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Housing brochure, GM-8330.







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For more information, request the Thomas & Betts Electrical Solutions for Commercial and Institutional Facilities brochure, GM-8333.





For more information, request the Thomas & Betts

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Vertical Market Solutions

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At Thomas & Betts, we understand the challenges you face in the food and beverage processing industry today. We're focused on providing electrical solutions that address the critical issues in every area of your operation, so you can focus on plant sustainability, cost, quality, flexibility, food and personnel safety and regulatory challenges across the production cycle. Our family of electrical solutions matches specific application criteria from start to finish inside food processing areas, assuring the quality and reliability of your electrical system throughout your facility, from incoming raw materials through shipping of finished goods. And with the industry's most efficient distribution system, we're prepared to meet your ongoing MRO, OEM and construction needs down the road.







For more information, request the Thomas & Betts Electrical Solutions for Food and Beverage Processing Facilities brochure, GM-8306.







Metals and Mining Industry



Thomas & Betts' long-term presence in the utility and industrial markets continues to drive the development of innovative electrical products that meet the stringent application requirements of metals and mining operations and perform over extended lifecycles. Our solutions are tailored to help you optimize operating costs and improve return on capital investments while protecting the environment and ensuring safety to workers and production assets. Our global network and fast logistics are in place to support your MRO, OEM and construction activities around the world.





For more information, request the Thomas & Betts Electrical Solutions for the Metals and Mining Industry brochure, GM-8332.







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Vertical Market Solutions

Pulp and Paper Processing Industry



At Thomas & Betts, we understand the challenges you face in the pulp and paper processing industry today. We're focused on providing electrical solutions that address the critical issues in every area of your operation, so you can focus on plant sustainability, personnel safety, cost, quality, flexibility and regulatory challenges across the production cycle. Our family of electrical solutions matches specific application criteria from start to finish inside processing areas, assuring the quality and reliability of your electrical system throughout your facility, from incoming raw materials through shipping of finished goods. And with the industry's most efficient distribution system, we're prepared to meet your ongoing MRO, OEM and construction needs today.







Chemical Industry



Thomas & Betts designs, manufactures and supplies solutions for electrical systems. In order to be profitable running special batches or continuous commodity compounds, you need reliable, robust and cost-effective equipment. Your systems need to operate at peak performance. That's why we invest considerable resources towards R&D, training and channel management. Our products solve real-world problems. Thomas & Betts offers the industry's most advanced materials distribution system, and our commitment shows in our unmatched products, unequaled service and loyalty from end-users, OEMs and contractors.





For more information, request the Thomas & Betts Electrical Solutions for Pulp and Paper Processing Facilities brochure, GM-8335.







For more information, request the Thomas & Betts Electrical Solutions for the Chemical Industry brochure, GM-8336.







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Vertical Market Solutions

Oil and Gas Industry



Thomas & Betts designs, manufactures and supplies technically advanced products for electrical systems. Profitable drilling, extracting, processing, transporting and dispensing operations require reliable, robust and cost-effective equipment. That's why we invest extensive amounts on R&D, training and channel management. Our solutions solve real-world problems. Thomas & Betts offers the industry's most advanced materials distribution system, and our commitment shows in our unmatched products, unequaled service and loyalty from end-users and OEMs.







For more information, request the Thomas & Betts Electrical Solutions for the Oil and Gas Industry brochure, GM-8329.







Water/Wastewater Treatment



At Thomas & Betts, we're focused on providing products that address the issues in every area of your wastewater treatment facility, so you can focus on cost, quality, flexibility and regulatory challenges.

Our family of products matches specific application criteria from start to finish, assuring the quality and reliability of your electrical system throughout your facility, from power substation to administration buildings. With the industry's most efficient distribution system, we're also prepared to meet your ongoing MRO needs down the road.





For more information, request the Thomas & Betts Electrical Solutions for Wastewater Treatment Facilities brochure, GM-8291.







Thomas & Betts

Vertical Market Solutions

Civil Infrastructure



At Thomas & Betts, we understand the challenges faced in civil infrastructure. We're focused on providing electrical solutions that address the critical issues in every transportation sector, so you can focus on sustainability, cost, quality, flexibility, safety and regulatory compliance. Our family of quality electrical solutions matches specific application criteria, ensuring the continued reliability of infrastructure. And with the industry's most efficient distribution system, we're prepared to meet your ongoing operation and maintenance needs as well as serve new OEM and construction investments.







For more information, request the Thomas & Betts Electrical Solutions for Civil Infrastructure brochure, GM-8331.







Renewable Energy

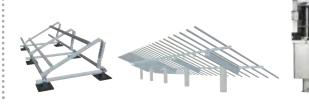


The demand for natural, clean and sustainable energy resources has brought solar and wind power generation into the spotlight. Investments and incentives by public and private entities are speeding green development and proliferation, yet the promise is not fully realized. Thomas & Betts is committed to seeing the industry succeed and thrive. We design integrated solutions with higher quality materials, fewer parts and ease of installation coupled with maintenance in mind in order to reduce product lifecycle costs. We provide the information and training necessary to correctly install and maintain critical structural systems for safe and reliable operation. With solutions from Thomas & Betts, you will meet your cost, quality, performance and regulatory challenges.





For more information, request the Thomas & Betts Electrical Solutions for Renewable Energy brochure, GM-8334.





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Vertical Market Solutions

Power Generation



The power generation industry, which has performed solidly for decades, is undergoing a transformation brought on by government regulations, consumer demand and evolving industry standards. New and emerging technological developments support cleaner and more efficient energy generation and higher availability for plants young and old. Thomas & Betts is leading the way with high-quality, innovative electrical systems and devices that perform optimally with minimal product lifecycle costs. Integrated engineering design solution sets simplify product selection. Fewer, snap-together parts ease installation and maintenance. Training and support services ensure ongoing safe and reliable operation, while warranties instill confidence that our products will perform as required and meet your performance and output demands.







Power Transmission and Distribution



From transmission lines and local distribution networks that crisscross the landscape to the customer premises, you'll find Thomas & Betts products to help you manage and control the constant flow of power. We understand that your customers depend on you to deliver a continuous, uninterrupted power flow, and that you rely on us to provide solutions that enable optimal reliability and efficiency. We also recognize your need to reduce the maintenance, repair and operations costs in your electric power transmission and distribution systems. Whether your systems are overhead or underground, we are your partner in power delivery. Our broad family of electrical solutions enables us to support your design, construction, operations and maintenance requirements economically, with fewer and shorter outages.





For more information, request the Thomas & Betts Electrical Solutions for Power Generation brochure, GM-8337.







For more information, request the Thomas & Betts Electrical Solutions for Power Transmission and Distribution brochure, GM-8338.







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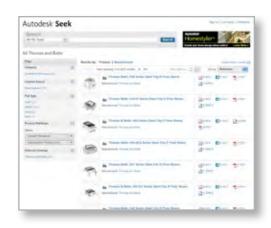
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Ocal*



In this section...



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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.

A Complete Corrosion Protection Solution

- UL® Listed with both the zinc coating and the PVC coating investigated and listed per UL6.
- Industry leading thread protection through a hot-dipped galvanizing process, and industry leading UL[®] Listed Type 4X PVC-coated conduit bodies.
- A full undisturbed zinc coating under the PVC coating, fulfilling the requirement of NEMA RN-1 regarding the restriction of harmed or eroded zinc coating over the conduit.
- Meets the requirements of NEMA RN-1 without exception.
- UL® Listed including UV resistance testing.
- "Double-Coat" coated fittings, enhancing corrosion protection by applying coating to the interior and exterior of the fittings before PVC coating.
- Custom colors.
- On-site installation training and certification, and extended warranty on installations conducted by certified installers.





Standards Met

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





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What is corrosion?

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

Examples of Corrosion









Corrosion Protection of Electrical Conduit Systems

Corrosion Protection Options

				304 STAINLESS	316 STAINLESS	POLY			
CHEMICAL	CHEMICAL	PVC	URETHANE	STEEL	STEEL	CARBONATE	CAST IRON	BRASS	ALUMINUM
CATEGORY	EXAMPLES				COMPATI	BILITY 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	N R
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 corrosion protection. 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 manufacturing process

Introduction

Ocal® PVC-coated conduit system fully complies 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.
- The steel shell is cut, threaded and prepared for the hot-dip galvanizing process.
- 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 manufactures 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.
- 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.
- Standard colors include gray, white and blue.

 Custom colors also available.

n 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.





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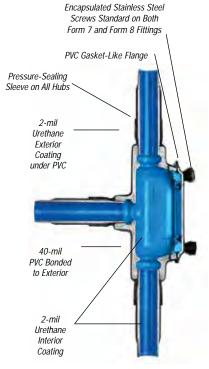




Complete corrosion protection

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 vaporand moisture-tight seal at every connection.



Ocal supplies encapsulated screws on both Form 7 and Form 8 fittings.





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 molded integral 0-ring seal for 2½" 4" Form 8 and all Form 7. 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 takes pride in providing PVC-coated conduit and fittings compliant with industry wide recognized standards.

It is this dedication to superior quality that makes Ocal "Better by Design."

Ocal-Blue® Double-Coat UL® Listed Type 4X Form 8 Conduit Bodies

UL® Listed Type 4X and NEMA 4X!

For the conduit system that has to stand up to a corrosive environment, the newly designed Ocal-Blue Type 4X Form 8 conduit body meets the challenge. The key is in the cover. Ocal takes a cast cover and then injection molds a PVC coating around it with an integral O-ring seal.

There's no need for tools or gaskets. To meet the harsh requirements of the UL® Type 4X listing, you need only hand-tighten the stainless steel encapsulated screws to 15 in.-lbs. of torque — as compared to the 35 in.-lbs. of torque required to tighten cover screws on competitors' conduit bodies.

Ideal for providing corrosion-resistant performance in washdown and other tough applications, Ocal-Blue Type 4X Form 8 PVC-coated cast-iron conduit bodies are now available in sizes up to 2". Look for the blue to know it's a high-quality Thomas & Betts product.



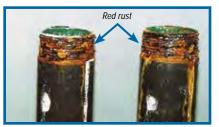
Evaluating corrosion protection of PVC-coated conduit

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. 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 Ocal® PVC-coated conduit system fully complies 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. The Ocal line of PVC-coated conduit systems, manufactured by Thomas & Betts, complies with UL6, NEMA RN-1 and ANSI C80.1.

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Adhesion test

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 $\frac{1}{2}$ " 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.





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



C	CAT. NO.	PIPE SIZE IN.	OUTSIDE DIAMETER	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS	NOMINAL WALL THICKNESS	NOMINAL INSIDE	CROSS SECTION AREA IN	LENGTH WITHOUT	MINIMUM WEIGHT PER FOOT
STEEL	ALUMINUM	METRIC SIZE DESIGNATOR*	STEEL ONLY In. MM	WITH PVC IN. MM	STEEL ONLY In. MM	WITH PVC IN. MM	DIAMETER In. MM	SQUARE IN. MM	COUPLINGS Ft. M	STEEL ONLY LBS. KG
COND1/2	COND1/2SA	1/2	.84	.92	.10	.14	.63	.30	9'11¼"	.79
		16	21.30	23.30	2.64	3.56	16.10	7.72	3.03	.36
COND3/4	COND3/4SA	3/4	1.05	1.13	.11	.15	.84	.53	9'11¼"	1.05
		21	26.70	28.70	2.71	3.73	21.20	13.53	3.03	.48
COND1	COND1SA	1	1.32	1.40	.13	.17	1.06	.86	9'11"	1.53
		27	33.40	35.40	3.20	4.21	27.00	21.94	3.02	.69
COND1-1/4	COND1-1/4SA	11/4	1.66	1.74	.13	.17	1.39	1.50	9'11"	2.01
		35	42.20	44.10	3.37	4.39	35.40	37.97	3.02	.91
COND1-1/2	COND1-1/2SA	1½	1.90	1.98	.14	.18	1.62	2.04	9'11"	2.40
		41	48.30	50.20	3.50	4.52	41.20	51.71	3.02	1.09
COND2	COND2SA	2	2.38	2.46	.15	.19	2.08	3.36	9'11"	3.32
		53	60.30	62.30	3.70	4.72	52.90	85.21	3.02	1.51
COND2-1/2	COND2-1/2SA	2 ½	2.88	2.96	.19	.23	2.49	4.80	9'10½"	5.27
		63	73.00	75.00	4.90	5.91	63.20	121.61	3.01	2.39
COND3	COND3SA	3	3.50	3.58	.21	.25	3.09	7.39	9'10½"	6.83
		78	88.90	90.90	5.20	6.22	78.50	187.80	3.01	3.10
COND3-1/2	COND3-1/2SA	3 ½	4.00	4.08	.22	.26	3.57	9.87	9'101/4"	8.31
		91	101.60	103.60	5.46	6.47	90.70	250.60	3.00	3.77
COND4	COND4SA	4	4.50	4.58	.23	.27	4.05	12.73	9'10¼"	9.73
		103	114.30	116.30	5.71	6.73	102.90	323.34	3.00	4.41
COND5	COND5SA	5	5.56	5.64	.25	.29	5.07	20.01	9'10"	13.14
		129	141.30	143.30	6.22	7.23	128.90	508.15	3.00	5.96
COND6	COND6SA	6	6.63	6.71	.27	.31	6.09	28.89	9'10"	17.46
	fact and nounds are indi	155	168.30	170.30	6.75	7.87	154.80	733.83	3.00	7.92

Note – Inches, feet 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	
(CONE	3/4	Blank = Steel		_ = space fo	r color identifier
			SA = Aluminum	G	= Gray	
				W	= White	
	Catalog No. E	xample:		_		
	COND3/4-G is	¾" steel		В	= Blue	
	conduit coated	in gray P	VC.	Custor	n colors also ava	ilable.





United States

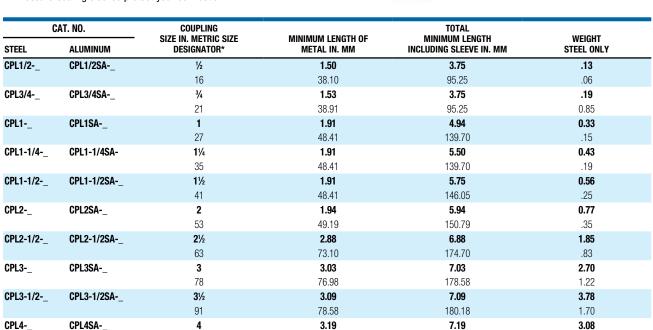
Tel: 901.252.8000 800.816.7809 Fax: 901.252.1354



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



80.97

3.37

85.69

3.44

87.29

182.57

7.37

187.29

7.44

188.89

1.39

5.00

2.25

8.00

3.60

Note - Inches and pounds are indicated in bold type. Metric measure is directly below bold type.

103

5

129

6

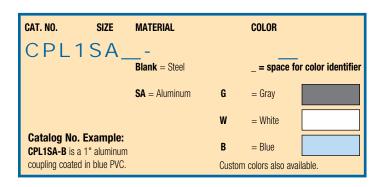
155

CPL5SA-_

CPL6SA-_

CPL5-_

CPL6-_



^{*} Metric size designator (ANSI C80.1-1994).

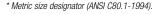
Join threaded conduit where you can't use a standard coupling.

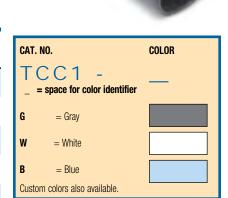
Ocal-Blue® Double-Coat Split Couplings

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

OAT NO	PIPE SIZE IN.	CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
CAT. NO.	METRIC SIZE DESIGNATOR*		WETRIC SIZE DESIGNATOR"
TCC1	1/2	TCC7	21/2
	16		63
TCC2	3/4	TCC8	3
	21		78
TCC3	1	TCC9	3½
	27		91
TCC4	11⁄4	TCC10	4
	35		103
TCC5	1½	TCC12	5
	41		129
TCC6	2	TCC14	6
	53		155





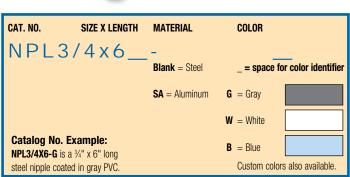
TCC Split Coupling

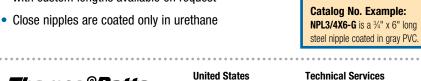
Note: The use of standard couplings is recommended whenever possible over the use of split couplings, because standard couplings provide better overall corrosion protection.

