.)
- NEC Article 250.98 compliant

Note: XJG-EMT couplings are not raintight and are for use in dry locations only. They are UL Listed for use with aluminum EMT.



Cat. no.	Size (in.)	Movement (in.)	A (length in.)	B (height in.)
XJG24-EMT	¾	4	17.39	2.75
XJG28-EMT	¾	8	21.39	2.75
XJG34-EMT	1	4	17.42	2.99
XJG38-EMT	1	8	21.42	2.99
XJG44-EMT	1¼	4	18.27	3.46
XJG48-EMT	1¼	8	22.27	3.46
XJG54-EMT	1½	4	18.69	3.68
XJG58-EMT	1½	8	22.69	3.68
XJG64-EMT	2	4	19.04	4.18
XJG68-EMT	2	8	23.04	4.18
XJG74-EMT	2½	4	23.23	4.52
XJG78-EMT	2½	8	27.23	4.52
XJG84-EMT	3	4	24.09	5.25
XJG88-EMT	3	8	28.09	5.25
XJG94-EMT	3½	4	28.70	6.00
XJG98-EMT	3½	8	28.70	6.00
XJG104-EMT	4	4	29.30	6.75
XJG108-EMT	4	8	29.30	6.75

Diagram



Rigid and intermediate metal conduit fittings

Rigid and capoffs



Offset reducers



	Cat. no. zinc	Cat. no. aluminum	Trade size (in.)	Height (in.)	Diameter (in.)	Dimensions (in.)				
						A	B	C	D	E
Diagrams 	H150-075ORGR-TB	H150-075ORGRA-TB	1½–¾	1 ²¹ / ₃₂	2¾	15 ¹ / ₁₆	23 ³ / ₃₂	1 ²⁹ / ₃₂	1¾	11 ¹ / ₃₂
	H150-100ORGR-TB	H150-100ORGRA-TB	1½–1	1 ²⁵ / ₃₂	2¾	1½	23 ³ / ₃₂	1 ²⁹ / ₃₂	1¾	7 ¹ / ₃₂
	H150-125ORGR-TB	H150-125ORGRA-TB	1½–1¼	1 ²⁵ / ₃₂	2¾	1½	23 ³ / ₃₂	1 ²⁹ / ₃₂	1¾	1¾
	H250-200ORGR-TB	H250-200ORGRA-TB	2½–2	2½	3¾	1¾	15 ¹ / ₁₆	2 ²⁹ / ₃₂	2½	3¾

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 chrome-plated offset reducer add suffix CP. (i.e. H150-125ORGRCP-TB)



Capoffs



	Cat. no. zinc	Cat. no. aluminum	Trade size (in.)	Height (in.)	Diameter (in.)	Dimensions (in.)		
						A	B	C
Diagrams 	H050CAP	H050CAPA	½	1 ¹³ / ₃₂	1½	19 ¹ / ₃₂	27 ¹ / ₃₂	3½
	H075CAP	H075CAPA	¾	1 ¹⁵ / ₃₂	1½	19 ¹ / ₃₂	1½	3½
	H100CAP	H100CAPA	1	1 ¹¹ / ₁₆	2	11 ¹ / ₁₆	1½	¾
	H125CAP	H125CAPA	1¼	1 ²⁵ / ₃₂	2¾	23 ³ / ₃₂	1 ²¹ / ₃₂	¾
	H150CAP	H150CAPA	1½	1 ¹³ / ₁₆	2¾	23 ³ / ₃₂	1 ²⁹ / ₃₂	¾
	H200CAP	H200CAPA	2	1 ²⁷ / ₃₂	3¾	23 ³ / ₃₂	2¾	¾
	H250CAP	H250CAPA	2½	2¾	3¾	7½	2 ²⁹ / ₃₂	¾
	H300CAP	H300CAPA	3	2¾	4¾	7½	3½	11 ¹ / ₃₂
	H350CAP	H350CAPA	3½	2¾	5	29 ¹ / ₃₂	4½	11 ¹ / ₃₂
	H400CAP	H400CAPA	4	2¾	5½	29 ¹ / ₃₂	4½	11 ¹ / ₃₂
	H500CAP	H500CAPA	5	2 ²³ / ₃₂	6¾	29 ¹ / ₃₂	5¾	11 ¹ / ₃₂
	H600CAP	H600CAPA	6	3	7¾	31 ¹ / ₃₂	6¾	11 ¹ / 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 chrome-plated capoff add suffix CP. (i.e. H050CAPCP)

Rigid and intermediate metal conduit fittings

Threadless fittings/couplings for threadless rigid metal conduit and intermediate metal conduit

— 01 8123 Series

— 02 8130 Series

— 03 8120 Series

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 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 (½ in. through 1½ in. size) and 20,000 amps RMS (2 in. and above sizes), duration of current 3 cycles

Standard material

- Nut, gland: ½ in. to 1 in. steel, 1¼ in. to 4 in. malleable iron
- Body: All malleable iron
- Ring: Steel (case-hardened)
- Insulator: Nylon
- Locknut: ½ in. through 2 in. steel (hardened) 2 in. through 4 in. malleable iron

Standard finish

- Electro zinc plated and chromate coated

Range

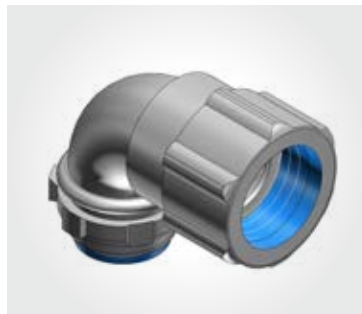
- 8123 and 8120 Series: ½ in. through 4 in. size conduit
- 8130 Series: ½ in. and ¾ in. size conduit
- All hub threads: Straight pipe (NPS)

Conformity

- UL 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)



— 01



— 02



— 03

Rigid and intermediate metal conduit fittings

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.

Nylon-insulated threadless fittings



	Cat. no.		Conduit size (in.)	Dimensions (in.)		
	Nylon insulated	Non-insulated		A	B	C
Diagram 	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	1 1/16
	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



Threadless couplings

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



	Cat. no.	Size (in.)	Dimensions (in.)	
			A	B
Diagram 	8120	1/2	1 9/32	2
	8220	3/4	1 19/32	2 3/16
	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



Threadless short elbows – Nylon-insulated

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 construction.



