

# Type CMAC - Aluminum, CSA Certified Flexible metal conduit

**CSA Certified, Aluminum non-jacketed flexible metal conduits, also known as “Heavy Wall Flex.” are used in many universal wiring applications.**

## Features & Benefits:

- Meets requirements of CSA C22.2 No. 56-13 for Flexible Metal Conduits
- Meets requirements of UL 1 for Flexible Metal Conduits (1/2" to 4" trade sizes)
- Full compliance to IEC 61386-1 requirements
- Trade sizes from 3/8" to 4" (12mm to 103mm)
- Suitable for use with T&B Fittings® and Steel City® fittings, listed for use with flexible metal conduits.
  - Ser. XC Squeeze Type Connectors
  - Ser. XC Clamp Type Connectors
  - Ser. 300 Tite-Bite Connectors
  - Ser. 200 Squeeze Connectors
- Suitable for use with Iberville fittings, listed for use with flexible metal conduits
  - Ser. CI21 Clamp Connectors
  - Ser. CI22 Clamp Connectors
  - Ser. CI40 Clamp Connectors

## Applications:

- The CSA conduit is intended for use as a metal raceway for wires and cable in accordance with Canadian Electrical Code (CEC) C22.1 Section 12-1000
- Permitted in or on buildings of either combustible or non-combustible construction

## Restrictions and Exception:

- CEC Rule 12-1004 (a) states: "12mm (3/8") trade size flexible metal conduit shall be permitted to be used for runs of not more than 1.5 meters (5 ft) for the connection of equipment."
- CEC Rule 12-1004 (b) states: "12mm (3/8") trade size flexible metal may be used as permitted by this code."

## Securements with straps:

- CEC Rule 12-1010 (3) states: "when flexible metal conduit is installed, it shall be secured at intervals not exceeding 1.5 meters (5 ft.) and within 300mm (12 in.) on each side of every outlet box or fitting except where flexible metal conduit is fished and except for lengths of not over 900 mm (3 ft.) at terminals where flexibility is required."

## Conductor fill:

- CEC Rule 12-1014 defines the maximum number of conductors
- CEC Table 6 provides the maximum number of conductors of one size in trade size conduits
- CEC Table 8 provides the maximum allowable percent conduit fill
- CEC Table 9 provides the cross sectional areas of the conduit

## Construction / Material / Finish:

- Aluminum Alloy
- Heavy guage and high strength
- Helically wound, formed strip
- Color: Metallic

# Steel City® Conduit Systems



## Certifications / Standards:



## Conforms to:

- CSA C22.2 No. 56, Flexible Metal Conduits (FMC)  
CSA File: LR-72635
- UL 1, Flexible Metal Conduits (FMC)  
UL File: E484989
- IEC 61386-1, -23, Conduit Systems for Cable Management  
EU DoC: EC-012-17-172
- CE (Conformité Européene, European Conformity)
- RoHS (Restriction of Hazardous Substances Directive)

## Environment ratings:

### Working Temperature:

- IEC/CE:  
Gen: -45 to +400°C (-49 to +752°F)

## Standards requirements:

Meets all CSA C22.2 No. 56 and UL 1 standards requirements including:

- ID and OD dimensions, material thickness, tension loading, flexibility, and markings

Meets all IEC 61386-1, -23 standard requirements including:

- Compression strength - Code 4 Heavy; 1250 N/50mm
- Impact strength - Code 5 Very Heavy; 20 Joules
- Tensile strength - Code 2 Light; 250 N/2 min.