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





Tel: 901.252.8000

800.816.7809 Fax: 901.252.1354



Ocal-Blue® Nipples (continued)

PVC-Coated	l Conduit Nipples	— Steel
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PIPE											
SIZE In.					N	IPPLE LENGTH					
METRIC		2"	21/2"	3"	31/2"	4"	5"	6"	8"	10"	12"
SIZE*	CLOSE	50.8	63.5	76.2	88.9	101.6	127.0	152.4	203.2	254.0	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
3 /4 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
	CLNPL11/4	NPL11/4X2	NPL11/4X21/2	NPL11/4X3	NPL11/4X31/2	NPL11/4X4	NPL11/4X5	NPL11/4X6	NPL11/4X8	NPL11/4X10	NPL11/4X12
1 ½ 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
3 ½ 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	CLNPL6	_	_	_	_	_	NPL6X5	NPL6X6	NPL6X8	NPL6X10	NPL6X12

PVC-Coated Conduit Nipples — Aluminum

PIPE SIZE											
IN.						IPPLE LENGTH					
METRIC		2"	2 ½"	3"	31/2"	4"	5"	6"	8"	10"	12"
SIZE*	CLOSE	50.8	63.5	76.2	88.9	101.6	127.0	152.4	203.2	254.0	304.8
1/2	CLNPL1/2SA	NPL1/2X2SA	NPL1/2X21/2SA	NPL1/2X3SA	NPL1/2X31/2SA	NPL1/2X4SA	NPL1/2X5SA	NPL1/2X6SA	NPL1/2X8SA	NPL1/2X10SA	NPL1/2X12SA
16											
3/4	CLNPL3/4SA	NPL3/4X2SA	NPL3/4X21/2SA	NPL3/4X3SA	NPL3/4X31/2SA	NPL3/4X4SA	NPL3/4X5SA	NPL3/4X6SA	NPL3/4X8SA	NPL3/4X10SA	NPL3/4X12SA
21											
1	CLNPL1SA	NPL1X2SA	NPL1X21/2SA	NPL1X3SA	NPL1X31/2SA	NPL1X4SA	NPL1X5SA	NPL1X6SA	NPL1X8SA	NPL1X10SA	NPL1X12SA
27											
11/4	CLNPL11/4SA	NPL11/4X2SA	NPL11/4X21/2SA	NPL11/4X3SA	NPL11/4X31/2SA	NPL11/4X4SA	NPL11/4X5SA	NPL11/4X6SA	NPL11/4X8SA	NPL11/4X10SA	NPL11/4X12SA
35											
11/2	CLNPL11/2SA	NPL11/2X2SA	NPL11/2X21/2SA	NPL11/2X3SA	NPL11/2X31/2SA	NPL11/2X4SA	NPL11/2X5SA	NPL11/2X6SA	NPL11/2X8SA	NPL11/2X10SA	NPL11/2X12SA
41											
2	CLNPL2SA	_	NPL2X21/2SA	NPL2X3SA	NPL2X31/2SA	NPL2X4SA	NPL2X5SA	NPL2X6SA	NPL2X8SA	NPL2X10SA	NPL2X12SA
53											
2 ½	CLNPL21/2SA	. –	-	_	NPL21/2X31/2SA	NPL21/2X4SA	NPL21/2X5SA	NPL21/2X6SA	NPL21/2X8SA	NPL21/2X10SA	NPL21/2X12SA
63											
3	CLNPL3SA	_	_	_	NPL3X31/2SA	NPL3X4SA	NPL3X5SA	NPL3X6SA	NPL3X8SA	NPL3X10SA	NPL3X12SA
78											
31/2	CLNPL31/2SA	_	_	_	_	NPL31/2X4SA	NPL31/2X5SA	NPL31/2X6SA	NPL31/2X8SA	NPL31/2X10SA	NPL31/2X12SA
91											
4	CLNPL4SA	_	_	_	_	NPL4X4SA	NPL4X5SA	NPL4X6SA	NPL4X8SA	NPL4X10SA	NPL4X12SA
103											
5	CLNPL5SA	_	_	_	_	_	NPL5X5SA	NPL5X6SA	NPL5X8SA	NPL5X10SA	NPL5X12SA
129											
6	CLNPL6SA	_	_	_	_	_	NPL6X5SA	NPL6X6SA	NPL6X8SA	NPL6X10SA	NPL6X12SA
155											

¹⁵⁵ * Metric size designator (ANSI C80.1-1994).

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



CAT. NO.		PIPE SIZE IN.	RADIUS "R"	OFFSET "C"	STRAIGHT END "D"	UNBENT LENGTH	WEIGHT EACH STEEL ONLY
STEEL	ALUMINUM	METRIC SIZE DESIGNATOR*	IN. MM	IN. MM	IN. MM	IN. MM	LBS. KG
ELL1/2	ELL1/2SA	1/2	4.00	6.00	2.00	10.28	.67
		16	101.60	152.40	50.80	261.19	16.95
ELL3/4	ELL3/4SA	3/4	4.50	6.50	2.00	11.07	.95
		21	114.30	165.10	50.80	281.14	24.07
ELL1	ELL1SA	1	5.75	8.00	2.25	13.53	1.77
		27	146.05	203.20	57.15	343.71	44.97
ELL11/4	ELL11/4SA	11/4	7.25	9.50	2.25	15.89	2.55
		35	184.15	241.30	57.15	403.56	64.80
LL11/2	ELL11/2SA	1½	8.25	11.00	2.75	18.46	3.98
		41	209.55	279.40	69.85	468.86	101.13
ELL2	ELL2SA	2	9.50	13.00	3.50	21.92	6.33
		53	241.30	330.20	88.90	556.83	160.86
ELL21/2	ELL21/2SA	2 ½	10.50	14.00	3.50	23.49	9.65
		63	266.70	355.60	88.90	596.73	245.09
ELL3	ELL3SA	3	13.00	16.50	3.50	27.42	15.42
		78	330.20	419.10	88.90	696.48	391.77
ELL31/2	ELL31/2SA	3½	15.00	20.75	5.75	35.06	23.30
		91	381.00	527.05	146.05	890.57	591.84
ELL4	ELL4SA	4	16.00	21.75	5.75	36.63	29.68
		103	406.40	552.45	146.05	930.47	753.80
ELL5	ELL5SA	5	24.00	31.00	7.00	51.70	60.82
	_	129	609.60	787.40	177.80	1313.16	1544.89
ELL6	ELL6SA	6	30.00	39.00	9.00	65.12	85.69
	- -	155	762.00	990.60	228.60	1654.15	2176.51

D

C

R

D

PIPE SIZE ELL3/4 -	ANGLE	MATERIAL	COLOR
LLL3/4 -			·
	30 = 30°	Blank = Steel	G = Gray
	45 = 45°	SA = Aluminum	W = White
	60 = 60°		B = Blue
	Blank = 90°		Custom calara alaa susilahla
Catalog No. Example: ELL3/4SA-W is a ¾" trade si	ize 90° aluminu	ım elbow coated in white F	Custom colors also available.



United States
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354



Choose the size and angle to meet your exact requirements.

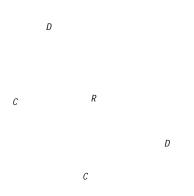
Ocal-Blue® Large-Radius Elbows

- 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



CAT. NO.		PIPE SIZE IN.	RADIUS "R"	OFFSET "C"	STRAIGHT END "D"	UNBENT Length
		METRIC SIZE DESIGNATOR*	IN. MM	FT./IN. MM	IN. MM	FT./IN. MM
LRELL_X12	LRELL_X12SA	1-21/2	12.00	1' 9"	9.00	3' 0"
		27-63	304.80	533.40	228.60	914.40
LRELL_X15	LRELL_X15SA	1–3	15.00	2' 0"	9.00	3' 6"
		27-78	381.00	609.60	228.60	1066.80
LRELL_X18	LRELL_X18SA	1–4	18.00	2' 4"	10.00	4' 0"
		27-103	457.20	711.20	254.00	1219.20
LRELL_X24	LRELL_X24SA	1–4	24.00	2' 11"	11.00	4' 11"
		27-103	609.60	889.00	279.40	1498.60
LRELL_X30	LRELL_X30SA	1–5	30.00	3' 5"	11.00	5' 9"
		27-129	762.00	1041.40	279.40	1752.60
LRELL_X36	LRELL_X36SA	1–6	36.00	3' 11"	11.00	6' 6"
		27-155	914.40	1193.80	279.40	1981.20
LRELL_X42	LRELL_X42SA	1–6	42.00	4' 6"	12.00	7' 6"
		27-155	1066.80	1371.60	304.80	2286.00
LRELL_X48	LRELL_X48SA	1–6	48.00	5' 0"	12.00	8' 6"
		27-155	1219.20	1524.00	304.80	2590.80
LRELL X60	LRELL X60SA-	21/2-6	60.00	6' 0"	12.00	9' 10"
		63–155	1524.00	1828.80	304.80	2997.20

^{*} Metric size designator (ANSI C80.1-1994).



ITEM	PIPE Size radius X 1 2	S ANGLE	MATERIAL	COLOR
	1 = 1"	30 = 30°	Blank = Steel	G = Gray
	2 = 2"	45 = 45°	SA = Aluminum	
	etc.	60 = 60°		W = White
Catalog No. Ex LRELL3X18-45-G elbow with a radius	is a 3" trade size steel	Blank = 90'		B = Blue
an angle of 45°, co				Custom colors also available.

PVC-Coated Conduit and Accessories

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







PVC-Coated Beam Clamps

	CAT. NO.		PIPE SIZE				
RIGHT ANGLE	PARALLEL	EDGE	IN.	METRIC SIZE DESIGNATOR*			
RA1/2	PAR1/2	EC1/2	1/2	16			
RA3/4	PAR3/4	EC3/4	3/4	21			
RA1	PAR1	EC1	1	27			
RA1-1/4	PAR1-1/4	EC1-1/4	11/4	35			
RA1-1/2	PAR1-1/2	EC1-1/2	11/2	41			
RA2	PAR2	EC2	2	53			
RA2-1/2	PAR2-1/2	_	21/2	63			
RA3	PAR3	_	3	78			
RA3-1/2	PAR3-1/2	_	31/2	91			
RA4	PAR4	_	4	103			

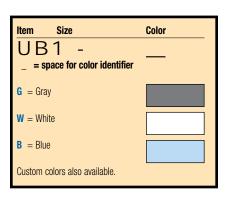
Cat. No.	Color
RA1 - _ = space for color identifier	_
G = Gray	
W = White	
B = Blue	
Custom colors also available.	



PVC-Coated U-Bolts

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

		PIPE SIZE	"A" DII	MENSION
CAT. NO.	IN.	METRIC SIZE DESIGNATOR*	IN.	ММ
UB1/2	1/2	16	1.38	34.93
UB3/4	3/4	21	1.56	39.69
UB1	1	27	1.84	46.83
UB1-1/4	111/4	35	2.19	55.56
UB1-1/2	1 ½	41	2.50	63.50
UB2	2	53	2.97	75.41
UB2-1/2	2 ½	63	3.47	88.11
UB3	3	78	4.09	103.98
UB3-1/2	31/2	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





PVC-Coated Conduit and Accessories

Support conduit on walls and structures.

Pipe Straps

Two-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



CAT NO. PIPE SIZE ONE-HOLE TWO-HOLE MALLEABLE STAMPED **METRIC SIZE** STEEL **DESIGNATOR*** 1HMS1/2-_ 2HS1/2-1/2 16 1HMS3/4-2HS3/4-3/4 21 1HMS1-_ 2HS1-_ 1 27 11/4 1HMS1-1/4-_ 2HS1-1/4-_ 35 11/2 1HMS1-1/2-_ 2HS1-1/2-_ 41 1HMS2-_ 2HS2-_ 2 53 1HMS2-1/2-_ 2HS2-1/2-_ 21/2 63 1HMS3-_ 2HS3-_ 3 78 1HMS3-1/2-_ 2HS3-1/2-_ 31/2 91 2HS4-_ 1HMS4-_ 4 103

One-Hole PVC-Coated Pipe Strap

PVC-Coated Pipe Straps

303 Stainless Steel Pipe Straps for PVC-Coated Conduit

(CAT NO.	_ PIPE SIZE	CONDUIT	PVC-COATED
ONE-HOLE 303 S.S. STRAP	TWO-HOLE 303 S.S. STRAP	IN. METRIC SIZE DESIGNATOR*	STRAP I.D. In. MM	CONDUIT O.D. IN. MM
TS102-SS	TS902-SS	1/2	.92	.92
		16	23.37	23.37
TS103-SS	TS903-SS	3/4	1.16	1.13
		21	29.46	28.70
TS104-SS	TS904-SS	1	1.51	1.40
		27	38.35	35.56
TS105-SS	TS905-SS	11/4	1.74	1.74
		35	44.20	44.20
TS106-SS	TS906-SS	1½	2.20	1.98
		41	55.88	50.29
HS107-SS	HS907-SS	2	2.88	2.46
		53	73.15	62.48
HS108-SS	HS908-SS	2 ½	3.50	2.96
		63	88.90	75.18
HS109-SS	HS909-SS	3	4.00	3.98
		78	101.60	101.09
HS110-SS	HS910-SS	3½	4.50	4.08
		91	114.30	103.63

* 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	1/2
	16
CB3/4	3/4
	21
CB1	1
	27
CB1-1/4	11/4
	35
CB1-1/2	1½
	41
CB2	2
	53
CB2-1/2	2 ½
	63
CB3	3
	78
CB3-1/2	31/2
	91
CB4	4
	103

Cat. No.	Color
CB1 -	
_ = space for color identifier	
G = Gray	
W = White	
B = Blue	
Custom colors also available.	



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.

- Type 4X Form 8 (½"-2") conduit bodies have injection-molded PVC-coated cover with integral 0-ring seal
- Flat surface molded on conduit body seals with molded flange on cover on 2½"-4" Form 8 and all Form 7
- 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





2 1/2" LB Form 8 conduit body and cover



21/2" LB Form 7 conduit body and cover







3/4" X Form 7 conduit body and cover



3/." ID Mark	9 conduit body	and cover
74 LD IVIAIN	7 CUHUUH DUU	anu cover

Cat. No.	Material	Co	Color				
LB27		_					
	Blank = Ferrous	_ = space for color identifier					
	SA = Aluminum	G = Gray					
Catalog No. Ex	cample:	$\mathbf{W} = \mathbf{W}$ hite					
LB27-W is a ¾' conduit body an		B = Blue					
coated in white		Custom colors	also available.				

Thomas@Betts

United States

Tel: 901.252.8000 800.816.7809 Fax: 901.252.1354



Ocal-Blue® Conduit Bodies Quick Reference

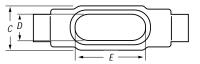
	SIZE (IN. AND METRIC SIZE DESIGNATOR*)										
SHAPE	STYLE	½" 16	¾" 21	1" 27	1¼" 35	1½" 41	2" 53	2½" 63	3" 78	3½" 91	4" 103
	Form 7	C17	C27	C37	C47	C57	C67	C77	C87		_
C	Form 8	C18-4X	C28-4X	C38-4X	C448-4X		C68-4X	C78	C88	_	_
P 000-18 2	Mark 9	C19	C29-	C39	C49	C59	C69	C789	C889	C989	C1089
	Form 7 Aluminum	C17SA	C27SA	C37SA	C47SA	C57SA	C67SA	C77SA	C87SA	_	_
	Form 7	LU17	LU27	LU37	 LU47	LU57	LU67				
— •	Form 8	LU18-4X	LU28-4X	LU38-4X	LU448-4X	LU58-4X- ₋	_ LU68-4X	_	_	_	_
	Form 7	LB17	LB27	LB37	LB47	LB57	LB67	LB777	LB87	LB97	LB107
LB	Form 8	LB18-4X	LB28-4X	LB38-4X	LB448-4X	LB58-4X-	_ LB68-4X	LB78	LB888	LB98	LB108
© _{LSU-IB} ©	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	LL18-4X	LL28-4X	LL38-4X	LL448-4X	LL58-4X	_ LL68-4X	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
LR	Form 8	LR18-4X-	LR28-4X-	LR38-4X-	LR448-4X-	LR58-4X-	LR68-4X	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	T18-4X	T28-4X-	T38-4X	T448-4X	T58-4X-	· -	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-				
TB	Form 8	_	_	_	TB448-4X	_	TB68-4X	_	_	_	_
	Mark 9	TB19	TB29-	TB39	TB49		500	_	_	_	_
	Form 7 Aluminum	TB17SA	TB27SA-	TB37SA	TB47SA	TB57SA	TB67SA-	_	_	_	_
	Form 7	X17-	X27-	X37-	X47-	X57-	X67-				
X	Form 8	X18-4X	X28-4X-	X38-4X	X448-4X	X58-4X	· -	_	_	_	_
	Mark 9	X19-	X29-	X39-		7,00 17		_	_	_	_
	Form 7 Aluminum	X17SA	X27SA	X37SA	X47SA	X57SA	X67SA	_	_	_	_
Ocal-Blue [®] Conduit Body (Covers										
		·		SIZE (IN. AND MET	RIC SIZE DE	SIGNATOR*)				
	STYLE	½" 16	³¼" 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-4X	280F-4X	380F-4X	480F-4X	580F-4X	680F-4X	880F	880F	980F	980F
	Mark 9	190	290	390	490	590	690	889	889	989	989
	Form 7 Aluminum * Metric size designat	170SA	270SA	370SA	470SA	570SA	670SA	870SA	870SA	970SA	970SA