	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
Diagram 	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

Rigid and intermediate metal conduit fittings

Set-screw fittings/couplings for threadless rigid metal conduit and intermediate metal conduit

—
01 8125 Series
—
02 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:
 - (1) Prevents thinning of insulation
 - (2) Reduces installation effort
 - (3) Prevents first thread damage
- Coupling provided with positive center stop
- Suitable for concrete-tight application
- Capable of carrying ground fault currents up to 10,000 amps RMS ($\frac{1}{2}$ through $1\frac{1}{2}$ in. size) and 20,000 amps RMS (2 in. and above sizes)

Standard material

- Body: $\frac{1}{2}$ in. through 2 in. steel
2 $\frac{1}{2}$ in. through 4 in. malleable iron
- Locknut: $\frac{1}{2}$ in. through 2 in. steel (hardened)
2 $\frac{1}{2}$ in. through 4 in. malleable iron
- Screw: Steel (hardened)
- Insulator: Nylon

Standard finish

- Electro zinc plated and chromate coated

Conformity

- UL 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)



—
01



—
02

Rigid and intermediate metal conduit fittings

Set-screw fittings/couplings for threadless rigid metal conduit and intermediate metal conduit



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 fittings



Diagram	Cat. no.	Conduit size (in.)	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	35/64
	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 in.–2 in. made of steel. Sizes 2 1/2 in.–4 in. are malleable iron



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 couplings



Diagram	Cat. no.	Conduit size (in.)	Dimensions (in.)
			A
	8124	1/2	2 1/2
	8224	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 3/8
	8724-TB	2 1/2	3 7/8
	8824-TB	3	4 1/4
	8974	4	5 3/8

Sizes 1/2 in.–2 in. made of steel; sizes 2 1/2 in.–4 in. are malleable iron

Rigid and intermediate metal conduit fittings

Elbows



Bushed elbows

The non-insulated elbow has smoothly rounded shoulders to protect conductor insulation. Malleable iron.



Diagram	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
	460TB	$\frac{1}{2}$	$1\frac{13}{16}$	$1\frac{1}{8}$	$\frac{5}{8}$
	461TB	$\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{1}{2}$	$\frac{9}{16}$
	462	1	$2\frac{23}{32}$	$1\frac{23}{32}$	$\frac{11}{16}$
	463	$1\frac{1}{4}$	$3\frac{1}{8}$	$2\frac{1}{16}$	$\frac{25}{32}$



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.



Diagram	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
	4290	$\frac{1}{2}$	$1\frac{7}{32}$	$1\frac{1}{4}$	$\frac{1}{2}$
	4291	$\frac{3}{4}$	$1\frac{7}{16}$	$1\frac{5}{16}$	$\frac{9}{16}$
	4292	1	$1\frac{23}{32}$	$1\frac{9}{16}$	$\frac{11}{16}$
	4293	$1\frac{1}{4}$	$2\frac{7}{32}$	$2\frac{1}{16}$	$\frac{13}{16}$
	4294	$1\frac{1}{2}$	$2\frac{15}{32}$	$2\frac{3}{16}$	$\frac{13}{16}$

Not UL Listed

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

Short elbows



Diagram	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
	4250	$\frac{1}{2}$	$1\frac{5}{16}$	$1\frac{1}{4}$	$\frac{7}{16}$
	4251	$\frac{3}{4}$	$1\frac{17}{32}$	$1\frac{5}{16}$	$\frac{1}{2}$
	4252	1	$1\frac{13}{16}$	$1\frac{9}{16}$	$\frac{5}{8}$
	4253	$1\frac{1}{4}$	$2\frac{9}{32}$	$2\frac{1}{16}$	$\frac{11}{16}$
	4254	$1\frac{1}{2}$	$2\frac{9}{16}$	$2\frac{3}{16}$	$\frac{11}{16}$
	4255	2	$3\frac{3}{32}$	$2\frac{9}{16}$	$\frac{11}{16}$

Rigid and intermediate metal conduit fittings

Threaded (ERICKSON®) couplings for threaded rigid metal conduit and intermediate metal conduit



—
674 Series
675AL Series

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 (½ in. through 1½ in. size) and up to 20,000 amps RMS (2 in. and above) (duration of fault current 3 cycles) (674 series tested)

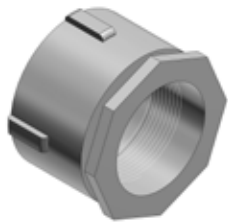
Standard material

674 Series

- Bushing and body: malleable iron
- Ring: steel up to 2 in. or malleable iron

675AL Series

- Bushing and body: aluminum
- Ring: aluminum



ERICKSON couplings

Standard finish

- 674 Series: Electro zinc plated and chromate coated
- 675AL Series: Degreased

Range

- 674 Series: ⅜ in. through 6 in. conduit
- 675AL Series: ½ in. through 6 in. conduit
- All straight pipe threads (NPS)

Conformity

- UL 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.



Diagram	Cat. no.	Dimensions (in.)			
	Mal. iron	Alum.*	Size (in.)	A	B
	674	—	⅜	1 ⅛	1 ⅛
	675	675AL	½	1 ⅝ ₃₂	1 ¼
	676	676AL	¾	1 ⅞ ₁₆	1 ⅓ ₃₂
	677	677AL	1	1 29 ₃₂	1 ⅝
	678	678AL	1 ¼	2 ⅜	1 ⅓ ₁₆
	679	679AL	1 ½	2 ⅝	1 31 ₃₂
	680-TB	680AL	2	3 7 ₃₂	2 7 ₃₂
	681	681AL	2 ½	3 3 ₃₂	2 11 ₁₆
	682	682AL	3	4 7 ₁₆	2 29 ₃₂
	683	683AL	3 ½	5	3
	684	684AL	4	5 ½	3 3 ₁₆
	685	685AL†	4 ½	6 ¼	3 15 ₃₂
	686	686AL	5	6 25 ₃₂	3 ¾
	687	687AL	6	8	4 ½ ₃₂

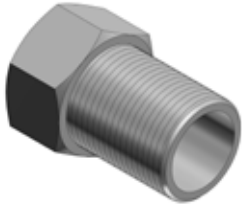
* Copper-free aluminum (less than 0.4% copper)

UL Listed and CSA Certified concrete-tight

† Not CSA Certified

Rigid and intermediate metal conduit fittings

Extensions and enlargers

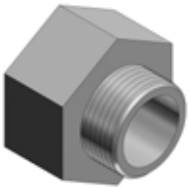


Ideal when longer thread length is needed. Will combine with any fitting having a male thread. Male thread of panel fitting extension is 1 in. long. Malleable iron.

