

# Corrosion Protection for Electrical Conduit and Fittings

**Ocal<sup>®</sup>**

Conduit  
Conduit Accessories  
Ordinary Location Fittings  
Hazardous Location Fittings  
Strut  
Strut Accessories  
Installation Tools  
Cable Ties  
Hazardous Location  
Lighting Fixtures

*Effective May 2008*

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[www.tnb.com](http://www.tnb.com)

## Ocal® PVC-coated conduit and fittings and other T&B products — better by design to stand up to your most demanding corrosive environments.

# Ocal®

When you're dealing with the world's most corrosive environments, just any old PVC-coated conduit won't do.

- **Only OCAL-BLUE** conduit has hot-dipped galvanized threads to ensure that the molten zinc penetrates the steel
- **Only OCAL-BLUE** conduit offers a full undisturbed zinc coating under its PVC coating, fulfilling the requirements of NEMA RN-1
- **Only OCAL-BLUE** conduit has both its zinc coating and its PVC coating investigated and listed per UL6
- **Only OCAL-BLUE** conduit is UL listed for UV resistance
- **Only OCAL-BLUE** fittings are double-coated for extra corrosion protection with a layer of urethane not only on the interior, but also on the exterior under the PVC coating

Which line of PVC-coated conduit, fittings and accessories can you trust to provide a complete corrosion-protection package for your entire electrical raceway system, extending its life for years to come? **Only OCAL-BLUE.**

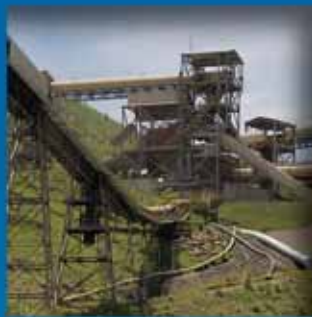
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### Food & Beverage Processing



### Mining



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### Transportation Infrastructure



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- Offering a best-of-class warranty and returns policy
- Uniform carton labeling with additional bar-coding for convenient inventory management
- Nationwide network of stocking electrical distributors
- Outstanding customer service capability
- Supplying you with the right products, convenient packaging, on-time delivery and competitive pricing

We deliver the solutions that make your job easier and offer the power to bring it all together in one package. Call us today and let us help you profit from sourcing your electrical products from the leader, Thomas & Betts.

# Thomas & Betts





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## Ocal®

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Ocal® Corrosion Protection for Electrical Conduit and Fittings



**Ocal®**

**Overview**

**Better by Design**

Ocal® Blue PVC-coated conduit and fittings represent a complete corrosion-protection package for your entire conduit system. This extensive product line includes the largest number of items in stock along with corrosion-resistant supports and patching compounds. With Ocal PVC-coated conduit and fittings, you get corrosion protection that will extend the life of your electrical raceway system for years and years.



**Only Ocal Offers These Advantages**

- Only Ocal PVC-coated conduit is UL Listed with both the zinc coating and the PVC coating investigated and listed per UL6.
- Only Ocal PVC-coated conduit has hot-dipped galvanized threads. Hot-dip galvanizing is the process through which the steel shell is dipped in molten zinc, causing the zinc to penetrate the steel.
- Only Ocal PVC-coated conduit offers a full undisturbed zinc coating under the PVC coating, fulfilling the requirement of NEMA RN-1 regarding undisturbed zinc coating over the conduit.
- Only Ocal PVC-coated conduit meets the requirements of NEMA RN-1 without exception.
- Only Ocal PVC-coated conduit is UL Listed for UV resistance.



- Only Ocal supplies "Double-Coat" coated fittings, enhancing corrosion protection by applying urethane to the interior and exterior of the fittings before PVC coating.
- Only Ocal offers custom colors.
- Only Ocal offers local installation training and certification.

**Standards Met**

- ANSI C80.1
- Federal Specification WW-C-581
- NEMA RN-1
- UL6

### What is corrosion?

Corrosive elements cause millions of dollars in damage through lost time, materials and labor.

### Examples of Corrosion



Ocal® Corrosion Protection for Electrical Conduit and Fittings

### Corrosion Protection of Electrical Conduit Systems

#### Corrosion Protection Options

CHEMICAL CATEGORY	CHEMICAL EXAMPLES	PVC	URETHANE	304	316	POLY-CARBONATE	CAST IRON	BRASS	ALUMINUM
				STAINLESS STEEL	STAINLESS STEEL				
COMPATIBILITY RATING									
Solvents (excluding alcohols and aliphatic)	Acetone, toluene, ketones, etc.	NR	NR	L	L	NR	L	L	L
Fuels	Jet fuel (alcohol based and aliphatic solvent based)	L	L	L	L	L	L	L	L
Plating Solutions	Chrome, nickel, copper, brass, gold, zinc, etc.	L	F	F	F	F	NR	NR	NR
Salts and Alkaline Materials	Caustic soda, caustic potash, alkaline cleaners, etc.	L	F	L	L	F	NR	NR	NR
Mild Acids	Low-concentration hydrochloric, sulfuric, fruit acids, glycolic, citric, etc.	L	S	L	L	S	NR	NR	NR
Strong or High-Purity Acids	Nitric, hydrofluoric, etc.	S	S	F	F	S	NR	NR	NR
Oxidizing Agents	Bleach, chlorine, hydrogen peroxide, etc.	L	S	L	L	S	NR	NR	NR

#### Chemical Compatibility Legend

SUITABILITY DESCRIPTION	COMPATIBILITY RATING
Rated for all Fumes, Splash & Liquid	L
Rated only for Fumes & Splash	S
Rated for Fumes only	F
Not Recommended	NR

The chart **above** provides a general guide for the end user to choose the most suitable material for his corrosion-protection needs. Compatibility with chemical environment should be thoroughly evaluated for each installation.

As you can see, PVC-coated conduit and fittings are suitable for almost all applications. When it comes to PVC-coated conduit systems, there is no higher quality than Ocal®.





# Ocal®

## Overview

### Ocal manufacturing process

#### Introduction

Ocal is the only PVC-coated conduit system in the industry to fully comply with all standards for proper use and protection in corrosive environments mandated by UL6, NEMA RN-1 and ANSI C80.1. It is manufactured right here in the United States by Thomas & Betts in our Jonesboro, AR manufacturing facility.

#### The Process of Manufacturing PVC-Coated Conduit

- 1 The process begins with 20-foot sticks of raw steel shell.
- 2 The steel shell is cut, threaded and prepared for the hot-dip galvanizing process.
- 3 The threaded shell is immersed in a molten zinc bath. This hot-dip galvanizing process enables the zinc to penetrate the steel, providing the best possible protection. After the conduit is extracted from the zinc bath, super-heated steam is blown through the interior and over the outside of the conduit to remove any slag. The ends of the conduit are heated enough to blow excess zinc out of the thread cavities. Thomas & Betts is the only manufacturer of steel conduit that hot-dip galvanizes the threads as well as the conduit itself. Other methods such as "hot galvanizing" provide only a sprayed-on zinc coating.
- 4 Prior to the exterior PVC coating, 2 mils (nominal) of blue urethane is applied to the inside diameter as well as the threads of each conduit. After priming, the conduit is heated and then rolled through liquid plastisol, achieving complete coverage of 40 mils in thickness.
- 5 Standard colors include gray, white and blue. Custom colors also available.



#### Ocal offers

- Plant walk-throughs
- Installation training and certification
- Installation tools
- The expertise to ensure that you get the maximum benefit of the Ocal-BLUE total protection system
- Manufacturing capabilities that ensure unmatched delivery time on custom orders, special colors or large quantities
- Protection of each shipment with special packaging for damage-free delivery

#### Superior Service

Our reputation for dependability and customer service has made Ocal the most trusted name in corrosion protection for the electrical industry.



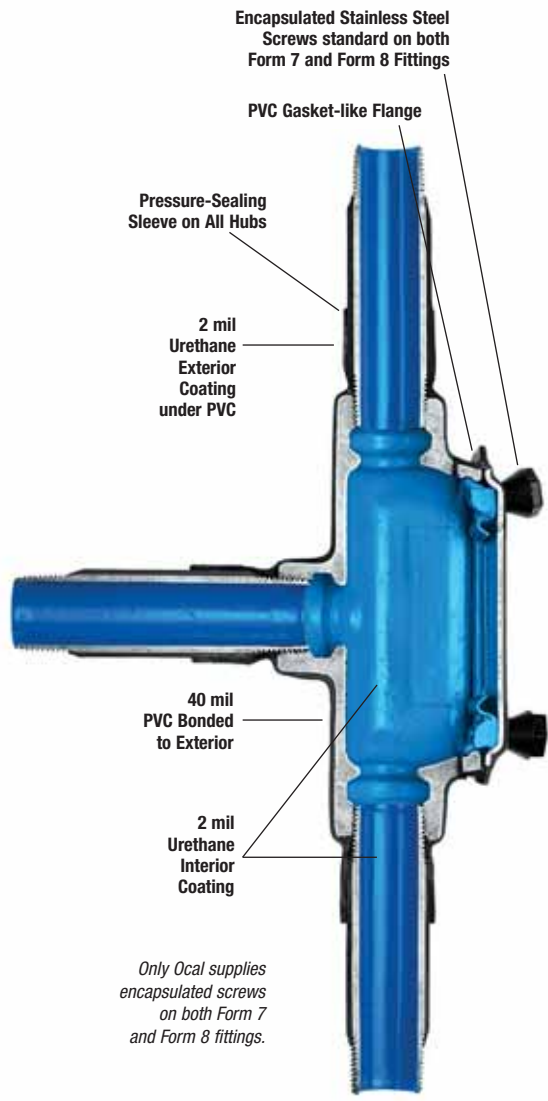
# Ocal®

## Overview

### Complete corrosion protection

Ocal has developed a process for coating the interior and exterior of all fittings with a nominal .002" (2 mils) of blue urethane, which is baked on. This proprietary application of urethane enhances the corrosion protection of your system, even if you accidentally nick or cut the PVC coating during installation.

Flexible, overlapping sleeves on all Ocal fittings guarantee protection with a vapor- and moisture-tight seal at every connection.



### The Process of Manufacturing PVC-Coated Fittings

- 1 Fittings are cleaned and then sprayed inside and outside with 2 mils (nominal) of blue urethane. This gives the fittings corrosion protection on the exterior as well as the interior — all fittings are “double-coated.”
- 2 40 mils of PVC is applied to the exterior of the fitting.
- 3 Covers are coated with a molded flange, and conduit bodies are molded with a flat surface to ensure a superior seal.
- 4 Standard colors include gray, white and blue. Custom colors also available.

*Thomas & Betts works hard to provide the only standards-compliant PVC-coated conduit on the market today. It is this dedication to superior quality that makes Ocal “Better by Design.”*

**Ocal® Corrosion Protection for Electrical Conduit and Fittings**



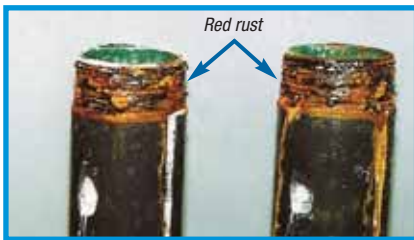
## Evaluating corrosion protection of PVC-coated conduit

When evaluating any electrical raceway conduit or fittings, **applicable standards** should be referenced. The three standards that address the design and performance of PVC-coated rigid steel conduit are **ANSI C80.1, UL6 and NEMA RN-1**. ANSI C80.1, UL and NEMA have determined the appropriate ASTM standards and test methods that apply.

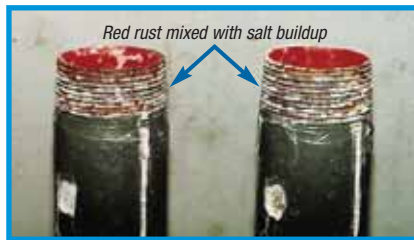
### Hot-Dip Galvanized Threads

Since electrical conduit systems breathe, the threads will be exposed to the corrosive environment for the duration of the installation. NEMA RN-1-2005 is the electrical industry's standard for PVC externally coated galvanized rigid steel conduit. Section 2.1 of this standard states, "Where unusually corrosive environments are encountered, it is recommended that threads be given additional protection suitable for the intended application." Hot-dip galvanizing is the process through which the steel shell is dipped in molten zinc, causing the zinc to penetrate the steel. Only Ocal hot-dip galvanizes the threads of the conduit, in addition to the conduit itself. This gives the threads the protection necessary in corrosive environments.

A compelling demonstration of the protection hot-dip galvanizing provides is shown below, using a common corrosive agent, salt, on hot-dip galvanized threads versus threads that are spray galvanized. UL6, the standard for rigid metal conduit, references ASTM B117 for evaluating protective coatings. Below are the results of a salt-fog test using the standard test method ASTM B117.



Examples of Spray-Galvanized (Hot-Galvanized) Threads after 42-day salt-fog test



Examples of Hot-Dip Galvanized Threads after 42-day salt-fog test

## Galvanized conduit underneath the PVC coating — Preece Test



With so much riding on the integrity of their electrical conduit systems, facilities need the superior protection offered by the Thomas & Betts Ocal PVC-coated conduit systems. The simple fact is that Ocal is the only PVC-coated conduit system to comply fully with the design and performance standards for PVC-coated conduit set forth by UL6, NEMA RN-1 and ANSI C80.1.

ANSI C80.1, UL6 and NEMA RN-1 have determined the appropriate ASTM standards and test methods that apply, and the Preece test is one test that must be passed to be in full compliance.

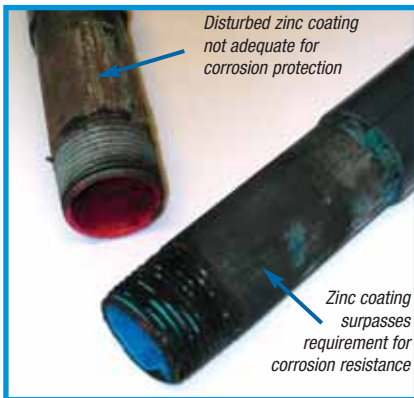
### Why is the Preece test relevant to PVC-coated conduit?

In cases where the PVC protection is accidentally breached, resulting from cuts, scrapes, etc., it is critical to have a second line of defense — a zinc, or galvanized, coating. The zinc coating will significantly slow corrosion and allow more time for repairs. Conduit systems without adequate zinc protection underneath the PVC coating are most likely to suffer catastrophic corrosion damage. This is why NEMA RN-1 section 3.1.1 requires the proper and correct treatment of galvanized conduit before it is PVC coated. It states, "The surface shall be cleaned in such a manner that the galvanized surface of the conduit is not harmed or eroded."

The purpose of the Preece test is to evaluate the zinc coating on galvanized rigid conduit to ensure adequate protection from corrosion per UL6.2.2. The test will also determine if the surface of the conduit has been damaged as a result of preparation for PVC coating.

In evaluating the test results, the conduit receives a passing grade when the sample does not show a bright, adherent deposit of copper after four 60-second immersions in the copper sulfate solution. The conduit showing the bright, firmly adhering copper has failed to provide adequate zinc protection against corrosion.

The Preece test follows procedures set forth by UL6.2.2 and ASTM A239 and is the test recognized by UL6, NEMA RN-1 and ANSI C80.1 to adequately assess zinc protection for rigid steel conduit. Only the Ocal line of PVC-coated conduit systems, manufactured by Thomas & Betts, complies with UL6, NEMA RN-1 and ANSI C80.1 without exception.





### Evaluating adhesion of PVC coating

The evaluation process for adhesion of PVC coating on conduit is governed by NEMA RN-1 section 3.8, Adhesion, which states, "The adhesion of the PVC coating to the conduit shall be greater than the strength of the coating itself." This adhesion test is straightforward and simple. There are no specialized conditions necessary to perform this test. Ocal routinely performs quality-control testing — including the adhesion test — on conduit as it rolls off the line. Conduit that passes this test demonstrates that the adhesion will provide years of trouble-free service.

The following demonstration shows Ocal PVC-coated conduit being subjected to the adhesion test.



**Step 1** consists of two cuts through the plastic to the substrate along the length of the conduit, approximately 1/2" apart and 3" to 4" in length. A third, perpendicular cut crosses the lengthwise parallel cuts.



**Step 2** calls for the edge of the PVC that was cut on the perpendicular to be carefully lifted to form a plastic tab.



In **Step 3**, the tab is pulled perpendicular to the conduit with a pair of pliers. The plastic tab will tear off rather than having any peeling effect or the coating separating from the substrate.



**Step 4** is the evaluation of the test, which in this case, results in a passing grade for Ocal. This result is more testimony to the fact that Ocal is "Better by Design."

### Results

With Ocal PVC-coated conduit and fittings, you get corrosion protection that will extend the life of your electrical raceway systems for years and years.





# Ocal®

## PVC-Coated Conduit

The ultimate in corrosion protection!

### OCAL-BLUE Conduit

- Hot-dip galvanized steel or aluminum conduit
- Nominal .002" (2 mil) blue urethane coating on interior
- Hot-dipped galvanized threads (steel)
- Minimum .040" (40 mil) PVC coating on exterior — in your choice of blue, white, gray or custom colors
- Color-coded thread protectors
- Couplings shipped with conduit are packaged separately



Ocal® Corrosion Protection for Electrical Conduit and Fittings

CAT. NO.		PIPE SIZE IN. METRIC SIZE DESIGNATOR*	OUTSIDE DIAMETER STEEL ONLY IN. MM	OUTSIDE DIAMETER WITH PVC IN. MM	NOMINAL WALL THICKNESS STEEL ONLY IN. MM	NOMINAL WALL THICKNESS WITH PVC IN. MM	NOMINAL INSIDE DIAMETER IN. MM	CROSS SECTION AREA IN SQUARE IN. MM	LENGTH WITHOUT COUPLINGS FT. M	MINIMUM WEIGHT PER FOOT STEEL ONLY LBS. KG
STEEL	ALUMINUM									
<b>COND1/2-</b>	<b>COND1/2SA-</b>	<b>½</b>	<b>.84</b>	<b>.92</b>	<b>.10</b>	<b>.14</b>	<b>.63</b>	<b>.30</b>	<b>9' 11¼"</b>	<b>.79</b>
		16	21.30	23.30	2.64	3.56	16.10	7.72	3.03	35.83
<b>COND3/4-</b>	<b>COND3/4SA-</b>	<b>¾</b>	<b>1.05</b>	<b>1.13</b>	<b>.11</b>	<b>2.71</b>	<b>.84</b>	<b>.53</b>	<b>9' 11¼"</b>	<b>1.05</b>
		21	26.70	28.70	2.71	3.73	21.20	13.53	3.03	47.63
<b>COND1-</b>	<b>COND1SA-</b>	<b>1</b>	<b>1.32</b>	<b>1.40</b>	<b>.13</b>	<b>.17</b>	<b>1.06</b>	<b>.86</b>	<b>9' 11"</b>	<b>1.53</b>
		27	33.40	35.40	3.20	4.21	27.00	21.94	3.02	69.40
<b>COND1-1/4-</b>	<b>COND1-1/4SA-</b>	<b>1¼</b>	<b>1.66</b>	<b>1.74</b>	<b>.13</b>	<b>.17</b>	<b>1.39</b>	<b>1.50</b>	<b>9' 11"</b>	<b>2.01</b>
		35	42.20	44.10	3.37	4.39	35.40	37.97	3.02	91.17
<b>COND1-1/2-</b>	<b>COND1-1/2SA-</b>	<b>1½</b>	<b>1.90</b>	<b>1.98</b>	<b>.14</b>	<b>.18</b>	<b>1.62</b>	<b>2.04</b>	<b>9' 11"</b>	<b>2.40</b>
		41	48.30	50.20	3.50	4.52	41.20	51.71	3.02	112.95
<b>COND2-</b>	<b>COND2SA-</b>	<b>2</b>	<b>2.38</b>	<b>2.46</b>	<b>.15</b>	<b>.19</b>	<b>2.08</b>	<b>3.36</b>	<b>9' 11"</b>	<b>3.32</b>
		53	60.30	62.30	3.70	4.72	52.90	85.21	3.02	150.60
<b>COND2-1/2-</b>	<b>COND2-1/2SA-</b>	<b>2½</b>	<b>2.88</b>	<b>2.96</b>	<b>.19</b>	<b>.23</b>	<b>2.49</b>	<b>4.80</b>	<b>9' 10½"</b>	<b>5.27</b>
		63	73.00	75.00	4.90	5.91	63.20	121.61	3.01	239.05
<b>COND3-</b>	<b>COND3SA-</b>	<b>3</b>	<b>3.50</b>	<b>3.58</b>	<b>.21</b>	<b>.25</b>	<b>3.09</b>	<b>7.39</b>	<b>9' 10½"</b>	<b>6.83</b>
		78	88.90	90.90	5.20	6.22	78.50	187.80	3.01	309.63
<b>COND3-1/2-</b>	<b>COND3-1/2SA-</b>	<b>3½</b>	<b>4.00</b>	<b>4.08</b>	<b>.22</b>	<b>.26</b>	<b>3.57</b>	<b>9.87</b>	<b>9' 10¼"</b>	<b>8.31</b>
		91	101.60	103.60	5.46	6.47	90.70	250.60	3.00	376.94
<b>COND4-</b>	<b>COND4SA-</b>	<b>4</b>	<b>4.50</b>	<b>4.58</b>	<b>.23</b>	<b>.27</b>	<b>4.05</b>	<b>12.73</b>	<b>9' 10¼"</b>	<b>9.73</b>
		103	114.30	116.30	5.71	6.73	102.90	323.34	3.00	441.04
<b>COND5-</b>	<b>COND5SA-</b>	<b>5</b>	<b>5.56</b>	<b>5.64</b>	<b>.25</b>	<b>.29</b>	<b>5.07</b>	<b>20.01</b>	<b>9' 10"</b>	<b>13.14</b>
		129	141.30	143.30	6.22	7.23	128.90	508.15	3.00	595.85
<b>COND6-</b>	<b>COND6SA-</b>	<b>6</b>	<b>6.63</b>	<b>6.71</b>	<b>.27</b>	<b>.31</b>	<b>6.09</b>	<b>28.89</b>	<b>9' 10"</b>	<b>17.46</b>
		155	168.30	170.30	6.75	.78	154.80	733.83	3.00	791.67

NOTE – Inches and pounds are indicated in bold type. Metric measure is directly below bold type.  
\* Metric size designator (ANSI C80.1-1994).

Cat. No.	Size	Material	Color
<b>COND3/4</b>	<b>—</b>	<b>—</b>	<b>—</b>
		Blank = Steel	— = space for color identifier
		SA = Aluminum	G = Gray
			W = White
			B = Blue
<p>Catalog No. Example: COND3/4-G is ¾" steel conduit coated in gray PVC.</p> <p>Custom colors also available.</p>			



## PVC-Coated Conduit Couplings

Corrosion-protected connections for conduit sections.

### OCAL-BLUE Couplings

- Nominal .002" (2 mil) blue urethane coating on interior and threads
- Minimum .040" (40 mil) PVC coating bonded to exterior — in your choice of blue, white, gray or custom colors
- Straight threads (NPS)
- Molded ribs on outer coating for easy installation (up to and including 4" trade size)
- Pressure-sealing sleeves protect your connection

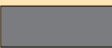




Ocal® Corrosion Protection for Electrical Conduit and Fittings

STEEL	ALUMINUM	COUPLING SIZE IN. METRIC SIZE DESIGNATOR*	MINIMUM LENGTH OF METAL	TOTAL MINIMUM LENGTH INCLUDING SLEEVE	WEIGHT STEEL ONLY
			IN. MM	IN. MM	LBS. KG
<b>CPL1/2-</b>	<b>CPL1/2SA-</b>	<b>½</b>	<b>1.50</b>	<b>3.75</b>	<b>.13</b>
		16	38.10	95.25	.06
<b>CPL3/4-</b>	<b>CPL3/4SA-</b>	<b>¾</b>	<b>1.53</b>	<b>3.75</b>	<b>.19</b>
		21	38.91	95.25	0.85
<b>CPL1-</b>	<b>CPL1SA-</b>	<b>1</b>	<b>1.91</b>	<b>4.94</b>	<b>0.33</b>
		27	48.41	139.70	.15
<b>CPL1-1/4-</b>	<b>CPL1-1/4SA-</b>	<b>1¼</b>	<b>1.91</b>	<b>5.50</b>	<b>0.43</b>
		35	48.41	139.70	.19
<b>CPL1-1/2-</b>	<b>CPL1-1/2SA-</b>	<b>1½</b>	<b>1.91</b>	<b>5.75</b>	<b>0.56</b>
		41	48.41	146.05	.25
<b>CPL2-</b>	<b>CPL2SA-</b>	<b>2</b>	<b>1.94</b>	<b>5.94</b>	<b>0.77</b>
		53	49.19	150.79	.35
<b>CPL2-1/2-</b>	<b>CPL2-1/2SA-</b>	<b>2½</b>	<b>2.88</b>	<b>6.88</b>	<b>1.85</b>
		63	73.10	174.70	.83
<b>CPL3-</b>	<b>CPL3SA-</b>	<b>3</b>	<b>3.03</b>	<b>7.03</b>	<b>2.70</b>
		78	76.98	178.58	1.22
<b>CPL3-1/2-</b>	<b>CPL3-1/2SA-</b>	<b>3½</b>	<b>3.09</b>	<b>7.09</b>	<b>3.78</b>
		91	78.58	180.18	1.70
<b>CPL4-</b>	<b>CPL4SA-</b>	<b>4</b>	<b>3.19</b>	<b>7.19</b>	<b>3.08</b>
		103	80.97	182.57	1.39
<b>CPL5-</b>	<b>CPL5SA-</b>	<b>5</b>	<b>3.37</b>	<b>7.37</b>	<b>5.00</b>
		129	85.69	187.29	2.25
<b>CPL6-</b>	<b>CPL6SA-</b>	<b>6</b>	<b>3.44</b>	<b>7.44</b>	<b>8.00</b>
		155	87.29	188.89	3.60

NOTE – Inches and pounds are indicated in bold type. Metric measure is directly below bold type.

\* Metric size designator (ANSI C80.1-1994).

Cat. No.	Size	Material	Color
<b>CPL3/4</b>	<b>___</b>	<b>___</b>	<b>___</b>
		Blank = Steel	___ = space for color identifier
		SA = Aluminum	G = Gray 
			W = White 
			B = Blue 
<b>Catalog No. Example:</b>			
CPL1SA-B is a 1" aluminum coupling coated in blue PVC.			
Custom colors also available.			





## PVC-Coated Conduit Split Couplings and Nipples

Join threaded conduit where you can't use a standard coupling.



TCC Split Coupling

### OCAL-BLUE Double-Coat Split Couplings

Split couplings serve as speed unions for cost-effective joining of two separate lengths of threaded conduit. Like other Ocal fittings, they're double coated in urethane and PVC to safeguard your entire conduit system against corrosion.

- Malleable iron construction
- Nominal .002" (2 mil) blue urethane on both interior and exterior
- Minimum .040" (40 mil) PVC bonded to exterior
- PVC coating in your choice of blue, white and gray standard colors with custom colors available on request
- Stainless steel hardware included

Cat. No.	Color
<b>TCC1 -</b>	—
— = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

Note: The use of standard couplings is recommended whenever possible over the use of split couplings, because standard couplings provide better overall corrosion protection.

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
TCC1-__	1/2 16
TCC2-__	3/4 21
TCC3-__	1 27
TCC4-__	1 1/4 35
TCC5-__	1 1/2 41
TCC6-__	2 53

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
TCC7-__	2 1/2 63
TCC8-__	3 78
TCC9-__	3 1/2 91
TCC10-__	4 103
TCC12-__	5 129
TCC14-__	6 155

\* Metric size designator (ANSI C80.1-1994).

Speed up your field installations with pre-threaded conduit nipples!

### OCAL-BLUE Nipples

- Made from Ocal PVC-coated steel or aluminum conduit
- Blue urethane coating over threads
- Nominal .002" (2 mil) blue urethane on interior
- Minimum .040" (40 mil) PVC coating on exterior — choose blue, white, gray or custom colors
- Color-coded thread protectors for easy identification of conduit size
- Available in 11 standard lengths — close and 2" to 12" with custom lengths available on request
- Close nipples are coated only in urethane



Cat. No.	Size x Length	Material	Color
<b>NPL3/4X6</b> __ -			—
		<b>Blank</b> = Steel	— = space for color identifier
		<b>SA</b> = Aluminum	<b>G</b> = Gray
			<b>W</b> = White
			<b>B</b> = Blue
			Custom colors also available.
<b>Catalog No. Example:</b>			
NPL3/4X6-G is a 3/4" x 6" long steel nipple coated in gray PVC.			

## PVC-Coated Conduit Nipples

### OCAL-BLUE Nipples (continued)

#### PVC-Coated Conduit Nipples — Steel

PIPE SIZE IN.	NIPPLE LENGTH											
	METRIC SIZE*	CLOSE	2" 50.8	2½" 63.5	3" 76.2	3½" 88.9	4" 101.6	5" 127.0	6" 152.4	8" 203.2	10" 254.0	12" 304.8
½	16	CLNPL1/2-	NPL1/2X2-	NPL1/2X21/2-	NPL1/2X3-	NPL1/2X31/2-	NPL1/2X4-	NPL1/2X5-	NPL1/2X6-	NPL1/2X8-	NPL1/2X10-	NPL1/2X12-
¾	21	CLNPL3/4-	NPL3/4X2-	NPL3/4X21/2-	NPL3/4X3-	NPL3/4X31/2-	NPL3/4X4-	NPL3/4X5-	NPL3/4X6-	NPL3/4X8-	NPL3/4X10-	NPL3/4X12-
1	27	CLNPL1-	NPL1X2-	NPL1X21/2-	NPL1X3-	NPL1X31/2-	NPL1X4-	NPL1X5-	NPL1X6-	NPL1X8-	NPL1X10-	NPL1X12-
1¼	35	CLNPL11/4-	NPL11/4X2-	NPL11/4X21/2-	NPL11/4X3-	NPL11/4X31/2-	NPL11/4X4-	NPL11/4X5-	NPL11/4X6-	NPL11/4X8-	NPL11/4X10-	NPL11/4X12-
1½	41	CLNPL11/2-	NPL11/2X2-	NPL11/2X21/2-	NPL11/2X3-	NPL11/2X31/2-	NPL11/2X4-	NPL11/2X5-	NPL11/2X6-	NPL11/2X8-	NPL11/2X10-	NPL11/2X12-
2	53	CLNPL2-	—	NPL2X21/2-	NPL2X3-	NPL2X31/2-	NPL2X4-	NPL2X5-	NPL2X6-	NPL2X8-	NPL2X10-	NPL2X12-
2½	63	CLNPL21/2-	—	—	—	NPL21/2X31/2-	NPL21/2X4-	NPL21/2X5-	NPL21/2X6-	NPL21/2X8-	NPL21/2X10-	NPL21/2X12-
3	78	CLNPL3-	—	—	—	NPL3X31/2-	NPL3X4-	NPL3X5-	NPL3X6-	NPL3X8-	NPL3X10-	NPL3X12-
3½	91	CLNPL31/2-	—	—	—	—	NPL31/2X4-	NPL31/2X5-	NPL31/2X6-	NPL31/2X8-	NPL31/2X10-	NPL31/2X12-
4	103	CLNPL4-	—	—	—	—	NPL4X4-	NPL4X5-	NPL4X6-	NPL4X8-	NPL4X10-	NPL4X12-
5	129	CLNPL5-	—	—	—	—	—	NPL5X5-	NPL5X6-	NPL5X8-	NPL5X10-	NPL5X12-
6	155	CLNPL6-	—	—	—	—	—	NPL6X5-	NPL6X6-	NPL6X8-	NPL6X10-	NPL6X12-

#### PVC-Coated Conduit Nipples — Aluminum

PIPE SIZE IN.	NIPPLE LENGTH											
	METRIC SIZE*	CLOSE	2" 50.8	2½" 63.5	3" 76.2	3½" 88.9	4" 101.6	5" 127.0	6" 152.4	8" 203.2	10" 254.0	12" 304.8
½	16	CLNPL1/2SA-	NPL1/2X2SA-	NPL1/2X21/2SA-	NPL1/2X3SA-	NPL1/2X31/2SA-	NPL1/2X4SA-	NPL1/2X5SA-	NPL1/2X6SA-	NPL1/2X8SA-	NPL1/2X10SA-	NPL1/2X12SA-
¾	21	CLNPL3/4SA-	NPL3/4X2SA-	NPL3/4X21/2SA-	NPL3/4X3SA-	NPL3/4X31/2SA-	NPL3/4X4SA-	NPL3/4X5SA-	NPL3/4X6SA-	NPL3/4X8SA-	NPL3/4X10SA-	NPL3/4X12SA-
1	27	CLNPL1SA-	NPL1X2SA-	NPL1X21/2SA-	NPL1X3SA-	NPL1X31/2SA-	NPL1X4SA-	NPL1X5SA-	NPL1X6SA-	NPL1X8SA-	NPL1X10SA-	NPL1X12SA-
1¼	35	CLNPL11/4SA-	NPL11/4X2SA-	NPL11/4X21/2SA-	NPL11/4X3SA-	NPL11/4X31/2SA-	NPL11/4X4SA-	NPL11/4X5SA-	NPL11/4X6SA-	NPL11/4X8SA-	NPL11/4X10SA-	NPL11/4X12SA-
1½	41	CLNPL11/2SA-	NPL11/2X2SA-	NPL11/2X21/2SA-	NPL11/2X3SA-	NPL11/2X31/2SA-	NPL11/2X4SA-	NPL11/2X5SA-	NPL11/2X6SA-	NPL11/2X8SA-	NPL11/2X10SA-	NPL11/2X12SA-
2	53	CLNPL2SA-	—	NPL2X21/2SA-	NPL2X3SA-	NPL2X31/2SA-	NPL2X4SA-	NPL2X5SA-	NPL2X6SA-	NPL2X8SA-	NPL2X10SA-	NPL2X12SA-
2½	63	CLNPL21/2SA-	—	—	—	NPL21/2X31/2SA-	NPL21/2X4SA-	NPL21/2X5SA-	NPL21/2X6SA-	NPL21/2X8SA-	NPL21/2X10SA-	NPL21/2X12SA-
3	78	CLNPL3SA-	—	—	—	NPL3X31/2SA-	NPL3X4SA-	NPL3X5SA-	NPL3X6SA-	NPL3X8SA-	NPL3X10SA-	NPL3X12SA-
3½	91	CLNPL31/2SA-	—	—	—	—	NPL31/2X4SA-	NPL31/2X5SA-	NPL31/2X6SA-	NPL31/2X8SA-	NPL31/2X10SA-	NPL31/2X12SA-
4	103	CLNPL4SA-	—	—	—	—	NPL4X4SA-	NPL4X5SA-	NPL4X6SA-	NPL4X8SA-	NPL4X10SA-	NPL4X12SA-
5	129	CLNPL5SA-	—	—	—	—	—	NPL5X5SA-	NPL5X6SA-	NPL5X8SA-	NPL5X10SA-	NPL5X12SA-
6	155	CLNPL6SA-	—	—	—	—	—	NPL6X5SA-	NPL6X6SA-	NPL6X8SA-	NPL6X10SA-	NPL6X12SA-

\* Metric size designator (ANSI C80.1-1994).

Ocal® Corrosion Protection for Electrical Conduit and Fittings



# Ocal®

## PVC-Coated Conduit Elbows

Factory bent to save wasted time and materials!