C Form 7 Ferrous Conduit Bodies with Covers

	HUB		. VOL. CAP.				
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
C17	1/2"	5.45	1.40	1.45	.95	3.20	4.00
	16	138.43	35.56	36.83	24.13	81.28	65.55
C27	3/411	6.05	1.60	1.65	1.15	3.80	6.60
	21	153.67	40.64	41.91	29.21	96.52	108.15
C37	1"	6.75	1.90	1.80	1.35	4.55	10.60
	27	171.45	48.26	45.72	34.29	115.57	173.70
C47	11/4"	7.30	2.30	2.20	1.80	5.00	18.80
	35	185.42	58.42	55.88	45.72	127.00	308.08
C57	1½"	8.60	2.60	2.45	2.05	5.45	26.40
	41	218.44	66.04	62.23	52.07	138.43	432.62
C67	2"	9.50	3.20	3.05	2.45	6.40	51.00
	53	241.30	81.28	77.47	62.23	162.56	835.74
C77	2 ½"	12.10	3.65	4.25	3.60	8.40	102.00
	63	307.34	92.71	107.95	91.44	213.36	1671.48
C87	3"	12.10	4.40	4.25	3.60	8.40	132.00
	78	307.34	111.76	107.95	91.44	213.36	2163.09



C Mark 9 Aluminum Conduit Bodies with Covers

	HUB		- VOL. CAP.				
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
C19	1/2"	5.00	1.38	1.38	1.19	3.31	_
	16	127.00	35.05	35.05	30.23	84.07	_
C29	3/411	5.69	1.63	1.56	1.38	3.94	_
	21	144.53	41.40	39.62	35.05	100.08	_
C39	1"	6.59	1.88	1.75	1.50	4.56	_
	27	167.39	47.75	44.45	38.10	115.82	_
C49	11/4"	7.50	2.50	2.19	1.94	5.31	_
	35	190.50	63.50	55.63	49.28	134.87	_
C59	11/2"	8.25	2.75	2.50	2.25	6.00	_
	41	209.55	69.85	63.50	57.15	152.40	_
C69	2"	10.50	3.44	3.19	2.88	8.06	_
	53	266.70	87.38	81.03	73.15	204.72	_
C789	2 ½"	15.63	4.44	5.00	4.25	10.88	_
	63	397.00	112.78	127.00	107.95	276.35	_
C889	3"	15.63	4.81	5.00	4.25	10.88	_
	78	397.00	122.17	127.00	107.95	276.35	_
C989	31/2"	18.75	5.69	6.25	5.44	13.44	_
	91	476.25	144.53	158.75	138.18	341.38	_
C1089	4"	18.75	5.94	6.25	5.44	13.44	<u> </u>
	103	476.25	150.88	158.75	138.18	341.38	_

C Form 8 Ferrous Conduit Bodies with Covers

	HUB		DIMENSIONS (IN. AND MM)**							
CAT. NO.	SIZE*	A	В	C	D	E	· VOL. CAP. (CU.IN./CU.CM)			
C18-4X	1/2"	5.53	1.44	1.38	1.00	3.31	4.90			
	16	140.49	36.51	34.93	25.40	84.14	80.30			
C28-4X	3/411	6.28	1.53	1.19	1.19	3.94	8.00			
	21	159.54	38.89	30.16	30.16	100.01	131.10			
C38-4X	1"	7.31	1.94	1.75	1.38	4.56	13.00			
	27	185.74	49.21	44.45	34.93	115.89	213.03			
C448-4X	11/4"	8.50	2.38	2.19	1.75	5.31	23.50			
	35	215.90	60.33	55.56	44.45	134.94	385.10			
C58-4X	1½"	10.38	2.78	2.75	2.13	6.50	45.00			
	41	263.53	70.64	69.85	53.98	165.10	737.42			
C68-4X	2"	12.25	3.56	3.75	3.00	8.56	88.00			
	53	311.15	90.49	95.25	76.20	217.49	1442.06			
C78	21/2"	15.63	4.44	5.00	4.25	10.88	110.00			
	63	396.88	112.71	127.00	107.95	276.23	1802.58			
C88	3"	15.63	4.81	5.00	4.25	10.88	110.00			
	78	396.88	122.24	127.00	107.95	276.23	1802.58			

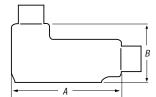
^{*} Metric size designator (ANSI C80.1-1994).

C Form 7 Aluminum Conduit Bodies with Covers

	HUB	DIMENSIONS (IN. AND MM)**					. VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
C17SA	1/2"	5.45	1.40	1.45	.95	3.20	4.00
	16	138.43	35.56	36.83	24.13	81.28	65.55
C27SA	3/411	6.05	1.60	1.65	1.15	3.80	6.60
	21	153.67	40.64	41.91	29.21	96.52	108.15
C37SA	1"	6.75	1.90	1.80	1.35	4.55	10.60
	27	171.45	48.26	45.72	34.29	115.57	173.70
C47SA	11/4"	7.30	2.30	2.20	1.80	5.00	18.80
	35	185.42	58.42	55.88	45.72	127.00	308.08
C57SA	11/2"	8.60	2.60	2.45	2.05	5.45	26.40
	41	218.44	66.04	62.23	52.07	138.43	432.62
C67SA	2"	9.50	3.20	3.05	2.45	6.40	51.00
	53	241.30	81.28	77.47	62.23	162.56	835.74
C77SA	2 ½"	12.10	3.65	4.25	3.60	8.40	102.00
	63	307.34	92.71	107.95	91.44	213.36	1671.48
C87SA	3"	12.10	4.40	4.25	3.60	8.40	132.00
	78	307.34	111.76	107.95	91.44	213.36	2163.09

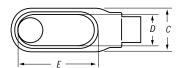
^{**} Dimensions shown are for uncoated conduit bodies.





LB Form 7 Ferrous Conduit Bodies with Covers

			DIMENSIO	NS (IN. AI	ND MM)**		
CAT. NO.	HUB . Size*	Α	В	C	D	E	. VOL. CAP. (CU.IN./CU.CM)
LB17	1/2"	4.60	2.20	1.35	.95	3.20	4.00
	16	116.84	55.88	34.29	24.13	81.28	65.55
LB27	3/4"	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	11/4"	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	11/2"	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	2 ½"	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	31/2"	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 Mark 9 Aluminum Conduit Bodies with Covers

			o i i di di i i				
	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		. VOL. CAP.
CAT. NO.	SIZE*	Α	В	C	D	E	(CU.IN./CU.CM)
LB19	1/2"	4.59	2.13	1.38	1.19	3.31	_
	16	116.68	53.98	34.93	30.16	84.14	_
LB29	3/411	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	11/4"	7.03	3.47	2.19	1.94	5.31	_
	35	178.59	88.11	55.56	49.21	134.94	_
LB59	11/2"	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	2 ½"	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	31/2"	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 8 Ferrous Conduit Bodies with Covers

	HUB		DIMENSI	ONS (IN. A	ND MM)**		. VOL. CAP.
CAT. NO.	SIZE*	Α	В	C	D	E	(CU.IN./CU.CM)
LB18-4X	1/2"	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
LB28-4X	3/411	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
LB38-4X	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
LB448-4X	11/4"	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
LB58-4X	11/2"	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
LB68-4X	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	21/2"	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	31/2"	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

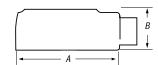
^{*} Metric size designator (ANSI C80.1-1994).

LB Form 7 Aluminum Conduit Bodies with Covers

	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		- VOL. CAP.
CAT. NO.	SIZE*	Α	В	C	D	E	(CU.IN./CU.CM)
LB17SA	1/2"	4.60	2.20	1.35	.95	3.20	4.00
	16	116.84	55.88	34.29	24.13	81.28	65.55
LB27SA	3/411	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	11/4"	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	21/2"	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	31/2"	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

^{**} Dimensions shown are for uncoated conduit bodies.





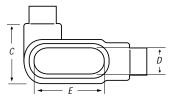
LL Form 7 Ferrous Conduit Bodies with Covers

HIIR		DIMENSIO	NS (IN. AI	ND MM)**		VOL. CAP.
SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
1/2"	4.60	1.40	1.45	.95	3.20	4.00
16	116.84	35.56	36.83	24.13	81.28	65.55
3/411	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
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
11/4"	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
11/2"	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
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
2 ½"	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
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
31/2"	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
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
	½" 16 ¾" 21 1" 27 1½" 35 1½" 41 2" 53 2½" 63 3" 78 3½" 91 4"	HUB SIZE*	KISE* A B ½" 4.60 1.40 16 116.84 35.56 ¾" 5.25 1.60 21 133.35 40.64 1" 6.00 1.90 27 152.40 48.26 1¼" 6.45 2.30 35 163.83 58.42 1½" 7.90 2.60 41 200.66 66.04 2" 8.30 3.20 53 210.82 81.28 2½" 10.55 3.65 63 267.97 92.71 3" 10.55 4.40 78 267.97 111.76 3½" 12.85 4.90 91 326.39 124.46 4" 12.85 5.40	KIUE* A B C ½" 4.60 1.40 1.45 16 116.84 35.56 36.83 ¾" 5.25 1.60 1.65 21 133.35 40.64 41.91 1" 6.00 1.90 2.60 27 152.40 48.26 66.04 1½" 6.45 2.30 3.05 35 163.83 58.42 77.47 1½" 7.90 2.60 3.80 41 200.66 66.04 96.52 2" 8.30 3.20 4.25 53 210.82 81.28 107.95 2½" 10.55 3.65 5.80 63 267.97 92.71 147.32 3" 10.55 4.40 5.80 78 267.97 111.76 147.32 3½" 12.85 4.90 7.03 91 326.39 124.46 178.56 <t< th=""><th>SIZE* A B C D ½" 4.60 1.40 1.45 .95 16 116.84 35.56 36.83 24.13 ¾" 5.25 1.60 1.65 1.15 21 133.35 40.64 41.91 29.21 1" 6.00 1.90 2.60 1.35 27 152.40 48.26 66.04 34.29 1¼" 6.45 2.30 3.05 1.80 35 163.83 58.42 77.47 45.72 41 200.66 66.04 96.52 52.07 2" 8.30 3.20 4.25 2.45 53 210.82 81.28 107.95 62.23 2½" 10.55 3.65 5.80 3.60 63 267.97 92.71 147.32 91.44 3" 10.55 4.40 5.80 3.60 78 267.97 111.76 147.32</th><th>NIZE* A B C D E ½" 4.60 1.40 1.45 .95 3.20 16 116.84 35.56 36.83 24.13 81.28 ¾" 5.25 1.60 1.65 1.15 3.80 21 133.35 40.64 41.91 29.21 96.52 1" 6.00 1.90 2.60 1.35 4.55 27 152.40 48.26 66.04 34.29 115.57 1½" 6.45 2.30 3.05 1.80 5.00 35 163.83 58.42 77.47 45.72 127.00 1½" 7.90 2.60 3.80 2.05 5.45 41 200.66 66.04 96.52 52.07 138.43 2" 8.30 3.20 4.25 2.45 6.40 53 210.82 81.28 107.95 62.23 162.56 2½" 10.55 <td< th=""></td<></th></t<>	SIZE* A B C D ½" 4.60 1.40 1.45 .95 16 116.84 35.56 36.83 24.13 ¾" 5.25 1.60 1.65 1.15 21 133.35 40.64 41.91 29.21 1" 6.00 1.90 2.60 1.35 27 152.40 48.26 66.04 34.29 1¼" 6.45 2.30 3.05 1.80 35 163.83 58.42 77.47 45.72 41 200.66 66.04 96.52 52.07 2" 8.30 3.20 4.25 2.45 53 210.82 81.28 107.95 62.23 2½" 10.55 3.65 5.80 3.60 63 267.97 92.71 147.32 91.44 3" 10.55 4.40 5.80 3.60 78 267.97 111.76 147.32	NIZE* A B C D E ½" 4.60 1.40 1.45 .95 3.20 16 116.84 35.56 36.83 24.13 81.28 ¾" 5.25 1.60 1.65 1.15 3.80 21 133.35 40.64 41.91 29.21 96.52 1" 6.00 1.90 2.60 1.35 4.55 27 152.40 48.26 66.04 34.29 115.57 1½" 6.45 2.30 3.05 1.80 5.00 35 163.83 58.42 77.47 45.72 127.00 1½" 7.90 2.60 3.80 2.05 5.45 41 200.66 66.04 96.52 52.07 138.43 2" 8.30 3.20 4.25 2.45 6.40 53 210.82 81.28 107.95 62.23 162.56 2½" 10.55 <td< th=""></td<>

LL Form 8 Ferrous Conduit Bodies with Covers

	HUB .		. VOL. CAP.				
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
LL18-4X	1/2"	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
LL28-4X	3/411	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
LL38-4X	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
LL448-4X	11/4"	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
LL58-4X	11/2"	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
LL68-4X	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	21/211	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).



LL Mark 9 Aluminum Conduit Bodies with Covers

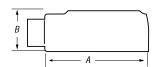
	HUB		DIMENSIONS (IN. AND MM)**						
CAT. NO.	SIZE*	Α	В	С	D	E	- VOL. CAP. (CU.IN./CU.CM)		
LL19	1/2"	4.59	1.38	2.13	1.19	3.31	_		
	16	116.68	34.93	53.98	30.16	84.14	_		
LL29	3/4"	5.25	1.63	2.38	1.38	3.94	_		
	21	133.35	41.28	60.33	34.93	100.01	_		
LL39	1"	6.09	1.88	2.63	1.50	4.56	_		
	27	154.78	47.63	66.68	38.10	115.89	_		
LL49	11/4"	7.03	2.50	3.09	1.94	5.31	_		
	35	178.59	63.50	78.58	49.21	134.94	_		
LL59	11/2"	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	31/2"	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

	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
LL17SA	1/211	4.60	1.40	1.45	.95	3.20	4.00
	16	116.84	35.56	36.83	24.13	81.28	65.55
LL27SA	3/411	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	11/4"	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	11/2"	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	21/2"	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	31/2"	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

^{**} Dimensions shown are for uncoated conduit bodies.





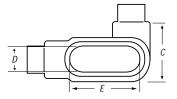
LR Form 7 Ferrous Conduit Bodies with Covers

			DIMENSIO	NS (IN. AI	ND MM)**		
CAT. NO.	HUB - Size*	A	В	C	D	E	- VOL. CAP. (CU.IN./CU.CM)
LR17	1/211	4.60	1.40	1.45	.95	3.20	4.00
	16	116.84	35.56	36.83	24.13	81.28	65.55
LR27	3/4"	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
LR37	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
LR47	11/4"	6.45	2.30	3.05	1.80	5.00	18.80
	35	163.83	58.42	77.47	45.72	127.00	308.08
LR57	11/2"	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
LR67	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
LR777	2 ½"	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
LR87	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
LR97	31/2"	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
LR107	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

LR Form 8 Ferrous Conduit Bodies with Covers

	HUB .		DIMENSIO	ONS (IN. A	ND MM)**		- VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
LR18-4X	1/2"	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
LR28-4X	3/411	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
LR38-4X	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
LR448-4X	11/4"	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
LR58-4X	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
LR68-4X	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
LR78	2 ½"	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
LR888	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).



LR Mark 9 Aluminum Conduit Bodies with Covers

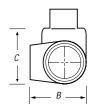
	HUB		DIMENSIO	NS (IN. AI	ND MM)**		VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
LR19	1/2"	4.59	1.38	2.13	1.19	3.31	_
	16	116.68	34.93	53.98	30.16	84.14	_
LR29	3/411	5.25	1.63	2.38	1.38	3.94	_
	21	133.35	41.28	60.33	34.93	100.01	_
LR39	1"	6.09	1.88	2.63	1.50	4.56	_
	27	154.78	47.63	66.68	38.10	115.89	_
LR49	11/4"	7.03	2.50	3.09	1.94	5.31	_
	35	178.59	63.50	78.58	49.21	134.94	_
LR59	11/2"	7.75	2.75	3.44	2.25	6.00	_
	41	196.85	69.85	87.31	57.15	152.40	_
LR69	2"	10.03	3.44	4.13	2.88	8.06	_
	53	254.79	87.31	104.78	73.03	204.79	_
LR789	21/2"	13.94	4.44	6.69	4.25	10.88	_
	63	354.01	112.71	169.86	107.95	276.23	_
LR889	3"	13.94	4.81	6.69	4.25	10.88	_
	78	354.08	122.24	169.93	107.95	276.35	_
LR989	31/2"	16.88	5.69	8.13	5.44	13.44	_
	91	428.63	144.46	206.38	138.11	341.31	_
LR1089	4"	16.88	5.94	8.13	5.44	13.44	_
	103	428 63	150.81	206.38	138 11	341 31	_

LR Form 7 Aluminum Conduit Bodies with Covers

			DIMENSIO	NS (IN. AI	ND MM)**		
CAT. NO.	HUB . Size*	Α	В	C	D	E	. VOL. CAP. (CU.IN./CU.CM)
LR17SA	1/2"	4.60	1.40	1.45	.95	3.20	4.00
	16	116.84	35.56	36.83	24.13	81.28	65.55
LR27SA	3/411	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
LR37SA	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
LR47SA	11/4"	6.45	2.30	3.05	1.80	5.00	18.80
	35	163.83	58.42	77.47	45.72	127.00	308.08
LR57SA	11/2"	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
LR67SA	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
LR777SA	21/211	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
LR87SA	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
LR97SA	31/2"	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
LR107SA	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

^{**} Dimensions shown are for uncoated conduit bodies.





