



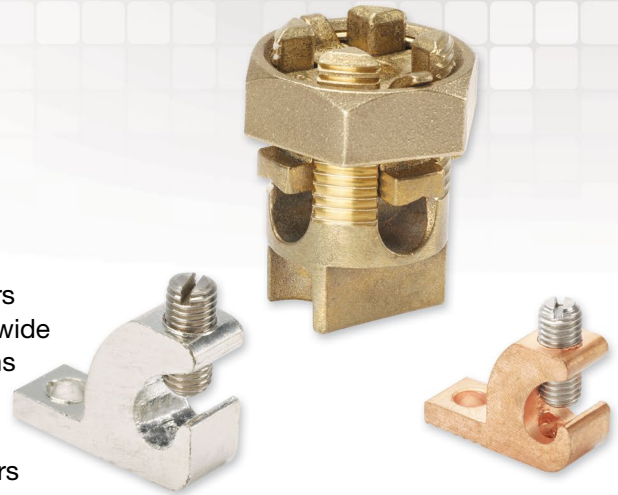
**THE DATASHEET OF  
SP2-500-12**



## StructuredGround™ Mechanical Connectors

The ability to provide a grounding system that is both reliable and economical is dependent upon finding the right connectors for the application. Panduit offers grounding connectors for a wide variety of conductor combinations and mounting configurations in high strength electrolytic copper, aluminum and bronze alloy materials.

Globally distributed StructuredGround™ Mechanical Connectors provide fast and easy terminating of ground conductors to water pipe, ground rods, conduit, iron pipe, and structural steel for highest reliability and lowest installed cost. With the addition of new ground clamps to the existing line of StructuredGround™ Mechanical Connectors, Panduit delivers the breadth of line to supply the right connector for each unique job, providing maximum reliability and safety for all critical electrical connections throughout your physical infrastructure.



### Key Features

### Benefits

|  |  |
|--|--|
| <b>UL/cULus Listed and CSA Certified</b>   | Satisfies grounding specification requirements for safety and reliability              |
| <b>Made from high strength electrolytic copper, aluminum or bronze, and available with tin-plating</b> | Creates optimum conductivity resulting in reliable, high quality connections           |
| <b>Broad selection of grounding connectors</b>   | Allows consolidation to one supplier, lowering procurement costs                       |
| <b>Local product support available on a global basis</b>   | Provides worldwide product availability and expertise for consistent, rapid deployment |
| <b>Wire range-taking capability</b>  | Minimizes inventory requirements, saves cost   |
| <b>Installed with standard screwdrivers and hex wrenches</b>   | Saves cost on special tooling  |

### Applications



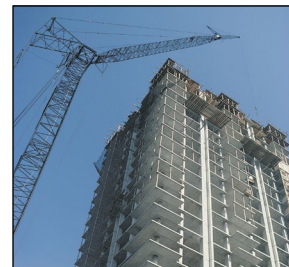
Oil and Gas



Industrial Facilities



Solar Power



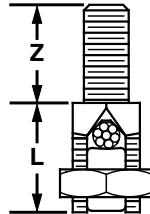
Construction

# StructuredGround™ Mechanical Connectors



## Bronze Service Post Connector, Male Stud, Single Conductor

- For grounding one copper code conductor to steel structures, busbars, or transformers or for tapping from busbar with hex nut and washer
- Made from high copper content, hard drawn copper rod provides high strength
- Pressure bar provides secure connection on a full range of conductor combinations used with each connector providing premium wire pull-out strength
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



### Type SP1 – Premium Grade

- True hex design for body and nut hex provides correct fit with socket, box, or open end wrenches for easy installation process
- Offered with standard and long stud lengths for optimized fit of the threaded stud through the mounting surface

### Type GSP1 – Value Grade

- Incorporates longer stud length than standard SP1 stud length to accommodate a variety of mounting applications
- Greater wire range-taking capability allows one GSP1 part to substitute for up to four SP1 parts (see Table for comparatives) – reduces inventory, saves costs

