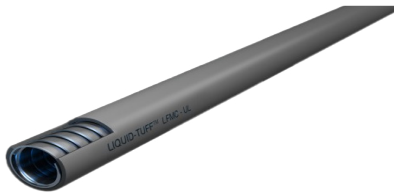




# Liquid-tight Flexible Metal Conduits (LFMC)



**Atkore**  
AFC Cable  
Systems



## Overview

This specification covers AFC Cable Systems, Inc. Atkore Liquid-Tuff 6200 series liquid-tight flexible steel conduit is designed for use as a raceway for power, control and communication cables in accordance with Article 350 of the National Electrical Code (NEC). The product is UL listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL listed in all trade sizes for direct burial in either earth or concrete encasement, outdoor use and sunlight resistance. In addition, the product is CSA certified for use at 75°C (167°F) in dry and oily locations and for -30°C (22°F) low temperature applications. This Liquid-tight Flexible Steel Conduit is manufactured and tested in accordance with UL 360 and CSA standard C22.2 Number 56. The product carries the UL listing mark and the CSA certification mark.

The Type LFMC (UL) Liquid-tight Flexible Steel Conduit is formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The 3/8-inch through 1-1/4-inch trade sizes are manufactured with a square-lock profile that contains a continuous bonding strip. The 1-1/2-inch trade sizes are manufactured with a fully interlocked "S" profile without a bonding strip. The construction is in accordance with UL 360 and CSA C22.2 Number 56 requirements.

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in sizes 3/8-inch through 1-1/4-inch. A separate grounding conductor is required by the NEC® for trade sizes 1-1/2-inch and larger. The Canadian Electric Code requires a grounding conductor for all trade sizes of Liquidtight Flexible Steel Conduit.

## Features

- Trade sizes 3/8-inch - 1-1/4-inch include bonding strip.
- UL liquidtight all sizes
- Sunlight resistant
- Flame retardant gray PVC jacket
- Hot dipped zinc galvanized low carbon steel core

## Applications

Suitable for use in:

- NEC® 350 liquid-tight Flexible Metal Conduit Type LFMC
- Wet locations
- Direct burial
- Concrete embedment
- Exposure to sunlight and weather
- Grounding strip in 3/8-inch to 1-1/4-inch trade sizes per NEC® 250.118(6)
- Flexible connections in hazardous locations:
  - Class I Div 2 NEC® 501.10(B)(2)(4), Class II Div 1 NEC® 502.10(A)(2)(2), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(2) and Class III Div 2 NEC® 503.10(B).
- Raised computer room floors per NEC® 645.5(E)(1)(b)(11)
- Service entrance wiring up to 6-feet per NEC® 230.43(15)
- Marinas and boatyards per NEC® 555.13(A)(1)
- Electric signs and outdoor lighting per NEC® 600.31(A) and 600.32(A)(1)
- Flexible connections for hoists and cranes per NEC® 610.11(C)
- Wiring elevators, dumbwaiters, escalators, moving walks, platforms and stairway chairlifts per NEC® 620.21
- Motors for permanently installed pools where flexible connections are required per NEC® 680.21(A)(2)
- Spas and hot tubs where flexible connections are required per NEC® 680.42(A)(1)
- Feeders for natural and artificially made bodies of water where flexible connections are required per NEC® 682.13
- Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Fire pump wiring per NEC® 695.6(D)
- Electric fire pump control wiring per NEC® 695.14(E)

## Standards and References

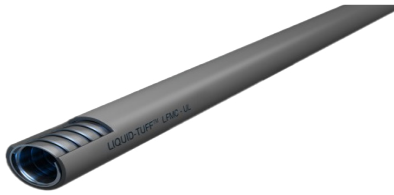
- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- CSA Group: Standard: C22.2 No. 56 File:157782
- NFPA 70 NEC® Article 350
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- Conduit in Trade Sizes 1-1/2 and larger require an equipment grounding conductor per NEC® 350.60