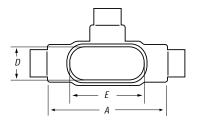
T Form 7 Ferrous Conduit Bodies with Covers

	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		- VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
T17	1/2"	5.60	1.80	2.35	.95	3.20	6.00
	16	142.24	45.72	59.69	24.13	81.28	98.32
T27	3/4"	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	11/4"	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	11/2"	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	2 ½"	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	31/2"	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 Form 8 Ferrous Conduit Bodies with Covers

	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		. VOL. CAP.
CAT. NO.	SIZE*	Α	В	C	D	E	(CU.IN./CU.CM)
T18-4X	1/2"	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
T28-4X	3/4"	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
T38-4X	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
T448-4X	11/4"	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
T58-4X	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
T68-4X	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	2 ½"	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).



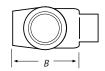
T Mark 9 Aluminum Conduit Bodies with Covers

	HUB		DIMENSIO	NS (IN. AI	ND MM)**		- VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
T19	1/2"	5.00	1.38	2.13	1.19	3.31	_
	16	127.00	34.93	53.98	30.16	84.14	_
T29	3/411	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	11/4"	7.50	2.50	3.09	1.94	5.31	_
	35	190.50	63.50	78.58	49.21	134.94	_
T59	11/2"	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	21/2"	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	31/2"	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	<u> </u>
	103	476 25	150.81	206.38	138 11	341 31	_

T Form 7 Aluminum Conduit Bodies with Covers

	HUB .		DIMENSIO	NS (IN. AI	ND MM)**		. VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
T17SA	1/211	5.60	1.80	2.35	.95	3.20	6.00
	16	142.24	45.72	59.69	24.13	81.28	98.32
T27SA	3/411	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	11/4"	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	11/2"	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	2 ½"	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	31/2"	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

^{**} Dimensions shown are for uncoated conduit bodies.



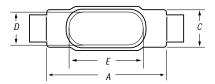
TB Form 7 Ferrous Conduit Bodies with Covers

	HUB .		DIMENSIONS (IN. AND MM)**							
CAT. NO.	SIZE*	Α	В	C	D	E	- VOL. CAP. (CU.IN./CU.CM)			
TB17	1/2"	5.60	2.06	1.63	.95	3.20	6.00			
	16	142.24	52.32	41.40	24.13	81.28	98.32			
TB27	3/4"	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	11/4"	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	11/2"	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

	HUB		DIMENSIO	ONS (IN. A	ND MM)**		- VOL. CAP.
CAT. NO.	SIZE*	Α	В	C	D	E	(CU.IN./CU.CM)
TB18-4X	1/2"	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
TB28-4X	3/411	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
TB38-4X	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
TB448-4X	11/4"	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
TB58-4X	11/2"	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
TB68-4X	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).



TB Mark 9 Aluminum Conduit Bodies with Covers

	HUB -		DIMENSIONS (IN. AND MM)**							
CAT. NO.	SIZE*	Α	В	С	D	E	· VOL. CAP. (CU.IN./CU.CM)			
TB19	1/2"	5.00	2.13	1.38	1.19	3.31	_			
	16	127.00	53.98	34.93	30.16	84.14	_			
TB29	3/411	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	11/4"	7.50	3.47	2.19	1.94	5.31	_			
	35	190.50	88.11	55.56	49.21	134.94	_			

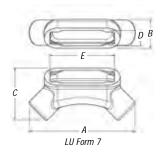
TB Form 7 Aluminum Conduit Bodies with Covers

	HUB -		DIMENSIONS (IN. AND MM)**					
CAT. NO.	SIZE*	Α	В	C	D	E	· VOL. CAP. (CU.IN./CU.CM)	
TB17SA	1/211	5.60	2.06	1.63	.95	3.20	6.00	
	16	142.24	52.32	41.40	24.13	81.28	98.32	
TB27SA	3/411	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	11/4"	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	11/2"	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	



	HUB		DIMENSIONS (IN.)								
CAT. NO.	SIZE	Α	В	С	D	E	CU. IN.				
LU17	1/2"	5.54	1.45	2.72	.95	3.20	4.8				
LU27	3/4"	6.22	1.70	3.07	1.15	3.80	7.6				
LU37	1"	7.34	1.97	3.52	1.35	4.55	13.4				
LU47	11/4"	8.40	2.47	4.21	1.80	5.00	23.0				
LU57	11/2"	8.95	2.72	4.44	2.05	5.45	28.3				
LU67	2"	10.61	3.43	5.43	2.45	6.40	56.0				

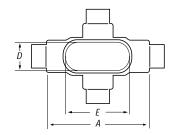
^{*} Metric size designator (ANSI C80.1-1994).

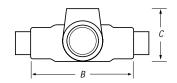


^{**} Dimensions shown are for uncoated conduit bodies.

^{**} Dimensions shown are for uncoated conduit bodies.







X Form 7 Ferrous Conduit Bodies with Covers

	HUB		DIMENSIONS (IN. AND MM)**						
CAT. NO.	SIZE*	Α	В	С	D	E	. VOL. CAP. (CU.IN./CU.CM)		
X17	1/2"	5.60	1.80	3.05	.95	3.20	6.00		
	16	142.24	45.72	77.47	24.13	81.28	98.32		
X27	3/411	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	11/4"	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	11/2"	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 Mark 9 Aluminum Conduit Bodies with Covers

	HUB .	DIMENSIONS (IN. AND MM)**					VOL. CAP.
CAT. NO.		Α	В	С	D	E	(CU.IN./CU.CM)
X19	1/2"	5.69	2.91	1.75	1.00	3.31	_
	16	144.46	73.82	44.45	25.40	84.14	_
X29	3/411	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 8 Ferrous Conduit Bodies with Covers

HUR	DIMENSIONS (IN. AND MM)**					- VOL. CAP.
SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
1/2"	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
3/411	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
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
11/4"	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
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
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
	16 34" 21 1" 27 114" 35 112" 41 2"	Koral	HOB ½" 5.69 1.75 16 144.46 44.45 ¾" 6.28 2.00 21 159.54 50.80 1" 7.31 2.25 27 185.74 57.15 1¼" 8.50 2.63 35 215.90 66.68 1½" 10.38 2.47 41 263.53 62.71 2" 12.25 3.56	NISE* A B C	RISIZE* A B C D ½" 5.69 1.75 2.91 1.00 16 144.46 44.45 73.82 25.40 ¾" 6.28 2.00 3.06 1.38 21 159.54 50.80 77.79 34.93 1" 7.31 2.25 3.50 1.38 27 185.74 57.15 88.90 34.93 1¼" 8.50 2.63 4.13 1.75 35 215.90 66.68 104.78 44.45 1½" 10.38 2.47 5.25 2.13 41 263.53 62.71 133.35 53.98 2" 12.25 3.56 6.25 3.00	Note Bit Size* A B C D E ½" 5.69 1.75 2.91 1.00 3.31 16 144.46 44.45 73.82 25.40 84.14 ¾" 6.28 2.00 3.06 1.38 3.94 21 159.54 50.80 77.79 34.93 100.01 1" 7.31 2.25 3.50 1.38 4.56 27 185.74 57.15 88.90 34.93 115.89 1¼" 8.50 2.63 4.13 1.75 5.31 35 215.90 66.68 104.78 44.45 134.94 1½" 10.38 2.47 5.25 2.13 6.50 41 263.53 62.71 133.35 53.98 165.10 2" 12.25 3.56 6.25 3.00 8.56

^{*} Metric size designator (ANSI C80.1-1994). ** Dimensions shown are for uncoated conduit bodies.

X Form 7 Aluminum Conduit Bodies with Covers

	HUB .	DIMENSIONS (IN. AND MM)**					VOL. CAP.
CAT. NO.	SIZE*	Α	В	С	D	E	(CU.IN./CU.CM)
X17SA	1/2"	5.60	1.80	3.05	.95	3.20	6.00
	16	142.24	45.72	77.47	24.13	81.28	98.32
X27SA	3/411	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	11/4"	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	11/2"	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

Fax: 901.252.1354



Make 90° bends while allowing straight pulls! Ocal-Blue® Double-Coat Pulling Elbows



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
LBD1100 -	.—
G = Gray	
W = White	
B = Blue	
b = Diue	
Custom colors also available.	

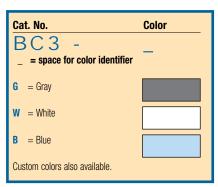
ORDINARY LBD SERIES CAT. NO.	HAZARDOUS LBH SERIES** CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
LBD1100	LBH10	½ 16
LBD2200	LBH20	3/4 21
LBD3300	LBH30	1 27
LBD4400	LBH40	1¼ 35
LBD5500	LBH50	1½ 41
LBD6600	LBH60	2 53
LBD7700	LBH70	2½ 63
LBD8800	LBH80	3 78
LBD9900	LBH90	3½ 91
LBD10900	LBH100	4 103
LBD012	-	5 129
LBD014	_	6 15

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

** Ratings prior to PVC coating

BC3-G Mogul BLB4-G Mogul





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

M	OGUL FITTING WITH	REPLACEMENT	PIPE SIZE		
BC CAT. NO.	BLB CAT. NO.	BUB Cat. No.	BT Cat. No.	COVER BG CAT. NO.	IN. Metric Size Designator*
BC3	BLB3	BUB3	ВТ3	BG48	1 27
BC4	BLB4	BUB4	BT4	BG48	1¼ 35
BC5	BLB5	BUB5	BT5	BG68	1 ½ 41
BC6	BLB6	BUB6	BT6	BG68	2 53
BC7	BLB7	BUB7	BT7	BG88	2½ 63
BC8	BLB8	BUB8	BT8	BG88	3 78
BC9	BLB9	BUB9	ВТ9	BG98	3½ 91
BC10	BLB10	BUB10	BT10	BG98	4 103

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

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

OAT NO	PIPE SIZE IN. METRIC SIZE
CAT. NO.	DESIGNATOR*
LBY15	1/2
	16
LBY25	3/4
	21
LBY35	1
	27
LBY45	1¼
	35
LBY55	1½
	41





LBY25-G

Cat. No.	Color
LBY15 - _ = space for color identifier	_
G = Gray	
W = White	
B = Blue	
Custom colors also available.	

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	EL19	EL196	EL1	½ 16
EL295	EL29	EL296	EL2	¾ 21
EL395	EL39	EL396	EL3	1 27
_	EL49	EL496	EL4	1¼ 35
_	EL59	_	EL5	1 ½ 41
_	EL69	_	EL6	2 53
_	EL79	_	EL7	2½ 63
_	_	_	EL8	3 78
_	_	-	EL9	3½ 91
_	_	-	EL10	4 103

^{*} Metric size designator (ANSI C80.1-1994).





Cat. No.	Color
EL195 - _ = space for color identifier	_
G = Gray	
W = White	
B = Blue	
Custom colors also available.	



Fax: 901.252.1354

Technical Services
Tel: 888.862.3289

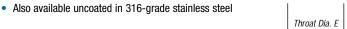


^{*} Metric size designator (ANSI C80.1-1994,

Unique sealing ring and groove design for optimum performance!

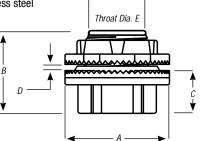
Ocal-Blue® Double-Coat and Stainless Steel Hubs

- 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 enable 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





H050GRSST Stainless Steel Grounded Hub





HUB1-1/4-G

PVC-Coated Zinc Hub



STG6-G

PVC-Coated Zinc Grounded Hub

Knoc	kout	Hubs

				PIPE SIZE DIMENSIONS (UNCOATED HUB)												
	PVC-COATED ZINC HUB	PVC-COATED Aluminum Hub	PVC-COATED ZINC GROUNDED HUB	316 STAINLESS Grounded Hub	METR	N. IC SIZE NATOR*	(OVE	A RALL A.)		В		c	(MAX.	D Panel (Ness)	(THI	E ROAT IA.)
	CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
Ī	HUB1/2	HUB1/2SA	STG1	H050GRSST	1/2	16	1.44	36.58	1.56	39.62	.88	22.35	.19	4.83	.59	14.99
	HUB3/4	HUB3/4SA	STG2	H075GRSST	3/4	21	1.44	36.58	1.59	40.39	.91	23.11	.19	4.83	.78	19.81
	HUB1	HUB1SA	STG3	H100GRSST	1	27	2.00	50.80	1.81	45.97	1.06	26.92	.25	6.35	1.00	25.40
	HUB1-1/4	HUB1-1/4SA	STG4	H125GRSST	11/4	35	2.38	60.45	1.88	47.75	1.06	26.92	.25	6.35	1.31	33.27
	HUB1-1/2	HUB1-1/2SA	STG5	H150GRSST	11/2	41	2.75	69.85	1.88	47.75	1.06	26.92	.25	6.35	1.53	38.86
	HUB2	HUB2SA	STG6	H200GRSST	2	53	3.25	82.55	1.94	49.28	1.16	29.46	.25	6.35	1.97	50.04
	HUB2-1/2	HUB2-1/2SA	STG7	_	2 ½	63	3.75	95.25	2.56	65.02	1.56	39.62	.25	6.35	2.41	61.21
	HUB3	HUB3SA	STG8	_	3	78	4.38	111.25	2.44	61.98	1.59	40.39	.25	6.35	2.97	75.44
	HUB3-1/2	HUB3-1/2SA	STG9	_	31/2	91	5.00	127.00	2.72	69.09	1.63	41.40	.25	6.35	3.41	86.61
	HUB4	HUB4SA	STG10	_	4	103	5.50	139.70	2.72	69.09	1.63	41.40	.25	6.35	3.88	98.55
	HUB5	HUB5SA	STG11	_	5	129	6.88	174.75	3.03	76.96	1.94	49.28	.25	6.35	4.94	125.48
	HUB6-	HUB6SA-	STG12-	_	6	155	7.69	195.33	3.16	80.26	2.00	50.80	.31	7.87	6.00	152.40

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 above



%-16 x %"



50

		316	P	PIPE SIZE	DIAN	METER	HE	GHT		MAX. CO	OND. SIZE
ZINC CAT. NO.	ALUMINUM CAT. NO.	STAINLESS CAT. NO.	IN.	METRIC SIZE DESIGNATOR*	IN.	мм	IN.	мм	GROUND SCREW	AWG	SQ. MM
L050GR-TB	L050GRA-TB	L050GRSST	1/2	16	1.50	38.10	.41	10.41	#10-32 x 1/4"	#10	6
L075GR-TB	L075GRA-TB	L075GRSST	3/4	21	1.69	42.93	.41	10.41	#10-32 x 1/4"	#10	6
L100GR-TB	L100GRA-TB	L100GRSST	1	27	2.00	50.80	.41	10.41	#10-32 x 1/4"	#10	6
L125GR-TB	L125GRA-TB	L125GRSST	11/4	35	2.38	60.45	.47	11.94	1/4-20 x 1/4"	#10	6
L150GR-TB	L150GRA-TB	L150GRSST	11/2	41	2.75	69.85	.47	11.94	¹⁄4-20 x ⁵⁄16"	#8	10
L200GR-TB	L200GRA-TB	L200GRSST	2	53	3.25	82.55	.47	11.94	1/4-20 x 5/16"	#8	10
L250GR-TB	L250GRA-TB	_	2 ½	63	3.75	95.25	.69	17.53	¹⁄4-20 x ⁵⁄16"	#6	16
L300GR-TB	L300GRA-TB	_	3	78	4.38	111.25	.72	18.29	¹⁄4-20 x ⁵⁄16"	#6	16
L350GR-TB	L350GRA-TB	_	31/2	91	5.00	127.00	.72	18.29	1/4-20 x 5/16"	#6	16
L400GR-TB	L400GRA-TB	_	4	103	5.50	139.70	.72	18.29	1/4-20 x 5/16"	#4	25
L500GR-TB	L500GRA-TB	_	5	129	6.63	168.40	.72	18.29	3/s-16 x 3/s"	#2	35

7.69

195.33

.72

18.29

155

L600GRA-TB

L600GR-TB

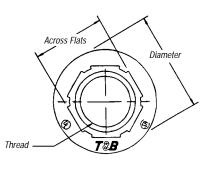
^{*} Metric size designator (ANSI C80.1-1994).

In bulkhead and through-bulkhead styles!

Ocal® PVC-Coated Bulkhead Fittings





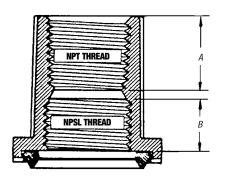


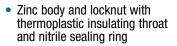
Bulkhead Fitting

Through-Bulkhead Fitting

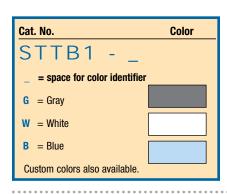
Nipple Nut Not Included

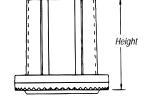
STTB2-G Bulkhead Fitting





- Nominal .040" (40 mil) PVC coating bonded to exterior — in blue, white, gray or custom colors
- Pressure-sealing sleeves protect your connections





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	1/2	1/2–14	1.41	1.44	1.00	.75	.50
		16	_	35.72	36.51	25.40	19.05	12.70
STTB2	STTTB2	3/4	³ ⁄4 –14	1.47	1.69	1.25	.78	.53
		21	_	37.31	42.86	31.75	19.84	13.49
STTB3	STTTB3	1	1-11½	1.69	2.00	1.53	.91	.59
		27	_	42.86	50.80	38.89	23.02	15.08
STTB4	STTTB4	11/4	11/4-111/2	1.78	2.38	1.84	.91	.66
		35	_	45.24	60.33	46.83	23.02	16.67
STTB5	STTTB5	1½	1½-11½	1.81	2.75	1.13	.91	.66
		41	_	46.04	69.85	28.58	23.02	16.67
STTB6	STTTB6	2	2–11 ½	1.84	3.25	2.63	.94	.66
		53	_	46.83	82.55	66.68	23.81	16.67
STTB7	_	2 ½	21/2-8	2.28	3.75	3.13	1.22	.88
		63	_	57.94	95.25	79.38	30.96	22.23
STTB8	_	3	3–8	2.56	4.38	3.78	1.19	.91
		78	_	65.09	111.13	96.04	30.16	23.02
STTB9	_	31/2	3½-8	2.56	5.00	4.28	1.38	.88
		91	_	65.09	127.00	108.74	34.93	22.23
STTB10	_	4	4–8	2.56	5.50	4.84	1.38	.88
		103	_	65.09	139.70	123.03	34.93	22.23
STTB11	_	5	5-8	2.72	6.63	5.91	1.47	.88
		129	_	69.06	168.28	150.02	37.31	22.23
STTB12	_	6	6–8	3.00	7.69	7.03	1.50	.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.