Panel fitting extensions



	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
Diagram 	1440	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{3}{16}$	$1\frac{7}{8}$
	1441	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{13}{32}$	$1\frac{15}{16}$
	1442	1	$1\frac{3}{16}$	$1\frac{21}{32}$	$1\frac{15}{16}$
	1443	$1\frac{1}{4}$	$1\frac{1}{4}$	$2\frac{1}{8}$	2



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

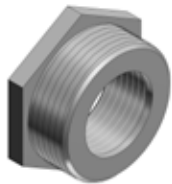
Male enlargers



	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
Diagram 	1245	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{3}{16}$	$1\frac{7}{8}$
	1246	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{13}{32}$	$1\frac{15}{16}$
	1244	1	$1\frac{3}{16}$	$1\frac{21}{32}$	$1\frac{15}{16}$
	1247	$1\frac{1}{4}$	$1\frac{1}{4}$	$2\frac{1}{8}$	2

Rigid and intermediate metal conduit fittings

Reducers

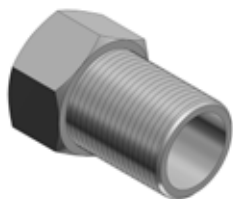


Female reducers

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



Diagram	Cat. no.	Size (in.)	Dimensions (in.)		
			A	B	C
	1250-TB	$\frac{3}{4}$ – $\frac{1}{2}$	$1\frac{1}{8}$	$\frac{5}{8}$	$\frac{3}{16}$
	1261	1 – $\frac{1}{2}$	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{3}{16}$
	1251	1 – $\frac{3}{4}$	$1\frac{3}{8}$	$1\frac{1}{16}$	$\frac{3}{16}$
	1262	$1\frac{1}{4}$ – $\frac{1}{2}$	$1\frac{13}{16}$	$2\frac{1}{32}$	$\frac{3}{16}$
	1263	$1\frac{1}{4}$ – $\frac{3}{4}$	$1\frac{13}{16}$	$2\frac{3}{32}$	$\frac{3}{16}$
	1252	$1\frac{1}{4}$ – 1	$1\frac{3}{4}$	$2\frac{5}{32}$	$\frac{7}{32}$
	1253	$1\frac{1}{2}$ – $1\frac{1}{4}$	2	$1\frac{13}{16}$	$\frac{1}{4}$
	1254	2 – $1\frac{1}{2}$	$2\frac{3}{8}$	$1\frac{3}{16}$	$\frac{9}{32}$
	1255	$2\frac{1}{2}$ – 2	3	$1\frac{1}{4}$	$\frac{3}{8}$
	1256	3 – $2\frac{1}{2}$	$3\frac{5}{8}$	$1\frac{1}{2}$	$\frac{1}{2}$
	1257	$3\frac{1}{2}$ – 3	$4\frac{1}{8}$	$1\frac{9}{16}$	$\frac{1}{2}$
	1258	4 – $3\frac{1}{2}$	$4\frac{5}{8}$	$1\frac{3}{16}$	$\frac{1}{2}$



Threaded reducers

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 through 606-TB, also 614 and 615.



Diagram	Cat. no.		Size (in.)	Dimensions (in.) A
	Stl. or M.I.	Alum.		
	600-TB	600AL-TB	$\frac{1}{2}$ – $\frac{3}{8}$	$\frac{5}{8}$
	601-TB	601AL-TB	$\frac{3}{4}$ – $\frac{1}{2}$	$1\frac{9}{32}$
	602-TB	602AL-TB	1 – $\frac{1}{2}$	$1\frac{9}{32}$
	603-TB	603AL-TB	1 – $\frac{3}{4}$	$1\frac{9}{32}$
	604-TB	604AL-TB	$1\frac{1}{4}$ – $\frac{1}{2}$	$1\frac{9}{32}$
	605-TB	605AL	$1\frac{1}{4}$ – $\frac{3}{4}$	$1\frac{9}{32}$
	606-TB	606AL	$1\frac{1}{4}$ – 1	$1\frac{11}{16}$
	607	607AL	$1\frac{1}{2}$ – $\frac{1}{2}$	$1\frac{15}{16}$
	608	608AL	$1\frac{1}{2}$ – $\frac{3}{4}$	$1\frac{15}{16}$
	609	609AL	$1\frac{1}{2}$ – 1	$1\frac{13}{32}$
	610	610AL	$1\frac{1}{2}$ – $1\frac{1}{4}$	$2\frac{7}{32}$
	611-TB	611AL	2 – $\frac{1}{2}$	$2\frac{23}{32}$
	612	612AL	2 – $\frac{3}{4}$	$1\frac{1}{16}$
	613	613AL	2 – 1	$1\frac{1}{16}$
	614-TB	614AL	2 – $1\frac{1}{4}$	$1\frac{1}{16}$
	615-TB	615AL	2 – $1\frac{1}{2}$	$2\frac{27}{32}$