## Temperature Rating

- 80°C/176°F DRY
- 60°C/140°F WET
- 70°C/158°F OIL
- UL Listed for -40C/-40F LOW TEMPERATURE



# Liquid-tight Flexible Metal Conduits (LFMC)



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6200 Series Liquid-tight Flexible Metal Conduit Selection							
Part Number	Price	Trade Size	Length	Minimum Bend Radius	Ø [in]		Weight (lb)
					Inside Min/Max	Outside Min/Max	
<a href="#">6201-30-00</a>	\$132.00	3/8in	100ft	2in	0.484/0.504	0.690/0.710	24
<a href="#">6202-22-00</a>	\$47.00	1/2in	25ft	3.25in	0.622/0.642	0.820/0.840	7
<a href="#">6202-30-00</a>	\$174.00		100ft				31
<a href="#">6203-22-00</a>	\$64.00	3/4in	25ft	4.25in	0.820/0.840	1.030/1.050	12
<a href="#">6203-30-00</a>	\$236.00		100ft				49
<a href="#">6204-30-00</a>	\$418.00	1in	100ft	6.5in	1.041/1.066	1.290/1.315	79
<a href="#">6205-24-00</a>	\$276.00	1-1/4in	50ft	8in	1.380/1.410	1.630/1.660	51
<a href="#">6206-24-00</a>	\$302.00	1-1/2in	50ft	9in	1.575/1.600	1.865/1.900	55
<a href="#">6207-24-00</a>	\$397.00	2in	50ft	11.1in	2.020/2.045	2.340/2.375	73

## Cutting Instructions

### Per NEMA 3.3.3 Cutting FMC & LFMC Conduit

There are three methods for cutting sections of Flexible Metal Conduit: rotary armor cutters, hacksaws, and wire cutters (such as diagonal cutters).

- **Rotary Armor Cutters:** These tools are specifically designed for safely cutting Flexible Metal Conduit and Armored Cable. With a few turns of the handle, the cutter makes a clean cut through the conduit's convolution.
- **Hacksaw:** If using a hacksaw, it is recommended to use a sharp blade with at least 32 teeth per inch. For best results, cut one of the convolutions at approximately a 60-degree angle.
- **Wire Cutters:** When using wire cutters, such as diagonal cutters, the armor can either be broken or unwound. To break the armor, bend the conduit at the desired cut point, twist the armor slightly, and insert the cutting pliers between the convolutions to make the cut. Be sure to twist the armor back into alignment with the convolutions before inserting it into the connector.

For Liquid-tight Flexible Metal Conduit, a square cut is required. This can be achieved using:

- A sharp hacksaw blade with at least 32 teeth per inch.
- Alternatively, a band saw with a 1/2in x .025in thick blade (24 teeth per inch, no set) and a blade speed of approximately 350 feet per minute can also be used.
- For larger conduit sizes, wrap reinforced tape around the circumference and cut directly through the center of the tape. This helps prevent the ends from flaring during the cut.



# Liquid-tight Flexible Non-metallic Conduit (NM)



## Overview

Atkore Liquid-Tuff series 6000 type LFNC-B non-metallic liquid-tight flexible conduit is designed for use in wet, dry or oily locations. It is flame resistant and can be used for power, control and communication cables in compliance with Article 356 of the National Electric Code. The product is UL listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL listed through 2-inch trade sizes for direct burial, outdoor use and sunlight resistance. This liquid-tight flexible non-metallic conduit is manufactured and tested in accordance with UL 1660. The product carries both the UL and cUL Listing Marks.

Liquid-tight flexible non-metallic conduit, type LFNC-B is a raceway of circular cross section with a smooth polyvinyl chloride (PVC) inner surface and an integral rigid PVC reinforcing member within the conduit wall. The wall thickness and dimensions of the integral conduit comply with Table 3 UL 1660 which are summarized in the table on the following page. A rugged moisture, oil and sunlight resistant flexible polyvinyl chloride (PVC) jacket is extruded directly over the integral rigid PVC core.

A separate grounding conductor is required by both the National and Canadian Electrical Code for all trade sizes.