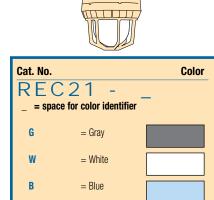
Easily join two different sizes of conduit!

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

	PIPE SIZE IN. METRIC SIZE DESIGNATOR*				
CAT. NO.	A	В			
REC21	3/4	1/2			
REC31	21 1	16 ½			
REC32-	27 1	16 ¾			
_	27	21			
REC42	1¼ 35	¾ 21			
REC43	11/4	1			
EC52	35 1 ½	27 ¾			
	41	21			
EC53	1½ 41	1 27			
REC54	1½ 41	11/4			
EC602	2 2	35 ¾			
	53	21			

	PIPE S METRIC SIZE	
CAT. NO.	Α	В
REC603	2	1
	53	27
REC604	2	11/4
	53	35
REC605	2	1½
	53	41
REC75	2 ½	1½
	63	41
REC86	3	2
	78	53
REC97	3 ½	2 ½
	91	63
REC108	4	3
	103	78
REC01210	5	4
	129	103



11/4" Conduit

Short 11/4" Nipple

11/4"-3/4" Series REC

Reducing Coupling

3/4" Conduit

Custom colors also available.

RE32-G

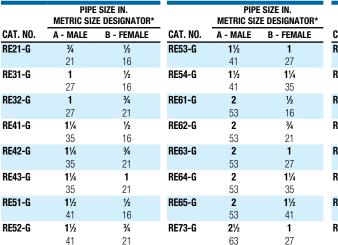
11/4" T

RECApplication

REC21-G

Lighting Fixture

Reduce a conduit hub to a smaller size. **Ocal-Blue® Urethane-Coated Reducing Bushings**



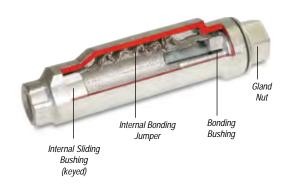
	•				
	PIPE SIZE IN. METRIC SIZE DESIGNATOR*				
CAT. NO.	A - MALE	B - FEMALE			
RE74-G	21/2	11/4			
	63	35			
RE75-G	21/2	11/2			
	63	41			
RE76-G	2 ½	2			
	63	53			
RE83-G	3	1			
	78	27			
RE84-G	3	11/4			
	78	35			
RE85-G	3	11/2			
	78	41			
RE86-G	3	2			
	78	53			
RE87-G	3	2 ½			
	78	63			

		SIZE IN. E DESIGNATOR*
CAT. NO.	A - MALE	B - FEMALE
RE96-G	3½	2
	91	53
RE97-G	31/2	2 ½
	91	63
RE98-G	31/2	3
	91	78
RE106-G	4	2
	103	53
RE107-G	4	2 ½
	103	63
RE108-G	4	3
	103	78
* Metric size	designator (AN	ISI C80.1-1994).

PVC-Coated Conduit Bodies and Fittings



8" Movement Coupling shown uncoated



Coupling shown uncoated

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 vou'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.



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Innovative Design Makes Installations Easier.

- ‡@aV[eSeeW_T1k`VWMeeSdkfa[efS^
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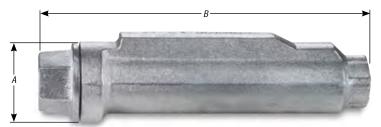


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PVC-Coated Conduit Bodies and Fittings





Coupling shown uncoated

PVC-Coated XJG Rigid	Conduit Ex	pansion Couplin	ıas
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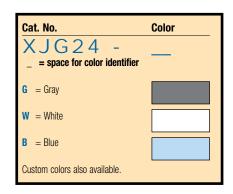
CAT NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	MOVEMENT IN. MM	A Diameter In. MM	B LENGTH IN. MM	C HEIGHT In. MM
XJG24	3/4	4.00	2.43	10.00	2.75
	21	101.60	61.72	254.00	69.85
XJG28	3/4	8.00	2.43	14.00	2.75
	21	203.20	61.72	355.60	69.85
XJG34	1	4.00	2.67	10.00	2.99
	27	101.60	67.82	254.00	75.95
XJG38	1	8.00	2.67	14.00	2.99
	27	203.20	67.82	355.60	75.95
XJG44	11/4	4.00	3.36	10.56	3.68
	35	101.60	85.34	268.22	93.47
XJG48	11/4	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	11/2	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	21/2	4.00	4.96	12.12	5.25
	63	101.60	125.98	307.85	133.35
XJG78	21/2	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	31/2	4.00	6.37	12.87	6.75
	91	101.60	161.80	326.90	171.45
XJG98	31/2	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.



.....Standard Materials/Finish.....

- ‡ ;`fWd S^4a`V[`Y <g_bWd F[``W UabbWdTd\$[V



The ultimate liquidtight solution for corrosive environments!

Ocal® PVC-Coated Liquidtight Conduit Connectors



- 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

Cat. No.	Material	Color
ST3/4	_	
	Blank = Steel/Iron	G = Gray
	SA = Aluminum	W = White
G in Cat. No. designa Custom colors also a		B = Blue

Non-Grounding Connectors

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% 12
ST1/2	ST1/2SA	ST1/245	ST1/290	ST1/290SA	½ 16
ST3/4	ST3/4SA	ST3/445	ST3/490	ST3/490SA	¾ 21
ST1	ST1SA	ST145	ST190	ST190SA	1 27
ST1-1/4	ST1-1/4SA	ST1-1/445	ST1-1/490	ST1-1/490SA	1¼ 35
ST1-1/2	ST1-1/2SA	ST1-1/245	ST1-1/290	ST1-1/290SA	1 ½ 41
ST2	ST2SA	ST245	ST290	ST290SA	2 53
ST2-1/2	ST2-1/2SA	ST2-1/245	ST2-1/290	ST2-1/290SA	2½ 63
ST3	ST3SA	ST345	ST390	ST390SA	3 78
ST4	ST4SA	ST445	ST490	ST490SA	4 103

^{*} Metric size designator (ANSI C80.1-1994).

Connectors with Grounding Lug

PVC-COATED STEEL STRAIGHT CAT. NO.	PVC-COATED Steel 45° Cat. No.	PVC-COATED STEEL 90° CAT. NO.	PIPE SIZE In. Metric Size Designator*
ST3/8G	ST3/845G	ST3/890G	¾ 12
ST1/2G	ST1/245G	ST1/290G	½ 16
ST3/4G	ST3/445G	ST3/490G	¾ 21
ST1G	ST145G	ST190G	1 27
ST1-1/4G	ST1-1/445G	ST1-1/490G	1½ 35
ST1-1/2G	ST1-1/245G	ST1-1/290G	1½ 41
ST2G	ST245G	ST290G	2 53
ST2-1/2G	ST2-1/245G	ST2-1/290G	2½ 63
ST3G	ST345G	ST390G	3 78
ST4G	ST445G	ST490G	4 103

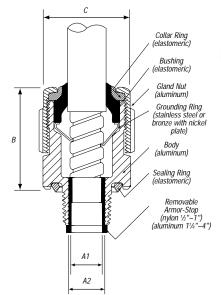
^{*} Metric size designator (ANSI C80.1-1994).

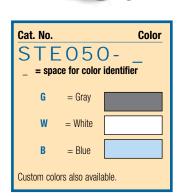


The ideal fitting for jacketed metal-clad cable in ordinary locations!

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, elastomeric collar ring/bushing and 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









PVC-Coated STE Series Fittings for Ordinary Locations

				RANGE OV	ER JACKET	RANGE OV	ER ARMOR	A1: THROAT	A2: THROAT		
CAT. NO.	HUB SIZE IN. METRIC SIZE DESIGNATOR**	STRIP LENGTH IN. MM	GLAND TORQUE LBIN. NM	MIN. IN. MM	MAX. IN. MM	MIN. IN. MM	MAX. IN. MM	DIA. MIN. W/END STOP IN. MM	DIA. MIN. W/O END STOP IN. MM	B Overall Height In. MM	C Max. Width In. 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*	11/4	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*	1½	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	21/2	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	3½	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.



PVC-Coated Boxes and Covers

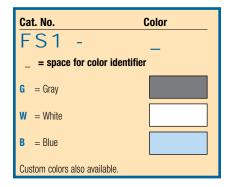
Variety of styles offers versatility!

Ocal-Blue® Double-Coat FS and FD Series Device Boxes



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





DEAD END Cat. No.	FEED-THRU CAT. NO.	HUB RIGHT CAT. NO.	HUB LEFT Cat. No.	STYLE	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
Single-Gan	g				
FS1	FSC1	FSR1	FSL1	Shallow	1/2
					16
FS2	FSC2	FSR2	FSL2	Shallow	3/4
					21
FS3	FSC3	_	_	Shallow	1
					27
FD1	FDC1	FDR1	FDL1	Deep	1/2
					16
FD2	FDC2	FDR2	FDL2	Deep	3/4
					21
FD3	FDC3	_	_	Deep	1
					27
_	FSCC2	_	_	Shallow	3/4
					21
_	FDCC2	_	_	Deep	3/4
					21
FSS2	_	_	_	Shallow	3/4
					21
FDD2	_	_	_	Deep	3/4
					21
Double-Gar	1g				
FS22	_	_	_	Shallow	3/4
					21
FD22	_	_	_	Deep	3/4
					21
FSS222	_	_	_	Shallow	3/4
					21
FDS222	_	_	_	Deep	3/4
_					21
_	FSC222-	_	_	Shallow	3/4
	_				21
_	FDC222-	_	_	Deep	3/4
					21
* Metric size o	lesianator (ANSI (280 1-1994)			

^{*} Metric size designator (ANSI C80.1-1994).

Fax: 901.252.1354



PVC-Coated Boxes and Covers

Designed for use with Ocal® FS and FD Series Boxes.

Ocal-Blue® Double-Coat FS and FD Series Covers







DS21G-G



DS32G-G



DS100G-G



DS185-G

Aluminum





FSKWGF1-G



WLGFFS-G



WLRD1-G

CAT. NO.	DESCRIPTION	MATERIAL
Single-Gang		
DS23	Duplex Receptacle Cover	Steel
DS21G	Round Flush Receptacle Cover	Iron
DS32G	Toggle Switch Cover	Iron
DS100G	Blank Cover	Aluminum
Single-Gang —	- NEMA 3R Raintight when used with appropriate	Ocal boxes
WLRD1	Duplex Receptacle Cover – Box Mount – Horizontal	Aluminum
FSK1VDR	Duplex Receptacle Cover – Box Mount – Vertical	Aluminum
WLGFFS	GFCI Receptacle Cover – Box Mount – Horizontal	Aluminum
FSKWGF1	GFCI Receptacle Cover – Box Mount – Vertical	Aluminum
DS185	Front Lever Switch Cover – Box Mount – NEMA 4	Aluminum
Double-Gang		
S1002G	Blank Cover	Iron
S322G	2-Toggle Switch Cover	Iron
S232	2-Duplex Receptacle Cover	Stamped Steel
S232GFI	2-GFCI Receptacle Cover	Steel
Double-Gang -	— NFMA 3R Raintight when used with appropriate	Ocal hoxes

DS1282- 2-Plunger-Style Switch Cover

PVC-coated covers in other styles and materials are available upon request.



S1002G-G



S322G-G



S232-G



DS1282-G



Contact Technical Services for more information.

S232GFI-G

Cat. No.	Color
DS23	_
_ = space for color identifier	
G = Gray	
W = White	
B = Blue	
Custom colors also available.	

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









PVC-Coated STEX Series Fittings for Hazardous Locations

CAT. NO.	HUB SIZE IN. METRIC SIZE DESIGNATOR**	STRIP LENGTH IN. MM	GLAND TORQUE LBIN. NM		ER JACKET MAX. IN. MM		/ER ARMOR	A1: THROAT DIA. MIN. W/END STOP IN. MM	A2: THROAT DIA. MIN. W/O END STOP IN. MM	B OVERALL HEIGHT IN. MM	C MAX. WIDTH IN. MM
STX050-462- *	1/2	1.25	300	.53	.65	.42	.57	N/A***	.40	2.50	1.63
317030-402	16	31.75	33.90	13.46	16.51	10.67	14.48	N/A***	10.16	63.50	41.40
CTVOEO ACA +											
STX050-464*	1/2	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*	3/4	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*	11/4	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
· · · · · <u>-</u>	53	44.45	180.78	36.58	50.04	32.51	45.97	31.75	39.62	130.05	91.95
STEX250- †	21/2	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
OTEXOGO _	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
31EX330	91	63.50	180.78	67.82	83.06	64.77	80.01	64.26	72.64	187.45	147.07
CTEVADO +											
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
STX400-484 [†]	4	_	1600	3.81	4.03	3.68	3.87	_	_	_	_
	103	_	180.78	96.77	102.36	93.47	98.30	_	_	_	_
STX400-485†	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.

**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

Technical Services Tel: 888.862.3289



^{***}This fitting does not have a removable armor stop.

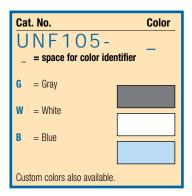
Ratings prior to PVC coating.

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-ignitionproof 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













UNY Male 5"-6" (shown uncoated)



UNF205-G

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



UNF Female 5"-6" (shown uncoated)

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	11/4	3.06	2.75
	35	77.72	69.85
UNY505	1½	3.63	3.06
	41	92.20	77.72
UNY605	2	3.50	3.81
	53	88.90	96.77
UNY705	2 ½	4.81	4.31
	63	122.17	109.47
UNY805	3	5.34	5.06
	78	135.64	128.52
UNY905	3½	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	1/4	2.13	1.81
	21	54.10	45.97
UNF305	1	2.16	2.00
	27	54.86	50.80
UNF405	11/4	2.25	2.75
	35	57.15	69.85
UNF505	1½	2.75	3.06
	41	69.85	77.72
UNF605	2	2.50	3.81
	53	63.50	96.77
UNF705	2 ½	3.50	4.31
	63	88.90	109.47
UNF805	3	4.00	5.06
	78	101.60	128.52
UNF905	3½	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

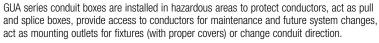
[†] Ratings prior to PVC coating.

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

Ocal-Blue® Double-Coat GUA Series Conduit Boxes



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



- 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 five full threads, integral bushing and pressure-sealing sleeves
- · All units furnished with internal grounding screw and ship complete with aluminum cover with 0-ring gasket (covers also sold separately for replacement purposes)
- Explosion-proof, dust-ignition-proof, raintight and suitable for use in the following environments:†

- NEMA 3, 4, 7 CD, 9 EFG













GUA	GUAC	CAT. NO.	GUAX	GUAB	- ALUMINUM COVER ONLY	IRON COVER ONLY	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	COVER OPENING IN. MM
GUA14-	GUAC14-	GUAT14-	GUAX14-	GUAB14-	GUA04-	GUA04WOD-	1/2	2.00
_	_	_	_	_	_	_	16	50.80
GUA24-	GUAC24-	GUAT24-	GUAX24-	GUAB24-	GUA04-	GUA04WOD-	3/4	2.00
_	_	_	_	_	_	_	21	50.80
GUA16	GUAC16	GUAT16	GUAX16	GUAB16	GUA06	GUA06WOD	1/2	3.00
							16	76.20
GUA26	GUAC26	GUAT26	GUAX26	GUAB26	GUA06	GUA06WOD	3/4	3.00
							21	76.20
GUA36	GUAC36	GUAT36	GUAX36	GUAB36	GUA06	GUA06WOD	1	3.00
							27	76.20
_	_	GUAT37	GUAX37	_	GUA07	GUA07WOD	1	3.63
							27	92.20
GUA47	GUAC47	GUAT47	GUAX47	GUAB47	GUA07	GUA07WOD	11/4	3.63
							35	92.20
_	GUAC49	GUAT49	GUAX49	_	GUA09	GUA09WOD	11/4	5.00
							35	127.00
GUA59	GUAC59	GUAT59	GUAX59	GUAB59	GUA09	GUA09WOD	1½	5.00
							41	127.00
_	GUAC69	GUAT69	GUAX69	GUAB69	GUA09	GUA09WOD	2	5.00
							53	127.00

†Ratings prior to PVC coating.