### OCAL-BLUE Standard-Radius Elbows

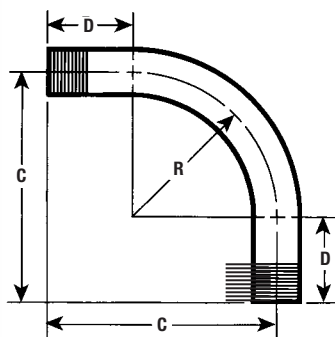
- Fabricated from Ocal PVC-coated conduit
- Standard radii in 30°, 45°, 60° and 90° available for immediate shipment
- Color-coded thread protectors for easy identification of conduit size



Ocal® Corrosion Protection for Electrical Conduit and Fittings

CAT. NO.		PIPE SIZE IN. METRIC SIZE DESIGNATOR*	RADIUS "R" IN. MM	OFFSET "C" IN. MM	STRAIGHT END "D" IN. MM	UNBENT LENGTH IN. MM	WEIGHT EACH STEEL ONLY LBS. KG
STEEL	ALUMINUM						
ELL1/2-_-	ELL1/2-_-SA-_-	1/2	4.00	6.00	2.00	10.28	.67
		16	101.60	152.40	50.80	261.19	16.95
ELL3/4-_-	ELL3/4-_-SA-_-	3/4	4.50	6.50	2.00	11.07	.95
		21	114.30	165.10	50.80	281.14	24.07
ELL1-_-	ELL1-_-SA-_-	1	5.75	8.00	2.25	13.53	1.77
		27	146.05	203.20	57.15	343.71	44.97
ELL1 1/4-_-	ELL1 1/4-_-SA-_-	1 1/4	7.25	9.50	2.25	15.89	2.55
		35	184.15	241.30	57.15	403.56	64.80
ELL1 1/2-_-	ELL1 1/2-_-SA-_-	1 1/2	8.25	11.00	2.75	18.46	3.98
		41	209.55	279.40	69.85	468.86	101.13
ELL2-_-	ELL2-_-SA-_-	2	9.50	13.00	3.50	21.92	6.33
		53	241.30	330.20	88.90	556.83	160.86
ELL2 1/2-_-	ELL2 1/2-_-SA-_-	2 1/2	10.50	14.00	3.50	23.49	9.65
		63	266.70	355.60	88.90	596.73	245.09
ELL3-_-	ELL3-_-SA-_-	3	13.00	16.50	3.50	27.42	15.42
		78	330.20	419.10	88.90	696.48	391.77
ELL3 1/2-_-	ELL3 1/2-_-SA-_-	3 1/2	15.00	20.75	5.75	35.06	23.30
		91	381.00	527.05	146.05	890.57	591.84
ELL4-_-	ELL4-_-SA-_-	4	16.00	21.75	5.75	36.63	29.68
		103	406.40	552.45	146.05	930.47	753.80
ELL5-_-	ELL5-_-SA-_-	5	24.00	31.00	7.00	51.70	60.82
		129	609.60	787.40	177.80	1313.16	1544.89
ELL6-_-	ELL6-_-SA-_-	6	30.00	39.00	9.00	65.12	85.69
		155	762.00	990.60	228.60	1654.15	2176.51

\* Metric size designator (ANSI C80.1-1994).



Item	Pipe Size	Angle	Material	Color
<b>ELL3/4</b>	-	-	-	-
		30 = 30°	Blank = Steel	G = Gray
		45 = 45°	SA = Aluminum	W = White
		60 = 60°		B = Blue
		Blank = 90°		Custom colors also available.

**Catalog No. Example:**  
ELL3/4SA-W is a 3/4" trade size 90° aluminum elbow coated in white PVC.



Choose the size and angle to meet your exact requirements.

### OCAL-BLUE Large-Radius Elbows

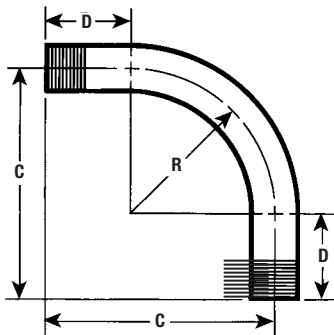
- Fabricated from Ocal PVC-coated conduit
- Large radius in 90° available for immediate shipment
- Special radii and angles not listed available upon request
- Color-coded thread protectors for easy identification of conduit size



Ocal® Corrosion Protection for Electrical Conduit and Fittings

CAT. NO.		PIPE SIZE	RADIUS "R"	OFFSET "C"	STRAIGHT END "D"	UNBENT LENGTH
STEEL	ALUMINUM	IN. METRIC SIZE DESIGNATOR*	IN. MM	FT./IN. MM	IN. MM	FT./IN. MM
LRELL_X12-_-	LRELL_X12-_-SA-_-	1 - 2½ 27 - 63	12.00 304.80	1' 9" 533.40	9.00 228.60	3' 0" 914.40
LRELL_X15-_-	LRELL_X15-_-SA-_-	1 - 3 27 - 78	15.00 381.00	2' 0" 609.60	9.00 228.60	3' 6" 1066.80
LRELL_X18-_-	LRELL_X18-_-SA-_-	1 - 4 27 - 103	18.00 457.20	2' 4" 711.20	10.00 254.00	4' 0" 1219.20
LRELL_X24-_-	LRELL_X24-_-SA-_-	1 - 4 27 - 103	24.00 609.60	2' 11" 889.00	11.00 279.40	4' 11" 1498.60
LRELL_X30-_-	LRELL_X30-_-SA-_-	1 - 6 27 - 155	30.00 762.00	3' 5" 1041.40	11.00 279.40	5' 9" 1752.60
LRELL_X36-_-	LRELL_X36-_-SA-_-	1 - 6 27 - 155	36.00 914.40	3' 11" 1193.80	11.00 279.40	6' 6" 1981.20
LRELL_X42-_-	LRELL_X42-_-SA-_-	1 - 6 27 - 155	42.00 1066.80	4' 6" 1371.60	12.00 304.80	7' 6" 2286.00
LRELL_X48-_-	LRELL_X48-_-SA-_-	1 - 6 27 - 155	48.00 1219.20	5' 0" 1524.00	12.00 304.80	8' 6" 2590.80
LRELL_X60-_-	LRELL_X60-_-SA-_-	2½ - 6 63 - 155	60.00 1524.00	6' 0" 1828.80	12.00 304.80	9' 10" 2997.20

\* Metric size designator (ANSI C80.1-1994).



Item	Pipe Size	Radius	Angle	Material	Color
<b>LRELL_X12</b>					
	1 = 1"		30 = 30°	Blank = Steel	G = Gray
	2 = 2"		45 = 45°	SA = Aluminum	
	etc.		60 = 60°		W = White
			Blank = 90°		
					B = Blue

**Catalog No. Example:**  
LRELL3X18-45-G is a 3" trade size steel elbow with a radius of 18" and an angle of 45°, coated in gray PVC.

Custom colors also available.




# Ocal®

## PVC-Coated Conduit Clamps and Straps

PVC coating evenly molded around saddle prevents exposure of metal — an Ocal exclusive!

### Ocal PVC-Coated Beam Clamps and U-Bolts

- Beam clamps support and attach conduit runs to structural beams
- Molded right-angle beam clamps and U-bolts provide extra protection
- Encapsulated, hex-shaped nuts fit standard wrenches
- Stainless steel hardware included
- Parallel (PAR) and edge (EC) clamps feature nominal .015" (15 mil) PVC coating for corrosion protection
- Right-Angle clamps (RA) and U-Bolts (UB) feature nominal .040" (40 mil) PVC coating for corrosion protection

Cat. No.	Color
<b>RA 1 -</b> _	
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	



#### PVC-Coated Beam Clamps



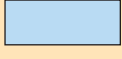
RIGHT ANGLE	CAT. NO.		PIPE SIZE	
	PARALLEL	EDGE	IN.	METRIC SIZE DESIGNATOR*
RA1/2-	PAR1/2-	EC1/2-	½	16
RA3/4-	PAR3/4-	EC3/4-	¾	21
RA1-	PAR1-	EC1-	1	27
RA1-1/4-	PAR1-1/4-	EC1-1/4-	1¼	35
RA1-1/2-	PAR1-1/2-	EC1-1/2-	1½	41
RA2-	PAR2-	EC2-	2	53
RA2-1/2-	PAR2-1/2-	—	2½	63
RA3-	PAR3-	—	3	78
RA3-1/2-	PAR3-1/2-	—	3½	91
RA4-	PAR4-	—	4	103



#### PVC-Coated U-Bolts

CAT. NO.	PIPE SIZE		"A" DIMENSION	
	IN.	METRIC SIZE DESIGNATOR*	IN.	MM
UB1/2-	½	16	1.38	34.93
UB3/4-	¾	21	1.56	39.69
UB1-	1	27	1.84	46.83
UB1-1/4-	1¼	35	2.19	55.56
UB1-1/2-	1½	41	2.50	63.50
UB2-	2	53	2.97	75.41
UB2-1/2-	2½	63	3.47	88.11
UB3-	3	78	4.09	103.98
UB3-1/2-	3½	91	4.59	116.68
UB4-	4	103	5.09	129.38
UB5-	5	129	6.63	168.28
UB6-	6	155	8.00	203.20

\* Metric size designator (ANSI C80.1-1994).

Item	Size	Color
<b>UB 1 -</b>		
_ = space for color identifier		
<b>G</b> = Gray		
<b>W</b> = White		
<b>B</b> = Blue		
Custom colors also available.		



Ocal® Corrosion Protection for Electrical Conduit and Fittings

Support conduit on walls and structures.

### Pipe Straps



Two-Hole PVC-Coated Pipe Strap

One-Hole PVC-Coated Pipe Strap

- Available in malleable iron/stamped steel with nominal .015" (15 mil) PVC coating in your choice of blue, white or gray or in 303 stainless steel
- Choose one- or two-hole versions
- Sized to allow for the extra thickness of the PVC coating



Two-Hole Stainless Steel Pipe Strap

One-Hole Stainless Steel Pipe Strap

### 303 Stainless Steel Pipe Straps for PVC-Coated Conduit

CAT. NO.		PIPE SIZE IN. METRIC SIZE DESIGNATOR*	CONDUIT STRAP I.D. IN. MM	PVC-COATED CONDUIT O.D. IN. MM
ONE-HOLE 303 S.S. STRAP	TWO-HOLE 303 S.S. STRAP			
TS102-SS	TS902-SS	½	.92	.92
TS103-SS	TS903-SS	¾	1.16	1.13
TS104-SS	TS904-SS	1	1.51	1.40
TS105-SS	TS905-SS	1¼	1.74	1.74
TS106-SS	TS906-SS	1½	2.20	1.98
HS107-SS	HS907-SS	2	2.88	2.46
HS108-SS	HS908-SS	2½	3.50	2.96
HS109-SS	HS909-SS	3	4.00	3.98
HS110-SS	HS910-SS	3½	4.50	4.08

\* Metric size designator (ANSI C80.1-1994).

Use as spacers with one-hole pipe straps.

### Ocal PVC-Coated Clamp-Back Spacers



- Provides space for air flow between conduit and mounting surface
- Nominal .015" (15 mil) PVC coating for corrosion protection

CAT. NO.	PIPE SIZE	
	IN.	METRIC SIZE DESIGNATOR*
CB1/2-	½	16
CB3/4-	¾	21
CB1-	1	27
CB1-1/4-	1¼	35
CB1-1/2-	1½	41
CB2-	2	53
CB2-1/2-	2½	63
CB3-	3	78
CB3-1/2-	3½	91
CB4-	4	103

Cat. No.	Color
<b>CB1</b> -	<span style="display: inline-block; width: 15px; height: 10px; background-color: #0000FF; border: 1px solid black;"></span>
- = space for color identifier	
G = Gray	<span style="display: inline-block; width: 15px; height: 10px; background-color: #808080; border: 1px solid black;"></span>
W = White	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFFFFF; border: 1px solid black;"></span>
B = Blue	<span style="display: inline-block; width: 15px; height: 10px; background-color: #0000FF; border: 1px solid black;"></span>
Custom colors also available.	

Ocal® Corrosion Protection for Electrical Conduit and Fittings



# Ocal®

## Ordinary Location Fittings — Conduit Bodies

Easy access for pulling, splicing, mounting and maintenance!

### OCAL-BLUE Double-Coat Conduit Bodies

With OCAL-BLUE Double-Coat Conduit Bodies, you can connect sections of conduit — with or without 90° bends — and provide easy access for wire pulling, making splices in branch conductors and maintenance and future system changes. Conduit bodies can also serve as mounting outlets for wiring devices and lighting fixtures.

- Flat surface molded on conduit body seals with molded flange on cover
- Available in Form 7 and Form 8 ferrous as well as Mark 9 and Form 7 aluminum
- All OCAL-BLUE conduit bodies offer double corrosion protection — both bodies and covers coated inside and out with a nominal .002" (2 mil) blue urethane, then exterior coated with a nominal .040" (40 mil) PVC
- PVC coating in your choice of blue, gray or white with custom colors available
- All threaded hubs fitted with pressure-sealing sleeves
- Conduit bodies ship complete with covers and encapsulated stainless steel screws
- Covers also sold separately for replacement or retrofit purposes



3/4" LB Form 8 conduit body and cover



1/2" LB Form 8 conduit body and cover

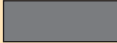




2 1/2" LB Form 7 conduit body and cover



3/4" X Form 7 conduit body and cover



Cat. No.	Material	Color
<b>LB27-__</b>		__
	Blank = Ferrous	__ = space for color identifier
	SA = Aluminum	G = Gray 
		W = White 
		B = Blue 
<b>Catalog No. Example:</b>		
LB27-W is a 3/4" LB ferrous conduit body and cover coated in white PVC.		
Custom colors also available.		












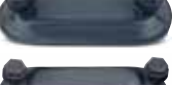
3/4" LB Mark 9 conduit body and cover

Ocal® Corrosion Protection for Electrical Conduit and Fittings





## Ordinary Location Fittings — Conduit Bodies

### OCAL-BLUE Conduit Bodies Quick Reference

NOTE: FITTINGS SHOWN UNCOATED

SHAPE	STYLE	SIZE (IN. AND METRIC SIZE DESIGNATOR*)									
		½" 16	¾" 21	1" 27	1¼" 35	1½" 41	2" 53	2½" 63	3" 78	3½" 91	4" 103
	Form 7	C17-	C27-	C37-	C47-	C57-	C67-	C77-	C87-	—	—
	Form 8	C18-	C28-	C38-	C448-	C58-	C68-	C78-	C88-	—	—
	Mark 9	C19-	C29-	C39-	C49-	C59-	C69-	C789-	C889-	C989-	C1089-
	Form 7 Aluminum	C17SA-	C27SA-	C37SA-	C47SA-	C57SA-	C67SA-	C77SA-	C87SA-	—	—
	Form 7	L17-	L27-	L37-	L47-	L57-	L67-	—	—	—	—
	Form 7 Aluminum	L17SA-	L27SA-	L37SA-	L47SA-	L57SA-	L67SA-	—	—	—	—
Double faced — may be used as LL or LR — has 2 openings											
	Form 7	LB17-	LB27-	LB37-	LB47-	LB57-	LB67-	LB777-	LB87-	LB97-	LB107-
	Form 8	LB18-	LB28-	LB38-	LB448-	LB58-	LB68-	LB78-	LB888-	LB98-	LB108-
	Mark 9	LB19-	LB29-	LB39-	LB49-	LB59-	LB69-	LB789-	LB889-	LB989-	LB1089-
	Form 7 Aluminum	LB17SA-	LB27SA-	LB37SA-	LB47SA-	LB57SA-	LB67SA-	LB777SA-	LB87SA-	LB97SA-	LB107SA-
	Form 7	LL17-	LL27-	LL37-	LL47-	LL57-	LL67-	LL777-	LL87-	LL97-	LL107-
	Form 8	LL18-	LL28-	LL38-	LL448-	LL58-	LL68-	LL78-	LL888-	—	—
	Mark 9	LL19-	LL29-	LL39-	LL49-	LL59-	LL69-	LL789-	LL889-	LL989-	LL1089-
	Form 7 Aluminum	LL17SA-	LL27SA-	LL37SA-	LL47SA-	LL57SA-	LL67SA-	LL777SA-	LL87SA-	LL97SA-	LL107SA-
	Form 7	LR17-	LR27-	LR37-	LR47-	LR57-	LR67-	LR777-	LR87-	LR97-	LR107-
	Form 8	LR18-	LR28-	LR38-	LR448-	LR58-	LR68-	LR78-	LR888-	—	—
	Mark 9	LR19-	LR29-	LR39-	LR49-	LR59-	LR69-	LR789-	LR889-	LR989-	LR1089-
	Form 7 Aluminum	LR17SA-	LR27SA-	LR37SA-	LR47SA-	LR57SA-	LR67SA-	LR777SA-	LR87SA-	LR97SA-	LR107SA-
	Form 7	T17-	T27-	T37-	T47-	T57-	T67-	T77-	T87-	T97-	T107-
	Form 8	T18-	T28-	T38-	T448-	T58-	T68-	T78-	T88-	—	—
	Mark 9	T19-	T29-	T39-	T49-	T59-	T69-	T789-	T889-	T989-	T1089-
	Form 7 Aluminum	T17SA-	T27SA-	T37SA-	T47SA-	T57SA-	T67SA-	T77SA-	T87SA-	T97SA-	T107SA-
	Form 7	TB17-	TB27-	TB37-	TB47-	TB57-	TB67-	—	—	—	—
	Form 8	TB18-	TB28-	TB38-	TB448-	TB58-	TB68-	—	—	—	—
	Mark 9	TB19-	TB29-	TB39-	TB49-	—	—	—	—	—	—
	Form 7 Aluminum	TB17SA-	TB27SA-	TB37SA-	TB47SA-	TB57SA-	TB67SA-	—	—	—	—
	Form 7	X17-	X27-	X37-	X47-	X57-	X67-	—	—	—	—
	Form 8	X18-	X28-	X38-	X448-	X58-	X68-	—	—	—	—
	Mark 9	X19-	X29-	X39-	—	—	—	—	—	—	—
	Form 7 Aluminum	X17SA-	X27SA-	X37SA-	X47SA-	X57SA-	X67SA-	—	—	—	—

### OCAL-BLUE Conduit Body Covers

STYLE	SIZE (IN. AND METRIC SIZE DESIGNATOR*)										
	½" 16	¾" 21	1" 27	1¼" 35	1½" 41	2" 53	2½" 63	3" 78	3½" 91	4" 103	
	Form 7	170F-	270F-	370F-	470F-	570F-	670F-	870F-	870F-	970F-	970F-
	Form 8	180F-	280F-	380F-	480F-	580F-	680F-	880F-	880F-	980F-	980F-
	Mark 9	190-	290-	390-	490-	590-	690-	889-	889-	989-	989-
	Form 7 Aluminum	170SA-	270SA-	370SA-	470SA-	570SA-	670SA-	870SA-	870SA-	970SA-	970SA-

\* Metric size designator (ANSI C80.1-1994).

Ocal® Corrosion Protection for Electrical Conduit and Fittings

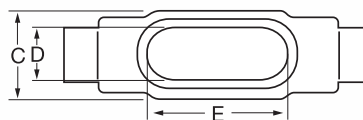
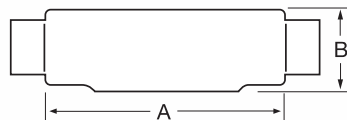


# Ocal®

## Ordinary Location Fittings — Conduit Bodies

Ocal® Corrosion Protection for Electrical Conduit and Fittings

**C**



### C Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
<b>C17-</b>	½"	<b>5.45</b>	<b>1.40</b>	<b>1.45</b>	<b>0.95</b>	<b>3.20</b>	<b>4.00</b>
	16	138.43	35.56	36.83	24.13	81.28	65.55
<b>C27-</b>	¾"	<b>6.05</b>	<b>1.60</b>	<b>1.65</b>	<b>1.15</b>	<b>3.80</b>	<b>6.60</b>
	21	153.67	40.64	41.91	29.21	96.52	108.15
<b>C37-</b>	1"	<b>6.75</b>	<b>1.90</b>	<b>1.80</b>	<b>1.35</b>	<b>4.55</b>	<b>10.60</b>
	27	171.45	48.26	45.72	34.29	115.57	173.70
<b>C47-</b>	1½"	<b>7.30</b>	<b>2.30</b>	<b>2.20</b>	<b>1.80</b>	<b>5.00</b>	<b>18.80</b>
	35	185.42	58.42	55.88	45.72	127.00	308.08
<b>C57-</b>	2"	<b>8.60</b>	<b>2.60</b>	<b>2.45</b>	<b>2.05</b>	<b>5.45</b>	<b>26.40</b>
	41	218.44	66.04	62.23	52.07	138.43	432.62
<b>C67-</b>	2½"	<b>9.50</b>	<b>3.20</b>	<b>3.05</b>	<b>2.45</b>	<b>6.40</b>	<b>51.00</b>
	53	241.30	81.28	77.47	62.23	162.56	835.74
<b>C77-</b>	3"	<b>12.10</b>	<b>3.65</b>	<b>4.25</b>	<b>3.60</b>	<b>8.40</b>	<b>102.00</b>
	63	307.34	92.71	107.95	91.44	213.36	1671.48
<b>C87-</b>	3½"	<b>12.10</b>	<b>4.40</b>	<b>4.25</b>	<b>3.60</b>	<b>8.40</b>	<b>132.00</b>
	78	307.34	111.76	107.95	91.44	213.36	2163.09

### C Mark 9 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
<b>C19-</b>	½"	<b>5.00</b>	<b>1.38</b>	<b>1.38</b>	<b>1.19</b>	<b>3.31</b>	—
	16	127.00	35.05	35.05	30.23	84.07	—
<b>C29-</b>	¾"	<b>5.69</b>	<b>1.63</b>	<b>1.56</b>	<b>1.38</b>	<b>3.94</b>	—
	21	144.53	41.40	39.62	35.05	100.08	—
<b>C39-</b>	1"	<b>6.59</b>	<b>1.88</b>	<b>1.75</b>	<b>1.50</b>	<b>4.56</b>	—
	27	167.39	47.75	44.45	38.10	115.82	—
<b>C49-</b>	1½"	<b>7.50</b>	<b>2.50</b>	<b>2.19</b>	<b>1.94</b>	<b>5.31</b>	—
	35	190.50	63.50	55.63	49.28	134.87	—
<b>C59-</b>	2"	<b>8.25</b>	<b>2.75</b>	<b>2.50</b>	<b>2.25</b>	<b>6.00</b>	—
	41	209.55	69.85	63.50	57.15	152.40	—
<b>C69-</b>	2½"	<b>10.50</b>	<b>3.44</b>	<b>3.19</b>	<b>2.88</b>	<b>8.06</b>	—
	53	266.70	87.38	81.03	73.15	204.72	—
<b>C789-</b>	3"	<b>15.63</b>	<b>4.44</b>	<b>5.00</b>	<b>4.25</b>	<b>10.88</b>	—
	63	397.00	112.78	127.00	107.95	276.35	—
<b>C889-</b>	3½"	<b>15.63</b>	<b>4.81</b>	<b>5.00</b>	<b>4.25</b>	<b>10.88</b>	—
	78	397.00	122.17	127.00	107.95	276.35	—
<b>C989-</b>	4"	<b>18.75</b>	<b>5.69</b>	<b>6.25</b>	<b>5.44</b>	<b>13.44</b>	—
	91	476.25	144.53	158.75	138.18	341.38	—
<b>C1089-</b>	4½"	<b>18.75</b>	<b>5.94</b>	<b>6.25</b>	<b>5.44</b>	<b>13.44</b>	—
	103	476.25	150.88	158.75	138.18	341.38	—

### C Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
<b>C18-</b>	½"	<b>5.53</b>	<b>1.44</b>	<b>1.38</b>	<b>1.00</b>	<b>3.31</b>	<b>4.90</b>
	16	140.49	36.51	34.93	25.40	84.14	80.30
<b>C28-</b>	¾"	<b>6.28</b>	<b>1.53</b>	<b>1.19</b>	<b>1.19</b>	<b>3.94</b>	<b>8.00</b>
	21	159.54	38.89	30.16	30.16	100.01	131.10
<b>C38-</b>	1"	<b>7.31</b>	<b>1.94</b>	<b>1.75</b>	<b>1.38</b>	<b>4.56</b>	<b>13.00</b>
	27	185.74	49.21	44.45	34.93	115.89	213.03
<b>C448-</b>	1½"	<b>8.50</b>	<b>2.38</b>	<b>2.19</b>	<b>1.75</b>	<b>5.31</b>	<b>23.50</b>
	35	215.90	60.33	55.56	44.45	134.94	385.10
<b>C58-</b>	2"	<b>10.38</b>	<b>2.78</b>	<b>2.75</b>	<b>2.13</b>	<b>6.50</b>	<b>45.00</b>
	41	263.53	70.64	69.85	53.98	165.10	737.42
<b>C68-</b>	2½"	<b>12.25</b>	<b>3.56</b>	<b>3.75</b>	<b>3.00</b>	<b>8.56</b>	<b>88.00</b>
	53	311.15	90.49	95.25	76.20	217.49	1442.06
<b>C78-</b>	3"	<b>15.63</b>	<b>4.44</b>	<b>5.00</b>	<b>4.25</b>	<b>10.88</b>	<b>110.00</b>
	63	396.88	112.71	127.00	107.95	276.23	1802.58
<b>C88-</b>	3½"	<b>15.63</b>	<b>4.81</b>	<b>5.00</b>	<b>4.25</b>	<b>10.88</b>	<b>110.00</b>
	78	396.88	122.24	127.00	107.95	276.23	1802.58

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

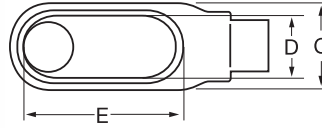
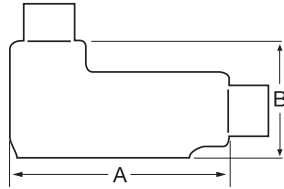
### C Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
<b>C17SA-</b>	½"	<b>5.45</b>	<b>1.40</b>	<b>1.45</b>	<b>0.95</b>	<b>3.20</b>	<b>4.00</b>
	16	138.43	35.56	36.83	24.13	81.28	65.55
<b>C27SA-</b>	¾"	<b>6.05</b>	<b>1.60</b>	<b>1.65</b>	<b>1.15</b>	<b>3.80</b>	<b>6.60</b>
	21	153.67	40.64	41.91	29.21	96.52	108.15
<b>C37SA-</b>	1"	<b>6.75</b>	<b>1.90</b>	<b>1.80</b>	<b>1.35</b>	<b>4.55</b>	<b>10.60</b>
	27	171.45	48.26	45.72	34.29	115.57	173.70
<b>C47SA-</b>	1½"	<b>7.30</b>	<b>2.30</b>	<b>2.20</b>	<b>1.80</b>	<b>5.00</b>	<b>18.80</b>
	35	185.42	58.42	55.88	45.72	127.00	308.08
<b>C57SA-</b>	2"	<b>8.60</b>	<b>2.60</b>	<b>2.45</b>	<b>2.05</b>	<b>5.45</b>	<b>26.40</b>
	41	218.44	66.04	62.23	52.07	138.43	432.62
<b>C67SA-</b>	2½"	<b>9.50</b>	<b>3.20</b>	<b>3.05</b>	<b>2.45</b>	<b>6.40</b>	<b>51.00</b>
	53	241.30	81.28	77.47	62.23	162.56	835.74
<b>C77SA-</b>	3"	<b>12.10</b>	<b>3.65</b>	<b>4.25</b>	<b>3.60</b>	<b>8.40</b>	<b>102.00</b>
	63	307.34	92.71	107.95	91.44	213.36	1671.48
<b>C87SA-</b>	3½"	<b>12.10</b>	<b>4.40</b>	<b>4.25</b>	<b>3.60</b>	<b>8.40</b>	<b>132.00</b>
	78	307.34	111.76	107.95	91.44	213.36	2163.09



## Ordinary Location Fittings — Conduit Bodies

LB



### LB Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LB17-	½"	4.60	2.20	1.35	0.95	3.20	4.00
	16	116.84	55.88	34.29	24.13	81.28	65.55
LB27-	¾"	5.25	2.40	1.65	1.15	3.80	6.60
	21	133.35	60.96	41.91	29.21	96.52	108.15
LB37-	1"	6.00	2.65	1.80	1.35	4.55	10.60
	27	152.40	67.31	45.72	34.29	115.57	173.70
LB47-	1¼"	6.45	3.20	2.20	1.80	5.00	18.80
	35	163.83	81.28	55.88	45.72	127.00	308.08
LB57-	1½"	7.25	3.90	2.45	2.05	5.45	26.40
	41	184.15	99.06	62.23	52.07	138.43	432.62
LB67-	2"	8.30	4.45	3.10	2.45	6.40	51.00
	53	210.82	113.03	78.74	62.23	162.56	835.74
LB777-	2½"	10.55	5.20	4.25	3.60	8.40	102.00
	63	267.97	132.08	107.95	91.44	213.36	1671.48
LB87-	3"	10.55	5.95	4.25	3.60	8.40	132.00
	78	267.97	151.13	107.95	91.44	213.36	2163.09
LB97-	3½"	12.85	6.70	5.25	4.55	10.25	210.00
	91	326.39	170.18	133.35	115.57	260.35	3441.28
LB107-	4"	12.85	7.20	5.25	4.55	10.25	243.00
	103	326.39	182.88	133.35	115.57	260.35	3982.06

### LB Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LB18-	½"	4.94	2.22	1.38	1.00	3.31	4.90
	16	125.41	56.36	34.93	25.40	84.14	80.30
LB28-	¾"	5.56	2.44	1.56	1.19	3.31	8.00
	21	141.29	61.93	39.69	30.16	84.14	131.10
LB38-	1"	6.50	2.81	1.75	1.38	4.56	13.00
	27	165.10	71.45	44.45	34.93	115.89	213.03
LB448-	1¼"	7.53	3.34	2.19	1.75	5.31	23.50
	35	191.29	84.93	55.56	44.45	134.94	385.10
LB58-	1½"	9.13	4.03	2.75	2.13	6.50	45.00
	41	231.78	102.39	69.85	53.98	165.10	737.42
LB68-	2"	11.00	4.41	3.75	3.00	8.56	88.00
	53	279.40	111.92	95.25	76.20	217.49	1442.06
LB78-	2½"	13.94	6.13	5.00	4.25	10.88	110.00
	63	354.01	155.58	127.00	107.95	276.23	1802.58
LB888-	3"	13.94	6.50	5.00	4.25	10.88	110.00
	78	354.01	165.10	127.00	107.95	276.23	1802.58
LB98-	3½"	16.88	7.56	6.25	5.44	13.44	250.00
	91	428.63	192.09	158.75	138.11	341.31	4096.77
LB108-	4"	16.88	7.81	6.25	5.44	13.44	250.00
	103	428.63	198.44	158.75	138.11	341.31	4096.77

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

### LB Mark 9 Aluminum Conduit Bodies with Covers

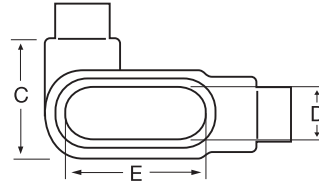
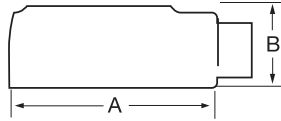
CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LB19-	½"	4.59	2.13	1.38	1.19	3.31	—
	16	116.68	53.98	34.93	30.16	84.14	—
LB29-	¾"	5.25	2.41	1.56	1.38	3.94	—
	21	133.35	61.12	39.69	34.93	100.01	—
LB39-	1"	6.09	2.84	1.75	1.50	4.56	—
	27	154.78	72.23	44.45	38.10	115.89	—
LB49-	1¼"	7.03	3.47	2.19	1.94	5.31	—
	35	178.59	88.11	55.56	49.21	134.94	—
LB59-	1½"	7.75	3.75	2.50	2.25	6.00	—
	41	196.85	95.25	63.50	57.15	152.40	—
LB69-	2"	10.03	4.47	3.19	2.88	8.06	—
	53	254.79	113.51	80.96	73.03	204.79	—
LB789-	2½"	13.94	6.13	5.00	4.25	10.88	—
	63	354.01	155.58	127.00	107.95	276.23	—
LB889-	3"	13.94	6.50	5.00	4.25	10.88	—
	78	354.01	165.10	127.00	107.95	276.23	—
LB989-	3½"	16.88	7.56	6.25	5.44	13.44	—
	91	428.63	192.09	158.75	138.11	341.31	—
LB1089-	4"	16.88	7.81	6.25	5.44	13.44	—
	103	428.63	198.44	158.75	138.11	341.31	—

### LB Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LB17SA-	½"	4.60	2.20	1.35	0.95	3.20	4.00
	16	116.84	55.88	34.29	24.13	81.28	65.55
LB27SA-	¾"	5.25	2.40	1.65	1.15	3.80	6.60
	21	133.35	60.96	41.91	29.21	96.52	108.15
LB37SA-	1"	6.00	2.65	1.80	1.35	4.55	10.60
	27	152.40	67.31	45.72	34.29	115.57	173.70
LB47SA-	1¼"	6.45	3.20	2.20	1.80	5.00	18.80
	35	163.83	81.28	55.88	45.72	127.00	308.08
LB57SA-	1½"	7.25	3.90	2.45	2.05	5.45	26.40
	41	184.15	99.06	62.23	52.07	138.43	432.62
LB67SA-	2"	8.30	4.45	3.10	2.45	6.40	51.00
	53	210.82	113.03	78.74	62.23	162.56	835.74
LB777SA-	2½"	10.55	5.20	4.25	3.60	8.40	102.00
	63	267.97	132.08	107.95	91.44	213.36	1671.48
LB87SA-	3"	10.55	5.95	4.25	3.60	8.40	132.00
	78	267.97	151.13	107.95	91.44	213.36	2163.09
LB97SA-	3½"	12.85	6.70	5.25	4.55	10.25	210.00
	91	326.39	170.18	133.35	115.57	260.35	3441.28
LB107SA-	4"	12.85	7.20	5.25	4.55	10.25	243.00
	103	326.39	182.88	133.35	115.57	260.35	3982.06

Ocal® Corrosion Protection for Electrical Conduit and Fittings

## Ordinary Location Fittings — Conduit Bodies



### LL Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LL17-	½"	4.60	1.40	1.45	0.95	3.20	4.00
16		116.84	35.56	36.83	24.13	81.28	65.55
LL27-	¾"	5.25	1.60	1.65	1.15	3.80	6.60
21		133.35	40.64	41.91	29.21	96.52	108.15
LL37-	1"	6.00	1.90	2.60	1.35	4.55	10.60
27		152.40	48.26	66.04	34.29	115.57	173.70
LL47-	1¼"	6.45	2.30	3.05	1.80	5.00	18.60
35		163.83	58.42	77.47	45.72	127.00	304.80
LL57-	1½"	7.90	2.60	3.80	2.05	5.45	26.40
41		200.66	66.04	96.52	52.07	138.43	432.62
LL67-	2"	8.30	3.20	4.25	2.45	6.40	51.00
53		210.82	81.28	107.95	62.23	162.56	835.74
LL777-	2½"	10.55	3.65	5.80	3.60	8.40	102.00
63		267.97	92.71	147.32	91.44	213.36	1671.48
LL87-	3"	10.55	4.40	5.80	3.60	8.40	132.00
78		267.97	111.76	147.32	91.44	213.36	2163.09
LL97-	3½"	12.85	4.90	7.03	4.55	10.25	210.00
91		326.39	124.46	178.56	115.57	260.35	3441.28
LL107-	4"	12.85	5.40	7.03	4.55	10.25	243.00
103		326.39	137.16	178.56	115.57	260.35	3982.06