## Ingress protection:

### IEC system ingress rating:

- IP Ingress Protection per IEC 60529 requirements
- IEC Ingress Ratings: IP40

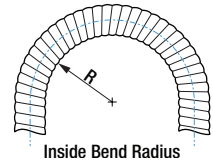
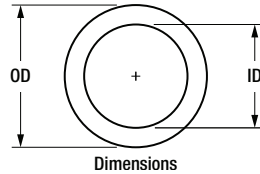
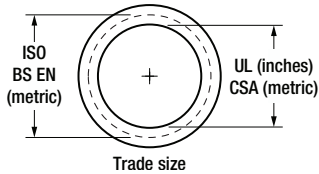


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## Product selection and dimensions

### Product selection

| Trade size |     |           | Coil length     |      |               |                 |      |           |                 |       |        |      | Weight |  |
|------------|-----|-----------|-----------------|------|---------------|-----------------|------|-----------|-----------------|-------|--------|------|--------|--|
| UL         | CSA | ISO BS EN | Carton          |      | Standard reel |                 |      | Bulk reel |                 |       | lbs/ft | kg/m |        |  |
| Inches     | mm  | mm        | Part No./GID    | Feet | Meter         | Part No./GID    | Feet | Meter     | Part No./GID    | Feet  | Meter  |      |        |  |
| 3/8        | 12  | 16        | CMACS01M-C      | 100  | 30            | CMACCS01M-K     | 500  | 150       | CMACCS01M-L     | 1,000 | 300    | 0.07 | 0.10   |  |
|            |     |           | 7TAA012CE0R0000 |      |               | 7TAA012CE0R0011 |      |           | 7TAA012CE0R0019 |       |        |      |        |  |
| 7/16       | 14  | 18        | CMACS14M-C      | 100  | 30            | CMACCS14M-K     | 500  | 150       | CMACCS14M-L     | 1,000 | 300    | 0.08 | 0.12   |  |
|            |     |           | 7TAA012CE0R0001 |      |               | 7TAA012CE0R0012 |      |           | 7TAA012CE0R0020 |       |        |      |        |  |
| 1/2        | 16  | 20        | CMACS02M-C      | 100  | 30            | CMACCS02M-K     | 500  | 150       | CMACCS02M-L     | 1,000 | 300    | 0.16 | 0.24   |  |
|            |     |           | 7TAA012CE0R0002 |      |               | 7TAA012CE0R0013 |      |           | 7TAA012CE0R0021 |       |        |      |        |  |
| 3/4        | 21  | 25        | CMACS03M-C      | 100  | 30            | CMACCS03M-K     | 500  | 150       | CMACCS03M-L     | 1,000 | 300    | 0.18 | 0.27   |  |
|            |     |           | 7TAA012CE0R0003 |      |               | 7TAA012CE0R0014 |      |           | 7TAA012CE0R0022 |       |        |      |        |  |
| 1          | 27  | 32        | CMACS04M-B      | 50   | 15            | CMACCS04M-J     | 400  | 120       | —               | —     | —      | 0.35 | 0.52   |  |
|            |     |           | 7TAA012CE0R0004 |      |               | 7TAA012CE0R0015 |      |           |                 |       |        |      |        |  |
| 1-1/4      | 35  | 40        | CMACS05M-B      | 50   | 15            | CMACCS05M-J     | 400  | 120       | —               | —     | —      | 0.43 | 0.64   |  |
|            |     |           | 7TAA012CE0R0005 |      |               | 7TAA012CE0R0016 |      |           |                 |       |        |      |        |  |
| 1-1/2      | 41  | 50        | CMACS06M-A      | 25   | 8             | CMACCS06M-H     | 300  | 90        | —               | —     | —      | 0.55 | 0.82   |  |
|            |     |           | 7TAA012CE0R0006 |      |               | 7TAA012CE0R0017 |      |           |                 |       |        |      |        |  |
| 2          | 53  | 63        | CMACS07M-A      | 25   | 8             | CMACCS07M-D     | 150  | 45        | —               | —     | —      | 0.73 | 1.09   |  |
|            |     |           | 7TAA012CE0R0007 |      |               | 7TAA012CE0R0018 |      |           |                 |       |        |      |        |  |
| 2-1/2      | 63  | 70        | CMACS08M-A      | 25   | 8             | —               | —    | —         | —               | —     | —      | 0.90 | 1.34   |  |
|            |     |           | 7TAA012CE0R0008 |      |               |                 |      |           |                 |       |        |      |        |  |
| 3          | 78  | 80        | CMACS09M-A      | 25   | 8             | —               | —    | —         | —               | —     | —      | 1.07 | 1.59   |  |
|            |     |           | 7TAA012CE0R0009 |      |               |                 |      |           |                 |       |        |      |        |  |
| 4          | 103 | 100       | CMACS11M-A      | 25   | 8             | —               | —    | —         | —               | —     | —      | 1.42 | 2.11   |  |
|            |     |           | 7TAA012CE0R0010 |      |               |                 |      |           |                 |       |        |      |        |  |