GUAD	GUAL	CAT. NO.	GUAN	GUAW	- ALUMINUM COVER ONLY	IRON COVER ONLY	PIPE SIZE IN. METRIC SIZE DESIGNATOR*	COVER OPENING IN. MM
GUAD14-	GUAL14-	GUAM14-	GUAN14-	GUAW14-	GUA04-	GUA04WOD-	1/2	2.00
UUAD 14	UUAL14	UUANIT4	UUAN14	UUAW 14	UUAU4	UUAU4WUD	16	50.80
GUAD24-	GUAL24-	GUAM24-	GUAN24-	GUAW24-	GUA04-	GUA04WOD-	3/4	2.00
UOADET _	donee4 _	donine _	donite4 _	GOATIL	4070 4 _	dono-iiob _	21	50.80
GUAD16-	GUAL16-	GUAM16-	GUAN16-	GUAW16-	GUA06-	GUA06WOD-	1/2	3.00
						_	16	76.20
GUAD26-	GUAL26-	GUAM26-	GUAN26-	GUAW26-	GUA06-	GUA06WOD-	3/4	3.00
		_	_			_	21	76.20
GUAD36	GUAL36	GUAM36	GUAN36	_	GUA06	GUA06WOD	1	3.00
_	_	_	_		_	_	27	76.20
_	GUAL47	GUAM47	GUAN47	_	GUA07	GUA07WOD	11/4	3.63
							35	92.20
GUAD49	GUAL49	_	_	_	GUA09	GUA09WOD	11/4	5.00
							35	127.00
_	GUAL59	_	GUAN59	_	GUA09	GUA09WOD	11/2	5.00
							41	127.00
_	GUAL69	GUAM69	GUAN69	_	GUA09	GUA09WOD	2	5.00
							53	127.00



PVC-Coated Hazardous Location Fittings

Junction boxes for branch conduits in hazardous locations.

Ocal-Blue® Double-Coat External Aluminum Hubs with

Covers and Installed Green Ground Screw

- · 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, GClass III, Division 1 & 2

 - NEMA 3, 4, 7 CD, 9 EFG (NEMA 4 rated when ordered with 0-ring installed)











GAC







		CAT.	NO.			· PIPE SIZE	
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	IN. METRIC SIZE DESIGNATOR*	COVER OPENING In. MM
GAC-1 †	GAE-1 †	GAL-1 †	GALB-1 †	GAT-1 †	GAS-123 •	1/2	3.69
						16	93.73
GAC-2 †	GAE-2 †	GAL-2 †	GALB-2 †	GAT-2 †	GAS-123 •	3/4	3.69
						21	93.73
GAC-3 [†] •	GAE-3 [†] •	GAL-3 [†] •	GALB-3 †	GAT-3 †	GAS-123 •	1	3.69
						27	93.73
GAC-4 †•	_	GAL-4 [†] •	GALB-4 †	GAT-4 †	GAS-4 •	1¼	3.91
						35	99.31
GAC-5 [†] •	_	GAL-5 [†] •	GALB-5 †•	GAT-5 †	GAS-56 •	1½	5.19
						41	131.83
GAC-6 [†] •	_	GAL-6 [†] •	GALB-6 †•	GAT-6 †	GAS-56 •	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.

^{**} Ratings prior to PVC coating.







GAJU (shown uncoated)



GAS





Cat. No.

Color

GAC-1
= space for color identifier

G = Gray

W = White

B = Blue

Custom colors also available.

GAJ (shown uncoated)



		CAT. NO).			PIPE SIZE	
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*	COVER OPENING In. MM
GAX-1 †	GAFX-1 †	GAJU-1 •	GALB-1 †	GAD-123 •	GAJ-123•	1/2	3.69
						16	93.73
GAX-2 †	GAFX-2 †	GAJU-2 •	GALB-2 †	GAD-123 •	GAJ-123•	3/4	3.69
						21	93.73
GAX-3 [†] •	GAFX-3 †	GAJU-3	GALB-3 †	GAD-123 •	GAJ-123•	1	3.69
						27	93.73
GAX-4 †•	_	_	GALB-4 †	_	GAJ-4•	11/4	3.91
						35	99.31
GAX-5 [†] ●	_	GAJU-5 •	GALB-5 †•	_	GAJ-56•	1½	5.19
						41	131.83
GAX-6 [†] •	_	GAJU-6	GALB-6 †•	_	GAJ-56•	2	5.19
						53	131.83

^{*} Metric size designator (ANSI C80.1-1994).

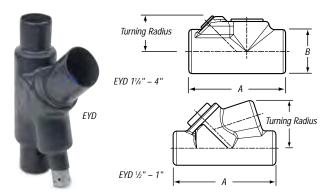
[•] Made-to-order item. Consult factory for lead time and minimum quantities.

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

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

Ocal-Blue® Double-Coat Sealing Fittings

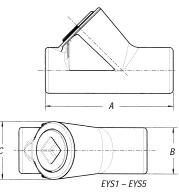
- Prevents pre-compression or "pressure piling" in conduit systems
- Gray iron alloy body construction coated with nominal .002"
 (2 mil) blue urethane on both interior and exterior
- Nominal .040" (40 mil) PVC coating bonded to exterior available in gray, white, blue or custom colors
- Explosion-proof, 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	MALE & FEMALE	PIPE SIZE IN. METRIC SIZE	DIMEN II M	TURNING RADIUS IN.	
CAT. NO.	CAT. NO.	DESIGNATOR*	Α	В	MM
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	11/4	5.00	2.25	1.80
		35	127.00	57.15	45.72
EYD5	EYD56	1½	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 ½	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	31/2	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	MALE & FEMALE	PIPE SIZE IN. METRIC SIZE	D	TURNING RADIUS IN.		
CAT. NO.	CAT. NO.	DESIGNATOR*	Α	В	С	MM
Vertical Or	nly					
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
	Horizontal					
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	11/4	5.00	2.25	_	1.81
		35	127.00	57.15	_	45.97
EYS5	EYS56	1½	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 ½	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	3½	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).



Tel: 888.862.3289



^{**} 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.



EZS



MALE & FEMALE CAT. NO.	IN. Metric Size Designator*
EZS16	½ 16
EZS26	¾ 21
EZS36	1 27
EZS46	1¼ 35
EZS56	1 ½ 41
EZS66	2 53
EZS76	2½ 63
EZS86	3 78
	EZS16 EZS36 EZS46 EZS56 EZS56 EZS56 EZS56 EZS66 EZS76

^{*} Metric size designator (ANSI C80.1-1994).



EZD Series Sealing Fittings

CAT. NO.	IN. Metric Size Designator*
EZD111	1/2
	16
EZD211	3/4
	21
EZD311	1
	27
EZD411	1¼
	35
EZD511	1½
	41
EZD611	2
	53
*****	. (1101.000.1.100.1)





EZD with Inspection Cover off

Cat. No.	Color				
EYS1-	_				
_ = space for color identifier					
G = Gray					
W = White					
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
SEAL-A3	Chico® A Sealing Compound, 1 lb. net wt./23 cu.in. vol.
FIBER-X6	Chico® X Fiber Filler, 8 oz.
SEALKIT-A4	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.

Rugged steel channels protected by corrosion-resistant PVC!

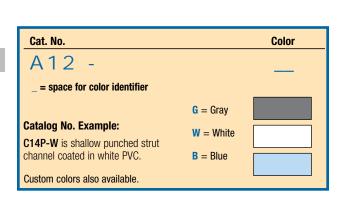
Ocal® PVC-Coated Steel Strut

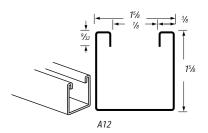


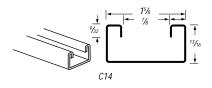




- ‡ Channels cold formed from hot-rolled pickled and oiled strip steel
- ‡ Nominal .015" (15 mil) PVC coating
- PVC coating available in your choice of blue, white or gray standard colors
- ‡ Custom colors also available on request
- ‡ Sold in 10-ft. (3.048m) lengths with standard length tolerance of $\pm \frac{1}{8}$ " (3.18mm)
- ‡ Choose between standard 15%" (41.28mm) and shallow $^{13}\!\%$ 6" (20.64mm) depths
- ‡ Available in both solid and punched styles
- ‡ Not recommended for vertical applications







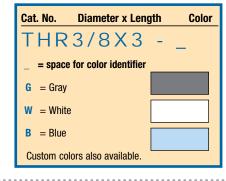
		STEEL Gauge		IN. MM	
CAT. NO.	STYLE	MM	w		Н
A12	Standard	12	1.63	Х	1.63
		2.65	41.28	Χ	41.28
A12A	Back to Back	12	1.63	X	3.25
		2.65	41.28	Χ	82.55
A12P	Standard Punched	12	1.63	X	1.63
		2.65	41.28	Χ	41.28
C14	Shallow	14	1.63	X	.81
		1.89	41.28	Χ	20.64
C14P	Shallow Punched	14	1.63	X	.81
		1.89	41.28	Χ	20.64

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

PVC-Coated 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 ¼", ¾" or ½" standard diameters and in 3-, 6- or 10-ft. standard lengths





Ocal® PVC-Coated Steel All-Thread Rod				
TRADE SIZE LENGTH IN. FT. CAT. NO. MM M				
THR1/4X10	½ 6.35	10.00 3.05		
THR3/8X3	% 9.53	3.00 0.91		
THR3/8X6	¾ 9.53	6.00 1.83		
THR3/8X10	¾ 9.53	10.00 3.05		
THR1/2X3	½ 12.70	3.00 0.91		
THR1/2X6	½ 12.70	6.00 1.83		
THR1/2X10	½ 12.70	10.00 3.05		

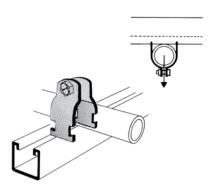
Designed for easy attachment of conduit to strut!

PVC-Coated 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 onehanded tightening
- ‡ Use with either 1%" or 1½" strut for greater versatility
- \$\Delta\$ 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)





Cat. No.	Size	Color
SS1-		_
_ = space fo	or color ide	ntifier
G = Gray		
W = White		
B = Blue		
Custom colors	also availa	ıble.

|--|

CAT. NO.	PIPE SIZE IN. METRIC SIZE DESIGNATOR*
SS1/2-	1/2
00.72 _	16
SS3/4-	3/4
_	21
SS1	1
	27
SS1-1/4	1¼
	35
SS1-1/2	1½
	41
SS2	2
	53
SS2-1/2	21/2
	63
SS3	3
	78
SS3-1/2	3½
	91
SS4	4
	103
SS5	5
	129 nator (ANSI C80 1-1994)

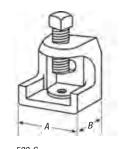
* Metric size designator (ANSI C80.1-1994).

Corrosion-protected clamps for hanging threaded rod.

Ocal® PVC-Coated Hanger Rod Beam Clamps

- ‡ Malleable iron construction
- 1 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)





500-G Hanger Rod Beam Clamp

Cat. No.	Color
500-	
_ = space for color identifier	
G = Gray	
W = White	
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	1	11/4	15/16	1/4 - 20	450
	25.40	31.75	23.81	6.35 - 20	204.12
501	11/2	15/8	7/8	¹⁵ / ₁₆ - 18	800
	38.10	41.28	22.23	7.94 - 18	362.87
502	2	2	1	% - 16	1300
	50.80	50.80	25.40	9.53 - 16	589.67
503	2 5// ₈	21/2	1	½ - 13	1300
	66.68	63.50	25.40	12.70 - 13	589.67
508	21/2	2 3/8	21/8	½ - 13	1700
	63.50	60.33	53.98	12.70 - 13	771.11

^{*} Metric size designator (ANSI C80.1-1994).

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

Ocal® PVC-Coated Mini Conduit Hangers

- 1 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
MINE1-	_
_ = space for color identifier	
G = Gray	
W = White	
B = Blue	
Custom colors also available.	

	PIPE SIZE IN.
CAT. NO.	METRIC SIZE DESIGNATOR*
MINE1/2	1/2
	16
MINE3/4	3/4
	21
MINE1	1
	27
MINE1-1/4	11/4
	35
MINE1-1/2	1½
	41
MINE2	2
	53
MINE2-1/2	2 ½
	63
MINE3	3
	78
MINE3-1/2	31/2
	91
MINE4	4
	103
* * * * * * * * * * * * * * * * * * * *	(ANOLOGO 4. 400 A)

^{*} Metric size designator (ANSI C80.1-1994).

 $^{^\}dagger$ Load ratings based on bottom hole of beam clamp with safety factor of three. CSA File No. LR-52208

Fewer parts, less installation time and huge labor savings!

Trapnut® Strut Fastener

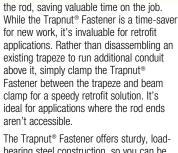
The unique scissor action of the Trapnut® Strut Fastener closes at any desired position on the threaded rod. Once closed, precision threads trap the rod for a sturdy hold that can be adjusted up or down for fine-tune positioning. While the versatile Trapnut® Fastener has a locking pin that holds it in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



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



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 finetune positioning
- ‡ Functions as a hex nut, square washer and flat washer combined



Press the pin with pliers.

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



Tighten to the desired position with pliers.

- ‡ Can be adjusted up or down for fine-tune positioning
- \$\frac{1}{2}\$ Sturdy, load-bearing stainless steel construction
- Sized to provide custom fit for either 15%" or 11/2" strut systems

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. These tools are ready for use on 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 E-445–E-451*.

Bends ½" through 2" PVC-coated conduit.

GREENLEE® Model 555 Electric Bender for PVC-Coated Conduit

When you use this electric bending machine on $\frac{1}{2}$ " 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
GBENDER	GREENLEE® Model 555 Bender
Shoes and Roller Kit for	r 40-mil PVC-Coated Conduit
37279	1/2" - 2" Shoes and Roller Supports
Kit Consists of One Each:	
00946	½" through 1¼" Roller Support
00573	½" through 1¼" Shoe
37281	1½" and 2" Shoe
37282	1½" through 2" Roller Support
23818	Metal Storage Box



Make saddles, offsets and conventional bends.

Hand Bender for PVC-Coated Conduit

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



High-speed threading — up to 25 rpm!

RHINO® High-Performance Threading Machine



RHINO® Threading Machine with optional wheeled stand

- \$\frac{1}{2}\$ Standard threading machine with built-in pipe cutter, reamer, foot-operated safety switch, \(\frac{1}{2}'' \) to 2" and 2\(\frac{1}{2}'' \) 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 four heavy-duty jaws, specially designed for PVC-coated conduit, at front and rear to automatically grip and center pipe

CAT. NO.	DESCRIPTION	
RHINO® High-	Performance Threading Machine	
P00551C	RHINO® 1/2"-4" Threading Machine with Jaws for PVC-Coated Conduit	
R0TH00548	Optional Wheeled Stand with Tool Tray for RHINO® Threading Machine	
Replacement	Threading Die Sets for RHINO® Threading Machine	
89101	½"-¾" Threading Die Set	
89102	1"-2" Threading Die Set	
59912	2½"-4" Threading Die Set	
Replacement Jaws Sets for RHINO® Threading Machine		
P20305C	Jaw Set for PVC-Coated Conduit	
R0TH02385	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 precisionthreaded 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
- 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", 1½", 1½" and 2" PVC-coated conduit and carrying case

CAT. NO.	DESCRIPTION
P71259C	SUPERTRONIC® 2000 Power Threader Set
	for $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ " and 2" PVC-Coated Conduit



Forged pipe clamp, shown above, is included with the P71259C SUPERTRONIC® 2000 Power Threader Set

Ocal® Installation Products

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



CAT. NO.	DESCRIPTION
MINI-COLLINS	Electric Power Drive & Accessories
R0TH00074	MINI-COLLINS® Electric Power Drive
13158	MINI-COLLINS® Adapter for SUPER CUT Die Heads
R0TH00117	MINI-COLLINS® 1" Square Shaft Drive for Geared Threaders
ROTH00119	Steel Carrying Case for MINI-COLLINS®

as shown at above left, and use only the outer ring.

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, temperedsteel 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	3/4" Die				
P70914C	1" Die				
P70915C	1¼" Die				
P70849C	1½" Die				
P70850C	2" Die				

Equipped with chain vise.

Tri-Stand Vise

- ‡ 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 %", ½" and ¾" 0.D.

CAT. NO. DESCRIPTION		PIPE CAPACITY IN. METRIC SIZE DESIGNATOR*		
R0TH00076	Tri-Stand with 6" Chain Vise (use with Ocal Jaws for PVC-coated conduit)	½ − 6 16 − 155		

^{*} Metric size designator (ANSI C80.1-1994).



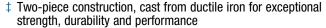
Superior design and construction for faster, safer chain-vise clamping of PVC-coated conduit.

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 our convenient set, which contains all the sizes from ½" to 2" in a handy carrying/storage case.

A unique 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.





