



FLEXIBLE ELECTRICAL CONDUIT



**electri-flex company**

Jacketed Metallic

EMI / RFI Shielded

Unjacketed Metallic

Nonmetallic



# Leadership in flexible



Liquatite® by Electri-Flex has earned a global reputation for manufacturing innovation and product quality. The pages that follow detail the most diverse flexible electrical conduit line in the world, with respect to available sizes, types and colors. But Electri-Flex's real source of success has sprung from its partnership philosophy. This philosophy was best stated by H. W. "West" Kinander, Jr., former president and co-owner, shortly before his untimely death in 1991.

*"Quality, service, fair distributor margins and loyalty to one's business partners has been the theme since our company began. It will continue to be the benchmark by which our company will be judged. You have my word."*



—H. W. "West" Kinander, Jr.

# electrical conduit

## for over 60 years

### The Liqueflex Line

The Liqueflex line includes nearly 50 types of flexible electrical conduit for contractors, OEMs, industrial maintenance and repair (MRO), government, utility and export users. Most conduits are available as standard products, and Electri-Flex has the manufacturing capability to develop specialized products as they are needed by customers.

An innovator in the liquidtight conduit industry, Electri-Flex is also a leader in packaging improvements and manufacturing patents. The majority of production tools and methods used are unique in that they are developed and built by Electri-Flex in its own tool shop in Roselle, Illinois, USA.

### Quality Assurance

Quality control for Liqueflex is performed by all levels of employment. To assure a high degree of quality assurance, Electri-Flex utilizes a vertically integrated manufacturing and production system, with each step performed in-house by a team of experts.

Our Quality Assurance Program offers testing procedures from the time raw materials are received at the facility to when the finished conduit is packaged and readied for shipping. Each foot of conduit produced passes through a series of gauges to determine diameters. Actual physical appearance is also checked.

A Quality Control Inspector randomly collects samples of each product at various stages of production. Testing covers such characteristics as tension strength, crush, flexibility and flammability. Further testing is also conducted during unannounced visits by both UL and CSA inspectors.

### Distribution and Representative Partners

Electri-Flex's representatives and distributors are the leaders in the markets they serve. The partners who have made Electri-Flex an industry leader share these qualities:

- **Representatives**—High degree of integrity and impeccable business reputation, knowledge of the product and the customer, carry compatible lines to make customer and distributor calls more productive, and day-to-day involvement by the principal of the company. For a representative in your area, please visit [www.electriflex.com](http://www.electriflex.com)
- **Distributors**—Industrially oriented, sound relations with customers, solid reputation in the community and quality sales people.

We choose only top-performing distributors who have the ability to grow with us in the electrical industry.

### Marketing Support

Making the best product doesn't create success without exceptional sales, service

and marketing programs that meet the needs of representatives and distributors. Our sales support services include:

- Rep warehouse locations across the United States
- On-site 64,000-square-foot distribution center
- Shipments of stocked items within one to three days from consigned stock locations
- Responsive sales and customer service departments
- Effective advertising support program that produces qualified leads
- Referrals on inquiries within a distributor's territory
- Special "off-sheet" price quotations
- Training seminars
- Liberal catalog and sample policy

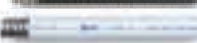
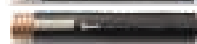
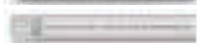
### A Close-knit Family Business

Electri-Flex was founded and is still owned by the Kinander family. The cultural focus is on high-quality products and services, with a strong sense of loyalty to Electri-Flex and its partners. We are dedicated to keeping this spirit of quality and loyalty alive within each employee. Electri-Flex's employees, representatives, distributors and customer partners continue to create the success Electri-Flex has enjoyed for more than 60 years.

### Industry Affiliations

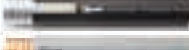
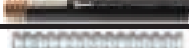
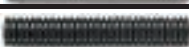
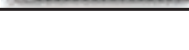