### Dimensions

| Part number | Trade size |     |           | Minimum inside bend radius |     |         |    | Inches      |       |              |       | Millimeters |       |              |       |
|-------------|------------|-----|-----------|----------------------------|-----|---------|----|-------------|-------|--------------|-------|-------------|-------|--------------|-------|
|             | UL         | CSA | ISO BS EN | Static                     |     | Dynamic |    | Inside (ID) |       | Outside (OD) |       | Inside (ID) |       | Outside (OD) |       |
|             |            |     |           | Inches                     | mm  | Inches  | mm | Min         | Max   | Min          | Max   | Min         | Max   | Min          | Max   |
| CMACS01M-*  | 3/8        | 12  | 16        | 2.0                        | 51  | —       | —  | 0.375       | 0.393 | 0.560        | 0.610 | 9.5         | 10.0  | 14.2         | 15.5  |
| CMACS14M-*  | 7/16       | 14  | 18        | 2.3                        | 57  | —       | —  | 0.437       | 0.457 | 0.655        | 0.675 | 11.1        | 11.6  | 15.8         | 17.1  |
| CMACS02M-*  | 1/2        | 16  | 20        | 3.0                        | 76  | —       | —  | 0.625       | 0.645 | 0.860        | 0.920 | 15.9        | 16.4  | 21.8         | 23.4  |
| CMACS03M-*  | 3/4        | 21  | 25        | 4.0                        | 102 | —       | —  | 0.081       | 0.835 | 1.045        | 1.105 | 20.6        | 21.2  | 26.5         | 28.1  |
| CMACS04M-*  | 1          | 27  | 32        | 5.0                        | 127 | —       | —  | 1.000       | 1.040 | 1.300        | 1.380 | 25.4        | 26.4  | 33.0         | 35.1  |
| CMACS05M-*  | 1-1/4      | 35  | 40        | 6.2                        | 157 | —       | —  | 1.250       | 1.300 | 1.550        | 1.630 | 31.8        | 33.0  | 39.4         | 41.4  |
| CMACS06M-*  | 1-1/2      | 41  | 50        | 7.5                        | 191 | —       | —  | 1.500       | 1.575 | 1.850        | 1.950 | 38.1        | 40.0  | 47.0         | 49.5  |
| CMACS07M-*  | 2          | 53  | 63        | 10.0                       | 254 | —       | —  | 2.000       | 2.080 | 2.350        | 2.454 | 50.8        | 52.8  | 59.7         | 62.3  |
| CMACS08M-*  | 2-1/2      | 63  | 70        | 12.5                       | 318 | —       | —  | 2.500       | 2.700 | 2.860        | 3.060 | 63.5        | 68.2  | 72.6         | 77.7  |
| CMACS09M-*  | 3          | 78  | 80        | 15.0                       | 381 | —       | —  | 3.000       | 3.200 | 3.360        | 3.560 | 76.2        | 81.3  | 85.3         | 90.4  |
| CMACS11M-*  | 4          | 103 | 100       | 20.0                       | 508 | —       | —  | 4.000       | 4.200 | 4.360        | 4.560 | 101.6       | 106.7 | 110.7        | 115.8 |

Note: Product must be installed in accordance with applicable national and local electrical codes.

## Contact us

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