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# **WESTERN TUBE & CONDUIT**

## **STEEL CONDUIT**

**EMT - Electrical Metallic Tubing**

**IMC - Intermediate Metal Conduit**

**Rigid - Electrical Rigid Metal Conduit**



# WESTERN TUBE & CONDUIT

## STEEL CONDUIT

Steel conduit is recognized as the safest and most protective form of electrical raceway. It is important that steel conduit provides excellent physical protection for wiring, and also acts as a ground shield, reducing EMI (electro-magnetic interference due to field emission) and minimizing any effect of external RFI (radio frequency interference). It is also approved as being the equipment ground conductor in a circuit, thereby reducing wiring requirements and simplifying installation.

It is essential that the installer know and follow the electrical codes that are required for his installation. There are national, international, state and local codes which may be pertinent. In many cases local codes add to or change some requirements in the broader-based codes. It is up to the installer to determine which rules apply, and to then install the conduit and wiring so that it meets all the specifications.

Western Tube and Conduit manufactures its conduit with a great deal of attention being paid to usability. We want the usage of WTC products to be as easy and smooth as possible. During production there is continuous monitoring and control of those factors affecting the installer – bendability, wire push and pull capability, size and threading for use of fittings, rounding of edges for avoiding the potential to cut or abrade wire, etc. As well, because we know that some conduit sees harsh environments, we pay particular attention to good, solid, protective coatings both inside and out. Our aim is that the installer will be proud of any job he has done with WTC conduit.

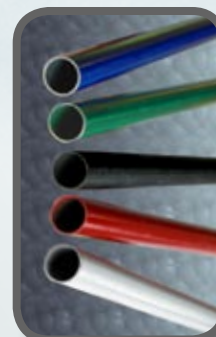
The standard length of all conduit is 10 feet. If there is a coupling attached, that length includes the coupling. WTC has the capability of producing some conduit to custom lengths, and is happy to accommodate its customers. Please contact our Sales personnel to discuss special orders.

Trade Size  
Metric Designator  
Nominal O.D.  
Nominal I.D.  
Nominal Wall Thickness  
Nominal Wt. per foot  
Feet in Sub-Bundle  
Qty. in Master Bundle  
Feet in Master Bundle  
Nom. Wt. per Master Bundle  
Color Designator\*

in.		in.	in.	in.	lbs.	ft.	qty.	ft.	lbs.	
1/2	16	0.706	0.622	0.042	0.3	100	700	7000	2100	Black
3/4	21	0.922	0.824	0.049	0.46	100	500	5000	2300	Red
1	27	1.163	1.049	0.057	0.67	100	300	3000	2010	Blue
1 1/4	35	1.510	1.380	0.065	1.01	50	200	2000	2020	Red
1 1/2	41	1.740	1.610	0.065	1.16	50	150	1500	1740	Black
2	53	2.197	2.067	0.065	1.48	50	120	1200	1776	Blue
2 1/2	63	2.875	2.731	0.072	2.16	-	61	610	1318	Black
3	78	3.500	3.356	0.072	2.63	-	51	510	1341	Blue
3 1/2	91	4.000	3.834	0.083	3.49	-	37	370	1291	Black
4	103	4.500	4.334	0.083	3.93	-	30	300	1179	Blue

## COLOR EMT

It is becoming increasingly popular to identify the uses of certain raceways with color conduit. In this way emergency circuits, data transmission circuits, computer power circuits, etc., can be readily identified and traced. In order to provide users with conduit satisfying this requirement, WTC produces EMT in blue, green, black, red, and white as well as in the standard silver. They are all galvanized and meet the same UL standards, but have an extra color dye added to their outer organic coating. We are also able to provide custom colors, and want to meet your needs. Our Sales personnel can provide further information.



## EMT (ELECTRICAL METALLIC TUBING)

Western Tube and Conduit EMT is manufactured using a low carbon strip steel which is electric resistance welded (ERW) into tubing and then hot in-line galvanized for rust protection. It receives organic polymer coatings both inside and out as well, making it very resistant to corrosion.

WTC EMT is listed with UL (Underwriter's Laboratories) and meets all specification requirements. Every piece of conduit contains a label reflecting that UL approval.

WTC emphasizes providing a durable product that is easy to use. We make sure our EMT bends without kinking or flattening. We test to make sure the zinc galvanize layer will not flake or crack. There is a special ID coating that has low friction so that feeding wires is simple and easy. And both the ID and the OD are treated so that rust is inhibited.