- ‡ Cross-hatched interior surface grips conduit securely while safeguarding PVC jacket from damage
- ‡ Available individually in ½" through 6" trade sizes
- ‡ Also available in a convenient set − ½" to 2" trade sizes
- ‡ Each clamp clearly marked with trade size for easy identification
- ‡ Openings at each end enable hanging for handy storage



	CONDL	CONDUIT SIZE		
CAT. NO.	IN.	METRIC*		
Individual Half-Shell	Clamps			
HLF-SHL-CLP1/2	1/2	16		
HLF-SHL-CLP3/4	3/4	21		
HLF-SHL-CLP1	1	27		
HLF-SHL-CLP1-1/4	11/4	35		
HLF-SHL-CLP1-1/2	11/2	41		
HLF-SHL-CLP2	2	53		
HLF-SHL-CLP2-1/2	21/2	63		
HLF-SHL-CLP3	3	78		
HLF-SHL-CLP3-1/2	31/2	91		
HLF-SHL-CLP4	4	103		
HLF-SHL-CLP5	5	129		
HLF-SHL-CLP6	6	155		
Half-Shell Clamp Set (in carrying/storage case)				
HI E_QHI _CI D_QET1	1/4 _ 2	16 _ 53		

16 - 53HLF-SHL-CLP-SET1

^{*} Metric size designator (ANSI C80.1-1994).

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

		WEI	GHT
CAT. NO.	DESCRIPTION	LBS.	KG
JAWS23	Used with RIDGID No. 23 or No. 40A Yoke Vises	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® Installation Products

Removable aluminum jaws for PVC-coated conduit.

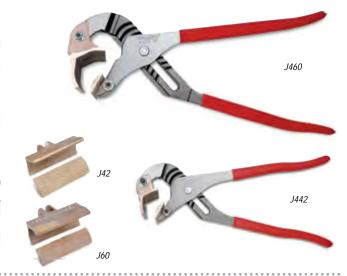
Ocal® J-Wrenches

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



PIPE CAPACITY	
½" to 1¼"	

CAT. NO.	DESCRIPTION	PIPE CAPACITY
J442	12" J-Wrench with Jaws	½" to 1¼"
J460	16" J-Wrench with Jaws	1½" to 2½"
J42	12" Jaw Set only	½" to 1¼"
J60	16" Jaw Set only	1½" to 2½"



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	1½
	254	16
P70160C	14	2
	356	53
P70161C	18	2 ½
	457	63
P70162C	24	3
	610	78

^{*} Metric size designator (ANSI C80.1-1994).

Specially coated strap won't absorb oil.

Strap Wrenches



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	17.00	1.75	2.00	3.50	1.75
	298.45	431.80	44.45	50.80	88.90	.79
31370	18.00	29.25	1.75	5.00	5.50	2.75
	457.20	742.95	44.45	127.00	139.70	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

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.



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.

OCAL PER MADOR COMPAND PROPER OF ALLEGATION OF THE STATE OF THE STAT

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

Ocal® Touch-Up Compounds

CAT. NO.	CONTAINER	SIZE	COLOR				
Exterior PVC Pat	ch						
SPRAY-G	Spray Can	12½ oz. (.37 liter)	Dark Gray				
SPRAY-W	Spray Can	12½ oz. (.37 liter)	White				
SPRAY-B	Spray Can	121/2 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				
Interior Urethane	Interior Urethane Patch						
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.
- Squeeze the amount of patch material needed onto the area to be repaired.
- If necessary, spread and level the patch material with a putty knife.
- Apply heat with a heat gun or torch, such as the T&B[®] Portable Heat-Shrink Torch.
- Being careful not to overheat (500° F/260° C max.), apply heat for two minutes total, or at least one 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.



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



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

Ocal® PVC Exterior Coating Chemical Resistance

ucais PVG Exterior Go	Coating Chemical		RECOMMENDED EXPOSURE		
SOLUTIONS	CONC.	TEMP.	SPLASHING	LIQUID	FUMES
Acetic Acid	10%	120	no	no	no
Acid Copper Plating Solution	1070	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			
Barium Sulfide	Sat'd	120	yes	yes	yes yes
Black Liguor	Sat'd	90	yes	yes	
Benzoic Acid	Sat'd	160	yes	yes	yes
		160	yes	yes	yes
Brass Plating Solution	Any		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	,		
Ferrous Sulfate	Sat'd	150	yes	yes	yes
			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
	rally .		you	yoo	
Indium Plating Solution	Δην	150	VAC	VAC	VAC
Indium Plating Solution Lactic Acid	Any 50%	150 120	yes yes	yes yes	yes yes

			RECOMMENDED EXPOSURE		
SOLUTIONS	CONC.	TEMP.	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 Sat'd	90 160	yes	yes	yes
Nickel Acetate Nickel Plating Solution	Sat u	160	yes yes	yes 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%	0.0			
Oleic Acid	Any	90	yes	yes	yes
Oxalic Acid	Sat'd	120	yes	yes	yes
Phenol	Any Sat'd	90 120	yes	yes	yes
Phosphoric Acid	75%	150	no yes	no yes	no 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 Diachromate	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	150 150	yes	yes	yes
Silver Plating Solution Soaps	Sat'd Any	90	yes	yes	yes
Sodium Acid Sulfate	Sat'd	160	yes yes	yes 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	no voc
Sodium Hypochlorite Sodium Hypochlorite	Sat'd 15%	90 120	yes	no no	yes
Sodium Sulfide	Sat'd	150	yes yes	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 Water	Sat'd	150	yes	yes	yes
White Liguor	Sat'd	160 90	yes yes	yes	yes
Zinc Plating Solution		160	yes	yes yes	yes yes
Zinc Sulfate	Sat'd	160	yes	yes	yes
		. 00	,00	, 50	, 50

Ocal® Urethane Interior Coating Chemical Resistance

			RECOMMENDED EXPOSURE		
SOLUTIONS	CONC.	TEMP.	SPLASHING	LIQUID	FUMES
Acetic Acid	10%	75	yes	no	yes
Acid Copper Plating Solution	Any	75	yes	no	yes
Alkaline Cleaners	Any	75 75	yes	no	yes
Aluminum Chloride	Sat'd	75 75	yes	no no	yes
Aluminum Sulfate Alums	Sat'd Sat'd	75 75	yes	no no	yes
Ammonium Chloride	Sat'd	75	yes yes	no no	yes 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 75	yes	no	yes
Calcium Bisulfite Calcium Chloride	Any	75 75	yes	no no	yes
Calcium Hypochlorite	Sat'd Sat'd	75 75	yes	no no	yes
Carbonic Acid	Sat'd	75	yes yes	no no	yes 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	ves	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	Any	75	yes	no	yes
(High Speed)	Any	75	yes	no	yes
(with Alkali Cyanides)	Sat'd	75 75	yes	no	yes
Copper Sulfate Coconut Oil	Sat'd	75 75	yes	no voo	yes
Cottonseed Oil	Sat'd Sat'd	75	yes	yes	yes
Disodium Phosphate	Sat'd	75	yes	yes no	yes
Ethyl Alcohol	Any	75	yes yes	no	yes 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 75	yes	no	yes
Hydrofluoric Acid	4%	75 75	yes	no no	yes
Hydrofluoric Acid	10%	75 75	yes	no no	yes
Hydrofluoric Acid	48%	75 75	yes	no no	yes
Hydrogen Peroxide Hydrogen Sulfide	30% Sat'd	75 75	yes	no no	yes
, ,			yes	no 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
	.,	-	,	-	,

	RECOMMENDED EXPOSURE				
SOLUTIONS	CONC.	TEMP.	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	0 11 1	75	yes	no	yes
Nickel Salts	Sat'd	75 75	yes	no	yes
Nitric Acid Nitric Acid	35% 40%	75 75	yes	no no	yes
Nitric Acid	60%	75 75	yes	no no	yes
Nitric Acid/	15%	73	yes	110	yes
Hydrofluoric Acid	4%	75	ves	no	yes
Nitric Acid/	16%	10	yoo	110	you
Sodium Dichromate	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 75	yes	no	yes
Potassium Diachromate	Sat'd	75 75	yes	no no	yes
Potassium Hypochlorite Potassium Sulfide	Sat'd Sat'd	75 75	yes	no no	yes
Potassium Thiosulfate	Sat'd	75	yes	no no	yes
Propyl Alcohol	Sat'd	75	yes yes	no	yes 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 75	yes	no no	yes
Sodium Hypochlorite Sodium Hypochlorite	Sat'd 15%	75 75	yes	no no	yes
Sodium Sulfide	Sat'd	75	yes yes	no no	yes 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

Ocal® Guide Specification:

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

Part 1 - General

ummary 21

1.1 Summary

- A. Section Includes: Furnishing, installation and assembly of PVCcoated 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)
 - 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
 - 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.

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

Part 2 - Products

- 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.
- 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.

Ocal® Guide Specification (continued):

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

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 ⅓ 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.
- 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.
- Liquidtight 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 ERMC 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 ERMC 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.
- If subjected to sustained flame or sustained heat above 400 degrees Fahrenheit, PVC will burn. PVC is self-extinguishing at room temperature.

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. JAWS23 on page E-437).



Ocal Jaw Vise Adapters JAWS23 See **page E-437**



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 E-436**.

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







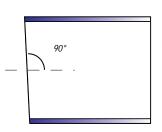
Half-Shell Clamps for conduit sizes ½" to 6" HLF-SHL-CLP-_ See **page E-436**

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 $\mathcal{V}^{"}$ 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).









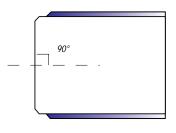




Cutting with a Roller-Style Cutter

Although most personnel in the field prefer a band saw cutter, a roller-style cutter is the 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.









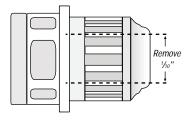


Manual and Hand-Held Threading

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 require 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 (1/10") from the throat and collar diameter of the die head.
- 3. Replace the dies and cover.





The die teeth are cutting tapered threads and will

become clogged with PVC and metal shavings.



Throat & Collar Shown









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.



SUPER CUT Die Head Set P70905C See page E-435





Cover Plate Shown

Threading

Manual Hand-Held Threading

Manual, ratchet-style threaders, such as the Rothenberger SUPER CUT ratchet threader, 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.

Hand-Held Powered Threading

The Rothenberger MINI-COLLINS® is a heavy-duty hand-held power tool 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 Rothenberge MINI-COLLINS® uses Rothenberger SUPER CUT dies. Optional tool cases are available.



Rothenberger SUPERTRONIC® 2000 P71259C See **page E-434**



 $\label{thm:conduit} \textbf{Ream the conduit with approved reamers. Spiral and straight-style reamers are both acceptable.}$



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®.



Ocal Urethane Patching Compound See **page E-439**



KOPR-SHIELD® See **page E-439**







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 E-439–E-440**).

Ream the conduit and dress the threads as previously described.





Ridgid Geared Threader ("Hog Head")

Stationary Power Threading

Rothenberger RHINO®

The Rothenberger RHINO® threading machine featured on **page E-434**, 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 $\frac{1}{2}$ 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.



Rothenberger RHINO® P00551C See **page E-434**

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 E-433** and the corresponding size of PVC-coated conduit on which they should be used.

CAT. NO.	PVC-COATED CONDUIT SIZE
35220	1/2"
35225	3/4"
2424A8	1"







Ocal® Air-Cure Patching Compounds See **page E-439**



Ocal® Heat-Cure Patch See **page E-440**



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.

Electric Bending

These machines are designed for bending $\frac{1}{2}$ " 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 E-433** 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.

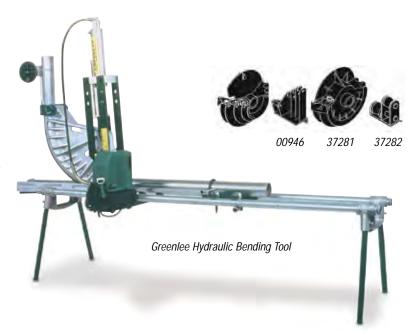
CAT. NO.	PVC-COATED CONDUIT SIZE
35220	1/2"
35225	3/4"
2424A8	1"





Shoe for Greenlee Hydraulic Bending Tool

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



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

Section 3 — External Coatings

3.1 Thickness

The thickness of polyvinyl chloride (PVC) coatings shall be a nominal .040 in. (1.02mm). The tolerance on the coating thickness shall be +.010 in. (.25mm) or -.005 in. (.13mm).

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
Hardness:		
Shore A	75	D 2240
Shore D	25	D 2240
Tensile Strength	2,000 psi	D 638
Elongation	200%	D 638
Dielectric strength	325 volts per mil	D 149
Brittleness temperature	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 $2\frac{1}{2}$ (63) through NPS 6 (155), the length of the sleeve extension(s) shall be at least 2 in. (50.8mm).

The PVC sleeve shall be a nominal thickness of .040 in. (1.02mm). The inside diameter (l.D.) of the overlapping sleeve shall be less than the outside diameter (0.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 .5% liquid detergent.

The inside of the PVE-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
Abrasion resistance	200 hours, no failure	ASTM G6
Bendability, radius	9 in.	ASTM G10
$(at 73.4^{\circ} \pm 1.8^{\circ} F)$	(228.6mm)	
Artificial weathering	Minimum 1,000 hours, no adverse effect	ASTM G153

^{*} The above requirements are based on testing a .040 in. (1.02mm) PVC coating applied over NPS ¾ inch 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. (12.7mm) 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.