| Part Number                           | Conductor Size Range (AWG) | Stud Size* (UNC threads) | Figure Dimensions (In.) |      | Nut Hex (In.) | Body Hex (In.) | Std. Pkg. Qty. |
|---------------------------------------|----------------------------|--------------------------|-------------------------|------|---------------|----------------|----------------|
|                                       |                            |                          | L                       | Z    |               |                |                |
| SP1-8-C                               | #12 SOL - #8 STR           | 1/4 - 20                 | 0.63                    | 0.50 | 0.50          | 0.38           | 100            |
| SP1-8L-C                              |                            |                          | 0.63                    | 1.00 |               |                |                |
| <b>NEW!</b> GSP1-12-6-C <sup>1</sup>  | #12 SOL - #6 STR           | 1/4 - 20                 | 0.87                    | 0.83 | 0.69          | 0.56           | 100            |
| SP1-7-C                               | #8 SOL - #7 STR            | 1/4 - 20                 | 0.88                    | 0.50 | 0.69          | 0.50           | 100            |
| SP1-7L-C                              |                            |                          | 0.88                    | 1.00 |               |                |                |
| SP1-4-C                               | #10 SOL - #4 STR           | 5/16 - 18                | 0.94                    | 0.56 | 0.75          | 0.56           | 100            |
| SP1-4L-C                              |                            |                          | 0.94                    | 1.00 |               |                |                |
| <b>NEW!</b> GSP1-10-4-C <sup>2</sup>  | #10 SOL - #4 STR           | 5/16 - 18                | 1.06                    | 0.83 | 0.81          | 0.69           | 100            |
| SP1-3-C                               | #6 SOL - #3 STR            | 3/8 - 16                 | 1.06                    | 0.63 | 0.81          | 0.63           | 100            |
| SP1-3L-C                              |                            |                          | 1.06                    | 1.13 |               |                |                |
| <b>NEW!</b> GSP1-6-2-C <sup>3</sup>   | #6 SOL - #2 STR            | 3/8 - 16                 | 1.06                    | 0.83 | 0.81          | 0.69           | 100            |
| SP1-2-C                               | #4 STR - #2 STR            | 3/8 - 16                 | 1.06                    | 0.63 | 0.88          | 0.69           | 100            |
| SP1-2L-C                              |                            |                          | 1.06                    | 1.13 |               |                |                |
| SP1-1/0-L                             | #6 SOL - 1/0 STR           | 1/2 - 13                 | 1.31                    | 0.75 | 1.00          | 0.75           | 50             |
| SP1-1/0L-L                            |                            |                          | 1.31                    | 1.25 |               |                |                |
| <b>NEW!</b> GSP1-4-2/0-L <sup>4</sup> | #4 SOL - 2/0 STR           | 3/8 - 16                 | 1.32                    | 0.83 | 1.06          | 0.88           | 50             |
| SP1-2/0-Q                             | #1 SOL - 2/0 STR           | 1/2 - 13                 | 1.44                    | 0.75 | 1.13          | 0.88           | 25             |
| SP1-2/0L-Q                            |                            |                          | 1.44                    | 1.25 |               |                |                |
| SP1-4/0-Q                             | 3/0 SOL - 4/0 STR          | 5/8 - 11                 | 1.69                    | 1.00 | 1.38          | 1.13           | 25             |
| SP1-4/0L-Q                            |                            |                          | 1.69                    | 1.50 |               |                |                |
| SP1-350-12                            | 4/0 SOL - 350 kcmil        | 5/8 - 11                 | 2.00                    | 1.00 | 1.50          | 1.25           | 12             |
| SP1-350L-12                           |                            |                          | 2.00                    | 1.50 |               |                |                |
| SP1-500-12                            | 250 kcmil - 500 kcmil      | 3/4 - 10                 | 2.31                    | 1.38 | 1.81          | 1.50           | 12             |
| SP1-500L-12                           |                            |                          | 2.31                    | 1.75 |               |                |                |

\*Type GSP1 does not have a true hex body. Apply open-end wrench to body width normal to conductor slot

<sup>1</sup> Alternate offering for SP1-8 and SP1-7. Review stud length (Dim. Z) for potential replacement for SP1-8L and SP1-7L

<sup>2</sup> Alternate offering for SP1-4. Review stud length (Dim. Z) for potential replacement for SP1-4L

<sup>3</sup> Alternate offering for SP1-3 and SP1-2. Review stud length (Dim. Z) for potential replacement for SP1-3L and SP1-2L

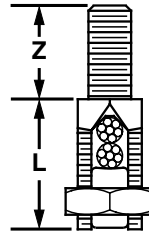
<sup>4</sup> Alternate offering for SP1-1/0 and SP1-2/0. Note stud size difference. Review stud length (Dim. Z) for potential replacement for SP1-1/0L and SP1-2/0L