### LL Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LL18-	½"	4.94	1.44	2.16	1.00	3.31	4.90
16		125.41	36.51	54.77	25.40	84.14	80.30
LL28-	¾"	5.56	1.69	2.31	1.19	3.94	8.00
21		141.29	42.86	58.74	30.16	100.01	131.10
LL38-	1"	6.47	1.94	2.63	1.38	4.56	13.00
27		164.31	49.21	66.68	34.93	115.89	213.03
LL448-	1¼"	7.53	2.38	3.16	1.75	5.31	23.50
35		191.29	60.33	80.17	44.45	134.94	385.10
LL58-	1½"	9.13	2.78	4.00	2.13	6.50	45.00
41		231.78	70.64	101.60	53.98	165.10	737.42
LL68-	2"	11.00	3.56	5.00	3.00	8.56	88.00
53		279.40	90.49	127.00	76.20	217.49	1442.06
LL78-	2½"	13.94	4.44	6.69	4.25	10.88	110.00
63		354.01	112.71	169.86	107.95	276.23	1802.58
LL888-	3"	13.94	4.81	6.69	4.25	10.88	110.00
78		354.01	122.24	169.86	107.95	276.23	1802.58

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

### LL Mark 9 Aluminum Conduit Bodies with Covers

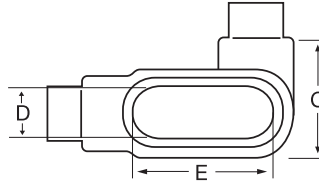
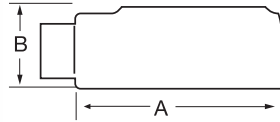
CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LL19-	½"	4.59	1.38	2.13	1.19	3.31	—
16		116.68	34.93	53.98	30.16	84.14	—
LL29-	¾"	5.25	1.63	2.38	1.38	3.94	—
21		133.35	41.28	60.33	34.93	100.01	—
LL39-	1"	6.09	1.88	2.63	1.50	4.56	—
27		154.78	47.63	66.68	38.10	115.89	—
LL49-	1¼"	7.03	2.50	3.09	1.94	5.31	—
35		178.59	63.50	78.58	49.21	134.94	—
LL59-	1½"	7.75	2.75	3.44	2.25	6.00	—
41		196.85	69.85	87.31	57.15	152.40	—
LL69-	2"	10.03	3.44	4.13	2.88	8.06	—
53		254.79	87.31	104.78	73.03	204.79	—
LL789-	2½"	13.94	4.44	6.69	4.25	10.88	—
63		354.01	112.71	169.86	107.95	276.23	—
LL889-	3"	13.94	4.81	6.69	4.25	10.88	—
78		354.08	122.24	169.93	107.95	276.35	—
LL989-	3½"	16.88	5.69	8.13	5.44	13.44	—
91		428.63	144.46	206.38	138.11	341.31	—
LL1089-	4"	16.88	5.94	8.13	5.44	13.44	—
103		428.63	150.81	206.38	138.11	341.31	—

### LL Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LL17SA-	½"	4.60	1.40	1.45	0.95	3.20	4.00
16		116.84	35.56	36.83	24.13	81.28	65.55
LL27SA-	¾"	5.25	1.60	1.65	1.15	3.80	6.60
21		133.35	40.64	41.91	29.21	96.52	108.15
LL37SA-	1"	6.00	1.90	2.60	1.35	4.55	10.60
27		152.40	48.26	66.04	34.29	115.57	173.70
LL47SA-	1¼"	6.45	2.30	3.05	1.80	5.00	18.60
35		163.83	58.42	77.47	45.72	127.00	304.80
LL57SA-	1½"	7.90	2.60	3.80	2.05	5.45	26.40
41		200.66	66.04	96.52	52.07	138.43	432.62
LL67SA-	2"	8.30	3.20	4.25	2.45	6.40	51.00
53		210.82	81.28	107.95	62.23	162.56	835.74
LL777SA-	2½"	10.55	3.65	5.80	3.60	8.40	102.00
63		267.97	92.71	147.32	91.44	213.36	1671.48
LL87SA-	3"	10.55	4.40	5.80	3.60	8.40	132.00
78		267.97	111.76	147.32	91.44	213.36	2163.09
LL97SA-	3½"	12.85	4.90	7.03	4.55	10.25	210.00
91		326.39	124.46	178.56	115.57	260.35	3441.28
LL107SA-	4"	12.85	5.40	7.03	4.55	10.25	243.00
103		326.39	137.16	178.56	115.57	260.35	3982.06

## Ordinary Location Fittings — Conduit Bodies

LR



### LR Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LR17- 16	½"	4.60	1.40	1.45	0.95	3.20	4.00
LR27- 21	¾"	5.25	1.60	1.65	1.15	3.80	6.60
LR37- 27	1"	6.00	1.90	2.60	1.35	4.55	10.60
LR47- 35	1¼"	6.45	2.30	3.05	1.80	5.00	18.80
LR57- 41	1½"	7.90	2.60	3.80	2.05	5.45	26.40
LR67- 53	2"	8.30	3.20	4.25	2.45	6.40	51.00
LR77- 63	2½"	10.55	3.65	5.80	3.60	8.40	102.00
LR87- 78	3"	10.55	4.40	5.80	3.60	8.40	132.00
LR97- 91	3½"	12.85	4.90	7.03	4.55	10.25	210.00
LR107- 103	4"	12.85	5.40	7.03	4.55	10.25	243.00

### LR Mark 9 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LR19- 16	½"	4.59	1.38	2.13	1.19	3.31	—
LR29- 21	¾"	5.25	1.63	2.38	1.38	3.94	—
LR39- 27	1"	6.09	1.88	2.63	1.50	4.56	—
LR49- 35	1¼"	7.03	2.50	3.09	1.94	5.31	—
LR59- 41	1½"	7.75	2.75	3.44	2.25	6.00	—
LR69- 53	2"	10.03	3.44	4.13	2.88	8.06	—
LR79- 63	2½"	13.94	4.44	6.69	4.25	10.88	—
LR89- 78	3"	13.94	4.81	6.69	4.25	10.88	—
LR99- 91	3½"	16.88	5.69	8.13	5.44	13.44	—
LR109- 103	4"	16.88	5.94	8.13	5.44	13.44	—

### LR Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LR18- 16	½"	4.94	1.44	2.16	1.00	3.31	4.90
LR28- 21	¾"	5.56	1.69	2.31	1.19	3.94	8.00
LR38- 27	1"	6.47	1.94	2.63	1.38	4.56	13.00
LR448- 35	1¼"	7.53	2.38	3.16	1.75	5.31	23.50
LR58- 41	1½"	9.13	2.78	4.00	2.13	6.50	45.00
LR68- 53	2"	11.00	3.56	5.00	3.00	8.56	88.00
LR78- 63	2½"	13.94	4.44	6.69	4.25	10.88	110.00
LR888- 78	3"	13.94	4.81	6.69	4.25	10.88	110.00

### LR Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
LR17SA- 16	½"	4.60	1.40	1.45	0.95	3.20	4.00
LR27SA- 21	¾"	5.25	1.60	1.65	1.15	3.80	6.60
LR37SA- 27	1"	6.00	1.90	2.60	1.35	4.55	10.60
LR47SA- 35	1¼"	6.45	2.30	3.05	1.80	5.00	18.80
LR57SA- 41	1½"	7.90	2.60	3.80	2.05	5.45	26.40
LR67SA- 53	2"	8.30	3.20	4.25	2.45	6.40	51.00
LR77SA- 63	2½"	10.55	3.65	5.80	3.60	8.40	102.00
LR87SA- 78	3"	10.55	4.40	5.80	3.60	8.40	132.00
LR97SA- 91	3½"	12.85	4.90	7.03	4.55	10.25	210.00
LR107SA- 103	4"	12.85	5.40	7.03	4.55	10.25	243.00

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

Ocal® Corrosion Protection for Electrical Conduit and Fittings

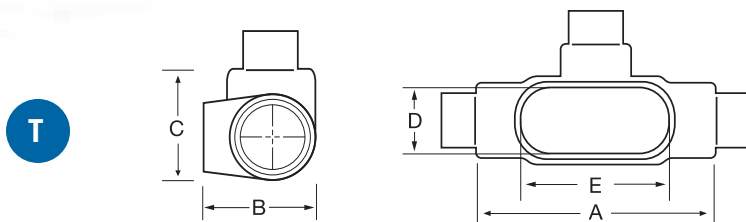




# Ocal®

## Ordinary Location Fittings — Conduit Bodies

Ocal® Corrosion Protection for Electrical Conduit and Fittings



### T Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
T17_	½"	5.60	1.80	2.35	0.95	3.20	6.00
	16	142.24	45.72	59.69	24.13	81.28	98.32
T27_	¾"	6.20	2.00	2.60	1.15	3.80	9.10
	21	157.48	50.80	66.04	29.21	96.52	149.12
T37_	1"	7.35	2.30	3.10	1.35	4.55	16.90
	27	186.69	58.42	78.74	34.29	115.57	276.94
T47_	1½"	7.30	2.30	3.05	1.80	5.00	19.30
	35	185.42	58.42	77.47	45.72	127.00	316.27
T57_	1½"	8.60	2.60	3.80	2.05	5.45	27.50
	41	218.44	66.04	96.52	52.07	138.43	450.64
T67_	2"	9.50	3.20	4.25	2.45	6.40	50.00
	53	241.30	81.28	107.95	62.23	162.56	819.35
T77_	2½"	12.10	3.65	5.80	3.60	8.40	102.00
	63	307.34	92.71	147.32	91.44	213.36	1671.48
T87_	3"	12.10	4.40	5.80	3.60	8.40	132.00
	78	307.34	111.76	147.32	91.44	213.36	2163.09
T97_	3½"	14.65	4.90	7.05	4.55	10.25	210.00
	91	372.11	124.46	179.07	115.57	260.35	3441.28
T107_	4"	14.65	5.40	7.05	4.55	10.25	243.00
	103	372.11	137.16	179.07	115.57	260.35	3982.06

### T Mark 9 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
T19_	½"	5.00	1.38	2.13	1.19	3.31	—
	16	127.00	34.93	53.98	30.16	84.14	—
T29_	¾"	5.69	1.63	2.38	1.38	3.94	—
	21	144.46	41.28	60.33	34.93	100.01	—
T39_	1"	6.59	1.88	2.63	1.50	4.56	—
	27	167.48	47.63	66.68	38.10	115.89	—
T49_	1½"	7.50	2.50	3.09	1.94	5.31	—
	35	190.50	63.50	78.58	49.21	134.94	—
T59_	1½"	8.25	2.75	3.44	2.25	6.00	—
	41	209.55	69.85	87.31	57.15	152.40	—
T69_	2"	10.50	3.44	4.13	2.88	8.06	—
	53	266.70	87.31	104.78	73.03	204.79	—
T789_	2½"	15.63	4.44	6.69	4.25	10.88	—
	63	396.88	112.71	169.86	107.95	276.23	—
T889_	3"	15.63	4.81	6.69	4.25	10.88	—
	78	396.88	122.24	169.86	107.95	276.23	—
T989_	3½"	18.75	5.69	8.13	5.44	13.44	—
	91	476.25	144.46	206.38	138.11	341.31	—
T1089_	4"	18.75	5.94	8.13	5.44	13.44	—
	103	476.25	150.81	206.38	138.11	341.31	—

### T Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
T18_	½"	5.69	1.75	2.16	1.00	3.31	6.00
	16	144.46	44.45	54.77	25.40	84.14	98.32
T28_	¾"	6.28	2.00	2.31	1.19	3.94	9.00
	21	159.54	50.80	58.74	30.16	100.01	147.48
T38_	1"	7.31	2.25	2.63	1.38	4.56	15.00
	27	185.74	57.15	66.68	34.93	115.89	245.81
T448_	1½"	8.50	2.63	3.16	1.75	5.31	24.00
	35	215.90	66.68	80.17	44.45	134.94	393.29
T58_	1½"	10.38	2.78	4.00	2.13	6.50	46.50
	41	263.53	70.64	101.60	53.98	165.10	762.00
T68_	2"	12.25	3.56	5.00	3.00	8.56	88.00
	53	311.15	90.49	127.00	76.20	217.49	1442.06
T78_	2½"	15.63	4.44	6.69	4.25	10.88	110.00
	63	396.88	112.71	169.86	107.95	276.23	1802.58
T88_	3"	15.63	4.81	6.69	4.25	10.88	110.00
	78	396.88	122.24	169.86	107.95	276.23	1802.58

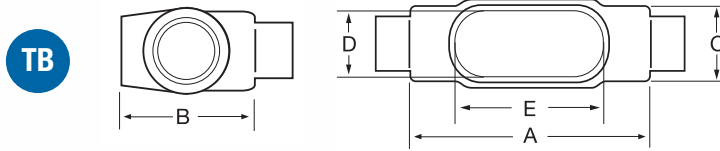
\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

### T Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
T17SA_	½"	5.60	1.80	2.35	0.95	3.20	6.00
	16	142.24	45.72	59.69	24.13	81.28	98.32
T27SA_	¾"	6.20	2.00	2.60	1.15	3.80	9.10
	21	157.48	50.80	66.04	29.21	96.52	149.12
T37SA_	1"	7.35	2.30	3.10	1.35	4.55	16.90
	27	186.69	58.42	78.74	34.29	115.57	276.94
T47SA_	1½"	7.30	2.30	3.05	1.80	5.00	19.30
	35	185.42	58.42	77.47	45.72	127.00	316.27
T57SA_	1½"	8.60	2.60	3.80	2.05	5.45	27.50
	41	218.44	66.04	96.52	52.07	138.43	450.64
T67SA_	2"	9.50	3.20	4.25	2.45	6.40	50.00
	53	241.30	81.28	107.95	62.23	162.56	819.35
T77SA_	2½"	12.10	3.65	5.80	3.60	8.40	102.00
	63	307.34	92.71	147.32	91.44	213.36	1671.48
T87SA_	3"	12.10	4.40	5.80	3.60	8.40	132.00
	78	307.34	111.76	147.32	91.44	213.36	2163.09
T97SA_	3½"	14.65	4.90	7.05	4.55	10.25	210.00
	91	372.11	124.46	179.07	115.57	260.35	3441.28
T107SA_	4"	14.65	5.40	7.05	4.55	10.25	243.00
	103	372.11	137.16	179.07	115.57	260.35	3982.06

## Ordinary Location Fittings — Conduit Bodies



### TB Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
TB17-	½"	5.60	2.06	1.63	0.95	3.20	6.00
	16	142.24	52.32	41.40	24.13	81.28	98.32
TB27-	¾"	6.20	2.31	1.81	1.15	3.80	9.10
	21	157.48	58.67	45.97	29.21	96.52	149.12
TB37-	1"	7.35	2.50	2.31	1.35	4.55	16.90
	27	186.69	63.50	58.67	34.29	115.57	276.94
TB47-	1¼"	7.30	3.19	2.25	1.80	5.00	19.30
	35	185.42	81.03	57.15	45.72	127.00	316.27
TB57-	1½"	8.60	3.91	2.42	2.05	5.45	27.50
	41	218.44	99.31	61.47	52.07	138.43	450.64
TB67-	2"	9.50	4.50	3.06	2.45	6.40	52.80
	53	241.30	114.30	77.72	62.23	162.56	865.24

### TB Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
TB18-	½"	5.69	2.63	1.38	1.00	3.31	6.00
	16	144.46	66.68	34.93	25.40	84.14	98.32
TB28-	¾"	6.28	2.88	1.19	1.19	3.94	9.00
	21	159.54	73.03	30.16	30.16	100.01	147.48
TB38-	1"	7.31	3.25	1.75	1.38	4.56	15.00
	27	185.74	82.55	44.45	34.93	115.89	245.81
TB448-	1¼"	8.50	3.31	2.19	1.75	5.31	24.00
	35	215.90	84.14	55.56	44.45	134.94	393.29
TB58-	1½"	10.38	3.69	2.75	2.13	6.50	46.50
	41	263.53	93.66	69.85	53.98	165.10	762.00
TB68-	2"	12.25	4.25	3.75	3.00	8.56	88.00
	53	311.15	107.95	95.25	76.20	217.49	1442.06

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

### TB Mark 9 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
TB19-	½"	5.00	2.13	1.38	1.19	3.31	—
	16	127.00	53.98	34.93	30.16	84.14	—
TB29-	¾"	5.69	2.41	1.56	1.38	3.94	—
	21	144.46	61.12	39.69	34.93	100.01	—
TB39-	1"	6.59	2.84	1.75	1.50	4.56	—
	27	167.48	72.23	44.45	38.10	115.89	—
TB49-	1¼"	7.50	3.47	2.19	1.94	5.31	—
	35	190.50	88.11	55.56	49.21	134.94	—

### TB Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
TB17SA-	½"	5.60	2.06	1.63	0.95	3.20	6.00
	16	142.24	52.32	41.40	24.13	81.28	98.32
TB27SA-	¾"	6.20	2.31	1.81	1.15	3.80	9.10
	21	157.48	58.67	45.97	29.21	96.52	149.12
TB37SA-	1"	7.35	2.50	2.31	1.35	4.55	16.90
	27	186.69	63.50	58.67	34.29	115.57	276.94
TB47SA-	1¼"	7.30	3.19	2.25	1.80	5.00	19.30
	35	185.42	81.03	57.15	45.72	127.00	316.27
TB57SA-	1½"	8.60	3.91	2.42	2.05	5.45	27.50
	41	218.44	99.31	61.47	52.07	138.43	450.64
TB67SA-	2"	9.50	4.50	3.06	2.45	6.40	52.80
	53	241.30	114.30	77.72	62.23	162.56	865.24

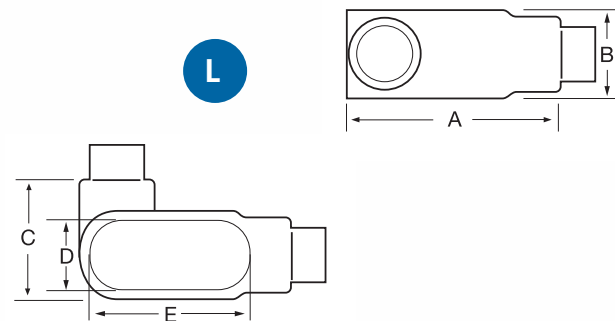
### L Form 7 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
L17-	½"	4.60	1.40	1.45	0.95	3.20	—
	16	116.84	35.56	36.83	24.13	81.28	—
L27-	¾"	5.25	1.60	1.65	1.15	3.80	—
	21	133.35	40.64	41.91	29.21	96.52	—
L37-	1"	6.00	1.90	2.60	1.35	4.55	—
	27	152.40	48.26	66.04	34.29	115.57	—
L47-	1¼"	6.45	2.30	3.05	1.80	5.00	—
	35	163.83	58.42	77.47	45.72	127.00	—
L57-	1½"	7.90	2.60	3.80	2.05	5.45	—
	41	200.66	66.04	96.52	52.07	138.43	—
L67-	2"	8.30	3.20	4.25	2.45	6.40	—
	53	210.82	81.28	107.95	62.23	162.56	—

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.

Ocal® Corrosion Protection for Electrical Conduit and Fittings





## Ordinary Location Fittings — Conduit Bodies and Hub Locknuts

### X Form 7 Ferrous Conduit Bodies with Covers

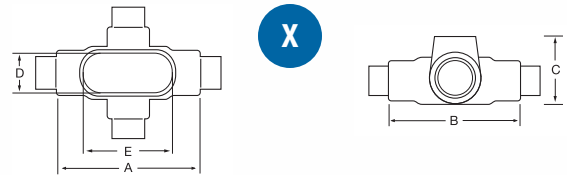
CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
X17_	½"	5.60	1.80	3.05	0.95	3.20	6.00
	16	142.24	45.72	77.47	24.13	81.28	98.32
X27_	¾"	6.20	2.00	3.30	1.15	3.80	9.10
	21	157.48	50.80	83.82	29.21	96.52	149.12
X37_	1"	7.35	2.30	3.80	1.35	4.55	16.90
	27	186.69	58.42	96.52	34.29	115.57	276.94
X47_	1¼"	7.30	2.30	3.85	1.80	5.00	19.30
	35	185.42	58.42	97.79	45.72	127.00	316.27
X57_	1½"	8.60	2.60	5.05	2.05	5.45	27.50
	41	218.44	66.04	128.27	52.07	138.43	450.64
X67_	2"	9.50	3.20	5.45	2.45	6.40	52.80
	53	241.30	81.28	138.43	62.23	162.56	865.24

### X Form 8 Ferrous Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
X18_	½"	5.69	1.75	2.91	1.00	3.31	6.00
	16	144.46	44.45	73.82	25.40	84.14	98.32
X28_	¾"	6.28	2.00	3.06	1.38	3.94	9.00
	21	159.54	50.80	77.79	34.93	100.01	147.48
X38_	1"	7.31	2.25	3.50	1.38	4.56	15.00
	27	185.74	57.15	88.90	34.93	115.89	245.81
X448_	1¼"	8.50	2.63	4.13	1.75	5.31	24.00
	35	215.90	66.68	104.78	44.45	134.94	393.29
X58_	1½"	10.38	2.47	5.25	2.13	6.50	46.50
	41	263.53	62.71	133.35	53.98	165.10	762.00
X68_	2"	12.25	3.56	6.25	3.00	8.56	88.00
	53	311.15	90.49	158.75	76.20	217.49	1442.06

\* Metric size designator (ANSI C80.1-1994).

\*\* Dimensions shown are for uncoated conduit bodies.



### X Mark 9 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
X19_	½"	5.69	2.91	1.75	1.00	3.31	—
	16	144.46	73.82	44.45	25.40	84.14	—
X29_	¾"	6.28	3.06	2.00	1.19	3.94	—
	21	159.54	77.79	50.80	30.16	100.01	—
X39_	1"	7.31	3.50	2.25	1.38	4.56	—
	27	185.74	88.90	57.15	34.93	115.89	—

### X Form 7 Aluminum Conduit Bodies with Covers

CAT. NO.	HUB SIZE*	DIMENSIONS (IN. AND MM)**					VOL. CAP. (CU.IN./CU.CM)
		A	B	C	D	E	
X17SA_	½"	5.60	1.80	3.05	0.95	3.20	6.00
	16	142.24	45.72	77.47	24.13	81.28	98.32
X27SA_	¾"	6.20	2.00	3.30	1.15	3.80	9.10
	21	157.48	50.80	83.82	29.21	96.52	149.12
X37SA_	1"	7.35	2.30	3.80	1.35	4.55	16.90
	27	186.69	58.42	96.52	34.29	115.57	276.94
X47SA_	1¼"	7.30	2.30	3.85	1.80	5.00	19.30
	35	185.42	58.42	97.79	45.72	127.00	316.27
X57SA_	1½"	8.60	2.60	5.05	2.05	5.45	27.50
	41	218.44	66.04	128.27	52.07	138.43	450.64
X67SA_	2"	9.50	3.20	5.45	2.45	6.40	52.80
	53	241.30	81.28	138.43	62.23	162.56	865.24

### T&B Grounding and Bonding Locknuts for Hubs

- Available in zinc, copper-free aluminum or 316 stainless steel
- UL File No. E-3060, CSA File No. 4484
- Use as replacement locknuts for the hubs featured on the following page



ZINC CAT. NO.	ALUMINUM CAT. NO.	316 STAINLESS CAT. NO.	PIPE SIZE		DIAMETER		HEIGHT		GROUND SCREW	MAX. COND. SIZE	
			IN.	METRIC SIZE DESIGNATOR*	IN.	MM	IN.	MM		AWG	SQ. MM
L050GR-TB	L050GRA-TB	L050GRSST	½	16	1.50	38.10	0.41	10.41	#10-32 x ¼"	#10	6
L075GR-TB	L075GRA-TB	L075GRSST	¾	21	1.69	42.93	0.41	10.41	#10-32 x ¼"	#10	6
L100GR-TB	L100GRA-TB	L100GRSST	1	27	2.00	50.80	0.41	10.41	#10-32 x ¼"	#10	6
L125GR-TB	L125GRA-TB	L125GRSST	1¼	35	2.38	60.45	0.47	11.94	¼-20 x ¼"	#10	6
L150GR-TB	L150GRA-TB	L150GRSST	1½	35	2.75	69.85	0.47	11.94	¼-20 x ⅝"	#8	10
L200GR-TB	L200GRA-TB	L200GRSST	2	53	3.25	82.55	0.47	11.94	¼-20 x ⅝"	#8	10
L250GR-TB	L250GRA-TB	—	2½	63	3.75	95.25	0.69	17.53	¼-20 x ⅝"	#6	16
L300GR-TB	L300GRA-TB	—	3	78	4.38	111.25	0.72	18.29	¼-20 x ⅝"	#6	16
L350GR-TB	L350GRA-TB	—	3½	91	5.00	127.00	0.72	18.29	¼-20 x ⅝"	#6	16
L400GR-TB	L400GRA-TB	—	4	103	5.50	139.70	0.72	18.29	¼-20 x ⅝"	#4	25
L500GR-TB	L500GRA-TB	—	5	129	6.63	168.40	0.72	18.29	¼-16 x ⅝"	#2	35
L600GR-TB	L600GRA-TB	—	6	155	7.69	195.33	0.72	18.29	¼-16 x ⅝"	#1	50

\* Metric size designator (ANSI C80.1-1994).



## Ordinary Location Fittings — Hubs

Unique sealing ring and groove design for optimum performance!

### OCAL-BLUE Double-Coat and Stainless Steel Hubs



HUB1-1/4-G  
PVC-Coated Zinc Hub

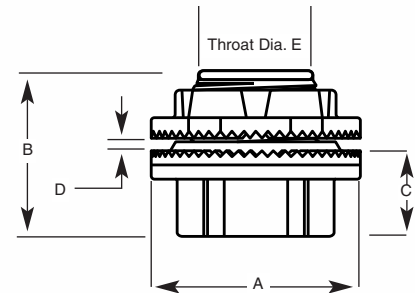
STG6-G  
PVC-Coated Zinc Grounded Hub

- Captive sealing ring won't buckle or slip during installation and provides a complete 360° seal — even when conduit isn't perpendicular to the enclosure
- Hexagonal/splined body and locknut enables fast and easy installation
- Insulated throat molded from 105° C-rated thermoplastic, UL94V0 flammability rated
- Sharper and deeper teeth provide a more penetrating bite for improved bonding to the enclosure
- Zinc or copper-free aluminum with a nominal .040" (40 mil) PVC coating bonded to exterior — in blue, white, gray or custom colors
- Pressure-sealing sleeves protect your connections
- Also available uncoated in 316-grade stainless steel
- For replacement locknuts, see previous page

Cat. No.	Color
<b>HUB1 - _</b>	
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	



H050GRSST  
Stainless Steel  
Grounded Hub



### Knockout Hubs

PVC-COATED ZINC HUB CAT. NO.	PVC-COATED ALUMINUM HUB CAT. NO.	PVC-COATED ZINC GROUNDED HUB CAT. NO.	316 STAINLESS GROUNDED HUB CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	DIMENSIONS (UNCOATED HUB)				
					A (OVERALL DIA.)	B	C	D (MAX. PANEL THICKNESS)	E (THROAT DIA.)
HUB1/2- <u>  </u>	HUB1/2SA- <u>  </u>	STG1- <u>  </u>	H050GRSST	½	1.44	1.56	0.88	0.19	0.59
				16	36.58	39.62	22.35	4.83	14.99
HUB3/4- <u>  </u>	HUB3/4SA- <u>  </u>	STG2- <u>  </u>	H075GRSST	¾	1.44	1.59	0.91	0.19	0.78
				21	36.58	40.39	23.11	4.83	19.81
HUB1- <u>  </u>	HUB1SA- <u>  </u>	STG3- <u>  </u>	H100GRSST	1	2.00	1.81	1.06	0.25	1.00
				27	50.80	45.97	26.92	6.35	25.40
HUB1-1/4- <u>  </u>	HUB1-1/4SA- <u>  </u>	STG4- <u>  </u>	H125GRSST	1¼	2.38	1.88	1.06	0.25	1.31
				35	60.45	47.75	26.92	26.92	6.35
HUB1-1/2- <u>  </u>	HUB1-1/2SA- <u>  </u>	STG5- <u>  </u>	H150GRSST	1½	2.75	1.88	1.06	0.25	1.53
				41	69.85	47.75	26.92	6.35	38.86
HUB2- <u>  </u>	HUB2SA- <u>  </u>	STG6- <u>  </u>	H200GRSST	2	3.25	1.94	1.16	0.25	1.97
				53	82.55	49.28	29.46	6.35	50.04
HUB2-1/2- <u>  </u>	HUB2-1/2SA- <u>  </u>	STG7- <u>  </u>	—	2½	3.75	2.56	1.56	0.25	2.41
				63	95.25	65.02	39.62	6.35	61.21
HUB3- <u>  </u>	HUB3SA- <u>  </u>	STG8- <u>  </u>	—	3	4.38	2.44	1.59	0.25	2.97
				78	111.25	61.98	40.39	6.35	75.44
HUB3-1/2- <u>  </u>	HUB3-1/2SA- <u>  </u>	STG9- <u>  </u>	—	3½	5.00	2.72	1.63	0.25	3.41
				91	127.00	69.09	41.40	6.35	86.61
HUB4- <u>  </u>	HUB4SA- <u>  </u>	STG10- <u>  </u>	—	4	5.50	2.72	1.63	0.25	3.88
				103	139.70	69.09	41.40	6.35	98.55
HUB5- <u>  </u>	HUB5SA- <u>  </u>	STG11- <u>  </u>	—	5	6.88	3.03	1.94	0.25	4.94
				129	174.75	76.96	49.28	6.35	125.48
HUB6- <u>  </u>	HUB6SA- <u>  </u>	STG12- <u>  </u>	—	6	7.69	3.16	2.00	0.31	6.00
				155	195.33	80.26	50.80	7.87	152.40

Ocal® Corrosion Protection for Electrical Conduit and Fittings

# Ocal®

## Ordinary Location Fittings — Bulkhead Fittings

### In bulkhead and through-bulkhead styles!

### Ocal PVC-Coated Bulkhead Fittings

- Zinc body and locknut with thermoplastic insulating throat and nitrile sealing ring
- Nominal .040" (40 mil) PVC coating bonded to exterior — in blue, white, gray or custom colors
- Pressure-sealing sleeves protect your connections

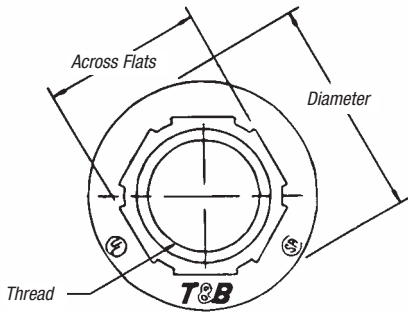
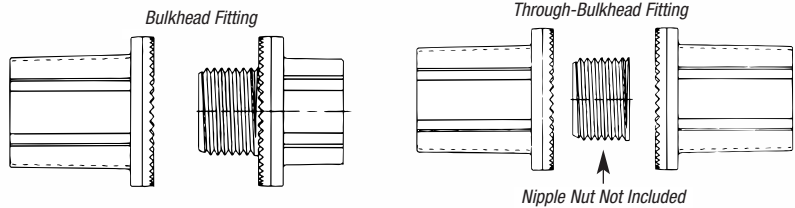
Ocal® Corrosion Protection for Electrical Conduit and Fittings



STTB2-G  
Bulkhead Fitting



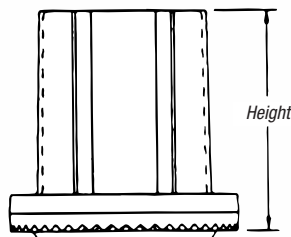
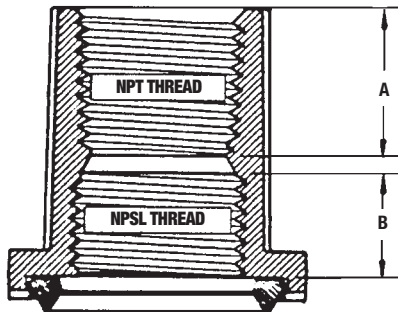
STTTB2-G  
Through-Bulkhead Fitting



BULKHEAD FITTING CAT. NO.	THROUGH-BULKHEAD FITTING CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	THREAD	HEIGHT IN. MM	DIA. IN. MM	ACROSS FLATS IN. MM	"A" IN. MM	"B" IN. MM
STTB1-	STTTB1-	½	½-14	1.41	1.44	1.00	0.75	0.50
		16	—	35.72	36.51	25.40	19.05	12.70
STTB2-	STTTB2-	¾	¾-14	1.47	1.69	1.25	0.78	0.53
		21	—	37.31	42.86	31.75	19.84	13.49
STTB3-	STTTB3-	1	1-11½	1.69	2.00	1.53	0.91	0.59
		27	—	42.86	50.80	38.89	23.02	15.08
STTB4-	STTTB4-	1¼	1¼-11½	1.78	2.38	1.84	0.91	0.66
		35	—	45.24	60.33	46.83	23.02	16.67
STTB5-	STTTB5-	1½	1½-11½	1.81	2.75	1.13	0.91	0.66
		41	—	46.04	69.85	28.58	23.02	16.67
STTB6-	STTTB6-	2	2-11½	1.84	3.25	2.63	0.94	0.66
		53	—	46.83	82.55	66.68	23.81	16.67
STTB7-	—	2½	2½-8	2.28	3.75	3.13	1.22	0.88
		63	—	57.94	95.25	79.38	30.96	22.23
STTB8-	—	3	3-8	2.56	4.38	3.78	1.19	0.91
		78	—	65.09	111.13	96.04	30.16	23.02
STTB9-	—	3½	3½-8	2.56	5.00	4.28	1.38	0.88
		91	—	65.09	127.00	108.74	34.93	22.23
STTB10-	—	4	4-8	2.56	5.50	4.84	1.38	0.88
		103	—	65.09	139.70	123.03	34.93	22.23
STTB11-	—	5	5-8	2.72	6.63	5.91	1.47	0.88
		129	—	69.06	168.28	150.02	37.31	22.23
STTB12-	—	6	6-8	3.00	7.69	7.03	1.50	0.97
		155	—	76.20	195.26	178.58	38.10	24.61

\* Metric size designator (ANSI C80.1-1994).

Dimensions shown are for uncoated fittings.



Cat. No.	Color
<b>STTB1 -</b>	
- = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

## Ordinary Location Fittings — Liquidtight Fittings

The ultimate liquidtight solution for corrosive environments!

### Ocal PVC-Coated Liquidtight Conduit Connectors



ST3/4-G

ST3/445-G

ST3/490-G

Ocal PVC-Coated Liquidtight Fittings – Straight (top left), 45° Angled (above) and 90° Angled (left).