# Conduit Application Guide

|                     |                                                                                     |            | Flexibility       |                   |          |                  |                 |              |                     |                          |              |                 |                       |                                        |                    |                   |                |  |  |  |
|---------------------|-------------------------------------------------------------------------------------|------------|-------------------|-------------------|----------|------------------|-----------------|--------------|---------------------|--------------------------|--------------|-----------------|-----------------------|----------------------------------------|--------------------|-------------------|----------------|--|--|--|
|                     |                                                                                     |            | Continued Flexing | Small Bend Radius | Flexible | Pliable (Static) | Metal Used      | Plastic Used | High Mech. Strength | Listed for Direct Burial | Halogen-Free | Low Fire Hazard | Sunlight/UV Resistant | Accepts Standard Liquid-tight Fittings | Self-Extinguishing | EMI/RFI Shielding | Approval       |  |  |  |
| JACKETED METALLIC   |    | TYPE LA    | 9                 |                   | •        |                  | Steel           | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL SP CE       |  |  |  |
|                     |    | TYPE LT    | 10                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 | Good                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE EF    | 11                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 | Good                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE ATLA  | 12                |                   |          | •                | Steel           | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL SP CE       |  |  |  |
|                     |    | TYPE AT    | 13                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 | Best                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE ATX   | 14                |                   | •        | •                | Steel           | TPR          |                     |                          | •            |                 | Best                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE ALT   | 15                |                   |          | •                | Aluminum        | PVC          |                     |                          |              |                 | Good                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE ZHLA  | 16                |                   |          | •                | Steel           | PU           | •                   | •                        | •            | •               | Best                  | •                                      | •                  |                   | UL SP CE       |  |  |  |
|                     |    | TYPE CEA   | 17                |                   |          | •                | Steel           | PU           |                     |                          | •            | •               | Best                  | •                                      | •                  |                   | CE             |  |  |  |
|                     |    | TYPE ACEA  | 18                |                   |          | •                | Aluminum        | PU           |                     |                          | •            | •               | Best                  | •                                      | •                  |                   | CE             |  |  |  |
|                     |    | TYPE LOR   | 19                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 | Best                  | •                                      |                    |                   | CE             |  |  |  |
|                     |    | TYPE CSA   | 20                |                   |          | •                | Steel           | PVC          | •                   |                          |              |                 | Good                  | •                                      | •                  |                   | SP CE          |  |  |  |
|                     |    | TYPE VJC   | 21                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 |                       | •                                      |                    |                   |                |  |  |  |
|                     |    | TYPE LAFG  | 22                |                   | •        | •                | Steel           | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL NSF/FDA CE  |  |  |  |
|                     |   | TYPE LTFG  | 23                |                   | •        | •                | Steel           | PVC          |                     |                          |              |                 | Good                  | •                                      |                    |                   | NSF/FDA CE     |  |  |  |
|                     |  | TYPE LSSFG | 24                |                   |          | •                | Stainless Steel | PVC          | •                   |                          |              |                 | Good                  | •                                      |                    |                   | NSF/FDA CE     |  |  |  |
|                     |  | TYPE LTSS  | 25                |                   |          | •                | Stainless Steel | PVC          | •                   |                          |              |                 | Good                  | •                                      |                    |                   | CE             |  |  |  |
|                     |  | TYPE ZHSS  | 26                |                   |          | •                | Stainless Steel | PU           | •                   |                          | •            | •               | Best                  | •                                      | •                  |                   | CE             |  |  |  |
|                     |  | TYPE ATXSS | 27                |                   |          | •                | Stainless Steel | TPR          | •                   |                          | •            |                 | Good                  | •                                      |                    |                   | CE             |  |  |  |
|                     |  | TYPE ATSS  | 27                |                   |          | •                | Stainless Steel | PVC          | •                   |                          |              |                 | Best                  | •                                      |                    |                   | CE             |  |  |  |
|                     |  | TYPE CBLA  | 28                |                   |          | •                | Steel           | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL SP CE       |  |  |  |
| EMI/RFI             |  | TYPE SLA   | 32                |                   |          | •                | Steel           | PVC          | •                   | •                        | Available    | Available       | Best                  | •                                      | •                  | •                 | UL CE          |  |  |  |
|                     |  | TYPE EMS   | 33                |                   |          | •                | Bronze          | PVC          |                     |                          | Available    | Available       | Best                  | •                                      | •                  | •                 | CE             |  |  |  |
|                     |  | TYPE EMCS  | 34                |                   |          | •                | Bronze          | PVC          |                     |                          | Available    | Available       | Best                  | •                                      | •                  | •                 | CE             |  |  |  |
| UNJACKETED METALLIC |  | TYPE BR    | 37                |                   |          | •                | Steel           |              | •                   |                          |              |                 |                       |                                        |                    |                   | UL SP* CE      |  |  |  |
|                     |  | TYPE ABR   | 38                |                   |          | •                | Aluminum        |              |                     |                          |              |                 |                       |                                        |                    |                   | UL SP* CE      |  |  |  |
|                     |  | TYPE ABRH  | 39                |                   |          | •                | Aluminum        |              | •                   |                          |              |                 |                       |                                        |                    |                   | UL** SP CE     |  |  |  |
|                     |  | TYPE USL   | 40                |                   | •        | •                | Steel           |              |                     |                          |              |                 |                       |                                        |                    |                   | RA             |  |  |  |
|                     |  | TYPE SL    | 41                |                   | •        | •                | Steel           |              |                     |                          |              |                 |                       |                                        |                    |                   |                |  |  |  |
|                     |  | TYPE UG    | 42                |                   |          |                  | •               | Steel        |                     |                          |              |                 |                       |                                        |                    |                   |                |  |  |  |
| NONMETALLIC         |  | CORRLOK®   | 44                | •                 | •        | •                |                 | Nylon        | •                   |                          | •            | •               | Good                  |                                        | •                  |                   | RA             |  |  |  |
|                     |  | TYPE LNM-P | 45                | •                 |          | •                |                 | PVC          |                     |                          |              |                 | Best                  | FNMC-A                                 | •                  |                   | cUL SP         |  |  |  |
|                     |  | TYPE NM    | 46                |                   |          | •                |                 | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL SP          |  |  |  |
|                     |  | TYPE NMHT  | 47                |                   |          | •                |                 | PVC          | •                   | •                        |              |                 | Best                  | •                                      | •                  |                   | UL SP          |  |  |  |
|                     |  | TYPE NMFG  | 48                |                   |          | •                |                 | PVC          |                     |                          |              |                 | Good                  | •                                      |                    |                   | UL SP NSF, FDA |  |  |  |
|                     |  | TYPE NM2   | 49                | •                 |          | •                |                 | PVC          |                     |                          |              |                 | Good                  | •                                      | •                  |                   | RA SP          |  |  |  |

\*Type BR is CSA certified in 3/8" only. Type ABR is CSA certified in 3/8" and 7/16" only. \*\*Type ABRH is UL listed in sizes 1/2" - 4" only.  
Shield-Flex, SLA, EMS, EMCS, HFSLA, HFEMS, HFEMCS, are trademarks of Electri-Flex Company, registered in the U.S. Patent and Trademark Office.