# StructuredGround™ Mechanical Connectors



## Bronze Service Post Connector, Male Stud, Two Conductor

- For grounding two copper code conductors to steel structures, busbars, or transformers or for tapping from busbar with hex nut and washer
- Made from high copper content, hard drawn copper rod provides high strength
- Pressure bar provides secure connection on a full range of conductor combinations used with each connector providing premium wire pull-out strength
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



### Type SP2 – Premium Grade

- True hex design for body and nut hex provides correct fit with socket, box, or open end wrenches for easy installation process
- Offered with standard and long stud lengths for optimized fit of the threaded stud through the mounting surface

### Type GSP2 – Value Grade

- Incorporates longer stud length than standard SP2 stud length to accommodate a variety of mounting applications
- Greater wire range-taking capability allows one GSP2 part to substitute for up to four SP2 parts (see Table for comparatives) – reduces inventory, saves costs

| Part Number                           | Conductor Size Range (AWG) | Stud Size* (UNC threads) | Figure Dimensions (In.) |      | Nut Hex (In.) | Body Hex (In.) | Std. Pkg. Qty. |
|---------------------------------------|----------------------------|--------------------------|-------------------------|------|---------------|----------------|----------------|
|                                       |                            |                          | L                       | Z    |               |                |                |
| SP2-8-C                               | #12 SOL – #8 STR           | 1/4 – 20                 | 0.75                    | 0.50 | 0.50          | 0.38           | 100            |
| SP2-8L-C                              |                            |                          | 0.75                    | 1.00 |               |                |                |
| <b>NEW!</b> GSP2-12-6-C <sup>1</sup>  | #12 SOL - #6 STR           | 1/4 – 20                 | 0.94                    | 0.83 | 0.69          | 0.56           | 100            |
| SP2-7-C                               | #10 SOL - #7 STR           | 1/4 - 20                 | 1.00                    | 0.50 | 0.69          | 0.50           | 100            |
| SP2-7L-C                              |                            |                          | 1.00                    | 1.00 |               |                |                |
| SP2-4-C                               | #10 SOL - #4 STR           | 5/16 - 18                | 1.16                    | 0.56 | 0.75          | 0.56           | 100            |
| SP2-4L-C                              |                            |                          | 1.16                    | 1.00 |               |                |                |
| <b>NEW!</b> GSP2-10-4-C <sup>2</sup>  | #10 SOL - #4 STR           | 5/16 - 18                | 1.30                    | 0.83 | 0.81          | 0.69           | 100            |
| SP2-3-C                               | #10 SOL - #3 STR           | 3/8 – 16                 | 1.09                    | 0.63 | 0.81          | 0.63           | 100            |
| SP2-3L-C                              |                            |                          | 1.09                    | 1.13 |               |                |                |
| <b>NEW!</b> GSP2-10-2-C <sup>3</sup>  | #10 SOL - #2 STR           | 3/8 - 16                 | 1.30                    | 0.83 | 0.81          | 0.69           | 100            |
| SP2-2-C                               | #10 STR - #2 STR           | 3/8 - 16                 | 1.38                    | 0.63 | 0.88          | 0.69           | 100            |
| SP2-2L-C                              |                            |                          | 1.28                    | 1.13 |               |                |                |
| SP2-1/0-L                             | #2 SOL - 1/0 STR           | 1/2 - 13                 | 1.69                    | 0.75 | 1.00          | 0.75           | 50             |
| SP2-1/0L-L                            |                            |                          | 1.69                    | 1.25 |               |                |                |
| <b>NEW!</b> GSP2-2-2/0-L <sup>4</sup> | #2 SOL - 2/0 STR           | 3/8 - 16                 | 1.65                    | 0.83 | 1.06          | 0.88           | 50             |
| SP2-2/0-Q                             | #2 SOL - 2/0 STR           | 1/2 - 13                 | 1.88                    | 0.75 | 1.13          | 0.88           | 25             |
| SP2-2/0L-Q                            |                            |                          | 1.88                    | 1.25 |               |                |                |
| SP2-4/0-Q                             | #1 SOL - 4/0 STR           | 5/8 - 11                 | 2.25                    | 1.00 | 1.38          | 1.13           | 25             |
| SP2-4/0L-Q                            |                            |                          | 2.25                    | 1.50 |               |                |                |
| SP2-350-12                            | #1 STR - 350 kcmil         | 5/8 - 11                 | 2.69                    | 1.00 | 1.50          | 1.25           | 12             |
| SP2-350L-12                           |                            |                          | 2.69                    | 1.50 |               |                |                |
| SP2-500-12                            | 3/0 STR - 500 kcmil        | 3/4 – 10                 | 3.19                    | 1.38 | 1.81          | 1.50           | 12             |
| SP2-500L-12                           |                            |                          | 3.19                    | 1.75 |               |                |                |