Rigid and intermediate metal conduit fittings

Reducing washers



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

Reducing washers



Diagram	Cat. no.	Size (in.)	Dimensions (in.)	
			A	B
	3700	$\frac{3}{4}-\frac{3}{8}$	$1\frac{3}{8}$	$\frac{45}{64}$
	3701	$\frac{3}{4}-\frac{1}{2}$	$1\frac{3}{8}$	$\frac{7}{8}$
	3702	$1-\frac{3}{8}$	$1\frac{5}{8}$	$\frac{45}{64}$
	3703	$1-\frac{1}{2}$	$1\frac{5}{8}$	$\frac{7}{8}$
	3704	$1-\frac{3}{4}$	$1\frac{5}{8}$	$1\frac{3}{32}$
	3705-TB	$1\frac{1}{4}-\frac{3}{8}$	2	$\frac{45}{64}$
	3706	$1\frac{1}{4}-\frac{1}{2}$	2	$\frac{7}{8}$
	3707	$1\frac{1}{4}-\frac{3}{4}$	2	$1\frac{3}{32}$
	3708	$1\frac{1}{4}-1$	2	$1\frac{23}{64}$
	3709	$1\frac{1}{2}-\frac{3}{8}$	$2\frac{1}{4}$	$\frac{45}{64}$
	3710	$1\frac{1}{2}-\frac{1}{2}$	$2\frac{1}{4}$	$\frac{7}{8}$
	3711	$1\frac{1}{2}-\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{3}{32}$
	3712	$1\frac{1}{2}-1$	$2\frac{1}{4}$	$1\frac{23}{64}$
	3713	$1\frac{1}{2}-1\frac{1}{4}$	$2\frac{1}{4}$	$1\frac{23}{32}$
	3714	$2-\frac{1}{2}$	$2\frac{3}{4}$	$\frac{7}{8}$
	3715-TB	$2-\frac{3}{4}$	$2\frac{3}{4}$	$1\frac{3}{32}$
	3716	$2-1$	$2\frac{3}{4}$	$1\frac{23}{64}$
	3717	$2-1\frac{1}{4}$	$2\frac{3}{4}$	$1\frac{23}{32}$
	3718	$2-1\frac{1}{2}$	$2\frac{3}{4}$	$1\frac{31}{32}$

Rigid and intermediate metal conduit fittings

Conduit straps for threaded rigid metal conduit and intermediate metal conduit



—
1275 Series
1276AL Series

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

1276AL Series

- All copper-free aluminum

Standard finish

1275 Series

- Hot dipped galvanized

1276AL Series

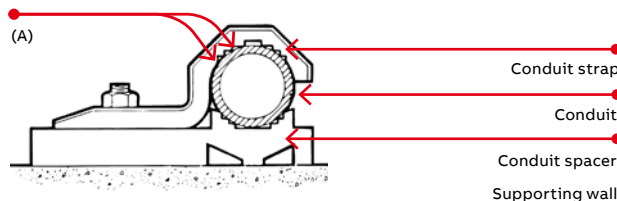
- As cast

Range

- 1275 Series
3/8 in. through 6 in. conduit
- 1276AL Series
1/2 in. through 6 in. conduit

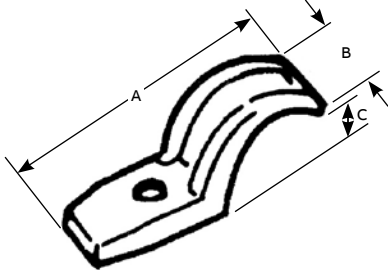
Conformity

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



Pipe straps – Malleable iron or aluminum



	Cat. no.		Size (in.)	Dimensions (in.)			Screw size (in.)
	Mal. iron	Alum.		A	B	C	
 Designed to fit each size of conduit snugly. High reinforcing ribs on each side increase strength, reduce weight. Hot-dipped galvanized finish.	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 3/16	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

UL not applicable

** Not CSA Certified

Rigid and intermediate metal conduit fittings

Conduit straps for threaded rigid metal conduit and intermediate metal conduit



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

Pipe straps – Steel



Diagram	Cat. no.	Conduit size (in.)	Dimensions (in.)			Screw size (in.)
			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 29/32	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
UL 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



Diagram	Cat. no.	Size (in.)	Bolt size (in.)	Dimensions (in.)		
				A	B	C
	1275CR	3/8	1/4	2	2 1/32	1/4
	1276CR	1/2	1/4	2 13/32	2 5/32	1/2
	1277CR	3/4	1/4	2 3/4	2 3/32	5/8
	1278CR	1	1/4	3 5/32	3/4	13/16
	1279CR	1 1/4	3/8	4 5/32	2 5/32	7/8
	1280CR	1 1/2	3/8	4 9/16	1	1 1/32
	1281CR	2	1/2	5 1/4	1 3/16	1 1/4

UL not applicable

Rigid and intermediate metal conduit fittings

Conduit spacers for rigid metal conduit, intermediate metal conduit and electrical metal tubing

—
01 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

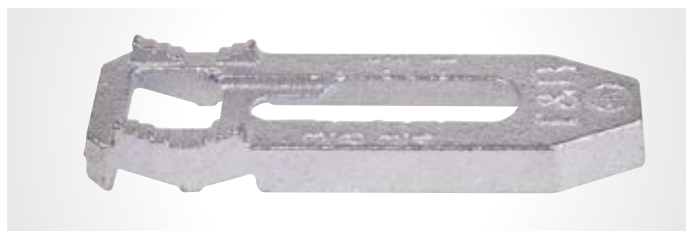
- As cast

Range

- ½ in. through 6 in. conduit

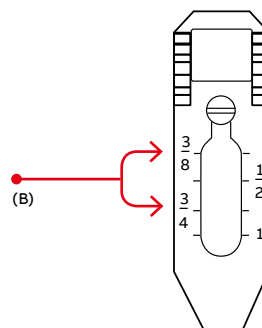
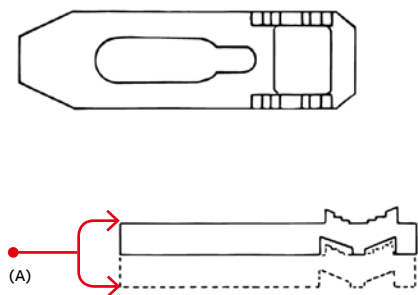
Conformity

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



—
01

Diagrams



Rigid and intermediate metal conduit fittings

Conduit spacers for rigid metal conduit, intermediate metal conduit and electrical metal tubing



—
Pipe spacers



Used with ABB 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.

Diagram	Cat. no.		Size (in.)	Screw size	Dimensions (in.)	
	Mal. Iron	Alum.			A	B
	1350	1350AL	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1	#7	3	$\frac{7}{8}$
	1351	1351AL	$1\frac{1}{4}$ – $1\frac{1}{2}$ –2	#12	5	$1\frac{3}{16}$
	1352	1352AL	$2\frac{1}{2}$ –3	#12	$9\frac{9}{16}$	$1\frac{3}{4}$
	1353	1353AL	$3\frac{1}{2}$ –4	#14	$7\frac{9}{16}$	2

Conforms to CEC Rule 12-012 (5)
UL 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.