# Conduit Application Guide

|                                                                                     |                                                                                     |                                                                                     | Temperature Range |      |      |      |     |      |      |      |      |      |      |      |      | General Chemical Resistance |   |   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------|------|------|------|-----|------|------|------|------|------|------|------|------|-----------------------------|---|---|
|                                                                                     |                                                                                     |                                                                                     | °C                | -60° | -40° | -20° | 0°  | 50°  | 60°  | 75°  | 80°  | 90°  | 105° | 150° |      |                             |   |   |
|                                                                                     |                                                                                     |                                                                                     | °F                | -76° | -40° | -4°  | 32° | 122° | 140° | 167° | 176° | 194° | 221° | 302° | Oils | Acids                       |   |   |
| Conduit Type                                                                        |                                                                                     |                                                                                     | Page              |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
| JACKETED METALLIC                                                                   |    | TYPE LA                                                                             | 9                 |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE LT                                                                             | 10                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE EF                                                                             | 11                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE ATLA                                                                           | 12                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE AT                                                                             | 13                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE ATX                                                                            | 14                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE ALT                                                                            | 15                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE ZHLA                                                                           | 16                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE CEA                                                                            | 17                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE ACEA                                                                           | 18                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE LOR                                                                            | 19                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |    | TYPE CSA                                                                            | 20                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |   | TYPE VJC                                                                            | 21                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE LAFG                                                                           | 22                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE LTFG                                                                           | 23                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE LSSFG                                                                          | 24                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE LTSS                                                                           | 25                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE ZHSS                                                                           | 26                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE ATXSS                                                                          | 27                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE ATSS                                                                           | 27                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE CBLA                                                                           | 28                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     | EMI/RFI                                                                             |  | TYPE SLA          | 32   |      |      |     |      |      |      |      |      |      |      |      |                             | • | • |
|  |                                                                                     | TYPE EMS                                                                            | 33                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|  |                                                                                     | TYPE EMCS                                                                           | 34                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
| UNJACKETED METALLIC                                                                 |  | TYPE BR                                                                             | 37                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
|                                                                                     |  | TYPE ABR                                                                            | 38                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
|                                                                                     |  | TYPE ABRH                                                                           | 39                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
|                                                                                     |  | TYPE USL                                                                            | 40                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
|                                                                                     |  | TYPE SL                                                                             | 41                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
|                                                                                     |  | TYPE UG                                                                             | 42                |      |      |      |     |      |      |      |      |      |      |      |      |                             |   |   |
| NONMETALLIC                                                                         |  | CORRLOK®                                                                            | 44                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE LNM-P                                                                          | 45                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE NM                                                                             | 46                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE NMHT                                                                           | 47                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE NMFG                                                                           | 48                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |
|                                                                                     |  | TYPE NM2                                                                            | 49                |      |      |      |     |      |      |      |      |      |      |      |      | •                           | • |   |



# Products for Every Market

***E**lectri-Flex offers flexible conduit for any application. The diversity of the Liquatite® product line allows us to serve the more than 20 major markets listed in this catalog as well as many other specialty markets.*

*Electri-Flex conduits are manufactured with features and specifications that allow them to be used across multiple markets. Many products are tailor-made to specific markets, such as for food processing and pharmaceuticals, while others can be used across a wide variety of markets. Some markets include:*

- Construction
- Data Center
- Defense
- Fixture/AC Whips
- Food Processing & Pharmaceuticals
- Healthcare
- Machine Tools (OEM)
- Mining, Oil & Gas Refineries
- Power Plants, Steel Mills & Utilities
- Rail/Transit
- Renewable Energy
- Robotics
- Security Cameras
- Ship Building & Aerospace
- Telecommunications & Cell Towers
- Wastewater

*The following page provides an overview of the primary markets served by Electri-Flex. Use it to find the best conduit for these markets.*



# NONMETALLIC

Nonmetallic flexible conduits are made without a metal core and are ideal for corrosive environments, high flexing applications and where weight might be an issue. Materials used are flexible and rigid PVC. For more information on our Nonmetallic Conduits, see below for an overview or continue through this section.

| Conduit Type                                                                      |                              | Page      |
|-----------------------------------------------------------------------------------|------------------------------|-----------|
|  | <b>CORRLOK</b>               | See Below |
|  | <b>TYPE LMN-P</b>            | 45        |
|  | <b>TYPE NM</b>               | 46        |
|  | <b>TYPE NMHT</b>             | 47        |
|  | <b>TYPE NMFG</b>             | 48        |
|  | <b>TYPE NM2</b>              | 49        |
|  | <b>TYPE NMLT &amp; NMSC</b>  | 50        |
|  | <b>NONMETALLIC A/C WHIPS</b> | 51        |

### Distinctive Characteristics May Include:

- UL recognized, UL listed, CSA certified
- NSF Certified
- WEEE and RoHS Compliant
- Flame- and sunlight-resistant
- High impact and crush strength
- Tight bends
- Wide temperature ranges

### Applications/Vertical Markets:

- Air Conditioning Hookups
- Machine Tools
- Cable Carriers
- Pools and Spas
- Outdoor Wiring
- Solar/Alternative Energy
- Robotics
- Power Trac
- Mining
- Oil & Gas
- Power Plants
- Cell Towers
- Construction
- Data Centers
- Food Processing/Pharmaceuticals
- Security
- Telecommunication
- Wastewater



The Corrluk System provides lightweight, liquidtight, flexible raceway alternatives that are easy to work with and stand up to tough environments.

For details, visit [www.electriflex.com](http://www.electriflex.com) and request the Corrluk catalog.

# TYPE NMHT

## Markets:

- Cell Towers
- Construction
- Power Plants
- Renewable Energy
- Telecommunications
- Utilities
- Wastewater Treatment



This version of Type NM is designed to withstand high temperature environments. NMHT can be used to contain conductors having insulation materials with higher temperature ratings.