- Nominal .040" (40 mil) PVC coating bonded to exterior — available in gray, white, blue or custom colors
- Pressure-sealing sleeves protect the connection
- Ocal uses only genuine T&B® liquidtight fittings to ensure quality installations

PVC-COATED STEEL STRAIGHT CAT. NO.	PVC-COATED ALUMINUM STRAIGHT CAT. NO.	PVC-COATED STEEL 45° CAT. NO.	PVC-COATED STEEL 90° CAT. NO.	PVC-COATED ALUMINUM 90° CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
ST3/8-	ST3/8SA-	ST3/845-	ST3/890-	ST3/890SA-	3/8 12
ST1/2-	ST1/2SA-	ST1/245-	ST1/290-	ST1/290SA-	1/2 16
ST3/4-	ST3/4SA-	ST3/445-	ST3/490-	ST3/490SA-	3/4 21
ST1-	ST1SA-	ST145-	ST190-	ST190SA-	1 27
ST1-1/4-	ST1-1/4SA-	ST1-1/445-	ST1-1/490-	ST1-1/490SA-	1 1/4 35
ST1-1/2-	ST1-1/2SA-	ST1-1/245-	ST1-1/290-	ST1-1/290SA-	1 1/2 41
ST2-	ST2SA-	ST245-	ST290-	ST290SA-	2 53
ST2-1/2-	ST2-1/2SA-	ST2-1/245-	ST2-1/290-	ST2-1/290SA-	2 1/2 63
ST3-	ST3SA-	ST345-	ST390-	ST390SA-	3 78
ST4-	ST4SA-	ST445-	ST490-	ST490SA-	4 103

\* Metric size designator (ANSI C80.1-1994).

Cat. No.	Material	Color
<b>ST3/4</b>	Blank = Steel/Iron SA = Aluminum	G = Gray W = White B = Blue

Custom colors also available.

### T&B 304 Stainless Steel Liquidtight Conduit Connectors



T&B 304 Stainless Steel Liquidtight Fittings – Straight (top left), 45° Angled (bottom left) and 90° Angled (top right). 5262 Series Sealing Ring Gasket (bottom right) sold separately.

STAINLESS STEEL STRAIGHT CAT. NO.	STAINLESS STEEL 45° CAT. NO.	STAINLESS STEEL 90° CAT. NO.	SEALING RING GASKET CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
5331SST	5341SST	5351SST	5261	3/8 12
5332SST	5342SST	5352SST	5262	1/2 16
5333SST	5343SST	5353SST	5263	3/4 21
5334SST	5344SST	5354SST	5264	1 27
5335SST	5345SST	5355SST	5265	1 1/4 35
5336SST	5346SST	5356SST	5266	1 1/2 41
5337SST	5347SST	5357SST	5267	2 53

\* Metric size designator (ANSI C80.1-1994).

Ocal® Corrosion Protection for Electrical Conduit and Fittings

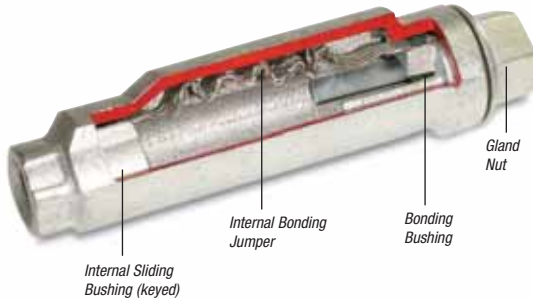




## Ordinary Location Fittings — Expansion Couplings



8" Movement  
Coupling shown uncoated



Coupling shown uncoated

### Innovative Design Makes Installations Easier.

- No disassembly necessary to install
- Fast, simple and requires fewer steps
- True internal bonding jumper — no external grounding strap required
- Tamper-proof internal jumper protected from the environment
- Exceeds code requirements for long conduit runs to permit linear movement

No disassembly required.

### Ocal PVC-Coated XJG Rigid Conduit Expansion Coupling

When you install a rigid expansion coupling in a long conduit run, you normally need three hands, two strong backs and lots of patience. Now you can relax.

With the no-hassle XJG Rigid Conduit Expansion Coupling, installation's just a few turns and you're done.

The XJG Rigid Conduit Expansion Coupling features innovations that provide convenience to the installer, saving time and money on the job. No disassembly is needed during installation, requiring fewer tools and less opportunity for lost pieces. It also features a true internal bonding jumper, eliminating the need for external jumpers, so there are fewer parts to buy and install.

If you need a fitting that can give and take without a lot of hassle, reach for the XJG Rigid Conduit Expansion Coupling. It's the latest breakthrough in the industry's leading line of conduit fittings.



**1**

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



**2**

With a wrench, tighten the gland nut to create a raintight seal around the conduit.

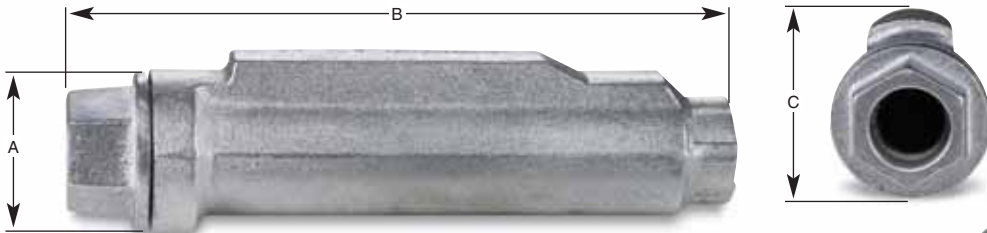


**3**

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

## Ordinary Location Fittings — Expansion Couplings

### Ocal PVC-Coated XJG Rigid Conduit Expansion Coupling (continued)



Coupling shown uncoated

CAT NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	MOVEMENT IN. MM	A DIAMETER IN. MM	B LENGTH IN. MM	C HEIGHT IN. MM
XJG24_	¾	4.00	2.43	10.00	2.75
	21	101.60	61.72	254.00	69.85
XJG28_	¾	8.00	2.43	14.00	2.75
	21	203.20	61.72	355.60	69.85
XJG34_	1	4.00	2.67	10.00	2.99
	27	101.60	67.82	254.00	75.95
XJG38_	1	8.00	2.67	14.00	2.99
	27	203.20	67.82	355.60	75.95
XJG44_	1¼	4.00	3.36	10.56	3.68
	35	101.60	85.34	268.22	93.47
XJG48_	1¼	8.00	3.36	14.56	3.68
	35	203.20	85.34	369.82	93.47
XJG54_	1½	4.00	3.36	10.56	3.68
	41	101.60	85.34	268.22	93.47
XJG58_	1½	8.00	3.36	14.56	3.68
	41	203.20	85.34	369.82	93.47
XJG64_	2	4.00	3.86	11.25	4.18
	53	101.60	98.04	285.75	106.17
XJG68_	2	8.00	3.86	15.25	4.18
	53	203.20	98.04	387.35	106.17
XJG74_	2½	4.00	4.96	12.12	5.25
	63	101.60	125.98	307.85	133.35
XJG78_	2½	8.00	4.96	16.12	5.25
	63	203.20	125.98	409.45	133.35
XJG84_	3	4.00	4.96	12.12	5.25
	78	101.60	125.98	307.85	133.35
XJG88_	3	8.00	4.96	16.12	5.25
	78	203.20	125.98	409.45	133.35
XJG94_	3½	4.00	6.37	12.87	6.75
	91	101.60	161.80	326.90	171.45
XJG98_	3½	8.00	6.37	16.87	6.75
	91	203.20	161.80	428.50	171.45
XJG104_	4	4.00	6.37	12.87	6.75
	103	101.60	161.80	326.90	171.45
XJG108_	4	8.00	6.37	16.87	6.75
	103	203.20	161.80	428.50	171.45
XJG1208_	5	8.00	7.99	18.87	8.56
	129	203.20	161.80	479.30	217.42

\* Metric size designator (ANSI C80.1 - 1994).

Dimensions shown are for uncoated coupling.



XJG24-G  
4" Movement

#### Standard Materials / Finish

Body / Finish . . . . . Ductile iron with nominal  
40 mil PVC exterior coating

Internal Bonding Jumper . . . Tinned copper braid

Cat. No.	Color
<b>XJG24 -</b>	-
- = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

Ocal® Corrosion Protection for Electrical Conduit and Fittings

# Ocal®

## Ordinary Location Fittings — PVC-Coated FS/FD Series Boxes

Variety of styles offers versatility!




### OCAL-BLUE Double-Coat FS and FD Series Device Boxes

Ocal® Corrosion Protection for Electrical Conduit and Fittings



Install these boxes in conduit systems to accommodate wiring devices, act as pull boxes for conductors, provide openings to make splices and taps and provide access to conductors for maintenance and future system changes.

- Cast class 30 gray iron alloy boxes
- Coated with a nominal .002" (2 mil) blue urethane on both the interior and exterior before PVC coating is applied
- Nominal .040" (40 mil) PVC coating bonded to exterior
- PVC coating available in your choice of blue, white or gray with custom colors available on request
- Pressure sealing sleeves protect connections with conduit

Cat. No.	Color
<b>FS1 -</b>	<b>—</b>
— = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

DEAD END CAT. NO.	FEED-THRU CAT. NO.	HUB RIGHT CAT. NO.	HUB LEFT CAT. NO.	STYLE	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
<b>Single Gang</b>					
FS1-__	FSC1-__	FSR1-__	FSL1-__	Shallow	½ 16
FS2-__	FSC2-__	FSR2-__	FSL2-__	Shallow	¾ 21
FS3-__	FSC3-__	—	—	Shallow	<b>1</b> 27
FD1-__	FDC1-__	FDR1-__	FDL1-__	Deep	½ 16
FD2-__	FDC2-__	FDR2-__	FDL2-__	Deep	¾ 21
FD3-__	FDC3-__	—	—	Deep	<b>1</b> 27
—	FSCC2-__	—	—	Shallow	¾ 21
—	FDCC2-__	—	—	Deep	¾ 21
FSS2-__	—	—	—	Shallow	¾ 21
FDD2-__	—	—	—	Deep	¾ 21
<b>Double Gang</b>					
FS22-__	—	—	—	Shallow	¾ 21
FD22-__	—	—	—	Deep	¾ 21
FSS22-__	—	—	—	Shallow	¾ 21
FDS22-__	—	—	—	Deep	¾ 21
—	FSC22-__	—	—	Shallow	¾ 21
—	FD22-__	—	—	Deep	¾ 21

\* Metric size designator (ANSI C80.1-1994).



## Ordinary Location Fittings — PVC-Coated FS/FD Series Covers

Designed for use with Ocal FS and FD Series Boxes.

### OCAL-BLUE Double-Coat FS and FD Series Covers



DS23-G



DS21G-G



DS32G-G



DS100G-G



CFSTF-G



CFSDR-G



CFSRG-G



CFSHG-G



CWPDR-FS-G



S1002G-G



S322G-G



S232-G



2CFST-G



S232GFI-G

CAT. NO.	DESCRIPTION	MATERIAL
<b>Single Gang</b>		
DS23-__	Duplex Receptacle Cover	Steel
DS21G-__	Round Flush Receptacle Cover	Iron
DS32G-__	Toggle Switch Cover	Iron
DS100G-__	Blank Cover	Aluminum
<b>Single Gang — NEMA 3R Raintight when used with appropriate Ocal boxes</b>		
CWPDR-FS-__	Duplex Receptacle Cover – Box Mount – Horizontal	Aluminum
CFSDR-__	Duplex Receptacle Cover – Box Mount – Vertical	Aluminum
CFSHG-__	GFCI Receptacle Cover – Box Mount – Horizontal	Aluminum
CFSRG-__	GFCI Receptacle Cover – Box Mount – Vertical	Aluminum
CFSTF-__	Front Lever Switch Cover – Box Mount – NEMA 4	Aluminum
<b>Double Gang</b>		
S1002G-__	Blank Cover	Iron
S322G-__	2 Toggle Switch Cover	Iron
S232-__	2 Duplex Receptacle Cover	Stamped Steel
S232GFI-__	2 GFCI Receptacle Cover	Steel
<b>Double Gang — NEMA 3R Raintight when used with appropriate Ocal boxes</b>		
2CFST-__	2 Plunger-Style Switch Cover	Aluminum

PVC-coated covers in other styles and materials are available upon request.  
Contact Technical Services for more information.

Cat. No.	Color
<b>DS23 -</b>	
__ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

Ocal® Corrosion Protection for Electrical Conduit and Fittings



## Ordinary Location Fittings — PVC-Coated Pulling Elbows and Mogul Fittings

Make 90° bends while allowing straight pulls!

### OCAL-BLUE Double-Coat Pulling Elbows



LBD2200-G

LBD and LBH bodies are installed at 90° bends in rigid conduit to act as pull outlets for conductors that are stiff due to large size or type of insulation and to make 90° bends in conduit system while allowing straight wire pulls in either direction.

- Choose LBD series for ordinary locations and LBH series for hazardous locations
- Coated with a nominal .002" (2 mil) blue urethane on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves seal connections

Cat. No.	Color
<b>LBD1100</b> - _	—
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

ORDINARY LBD SERIES CAT. NO.	HAZARDOUS LBH SERIES CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
LBD1100- _	LBH10- _	1/2
LBD2200- _	LBH20- _	16 21
LBD3300- _	LBH30- _	1 27
LBD4400- _	LBH40- _	1 1/4 35
LBD5500- _	LBH50- _	1 1/2 41
LBD6600- _	LBH60- _	2 53
LBD7700- _	LBH70- _	2 1/2 63
LBD8800- _	LBH80- _	3 78
LBD9900- _	LBH90- _	3 1/2 91
LBD10900- _	LBH100- _	4 103
LBD012- _	—	5 129
LBD014- _	—	6 15

\* Metric size designator (ANSI C80.1-1994)



BC3-G Mogul



BLB4-G Mogul



BUB3-G Mogul

Cat. No.	Color
<b>BC3</b> - _	—
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

### OCAL-BLUE Double-Coat Mogul Fittings

Install mogul fittings in conduit systems to act as pull outlets for conductors that are stiff due to large size or type of installation, to provide the longer openings needed when pulling large conductors, to prevent sharp bends and kinks in large conductors or to provide more splicing space.

- Nominal .002" (2 mil) blue urethane on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves protect connections



BG48-G Replacement Cover

MOGUL FITTING WITH COVER AND GASKET				REPLACEMENT COVER BG	PIPE SIZE
BC CAT. NO.	BLB CAT. NO.	BUB CAT. NO.	BT CAT. NO.	CAT. NO.	IN. METRIC SIZE DESIGNATOR*
BC3- _	BLB3- _	BUB3- _	BT3- _	BG48- _	1 27
BC4- _	BLB4- _	BUB4- _	BT4- _	BG48- _	1 1/4 35
BC5- _	BLB5- _	BUB5- _	BT5- _	BG68- _	1 1/2 41
BC6- _	BLB6- _	BUB6- _	BT6- _	BG68- _	2 53
BC7- _	BLB7- _	BUB7- _	BT7- _	BG88- _	2 1/2 63
BC8- _	BLB8- _	BUB8- _	BT8- _	BG88- _	3 78
BC9- _	BLB9- _	BUB9- _	BT9- _	BG98- _	3 1/2 91
BC10- _	BLB10- _	BUB10- _	BT10- _	BG98- _	4 103

\* Metric size designator (ANSI C80.1-1994).

## Ordinary Location Fittings — PVC-Coated Service Entrance and Malleable Elbows

Make 90° bends in limited space!

### OCAL-BLUE Double-Coat Service Entrance Elbows

LBY Series elbows are installed in conduit systems to make 90° bends where space is limited, to act as pull outlets and to provide access to conductors for maintenance and future system changes.

- Nominal .002" (2 mil) blue urethane on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves protect connections



LBY25-G

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
LBY15- <u>  </u>	½ 16
LBY25- <u>  </u>	¾ 21
LBY35- <u>  </u>	1 27
LBY45- <u>  </u>	1¼ 35
LBY55- <u>  </u>	1½ 41



LBY25-G

Cat. No.	Color
<b>LBY15</b> - <u>  </u>	
<u>  </u> = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

\* Metric size designator (ANSI C80.1-1994).

End or change directions in conduit runs.

### OCAL-BLUE Double-Coat Malleable Elbows

EL Series elbows are installed at the end of conduit runs, in a box or a fitting hub to change direction in threaded rigid conduit run by 45° or 90°, or when terminating at a box or fitting.

- Nominal .002" (2 mil) blue urethane on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves protect connections



90° MALE CAT. NO.	90° FEMALE CAT. NO.	90° MALE-FEMALE CAT. NO.	45° FEMALE CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
EL195- <u>  </u>	EL19- <u>  </u>	EL196- <u>  </u>	EL1- <u>  </u>	½ 16
EL295- <u>  </u>	EL29- <u>  </u>	EL296- <u>  </u>	EL2- <u>  </u>	¾ 21
EL395- <u>  </u>	EL39- <u>  </u>	EL396- <u>  </u>	EL3- <u>  </u>	1 27
—	EL49- <u>  </u>	EL496- <u>  </u>	EL4- <u>  </u>	1¼ 35
—	EL59- <u>  </u>	—	EL5- <u>  </u>	1½ 41
—	EL69- <u>  </u>	—	EL6- <u>  </u>	2 53
—	EL79- <u>  </u>	—	EL7- <u>  </u>	2½ 63
—	—	—	EL8- <u>  </u>	3 78
—	—	—	EL9- <u>  </u>	3½ 91
—	—	—	EL10- <u>  </u>	4 103

\* Metric size designator (ANSI C80.1-1994).

Cat. No.	Color
<b>EL195</b> - <u>  </u>	
<u>  </u> = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

Ocal® Corrosion Protection for Electrical Conduit and Fittings



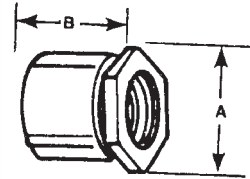
# Ocal®

## Ordinary Location Fittings — PVC-Coated Erickson® Couplings

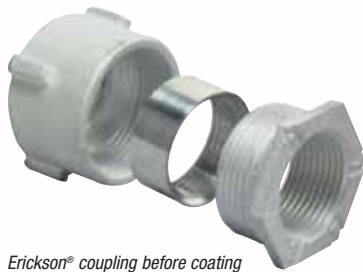
Join two conduit runs when neither can rotate!

### OCAL-BLUE Double-Coat Threaded Erickson® 3-Piece Coupling

- Malleable iron and steel or copper-free aluminum
- Nominal .002" (2 mil) blue urethane coating on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Free fitting threads ensure easy assembly
- Provides rigid in-line coupling with high-quality grounding — won't loosen under vibration
- Suitable for concrete-tight applications



Ocal® Corrosion Protection for Electrical Conduit and Fittings



STEEL/ MALLEABLE IRON CAT. NO.	COPPER- FREE ALUMINUM CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	DIMENSIONS IN. MM	
			A	B
ERICSON1/2- 16	ERICSON1/2SA- 16	1/2	1.47 37.34	1.25 31.75
ERICSON3/4- 21	ERICSON3/4SA- 21	3/4	1.56 39.62	1.41 35.81
ERICSON1- 27	ERICSON1SA- 27	1	1.91 48.51	1.63 41.40
ERICSON11/4- 35	ERICSON11/4SA- 35	1 1/4	2.38 60.45	1.81 45.97
ERICSON11/2- 41	ERICSON11/2SA- 41	1 1/2	2.63 66.80	1.97 50.04
ERICSON2- 53	ERICSON2SA- 53	2	3.22 81.79	2.22 56.39
ERICSON21/2- 63	ERICSON21/2SA- 63	2 1/2	3.97 100.84	2.69 68.33
ERICSON3- 78	ERICSON3SA- 78	3	4.44 112.78	2.91 73.91
ERICSON31/2- 91	ERICSON31/2SA- 91	3 1/2	5.00 127.00	3.00 76.20
ERICSON4- 103	ERICSON4SA- 103	4	5.50 139.70	3.19 81.03
ERICSON5- 129	ERICSON5SA- 129	5	6.78 172.21	3.75 95.25
ERICSON6- 155	ERICSON6SA- 155	6	8.00 203.20	4.03 102.36

\* Metric size designator (ANSI C80.1-1994).

#### Standard Materials / Finish

##### Cat No. ERICSON

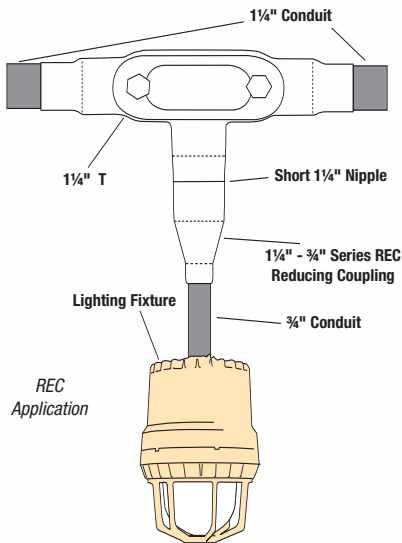
Bushing & Case . . . . .Malleable iron  
Ring . . . . .Steel and malleable iron  
Finish . . . . .Nominal 2 mil blue urethane interior  
and exterior coating with nominal  
40 mil PVC exterior coating

##### Cat. No. ERICSON\_SA

Bushing & Case . . . . .Copper-free aluminum  
Ring . . . . .Copper-free aluminum  
Finish . . . . .Nominal 2 mil blue urethane interior  
and exterior coating with nominal  
40 mil PVC exterior coating

Cat. No.	Size	Material	Color
<b>ERICSON1 / 2</b> _ _			
		Blank = Steel	_ = space for color identifier
		SA = Aluminum	G = Gray
			W = White
			B = Blue
<b>Catalog No. Example:</b>			
ERICSON2SA-B is a 2" aluminum Erickson® coupling coated in blue PVC.			
Custom colors also available.			

## Ordinary Location Fittings — PVC-Coated Reducing Couplings and Bushings



REC Application

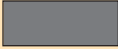


### Easily join two different sizes of conduit! OCAL-BLUE Double-Coat Reducing Couplings

- Integral bushings in both ends prevent damage to wires
- Funnel-shaped interior guides wires from large to small conduit, making them easier to pull
- Nominal .002" (2 mil) blue urethane coating on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves protect connections



REC21-G

Ocal® Corrosion Protection for Electrical Conduit and Fittings

Cat. No.	Color
<b>REC21 -</b>	<b>—</b>
— = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A	B
REC21- <u>  </u>	¾	½
	21	16
REC31- <u>  </u>	1	½
	27	16
REC32- <u>  </u>	1	¾
	27	21
REC42- <u>  </u>	1¼	¾
	35	21
REC43- <u>  </u>	1¼	1
	35	27
REC52- <u>  </u>	1½	¾
	41	21
REC53- <u>  </u>	1½	1
	41	27
REC54- <u>  </u>	1½	1¼
	41	35
REC602- <u>  </u>	2	¾
	53	21

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A	B
REC603- <u>  </u>	2	1
	53	27
REC604- <u>  </u>	2	1¼
	53	35
REC605- <u>  </u>	2	1½
	53	41
REC75- <u>  </u>	2½	1½
	63	41
REC86- <u>  </u>	3	2
	78	53
REC97- <u>  </u>	3½	2½
	91	63
REC108- <u>  </u>	4	3
	103	78
REC01210- <u>  </u>	5	4
	129	103

\* Metric size designator (ANSI C80.1-1994).

### Reduce a conduit hub to a smaller size.

### OCAL-BLUE Urethane-Coated Reducing Bushings

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A - MALE	B - FEMALE
RE21-G	¾	½
	21	16
RE31-G	1	½
	27	16
RE32-G	1	¾
	27	21
RE41-G	1¼	½
	35	16
RE42-G	1¼	¾
	35	21
RE43-G	1¼	1
	35	21
RE51-G	1½	½
	41	16
RE52-G	1½	¾
	41	21

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A - MALE	B - FEMALE
RE53-G	1½	1
	41	27
RE54-G	1½	1¼
	41	35
RE61-G	2	½
	53	16
RE62-G	2	¾
	53	21
RE63-G	2	1
	53	27
RE64-G	2	1¼
	53	35
RE65-G	2	1½
	53	41
RE73-G	2½	1
	63	27

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A - MALE	B - FEMALE
RE74-G	2½	1¼
	63	35
RE75-G	2½	1½
	63	41
RE76-G	2½	2
	63	53
RE83-G	3	1
	78	27
RE84-G	3	1¼
	78	35
RE85-G	3	1½
	78	41
RE86-G	3	2
	78	53
RE87-G	3	2½
	78	63



RE32-G

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	
	A - MALE	B - FEMALE
RE96-G	3½	2
	91	53
RE97-G	3½	2½
	91	63
RE98-G	3½	3
	91	78
RE106-G	4	2
	103	53
RE107-G	4	2½
	103	63
RE108-G	4	3
	103	78

\* Metric size designator (ANSI C80.1-1994).

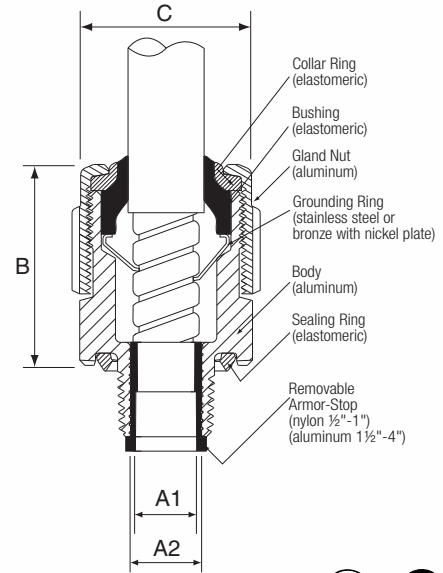
# Ocal®

## Ordinary Location Fittings — PVC-Coated STAR TECK EXTREME® Fittings

The ideal fitting for jacketed metal-clad cable in ordinary locations!

### OCAL-BLUE Double-Coat STAR TECK EXTREME® STE Series Fittings for Ordinary Locations

- Provides a means for passing armored and metal-clad jacketed cables through a bulkhead or enclosure
- Forms a mechanical grip and water- and/or oil-resistant termination
- Provides grounding continuity of cable armor
- Removable armor stop accommodates a wide range of cable sizes
- Features built-in sealing device and jacket stripping gauge, patented elastomeric collar ring/bushing and patented grounding ring
- Aluminum construction
- Nominal .002" (2 mil) blue urethane coating on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior



Cat. No.                      Color

**STE050-**                      **—**

— = space for color identifier

**G** = Gray                      

**W** = White                      

**B** = Blue                      

Custom colors also available.

### PVC-Coated STE Series Fittings for Ordinary Locations



CAT. NO.	HUB SIZE	STRIP LENGTH	GLAND TORQUE	RANGE OVER JACKET		RANGE OVER ARMOR		A1: THROAT	A2: THROAT	B OVERALL HEIGHT	C MAX. WIDTH
	IN.	IN.		MIN.	MAX.	MIN.	MAX.	DIA. MIN. W/END STOP	DIA. MIN. W/O END STOP		
	METRIC SIZE DESIGNATOR**	MM	LB.-IN.	MM	MM	MM	MM	MM	MM	MM	MM
ST050-462-*	1/2	1.25	300	.53	.65	.42	.57	N/A***	.40	2.02	1.22
	16	31.75	33.90	13.46	16.51	10.67	14.48	N/A***	10.16	51.31	30.99
STE050-*	1/2	1.25	300	.60	.99	.52	.90	.51	.61	2.65	1.63
	16	31.75	33.90	15.24	25.15	13.21	22.86	12.95	15.49	67.31	41.40
STE075-*	3/4	1.25	600	.86	1.21	.78	1.13	.66	.82	2.90	2.08
	21	31.75	67.79	21.84	30.73	19.81	28.70	16.76	20.83	73.66	52.83
STE100-*	1	1.25	700	.95	1.38	.87	1.30	.79	1.04	3.02	2.30
	27	31.75	79.09	24.13	35.05	22.10	33.02	20.07	26.42	76.71	58.42
STE125-*	1 1/4	1.25	1000	1.15	1.63	.99	1.47	.97	1.25	4.01	2.82
	35	31.75	112.98	29.21	41.40	25.15	37.34	24.64	31.75	101.85	71.63
STE150-*	1 1/2	1.75	1200	1.44	1.97	1.28	1.81	1.26	1.56	4.29	3.25
	41	44.45	135.58	36.58	50.04	32.51	45.97	32.00	39.62	108.97	82.55
STE200-*	2	1.75	1600	1.83	2.38	1.67	2.22	1.65	2.00	4.12	3.60
	53	44.45	180.78	46.48	60.45	42.42	56.39	41.91	50.80	104.65	91.44
STE250-	2 1/2	2.50	1600	2.27	2.81	2.11	2.68	2.08	2.42	5.32	4.75
	63	63.50	180.78	57.66	71.37	53.59	68.07	52.83	61.47	135.13	120.65
STE300-	3	2.50	1600	2.67	3.27	2.55	3.15	2.53	2.89	5.40	5.40
	78	63.50	180.78	67.82	83.06	64.77	80.01	64.26	73.41	137.16	137.16
STE350-	3 1/2	2.50	1600	3.22	3.87	3.09	3.64	3.07	3.46	5.36	5.90
	91	63.50	180.78	81.79	98.30	78.49	92.46	77.98	87.88	136.14	149.86
STE400-	4	2.50	1600	3.67	4.34	3.55	4.23	3.53	3.94	5.42	6.40
	103	63.50	180.78	93.22	110.27	90.17	107.44	89.66	100.08	137.67	162.56

\* These products are UL Listed UL84H3 and watertight NEMA Type 6P.

\*\* Metric size designator (ANSI C80.1-1994).

\*\*\* This fitting does not have a removable armor stop.

Ocal® Corrosion Protection for Electrical Conduit and Fittings



## Hazardous Location Fittings — PVC-Coated STAR TECK EXTREME® Fittings

Specially designed for hazardous locations!

### OCAL-BLUE Double-Coat STAR TECK EXTREME® STEX Series Fittings for Hazardous Locations

- Offers all the features of the STE Series
- Classified for Class I, Division 1, Groups A, B, C, D and Class II, Division 1, Groups E, F, G environments with approved metal-clad cable installed in accordance with NEC/CEC requirements•
- Requires T&B® sealing compound for use in hazardous locations



Ocal® Corrosion Protection for Electrical Conduit and Fittings

#### PVC-Coated STEX Series Fittings for Hazardous Locations

CAT. NO.	HUB SIZE IN. METRIC SIZE DESIGNATOR**	STRIP LENGTH IN. MM	GLAND TORQUE LB.-IN. NM	RANGE OVER JACKET		RANGE OVER ARMOR		A1: THROAT DIA. MIN. W/END STOP	A2: THROAT DIA. MIN. W/O END STOP	B OVERALL HEIGHT	C MAX. WIDTH
				MIN. IN. MM	MAX. IN. MM	MIN. IN. MM	MAX. IN. MM	IN. MM	IN. MM	IN. MM	IN. MM
STX050-462-_*	½	1.25	300	.53	.65	.42	.57	N/A***	.40	2.50	1.63
	16	31.75	33.90	13.46	16.51	10.67	14.48	N/A***	10.16	63.50	41.40
STX050-464-_*	½	1.25	300	.60	.76	.49	.68	N/A***	.49	2.53	1.63
	16	31.75	33.90	15.24	19.30	12.45	17.27	N/A***	12.45	64.26	41.40
STEX075-_*	¾	1.25	600	.60	.99	.52	.90	.50	.68	3.40	1.82
	21	31.75	67.79	15.24	25.15	13.21	22.86	12.70	17.27	86.36	46.23
STEX100-_*	1	1.25	700	.86	1.21	.78	1.13	.65	.83	3.58	2.30
	27	31.75	79.09	21.84	30.73	19.81	28.70	16.51	21.08	90.93	58.42
STEX125-_*	1¼	1.25	1000	.95	1.38	.87	1.30	.83	1.07	3.92	2.51
	3	31.75	112.98	24.13	35.05	22.10	33.02	21.08	27.18	99.57	63.75
STEX150-_*	1½	1.75	1200	1.15	1.63	.99	1.47	.96	1.27	5.02	3.26
	41	44.45	135.58	29.21	41.40	25.15	37.34	24.38	32.26	127.51	82.80
STEX200-_*	2	1.75	1600	1.44	1.97	1.28	1.81	1.25	1.56	5.12	3.62
	53	44.45	180.78	36.58	50.04	32.51	45.97	31.75	39.62	130.05	91.95
STEX250-†	2½	2.50	1600	1.83	2.38	1.67	2.22	1.64	2.00	5.17	4.58
	63	63.50	180.78	46.48	60.45	42.42	56.39	41.66	50.80	131.32	116.33
STEX300-†	3	2.50	1600	2.27	2.81	2.11	2.68	2.08	2.46	6.61	5.10
	78	63.50	180.78	57.66	71.37	53.59	68.07	52.83	62.48	167.89	129.54
STEX350-†	3½	2.50	1600	2.67	3.27	2.55	3.15	2.53	2.86	7.38	5.79
	91	63.50	180.78	67.82	83.06	64.77	80.01	64.26	72.64	187.45	147.07
STEX400-†	4	2.50	1600	3.22	3.87	3.09	3.64	3.06	3.46	7.65	6.19
	103	63.50	180.78	81.79	98.30	78.49	92.46	77.72	87.88	194.31	157.23
STEX400-484-†	4	—	1600	3.81	4.03	3.68	3.87	—	—	—	—
	103	—	180.78	96.77	102.36	93.47	98.30	—	—	—	—
STEX400-485-†	4	—	1600	3.97	4.19	3.84	4.03	—	—	—	—
	103	—	180.78	100.84	106.43	97.54	102.36	—	—	—	—

\* These products are UL Listed UL84H3 and watertight NEMA Type 6P.

\*\*\* This fitting does not have a removable armor stop.

• Ratings prior to PVC coating.

\*\* Metric size designator (ANSI C80.1-1994).

† CSA approved for hazardous locations.

#### T&B® Sealing Compounds — Used for Hazardous Locations

CAT. NO.	DESCRIPTION	VOLUME
SC4-KIT	Liquid-Type Sealing Compound for use in Control Cable Applications	2.8 fl. oz.
SC65	Putty-Type Sealing Compound	60 grams

# Ocal®

## Hazardous Location Fittings — PVC-Coated Conduit Boxes

Provides access to wiring, directional changes in conduit and more!

### OCAL-BLUE Double-Coat GUA Series Conduit Boxes



GUA

#### Listings / Certifications†

- UL514A Wet Locations (when used with gasketed covers)
- UL886
- CSA C22.2 No. 30

GUA series conduit boxes are installed in hazardous areas to protect conductors, act as pull and splice boxes, provide access to conductors for maintenance and future system changes, act as mounting outlets for fixtures (with proper covers) or change conduit direction.

- Grade 60-45-10 ductile iron bodies and cast aluminum covers (iron covers also available)
- Nominal .002" (2 mil) blue urethane coating on both interior and exterior and nominal .040" (40 mil) PVC coating bonded to exterior
- All hubs have minimum 5 full threads, integral bushing and pressure-sealing sleeves
- All units furnished with internal grounding screw and ship complete with aluminum cover with O-ring gasket (covers also sold separately for replacement purposes)
- Explosion-proof, dust-ignition proof, raintight and suitable for use in the following environments:†
  - Class I, Division 1 & 2, Groups C, D
  - Class II, Division 1, Groups E, F, G
  - Class III, Division 1 & 2
  - NEMA 3, 4, 7 CD, 9 EFG



GUAB



GUAC



GUAT



GUAX



CAT. NO.					ALUMINUM COVER ONLY	IRON COVER ONLY	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	COVER OPENING IN. MM
GUA	GUAC	GUAT	GUAX	GUAB				
GUA14-	GUAC14-	GUAT14-	GUAX14-	GUAB14-	GUA04-	GUA04WOD-	½ 16	2.00 50.80
GUA24-	GUAC24-	GUAT24-	GUAX24-	GUAB24-	GUA04-	GUA04WOD-	¾ 21	2.00 50.80
GUA16-	GUAC16-	GUAT16-	GUAX16-	GUAB16-	GUA06-	GUA06WOD-	½ 16	3.00 76.20
GUA26-	GUAC26-	GUAT26-	GUAX26-	GUAB26-	GUA06-	GUA06WOD-	¾ 21	3.00 76.20
GUA36-	GUAC36-	GUAT36-	GUAX36-	GUAB36-	GUA06-	GUA06WOD-	1 27	3.00 76.20
—	—	GUAT37-	GUAX37-	—	GUA07-	GUA07WOD-	1 27	3.63 92.20
GUA47-	GUAC47-	GUAT47-	GUAX47-	GUAB47-	GUA07-	GUA07WOD-	1¼ 35	3.63 92.20
—	GUAC49-	GUAT49-	GUAX49-	—	GUA09-	GUA09WOD-	1¼ 35	5.00 127.00
GUA59-	GUAC59-	GUAT59-	GUAX59-	GUAB59-	GUA09-	GUA09WOD-	1½ 41	5.00 127.00
—	GUAC69-	GUAT69-	GUAX69-	GUAB69-	GUA09-	GUA09WOD-	2 53	5.00 127.00

\* Metric size designator (ANSI C80.1-1994).