Diagram	Cat. no.	Conduit size (in.)	Screw size	Dimensions (in.)	
				A	B
	1350CR	$\frac{1}{2}$ – $\frac{3}{4}$ –1	#7	3	$\frac{7}{8}$
	1351CR	$1\frac{1}{4}$ – $1\frac{1}{2}$ –2	#12	5	$\frac{3}{8}$
	1352CR	$2\frac{1}{2}$ –3	#12	$6\frac{9}{16}$	$1\frac{3}{4}$
	1353CR	$3\frac{1}{2}$ –4	#14	$7\frac{9}{16}$	2

Conforms to CEC Rule 12-012 (5)
UL not applicable

Rigid and intermediate metal conduit fittings

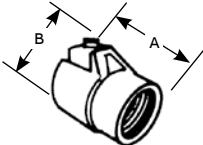
Couplings, beam clamps and conduit supports



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.

Tite-Bite combination couplings – Armoured cable to threaded rigid



Diagram	Cat. no.	Size (in.)	Dimensions (in.)	
			A	B
	440	½	1⅞	1 ²⁷ / ₃₂
	441	¾	1¾	2⅞
	442	1	2	2 ¹⁷ / ₃₂



Steel. Includes bolts.

Beam clamps – Adjustable



Cat. no.	Description
700TB	Fits flange 2¾ in. –7⅞ in.
703*	Special bolt and 3 nuts

* Not CSA Certified



These supports will fit any flange, tapered or straight up to ⅝ in. thick. The broad hook holds the conduit at any desired angle. Holds standard rigid conduit, EMT, or IMC. Malleable iron.

Conduit supports



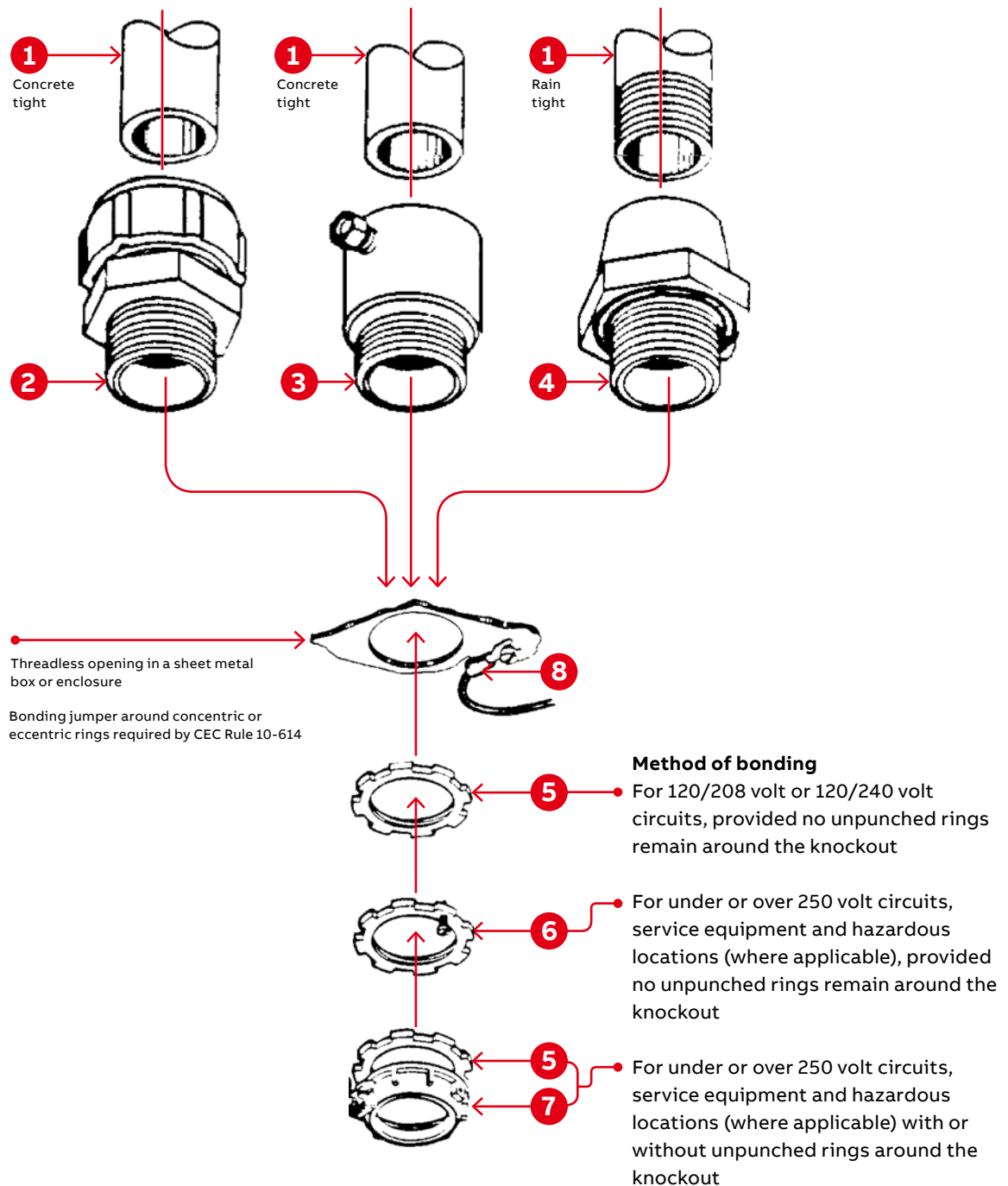
Cat. no.	Size (in.)
690TB	½
691TB	¾
692TB	1
693TB	1¼

Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

- (1) Threaded or threadless rigid metal conduit or intermediate metal conduit
- (2) Series 8123 or 8124 threadless fittings
- (3) Series 8125 set screw fitting
- (4) Series 370 or H050-TB sealing hub (Bullet Hubs)
- (5) Series 140 locknuts
- (6) Series 106 bonding locknut
- (7) Series 3870 bonding & grounding bushing
- (8) Sta-Kon® or Color-Keyed® lug

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.