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MG28	NC-303	E-539						
NAC40					NPL1/2X6	E-395	-	
NC49 S	NC32-S	E-340	NENZ-M160S/P2	E-250	NPL1/2X6SA	E-395	NPL1X31/2	E-395
NC5010E-SC. E-538 NELY-M202S/P3 . E-250 NPL11/2X10SA . E-395 NPL1X6A . E-395 NC-501SC. E-538 NELY-M207S/P3 . E-250 NPL11/2X12SA . E-395 NPL1X6SA . E-395 NC-501SC. E-538 NELY-M207S/P4 . E-250 NPL11/2X12SA . E-395 NPL1X6SA . E-395 NC-502SC . E-538 NELY-M207S/P4 . E-250 NPL11/2X12SA . E-395 NPL1X6SA . E-395 NC-502SC . E-538 NELY-M207S/P4 . E-250 NPL11/2X12SA . E-395 NPL1X6SA . E-395 NC-502SC . E-539 NELY-M207S/P5 . E-250 NPL11/2X12SA . E-395 NPL1X6SA . E-395 NC-502SC . E-539 NC-502SC . E-539 NELY-M257S/P5 . E-250 NPL11/2X21/E2 . E-395 NPL1X6SA . E-395 NC-851 . E-539 NC-850 . E-539 NELY-M257S/P6 . E-250 NPL11/2X21/E2 . E-395 NPL1X6SA . E-395 NC-851 . E-539 NC-851 . E-539 NELY-M257S/P6 . E-250 NPL11/2X21/E2 . E-395 NPL1X6SA . E-395 NC-851 . E-395 NC-851 . E-539 NC-852 . E-539 NC-852SC . E-539 NC-852	NC40	E-340			NPL1/2X8	E-395		
NC-501DBL-SC	NC40-S	E-340	NENZ-M202S/P1	E-250	NPL1/2X8SA	E-395	NPL1X3SA	E-395
NC-5015C	NC50	E-340	NENZ-M202S/P3	E-250	NPL11/2X10	E-395	NPL1X4	E-395
NC-502SC			NENZ-M202S/P4	E-250	NPL11/2X10SA	E-395	NPL1X4SA	E-395
NC-850. E-340 NEIZ-M207S/P5 E-250 NPL11/2X2- E-395 NPL1X6- E-395 NO-850. E-599 NEIZ-M257S/P5 E-250 NPL11/2X21/2- E-395 NPLX6SA_ E-395 NO-851. E-599 NEIZ-M257S/P6 E-250 NPL11/2X21/2- E-395 NPLX6SA_ E-395 NO-852. E-599 NEIZ-M257S/P6 E-250 NPL11/2X21/2- E-395 NPLX8-A. E-395 NO-852. E-639 NEIZ-M233S/P5 E-250 NPL11/2X21/2- E-395 NPL1X8-A. E-395 NO-852. E-639 NEIZ-M233S/P5 E-250 NPL11/2X31/2- E-395 NPL21/2X10SA_ E-395 NEZ-M305S/P5 E-250 NPL11/2X31/2- E-395 NPL21/2X10SA_ E-395 NEZ-M4062-10. E-251 NEIZ-M409S/P6 E-250 NPL11/2X31/2- E-395 NPL21/2X10SA_ E-395 NEZ-M4062-10. E-251 NEIZ-M506S/P3 E-250 NPL11/2X31/2- E-395 NPL21/2X12- E-395 NEZ-M25-11. E-251 NEIZ-M506S/P3 E-250 NPL11/2X35A_ E-395 NPL21/2X31/2- E-395 NEZ-M25-11. E-251 NEIZ-M506S/P3 E-250 NPL11/2X3-A. E-395 NPL21/2X31/2- E-395 NEZ-M25-11. E-251 NEIZ-M506S/P3 E-250 NPL11/2X4- E-395 NPL21/2X31/2- E-395 NEZ-M23-3- E-251 NEIZ-M506S/P3 E-250 NPL11/2X4- E-395 NPL21/2X31/2- E-395 NEZ-M23-3- E-251 NEIZ-M506S/P3 E-250 NPL11/2X5-A. E-395 NPL21/2X31/2- E-395 NEZ-M329-13. E-251 NEIZ-M508S/P3 E-250 NPL11/2X5-A. E-395 NPL21/2X5-A. E-395 NEZ-M329-13. E-251 NEIZ-M508S/P3 E-250 NPL11/2X5-A. E-395 NPL21/2X5-A. E-395	NC-501SC	E-538			NPL11/2X12	E-395	NPL1X5	E-395
NC-850	NC-502SC	E-538	NENZ-M207S/P4	E-250	NPL11/2X12SA	E-395	NPL1X5SA	E-395
NC-851	NC50-S	E-340	NENZ-M207S/P5	E-250	NPL11/2X2	E-395	NPL1X6	E-395
NC-952	NC-850	E-539	NENZ-M257S/P5	E-250	NPL11/2X21/2	E-395	NPL1X6SA	E-395
NC-853 E-539 NENZ-M323S/P5 E-250 NPL11/2X3⁻ E-395 NPL21/2X10⁻ E-395 NEAV-M102-10 E-251 NENZ-M09S/P5 E-250 NPL11/2X31/2⁻ E-395 NPL21/2X10GA E-395 NEAV-M102-10 E-251 NEVA-M09S/P5 E-250 NPL11/2X31/2A E-395 NPL21/2X12 E-395 NEAV-M207-10 E-251 NEX-M06S/P1 E-250 NPL11/2X31/2A E-395 NPL21/2X31/2- E-395 NEAV-M207-11 E-251 NEX-M06S/P3 E-250 NPL11/2X45A E-395 NPL21/2X31/2- E-395 NEAV-M323-13 E-251 NEX-M06S/P3 E-250 NPL11/2X45A E-395 NPL21/2X31/2- E-395 NEAV-M329-13 E-251 NEX-M60SS/P3 E-250 NPL11/2X56A E-395 NPL21/2X5A E-395 NEAV-M506-14 E-251 NEX-M63SS/P1 E-250 NPL11/2X56A E-395 NPL21/2X5A E-395 NEAV-M506-14 E-251 NEP1-41-6 E-363 NPL11/2X56A E-395 NPL21/2X5A E-395<	NC-851	E-539	NENZ-M257S/P6	E-250	NPL11/2X21/2SA	E-395	NPL1X8	E-395
NEAV-M120-10	NC-852	E-539	NENZ-M323S/P4	E-250	NPL11/2X2SA	E-395	NPL1X8SA	E-395
NEAV-M162-10 E-251 NENZ-M409S/P5 E-250 NPL11/ZX31/2SA_ E-395 NPL21/ZX12_ E-395 NEAV-M207-10 E-251 NENZ-M506S/P1 E-250 NPL1/ZX44_ E-395 NPL21/ZX12SA_ E-395 NEAV-M205-11 E-251 NEX-M506S/P3 E-250 NPL1/ZX44_ E-395 NPL21/ZX31/2SA_ E-395 NEAV-M323-13 E-251 NEX-M508S/P2 E-250 NPL11/ZX45_ E-395 NPL21/ZX44_ E-395 NEAV-M323-13 E-251 NENZ-M508S/P3 E-250 NPL11/ZX5_ E-395 NPL21/ZX45_ E-395 NEAV-M406-13 E-251 NENZ-M508S/P1 E-250 NPL11/ZX5_ E-395 NPL21/ZX5_ E-395 NEAV-M409-13 E-251 NEPA16-6 E-363 NPL11/ZX6_ E-395 NPL21/ZX5_ E-395 NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/ZX8_ E-395 NPL21/ZX6A_ E-395 NEAV-M508-14 E-251 NEPA2-28 E-363 NPL11/X410B_ E-395 NPL21/ZX6A_ E-395 </td <td>NC-853</td> <td> E-539</td> <td>NENZ-M323S/P5</td> <td> E-250</td> <td>NPL11/2X3</td> <td> E-395</td> <td>NPL21/2X10</td> <td> E-395</td>	NC-853	E-539	NENZ-M323S/P5	E-250	NPL11/2X3	E-395	NPL21/2X10	E-395
NEAV-M207-10	NEAV-M120-10	E-251	NENZ-M409S/P4	E-250	NPL11/2X31/2	E-395	NPL21/2X10SA	E-395
NEAV-M207-10	NEAV-M162-10	E-251	NENZ-M409S/P5	E-250	NPL11/2X31/2SA	E-395	NPL21/2X12	E-395
NEAV-M253-11	NEAV-M207-10	E-251			NPL11/2X3SA	E-395	NPL21/2X12SA	E-395
NEAV-M323-13 E-251 NEIX-M508S/P3 E-250 NPL11/2X55_ E-395 NPL21/2X4_ E-395 NEAV-M329-13 E-251 NEIX-M638S/P1 E-250 NPL11/2X55_ E-395 NPL21/2X45_ E-395 NEAV-M409-13 E-251 NENZ-M638S/P2 E-250 NPL11/2X65_ E-395 NPL21/2X55_ E-395 NEAV-M506-14 E-251 NEPA16-16 E-363 NPL11/2X65_ E-395 NPL21/2X65_ E-395 NEAV-M508-14 E-251 NEPA24-28 E-363 NPL11/2X85_ E-395 NPL21/2X65_ E-395 NEBV-M638-14 E-251 NEW-M160-10 E-251 NPL11/2X85_ E-395 NPL21/2X8_ E-395 NEBV-M638-11 E-251 NEW-M160-10 E-251 NPL11/4X10SA_ E-395 NPL21/2X8_ E-395 NEBV-M257-11 E-251 NEW-M162-10 E-251 NPL11/4X12SA_ E-395 NPL2X10SA_ E-395 NEBV-M323-13 E-251 NFN3-70 E-240 NPL11/4X12SA_ E-395 NPL2X10SA_ E-395	NEAV-M253-11	E-251			NPL11/2X4	E-395	NPL21/2X31/2	E-395
NEAV-M323-13 E-251 NEIX-M508S/P3 E-250 NPL11/2X5- E-395 NPL21/2X4- E-395 NEAV-M329-13 E-251 NEIX-M638S/P1 E-250 NPL11/2X5SA- E-395 NPL21/2X6SA- E-395 NEAV-M409-13 E-251 NEPA14-16 E-363 NPL11/2X6S- E-395 NPL21/2X6S- E-335 NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/2X8- E-395 NPL21/2X6- E-395 NEAV-M508-14 E-251 NEPA16-20 E-363 NPL11/2X8- E-395 NPL21/2X6- E-395 NEAV-M508-14 E-251 NEPA4-28 E-363 NPL11/2X8- E-395 NPL21/2X6- E-395 NEAV-M508-14 E-251 NEW-M100-10 E-251 NPL11/4X10- E-395 NPL21/2X8- E-395 NEBV-M207-10 E-251 NEW-M160-10 E-251 NPL11/4X10- E-395 NPL2X10SA- E-395 NEBV-M203-11 E-251 NEW-M160-10 E-251 NPL11/4X12- E-395 NPL2X10- E-395 <tr< td=""><td>NEAV-M257-11</td><td> E-251</td><td>NENZ-M508S/P2</td><td> E-250</td><td>NPL11/2X4SA</td><td> E-395</td><td>NPL21/2X31/2SA</td><td> E-395</td></tr<>	NEAV-M257-11	E-251	NENZ-M508S/P2	E-250	NPL11/2X4SA	E-395	NPL21/2X31/2SA	E-395
NEAV-M406-13 E-251 NENZ-M638S/P2 E-250 NPL11/2X65_ E-395 NPL21/2X5_ E-395 NEAV-M409-13 E-251 NEPA14-16 E-363 NPL11/2X6SA_ E-395 NPL21/2X5SA_ E-395 NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/2X6SA_ E-395 NPL21/2X6SA_ E-395 NEAV-M608-14 E-251 NEPA24-28 E-363 NPL11/2X6SA_ E-395 NPL21/2X6SA_ E-395 NEAV-M638-14 E-251 NEWV-M120-10 E-251 NPL11/4X10_ E-395 NPL21/2X8SA_ E-395 NEBV-M207-10 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL21/2X8SA_ E-395 NEBV-M253-11 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL21/2X8SA_ E-395 NEBV-M253-11 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL2X10_ E-395 NEBV-M506-14 E-251 NFN3-09 E-240 NPL11/4X2_ E-395 NPL2X10_ E-395	NEAV-M323-13	E-251	NENZ-M508S/P3	E-250			NPL21/2X4	E-395
NEAV-M406-13 E-251 NENZ-M638S/P2 E-250 NPL11/2X65_ E-395 NPL21/2X5_ E-395 NEAV-M409-13 E-251 NEPA14-16 E-363 NPL11/2X6SA_ E-395 NPL21/2X5SA_ E-395 NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/2X6SA_ E-395 NPL21/2X6SA_ E-395 NEAV-M608-14 E-251 NEPA24-28 E-363 NPL11/2X6SA_ E-395 NPL21/2X6SA_ E-395 NEAV-M638-14 E-251 NEWV-M120-10 E-251 NPL11/4X10_ E-395 NPL21/2X8SA_ E-395 NEBV-M207-10 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL21/2X8SA_ E-395 NEBV-M253-11 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL21/2X8SA_ E-395 NEBV-M253-11 E-251 NEWV-M160-10 E-251 NPL11/4X12_ E-395 NPL2X10_ E-395 NEBV-M506-14 E-251 NFN3-09 E-240 NPL11/4X2_ E-395 NPL2X10_ E-395	NEAV-M329-13	E-251	NENZ-M638S/P1	E-250	NPL11/2X5SA	E-395	NPL21/2X4SA	E-395
NEAV-M409-13 E-251 NEPA14-16 E-363 NPL11/2X6SA_ E-395 NPL21/2X5SA_ E-395 NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/2X6B_ E-395 NPL21/2X6_ E-395 NEAV-M508-14 E-251 NEPA24-28 E-363 NPL11/2X6B_ E-395 NPL21/2X6B_ E-395 NEW-M508-14 E-251 NEW-M10-10 E-251 NPL11/4X10_ E-395 NPL21/2X8B_ E-395 NEBV-M207-10 E-251 NEW-M160-10 E-251 NPL11/4X10_ E-395 NPL2X10_ E-395 NEBV-M257-11 E-251 NEW-M162-10 E-251 NPL11/4X12_ E-395 NPL2X10_ E-395 NEBV-M257-11 E-251 NFW-M202-10 E-251 NPL11/4X12_ E-395 NPL2X10_ E-395 NEBV-M503-13 E-251 NFN3-07 E-240 NPL11/4X21_ E-395 NPL2X10_ E-395 NEBV-M309-13 E-251 NFN3-16 E-240 NPL11/4X21/2_ E-395 NPL2X12_ E-395 <th< td=""><td>NEAV-M406-13</td><td> E-251</td><td>NENZ-M638S/P2</td><td> E-250</td><td>NPL11/2X6</td><td> E-395</td><td></td><td></td></th<>	NEAV-M406-13	E-251	NENZ-M638S/P2	E-250	NPL11/2X6	E-395		
NEAV-M506-14 E-251 NEPA16-20 E-363 NPL11/2X85_ E-395 NPL21/2X66_ E-395 NEAV-M508-14 E-251 NEPA24-28 E-363 NPL11/2X85A_ E-395 NPL21/2X66A_ E-395 NEAV-M608-14 E-251 NEW-M100-10 E-251 NPL11/4X10_ E-395 NPL21/2X85A_ E-395 NEBV-M207-10 E-251 NEW-M160-10 E-251 NPL11/4X10SA_ E-395 NPL21/2X8SA_ E-395 NEBV-M205-11 E-251 NEW-M162-10 E-251 NPL11/4X10SA_ E-395 NPL2X10_ E-395 NEBV-M329-13 E-251 NEW-M202-10 E-251 NPL11/4X12SA_ E-395 NPL2X10SA_ E-395 NEBV-M329-13 E-251 NFN3-07 E-240 NPL11/4X21_ E-395 NPL2X12SA_ E-395 NEBV-M306-13 E-251 NFN3-11 E-240 NPL11/4X21/2_ E-395 NPL2X12SA_ E-395 NEBV-M506-14 E-251 NFN3-21 E-240 NPL11/4X31/2SA_ E-395 NPL2X21/2SA_ E-395 <td>NEAV-M409-13</td> <td> E-251</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	NEAV-M409-13	E-251						
NEAV-M6308-14 E-251 NEPA24-28 E-363 NPL11/2X8SA	NEAV-M506-14	E-251	NEPA16-20	E-363			NPL21/2X6	E-395
NEAV-M638-14 E-251 NEW-M120-10 E-251 NPL1/4X10- E-395 NPL21/2X8- E-395 NEBV-M207-10 E-251 NEW-M160-10 E-251 NPL1/4X10SA- E-395 NPL21/2X8SA- E-395 NEBV-M257-11 E-251 NEW-M162-10 E-251 NPL11/4X12- E-395 NPL2X10- E-395 NEBV-M323-13 E-251 NFW-M202-10 E-251 NPL11/4X12- E-395 NPL2X10- E-395 NEBV-M323-13 E-251 NFN3-07 E-240 NPL11/4X2- E-395 NPL2X12- E-395 NEBV-M329-13 E-251 NFN3-09 E-240 NPL11/4X21/2- E-395 NPL2X12SA- E-395 NEBV-M406-13 E-251 NFN3-11 E-240 NPL11/4X21/2SA- E-395 NPL2X1/2SA- E-395 NEBV-M409-13 E-251 NFN3-16 E-240 NPL11/4X25A- E-395 NPL2X21/2SA- E-395 NEBV-M508-14 E-251 NFN3-21 E-240 NPL11/4X31/2SA- E-395 NPL2X31/2SA- E-395	NEAV-M508-14	E-251			NPL11/2X8SA	E-395	NPL21/2X6SA	E-395
NEBV-M207-10 E-251 NEWV-M160-10 E-251 NPL1/4X10SA	NEAV-M638-14	E-251	NEWV-M120-10	E-251			NPL21/2X8	E-395
NEBV-M257-11 E-251 NEWV-M202-10 E-251 NPL11/4X12SA E-395 NPL2X10SA E-395 NEBV-M323-13 E-251 NFN3-07 E-240 NPL11/4X2 E-395 NPL2X12 E-395 NEBV-M406-13 E-251 NFN3-09 E-240 NPL11/4X21/2- E-395 NPL2X12SA E-395 NEBV-M406-13 E-251 NFN3-11 E-240 NPL11/4X21/2SA E-395 NPL2X21/2 E-395 NEBV-M506-14 E-251 NFN3-16 E-240 NPL11/4X2SA E-395 NPL2X21/2SA E-395 NEBV-M506-14 E-251 NFN3-21 E-240 NPL11/4X2SA E-395 NPL2X31/2 E-395 NEBV-M508-14 E-251 NFN3-29 E-240 NPL11/4X31/2 E-395 NPL2X31/2 E-395 NEBV-M638-14 E-251 NFN3-36 E-240 NPL1/4X31/2SA E-395 NPL2X31/2 E-395 NENV-M100-10 E-250 NFL3-34 E-240 NPL1/4X31/2SA E-395 NPL2X31/2 E-395 <td>NEBV-M207-10</td> <td> E-251</td> <td>NEWV-M160-10</td> <td> E-251</td> <td></td> <td></td> <td>NPL21/2X8SA</td> <td> E-395</td>	NEBV-M207-10	E-251	NEWV-M160-10	E-251			NPL21/2X8SA	E-395
NEBV-M323-13 E-251 NFN3-07 E-240 NPL11/4X2	NEBV-M253-11	E-251	NEWV-M162-10	E-251	NPL11/4X12	E-395	NPL2X10	E-395
NEBV-M323-13 E-251 NFN3-07 E-240 NPL11/4X2	NEBV-M257-11	E-251	NEWV-M202-10	E-251	NPL11/4X12SA	E-395	NPL2X10SA	E-395
NEBV-M329-13 E-251 NFN3-09 E-240 NPL11/4X21/2- E-395 NPL2X12SA- E-395 NEBV-M406-13 E-251 NFN3-11 E-240 NPL11/4X21/2SA- E-395 NPL2X21/2- E-395 NEBV-M409-13 E-251 NFN3-16 E-240 NPL11/4X2SA- E-395 NPL2X21/2SA- E-395 NEBV-M506-14 E-251 NFN3-21 E-240 NPL11/4X3- E-395 NPL2X3- E-395 NEBV-M508-14 E-251 NFN3-29 E-240 NPL11/4X31/2- E-395 NPL2X31/2- E-395 NEBV-M638-14 E-251 NFN3-29 E-240 NPL11/4X31/2- E-395 NPL2X31/2- E-395 NEBV-M1638-14 E-251 NFN3-36 E-240 NPL11/4X31/2SA- E-395 NPL2X31/2- E-395 NEBV-M1638-14 E-250 NFN3-48 E-240 NPL11/4X31/2SA- E-395 NPL2X31/2SA- E-395 NENV-M100-10 E-250 NPL1/2X10- E-395 NPL11/4X34SA- E-395 NPL2X4SA- E-395			NFN3-07	E-240	NPL11/4X2	E-395	NPL2X12	E-395
NEBV-M406-13 E-251 NFN3-11 E-240 NPL11/4X21/2SA	NEBV-M329-13	E-251			NPL11/4X21/2	E-395		
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