† Ratings prior to PVC coating.

Ocal® Corrosion Protection for Electrical Conduit and Fittings

## Hazardous Location Fittings — PVC-Coated Conduit Boxes

### OCAL-BLUE Double-Coat GUA Series Conduit Boxes (continued)



GUA4



GUA6



GUA6



GUA8



GUA10

Cat. No.	Color
<b>GUA14 - _</b>	
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	



CAT. NO.					ALUMINUM COVER ONLY	IRON COVER ONLY	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	COVER OPENING IN. MM
GUAD	GUAL	GUAM	GUAN	GUAW				
GUAD14_	GUAL14_	GUAM14_	GUAN14_	GUAW14_	GUA04_	GUA04WOD_	½ 16	2.00 50.80
GUAD24_	GUAL24_	GUAM24_	GUAN24_	GUAW24_	GUA04_	GUA04WOD_	¾ 21	2.00 50.80
GUAD16_	GUAL16_	GUAM16_	GUAN16_	GUAW16_	GUA06_	GUA06WOD_	½ 16	3.00 76.20
GUAD26_	GUAL26_	GUAM26_	GUAN26_	GUAW26_	GUA06_	GUA06WOD_	¾ 21	3.00 76.20
GUAD36_	GUAL36_	GUAM36_	GUAN36_	—	GUA06_	GUA06WOD_	1 27	3.00 76.20
—	GUAL47_	GUAM47_	GUAN47_	—	GUA07_	GUA07WOD_	1¼ 35	3.63 92.20
GUAD49_	GUAL49_	—	—	—	GUA09_	GUA09WOD_	1¼ 35	5.00 127.00
—	GUAL59_	—	GUAN59_	—	GUA09_	GUA09WOD_	1½ 41	5.00 127.00
—	GUAL69_	GUAM69_	GUAN69_	—	GUA09_	GUA09WOD_	2 53	5.00 127.00

\* Metric size designator (ANSI C80.1-1994).

Ocal® Corrosion Protection for Electrical Conduit and Fittings



# Ocal®

## Hazardous Location Fittings — PVC-Coated Aluminum Conduit Boxes

Junction boxes for branch conduits in hazardous locations.

### OCAL-BLUE Double-Coat External Hubs with Covers and Installed Green Ground Screw

Ocal® Corrosion Protection for Electrical Conduit and Fittings



GAC



GAE



GAL



GALB



GAT

- Accessible wiring chamber provides a convenient location to maintain or change a system, pull conductors and make splices
- Unique mounting pads and rugged protective housing ideal for installation of OEM devices or instruments
- Die-cast copper-free aluminum alloy A360 construction with precision cast and machined surfaces
- Precision NPT threaded hubs for trouble-free field installation
- Nominal .002" (2 mil) blue urethane coating on both interior and exterior and nominal .040" (40 mil) PVC coating bonded to exterior
- Explosion-proof, dust-ignition proof, raintight and suitable for use in the following environments:††
  - Class I, Division 1 & 2, Groups C, D
  - Class II, Division 1, Groups E, F, G
  - Class III, Division 1 & 2
  - NEMA 3, 4, 7 CD, 9 EFG (NEMA 4 rated when ordered with O-ring installed)



CAT. NO.

THROUGH-FEED W/SURF. COVER GAC	DEAD END W/SURF. COVER GAE	L-STYLE W/SURF. COVER GAL	LB-STYLE W/SURF. COVER GALB	T-STYLE W/SURF. COVER GAT	SURFACE COVER ONLY GAS	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	COVER OPENING IN. MM
GAC-1-†	GAE-1-†	GAL-1-†	GALB-1-†	GAT-1-†	GAS-123-•	½ 16	3.69 93.73
GAC-2-†	GAE-2-†	GAL-2-†	GALB-2-†	GAT-2-†	GAS-123-•	¾ 21	3.69 93.73
GAC-3-†•	GAE-3-†•	GAL-3-†•	GALB-3-†	GAT-3-†	GAS-123-•	1 27	3.69 93.73
GAC-4-†•	—	GAL-4-†•	GALB-4-†	GAT-4-†	GAS-4-•	1¼ 35	3.91 99.31
GAC-5-†•	—	GAL-5-†•	GALB-5-†•	GAT-5-†	GAS-56-•	1½ 41	5.19 131.83
GAC-6-†•	—	GAL-6-†•	GALB-6-†•	GAT-6-†	GAS-56-•	2 53	5.19 131.83

\* Metric size designator (ANSI C80.1-1994).

† Suffix -OR: O-ring available for NEMA 4 rating. Consult factory for lead time and price.

• Made-to-order item. Consult factory for lead time and minimum quantities.

†† Ratings prior to PVC coating.

## Hazardous Location Fittings — PVC-Coated Aluminum Conduit Boxes

### OCAL-BLUE Double-Coat External Hubs with Covers and Installed Green Ground Screw (continued)



GAX



GAFX



GAJU  
(shown uncoated)



GAS



GAD



GAJ  
(shown uncoated)

Cat. No.	Color
<b>GAC-1-</b> _	
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	



CAT. NO.						PIPE SIZE	COVER OPENING
X-STYLE W/SURF. COVER GAX	X-STYLE W/FLANGE & SURF. COVER GAFX	U-STYLE SURFACE W/CANOPY COVER GAJU	SURFACE COVER ONLY GAS	DOME COVER ONLY (CLASS I, GR. D) GAD	CANOPY COVER ONLY GAJ	IN. METRIC SIZE DESIGNATOR*	IN. MM
GAX-1-†	GAFX-1-†	GAJU-1-•	GALB-1-†	GAD-123-•	GAJ-123-•	½	3.69
GAX-2-†	GAFX-2-†	GAJU-2-•	GALB-2-†	GAD-123-•	GAJ-123-•	16	93.73
GAX-3-†•	GAFX-3-†	GAJU-3-•	GALB-3-†	GAD-123-•	GAJ-123-•	¼	3.69
GAX-4-†•	—	—	GALB-4-†	—	GAJ-4-•	21	93.73
GAX-5-†•	—	GAJU-5-•	GALB-5-†•	—	GAJ-56-•	1	3.69
GAX-6-†•	—	GAJU-6-•	GALB-6-†•	—	GAJ-56-•	27	93.73
						1¼	3.91
						35	99.31
						1½	5.19
						41	131.83
						2	5.19
						53	131.83

\* Metric size designator (ANSI C80.1-1994).

• Made-to-order item. Consult factory for lead time and minimum quantities.

† Suffix -OR: O-ring available for NEMA 4 rating. Consult factory for lead time and price.

Ocal® Corrosion Protection for Electrical Conduit and Fittings

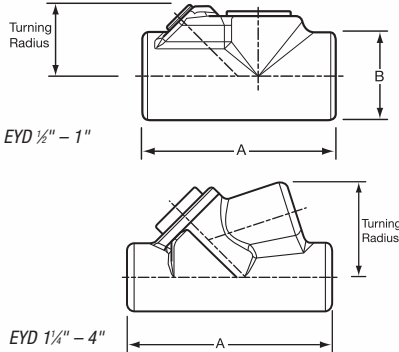


## Hazardous Location Fittings — PVC-Coated Sealing Fittings

Restrict the passage of gases, vapors and flames at atmospheric pressure and normal ambient temperatures.

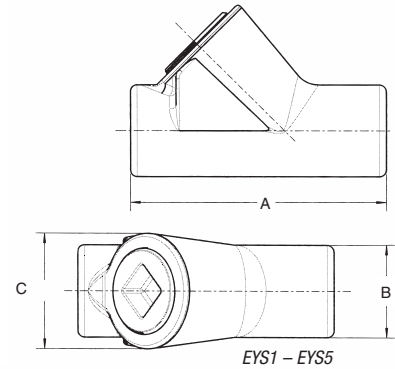
### OCAL-BLUE Double-Coat Sealing Fittings

- Prevents pre-compression or “pressure piling” in conduit systems
- Gray iron alloy body construction coated with nominal .002” (2 mil) blue urethane on both interior and exterior
- Nominal .040” (40 mil) PVC coating bonded to exterior — available in gray, white, blue or custom colors
- Explosion-proof, dust-ignition proof and suitable for use in the following environments:†
  - Class I, Division 1 & 2, Groups C, D
  - Class II, Division 1, Groups E, F, G
  - Class III, Division 1 & 2



### EYD Series Drain Sealing Fittings

FEMALE CAT. NO.	MALE & FEMALE CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	DIMENSIONS IN. MM		TURNING RADIUS IN. MM
			A	B	
EYD1_	EYD16_	1/2	3.81	1.50	1.75
		16	96.77	38.10	44.45
EYD2_	EYD26_	3/4	4.08	1.75	1.98
		21	103.63	44.45	50.29
EYD3_	EYD36_	1	4.85	2.19	2.19
		27	123.19	55.63	55.63
EYD4_	EYD46_	1 1/4	5.00	2.25	1.80
		35	127.00	57.15	45.72
EYD5_	EYD56_	1 1/2	5.44	2.44	2.00
		41	138.18	61.98	50.80
EYD6_	EYD66_	2	6.25	3.00	2.32
		53	158.75	76.20	58.93
EYD7_	EYD76_	2 1/2	7.50	3.50	2.69
		63	190.50	88.90	68.33
EYD8_	EYD86_	3	8.50	4.25	3.15
		78	215.90	107.95	80.01
EYD9_	EYD96_	3 1/2	9.19	4.75	3.38
		91	233.43	120.65	85.85
EYD10_	EYD106_	4	9.75	5.25	3.64
		103	247.65	133.35	92.46



### EYS Series Sealing Fittings

FEMALE CAT. NO.	MALE & FEMALE CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	DIMENSIONS IN. MM			TURNING RADIUS IN. MM
			A	B	C	
<b>Vertical Only</b>						
EYS1_	EYS16_	1/2	3.31	1.25	1.50	1.66
		16	84.07	31.75	38.10	42.16
EYS2_	EYS26_	3/4	3.65	1.50	1.75	1.96
		21	92.71	38.10	44.45	49.78
EYS3_	EYS36_	1	4.25	1.75	2.19	2.40
		27	107.95	44.45	55.63	60.96
<b>Vertical or Horizontal</b>						
EYS11_	EYS116_	1/2	3.63	1.25	—	1.09
		16	92.20	31.75	—	27.69
EYS21_	EYS216_	3/4	3.66	1.50	—	1.25
		21	92.96	38.10	—	31.75
EYS31_	EYS316_	1	4.25	1.75	—	1.59
		27	107.95	44.45	—	40.39
EYS4_	EYS46_	1 1/4	5.00	2.25	—	1.81
		35	127.00	57.15	—	45.97
EYS5_	EYS56_	1 1/2	5.44	2.44	—	2.00
		41	138.18	61.98	—	50.80
EYS6_	EYS66_	2	6.25	3.00	—	2.31
		53	158.75	76.20	—	58.67
EYS7_	EYS76_	2 1/2	7.50	3.50	—	2.56
		63	190.50	88.90	—	65.02
EYS8_	EYS86_	3	8.50	4.25	—	3.09
		78	215.90	107.95	—	78.49
EYS9_	EYS96_	3 1/2	9.19	4.75	—	3.38
		91	233.43	120.65	—	85.85
EYS10_	EYS106_	4	9.75	5.25	—	3.53
		103	247.65	133.35	—	89.66

\* Metric size designator (ANSI C80.1-1994).

\*\* EYSX and EYDX are expanded-fill styles. When ordering, add X to part number. For example: EYSX31-G, EYDX31-B.

† Ratings prior to PVC coating.



## Hazardous Location Fittings — PVC-Coated Sealing Fittings

### OCAL-BLUE Double-Coat Sealing Fittings (continued)



EZS

#### EZS Series Sealing Fittings

FEMALE CAT. NO.	MALE & FEMALE CAT. NO.	IN. METRIC SIZE DESIGNATOR*
EZS1- <u>  </u>	EZS16- <u>  </u>	½ 16
EZS2- <u>  </u>	EZS26- <u>  </u>	¾ 21
EZS3- <u>  </u>	EZS36- <u>  </u>	1 27
EZS4- <u>  </u>	EZS46- <u>  </u>	1¼ 35
EZS5- <u>  </u>	EZS56- <u>  </u>	1½ 41
EZS6- <u>  </u>	EZS66- <u>  </u>	2 53
EZS7- <u>  </u>	EZS76- <u>  </u>	2½ 63
EZS8- <u>  </u>	EZS86- <u>  </u>	3 78

\* Metric size designator (ANSI C80.1-1994).



EZD

#### EZD Series Sealing Fittings

CAT. NO.	IN. METRIC SIZE DESIGNATOR*
EZD111- <u>  </u>	½ 16
EZD211- <u>  </u>	¾ 21
EZD311- <u>  </u>	1 27
EZD411- <u>  </u>	1¼ 35
EZD511- <u>  </u>	1½ 41
EZD611- <u>  </u>	2 53

\* Metric size designator (ANSI C80.1-1994).



EZD  
with Inspection Cover off

Cat. No.	Color
<b>EYS1-<u>  </u></b>	<u>  </u>
<u>  </u> = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

Ensures proper functioning of EYS sealing fittings.

### Chico® Sealing Compound and Fiber

- Sealing compound mixes with water, pours easily and hardens in 60–70 minutes
- Fiber filler mineral wool holds sealing compound in place while it hardens

OCAL-BLUE Double-Coat EYS Sealing Fittings require fiber filler and sealing compound to function properly. Use Chico® X Fiber Filler to form a dam around the sealing fitting's integral bushing, as well as at the end of the conduit and around conductors entering the hub. Chico® A Sealing Compound expands slightly while hardening and bonds to the inner walls of the sealing fitting.



FIBER-X6



SEAL-A3

CAT. NO.	DESCRIPTION
<b>SEAL-A3</b>	Chico® A Sealing Compound, 1 lb. net wt./23 cu.in. vol.
<b>FIBER-X6</b>	Chico® X Fiber Filler, 8 oz.
<b>SEALKIT-A4</b>	Chico® A Sealing Compound, 1 lb. net wt./23 cu.in. vol., with 1 oz. Chico® X Fiber Filler

Chico® is a registered trademark of Cooper Crouse-Hinds.

Ocal® Corrosion Protection for Electrical Conduit and Fittings

# Ocal®

## Hazardous Location Fittings — PVC-Coated Conduit Unions

Explosion-proof, dust-ignition proof three-piece couplings.

### OCAL-BLUE Double-Coat Conduit Unions

- Install in threaded thick-wall conduit systems in hazardous areas
- Use UNY male unions to connect conduit to a conduit fitting, junction box or device enclosure
- Use UNF female unions to connect conduit to conduit or to provide means for future modifications to the conduit system
- Nominal .002" (2 mil) blue urethane on interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior
- Pressure-sealing sleeves protect your connection
- Explosion-proof, dust-ignition proof and suitable for use in the following environments:†
  - Class I, Division 1 & 2, Groups A, B, C, D
  - Class II, Division 1, Groups E, F, G
  - Class III, Division 1 & 2



UNF205-G



UNY Male 1/2"-4"  
(shown uncoated)



UNY Male 5"-6"  
(shown uncoated)



UNF Female 1/2"-4"  
(shown uncoated)



UNF Female 5"-6"  
(shown uncoated)



Cat. No.	Color
<b>UNF105-</b> _	
_ = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

#### UNY Male Unions

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	OVERALL LENGTH IN. MM	OVERALL DIAMETER IN. MM
UNY105-	1/2	2.39	1.50
	16	60.71	38.10
UNY205-	3/4	2.44	1.81
	21	61.98	45.97
UNY305-	1	2.75	2.00
	27	69.85	50.80
UNY405-	1 1/4	3.06	2.75
	35	77.72	69.85
UNY505-	1 1/2	3.63	3.06
	41	92.20	77.72
UNY605-	2	3.50	3.81
	53	88.90	96.77
UNY705-	2 1/2	4.81	4.31
	63	122.17	109.47
UNY805-	3	5.34	5.06
	78	135.64	128.52
UNY905-	3 1/2	5.50	5.69
	91	139.70	144.53
UNY1005-	4	5.63	6.19
	103	143.00	157.23
UNY905-	5	5.25	8.19
	129	133.35	208.03
UNY014-	6	5.38	9.31
	155	136.65	236.47

\* Metric size designator (ANSI C80.1-1994).

#### UNF Female Unions

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	OVERALL LENGTH IN. MM	OVERALL DIAMETER IN. MM
UNF105-	1/2	1.88	1.50
	16	47.75	38.10
UNF205-	3/4	2.13	1.81
	21	54.10	45.97
UNF305-	1	2.16	2.00
	27	54.86	50.80
UNF405-	1 1/4	2.25	2.75
	35	57.15	69.85
UNF505-	1 1/2	2.75	3.06
	41	69.85	77.72
UNF605-	2	2.50	3.81
	53	63.50	96.77
UNF705-	2 1/2	3.50	4.31
	63	88.90	109.47
UNF805-	3	4.00	5.06
	78	101.60	128.52
UNF905-	3 1/2	4.16	5.69
	91	105.66	144.53
UNF1005-	4	4.25	6.19
	103	107.95	157.23
UNF012-	5	3.81	8.19
	129	96.77	208.03
UNF014-	6	3.81	9.31
	155	96.77	236.47

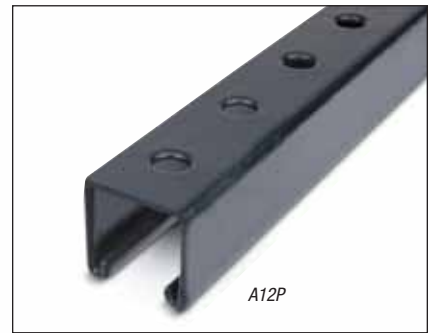
† Ratings prior to PVC coating.

Ocal® Corrosion Protection for Electrical Conduit and Fittings

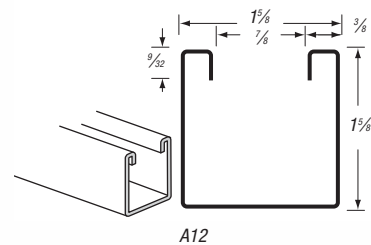
## Strut — PVC-Coated Steel Channel

Rugged steel channels protected by corrosion-resistant PVC!

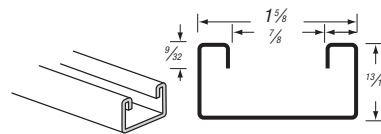
### Ocal PVC-Coated Steel Strut



- Channels cold formed from hot-rolled pickled and oiled strip steel
- Nominal .015" (15 mil) PVC coating
- PVC coating available in your choice of blue, white or gray standard colors
- Custom colors also available on request
- Sold in 10 ft. (3.048m) lengths with standard length tolerance of  $\pm \frac{1}{8}$ " (3.18mm)
- Choose between standard 1 $\frac{1}{2}$ " (41.28mm) and shallow 1 $\frac{3}{8}$ " (20.64mm) depths
- Available in both solid and punched styles



A12



C14

Cat. No.	Color
<b>A 1 2 -</b>	—
	_ = space for color identifier
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

**Catalog No. Example:**  
C14P-W is shallow punched strut channel coated in white PVC.

CAT. NO.	STYLE	STEEL GAUGE	IN. MM	
			W	H
A12-	Standard	12	1.63	x 1.63
		2.65	41.28	x 41.28
A12A-	Back to Back	12	1.63	x 3.25
		2.65	41.28	x 82.55
A12P-	Standard Punched	12	1.63	x 1.63
		2.65	41.28	x 41.28
C14-	Shallow	14	1.63	x .81
		1.89	41.28	x 20.64
C14P-	Shallow Punched	14	1.63	x .81
		1.89	41.28	x 20.64

Ocal® Corrosion Protection for Electrical Conduit and Fittings

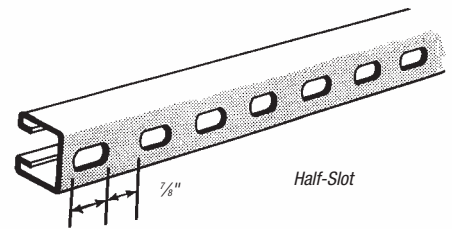
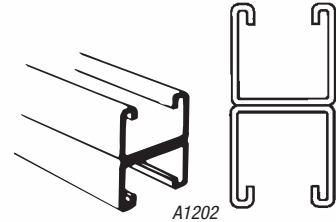
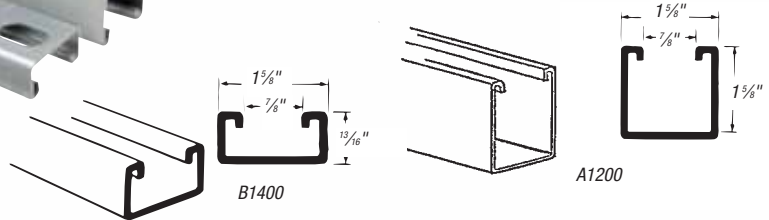


## Strut — Stainless Steel Channel and Hardware

Type 304 or Type 316 stainless — cold-roll formed for strength.

### Stainless Steel Strut

- 12 or 14 gauge Type 304 or Type 316 stainless steel
- Available in 10-ft. (3.048m) and 20-ft. (6.096m) lengths with standard length tolerance of  $\pm \frac{1}{8}$ " (3.18mm)
- Choose standard or shallow and solid or half-slot style



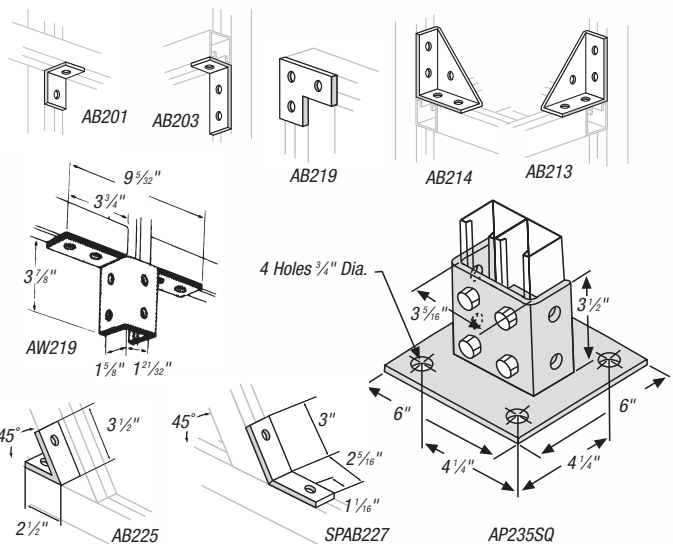
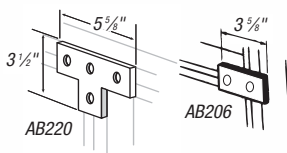
TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	STYLE	STEEL GAUGE MM	LENGTH FT. M	IN. WIDTH	IN. HEIGHT
A1200 10SS	A120010T316SS	Standard	12	10	1.63	x 1.63
A1200 20SS	A120020T316SS	Standard	12	20	1.63	x 1.63
A1200HS 10SS	A1200HS10T316SS	Standard Half-Slot	12	10	1.63	x 1.63
A1200HS 20SS	A1200HS20T316SS	Standard Half-Slot	12	20	1.63	x 1.63
B1400 10SS	B140010T316SS	Shallow	14	10	1.63	x .81
B1400 20SS	B140020T316SS	Shallow	14	20	1.63	x .81
A1202HS10SS	A1202HS10T316SS	Back-to-Back Half-Slot	12	10	1.63	x 3.25
A1202HS20SS	A1202HS20T316SS	Back-to-Back Half-Slot	12	20	1.63	x 3.25

Ocal® Corrosion Protection for Electrical Conduit and Fittings

### Stainless Steel Hardware Accessories

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	SIZE
<b>Flat Plate Fittings</b>		
AB220SS	AB220SS316	5/8" x 3/2"
AB207SS	AB207SS6C	5/8"
X207SS	X207SS6C	7/4"
AB206SS	AB206SS6C	3/8"
<b>90° Corner Fittings or Brackets</b>		
AB201SS	AB201SS316	—
AB202SS	AB202SS316	1 1/8" x 2"
AB203SS	AB203SS316	—
AB204SS	AB204SS316	2 1/4" x 3 1/2"
AB213SS	AB213SS316	—
AB214SS	AB214SS316	—
AB219SS	AB219SS316	—
AW219SS	AW219SS316	9/16" x 3 1/8"
AB205SS	AB205SS316	—

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	SIZE
<b>45° Fittings</b>		
AB225SS	AB225SS316	3 1/2" x 2 1/2"
SPAB227SS	AB227SS316	3" x 2 5/16"
<b>Pedestal Base</b>		
AP232SS	AP232SS6	4 1/2" x 3 1/2"
AP232SSQSS	AP232SSQSS6	4 1/2" x 3 1/2"
AP235SS	AP235SS6	6" x 4"
AP235SSQSS	AP235SSQSS6	6" x 4"



## Strut — All-Thread Rod and Hardware

Continuously threaded rod for use with conduit hangers and strut to suspend overhead conduit runs.

### All-Thread Rod

- All-thread steel rod coated with nominal .015" (15 mil) PVC in blue, white or gray with custom colors available on request
- Available in 1/4", 3/8" or 1/2" standard diameters and in 3-, 6- or 10-ft. standard lengths
- Also available uncoated in Type 304 or Type 316 stainless steel
- Stainless steel all-thread rod comes in 3/8" or 1/2" diameters in 6-ft. standard lengths with other diameters and lengths available on request

### Ocal PVC-Coated Steel All-Thread Rod

CAT. NO.	TRADE SIZE	LENGTH
	IN. MM	FT. M
THR1/4X10- 6.35	1/4"	10.00 3.05
THR3/8X3- 9.53	3/8"	3.00 0.91
THR3/8X6- 9.53	3/8"	6.00 1.83
THR3/8X10- 9.53	3/8"	10.00 3.05
THR1/2X3- 12.70	1/2"	3.00 0.91
THR1/2X6- 12.70	1/2"	6.00 1.83
THR1/2X10- 12.70	1/2"	10.00 3.05



PVC-Coated All-Thread Rod

Cat. No.	Diameter x Length	Color
<b>THR3/8X3</b> -		
_ = space for color identifier		
<b>G</b>	= Gray	
<b>W</b>	= White	
<b>B</b>	= Blue	
Custom colors also available.		

### Stainless Steel All-Thread Rod

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	TRADE SIZE	LENGTH
		IN. MM	FT. M
H104-3/8X6SS	H104 3/8X6SS316	3/8"	6.00 1.83
H104 3/8X12SS	H104-3/8X12SS6	3/8"	12.00 3.66
H104-1/2X6SSC	H104-1/2X6SS6	1/2"	6.00 1.83
H104 1/2X12SS	H104 1/2X12SS316	1/2"	12.00 3.66

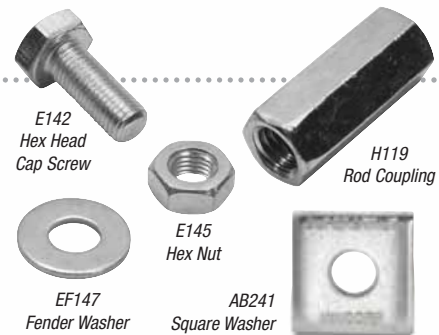


Stainless Steel All-Thread Rod

### Stainless Steel Hardware Accessories (continued)

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	SIZE
<b>Spring Nut — Regular</b>		
—	A100 1/4 SS	1/4"
—	A100 5/16SS	5/16"
—	A100 3/8 SS	3/8"
<b>Spring Nut — Short</b>		
—	B100 1/4 SS	1/4"
—	B100 3/8 SS	3/8"
—	B100 1/2SS	1/2"
<b>Springless Nut</b>		
—	AB100 1/4 SS	1/4"
—	AB100 5/16SS	5/16"
—	AB100 3/8 SS	3/8"
<b>Hex Head Cap Screw</b>		
E142 (T) X (L) SS	E142 (T) X (L) SS316	—

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	SIZE
<b>Hex Nut</b>		
E145 1/4 SS	—	1/4"
E145 5/16SS	—	5/16"
E145 3/8 SS	—	3/8"
E145 1/2 SS	—	1/2"
<b>Fender Washer</b>		
EF147 1/4 SS	—	1/4"
EF147 3/8 SS	—	3/8"
EF147 1/2SS	—	1/2"
<b>Square Washer</b>		
AB241 1/4SS	AB241-1/4SS316	1/4"
AB241 5/16SS	—	5/16"
AB241 3/8 SS	AB241-3/8 SS316	3/8"
AB241 1/2SS	AB241-1/2SS316	1/2"



E142  
Hex Head  
Cap Screw

H119  
Rod Coupling

EF147  
Fender Washer

E145  
Hex Nut

AB241  
Square Washer

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	SIZE
<b>Rod Coupling</b>		
H119 1/4SS	—	1/4"
H119 3/8SS	—	3/8"
H119 1/2SS	H119-1/2SS6	1/2"
<b>U-Bolt Beam Clamps</b>		
U501SS	—	3 3/16" H
U502SS	—	4 1/16" H



## Strut — PVC-Coated Beam Clamps and Conduit Hangers

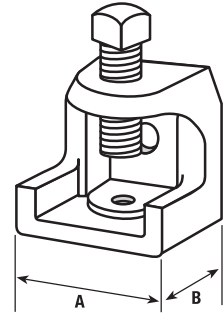
Corrosion-protected clamps for hanging threaded rod.

### Ocal PVC-Coated Hanger Rod Beam Clamps



500-G  
Hanger Rod Beam Clamp

- Malleable iron construction
- Nominal .015" (15 mil) PVC coating in blue, white, gray or custom colors
- 500, 502 and 503 also available uncoated in Type 316 stainless steel; add -SS316 to catalog number to order (for example: 502-SS316)



Cat. No.	Color
<b>500-</b>	—
— = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

CAT. NO.	BASE "A" IN. MM	BASE "B" IN. MM	JAW OPENING IN. MM	TAPPED HOLE IN. MM	LOAD RATING‡ LBS. KG
500- <b>1</b>	25.40	31.75	1 <sup>5</sup> / <sub>16</sub>	1/4 - 20	450
501- <b>1</b>	38.10	41.28	7/8	6.35 - 20	204.12
502- <b>2</b>	50.80	50.80	1	7.94 - 18	800
503- <b>2</b>	66.68	63.50	1	3/8 - 16	1300
508- <b>2</b>	63.50	60.33	2 <sup>1</sup> / <sub>8</sub>	9.53 - 16	589.67
				12.70 - 13	1300
				1/2 - 13	1700
				12.70 - 13	771.11

\* Metric size designator (ANSI C80.1-1994).

‡ Load ratings based on bottom hole of beam clamp with safety factor of three.

CSA File No. LR-52208



MINE3/4-G  
Mini Conduit Hanger

Includes stainless steel bolt and nut for fast, easy installation.

### Ocal PVC-Coated Mini Conduit Hangers

- Nominal .015" (15 mil) PVC coating in blue, white, gray or custom colors
- Rated for loads of up to 500 lbs. (226.80kg) with a safety factor of three

Cat. No.	Color
<b>MINE1-</b>	—
— = space for color identifier	
<b>G</b> = Gray	
<b>W</b> = White	
<b>B</b> = Blue	
Custom colors also available.	

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
MINE1/2- <b>1</b>	1/2
	16
MINE3/4- <b>1</b>	3/4
	21
MINE1- <b>1</b>	1
	27
MINE1-1/4- <b>1</b>	1 1/4
	35
MINE1-1/2- <b>1</b>	1 1/2
	41

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
MINE2- <b>2</b>	2
	53
MINE2-1/2- <b>2</b>	2 1/2
	63
MINE3- <b>3</b>	3
	78
MINE3-1/2- <b>3</b>	3 1/2
	91
MINE4- <b>4</b>	4
	103

\* Metric size designator (ANSI C80.1-1994).



Designed for easy attachment of conduit to strut!

### Pipe Straps for Strut

Just twist-insert these pipe straps anywhere you need them along the slot side of a channel. For additional flexibility, you can position the straps as closely as your pipe couplings permit.

- Combination slot and hex head bolt for flexibility of attachment
- Captivated square nut on shoulder enables easy one-handed tightening
- Use with either 1 5/8" or 1 1/2" strut for greater versatility
- Shipped pre-assembled for easier counting, sorting and handling
- Available with nominal .015" (15 mil) PVC coating in your choice of blue, white or gray standard colors (custom colors also available on request)
- Or choose uncoated pipe straps in Type 304 or Type 316 stainless steel



Stainless Steel Pipe Strap



PVC-Coated Pipe Strap

### Stainless Steel Strut Pipe Straps

TYPE 304 STAINLESS CAT. NO.	TYPE 316 STAINLESS CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
700-3/4-SS	700-3/4-SS316	1/2 16
700-1-SS	700-1-SS316	3/4 21
701-1-1/2-SS	701-1-1/2-SS316	1 27
701-1-3/4-SS	701-1-3/4-SS316	1 1/4 35
701-2-SS	701-2-SS316	1 1/2 41
701-2-1/2-SS	701-2-1/2-SS316	2 53
701-3-SS	701-3-SS316	2 1/2 63
701-3-5/8-SS	701-3-5/8-SS316	3 78
701-4-1/8-SS	701-4-1/8-SS316	3 1/2 91
701-4-5/8-SS	701-4-5/8-SS316	4 103

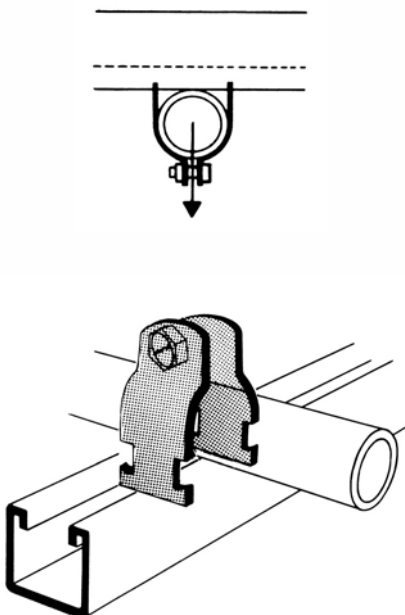
\* Metric size designator (ANSI C80.1-1994).

Note: Stainless steel strut pipe straps are recommended only for use with stainless steel strut. Stainless steel straps may damage the PVC coating on PVC-coated strut.