\*Type GSP2 does not have a true hex body. Apply open-end wrench to body width normal to conductor slot

<sup>1</sup> Alternate offering for SP2-8 and SP2-7. Review stud length (Dim. Z) for potential replacement for SP2-8L and SP2-7L

<sup>2</sup> Alternate offering for SP2-4. Review stud length (Dim. Z) for potential replacement for SP2-4L

<sup>3</sup> Alternate offering for SP2-3 and SP2-2. Review stud length (Dim. Z) for potential replacement for SP2-3L and SP2-2L

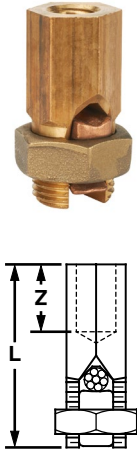
<sup>4</sup> Alternate offering for SP2-1/0 and SP2-2/0. Note stud size difference. Review stud length (Dim. Z) for potential replacement for SP2-1/0L and SP2-2/0L

# StructuredGround™ Mechanical Connectors



## Bronze, Service Post Connector, Female Thread, Single Conductor

- For grounding one copper code conductor to steel structures, busbars, or transformers or for tapping from busbar using external studs, screws, or bolts
- Made from high copper content, hard drawn copper rod provides high strength
- True hex design for body and nut hex provides correct fit with socket, box, or open end wrenches resulting in proper torquing of electrical connection
- Pressure bar provides secure connection on a full range of conductor combinations used with each connector providing premium wire pull-out strength
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



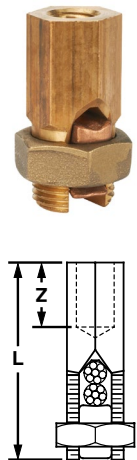
| Part Number | Conductor Size Range (AWG) | Thread Size* | Figure Dimensions (In.) |      | Nut Hex (In.) | Body Hex (In.) | Std. Pkg. Qty. |
|-------------|----------------------------|--------------|-------------------------|------|---------------|----------------|----------------|
|             |                            |              | L                       | Z    |               |                |                |
| SPF1-8-C    | #12 SOL – #8 STR           | 1/4 – 20     | 0.91                    | 0.25 | 0.50          | 0.38           | 100            |
| SPF1-7-C    | #10 SOL – #7 STR           | 1/4 – 20     | 1.13                    | 0.25 | 0.69          | 0.50           | 100            |
| SPF1-4-C    | #8 SOL – #4 STR            | 5/16 – 18    | 1.44                    | 0.31 | 0.75          | 0.56           | 100            |
| SPF1-3-C    | #6 STR – #3 STR            | 3/8 – 16     | 1.50                    | 0.38 | 0.81          | 0.63           | 100            |
| SPF1-2-C    | #6 STR – #2 STR            | 3/8 – 16     | 1.63                    | 0.38 | 0.88          | 0.69           | 100            |
| SPF1-1/0-L  | #2 SOL – 1/0 STR           | 1/2 – 13     | 1.88                    | 0.44 | 1.00          | 0.75           | 50             |
| SPF1-2/0-Q  | #1 SOL – 2/0 STR           | 1/2 – 13     | 2.06                    | 0.50 | 1.13          | 0.88           | 25             |
| SPF1-4/0-Q  | 1/0 STR – 4/0 STR          | 5/8 – 11     | 2.38                    | 0.63 | 1.38          | 1.13           | 25             |
| SPF1-350-12 | 4/0 STR – 350 kcmil        | 5/8 – 11     | 2.63                    | 0.63 | 1.50          | 1.25           | 12             |
| SPF1-500-12 | 300 kcmil – 500 kcmil      | 3/4 – 10     | 3.13                    | 0.75 | 1.81          | 1.50           | 12             |

\*UNC threads.