WTC's EMT products conform to the following specifications:

- **UL 797** (Underwriter's Laboratories) "Standard for Safety for Electrical Metallic Tubing – Steel". We participate in UL's program of continuous monitoring of our production facilities and our products.
- **CSA C22.2 No. 83.1** (Canadian Standards Association) "Electrical Metallic Tubing – Steel".
- **ANSI C80.3** (American National Standards Institute) "American National Standard for Steel Electrical Metallic Tubing".
- **NEC Article 358** (National Electrical Code).
- **U.S. Federal Agencies and the U.S. DOD** (Department of Defense) – these organizations formerly required conformance to their Specification WW-C-563 but have abandoned that document and replaced it with the above listed UL-797 and ANSI C80.3.



Metric Designator  
 Trade Size  
 Nominal O.D.  
 Nominal I.D.  
 Nominal Wall Thickness  
 Nom. Wt. per foot  
 Feet in Master Bundle  
 Qty. in Sub-Bundle  
 Feet in Master Bundle  
 Nom. Wt. per Master Bundle  
 \*Color Designator

in.		in.	in.	in.	lbs.	ft.	qty.	ft.	lbs.	
1/2	16	0.815	0.659	0.078	0.62	100	350	3500	2170	Yellow
3/4	21	1.029	0.863	0.083	0.84	50	250	2500	2100	Green
1	27	1.290	1.104	0.093	1.19	50	170	1700	2023	Orange
1 1/4	35	1.638	1.448	0.095	1.58	-	135	1350	2133	Green
1 1/2	41	1.883	1.683	0.100	1.94	-	110	1100	2134	Yellow
2	53	2.360	2.150	0.105	2.56	-	80	800	2048	Orange
2 1/2	63	2.857	2.557	0.150	4.41	-	37	370	1632	Yellow
3	78	3.476	3.176	0.150	5.43	-	30	300	1629	Orange
3 1/2	91	3.971	3.671	0.150	6.29	-	24	240	1510	Yellow
4	103	4.466	4.166	0.150	7.00	-	24	240	1680	Orange

## \*\*SAFETY INFORMATION\*\*

It is well known that steel conduit provides the best protection from physical and fire damage that is available in electrical raceways. Lately, concern has developed over the potential effects of electrical fields on humans. There is no hard evidence that field emissions from AC power lines are damaging to humans, but there are suspicions and possible links to increased incidence of cancer, and studies are being performed to further scientific knowledge in this area. The use of steel conduit has been shown to significantly reduce the amount of emitted signal around electrical wiring, and it can certainly provide extra protection from the fields generated by the wiring. Using steel conduit is the safest approach we can recommend.

## RIGID (RMC – RIGID METAL CONDUIT)

WTC's Rigid Conduit is manufactured as heavy gage tubing which is then galvanized inside and out, receives a chromate conversion layer, and then an organic polymer for extra protection. It is strong and resistant to environmental and mechanical degradation.

Rigid also is monitored at the factory to make sure it is easily usable. It is subjected to bend testing and threadability testing, as well as a large number of verifications. Each piece contains the UL approval label and one coupling.

WTC's Rigid products conform to the following specifications:

- UL 6** (Underwriter's Laboratories) "Standard for Safety Electrical Rigid Metal Conduit – Steel". Again, we participate in UL's program of continuous monitoring of our production facilities and our products.
- CSA C22.2 No. 45.1** (Canadian Standards Association) "Electrical Rigid Conduit – Steel".
- ANSI C80.1** (American National Standards Institute) "American National Standard for Electrical Rigid Metal Conduit - Steel".
- NEC Article 344** (National Electrical Code).
- U.S. Federal Agencies and the U.S. DOD** (Department of Defense) – these organizations formerly required conformance to their Specification WW-C-581 but have abandoned that document and replaced it with the above listed UL-6 and ANSI C80.1.

## IMC (INTERMEDIATE METAL CONDUIT)

It should be noted that, per the NEC (National Electrical Code), IMC may be used in any application and location where Rigid Conduit is specified. It meets all NEC code requirements and is completely acceptable as a substitute.