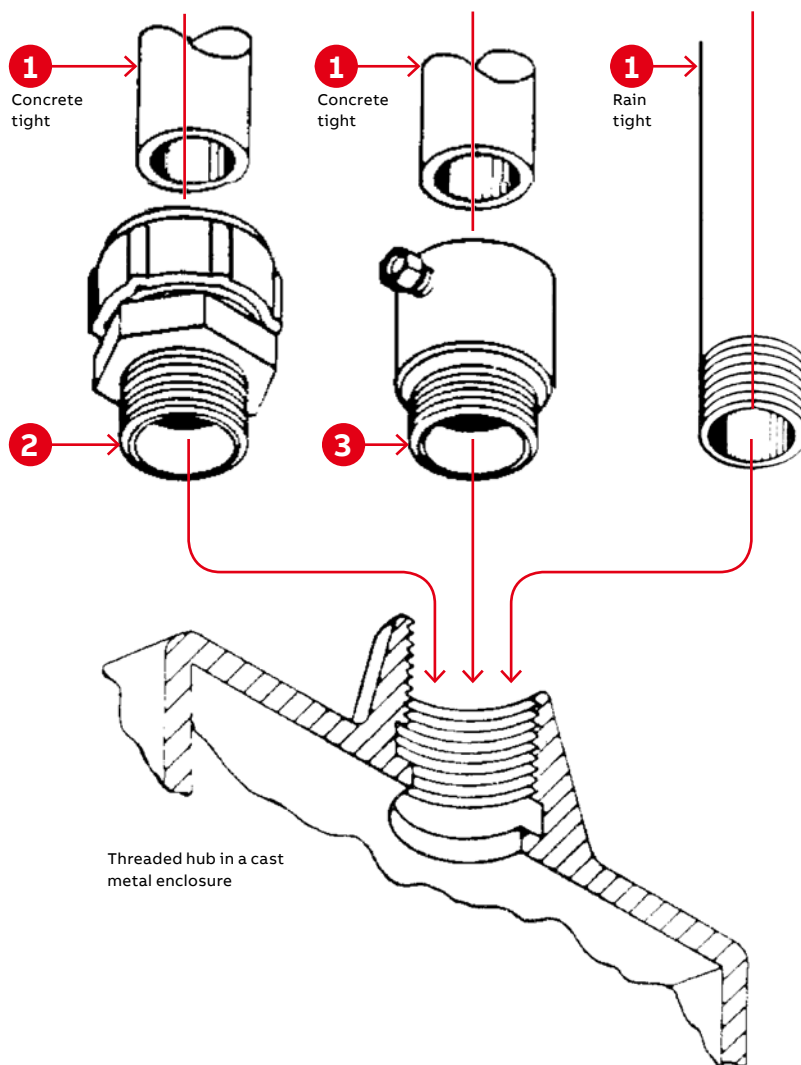


Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

(1) Threaded or threadless rigid metal conduit or intermediate metal conduit
 (2) Series 8123 threadless fitting
 (3) Series 8125 set screw fitting

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 volt circuits (CEC 10-610)
- (2) Over 250 volt circuits (CEC 10-610)
- (3) Service equipment (CEC 10-604)

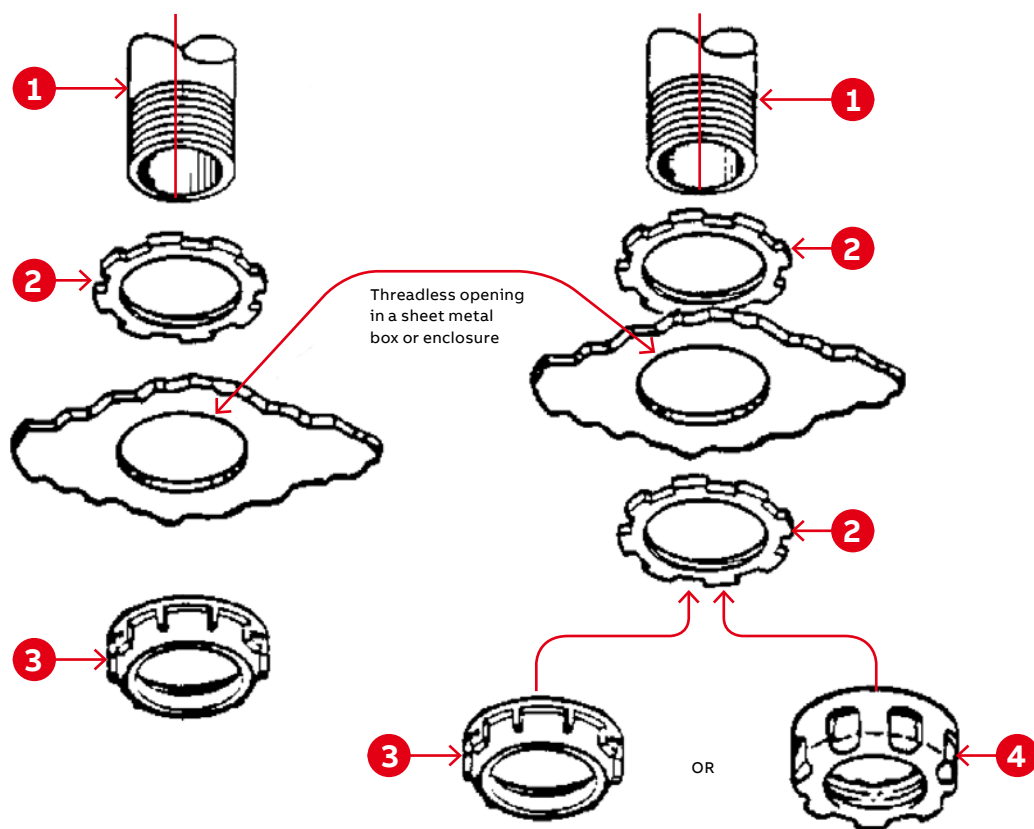
- (4) Hazardous locations 18-074 (where applicable)
- 18-124 (Class I, Zone 1)
- 18-160 (Class I, Zone 2)
- 18-218 (Class II, Division 1)
- 18-268 (Class II, Division 2)
- 18-316 (Class III, Division 1)
- 18-366 (Class III, Division 2)

Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

- (1) Threaded rigid metal conduit or intermediate metal conduit
- (2) Series 142 locknuts
- (3) Series 122 bushing metallic
- (4) Series 222 bushing plastic
- (5) Series 106 bonding locknut
- (6) Series 3650 bonding wedge

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 volt circuits (other than service equipment).