## Construction:

- Type NM is a helically wound integral Type B construction. It contains a spiral of rigid PVC reinforcement imbedded within the PVC wall.

## Application:

Type NMHT is intended for installation in accordance with Article 356 of the NEC (ANSI/NFPA-70) for Flexible Liquidtight Nonmetallic Conduit (LFNC-B or FNMC-B).

- For containment of 1000 volt and lower potential circuits.
- Listed and marked for outdoor use.
- Listed and marked for direct burial and in poured concrete
- Installations in hazardous (classified) locations:
  - Class I Div. 2 Article 501
  - Class II Div. 1 & 2 Article 502
  - Class III Div. 1 & 2 Article 503
- Electric signs and outdoor lighting over 1000 volts. Article 600.32(A).
- Wiring methods for pools and spas. Article 680.
- Conforms to the requirements of section 14.5.5 of the Electrical Standard for Industrial Machinery NFPA-79.

## Fittings:

Suitable for use with nonmetallic fittings marked for FNMC-B or LFNC-B for liquidtight flexible nonmetallic conduit Type B or with standard metal liquidtight fittings. See NMLT connectors (p. 50) for further information.

Continuous lengths on reels available in 1/2" and 3/4" diameters only. Larger sizes available. Consult factory.

Proudly made in the U.S.A.

## Product Information

### Certifications & Compliance

Listed File # E79308  
Conforms to Underwriters Laboratories Standard ANSI/UL 1660 Type B.

Certified File #LL230485  
Conforms to CSA 22.2 No. 227.2 Type B.

WEEE and RoHS Compliant

ARRA Certification

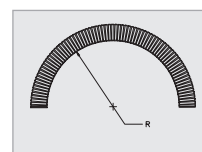
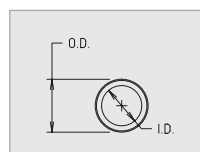
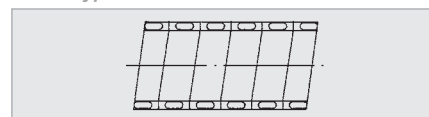
### Standard Colors

Black. Other colors available upon request

### Working Temperatures

-20°C to 105°C Dry / 60°C Wet / 70°C Oil

### NMHT Type B



| US Trade Size | ISO (MM) | CSA (MM) | Type    | INTERNAL DIAMETER |           | OUTER DIAMETER |           | INSIDE BEND RADIUS | WEIGHT<br>Lbs. per 100 Ft. | STANDARD LENGTH |        |
|---------------|----------|----------|---------|-------------------|-----------|----------------|-----------|--------------------|----------------------------|-----------------|--------|
|               |          |          |         | Min (IN.)         | Max (IN.) | Min (IN.)      | Max (IN.) | Static (IN.)       |                            | Carton (Ft.)    | Part # |
| 3/8"          | 16       | 12       | NMHT-10 | 0.484             | 0.504     | 0.690          | 0.710     | 2.0                | 10                         | 100             | 82101  |
| 1/2"          | 20       | 16       | NMHT-11 | 0.622             | 0.642     | 0.820          | 0.840     | 3.25               | 11                         | 100             | 82111  |
| 3/4"          | 25       | 21       | NMHT-12 | 0.820             | 0.840     | 1.030          | 1.050     | 4.25               | 15                         | 100             | 82122  |
| 1"            | 32       | 27       | NMHT-13 | 1.041             | 1.066     | 1.290          | 1.315     | 6.5                | 25                         | 100             | 82132  |
| 1 1/4"        | 40       | 35       | NMHT-14 | 1.380             | 1.410     | 1.630          | 1.660     | 8.0                | 34                         | 100             | 82142  |
| 1 1/2"        | 50       | 41       | NMHT-15 | 1.575             | 1.600     | 1.865          | 1.900     | 9.0                | 42                         | 50              | 82152  |
| 2"            | 63       | 53       | NMHT-16 | 2.020             | 2.045     | 2.340          | 2.375     | 11.0               | 60                         | 50              | 82162  |

# ENGINEERING INFORMATION



## ELECTRI-FLEX VISE

The Electri-Flex cutting vise is recommended for accurate, straight cuts in the field. This lightweight cast iron vise can either be bench-mounted or carried in the tool box. The clamping mechanism securely holds the flexible conduit while the slots guide a hacksaw to ensure a clean, square cut. Suitable for conduit trade sizes 3/8" to 1-1/2". Works well on other tubing and materials too. Order P/N: 90030, weight 2.4 lbs.

## CUTTING FLEXIBLE CONDUITS

Proper cutting methods for flexible conduits are important to ensure a sealed connection when assembled with intended fittings. Furthermore, in case of flexible conduits containing steel, a clean, square cut is necessary for establishing a good connection for continuity of the ground.

## HAND CUTTING IN FIELD

When using a handheld hacksaw, care should be taken to make a square, clean cut. This can be easily achieved through the use of the cutting vise shown on this page. For best results, a blade having 24 to 32 teeth per inch with no-set is recommended. For larger sizes, apply reinforced tape around the circumference of the conduit and cut directly through the middle of the tape. This will reduce the possibility of flaring the ends while cutting.

## REPETITIVE PRODUCTION CUTTING

It has been our experience that in order to achieve the best results; a band saw having a blade with 24 to 32 teeth per inch at a speed of 300 to 350 feet per minute should be used. A no-set blade will produce the cleanest cut. Conduit should be held and supported in a safe manner. Abrasive cut-off wheels and chop saws are not recommended.