IMC is manufactured as a cross between EMT and Rigid. It has the same tube-making process as EMT, but is a much heavier gage so it can be threaded like Rigid. It receives the same size threads, so the same couplings are used on both. It is a slightly thinner gage than Rigid, so it is lighter and easier to use. But it still has the overall strength it needs. It is well protected by its zinc and organic coatings inside and out from corrosion. It is tested for bendability and threadability as well. Each piece of IMC has a label showing its UL approval, and it is shipped containing one coupling.

WTC's IMC products conform to the following specifications:

- UL 1242** (Underwriter's Laboratories) "Standard for Safety Electrical Intermediate Metal Conduit – Steel". Again, we participate in UL's program of continuous monitoring of our production facilities and our products.
- ANSI C80.6** (American National Standards Institute) "American National Standard for Electrical Intermediate Metal Conduit".
- NEC Article 342** (National Electrical Code).
- U.S. Federal Agencies and the U.S. DOD** (Department of Defense) – these organizations formerly required conformance to their Specification WW-C-581 but have abandoned that document and replaced it with the above listed UL-1242 and ANSI C80.6.

\*Color Designator refers to banding tape on EMT and end caps on IMC and Rigid

Master bundle quantities conform to NEMA Standard RN-2

All WTC Conduit is listed with UL (Underwriter's Laboratories)

Trade Size  
 Metric Designator  
 Nominal O.D.  
 Nominal I.D.  
 Nominal Wall Thickness  
 Nominal Wt. per foot  
 Feet in Sub-Bundle  
 Qty. in Master Bundle  
 Feet in Master Bundle  
 Nom. Wt. per Master Bundle  
 Color Designator\*

in.		in.	in.	in.	lbs.	ft.	qty.	ft.	lbs.	
1/2	16	0.840	0.632	0.104	0.82	100	250	2500	2050	Black
3/4	21	1.050	0.836	0.107	1.09	50	200	2000	2180	Red
1	27	1.315	1.063	0.126	1.61	50	125	1250	2013	Blue
1 1/4	35	1.660	1.394	0.133	2.18	-	90	900	1962	Red
1 1/2	41	1.900	1.624	0.138	2.63	-	80	800	2104	Black
2	53	2.375	2.083	0.146	3.50	-	60	600	2100	Blue
2 1/2	63	2.875	2.489	0.193	5.59	-	37	370	2068	Black
3	78	3.500	3.090	0.205	7.27	-	30	300	2181	Blue
3 1/2	91	4.000	3.570	0.215	8.80	-	25	250	2200	Black
4	103	4.500	4.050	0.225	10.30	-	20	200	2060	Blue
5	129	5.563	5.073	0.245	14.00	-	15	150	2100	Blue
6	155	6.625	6.093	0.266	18.40	-	10	100	1840	Blue

Service, Quality and Friendship Since 1964



## CUSTOMER SATISFACTION

Western Tube & Conduit works hard at developing and maintaining an environment where the employees take a proactive approach to Customer Satisfaction. We know that success means being helpful and knowledgeable up front, understanding all the customer's applications, needs and requirements, producing material that meets all its specifications, and delivering on time. We are highly sensitive to the needs of customers for quick delivery, even on unique items, and pride ourselves on being highly responsive. We are happy to discuss custom products and usually can satisfy the need. If you have special requirements, let us know and see how well we perform.



## QUALITY

Western Tube & Conduit is registered and certified to ISO-9001:2000. Satisfying that set of quality requirements allows us to efficiently maintain a consistent high quality output. We take Quality very seriously, and know that it must be pervasive throughout our company. We think of Quality not only in terms of our products, but also in our processes and systems. Western Tube & Conduit has dedicated itself to Continuous Improvement, and we constantly measure our performance, always seeking to be better than we were previously. We invest a great deal of time and effort into helping our employees understand the needs of customers, and to creating an environment that fosters a conscientious approach to getting things exactly right. Our people work hard to provide what would be satisfactory to them as if they were the customer themselves – nothing less will suffice.

The ultimate goal of Western Tube is to be identified as the company that stands out in the industry as being most responsive to customers and where you automatically go when you need high quality. We know that the journey never ends, and we will always work towards being better at what we do so that you can provide your customers with the same excellence in products and service.



## WESTERN TUBE & CONDUIT CORPORATION

2001 East Dominguez Street P.O. Box 2720  
Long Beach, CA 90801-2720

(800) 310-8823 (310) 537-6300 (714) 952-3188 FAX (310) 604-9785  
[www.westerntube.com](http://www.westerntube.com)

Being a leader in our industry,  
we maintain affiliation with the  
following trade associations