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

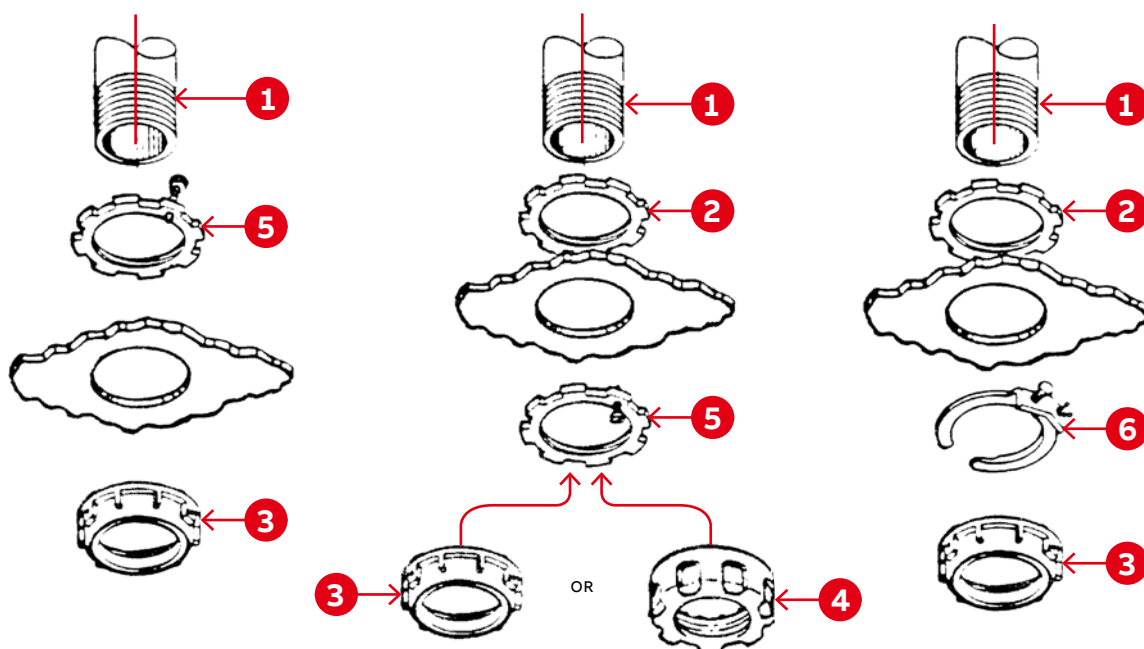
Method of bonding for over 250 volt circuits, e.g. 600/347 volt systems and those operating over 600 volts (other than service equipment).

Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

- (1) Threaded rigid metal conduit or intermediate metal conduit
- (2) Series 142 locknuts
- (3) Series 122 bushing metallic
- (4) Series 222 bushing plastic
- (5) Series 106 bonding locknut
- (6) Series 3650 bonding wedge

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.



Methods of bonding

For:

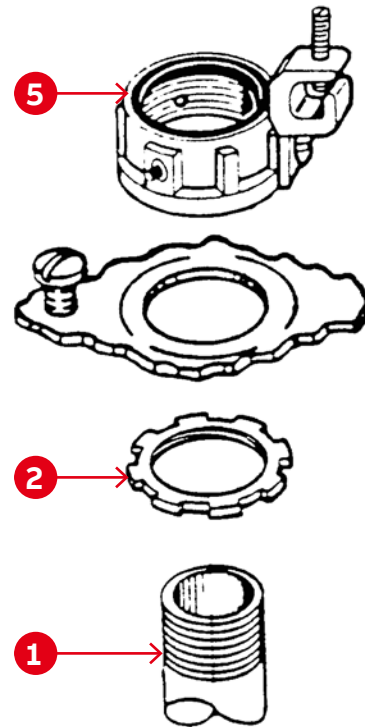
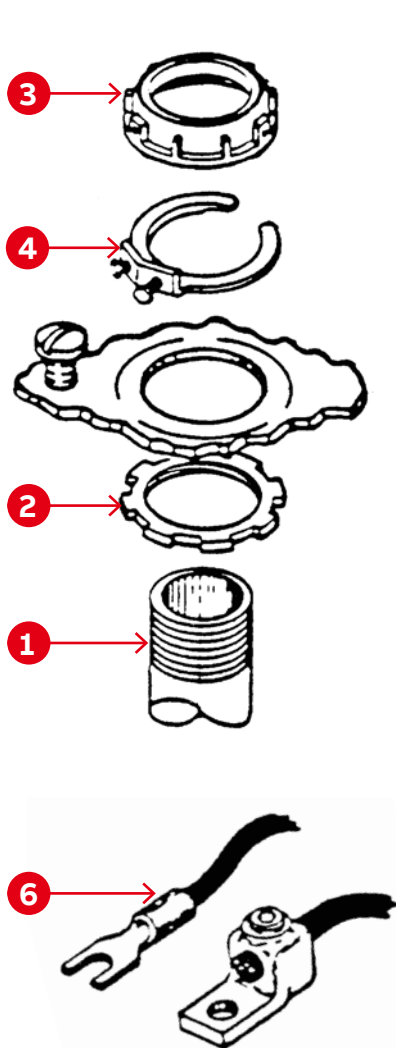
- (i) Over 250 volt circuit, e.g. 347/600-volt systems and those operating over 600 volts
- (ii) Service equipment
- (iii) Hazardous locations where applicable

Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

- (1) Threaded rigid metal conduit or intermediate metal conduit
- (2) Series 142 locknuts
- (3) Series 122 bushing, metallic
- (4) Series 3650 bonding wedge
- (5) Series 3870 bonding and grounding bushing
- (6) Typical mechanical or pressure type fitting

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.

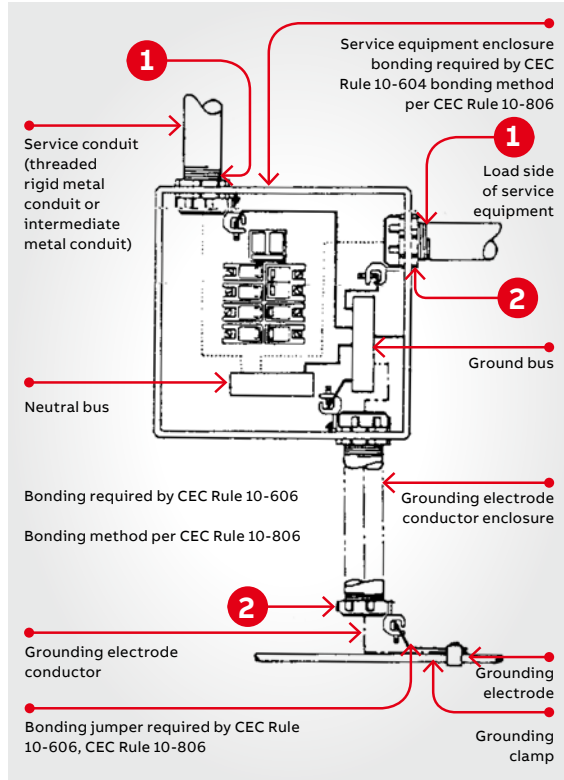
Note: Bonding jumper required by CEC Rule 10-614

Note: For raintight applications, a sealing ring, ABB series 5302, may be used between outside of box or enclosure and the outside locknut.