## Conduit Wire Fill Charts

Per National Electrical Code—Chapter 9, Table 4

| Trade Size                       | Internal Diameter (In.) | Total Area 100% (sq. In.) | 2 Wires 31% (sq. In.) | Over 2 Wires 40% (sq. In.) | 1 Wire 53% (sq. In.) | Internal Diameter (In.)                                                                                                                               | Total Area 100% (sq. In.) | 2 Wires 31% (sq. In.) | Over 2 Wires 40% (sq. In.) | 1 Wire 53% (sq. In.) |
|----------------------------------|-------------------------|---------------------------|-----------------------|----------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------|----------------------------|----------------------|
| Flexible Metal Conduit — BR, ABR |                         |                           |                       |                            |                      | Liquidtight Flexible Metal Conduit — LA, LT, EF, ATLA, AT, ATX, ALT, ZHLA, CEA, ACEA, LOR, CSA, VJC, LAFG, LTFG, LSSFG, LTSS, ZHSS, ATXSS, ATSS, CBLA |                           |                       |                            |                      |
| 3/8                              | 0.384                   | 0.116                     | 0.036                 | 0.046                      | 0.061                | 0.494                                                                                                                                                 | 0.192                     | 0.060                 | 0.077                      | 0.102                |
| 1/2                              | 0.635                   | 0.317                     | 0.098                 | 0.127                      | 0.168                | 0.632                                                                                                                                                 | 0.314                     | 0.097                 | 0.126                      | 0.166                |
| 3/4                              | 0.824                   | 0.533                     | 0.165                 | 0.213                      | 0.282                | 0.830                                                                                                                                                 | 0.541                     | 0.168                 | 0.216                      | 0.287                |
| 1                                | 1.020                   | 0.817                     | 0.253                 | 0.327                      | 0.433                | 1.054                                                                                                                                                 | 0.872                     | 0.270                 | 0.349                      | 0.462                |
| 1-1/4                            | 1.275                   | 1.277                     | 0.396                 | 0.511                      | 0.677                | 1.395                                                                                                                                                 | 1.528                     | 0.474                 | 0.611                      | 0.810                |
| 1-1/2                            | 1.538                   | 1.857                     | 0.576                 | 0.743                      | 0.984                | 1.588                                                                                                                                                 | 1.979                     | 0.613                 | 0.792                      | 1.049                |
| 2                                | 2.040                   | 3.269                     | 1.013                 | 1.308                      | 1.733                | 2.033                                                                                                                                                 | 3.245                     | 1.006                 | 1.298                      | 1.720                |
| 2-1/2                            | 2.500                   | 4.909                     | 1.522                 | 1.964                      | 2.602                | 2.493                                                                                                                                                 | 4.879                     | 1.512                 | 1.952                      | 2.586                |
| 3                                | 3.000                   | 7.069                     | 2.191                 | 2.828                      | 3.747                | 3.085                                                                                                                                                 | 7.475                     | 2.317                 | 2.990                      | 3.962                |
| 3-1/2                            | 3.500                   | 9.621                     | 2.983                 | 3.848                      | 5.099                | 3.520                                                                                                                                                 | 9.731                     | 3.017                 | 3.892                      | 5.157                |
| 4                                | 4.000                   | 12.566                    | 3.895                 | 5.026                      | 6.660                | 4.020                                                                                                                                                 | 12.692                    | 3.935                 | 5.077                      | 6.727                |

| Flexible Nonmetallic Conduit Type A — LNM-P |       |       |       |       |       | Liquidtight Nonmetallic Conduit Type B — NM, NMHT, NMFG, NM2 |       |       |       |       |
|---------------------------------------------|-------|-------|-------|-------|-------|--------------------------------------------------------------|-------|-------|-------|-------|
| 3/8                                         | 0.495 | 0.192 | 0.060 | 0.077 | 0.102 | 0.494                                                        | 0.192 | 0.060 | 0.077 | 0.102 |
| 1/2                                         | 0.630 | 0.312 | 0.097 | 0.125 | 0.165 | 0.632                                                        | 0.314 | 0.097 | 0.126 | 0.166 |
| 3/4                                         | 0.825 | 0.535 | 0.166 | 0.214 | 0.284 | 0.830                                                        | 0.541 | 0.168 | 0.216 | 0.287 |
| 1                                           | 1.043 | 0.854 | 0.265 | 0.342 | 0.453 | 1.054                                                        | 0.872 | 0.270 | 0.349 | 0.462 |
| 1-1/4                                       | 1.383 | 1.501 | 0.465 | 0.600 | 0.796 | 1.395                                                        | 1.528 | 0.474 | 0.611 | 0.810 |
| 1-1/2                                       | 1.603 | 2.017 | 0.625 | 0.807 | 1.069 | 1.588                                                        | 1.979 | 0.613 | 0.792 | 1.049 |
| 2                                           | 2.063 | 3.341 | 1.036 | 1.336 | 1.771 | 2.033                                                        | 3.245 | 1.006 | 1.298 | 1.720 |

| NPT Threaded Fittings |       | NPT Threaded Fittings — Knock Out Diameter |  |
|-----------------------|-------|--------------------------------------------|--|
| 3/8                   | 1/2   | 7/8                                        |  |
| 1/2                   | 1/2   | 7/8                                        |  |
| 3/4                   | 3/4   | 1-3/32                                     |  |
| 1                     | 1     | 1-23/64                                    |  |
| 1-1/4                 | 1-1/4 | 1-23/32                                    |  |
| 1-1/2                 | 1-1/2 | 2                                          |  |
| 2                     | 2     | 2-1/2                                      |  |