### Ocal PVC-Coated Strut Pipe Straps

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
SS1/2- <u>  </u>	1/2 16
SS3/4- <u>  </u>	3/4 21
SS1- <u>  </u>	1 27
SS1-1/4- <u>  </u>	1 1/4 35
SS1-1/2- <u>  </u>	1 1/2 41
SS2- <u>  </u>	2 53
SS2-1/2- <u>  </u>	2 1/2 63
SS3- <u>  </u>	3 78
SS3-1/2- <u>  </u>	3 1/2 91
SS4- <u>  </u>	4 103
SS5- <u>  </u>	5 129

\* Metric size designator (ANSI C80.1-1994).



Ocal® Corrosion Protection for Electrical Conduit and Fittings

Cat. No.	Size	Color
<b>SS 1-</b>		
- = space for color identifier		
G	= Gray	
W	= White	
B	= Blue	
Custom colors also available.		



**Fewer parts, less installation time and huge labor savings!**

### Trapnut® Strut Fastener

The unique scissor action of the Trapnut® Strut Fastener closes at any desired position on the threaded rod. Once closed, precision threads trap the rod for a sturdy hold that can be adjusted up or down for fine-tune positioning. While the versatile Trapnut® Fastener has a locking pin that holds it in the desired position, it can also be removed and reused.



Standard method using nuts and washers



New method using Trapnut® Strut Fastener

Unlike a hex nut, there's no need to thread the Trapnut® Fastener from either end of the rod, saving valuable time on the job. While the Trapnut® Fastener is a time-saver for new work, it's invaluable for retrofit applications. Rather than disassembling an existing trapeze to run additional conduit above it, simply clamp the Trapnut® Fastener between the trapeze and beam clamp for a speedy retrofit solution. It's ideal for applications where the rod ends aren't accessible.

The Trapnut® Fastener offers sturdy, load-bearing steel construction, so you can be confident of a solid installation. In addition, the Trapnut® Fastener functions as a hex nut, square washer and flat washer all in one, so there are fewer parts to keep track of on the job.

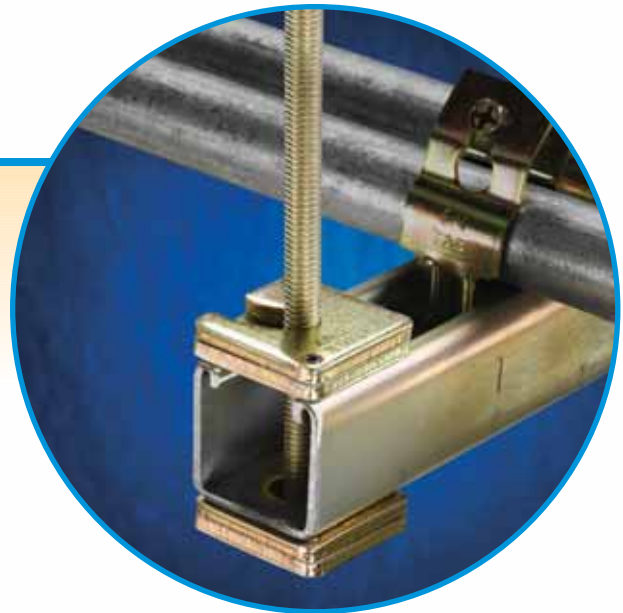
- Takes 30% less time than the traditional method on new work\*
- Takes 43% less time than the traditional method on retrofit applications\*

\* Based on time study conducted by Thomas & Betts comparing the time to install 15 feet of 2" conduit with typical trapeze assemblies using washers and nuts versus Trapnut® fasteners.

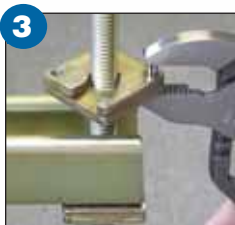


### Type 316 Stainless Steel Trapnut® Fastener

CAT. NO.	MATERIAL	SIZE	DESIGN LOAD
		IN. MM	LBS. KG
H122-1/4-SS6	Type 316 Stainless Steel	1/4"	150.00
		6.35	68.04
H122-3/8-SS6	Type 316 Stainless Steel	3/8"	590.00
		9.53	267.62
H122-1/2-SS6	Type 316 Stainless Steel	1/2"	1080.00
		12.70	489.88



### Trapnut® Fastener is Quick and Easy to Install



#### 1 Hold in the open position.

- No need to thread the Trapnut® Fastener from either end of the rod — saves valuable time
- Perfect for retrofit applications where the rod ends are not accessible

#### 2 Insert the bottom plate on the rod and close the top plate.

- Precision threads trap the threaded rod for a sturdy hold that can be adjusted up or down for fine-tune positioning
- Functions as a hex nut, square washer and flat washer combined

#### 3 Press the pin with pliers.

- Locking pin holds Trapnut® Fastener in the desired position
- Can be removed and reused

#### 4 Tighten to the desired position with pliers.

- Can be adjusted up or down for fine-tune positioning
- Sturdy, load-bearing stainless steel construction
- Sized to provide custom fit for either 1 1/8" or 1 1/2" strut systems





In This Section...

## Ocal® Installation Products

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Ocal® Installation Products



**United States**  
Tel: 901.252.8000  
Fax: 901.252.1354

**Canada**  
Tel: 450.347.5318  
Fax: 450.347.1976

**Customer Service**  
Tel: 800.816.7809

**Technical Services**  
Tel: 888.862.3289

**Thomas & Betts**

[www.tnb.com](http://www.tnb.com)





# Ocal®

## Ocal® Installation Tools Overview

Ocal® Installation Products

### The Right Tools for the Job!

Thomas & Betts Ocal® PVC-Coated Conduit is designed to prevent corrosion from striking weak points in conduit systems. But any PVC-coated conduit system is only as good as the installation job. The wrong tools can result in incorrectly installed pipes and fittings or damage to PVC coating, creating those weak points where corrosion starts.

After careful research and evaluation, Thomas & Betts now offers you the very best installation tools available for PVC-coated conduit right out of the box. What that means to you, the installer, is lower costs — in equipment, in installation time and in time you'd normally have to spend adapting standard tools for use on PVC-coated conduit.



### Hassle-Free Installation

Count on Thomas & Betts to provide a hassle-free way for installers to get the right tools for the job in their hands — just another benefit of using Ocal® products.

For more information on Ocal® Installation Guidelines, see pages 74–81.



# Ocal®

## Electric and Hand Benders



Bends 1/2" through 2" PVC-coated conduit.

### GREENLEE® Model 555 Electric Bender for PVC-Coated Conduit

When you use this electric bending machine on 1/2" through 2" conduit, the shoes as well as the roller assembly should be of the type designed specifically for use with PVC-coated conduit.

If you use conventional shoes, the shoes and each of the rollers in the roller assembly must be machined 60 thousandths. Some manufacturers use slide bars instead of a roller assembly, and these, too, must be machined 60 thousandths.

Be sure to compensate for "spring back," since PVC coating often requires the setting to be off as much as 5°.

CAT. NO.	DESCRIPTION
<b>GBENDER</b>	GREENLEE® Model 555 Bender
<b>Shoes and Roller Kit for 40 mil PVC-Coated Conduit</b>	
<b>37279</b>	1/2" - 2" Shoes and Roller Supports
<b>Kit Consists of One Each:</b>	
<b>00946</b>	1/2" through 1 1/4" Roller Support
<b>00573</b>	1/2" through 1 1/4" Shoe
<b>37281</b>	1 1/2" and 2" Shoe
<b>37282</b>	1 1/2" through 2" Roller Support
<b>23818</b>	Metal Storage Box

Ocal® Installation Products

Make saddles, offsets and conventional bends.

### Hand Bender for PVC-Coated Conduit

CAT. NO.	CONDUIT SIZE
<b>35220</b>	1/2"
<b>35225</b>	3/4"
<b>2424A8</b>	1"



United States  
Tel: 901.252.8000  
Fax: 901.252.1354

Canada  
Tel: 450.347.5318  
Fax: 450.347.1976

Customer Service  
Tel: 800.816.7809

Technical Services  
Tel: 888.862.3289

Thomas & Betts

www.tnb.com





**Ocal®**

**Power Threaders**

**Ocal® Installation Products**

High-speed threading — up to 25 rpm!

**RHINO® High-Performance Threading Machine**



*RHINO® Threading Machine with optional wheeled stand*

- Standard threading machine with built-in pipe cutter, reamer, foot-operated safety switch, ½" to 2" and 2½" to 4" automatic die heads and precision alloy dies
- Heavy-duty, 115V AC/DC, 50/60 Hz motor develops up to 3hp
- Quiet operation — 85dB maximum noise level
- Easy to maintain and service
- Precision pipe cutter with dual guide for accuracy and control
- COLLINS® SUPER GRIP R/L chucking system features 4 heavy-duty jaws, specially designed for PVC-coated conduit, at front and rear to automatically grip and center pipe

CAT. NO.	DESCRIPTION
<b>RHINO® High-Performance Threading Machine</b>	
P00551C	RHINO® ½"-4" Threading Machine with Jaws for PVC-Coated Conduit
ROTH00548	Optional Wheeled Stand with Tool Tray for RHINO® Threading Machine
<b>Replacement Threading Die Sets for RHINO® Threading Machine</b>	
89101	½"-¾" Threading Die Set
89102	1"-2" Threading Die Set
59912	2½"-4" Threading Die Set
<b>Replacement Jaws Sets for RHINO® Threading Machine</b>	
P20305C	Jaw Set for PVC-Coated Conduit
ROTH02385	Jaw Set for Galvanized Rigid Conduit

Portable and compact for mobile use and hard-to-reach spaces!

**SUPERTRONIC® 2000 Power Threader**

- Quick and easy production of precision-threaded joints to approved standards
- Dust-tight casing with sealed lubrication ensures long service life and low maintenance
- Optimized gearing for high-performance output with minimal energy consumption
- 15-25 rpm threading speed with 60 rpm rapid reverse for time savings
- Complete set includes SUPERTRONIC® 2000, forged pipe clamp, thread-cutting spray, quick-change die heads with tempered-steel precision dies for ½", ¾", 1", 1¼", 1½" and 2" PVC-coated conduit and carrying case



*Forged pipe clamp, shown at right, is included with the P71259C SUPERTRONIC® 2000 Power Threader Set.*

CAT. NO.	DESCRIPTION
P71259C	SUPERTRONIC® 2000 Power Threader Set for ½", ¾", 1", 1¼", 1½" and 2" PVC-Coated Conduit





Threads ½" to 2" conduit in seconds!

### MINI-COLLINS® Electric Power Drive

- Lightweight, compact design goes anywhere — only 28" long and requires only 1¾" clearance in trenches, overhead and other tight spaces
- Easy to maintain — built-in fill plug eliminates disassembly of gearbox for oiling
- 115V, 15A reversible motor provides the power to make any turning job easier
- Tightens nuts, drives cable pullers, turns hoists and jacks, opens and closes valves and drives up to 6" geared threaders
- Compatible with RIDGID® 12R die heads
- Cat. No. 13158 Adapter enables SUPER CUT die heads (below) to be used with ROTHENBERGER® MINI-COLLINS® and RIDGID® Model 700 portable threading machines



MINI-COLLINS® Electric Power Drive



The two-piece 13158 adapter enables the use of SUPER CUT die heads with the MINI-COLLINS®. For dies up to 1¼" in size, use both pieces together, as shown at right. For larger dies, separate the two pieces, as shown at left, and use only the outer ring.

CAT. NO.	DESCRIPTION
<b>MINI-COLLINS® Electric Power Drive &amp; Accessories</b>	
ROTH00074	MINI-COLLINS® Electric Power Drive
13158	MINI-COLLINS® Adapter for SUPER CUT Die Heads
ROTH00117	MINI-COLLINS® 1" Square Shaft Drive for Geared Threaders
ROTH00119	Steel Carrying Case for MINI-COLLINS®

Machined to thread PVC-coated conduit.

### SUPER CUT Die Heads

- Optimized cutting geometry offers easy starting and excellent shaving discharge
- Purchase dies individually
- Or choose the complete set, including ratchet handle, quick-change die heads, tempered-steel precision dies for ½", ¾", 1", 1¼", 1½" and 2" PVC-coated conduit and plastic carrying case
- Fit SUPERTRONIC® 2000 threader
- Use with MINI-COLLINS® (above) or RIDGID® Model 700 with Catalog No. 13158 adapter (above)

CAT. NO.	DESCRIPTION
P70905C	Complete Die Set for ½" – 2"
P70912C	½" Die
P70913C	¾" Die
P70914C	1" Die
P70915C	1¼" Die
P70849C	1½" Die
P70850C	2" Die



# Ocal®

## Vises and Half-Shell Clamps

Ocal® Installation Products



Equipped with chain or bench yoke vise.

### Tri-Stand Visers

- Sturdy, stable frame collapses for easy mobility and storage
- Ceiling brace for overhead support enables you to secure frame even during difficult work
- Features recesses for bending tubes 3/8", 1/2" and 3/4" O.D.

CAT. NO.	DESCRIPTION	PIPE CAPACITY IN. METRIC SIZE DESIGNATOR*
<b>ROTH00076</b>	Tri-Stand with 6" Chain Vise (use with Ocal Jaws for PVC-coated conduit)	1/2 - 6 16 - 155
<b>P00076C</b>	Tri-Stand with Bench Yoke Vise (includes jaws designed for use with PVC-coated conduit)	1/2 - 4 16 - 103

\* Metric size designator (ANSI C80.1-1994).

Superior design and construction for faster, safer chain-vise clamping of PVC-coated conduit.

### Ocal® Half-Shell Clamps

If you already have a chain vise, now you can avoid the expense of purchasing a yoke vise with special jaws – or the trouble of making clamps out of PVC or steel pipe – to cut and thread PVC-coated conduit. These Half-Shell Clamps come in the full range of 1/2" to 6" trade sizes. Buy the individual sizes you need, or choose one of our convenient sets, which contain all the sizes from 1/2" to 2" or 2 1/2" to 4" in a handy carrying/storage case.

A unique, patent-pending internal design ensures secure clamping while protecting the integrity of the conduit's PVC coating. Cast from ductile iron for extreme strength and durability, Ocal® Half-Shell Clamps offer you years of consistent, reliable service.



- Two-piece construction, cast from ductile iron for exceptional strength, durability and performance
- Patent-pending, cross-hatched interior surface grips conduit securely while safeguarding PVC jacket from damage
- Available individually in 1/2" through 6" trade sizes
- Also available in two convenient sets – 1/2" to 2" and 2 1/2" to 4"
- Each clamp clearly marked with trade size for easy identification
- Openings at each end enable hanging for handy storage



CAT. NO.	CONDUIT SIZE	
	IN.	METRIC*
<b>Individual Half-Shell Clamps</b>		
<b>HLF-SHL-CLP1/2</b>	1/2	16
<b>HLF-SHL-CLP3/4</b>	3/4	21
<b>HLF-SHL-CLP1</b>	1	27
<b>HLF-SHL-CLP1-1/4</b>	1 1/4	35
<b>HLF-SHL-CLP1-1/2</b>	1 1/2	41
<b>HLF-SHL-CLP2</b>	2	53
<b>HLF-SHL-CLP2-1/2</b>	2 1/2	63
<b>HLF-SHL-CLP3</b>	3	78
<b>HLF-SHL-CLP3-1/2</b>	3 1/2	91
<b>HLF-SHL-CLP4</b>	4	103
<b>HLF-SHL-CLP5</b>	5	129
<b>HLF-SHL-CLP6</b>	6	155

#### Half-Shell Clamp Sets (in carrying/storage case)

<b>HLF-SHL-CLP-SET1</b>	1/2 - 2	16 - 53
<b>HLF-SHL-CLP-SET2</b>	2 1/2 - 4	63 - 103

\* Metric size designator (ANSI C80.1-1994).

## Jaws, Pipe Cutter and Pipe Reamer

Designed to hold PVC-coated conduit safely and securely in a yoke-style vise.

### Ocal® Jaws for PVC-Coated Conduit

- Replaces the standard jaw inserts in a yoke vise
- Provides greater clamping force and prevents pipe from spinning during threading
- Machined aluminum construction
- Three-piece set



CAT. NO.	DESCRIPTION	WEIGHT	
		LBS.	KG
JAWS23	Used with RIDGID No. 23 or No. 40A Yoke Vises	2.80	1.27
JAWS76	Used with Rothenberger Yoke Vise	2.80	1.27

Specially designed for cutting PVC-coated conduit.

### Steel Pipe Cutters

- Easy pressure control transmits optimum force onto tube
- Hardened, high-alloy steel cutter wheel provides long service life and burr-free external cutting



CAT. NO.	DESCRIPTION	PIPE O.D.
P70045C	Steel Pipe Cutter — Up to 2"	1/8"–2"
P70060C	Steel Pipe Cutter — Up to 4"	1/8"–4"

Rapid and clean deburring!

### Ratchet Pipe Reamer

- Smooth running ratchet
- Tempered-steel cutting bit
- For steel tubes 1/4" to 2" O.D.



CAT. NO.	DESCRIPTION	PIPE O.D.
70289	Ratchet Pipe Reamer	1/4"–2"



# Ocal®

## J-Wrenches, Pipe Wrenches and Strap Wrenches

Ocal® Installation Products

Removable aluminum jaws for PVC-coated conduit.

### Ocal® J-Wrenches

Use with our pliers, or purchase just the jaws and adapt your own!



J460



J460



J42



J442

CAT. NO.	DESCRIPTION	PIPE CAPACITY
J442	12" J-Wrench with Jaws	1/2" to 1 1/4"
J460	16" J-Wrench with Jaws	1 1/2" to 2 1/2"
J42	12" Jaw Set only	1/2" to 1 1/4"
J60	16" Jaw Set only	1 1/2" to 2 1/2"

Jaws grip PVC-coated pipe securely without damaging the plastic coating!

### Aluminum Pipe Wrenches

- Extremely light aluminum alloy offers high strength but weighs 40% less than standard cast
- Self-clamping, spring-supported hook for easy, one-handed, ratchet-like use
- Scale on hook for quick preset of tube diameter



CAT. NO.	LENGTH IN. MM	STEEL TUBE O.D. MAX. IN. METRIC SIZE DESIGNATOR*
P70159C	10 254	1 1/2 16
P70160C	14 356	2 53
P70161C	18 457	2 1/2 63
P70162C	24 610	3 78

\* Metric size designator (ANSI C80.1-1994).

Specially coated strap won't absorb oil.

### RIDGID® Strap Wrenches



31370

31355

CAT. NO.	HANDLE LENGTH IN. MM	STRAP LENGTH IN. MM	STRAP WIDTH IN. MM	PIPE CAPACITY IN. MM	PIPE CAPACITY (O.D.) IN. MM	WEIGHT LB. KG
31355	11.75 298.45	17.00 431.80	1.75 44.45	2.00 50.80	3.50 88.90	1.75 .79
31370	18.00 457.20	29.25 742.95	1.75 44.45	5.00 127.00	5.50 139.70	2.75 1.25

Protects, lubricates and enhances the conductivity of all electrical connections!

### KOPR-SHIELD® Joint Compound

- Meets NEC requirements for protection against corrosion: *"Where corrosion protection is necessary and the conduit is threaded in the field, all threads shall be coated with an approved electrically conductive, corrosion-resistant compound."*
- Extremely adhesive compound flows smoothly into uneven contours and voids, ensuring easy application and complete, positive protection and lubrication
- Won't settle out, thin, thicken, harden or dry out under the most severe environmental conditions
- Excellent temperature characteristics — can be brushed on at -50° F to 250° F (-45° C to 121° C) and remains intact for short periods even at 1,800° F (982° C)
- Ensures low resistance and seals out air and moisture
- Unique, homogenized blend of pure, polished colloidal copper, rust and corrosion inhibitors



#### KOPR-SHIELD® Joint Compound

CAT. NO.	CONTAINER	SIZE
201-31879	Brush Cap Can	1½ oz. (.04 liter)
201-31879-1	Brush Cap Can	4 oz. (.12 liter)
CP8-TB	Brush Cap Can	8 oz. (.24 liter)
CP16	Brush Cap Can	1 pint (.47 liter)
CP128	Can	1 gallon (3.79 liter)

Note: Not recommended for food & beverage processing applications



Fast-drying, air-cure patch for Ocal® conduit and fittings.

### Ocal® Touch-Up Compounds

CAT. NO.	CONTAINER	SIZE	COLOR
<b>Exterior PVC Patch</b>			
SPRAY-G	Spray Can	12½ oz. (.37 liter)	Dark Gray
SPRAY-W	Spray Can	12½ oz. (.37 liter)	White
SPRAY-B	Spray Can	12½ oz. (.37 liter)	Light Blue
PATCHP-G	Brush Cap Can	1 pint (.47 liter)	Dark Gray
PATCHP-W	Brush Cap Can	1 pint (.47 liter)	White
PATCHP-B	Brush Cap Can	1 pint (.47 liter)	Light Blue
PATCHG-G	Bottle	1 gallon (3.79 liter)	Dark Gray
PATCHG-W	Bottle	1 gallon (3.79 liter)	White
PATCHG-B	Bottle	1 gallon (3.79 liter)	Light Blue
<b>Interior Urethane Patch</b>			
URETHANEPATCH	Brush Cap Can	1 pint (.47 liter)	Blue



## A better patching solution for hot weather applications!

### Ocal® Heat-Cure Patch

Even in the best of installations, the PVC jacket on PVC-coated conduit or fittings can be cut, nicked or abraded. To maintain corrosion protection, Ocal® has added a new, thicker PVC patch to its offering of touch-up compounds.

Ideal for use in hot weather, Ocal® Heat-Cure Patch offers a thicker consistency at high ambient temperatures than standard air-cure patches, ensuring better coverage and a more effective patch.

**Ocal® Heat-Cure Patch makes patching fast and easy.**

- 1 Make sure the area to be patched is clean and dry.
- 2 Squeeze the amount of patch material needed onto the area to be repaired.
- 3 If necessary, spread and level the patch material with a putty knife.
- 4 Apply heat with a heat gun or torch, such as the T&B® Portable Heat-Shrink Torch.
- 5 Being careful not to overheat (500° F/260° C max.), apply heat for 2 minutes total, or at least 1 minute after surface of patch has turned glossy. (The patch material is a glossy liquid that turns flat with initial heat application and then turns glossy again as heating continues.)
- 6 Allow the patched area to air cool, or use a water quench.



**NEW!**

#### Heat-Cure Patch

CAT NO.	COLOR	SIZE
PATCHT-G	Dark Gray	6 oz. (.18 liter)
PATCHT-W	White	6 oz. (.18 liter)
PATCHT-B	Light Blue	6 oz. (.18 liter)

## Separate controls enable precise adjustment of flame and temperature!

### T&B® Portable Heat-Shrink Torch

- 2,500° F (1,371° C) output capacity satisfies virtually any heating, brazing or soldering requirement
- Dual fuel- and air-flow controls enable separate adjustment of temperature and flame precision
- Brass and steel construction provides durability
- Operates on standard butane lighter fluid (not included)

#### Specifications

- Dimensions (without base) L x W x H: 3.90" x 1.40" x 5.40"  
99.06mm x 35.56mm x 137.16mm
- Weight (when filled): 9.88 oz.  
280.09g
- Fuel Tank Capacity: 2.03 fl. oz.  
60.03ml
- Operating Time (per full fuel tank): Up to 220 minutes



#### Portable Heat-Shrink Torch

CAT. NO.	DESCRIPTION
WT-PTORCH	Portable Heat-Shrink Torch





In This Section...

## Other Products for Corrosive Environments

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Other Products for Corrosive Environments

**United States**  
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**Thomas&Betts**

[www.tnb.com](http://www.tnb.com)



## **Hazlux® Hazardous Location Lighting Fixtures**

Polymeric fixtures for Class I, Division 2, wet and marine locations.

### **Hazlux® 1 – HID, Mogul Base, 50-175W**

- Enclosed and gasketed
- Polymeric (fiberglass-reinforced polyester) guard with a variety of globe options
- High-pressure sodium, metal halide or mercury vapor lamp
- 50 to 175 watts, 120 to 480 volts
- Pendant, ceiling, wall, angle stanchion or straight stanchion mounting

#### **Standards / Certifications**

- UL844 Class I, Division 2, Groups A, B, C, D
- UL1598 Wet Locations
- UL1598 Marine Applications
- NEMA 4X



### **Hazlite™ M1 – HID or Fluorescent, Medium or Bi-Pin Base, 9-100W**

- Polymeric (fiberglass-reinforced polyester) guard with a variety of globe options
- Metal halide, high-pressure sodium or fluorescent lamp
- 9 to 100 watts, 120 to 277 volts
- Cone pendant, one-hub ceiling or two-hub ceiling mounting

#### **Standards / Certifications**

- UL844 Class I, Division 2 Hazardous Locations
- UL1598 Wet Locations
- UL1598 Marine Applications
- NEMA 4X



### **Ordering Hazlux® Lighting Fixtures**

To order or learn more about the many styles and varieties of Hazlux® fixtures for corrosive environments, please see our Hazlux® catalog or visit [www.tnb.com](http://www.tnb.com).

**Other Products for Corrosive Environments**

## Hazlux® Hazardous Location Lighting Fixtures

Enclosed and gasketed fixtures for Class I, Division 1, Class II, wet and marine locations.

### Hazlux® 3 – HID, Mogul Base, 50-400W

- Enclosed and gasketed
- Cast copper-free aluminum housing — available with HazCote™ Kynar coating for extremely corrosive environments
- Variety of globe material options
- High-pressure sodium, metal halide or mercury vapor lamp
- 50 to 400 watts, 120 to 480 volts
- Cone top pendant, wall, ceiling, flexible pendant, ring, straight stanchion, angle stanchion or rigid pendant mounting

#### Standards / Certifications

- UL844 Class I, Division 2, Groups A, B, C, D
- UL844 Class II, Division 1 & 2, Groups E, F, G
- UL844 Class III
- UL1598 Wet Locations
- UL1598 Marine Applications
- NEMA 4X

Explosion-proof fixtures for Class I, Division 1, Class II, wet and marine locations.

### Hazlux® 5 – HID Explosion-Proof, Mogul Base, 50-400W

- Cast copper-free aluminum housing — available with HazCote™ Kynar coating for extremely corrosive environments
- High-pressure sodium, metal halide or mercury vapor lamp
- 50 to 400 watts, 120 to 480 volts
- Pendant, wall, ceiling, bulkhead or stanchion mounting

#### Standards / Certifications

- UL844 Class I, Division 1, Groups C, D
- UL844 Class II, Division 1 & 2, Groups E, F, G
- UL1598 Wet Locations
- UL1598 Marine Applications
- NEMA 4X



### Ordering Hazlux® Lighting Fixtures

To order or learn more about the many styles and varieties of Hazlux® fixtures for corrosive environments, please see our Hazlux® catalog or visit [www.tnb.com](http://www.tnb.com).





# Ocal®

## Ty-Rap® Stainless Steel Cable Ties

Other Products for Corrosive Environments



Type SS  
Mini Stainless Steel Cable Ties



Type SS  
Standard Stainless Steel Cable Ties



Type TYS  
Multi-Lok Stainless Steel Ties — Uncoated



Type TYS  
Multi-Lok Stainless Steel Ties — Coated



Type LS  
Heavy-Duty Stainless Steel  
Ball-Lock Cable Ties — Uncoated



Type LS  
Heavy-Duty Stainless Steel  
Ball-Lock Cable Ties — Coated

## Ty-Rap® Stainless Steel Cable Ties

CAT. NO.	WIDTH IN./MM.	LENGTH IN./MM.	THICKNESS IN./MM	MAX. DIA. SINGLE WRAP IN./MM	MAX. DIA. DOUBLE WRAP IN./MM
<b>Type SS Mini Stainless Steel Cable Ties</b>					
SS7-180	.18/4.50	6.5/165	.02/.51	1.7/43	(single
SS10-180	.18/4.50	10/254	.02/.51	2.8/71	wrap
SS16-180	.18/4.50	16/406	.02/.51	4.7/119	only)
SS23-180	.18/4.50	22.5/572	.02/.51	6/152	
SS29-180	.18/4.50	29.0/737	.02/.51	8/203	
<b>Type SS Standard Stainless Steel Cable Ties</b>					
SS10-250	.25/6.35	10/254	.02/.51	2.1/53	
SS17-250	.25/6.35	16.5/419	.02/.51	4.3/109	(single
SS23-250	.25/6.35	22.5/572	.02/.51	6.5/165	wrap
SS29-250	.25/6.35	29/737	.02/.51	8.5/215	only)
SS35-250	.25/6.35	35/889	.02/.51	10.5/265	
<b>Type TYS Multi-Lok Stainless Steel Cable Ties</b>					
<b>Uncoated</b>		<b>Nylon 11 Coated</b>			
TYS6-280	TYS6-280C	.28/7.00	6/152	.01/.25	1.9/48
TYS9-280	TYS9-280C	.28/7.00	9/229	.01/.25	2.8/71
TYS12-280	TYS12-280C	.28/7.00	12/305	.01/.25	3.8/96
TYS18-280	TYS18-280C	.28/7.00	18/457	.01/.25	5.7/144
TYS24-280	TYS24-280C	.28/7.00	24/610	.01/.25	7.6/193
TYS6-470	TYS6-470C	.47/12.00	6/152	.01/.25	1.9/48
TYS9-470	TYS9-470C	.47/12.00	9/229	.01/.25	2.8/71
TYS12-470	TYS12-470C	.47/12.00	12/305	.01/.25	3.8/96
TYS18-470	TYS18-470C	.47/12.00	18/457	.01/.25	5.7/144
TYS24-470	TYS24-470C	.47/12.00	24/610	.01/.25	7.6/193
<b>Type LS Heavy-Duty Stainless Steel Ball-Lock Cable Ties</b>					
<b>Uncoated</b>					
LS-4.6-200A	.18/4.6	7.9/201	—	2/51	(single
LS-4.6-360A	.18/4.6	14.2/360	—	4/102	wrap
LS-4.6-520A	.18/4.6	20.5/520	—	6/152	only)
LS-4.6-680A	.18/4.6	26.7/679	—	8/203	
LS-4.6-840A	.18/4.6	33.0/838	—	10/254	
LS-7.9-200A	.31/7.9	7.9/201	—	2/51	(single
LS-7.9-360A	.31/7.9	14.2/360	—	4/102	wrap
LS-7.9-520A	.31/7.9	20.5/520	—	6/152	only)
LS-7.9-680A	.31/7.9	26.7/679	—	8/203	
LS-7.9-840A	.31/7.9	33.0/838	—	10/254	
LS-7.9-1010A	.31/7.9	41.3/1050	—	12.5/318	
<b>Fully Polyester</b>					
<b>Uncoated</b>		<b>Coated</b>			
LS-4.6-200B	LS-4.6-200-C	.18/4.6	7.9/201	—	2/51
LS-4.6-360B	LS-4.6-360-C	.18/4.6	14.2/360	—	4/102
LS-4.6-520B	LS-4.6-520-C	.18/4.6	20.5/520	—	6/152
LS-4.6-680B	LS-4.6-680-C	.18/4.6	26.7/679	—	8/203
LS-4.6-840B	—	.18/4.6	33.0/838	—	10/254
LS-7.9-200B	LS-7.9-200-C	.31/7.9	7.9/201	—	2/51
LS-7.9-360B	LS-7.9-360-C	.31/7.9	14.2/360	—	4/102
LS-7.9-520B	LS-7.9-520-C	.31/7.9	20.5/520	—	6/152
LS-7.9-680B	LS-7.9-680-C	.31/7.9	26.7/679	—	8/203
LS-7.9-840B	—	.31/7.9	33.0/838	—	10/254
LS-7.9-1010B	—	.31/7.9	41.3/1050	—	12.5/318

# Ocal®

## Ty-Rap® Stainless Steel Cable Ties



Other Products for Corrosive Environments

STAINLESS STEEL TYPE	COATING OR FINISH	MIN. LOOP TENSILE STRENGTH SINGLE WRAP LBS./N.	MIN. LOOP TENSILE STRENGTH DOUBLE WRAP LBS./N.	APPLICATION TOOLS USED	GENERAL APPLICATION	
304*	Dull to Bright	100/445	(single wrap only)	WTA290	<ul style="list-style-type: none"> <li>• Wire/cable bundling</li> <li>• I.D. tagging</li> </ul>	
304*		100/445		WTA290		
304*		100/445		WTA290		
304*		100/445		WTA290		
304*		100/445		WTA290		
304*	Dull to Bright	200/890	(single wrap only)	WTA250	<ul style="list-style-type: none"> <li>• Wire/cable bundling</li> <li>• I.D. tagging</li> </ul>	
304*		200/890		WTA250		
304*		200/890		WTA250		
304*		200/890		WTA250		
304*		200/890		WTA250		
316	Uncoated or Nylon 11	250/1,112	(single wrap only)	WTAE200	<ul style="list-style-type: none"> <li>• Self-locking</li> <li>• Cable bundling</li> <li>• Hazardous and corrosive environments</li> </ul>	
316		250/1,112		WTAE200		
316	Coated Black	250/1,112	(single wrap only)	WTAE200		
316		250/1,112		WTAE201		
316		250/1,112		WTC075		
316		250/1,112		WTC075		
316		250/1,112		WTC075		
316		250/1,112		WTC075		
316		250/1,112		WTC075		
302/304	Dull	100/445	(single wrap only)	DAS250		
302/304		100/445		DAS250		
302/304		100/445		DAS250		
302/304		100/445		DAS250		
302/304		100/445		DAS250		
302/304		250/1,112		DAS250		
302/304		250/1,112		DAS250		
302/304		250/1,112		DAS250		
302/304		250/1,112		DAS250		
302/304		250/1,112		DAS250		
302/304		250/1,112		DAS250		
316	Uncoated or Fully Polyester	100/445	(single wrap only)	DAS250	<ul style="list-style-type: none"> <li>• Offshore drilling</li> <li>• Petrochemical processing</li> <li>• Shipbuilding</li> <li>• Food &amp; Beverage processing</li> <li>• Pharmaceutical processing</li> </ul>	
316		100/445		DAS250		
316		100/445		DAS250		
316		100/445		DAS250		
316		100/445		DAS250		
316	Coated Black	250/1,112		DAS250		
316		250/1,112		DAS250		
316		250/1,112		DAS250		
316		250/1,112		DAS250		
316		250/1,112		DAS250		
316		250/1,112		DAS250		

\* SS series also available in Type 316 stainless.