## Bronze, Service Post Connector, Female Thread, Two Conductor

- For grounding two copper code conductors to steel structures, busbars, or transformers or for tapping from busbar using external threaded studs, screws, or bolts
- Made from high copper content, hard drawn copper rod provides high strength
- True hex design for body and nut hex provides correct fit with socket, box, or open end wrenches resulting in proper torquing of electrical connection
- Pressure bar provides secure connection on a full range of conductor combinations used with each connector providing premium wire pull-out strength
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



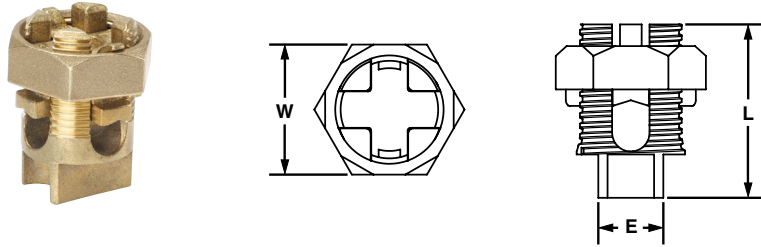
| Part Number | Conductor Size Range (AWG) | Thread Size* | Figure Dimensions (In.) |      | Nut Hex (In.) | Body Hex (In.) | Std. Pkg. Qty. |
|-------------|----------------------------|--------------|-------------------------|------|---------------|----------------|----------------|
|             |                            |              | L                       | Z    |               |                |                |
| SPF2-8-C    | #12 SOL – #8 STR           | 1/4 – 20     | 1.13                    | 0.25 | 0.50          | 0.38           | 100            |
| SPF2-7-C    | #10 SOL – #7 STR           | 1/4 – 20     | 1.44                    | 0.25 | 0.69          | 0.50           | 100            |
| SPF2-4-C    | #10 SOL – #4 STR           | 5/16 – 18    | 1.56                    | 0.31 | 0.75          | 0.56           | 100            |
| SPF2-3-C    | #10 SOL – #3 STR           | 3/8 – 16     | 1.63                    | 0.38 | 0.81          | 0.63           | 100            |
| SPF2-2-C    | #10 SOL – #2 STR           | 3/8 – 16     | 1.94                    | 0.38 | 0.88          | 0.69           | 100            |
| SPF2-1/0-L  | #2 SOL – 1/0 STR           | 1/2 – 13     | 2.13                    | 0.44 | 1.00          | 0.75           | 50             |
| SPF2-2/0-Q  | #2 SOL – 2/0 STR           | 1/2 – 13     | 2.31                    | 0.50 | 1.13          | 0.88           | 25             |
| SPF2-4/0-Q  | #1 SOL – 4/0 STR           | 5/8 – 11     | 2.50                    | 0.63 | 1.38          | 1.13           | 25             |
| SPF2-350-12 | #1 STR – 350 kcmil         | 5/8 – 11     | 2.69                    | 0.63 | 1.50          | 1.25           | 12             |
| SPF2-500-12 | 3/0 STR – 500 kcmil        | 3/4 – 10     | 3.31                    | 0.75 | 1.81          | 1.50           | 12             |

\*UNC threads.

# StructuredGround™ Mechanical Connectors

**UL LISTED** **CSA CERTIFIED** **DB RATED** **Bronze Split Bolt Quad Clamp**

- Split bolt design allows easy insertion of perpendicular conductors to speed installation
- UL 467 Listed and CSA Certified for direct burial in earth or concrete
- UL Listed and CSA Certified for use up to 600 V and temperature rated 90°C
- Each clamp accepts up to two conductors for a high performance bond with faster installation
- Wire range-taking capability minimizes inventory requirements, saves cost
- Made from high strength, electrolytic bronze to provide reliable grounding connections



| Part Number | Conductor Size Range (AWG) | Figure Dimensions (In.) |      |      | Tightening Torque (In. – Lbs.)                          | Std. Pkg. Qty. |
|-------------|----------------------------|-------------------------|------|------|---|----------------|
|             |                            | E                       | W    | L    |   |                |
| SBQC1/0-X   | #6 SOL – 1/0 STR           | 0.75                    | 1.50 | 2.00 | #6 – #4 AWG – 165<br>#3 – #1 AWG – 275<br>1/0 AWG – 385 | 10             |