## Dimensions

| Carton Type                    | Size: L x W x H<br>in. (cm.) |                   |                    | Trade Size<br>in. | ISO Size<br>mm. | CSA Size<br>mm. | Length Per Carton<br>ft. (m.) |
|--------------------------------|------------------------------|-------------------|--------------------|-------------------|-----------------|-----------------|-------------------------------|
|                                | L                            | W                 | H                  |                   |                 |                 |                               |
| Liquatite Types LA, LT, and EF |                              |                   |                    |                   |                 |                 |                               |
| R1                             | 14-3/8<br>(36.53)            | 7-3/4<br>(19.685) | 15<br>(38.1)       | 1/4               | 10              | 8               | 250 (75)                      |
|                                |                              |                   |                    | 5/16              | 12              | 10              | 250 (75)                      |
|                                |                              |                   |                    | 3/8               | 16              | 12              | 100 (30)                      |
| R2                             | 16-3/4<br>(42.55)            | 8<br>(20.32)      | 17-5/8<br>(44.77)  | 1/2               | 20              | 16              | 100 (30)                      |
| R3                             | 20-3/8<br>(51.77)            | 8<br>(20.32)      | 20-3/4<br>(52.7)   | 3/4               | 25              | 21              | 100 (30)                      |
| R4                             | 24-1/2<br>(62.23)            | 8-1/4<br>(20.96)  | 25-1/4<br>(64.135) | 1                 | 32              | 27              | 100 (30)                      |
|                                |                              |                   |                    | 1-1/4             | 40              | 35              | 50 (15)                       |
| R6                             | 37<br>(93.98)                | 10-3/8<br>(26.37) | 33-5/8<br>(85.41)  | 1-1/2             | 50              | 41              | 50 (15)                       |
|                                |                              |                   |                    | 2                 | 63              | 53              | 50 (15)                       |
|                                |                              |                   |                    | 2-1/2             | 70              | 63              | 25 (8)                        |
| #3                             | 52<br>(132.08)               | 8-1/2<br>(21.59)  | 52<br>(132.08)     | 3                 | 80              | 78              | 25 (8)                        |
| 3 & 4                          | 60-1/4<br>(153.04)           | 6-1/2<br>(16.5)   | 60-1/4<br>(153.04) | 3-1/2             | 90              | 91              | 25 (8)                        |
|                                |                              |                   |                    | 4                 | 100             | 103             | 25 (8)                        |
| 5 & 6                          | 66<br>(167.64)               | 12-1/2<br>(31.75) | 66<br>(167.64)     | 5                 | 125             | -               | 25 (8)                        |
|                                |                              |                   |                    | 6                 | 150             | -               | 25 (8)                        |
| Nonmetallic Type LNM-P         |                              |                   |                    |                   |                 |                 |                               |
| Small LNM-P                    | 34-3/4<br>(88.27)            | 7<br>(17.78)      | 34-3/4<br>(88.27)  | 3/8               | 16              | 12              | 250 (75)                      |
|                                |                              |                   |                    | 1/2               | 20              | 16              | 200 (60)                      |
|                                |                              |                   |                    | 3/4               | 25              | 21              | 175 (50)                      |
|                                |                              |                   |                    | 1                 | 32              | 27              | 100 (30)                      |
|                                |                              |                   |                    | 1-1/4             | 40              | 35              | 100 (30)                      |
| Large LNM-P                    | 43<br>(109.22)               | 7-3/4<br>(19.7)   | 43<br>(109.22)     | 1-1/2             | 50              | 41              | 100 (30)                      |
|                                |                              |                   |                    | 2                 | 63              | 53              | 50 (15)                       |
| Nonmetallic Type NM and NM2    |                              |                   |                    |                   |                 |                 |                               |
| -                              | 6<br>(15.24)                 | 20<br>(50.8)      | 20<br>(50.8)       | 3/8               | 16              | 12              | 100 (30)                      |
| -                              | 6<br>(15.24)                 | 20<br>(50.8)      | 20<br>(50.8)       | 1/2               | 20              | 16              | 100 (30)                      |
| -                              | 7<br>(17.78)                 | 22<br>(55.88)     | 22<br>(55.88)      | 3/4               | 25              | 21              | 100 (30)                      |
| -                              | 8<br>(20.32)                 | 24<br>(60.96)     | 24<br>(60.96)      | 1                 | 32              | 27              | 100 (30)                      |
| -                              | 9<br>(22.86)                 | 26<br>(66.04)     | 26<br>(66.04)      | 1-1/4             | 40              | 35              | 100 (30)                      |
| -                              | 7<br>(17.78)                 | 30<br>(76.2)      | 30<br>(76.2)       | 1-1/2             | 50              | 41              | 50 (15)                       |
| -                              | 7<br>(17.78)                 | 30<br>(76.2)      | 30<br>(76.2)       | 2                 | 63              | 53              | 50 (15)                       |

## Skids

| Standard Skid Quantities: 48" x 40" x 5" |                |              |                      |                   |     |
|------------------------------------------|----------------|--------------|----------------------|-------------------|-----|
| Trade Size (in.)                         | Catalog Number | Flex ABR, BR | Liquatite EF, LA, LT | Nonmetallic LNM-P | NM  |
| 3/8                                      | 10             | 60 coils     | 45 cartons           | 100               | 250 |
| 1/2                                      | 11             | 25 coils     | 45 cartons           | 100               | 200 |
| 3/4                                      | 12             | 25 coils     | 24 cartons           | 100               | 175 |
| 1                                        | 13             | 28 coils     | 20 cartons           | 100               | 100 |
| 1-1/4                                    | 14             | 28 coils     | 20 cartons           | 50                | 100 |
| 1-1/2                                    | 15             | 28 coils     | 5 cartons            | 50                | 50  |
| 2                                        | 16             | 28 coils     | 5 cartons            | 50                | 50  |
| 2-1/2                                    | 17             | 5 coils      | 5 cartons            | 25                | -   |
| 3                                        | 18             | 5 coils      | 5 cartons            | 25                | -   |
| 3-1/2                                    | 350            | 5 coils      | 5 cartons            | 25                | -   |
| 4                                        | 19             | 4 coils      | 5 cartons            | 25                | -   |