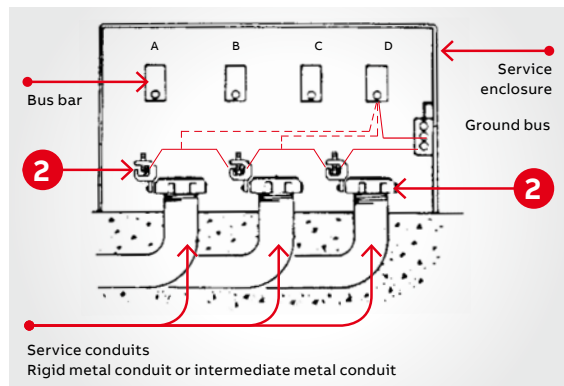
Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

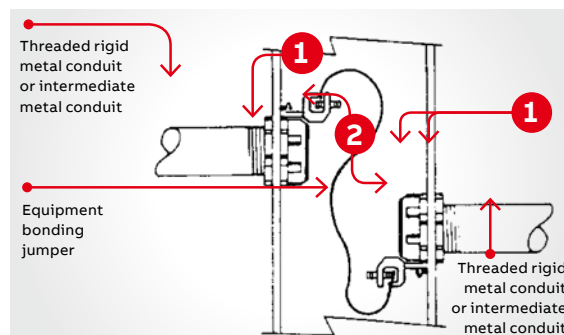
- 1 Series 142 locknut
- 2 Series 3870 bonding and grounding bushing (threaded)
- 3 Series 5262 sealing O-ring
- 4 Typical bolted or pressure lug
-
- 01 Bonding service equipment (CEC Rule 10-604)
-
- 02 Multiple bonding of service raceways where service entrance conductors are paralleled in two or more raceways, CEC Rule 10-614
-
- 03 Install bonding jumper to assure electrical continuity between isolated sections of raceways (CEC Rule 10-614)



01



02



03

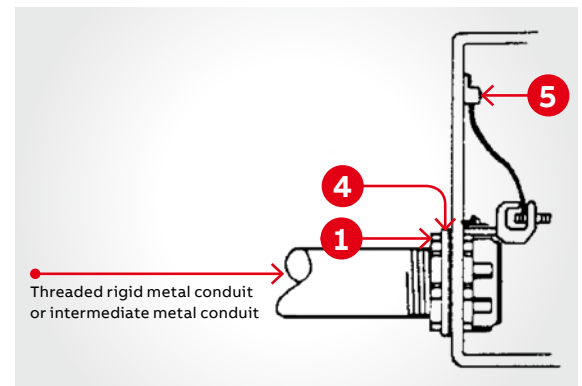
Suggested specifications

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 ABB.

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

- (1) Shall be of malleable iron/steel/aluminum construction adequately protected against corrosion.
- (2) Bushing insulator shall be listed or certified for 150 °C/302 °F application with a flammability rating of 94V-0. Insulator must be positively locked in place.



- (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)

Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

(1) Series 142 Locknut
(2) Series 106
bonding locknuts
(3) Series 122 bushing

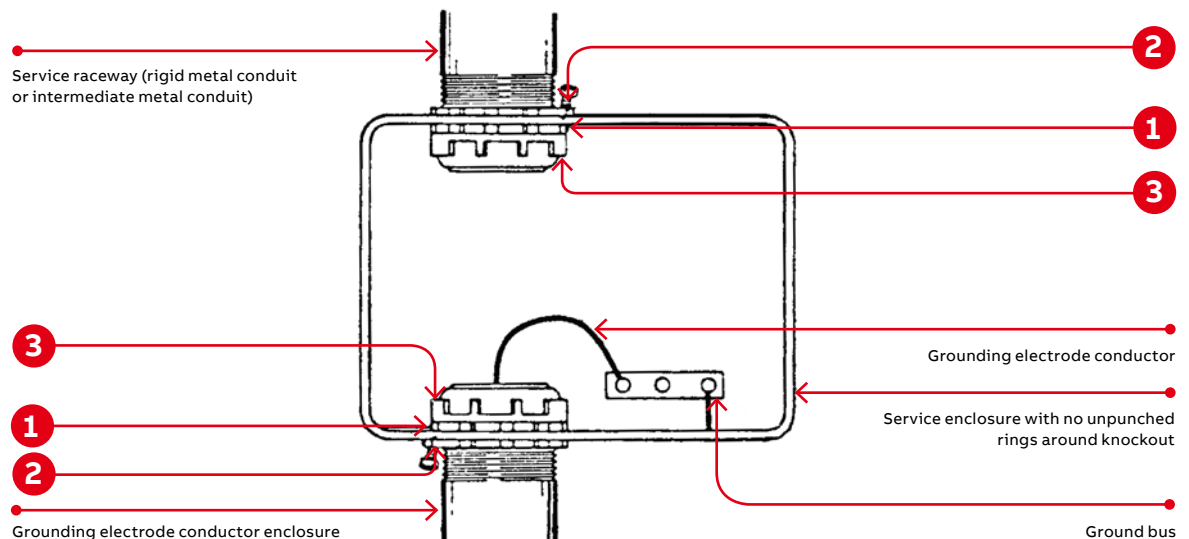
Suitable for bonding raceway, EMT or terminating fitting to a sheet metal box or enclosure where

- (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 ABB.



Rigid and intermediate metal conduit fittings

Methods of bonding and grounding

- (1) Series 142 locknut
- (2) Series 122 metallic bushing
- (3) Series 3651 bonding and grounding wedge
- (4) Pressure (crimp-type) terminal lug
- 01 Series 3651 bonding and grounding wedge

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 ABB – series 3650.

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