The surface of the outer jacket is clearly marked with a legible print legend in compliance with UL 1660.

## Features

- Rugged Nonmetallic PVC
- Interior integral reinforced member within conduit wall
- Integral Type B construction per NEC® 356.2(2)
- Rigid PVC spiral core for strength
- Outdoor applications including direct burial
- Rated for concrete embedment
- Sunlight and oil resistant
- Non-conductive raceway
- Gray jacket

## Applications

Suitable for use in:

- NEC® 356.2(2) liquid-tight flexible non-metallic conduit
- Type LFNC-B
- Wet locations
- Direct burial
- Concrete embedment
- Exposure to sunlight and weather
- Flexible connections in hazardous locations:
- Class I Div 2 NEC® 501.10(B)(2)(5), Class II Div 1 NEC® 502.10(A)(2)(3), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(3) and Class III Div 2 NEC® 503.10(B).
- Raised computer room floors per NEC® 645.5(E)(1)(b)(12)
- Service entrance wiring per NEC® 230.43(16)
- Marinas and boatyards per NEC® 555.34(A)(1)
- Electric signs and outdoor lighting per NEC® 600.31(A) and 600.32(A)(1)
- Flexible connections for hoists and cranes per NEC® 610.11(C)
- Wiring elevators, dumbwaiters, escalators, moving walks, platforms and stairway chairlifts per NEC® 620.21 motors for permanently installed pools where flexible connections are required per NEC® 680.21(A)(2)
- Spas and hot tubs where flexible connections are required per NEC® 680.42(A)(1)
- Feeders for natural and artificially made bodies of water where flexible connections are required per NEC® 682.13
- Solar photovoltaic (PV) systems per NEC® 690.31(A)
- Fire pump wiring per NEC® 695.6(D)
- Electric fire pump control wiring per NEC® 695.14(E)

## Standards and References

- Underwriters Laboratories Inc.:
- Standard: UL 1660
- File: E123464
- NFPA 70: NEC® Article 356
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- All Trade Sizes require an equipment grounding conductor per NEC® 356.60
- All Trade Sizes require a bonding conductor per CEC Rule 12-1306

## Temperature Rating

- 80°C (176°F) Dry
- 60°C (140°F) Wet
- 70°C (158°F) Oil



# Liquid-tight Flexible Non-metallic Conduit (NM)



**Atkore**  
AFC Cable  
Systems

## 6000 Series Liquid-tight Flexible Non-metallic Conduit Selection

Part Number	Price	Trade Size [in]	Length	Minimum Bend Radius	Ø [in]		Weight (lb)
					Inside Min/Max	Outside Min/Max	
<a href="#"><u>6001-30-00</u></a>	\$73.00	3/8in	100ft	2in	0.484 / 0.504	0.690 / 0.710	12
<a href="#"><u>6002-22-00</u></a>	\$20.00	1/2in	25ft	3.25in	0.622 / 0.642	0.820 / 0.840	3
<a href="#"><u>6002-30-00</u></a>	\$74.00		100ft				13
<a href="#"><u>6003-22-00</u></a>	\$27.50	3/4in	25ft	4.25in	0.820 / 0.840	1.030 / 1.050	4
<a href="#"><u>6003-30-00</u></a>	\$103.00		100ft				18
<a href="#"><u>6004-24-00</u></a>	\$88.00	1in	50ft	6.5in	1.041 / 1.066	1.290 / 1.315	14
<a href="#"><u>6004-30-00</u></a>	\$164.00		100ft				27
<a href="#"><u>6005-24-00</u></a>	\$113.00	1-1/4in	50ft	8in	1.380 / 1.410	1.630 / 1.660	35
<a href="#"><u>6006-24-00</u></a>	\$140.00	1-1/2in	50ft	9in	1.575 / 1.600	1.865 / 1.900	48
<a href="#"><u>6007-24-00</u></a>	\$196.00	2in	50ft	11.1in	2.020 / 2.045	2.340 / 2.375	70