## Cartons

| Trade Size (in.) | Catalog Number | Standard Carton Type |       |
|------------------|----------------|----------------------|-------|
|                  |                | All                  | LNM-P |
| 3/8              | 10             | 100                  | 250   |
| 1/2              | 11             | 100                  | 200   |
| 3/4              | 12             | 100                  | 175   |
| 1                | 13             | 100                  | 100   |
| 1-1/4            | 14             | 50                   | 100   |
| 1-1/2            | 15             | 50                   | 50    |
| 2                | 16             | 50                   | 50    |
| 2-1/2            | 17             | 25                   | -     |
| 3                | 18             | 25                   | -     |
| 3-1/2            | 350            | 25                   | -     |
| 4                | 19             | 25                   | -     |
| 5                | 500            | 25                   | -     |
| 6                | 600            | 25                   | -     |

## Packaging, Disclaimer and Warranty

### DISCLAIMER

All specifications contained herein are subject to change without notice. [Please refer to www.electriflex.com](http://www.electriflex.com) for the most current product information.

Carton and reel lengths are approximate due to variations during the extrusion process.

### PRODUCT WARRANTY

The Electri-Flex Company manufactures its products to the specifications and standards as described in the most current Electri-Flex catalog and it warrants them to be free from defects in materials and workmanship.

Electri-Flex will, in the case of product claim, be liable for only the price of the goods purchased. Remedies with respect to products sold by Electri-Flex will be limited only to the right of replacement, or to repayment of user's price of its product.



# STANDARD DIMENSIONS

TYPE LA • TYPE LT • TYPE EF • TYPE ATLA • TYPE AT • TYPE ATX • TYPE ALT • TYPE ZHLA • TYPE CEA • TYPE ACEA • TYPE LOR • TYPE CSA • TYPE VJC • TYPE LAFG • TYPE LTFG • TYPE LSSFG • TYPE LTSS • TYPE ZHSS • TYPE ATXSS • TYPE ATSS • TYPE CBLA • TYPE SLA • TYPE EMS • TYPE EMCS • TYPE NM • TYPE NMHT • TYPE NM2 • TYPE NMFG

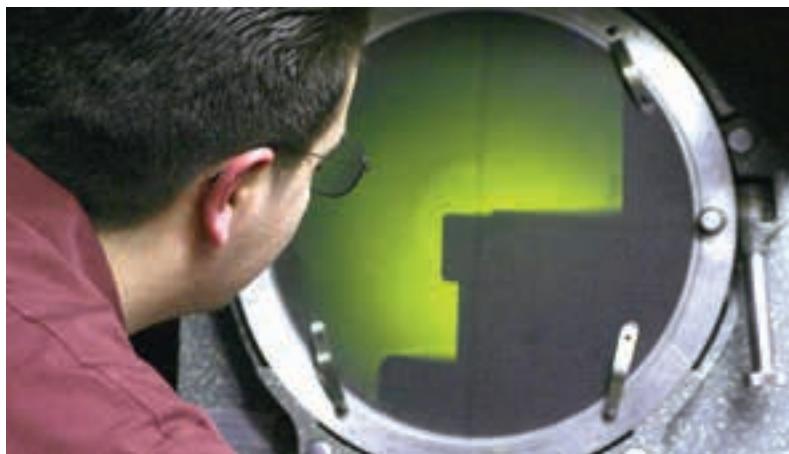
## STANDARD DIMENSIONS FOR LIQUIDTIGHT FLEXIBLE CONDUIT

| Trade Size (in.) | Type | Diameter (in.) |                 | Diameter (mm)  |                 |
|------------------|------|----------------|-----------------|----------------|-----------------|
|                  |      | Inside Min/Max | Outside Min/Max | Inside Min/Max | Outside Min/Max |
| 1/4              | 140  | 0.245/0.265    | 0.450/0.470     | 6.2/6.7        | 11.4/11.9       |
| 5/16             | 516  | 0.385/0.405    | 0.570/0.590     | 9.8/10.3       | 14.5/15.0       |
| 3/8              | 10   | 0.484/0.504    | 0.690/0.710     | 12.3/12.8      | 17.5/18.0       |
| 1/2              | 11   | 0.622/0.642    | 0.820/0.840     | 15.8/16.3      | 20.8/21.3       |
| 3/4              | 12   | 0.820/0.840    | 1.030/1.050     | 20.8/21.3      | 26.2/26.7       |
| 1                | 13   | 1.041/1.066    | 1.290/1.315     | 26.4/27.1      | 32.8/33.4       |
| 1-1/4            | 14   | 1.380/1.410    | 1.630/1.660     | 35.1/35.8      | 41.4/42.2       |
| 1-1/2            | 15   | 1.575/1.600    | 1.865/1.900     | 40.0/40.6      | 47.4/48.3       |
| 2                | 16   | 2.020/2.045    | 2.340/2.375     | 51.3/51.9      | 59.4/60.3       |
| 2-1/2            | 17   | 2.480/2.505    | 2.840/2.875     | 63.0/63.6      | 72.1/73.0       |
| 3                | 18   | 3.070/3.100    | 3.460/3.500     | 78.0/78.7      | 87.9/88.8       |
| 3-1/2            | 350  | 3.500/3.540    | 3.960/4.000     | 88.9/89.9      | 100.6/101.6     |
| 4                | 19   | 4.000/4.040    | 4.460/4.500     | 101.6/102.6    | 113.3/114.3     |
| 5                | 500  | 4.975/5.035    | 5.505/5.565     | 126.4/127.9    | 139.8/141.4     |
| 6                | 600  | 6.015/6.075    | 6.565/6.625     | 152.8/154.3    | 166.8/168.3     |