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## Ty-Rap® Stainless Steel Cable Ties

### Ty-Rap® Stainless Steel Cable Ties (continued)

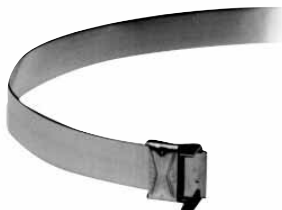
Other Products for Corrosive Environments



Type TS  
Stainless Steel Self-Locking Cable Ties



Type SSR  
Reusable Stainless Steel Cable Ties



Type SSH  
Free-End Clamps

CAT. NO.	WIDTH IN./MM.	LENGTH IN./MM.	THICKNESS IN./MM	MAX. DIA. SINGLE WRAP IN./MM	MAX. DIA. DOUBLE WRAP IN./MM
<b>Type TS Stainless Steel Self-Locking Cable Ties</b>					
TS-4.6-200A	.18/4.6	8.8/222.9	—	2/50.8	(single
TS-4.6-360A	.18/4.6	15.3/388.0	—	4/101.6	wrap
TS-4.6-520A	.18/4.6	21.3/540.4	—	6/152.4	only)
TS-4.6-680A	.18/4.6	27.8/705.5	—	8/203.2	
TS-4.6-840A	.18/4.6	33.8/857.9	—	10/254.0	
TS-4.6-200B	.18/4.6	8.8/222.9	—	2/50.8	
TS-4.6-360B	.18/4.6	15.3/388.0	—	4/101.6	
TS-4.6-520B	.18/4.6	21.3/540.4	—	6/152.4	
TS-4.6-680B	.18/4.6	27.8/705.5	—	8/203.2	
TS-4.6-840B	.18/4.6	33.8/857.9	—	10/254.0	
<b>Type SSR Reusable Stainless Steel Cable Ties</b>					
SSR6-250C	.25/6.35	6/152	.02/.51	1.5/38	N/A
SSR9-250C	.25/6.35	9/229	.02/.51	2.5/63	1.1/28
SSR12-250C	.25/6.35	12/305	.02/.51	3.4/86	1.5/38
SSR18-250C	.25/6.35	18/457	.02/.51	5.4/137	2.5/64
SSR24-250C	.25/6.35	24/610	.02/.51	7.3/185	3.5/89
SSR6-375C	.38/9.53	6/152	.02/.51	1.5/38	N/A
SSR9-375C	.38/9.53	9/229	.02/.51	2.5/63	1.1/28
SSR12-375C	.38/9.53	12/305	.02/.51	3.4/86	1.5/38
SSR18-375C	.38/9.53	18/457	.02/.51	5.4/137	2.5/64
SSR24-375C	.38/9.53	24/610	.02/.51	7.3/185	3.5/89
SSR30-375C	.38/9.53	30/762	.02/.51	9.1/231	4.4/112
SSR36-375C	.38/9.53	36/914	.02/.51	11.0/280	5.3/135
<b>Type SSH Free-End Clamps</b>					
SSH10-250	.25/6.35	10/250	.02/.51	2.0/50	—
SSH16-250	.25/6.35	16/400	.02/.51	3.5/88	1.5/38
SSH19-250	.25/6.35	19/480	.02/.51	5.0/127	2.5/63
SSH27-250	.25/6.35	27/680	.02/.51	7.0/177	3.5/88
SSH34-250	.25/6.35	34/860	.02/.51	9.0/228	4.5/114
SSH16-375	.38/9.53	16/400	.03/.76	3.5/88	1.5/38
SSH44-375	.38/9.53	44/1,120	.03/.76	12.0/304	6.0/152
SSH18-500	.5/12.70	18/460	.03/.76	4.0/101	2.0/50
SSH31-500	.5/12.70	31/780	.03/.76	8.0/203	4.0/101
SSH21-625	.63/15.88	21/530	.03/.76	5.0/127	2.5/63
SSH56-625	.63/15.88	56/1,420	.03/.76	16.0/406	8.0/203
SSH69-625	.63/15.88	69/1,750	.03/.76	20.0/508	10.0/254
SSH24-750	.75/19.05	24/600	.03/.76	6.0/152	3.0/76
SSH37-750	.75/19.05	37/940	.03/.76	10.0/254	5.0/127
SSH50-750	.75/19.05	50/1,270	.03/.76	14.0/355	7.0/177
SSH62-750	.75/19.05	62/1,570	.03/.76	18.0/457	9.0/228





## Ty-Rap® Stainless Steel Cable Ties



Other Products for Corrosive Environments

STAINLESS STEEL TYPE	COATING OR FINISH	MIN. LOOP TENSILE STRENGTH SINGLE WRAP LBS./N.	MIN. LOOP TENSILE STRENGTH DOUBLE WRAP LBS./N.	APPLICATION TOOLS USED	GENERAL APPLICATION
302/304	—	150/667.20	(single	<b>DAS250</b>	<ul style="list-style-type: none"> <li>• High temperatures</li> <li>• Marine/salt water applications</li> <li>• Harsh or corrosive environments</li> <li>• Washdown areas</li> </ul>
302/304		150/667.20	wrap	<b>DAS250</b>	
302/304		150/667.20	only)	<b>DAS250</b>	
302/304		150/667.20		<b>DAS250</b>	
302/304		150/667.20		<b>DAS250</b>	
316		150/667.20		<b>DAS250</b>	<ul style="list-style-type: none"> <li>• High temperatures</li> <li>• Marine/salt water applications</li> <li>• Harsh or corrosive environments</li> <li>• Washdown areas</li> </ul>
316		150/667.20		<b>DAS250</b>	
316		150/667.20		<b>DAS250</b>	
316		150/667.20		<b>DAS250</b>	
316		150/667.20		<b>DAS250</b>	
200/300	Nylon 11 Coated	75/334	300/1,334	<b>WTAE200</b>	<ul style="list-style-type: none"> <li>• Reusable</li> <li>• Cable bundling</li> <li>• Oil rigs</li> </ul>
200/300	(Uncoated or other	75/334	300/1,334	<b>WTAE200</b>	
200/300	colors available on	75/334	300/1,334	<b>WTAE200</b>	
200/300	special order)	75/334	300/1,334	<b>WTAE200</b>	
200/300		75/334	300/1,334	<b>WTAE200</b>	
200/300		100/445	500/2,224	<b>WTAE200</b>	<ul style="list-style-type: none"> <li>• Telecommuni-cations towers</li> <li>• Hazardous and corrosive environments</li> <li>• Cable trays</li> </ul>
200/300		100/445	500/2,224	<b>WTAE200</b>	
200/300		100/445	500/2,224	<b>WTC075</b>	
200/300		100/445	500/2,224	<b>WTC075</b>	
200/300		100/445	500/2,224	<b>WTC075</b>	
200/300		100/445	500/2,224	<b>WTC075</b>	
200/300		100/445	500/2,224	<b>WTC075</b>	
201	Bright	450/2,002	1,200/5,338	<b>WTJ020/WTC075/WTC001</b>	<ul style="list-style-type: none"> <li>• Industrial hoses</li> <li>• Cable bundling</li> </ul>
201		450/2,002	1,200/5,338	<b>WTJ020/WTC075/WTC001</b>	
201		450/2,002	1,200/5,338	<b>WTJ020/WTC075/WTC001</b>	
201		450/2,002	1,200/5,338	<b>WTJ020/WTC075/WTC001</b>	
201		450/2,002	1,200/5,338	<b>WTJ020/WTC075/WTC001</b>	
201		900/4,003	2,400/10,675	<b>WTJ020/WTC075/WTC001</b>	<ul style="list-style-type: none"> <li>• Industrial hoses</li> <li>• Cable bundling</li> </ul>
201		900/4,003	2,400/10,675	<b>WTJ075/WTC001</b>	
201		1,400/6,227	3,300/14,678	<b>WTJ075/WTC001</b>	<ul style="list-style-type: none"> <li>• High strength</li> </ul>
201		1,400/6,227	3,300/14,678	<b>WTJ075/WTC001</b>	
201		1,700/7,562	4,000/17,792	<b>WTJ075/WTC001</b>	<ul style="list-style-type: none"> <li>• High strength</li> </ul>
201		1,700/7,562	4,000/17,792	<b>WTJ075/WTC001</b>	
201		1,700/7,562	4,000/17,792	<b>WTC001</b>	
201		2,000/8,896	5,000/22,240	<b>WTC001</b>	<ul style="list-style-type: none"> <li>• High strength</li> </ul>
201		2,000/8,896	5,000/22,240	<b>WTC001</b>	
201		2,000/8,896	5,000/22,240	<b>WTC001</b>	
201		2,000/8,896	5,000/22,240	<b>WTC001</b>	

Ty-Rap® Stainless Steel Cable Ties have passed a variety of mechanical, environmental, and electrical tests. Other data can be made available upon request.

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# Ocal<sup>®</sup>

## Ty-Rap<sup>®</sup> Weather-Resistant Cable Ties

Bundle cables up to 4" in diameter in harsh environments.

### Ty-Rap<sup>®</sup> Weather-Resistant Polypropylene Cable Ties

- Especially resistant to chemical exposure
- For use in temperatures ranging from -40° F to 185° F (-40° C to 85° C)
- Black polypropylene body and head construction with stainless steel locking device



BULK PKG. CAT. NO.	WIDTH IN./MM.	BODY LENGTH IN./MM.	MAX. WIRE BUNDLE DIA. IN./MM.	TENSILE STR. LBS./N.	BULK PKG. QTY.
TYP23MX	.09/2.29	3.62/91.95	.63/16.00	18/80.07	1,000
TYP25MX	.18/4.57	7.31/185.67	1.75/44.45	30/133.40	1,000
TYP28MX	.18/4.57	14.20/360.68	4.00/101.60	30/133.40	1,000
TYP27MX	.27/6.86	13.20/335.28	3.50/88.90	60266.90	500

### Ty-Rap<sup>®</sup> Cable Ties Chemical Resistance

The table below shows the resistance of Ty-Rap<sup>®</sup> cable tie materials to various chemicals. The table is designed to help you determine the cable tie material best suited for a particular chemical environment.

#### Resistance of Available Materials to Various Chemicals at Temperature of 70° F (21° C)

REAGENTS	CONCENTRATION	WEATHER-RESISTANT		REAGENTS	CONCENTRATION	WEATHER-RESISTANT		REAGENTS	CONCENTRATION	WEATHER-RESISTANT	
		POLY-PROPYLENE AS USED IN TYP X SERIES	STAINLESS STEEL AS USED IN TYS SERIES			POLY-PROPYLENE AS USED IN TYP X SERIES	STAINLESS STEEL AS USED IN TYS SERIES			POLY-PROPYLENE AS USED IN TYP X SERIES	STAINLESS STEEL AS USED IN TYS SERIES
Arsenic Acid	40%	E	E	Fuel Oil	100%	—	E	Potassium Ferrocyanide	25%	E	E
Acetaldehyde	50%	—	—	Furfural	100%	F	E	Potassium Hydroxide	5%	E	E
Acetone	100%	E	E	Gallic Acid	AQ	—	E	Potassium Iodide	All	E	E
Aluminum Hydroxide	AQ	E	E	Gasoline	100%	S	E	Potassium Nitrate	50%	E	E
Ammonia	All	E	E	Glycerine	100%	E	E	Potassium Permanganate	5%	E	E
Ammonium Carbonate	5%	E	E	Hydrocyanic Acid	All	E	E	Potassium Sulfate	5%	E	E
Ammonium Hydroxide	10%	E	E	Hydrogen Peroxide	30%	E	E	Potassium Sulfide	AQ	E	E
Ammonium Nitrate	—	E	E	Hydrogen Sulfide	Dry	E	E	Propyl Alcohol	100%	E	E
Ammonium Sulfate	10%	S	S	Iodoform	100%	—	E	Silver Nitrate	10%	E	E
Barium Carbonate	All	E	E	Isopropyl Alcohol	100%	E	E	Sodium Acetate	60%	E	E
Barium Chloride	5%	E	E	Jet Fuel	100%	S	E	Sodium Bicarbonate	All	E	E
Barium Sulfate	10%	E	E	Lactic Acid	10%	E	E	Sodium Bisulfate	10%	E	E
Barium Sulfide	10%	E	E	Lanolin	10%	E	E	Sodium Borate	All	E	E
Benzene	100%	S	E	Lead Acetate	5%	E	E	Sodium Carbonate	5%	E	E
Benzoic Acid	100%	E	E	Linseed Oil	10%	E	E	Sodium Chlorate	25%	E	E
Butyric Acid	50%	E	E	Magnesium Carbonate	All	E	E	Sodium Chloride	2%	E	E
Calcium Carbonate	AQ	E	E	Magnesium Chloride	10%	F	F	Sodium Fluoride	5%	F	F
Calcium Hydroxide	20%	E	E	Magnesium Nitrate	All	E	E	Sodium Hydroxide	10%	E	E
Calcium Hydrochlorite	2	F	F	Malic Acid	AQ	E	E	Sodium Hyposulfite	AQ	—	E
Calcium Sulfate	2%	E	E	Mercury	100%	E	E	Sodium Nitrate	5%	E	E
Carbon Tetrachloride	100%	F	E	Methyl Alcohol	100%	E	E	Sodium Nitrite	AQ	E	E
Chlorine (WET)	—	F	F	Methyl Chloride	100%	S	E	Sodium Perchlorate	10%	—	E
Chlorine (DRY)	—	NR	F	Methyl Ethyl Ketone	100%	E	E	Sodium Phosphate	5%	E	E
Chloroacetic Acid	30%	—	F	Naptha	100%	E	E	Sodium Sulfate	5%	E	E
Chloroform	100%	F	E	Nitric Acid	30%	E	E	Sodium Thiosulfate	5%	S	S
Chromic Acid	50%	F	F	Nitric Acid	30—70%	F	E	Stearic Acid	100%	E	E
Citric Acid	50%	E	E	Nitrous Acid	5%	F	E	Sulfur	100%	E	E
Copper Cyanide	10%	E	E	Oleic Acid	100%	E	E	Sulfur Dioxide	All	E	E
Copper Nitrate	50%	E	E	Oxalic Acid	10%	E	E	Sulfuric Acid	Conc.	S	E
Cider	—	E	E	Paraffin	100%	E	E	Sulfuric Acid	5%	F	F
Dichloroethane	100%	—	E	Petroleum Ether	100%	F	E	Tannic Acid	10%	E	E
Diethyl Ether	100%	E	E	Phenol	90%	E	E	Tartaric Acid	50%	E	E
Ethyl Alcohol	100%	E	E	Phosphoric Acid	10%E	E	—	Tetrahydrofuran	100%	F	E
Ethyl Chloride	100%	F	E	Picric Acid	1%	E	E	Toluene	100%	F	F
Ethylene Glycol	100%	E	E	Potassium Bromide	AQ	S	S	Xylene	100%	F	E
Ferric Hydroxide	All	E	E	Potassium Carbonate	1%	—	—	Zinc Chloride	70%	E	E
Ferric Nitrate	10%	E	E	Potassium Chlorate	AQ	E	E	Zinc Nitrate	AQ	E	E
Ferrous Sulfate	10%E	E	E	Potassium Dichromate	40%	E	E	Zinc Sulfate	AQ	E	E

Ratings: E=Excellent S=Satisfactory F=Fair NR=Not Recommended (AQ=Aqueous)



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**Thomas & Betts**

[www.tnb.com](http://www.tnb.com)





# Ocal®

## Ocal® PVC Exterior Coating Chemical Resistance

Ocal® Reference Information

SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE		
			SPLASHING	LIQUID	FUMES
Acetic Acid	10%	120	no	no	no
Acid Copper Plating Solution	160	yes	yes	yes	
Alkaline Cleaners	160	yes	yes	yes	
Aluminum Chloride	Sat'd	160	yes	yes	yes
Aluminum Sulfate	Sat'd	160	yes	yes	yes
Alums	Sat'd	160	yes	yes	yes
Ammonium Chloride	Sat'd	160	yes	yes	yes
Ammonium Hydroxide	28%	120	yes	yes	yes
Ammonium Hydroxide	10%	120	yes	yes	yes
Ammonium Sulfate	Sat'd	160	yes	yes	yes
Ammonium Thiocyanate	Sat'd	160	yes	yes	yes
Amyl Alcohol	Any	90	yes	yes	yes
Arsenic Acids	Any	150	yes	yes	yes
Barium Sulfide	Sat'd	120	yes	yes	yes
Black Liquor	Sat'd	90	yes	yes	yes
Benzoic Acid	Sat'd	160	yes	yes	yes
Brass Plating Solution	Any	160	yes	yes	yes
Bromine Water	Sat'd	120	yes	yes	yes
Butyl Alcohol	Any	90	yes	yes	yes
Cadmium Plating Solution	Any	150	yes	yes	yes
Calcium Bisulfite	Any	150	yes	yes	yes
Calcium Chloride	Sat'd	160	yes	yes	yes
Calcium Hypochlorite	Sat'd	120	yes	yes	yes
Carbonic Acid	Sat'd	160	yes	yes	yes
Casein	Sat'd	90	yes	yes	yes
Castor Oil	Any	90	yes	yes	yes
Caustic Soda	35%	120	yes	yes	yes
Caustic Soda	10%	150	yes	yes	yes
Caustic Potash	35%	120	yes	yes	yes
Caustic Potash	10%	150	yes	yes	yes
Chlorine Water	Sat'd	90	yes	yes	yes
Chromium Plating Solution	Any	150	yes	yes	yes
Citric Acid	Sat'd	160	yes	yes	yes
Copper Chloride (Cupric)	Sat'd	160	yes	yes	yes
Copper Cyanide Plating Sol	Any	160	yes	yes	yes
(High Speed)	Any	180	yes	yes	yes
(with Alkali Cyanides)	Sat'd	160	yes	yes	yes
Copper Sulfate	Sat'd	160	yes	yes	yes
Coconut Oil	Sat'd	90	yes	yes	yes
Cottonseed Oil	Sat'd	90	yes	yes	yes
Disodium Phosphate	Sat'd	160	yes	yes	yes
Ethyl Alcohol	Any	90	yes	yes	yes
Ethylene Glycol	Any	90	yes	no	yes
Ferric Chloride	45%	120	yes	yes	yes
Ferrous Sulfate	Sat'd	150	yes	yes	yes
Fluoboric Acid	Any	150	yes	yes	yes
Formaldehyde	37%	120	yes	yes	yes
Formic Acid	85%	100	no	no	no
Gallic Acid	Sat'd	150	no	no	yes
Glucose	Any	150	yes	yes	yes
Glue	Any	150	yes	yes	yes
Glycerine	Any	90	yes	yes	yes
Gold Plating Solution	Any	150	yes	yes	yes
Hydrochloric Acid	10%	120	yes	no	yes
Hydrochloric Acid	21.5%	120	yes	no	yes
Hydrochloric Acid	37.5%	120	yes	no	yes
Hydrochloric Acid	37.5%	90	yes	no	yes
Hydrofluoric Acid	4%	140	yes	no	yes
Hydrofluoric Acid	10%	120	yes	no	yes
Hydrofluoric Acid	48%	120	yes	no	yes
Hydrogen Peroxide	30%	120	yes	yes	yes
Hydrogen Sulfide	Sat'd	120	yes	yes	yes
Hydroquinone	Any	90	yes	yes	yes
Indium Plating Solution	Any	150	yes	yes	yes
Lactic Acid	50%	120	yes	yes	yes
Lactic Acid	Any	90	yes	yes	yes

SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE		
			SPLASHING	LIQUID	FUMES
Lead Plating Solution	Any	150	yes	yes	yes
Malic Acid	Any	90	yes	yes	yes
Methyl Alcohol	Any	90	yes	yes	yes
Mineral Oils	Any	90	yes	yes	yes
Nickel Acetate	Sat'd	160	yes	yes	yes
Nickel Plating Solution	160	yes	yes	yes	
Nickel Salts	Sat'd	160	yes	yes	yes
Nitric Acid	35%	120	yes	no	yes
Nitric Acid	40%	90	yes	no	yes
Nitric Acid	60%	120	yes	no	yes
Nitric Acid/ Hydrofluoric Acid	15%				
	4%	140	yes	yes	yes
Nitric Acid/ Sodium Dichromate	16%				
	13%	130	yes	yes	yes
Water	71%				
Oleic Acid	Any	90	yes	yes	yes
Oxalic Acid	Sat'd	120	yes	yes	yes
	Any	90	yes	yes	yes
Phenol	Sat'd	120	no	no	no
Phosphoric Acid	75%	150	yes	yes	yes
Phosphoric Acid	85%	120	yes	yes	yes
Phosphoric Acid	85%	160	yes	yes	yes
Potassium Acid Sulfate	Sat'd	150	yes	yes	yes
Potassium Antimonate	Sat'd	150	yes	yes	yes
Potassium Bisulfite	Sat'd	90	yes	yes	yes
Potassium Chloride	Sat'd	160	yes	yes	yes
Potassium Cuprocyanide	Sat'd	150	yes	yes	yes
Potassium Cyanide	Sat'd	160	yes	yes	yes
Potassium Dichromate	Sat'd	160	yes	yes	yes
Potassium Hypochlorite	Sat'd	90	yes	no	yes
Potassium Sulfide	Sat'd	150	yes	yes	yes
Potassium Thiosulfate	Sat'd	150	yes	yes	yes
Propyl Alcohol	Sat'd	150	yes	yes	yes
Rhodium Plating Solution	Sat'd	150	yes	yes	yes
Silver Plating Solution	Sat'd	150	yes	yes	yes
Soaps	Any	90	yes	yes	yes
Sodium Acid Sulfate	Sat'd	160	yes	yes	yes
Sodium Antimonate	Sat'd	150	yes	yes	yes
Sodium Bicarbonate	Sat'd	160	yes	yes	yes
Sodium Bisulfite	Sat'd	90	yes	yes	yes
Sodium Chloride	Sat'd	160	yes	yes	yes
Sodium Cyanide	Sat'd	160	yes	yes	yes
Sodium Dichromate	Sat'd	160	yes	yes	yes
Sodium Hydroxide	10%	150	yes	no	yes
Sodium Hydroxide	35%	120	yes	no	yes
Sodium Hydroxide	73%	160	no	no	no
Sodium Hypochlorite	Sat'd	90	yes	no	yes
Sodium Hypochlorite	15%	120	yes	no	yes
Sodium Sulfide	Sat'd	150	yes	yes	yes
Sodium Thiosulfate	Sat'd	150	yes	yes	yes
Sulfuric Acid	15%	120	yes	yes	yes
Sulfuric Acid	15%	160	yes	yes	yes
Sulfuric Acid	50%	120	yes	yes	yes
Sulfuric Acid	70%	90	yes	no	yes
Sulfuric Acid	98%	100	no	no	yes
Sulfurous Acid	2%	120	yes	no	yes
Sulfurous Acid	6%	120	yes	no	yes
Tannic Acid	Sat'd	90	yes	yes	yes
Tartaric Acid	Sat'd	90	yes	yes	yes
Tin Chloride Aqueous	Sat'd	150	yes	yes	yes
Tin Plating Solution	Sat'd	150	yes	yes	yes
Triethaneolamine	Sat'd	150	yes	yes	yes
Trisodium Phosphate	Sat'd	150	yes	yes	yes
Water	Sat'd	160	yes	yes	yes
White Liquor	90	yes	yes	yes	yes
Zinc Plating Solution	160	yes	yes	yes	yes
Zinc Sulfate	Sat'd	160	yes	yes	yes

# Ocal® Urethane Interior Coating Chemical Resistance



Ocal® Reference Information

SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE		
			SPLASHING	LIQUID	FUMES
Acetic Acid	10%	75	yes	no	yes
Acid Copper Plating Solution	Any	75	yes	no	yes
Alkaline Cleaners	Any	75	yes	no	yes
Aluminum Chloride	Sat'd	75	yes	no	yes
Aluminum Sulfate	Sat'd	75	yes	no	yes
Alums	Sat'd	75	yes	no	yes
Ammonium Chloride	Sat'd	75	yes	no	yes
Ammonium Hydroxide	28%	75	yes	no	yes
Ammonium Hydroxide	10%	75	yes	no	yes
Ammonium Sulfate	Sat'd	75	yes	no	yes
Ammonium Thiocyanate	Sat'd	75	yes	no	yes
Amyl Alcohol	Any	75	yes	yes	yes
Arsenic Acids	Any	75	yes	no	yes
Barium Sulfide	Sat'd	75	yes	no	yes
Black Liquor	Sat'd	75	yes	no	yes
Benzoic Acid	Sat'd	75	yes	no	yes
Brass Plating Solution	Any	75	yes	no	yes
Bromine Water	Sat'd	75	yes	no	yes
Butyl Alcohol	Any	75	yes	no	yes
Cadmium Plating Solution	Any	75	yes	no	yes
Calcium Bisulfite	Any	75	yes	no	yes
Calcium Chloride	Sat'd	75	yes	no	yes
Calcium Hypochlorite	Sat'd	75	yes	no	yes
Carbonic Acid	Sat'd	75	yes	no	yes
Casein	Sat'd	75	yes	no	yes
Castor Oil	Any	75	yes	yes	yes
Caustic Soda	35%	75	yes	no	yes
Caustic Soda	10%	75	yes	no	yes
Caustic Potash	35%	75	yes	no	yes
Caustic Potash	10%	75	yes	no	yes
Chlorine Water	Sat'd	75	yes	no	yes
Chromium Plating Solution	Any	75	yes	no	yes
Citric Acid	Sat'd	75	yes	no	yes
Copper Chloride (Cupric)	Sat'd	75	yes	no	yes
Copper Cyanide Plating Sol (High Speed)	Any	75	yes	no	yes
(with Alkali Cyanides)	Sat'd	75	yes	no	yes
Copper Sulfate	Sat'd	75	yes	no	yes
Coconut Oil	Sat'd	75	yes	yes	yes
Cottonseed Oil	Sat'd	75	yes	yes	yes
Disodium Phosphate	Sat'd	75	yes	no	yes
Ethyl Alcohol	Any	75	yes	no	yes
Ethylene Glycol	Any	75	yes	yes	yes
Ferric Chloride	45%	75	yes	no	yes
Ferrous Sulfate	Sat'd	75	yes	no	yes
Fluoboric Acid	Any	75	yes	no	yes
Formaldehyde	37%	75	yes	no	yes
Formic Acid	85%	75	yes	no	yes
Gallic Acid	Sat'd	75	yes	no	yes
Glucose	Any	75	yes	yes	yes
Glue	Any	75	yes	no	yes
Glycerine	Any	75	yes	yes	yes
Gold Plating Solution	Any	75	yes	no	yes
Hydrochloric Acid	10%	75	yes	no	yes
Hydrochloric Acid	21.5%	75	yes	no	yes
Hydrochloric Acid	37.5%	75	yes	no	yes
Hydrofluoric Acid	4%	75	yes	no	yes
Hydrofluoric Acid	10%	75	yes	no	yes
Hydrofluoric Acid	48%	75	yes	no	yes
Hydrogen Peroxide	30%	75	yes	no	yes
Hydrogen Sulfide	Sat'd	75	yes	no	yes
Hydroquinone	Any	75	yes	no	yes
Indium Plating Solution	Any	75	yes	no	yes
Lactic Acid	50%	75	yes	no	yes
Lactic Acid	Any	75	yes	no	yes

SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE		
			SPLASHING	LIQUID	FUMES
Lead Plating Solution	Any	75	yes	no	yes
Malic Acid	Any	75	yes	no	yes
Methyl Alcohol	Any	75	yes	no	yes
Mineral Oils	Any	75	yes	yes	yes
Nickel Acetate	Sat'd	75	yes	no	yes
Nickel Plating Solution		75	yes	no	yes
Nickel Salts	Sat'd	75	yes	no	yes
Nitric Acid	35%	75	yes	no	yes
Nitric Acid	40%	75	yes	no	yes
Nitric Acid	60%	75	yes	no	yes
Nitric Acid/ Hydrofluoric Acid	15% 4%	75	yes	no	yes
Nitric Acid/ Sodium Dichromate	16% 13%	75	yes	no	yes
Water	71%				
Oleic Acid	Any	75	yes	no	yes
Oxalic Acid	Sat'd	75	yes	no	yes
	Any	75	yes	no	yes
Phenol	Sat'd	75	yes	no	yes
Phosphoric Acid	75%	75	yes	no	yes
Phosphoric Acid	85%	75	yes	no	yes
Potassium Acid Sulfate	Sat'd	75	yes	no	yes
Potassium Antimonate	Sat'd	75	yes	no	yes
Potassium Bisulfite	Sat'd	75	yes	no	yes
Potassium Chloride	Sat'd	75	yes	no	yes
Potassium Cuprocyanide	Sat'd	75	yes	no	yes
Potassium Cyanide	Sat'd	75	yes	no	yes
Potassium Dichromate	Sat'd	75	yes	no	yes
Potassium Hypochlorite	Sat'd	75	yes	no	yes
Potassium Sulfide	Sat'd	75	yes	no	yes
Potassium Thiosulfate	Sat'd	75	yes	no	yes
Propyl Alcohol	Sat'd	75	yes	no	yes
Rhodium Plating Solution	Sat'd	75	yes	no	yes
Silver Plating Solution	Sat'd	75	yes	no	yes
Soaps	Any	75	yes	no	yes
Sodium Acid Sulfate	Sat'd	75	yes	no	yes
Sodium Antimonate	Sat'd	75	yes	no	yes
Sodium Bicarbonate	Sat'd	75	yes	no	yes
Sodium Bisulfite	Sat'd	75	yes	no	yes
Sodium Chloride	Sat'd	75	yes	no	yes
Sodium Cyanide	Sat'd	75	yes	no	yes
Sodium Dichromate	Sat'd	75	yes	no	yes
Sodium Hydroxide	10%	75	yes	no	yes
Sodium Hydroxide	35%	75	yes	no	yes
Sodium Hydroxide	73%	75	yes	no	yes
Sodium Hypochlorite	Sat'd	75	yes	no	yes
Sodium Hypochlorite	15%	75	yes	no	yes
Sodium Sulfide	Sat'd	75	yes	no	yes
Sodium Thiosulfate	Sat'd	75	yes	no	yes
Sulfuric Acid	15%	75	yes	no	yes
Sulfuric Acid	50%	75	yes	no	yes
Sulfuric Acid	70%	75	yes	no	yes
Sulfuric Acid	98%	75	yes	no	yes
Sulfurous Acid	2%	75	yes	no	yes
Sulfurous Acid	6%	75	yes	no	yes
Tannic Acid	Sat'd	75	yes	no	yes
Tartaric Acid	Sat'd	75	yes	no	yes
Tin Chloride Aqueous	Sat'd	75	yes	no	yes
Tin Plating Solution	Sat'd	75	yes	no	yes
Triethaneolamine	Sat'd	75	yes	no	yes
Trisodium Phosphate	Sat'd	75	yes	no	yes
Water	Sat'd	75	yes	no	yes
White Liquor		75	yes	no	yes
Zinc Plating Solution		75	yes	no	yes
Zinc Sulfate	Sat'd	75	yes	no	yes



# Section 26 05 33 — Underground Ducts and Raceways for Electrical Systems: Conduit Systems for Use in Corrosive Environments

## Part 1 – General

### 1.1 Summary

- A. Section Includes: Furnishing, installation and assembly of PVC-coated electrical rigid metal conduit (ERMC) systems and stainless steel fittings.
- B. Related Sections
  - 1. Section 26 05 29 – Hangers and Supports for Electrical Systems

### 1.2 References

- A. National Electrical Manufacturers Association (NEMA)
  - 1. NEMA RN 1: Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit
- B. National Fire Protection Association (NFPA)
  - 1. NFPA 70: National Electrical Code (NEC)
- C. American Society for Testing and Materials (ASTM):
  - 1. ASTM A 239: Standard Practice for Locating the Thinnest Spot in a Zinc (Galvanized) Coating on Iron or Steel Articles
- D. Underwriters Laboratories, Inc. (UL)
  - 1. UL 6: Safety Standard for Rigid Metal Conduit
  - 2. UL 514B: Safety Standard for Fittings for Conduit and Outlet Boxes
- E. American National Standards Institute (ANSI)
  - 1. ANSI C80.1: American National Standard for Rigid Steel Conduit – Zinc Coated
- G. Steel Tube Institute of North America
  - 1. Guidelines for Installing Steel Conduit/Tubing

### 1.3 Submittals

- A. General: Submit in accordance with Section 01 33 00.
- B. Product Data
  - 1. Manufacturer's descriptive literature and product specifications for each product.
  - 2. Manufacturer's installation literature and training guide.
  - 3. Manufacturer's product drawings, when applicable.

### 1.4 Quality Assurance

- A. Manufacturer Qualifications: Products shall be free of defects in material and workmanship.
- B. Installer Qualifications: Installer shall be trained and certified based on the acceptable manufacturer's listed requirements.

## Part 2 – Products

### 2.1 General

- A. Furnish PVC-coated ERMC of size as indicated. If not indicated, the smallest trade size shall be ¾ in. The PVC-coated ERMC system shall include necessary PVC-coated fittings, boxes and covers to form a complete encapsulated system.

### 2.2 Manufacturers

- A. Acceptable Manufacturers: Thomas & Betts Corporation; 8155 T & B Blvd., Memphis, TN 38125. Tel: 901-252-5000. Web: www.tnb.com
- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

### 2.3 Materials/Components

#### A. PVC-Coated Rigid Steel Conduit

The PVC-coated rigid steel conduit shall be hot-dip galvanized inside and out with hot-dip galvanized threads. The interior galvanizing shall be listed per UL 6. The exterior galvanizing shall be listed per UL 6 as primary corrosion protection. Thread protectors shall be used on the exposed threads of the PVC-coated conduit. PVC-coated ERMC steel conduit shall comply with UL 6, ANSI C80.1 and NEMA RN 1 standards without exception.

The PVC coating, in compliance with NEMA RN 1, shall be nominal 40 mils in thickness continuous over the entire length of the conduit except at the threads and be free of blisters, bubbles or pinholes. PVC shall be UL listed as a primary corrosion protection.

A blue urethane coating shall be uniformly and consistently applied to the interior of conduit. This internal coating shall be a nominal 2 mils thickness. All male threads on elbows and nipples shall be protected by this same application of urethane coating.

Coated couplings shall be used with coated conduit. The thickness of the coating on couplings shall be at least equal to the thickness of the coating on the conduit. Each coated coupling shall have a flexible PVC sleeve which extends from each end of the coupling and which will overlap the PVC coating on the conduit when the coupling has been installed on the conduit. The length of the sleeve extension(s) shall be at least equivalent to the nominal conduit size for sizes up through 2 in. For sizes 2 – 6 in., the length of the sleeve extension(s) shall be at least 2 in. The PVC sleeve shall be a nominal thickness of 40 mils in thickness. The inside diameter of the overlapping sleeve shall be less than the outside diameter of the PVC-coated conduit.

#### B. PVC-Coated Rigid Aluminum Conduit

The PVC-coated ERMC aluminum conduit prior to coating shall be UL listed. The exterior of the conduit shall have a PVC coating of a minimum thickness of nominal 40 mils.





A blue urethane coating shall be uniformly and consistently applied to the interior of conduit. This internal coating shall be a nominal 2 mils thickness. All male threads on elbows and nipples shall be protected by this same application of urethane coating.

Coated couplings shall be used with coated conduit. The thickness of the coating on couplings shall be at least equal to the thickness of the coating on the conduit. Each coated coupling shall have a flexible PVC sleeve which extends from each end of the coupling and which will overlap the PVC coating on the conduit when the coupling has been installed on the conduit. The length of the sleeve extension(s) shall be at least equivalent to the nominal conduit size for sizes up through 2 in. For sizes 2 – 6 in., the length of the sleeve extension(s) shall be at least 2 in. The PVC sleeve shall be a nominal thickness of 40 mils in thickness. The inside diameter of the overlapping sleeve shall be less than the outside diameter of the PVC-coated conduit.

### C. PVC-Coated Ordinary Location Fittings

PVC-coated ferrous and aluminum fittings for general service and corrosive locations must be UL listed. The PVC coating shall be minimum 40 mils in thickness and be free of blisters, bubbles or pinholes. Female threads on fittings shall be protected by application of urethane coating.

All female ends of PVC-coated conduit fittings shall have a flexible PVC sleeve which extends from the female ends of the fitting and which will overlap the PVC coating on the conduit when the fitting has been installed on the conduit. The length of the sleeve extension(s) shall be at least equivalent to the nominal conduit size for sizes up through 2 in. For sizes 2 – 6 in., the length of the sleeve extension(s) shall be at least 2 in. The PVC sleeve shall be a nominal thickness of 40 mils in thickness. The inside diameter of the overlapping sleeve shall be less than the outside diameter of the PVC-coated conduit.