*This reference chart is applicable to the standard conduit types listed above. Please refer to individual product pages of this catalog for size ranges and dimensions for products not listed here.*

## COMMON CONVERSIONS

| Length                      | Weight                    | Temperature             |
|-----------------------------|---------------------------|-------------------------|
| 1 Foot = 0.305 Meters       | 1 Pound = 454 Grams       | °C = Degrees Centigrade |
| 1 Meter = 3.281 Feet        | 1 Pound = 0.454 Kilograms | °F = Degrees Fahrenheit |
| 1 Inch = 25.4 Millimeters   | 1 Kilogram = 2.205 Pounds | °C = (°F — 32) ÷ 1.8    |
| 1 Millimeter = 0.039 Inches | 1 Gram = 0.035 Ounces     | °F = (°C x 1.8) + 32    |
| 1 Inch = 2.54 Centimeters   | 1 Ounce = 28.349 Grams    | -                       |
| 1 Centimeter = 0.394 Inches | -                         | -                       |



### NEMA Guidelines Publication

NEMA (National Electrical Manufacturers Association) has developed and published an APPLICATION AND INSTALLATION GUIDELINES FOR FLEXIBLE AND LIQUIDTIGHT FLEXIBLE METAL AND NONMETALLIC CONDUITS. This publication, NEMA RV 3-2014, is available at this link: [www.nema.org/stds/rv3.cfm#download](http://www.nema.org/stds/rv3.cfm#download)

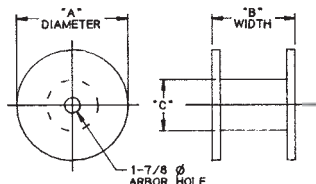
# REEL DIMENSIONS

Carton and reel lengths are approximate due to variations during the extrusion process.

| Trade Size (in.) | Type | 58"            | 42"            |           |        | 30"  |      |      |           |        | 32" Special |     |     | 24"       |        |                |
|------------------|------|----------------|----------------|-----------|--------|------|------|------|-----------|--------|-------------|-----|-----|-----------|--------|----------------|
|                  |      | LT<br>LA<br>EF | LT<br>LA<br>Ef | BR<br>ABR | LN-M-P | LT   | LA   | EF   | BR<br>ABR | LN-M-P | LT          | LA  | EF  | BR<br>ABR | LN-M-P | LT<br>LA<br>EF |
| 3/8              | 10   | 6000           | -              | -         | -      | 1000 | 1000 | 1000 | 2000      | 1000   | -           | -   | -   | 1000      | 500    | 500            |
| 1/2              | 11   | 4500           | -              | -         | 1000   | 1000 | 1000 | 1000 | 1000      | 500    | -           | -   | -   | -         | -      | 500            |
| 3/4              | 12   | 2500           | 1000           | -         | -      | 500  | 500  | 500  | 500       | 500    | -           | -   | -   | -         | -      | -              |
| 1                | 13   | 1500           | -              | -         | -      | 400  | -    | 400  | 400       | 400    | -           | 400 | -   | -         | -      | -              |
| 1-1/4            | 14   | 1000           | -              | 400       | -      | 200  | -    | 200  | -         | 200    | -           | 200 | -   | -         | -      | -              |
| 1-1/2            | 15   | 750            | -              | 300       | -      | -    | -    | -    | -         | -      | 150         | 150 | 150 | -         | -      | -              |
| 2                | 16   | 500            | -              | 150       | -      | -    | -    | -    | -         | -      | 100         | 100 | 100 | -         | -      | -              |
| 2-1/2            | 17   | 275            | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |
| 3                | 18   | 175            | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |
| 3-1/2            | 350  | 175            | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |
| 4                | 19   | 100            | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |
| 5                | 500  | -              | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |
| 6                | 600  | -              | -              | -         | -      | -    | -    | -    | -         | -      | -           | -   | -   | -         | -      | -              |

## Approximate Reel Dimensions

| "A"          |        | "B"  |       | "C"  |       | Weight |      | Qty./Skid |
|--------------|--------|------|-------|------|-------|--------|------|-----------|
| (in)         | (cm)   | (in) | (cm)  | (in) | (cm)  | (lbs)  | (kg) |           |
| 24           | 60.96  | 19.5 | 49.53 | 12   | 30.48 | 17     | 7.7  | 4         |
| 30           | 76.2   | 19.5 | 49.53 | 12   | 30.48 | 21     | 9.5  | 4         |
| 32 (Special) | 81.28  | 19.5 | 49.53 | 14   | 35.56 | 23     | 10.4 | 4         |
| 42           | 106.68 | 20   | 50.8  | 24   | 60.96 | 70     | 31.8 | 1         |
| 58 (Jumbo)   | 147.32 | 36   | 91.44 | 28   | 71.12 | 208    | 94.3 | 1         |



### Lazy Louis Liquatite Reel Payout Stand

Safe and easy handling of conduit for contractor and high-rise work.

This rugged yet simple payout reel is worth its weight in gold. It easily handles reels (32" diameter and smaller) hassle-free, and can take loaded reels of 400 lbs. capacity.

The tough steel construction of the base, roller bearings and top plate make dispensing conduit fast and efficient, while the tubular shaft makes set up and handling a breeze. There's never a need of a hoist or a forklift to push the reels around. With the **Lazy Louie** you set up where you want to work and that's it.

Weight 11 lbs. P/N 90040