1. The PVC coating on all form 8 covers shall form a gasket-like flange of at least  $\frac{5}{16}$  in. wide and minimum 40 mils covering the top of the fitting around the opening and the bottom of the cover/matting with the flange of the fitting. A blue urethane coating shall be uniformly and consistently applied to the interior, exterior and threads of all conduit bodies, including but not limited to form 8 and form 7 conduit bodies. This coating shall be a nominal 2 mils thickness. Stainless steel encapsulated screws shall be supplied with all form 7 and form 8 fittings.
2. Rigid hubs shall have a nominal 40 mils PVC coating thickness with a nominal 2 mils of blue urethane on interior and threads. The male threads and locknut shall remain uncoated.
3. Liquid-tight fittings shall have an exterior PVC coating of a minimum thickness of nominal 40 mils.

### D. PVC-Coated Hazardous Location Fittings

Hazardous location fittings prior to PVC coating must be UL listed. All female ends of PVC-coated conduit fittings shall have a flexible PVC sleeve which extends from the female ends of the fitting and which will overlap the PVC coating on the conduit when the fitting has been installed on the conduit. The length of the sleeve extension(s) shall be at least equivalent to the nominal conduit size for sizes up through 2 in. For sizes 2 – 6 in., the length of the sleeve extension(s) shall be at least 2 in. The PVC sleeve shall be a nominal thickness of 40 mils in thickness. The inside diameter of the overlapping sleeve shall be less than the outside diameter of the PVC-coated conduit.

### E. PVC-Coated Strut, Hangers and Clamps

Right-angle beam clamps and U-bolts shall be specially formed and sized to fit snugly the outside diameter of the PVC-coated conduit. Support products such as ferrous strut, beam clamps, pipe straps, clamp back spacers, conduit clamp hangers and all-thread rods shall have a minimum 15 mil PVC coating by the manufacturer of the ERM conduit and system components.

### F. Stainless Steel Fittings

Stainless steel liquid-tight fittings shall be made of 304-grade stainless steel or better.

### G. Stainless Steel Strut, Hangers, Etc.

Stainless steel strut, beam clamps, pipe straps, clamp back spacers, conduit clamp hangers and all-thread rods shall be made of 304-grade stainless steel or better.

## Part 3 – Execution

### 3.1 Examination

- A. The PVC-coated ERM and system components have been selected for use in an atmosphere considered to be corrosive for this project. The corrosive atmosphere is considered to be more damaging than merely the presence of moisture. Accordingly, conduit and the corresponding fittings for it must have PVC protection as described under Part 2 – Products. Conduit and fittings that are merely galvanized for this purpose are insufficient.

### 3.2 Preparation

- A. Preparation shall be done in accordance with manufacturer's printed instructions.

### 3.3 Installation

- A. Install in accordance with manufacturer's printed instructions and manufacturer's installation training.

### 3.4 Quality Control

- A. General: Comply with requirements of Section 01 45 13.

### 3.5 Manufacturer's Field Services

- A. Free on-site installation training course by company representative. This representative must conduct the on-site training course in order to qualify for the installation certificate. The time required for this training is estimated to be two (2) hours.
- B. After the on-site training installation, the representative shall then register the installer in his database and provide certification for installation.

## END OF SECTION

### Notes

1. Ocal PVC-coated conduit and fittings are not recommended for use in areas where they will be exposed to sustained temperatures above 200 degrees Fahrenheit or exposed to fire. Prolonged exposure to heat greater than 200 degrees Fahrenheit or exposure to fire may cause the plastic coatings to release harmful emissions, posing a potential health hazard to persons subjected to such emissions.
2. If subjected to sustained flame or sustained heat above 400 degrees Fahrenheit, PVC will burn. PVC is self-extinguishing at room temperature.



# Ocal®

## Ocal® Installation Guidelines

Ocal® Reference Information

### Ocal® Recommended Installation Procedures

PVC-coated conduit is installed in much the same manner as conventional rigid galvanized steel conduit; however, certain precautions must be taken to protect the exterior coating and ensure satisfactory results. By following these guidelines and using the proper tooling, a damage-free installation can be achieved.

When an engineer has specified Ocal® PVC-coated conduit, the intent is for the total run to be PVC coated. There are no exceptions to this rule. This means from the beginning of the run to its completion and all in between, no exposed metal shall be allowed.

#### Clamping in a Yoke-Style Vise

The first step is the correct clamping of the PVC-coated conduit.

When you use a yoke-style vise, you should replace both the upper and lower jaw inserts with the specially designed Ocal® jaw vise adapters. These adapters provide greater clamping force and prevent the pipe from spinning during the threading process. (See Catalog No. JAWS76 or JAWS23 on page 57.)

Your other option is to purchase a yoke-style vise already equipped with jaws designed specifically for PVC-coated conduit, such as the yoke-style tri-stand vise manufactured by Rothenberger (Catalog No. P00076C) on page 56.



*Yoke-Style Tri-Stand Vise with jaws designed for PVC-coated conduit P00076C See page 56.*



*Ocal Jaw Vise Adapters JAWS23 or JAWS76 See page 57.*

### Clamping in a Chain-Style Vise

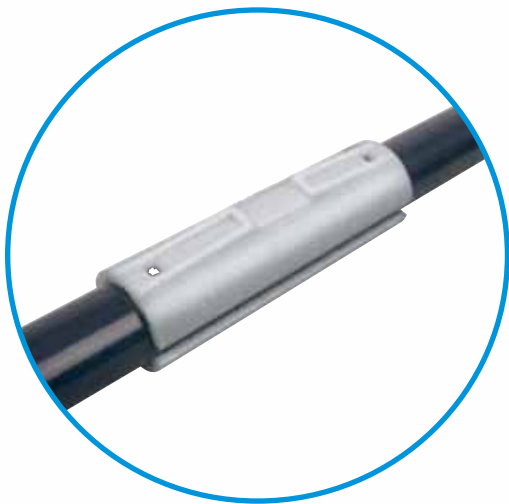
If a chain-style vise is used, the chain — as well as the jaw inserts — will tear the PVC coating when the threading force is applied.

To prevent this from happening, installers sometimes make “shells” from PVC pipe or standard rigid steel conduit that fit over the PVC-coated conduit. To save time and obtain more consistency, longer life and better protection, you can use the Ocal half-shell clamps featured on page 56.

Available in trade sizes ½" to 6", Ocal half-shell clamps are made from ductile iron for superior strength and durability. They feature a patent-pending, cross-hatched interior surface designed to safeguard the PVC coating while holding the conduit securely in a chain-style vise.



Half-Shell Clamps  
for conduit sizes ½" to 6"  
HLF-SHL-CLP-\_  
See page 56.



Chain-Style Vise  
ROTH00076  
See page 56.



Half-Shell Clamp Sets  
HLF-SHL-CLP-SET1  
HLF-SHL-CLP-SET2  
See page 56.



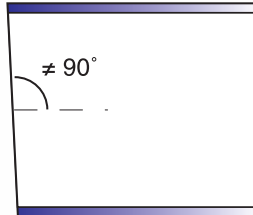


## Cutting with a Band Saw Cutter

A band saw cutter will cut the PVC coating flush with the end of the conduit. PVC material cut flush to the end of the conduit will not allow the die teeth to bite into the steel to start the threading process.

Therefore, before threading, you must remove approximately 1/4" of the PVC coating from the end of the conduit. Using a knife, whittle in a pencil-sharpening style, cutting the coating from the conduit. A wire brush may also be used to remove PVC coating.

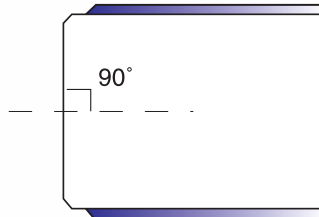
A band saw cutter usually will not cut the conduit at a "perfect" 90° angle (the accuracy of this cut depends heavily on the skill of the operator).



## Cutting with a Roller-Style Cutter

Although most personnel in the field prefer a band saw cutter, a roller-style cutter recommended tool for cutting Ocal PVC-coated conduit.

A roller-style cutter cuts the edge of the conduit at a bevel and removes 1/4" of the coating at the same time. In addition, a roller-style cutter provides an exact 90° cut in relation to the conduit. No additional removal of PVC coating is necessary.



Steel Pipe Cutters  
P70045C  
P70060C  
See page 57.

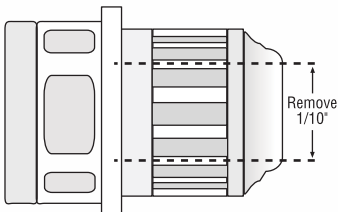


### Manual and Hand-Held Threading

PVC-coated conduit has a larger O.D. than uncoated conduit. Standard dies will not clear the additional thickness. Hand-held as well as power threading devices requires a die head for the correct size conduit. The standard die head is factory set for rigid conduit and will not fit over PVC coating. These die heads are available from OCAL, machined for use with PVC-coated conduit. You can have standard dies machined as well.

If you have dies machined, you will need to adhere to the following procedure:

1. Remove the cover plate and the four die teeth.
2. Have the machinist remove 100 thousandths of an inch ( $\frac{1}{10}''$ ) from the throat and collar diameter of the die head.
3. Replace the dies and cover.



SUPER CUT Die Head Set  
P70905C  
See page 55.



Throat & Collar Shown



Cover Plate Shown



The die teeth are cutting tapered threads and will become clogged with PVC and metal shavings.



To prevent clogging, use a knife and score the conduit lengthwise from the point where the threads will end to where they begin. This will allow the PVC and metal shavings to fall into the throat of the die head.



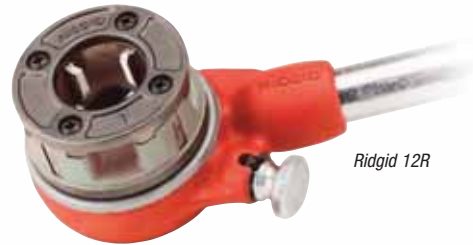




## Threading

### Hand-Held Manual Threading

Manual, ratchet-style threaders, such as the Rothenberger SUPER CUT ratchet threader or Ridgid 12R, are typically used for smaller size conduit. The ratchet knob indicates forward and reverse. Die heads snap in from both sides and lock in place. (Ridgid 12R includes ratchet and handle only.)



Ridgid 12R

### Hand-Held Powered Threading

The Rothenberger MINI-COLLINS® and Ridgid 700 Power Drive are heavy-duty hand-held power tools typically used for conduit up to 2" in diameter. Hand-held power threaders such as the Rothenberger SUPERTRONIC® 2000 are available with die heads for PVC-coated conduit. The Rothenberger MINI-COLLINS® uses Rothenberger SUPER CUT dies, while the Ridgid 700 Power Drive is designed for Ridgid 12R dies. Optional tool cases are available.



Rothenberger SUPERTRONIC® 2000  
P71259C  
See page 54.



Ream the conduit with approved reamers. Spiral and straight-style reamers are both acceptable.



Rothenberger MINI-COLLINS®  
ROTH00074  
See page 55.

The threads must be dressed per NEC Article 300.6 [a]: "Where unusually corrosive elements require additional protection, it is recommended that threads be zinc coated with a hot dipped process or equivalent."

Use a good quality degreaser and apply Ocal interior touch-up compound or T&B KOPR-SHIELD®.



Ridgid Reamers



Ocal Urethane Patching Compound  
See page 59.



KOPR-SHIELD®  
See page 59.



Rothenberger Reamer  
70289  
See page 57.



### Geared Threading

Geared threaders will thread 2½" through 6" PVC coated conduit. However, geared threaders are typically only used for 5" and 6" conduit. The cutting dies are adjustable and will not require pencil cutting the conduit.

The geared threader requires a clamp screw to secure the conduit, and the clamp screw will penetrate the PVC coating. Make certain the clamp screw is tight; otherwise, it will slip around the conduit and tear the coating. After the threading process is complete, touch up the penetrated area with Ocal exterior PVC patching compound (see pages 59–60).

Ream the conduit and dress the threads as previously described.



Ridgid Geared Threader ("Hog Head")



Rothenberger MINI-COLLINS®  
ROTH00074  
See page 55.



Ridgid 700 Power Drive ("Power Pony")

### Stationary Power Threading

#### Rothenberger RHINO®

The Rothenberger RHINO® threading machine featured on page 54, Catalog No. P00551C, which comes equipped with jaws for PVC-coated conduit up to 4", is the recommended choice for threading Ocal® PVC-coated conduit.

With the Rothenberger RHINO®, you won't need to pencil cut or score the PVC, because this machine uses a roller cutter and will remove ¼" of the PVC coating. Cuttings will fall onto the screen on the lower portion of the machine.

Machines that use centrifugal force (slap chucks) — other than the Rothenberger RHINO®, Catalog No. P00551C — to tighten the jaws around the conduit can be used, but only with shell clamps attached. These types of threaders will damage the PVC coating without the use of shell clamps.

#### Ridgid® Model 1224

Stationary power threading machines such as the Ridgid 1224 have the capacity to thread rigid conduit from ½" to 4". The standard jaw inserts with these units are intended to secure uncoated rigid conduit. The teeth of the standard jaw inserts will penetrate the PVC coating, but not bite into the steel. As a result, the standard jaw inserts will grind the PVC coating off the conduit. To prevent this, shell-style clamps or jaw inserts for coated conduit may be used.

- **Shell Clamps – Range: ½" to 3½"**

To properly clamp the conduit, the shell style clamps described earlier can be used on conduit sizes from ½" to 3½". However, for 4" conduit, there is not enough room in the chuck to accommodate both the 4" conduit and shell clamps.

- **Jaw inserts for coated conduit – Range: ½" to 4"**

The jaw inserts for coated conduit have teeth that will penetrate the PVC coating and bite into the conduit itself. Ridgid catalog number 26187 is the jaw insert for coated conduit used in the Ridgid 1224 threading machine.



Rothenberger RHINO®  
P00551C  
See page 54.



Ridgid 1224

### Stationary Power Threading (continued)

#### Ridgid® Model 1224 (continued)

The jaw inserts for coated conduit will leave slits in the PVC jacket. You will need to touch up slits with Ocal exterior PVC patching compound (see pages 59–60). Since an extra step is required with the special jaw inserts, most installers usually use them only for 4" conduit with the Ridgid 1224 threading machine.

Make sure the stationary machine is set up for NPT threading. All machines can cut straight threads; however, not all machines can cut both tapered and straight threads. Always make sure the thread cutting oil is clean and of the type recommended by the machine manufacturer.



Ridgid 1224

#### Ridgid® Models 300 and 535

Stationary power threading machines such as the Ridgid 300 and Ridgid 535 have the capacity to thread rigid conduit from ½" to 2". The standard jaw inserts for these units are intended to secure uncoated rigid conduit. The teeth of the standard jaw inserts will penetrate the PVC coating, but not bite into the steel. As a result, the standard jaw inserts will grind the PVC coating off the conduit. To prevent this, shell style clamps or jaw inserts for coated conduit may be used.

- **Shell Clamps – Range: ½" to 1½"**

To properly clamp the conduit, the shell style clamps described earlier can be used on conduit sizes from ½" to 1½". However, for 2" conduit, there is not enough room in the chuck to accommodate both the 2" conduit and shell clamps

- **Jaw Inserts for Coated Conduit – Range: ½" to 2"**

The jaw inserts for coated conduit have teeth that will penetrate the PVC coating and bite into the conduit itself. Ridgid catalog number 97365 is the jaw insert for coated conduit used in the Ridgid 300 and 535 threaders. The jaw inserts for coated conduit will leave slits in the PVC jacket. You will need to touch up these slits with Ocal exterior patching compound (see pages 59–60). Since an extra step is required with the special jaw inserts, most installers only use them for 2" conduit with the Ridgid 300 and 535 machines.



Ridgid 300  
Compact Threader



Ridgid 300 Power Drive Complete



Ridgid Model 535

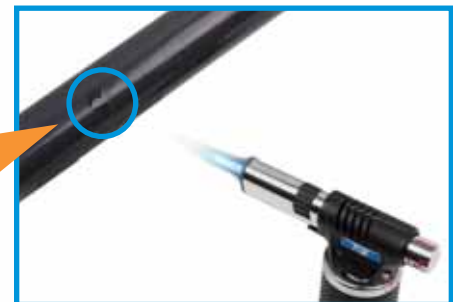
There is no need to pencil cut or score the PVC, because these threading machines use a roller cutter and remove ¼" of the PVC coating. Cuttings simply fall onto the screen on the lower portion of the machine.



Ocal® Air-Cure  
Patching Compounds  
See page 59.



Ocal® Heat-Cure Patch  
See page 60.



Ocal® Heat-Cure Patch offers a thicker consistency at higher ambient temperatures than standard air-cure compounds, ensuring better coverage and a more effective patch in warm weather applications.

### Bending

Never use any type of lubricant on the shoes. Use rubbing alcohol to clean the shoe prior to bending.

### Hand Bending

A standard hand bender can be used for saddles, offsets and conventional bending. For PVC-coated conduit, the next larger shoe size from the EMT size should be used. The chart below shows the catalog numbers of the hand benders on page 53 and the corresponding size of PVC-coated conduit on which they should be used.

CAT. NO.	PVC-COATED CONDUIT SIZE
35220	½"
35225	¾"
2424A8	1"

### Electric Bending

These machines are designed for bending ½" through 2" conduit. The shoes as well as the roller assembly should be of the design for use with PVC coated conduit. Listed along with the Greenlee® electric bender on page 53 are the bending accessories to equip the machine for PVC-coated conduit.

If you use conventional shoes on an electric bender, the shoes and each of the rollers in the roller assembly must be machined 60 thousandths. Some manufacturers use slide bars instead of a roller assembly, and these, too, must be machined 60 thousandths. Be sure to compensate for "spring back," since PVC coating often requires the setting to be off as much as 5°.

### Hydraulic Bending

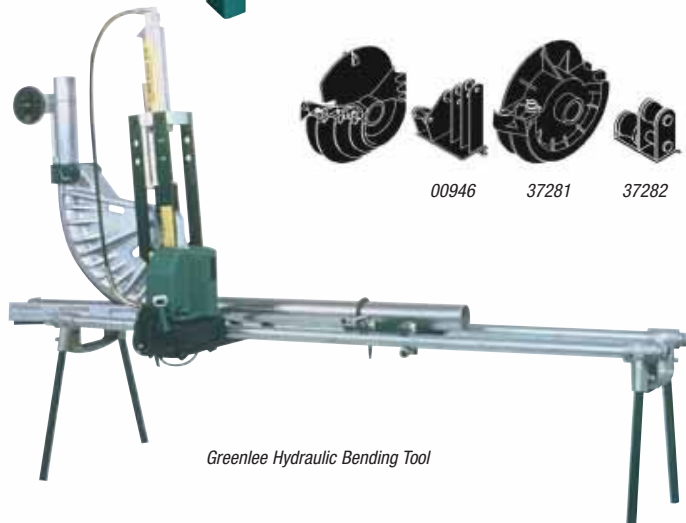
This is the preferred style of bending for 2½" and larger size conduit. The shoe assembly should be of the design for PVC-coated conduit. The roller wheel and/or slide bar will accommodate PVC-coated conduit without the need for machining.

Note:

- Sequential bends can be manufactured by Ocal upon request.
- 5" and 6" conduit must be bent at the factory.



Shoe for Greenlee Hydraulic Bending Tool



Greenlee Hydraulic Bending Tool



Ridgid Hand Bender  
See page 53.



Chicago Bender



Greenlee® Model 555 Bender  
(left) and bending accessories  
for PVC-coated conduit (below)  
See page 53.



00946    37281    37282





# Industry Standards — NEMA

## NEMA Standards Publication No. RN 1–2005

Underwriter Laboratories, Inc. (UL)

333 Pfingsten Road, Northbrook, IL 60062

UL 6-2007 Safety Standard for Electrical Rigid Metal Conduit – Steel

Ocal® Reference Information

### Section 3 — External Coatings

#### 3.1 Thickness

The thickness of polyvinyl chloride (PVC) coatings shall be a nominal 0.040 in. (1.02 mm). The tolerance on the coating thickness shall be +0.010 in. (0.25 mm) or -0.005 in. (0.13 mm).

#### 3.2 Coating Material

The PVC coating shall have the properties specified in **Table 3-1**.

**Properties of PVC Coatings — Table 3.1**

PROPERTY	MINIMUM REQUIREMENT	ASTM TEST METHOD
<b>Hardness:</b>		
Shore A	75	D 2240
Shore D	25	D 2240
<b>Tensile Strength</b>	2,000 psi	D 638
<b>Elongation</b>	200%	D 638
<b>Dielectric strength</b>	325 volts per mil	D 149
<b>Brittleness temperature</b>	5° F	D 1790

#### 3.3 Application of Coating

##### 3.3.1 Cleaning

The exterior surface that is to receive the coating shall be free of grease, oil, dirt and other extraneous matter. **The surface shall be cleaned in such a manner that the galvanized surface of the conduit is not harmed or eroded.**

##### 3.3.2 Priming

The cleaned exterior surface shall be primed with an adhesive suitable for use with the PVC coating material to be applied.

##### 3.3.3 Coating

The PVC material shall be applied in powder, plastisol or pellet form by a manufacturing method which will produce a finished product conforming to these standards.

#### 3.4 Elbows

Coated elbows shall be used with coated conduit. The thickness of the coating on elbows shall be in accordance with Section 3.1.

#### 3.5 Couplings

Coated couplings shall be used with coated conduit. The thickness of the coating on couplings shall be at least equal to the thickness of the coating on the conduit.

Each coated coupling shall have a flexible PVC sleeve which extends from each end of the coupling and which will overlap the PVC coating on the conduit when the coupling has been installed on the conduit.

The length of the sleeve extension(s) shall be at least equivalent to the nominal conduit size for sizes up through NPS 2 (53). For sizes NPS 2½ (63) through NPS 6 (155), the length of the sleeve extension(s) shall be at least 2 in. (50.8 mm).

The PVC sleeve shall be a nominal thickness of 0.040 in. (1.02 mm). The inside diameter (I.D.) of the overlapping sleeve shall be less than the outside diameter (O.D.) of the PVC-coated conduit.

#### 3.6 Workmanship and Appearance

The PVC coating shall be free of blisters, bubbles, and pinholes. The PVC coating shall be continuous over the entire length of the conduit except at the threads and shall be holiday-free at the time of manufacture.

A holiday is herein defined as an electrical discontinuity of less than 80,000 ohms equivalent resistance sensed with a cellulose sponge wet with a suitable electrolyte and measured with an appropriate low voltage direct-current instrument. A suitable electrolyte is a solution containing tap water, 3.0% salt (sodium chloride) and 0.5% liquid detergent.

The inside of the PVC-coated conduit, couplings and elbows shall be free of the PVC coating material.

All sleeve extensions shall be square cut.

#### 3.7 Performance Requirements

Typical physical requirements for PVC-coated conduit are given in **Table 3-2**.

**Typical Physical Properties of PVC-Coated Rigid Conduit and IMC — Table 3.2**

PROPERTY	REQUIREMENT*	TEST METHOD
<b>Abrasion resistance</b>	200 hours, no failure	ASTM G6
<b>Bendability, radius</b> (at 73.4° ± 1.8° F)	9 in. (228.6 mm)	ASTM G10
<b>Artificial weathering</b>	Minimum 1,000 hours, no adverse effect	ASTM G153

\* The above requirements are based on testing a 0.040 in. (1.02 mm) PVC coating applied over NPS ¾ inch (21) galvanized rigid steel conduit. See Section 1 for information on the ASTM test methods.

#### 3.8 Adhesion

The adhesion of the PVC coating to the conduit shall be greater than the strength of the coating itself. This shall be determined by making two circumferential cuts, above ½ in. (12.7 mm) apart, through the plastic to the substrate. A third cut shall be made perpendicular to and crossing the circumferential cuts. The edge of the plastic shall be carefully lifted with a knife to form a plastic tab. This tab shall be pulled perpendicular to the conduit with a pair of pliers. The plastic tab shall tear rather than any additional coating film separating from the substrate.



### A

A100 1/4 SS	47
A100 3/8 SS	47
A100 5/16SS	47
A12	45
A1200 10SS	46
A1200 20SS	46
A120010T316SS	46
A120020T316SS	46
A1200H20T316SS	46
A1200HS 10SS	46
A1200HS 20SS	46
A1200HS10T316SS	46
A1202HS10SS	46
A1202HS10T316SS	46
A1202HS20T316SS	46
A12A	45
A12P	45
AB100 1/4 SS	47
AB100 3/8 SS	47
AB100 5/16SS	47
AB201SS	46
AB201SS316	46
AB202SS	46
AB202SS316	46
AB203SS	46
AB203SS316	46
AB204SS	46
AB204SS316	46
AB205SS	46
AB205SS316	46
AB206SS	46
AB206SS6C	46
AB207SS	46
AB207SS6C	46
AB213SS	46
AB213SS316	46
AB214SS	46
AB214SS316	46
AB219SS	46
AB219SS316	46
AB220SS	46
AB220SS316	46
AB225SS	46
AB225SS316	46
AB227SS316	46
AB241 1/4SS	47
AB241 3/8 SS	47
AB241 5/16SS	47
AB241-1/2SS316	47
AB241-1/4SS316	47
AB241-3/8 SS316	47
AP232SQSS	46
AP232SQSS6	46
AP232SS	46
AP232SS6	46
AP235SQSS	46
AP235SQSS6	46
AP235SS	46
AP235SS6	46
AW219SS	46
AW219SS316	46

### B

B100 1/2SS	47
B100 1/4 SS	47
B100 3/8 SS	47
B1400 10SS	46
B1400 20SS	46
B140010T316SS	46

B140020T316SS	46
BC10	32
BC3	32
BC4	32
BC5	32
BC6	32
BC7	32
BC8	32
BC9	32
BG48	32
BG68	32
BG88	32
BG98	32
BLB10	32
BLB3	32
BLB4	32
BLB5	32
BLB6	32
BLB7	32
BLB8	32
BLB9	32
BT10	32
BT3	32
BT4	32
BT5	32
BT6	32
BT7	32
BT8	32
BT9	32
BUB10	32
BUB3	32
BUB4	32
BUB5	32
BUB6	32
BUB7	32
BUB8	32
BUB9	32

### C

C1089	18
C14	45
C14P	45
C17	18
C17SA	18
C18	18
C19	18
C27	18
C27SA	18
C28	18
C29	18
C37	18
C37SA	18
C38	18
C39	18
C448	18
C47	18
C47SA	18
C49	18
C57	18
C57SA	18
C58	18
C59	18
C67	18
C67SA	18
C68	18
C69	18
C77	18
C77SA	18
C78	18
C789	18
C87	18
C87SA	18

C88	18
C889	18
C989	18
CB1	15
CB1/2	15
CB1-1/2	15
CB1-1/4	15
CB2	15
CB2-1/2	15
CB3	15
CB3/4	15
CB3-1/2	15
CB4	15
CFSDR	31
CFSHG	31
CFSRG	31
CFSTF	31
CLNPL1	11
CLNPL1/2	11
CLNPL1/2SA	11
CLNPL11/2	11
CLNPL11/2SA	11
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CLNPL21/2SA	11
CLNPL2SA	11
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COND1/2SA	8
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COND1-1/2SA	8
COND1-1/4	8
COND1-1/4SA	8
COND1SA	8
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COND2-1/2	8
COND2-1/2SA	8
COND2SA	8
COND3	8
COND3/4	8
COND3/4SA	8
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COND3-1/2SA	8
COND3SA	8
COND4	8
COND4SA	8
COND5	8
COND5SA	8
COND6	8
COND6SA	8
CP128	59
CP16	59
CP8-TB	59
CPL1	9
CPL1/2	9
CPL1/2SA	9
CPL1-1/2	9

CPL1-1/2SA	9
CPL1-1/4	9
CPL1-1/4SA	9
CPL1SA	9
CPL2	9
CPL2-1/2	9
CPL2-1/2SA	9
CPL2SA	9
CPL3	9
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CPL3-1/2SA	9
CPL3SA	9
CPL4	9
CPL4SA	9
CPL5	9
CPL5SA	9
CPL6	9
CPL6SA	9
CWPDR-FS	31

### D

DAS250	65, 67
DS100G	31
DS21G	31
DS23	31
DS32G	31

### E

E142 (T) X (L) SS	47
E142 (T) X (L) SS316	47
E145 1/2 SS	47
E145 1/4 SS	47
E145 3/8 SS	47
E145 5/16SS	47
EC1	14
EC1/2	14
EC1-1/2	14
EC1-1/4	14
EC2	14
EC3/4	14
EF147 1/2SS	47
EF147 1/4 SS	47
EF147 3/8 SS	47
EL1	33
EL10	33
EL19	33
EL195	33
EL196	33
EL2	33
EL29	33
EL295	33
EL296	33
EL3	33
EL39	33
EL395	33
EL396	33
EL4	33
EL49	33
EL496	33
EL5	33
EL59	33
EL6	33
EL69	33
EL7	33
EL79	33
EL8	33
EL9	33
ELL1	12
ELL1/2	12



Ocal® Reference Information

ELL1/2-_-SA	12	EYS2	42	FSS2	30	GUAB69	38
ELL1-_-SA	12	EYS21	42	FSS2	30	GUAC14	38
ELL11/2	12	EYS216	42	FSS222	30	GUAC16	38
ELL11/2-_-SA	12	EYS26	42			GUAC24	38
ELL11/4	12	EYS3	42	<b>G</b>			
ELL11/4-_-SA	12	EYS31	42	GAC-1	40	GUAC26	38
ELL2	12	EYS316	42	GAC-2	40	GUAC36	38
ELL2-_-SA	12	EYS36	42	GAC-3	40	GUAC47	38
ELL21/2	12	EYS4	42	GAC-4	40	GUAC49	38
ELL21/2-_-SA	12	EYS46	42	GAC-5	40	GUAC59	38
ELL3	12	EYS5	42	GAC-6	40	GUAC69	38
ELL3/4	12	EYS56	42	GAD-123	41	GUAD14	39
ELL3/4-_-SA	12	EYS6	42	GAE-1	40	GUAD16	39
ELL3-_-SA	12	EYS66	42	GAE-2	40	GUAD24	39
ELL31/2	12	EYS7	42	GAE-3	40	GUAD26	39
ELL31/2-_-SA	12	EYS76	42	GAFX-1	41	GUAD36	39
ELL4	12	EYS8	42	GAFX-2	41	GUAD49	39
ELL4-_-SA	12	EYS86	42	GAFX-3	41	GUAL14	39
ELL5	12	EYS9	42	GAJ-123	41	GUAL16	39
ELL5-_-SA	12	EYS96	42	GAJ-4	41	GUAL24	39
ELL6	12	EZD111	43	GAJ-56	41	GUAL26	39
ELL6-_-SA	12	EZD211	43	GAJU-1	41	GUAL36	39
ERICSON1	34	EZD311	43	GAJU-2	41	GUAL47	39
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ERICSON1/2SA	34	EZD511	43	GAJU-5	41	GUAL59	39
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ERICSON3/4SA	34	EZS6	43	GALB-5	40, 41	GUAN26	39
ERICSON31/2	34	EZS66	43	GALB-6	40, 41	GUAN36	39
ERICSON31/2SA	34	EZS7	43	GAS-123	40	GUAN47	39
ERICSON3SA	34	EZS76	43	GAS-4	40	GUAN59	39
ERICSON4	34	EZS8	43	GAS-56	40	GUAN69	39
ERICSON4SA	34	EZS86	43	GAT-1	40	GUA04WOD	38, 39
ERICSON5	34			GAT-2	40	GUA06WOD	38, 39
ERICSON5SA	34	<b>F</b>				GUA07WOD	38, 39
ERICSON6	34	FD1	30	GAT-3	40	GUA09WOD	38, 39
ERICSON6SA	34	FD2	30	GAT-4	40	GUAT14	38
EYD1	42	FD22	30	GAT-5	40	GUAT16	38
EYD10	42	FD3	30	GAT-6	40	GUAT24	38
EYD106	42	FDC1	30	GAX-1	41	GUAT26	38
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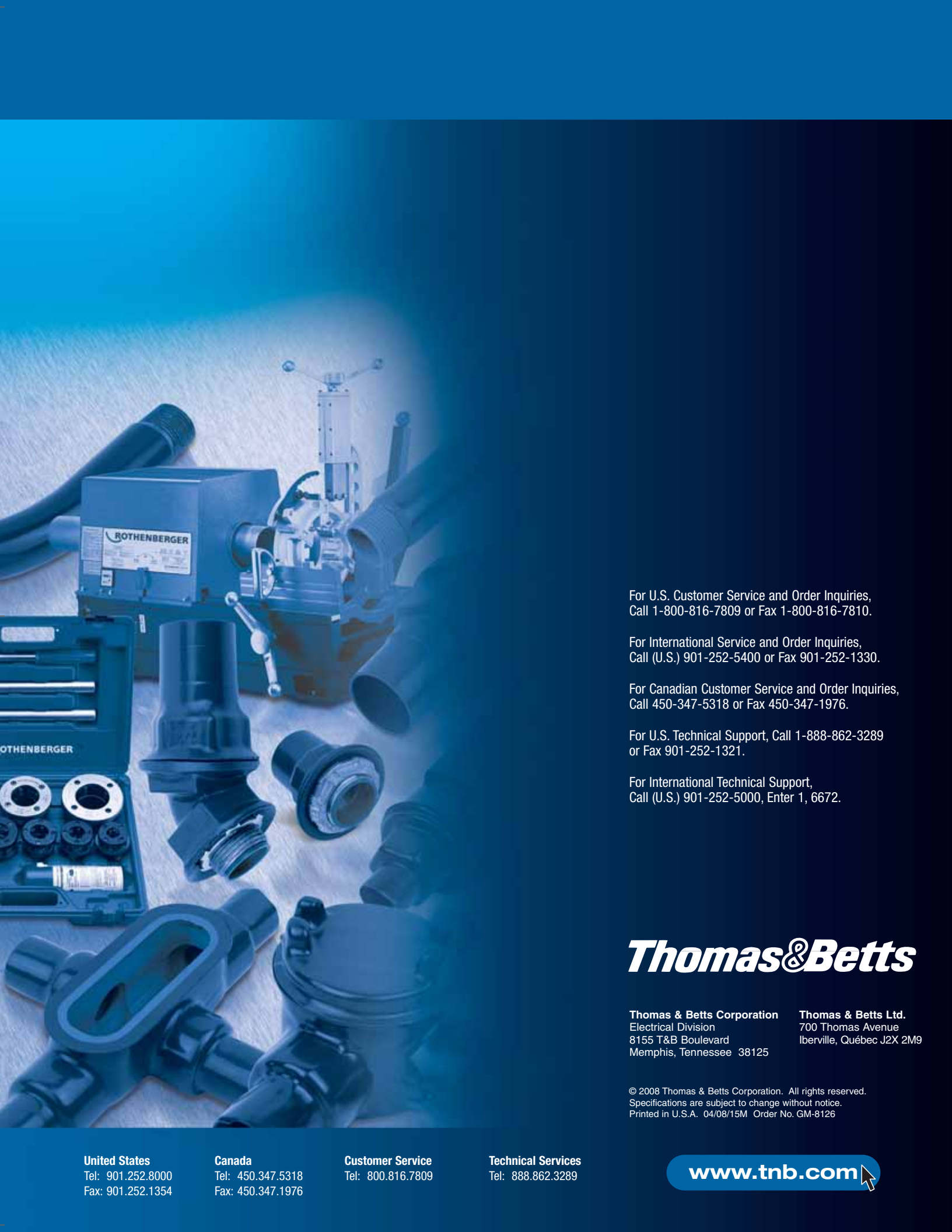
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