**cULus LISTED** **DB RATED** **Copper and Aluminum One-Hole Grounding Lay-in Lug**

- Used for quick installation of a continuous grounding conductor
- UL 467 Listed for grounding and bonding; copper body lugs are UL Listed for direct burial in earth or concrete (aluminum body lugs are not direct burial rated)
- cULus Listed for use up to 600 V and temperature rated 90°C
- Wire range-taking capability minimizes inventory requirements, saves cost



Copper

Tin-Plated Copper

Aluminum

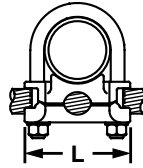
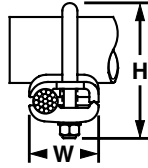
| Part Number                      | Set Screw Material | Conductor Size Range (AWG) | Stud Hole Size (In.) | Hex Key Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|----------------------------------|--------------------|----------------------------|----------------------|--------------------|-------------------------|------|------|----------------|
|                                  |                    |                            |                      |                    | L                       | W    | H    |                |
| <b>Copper Body</b>               |                    |                            |                      |                    |                         |      |      |                |
| LICC4-22-C                       | Stainless Steel    | #14 SOL – #4 STR           | 0.22                 | **                 | 1.16                    | 0.39 | 0.87 | 100            |
| <b>Tin-Plated Copper body</b>    |                    |                            |                      |                    |                         |      |      |                |
| LICC4-22TP-C                     | Stainless Steel    | #14 SOL – #4 STR           | 0.22                 | **                 | 1.16                    | 0.39 | 0.87 | 100            |
| <b>Tin-Plated Aluminum Body*</b> |                    |                            |                      |                    |                         |      |      |                |
| LIAC4-22-C*                      | Stainless Steel    | #14 SOL – #4 STR           | 0.22                 | **                 | 1.06                    | 0.39 | 0.78 | 100            |
| LIAS1/0-14-L*                    | Zinc Plated Steel  | #14 SOL – 1/0 STR          | 0.27                 | **                 | 1.50                    | 0.61 | 1.10 | 50             |
| LIAS250-56-Q*                    | Zinc Plated Steel  | #6 SOL – 250 STR           | 0.33                 | 1/4                | 2.20                    | 0.80 | 1.70 | 25             |

\*Not DB Rated  
 \*\*Uses slotted head set screw.  
 The use of Panduit oxide inhibiting joint compound (CMP) is recommended for pad and conductor connections.

# StructuredGround™ Mechanical Connectors

**cULus DB RATED Bronze Grounding Clamp, U-Bolt**

- Used to ground copper conductor parallel or at a right angle to a rod, tube, or pipe
- Made from high strength, electrolytic cast bronze
- High strength silicon bronze hardware provides long term reliable assembly
- Accommodates a wide range of pipe, tube, rod and conductor sizes – minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



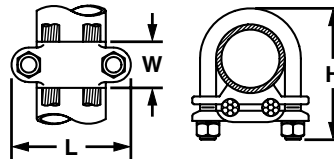
| Part Number | Conductor Size Range (AWG) | Ground Rod Size (In) | Iron Pipe Size (In) | Figure Dimensions (In.) |      |      | Bolt Dia. (In.) | Hex Size (In.) | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|---------------------|-------------------------|------|------|-----------------|----------------|----------------|
|             |                            |                      |                     | L                       | W    | H    |                 |                |                |
| GPL-4-Q     | #8 SOL – #4 STR            | 5/8 or 3/4           | 3/8                 | 2.00                    | 1.38 | 2.75 | 3/8             | 9/16           | 25             |
| GPL-5-Q     | #4 SOL – 2/0 STR           | 5/8 or 3/4           | 3/8                 | 2.00                    | 1.63 | 2.75 | 3/8             | 9/16           | 25             |
| GPL-6-Q     | 2/0 SOL – 250 kcmil        | 5/8 or 3/4           | 3/8                 | 2.00                    | 1.88 | 2.75 | 3/8             | 9/16           | 25             |
| GPL-8-Q     | #8 SOL – #4 STR            | 7/8 or 1             | 1/2 or 3/4          | 2.38                    | 1.38 | 2.63 | 3/8             | 9/16           | 25             |
| GPL-9-Q     | #4 SOL – 2/0 STR           | 7/8 or 1             | 1/2 or 3/4          | 2.38                    | 1.63 | 2.63 | 3/8             | 9/16           | 25             |
| GPL-10-Q    | 2/0 SOL – 250 kcmil        | 7/8 or 1             | 1/2 or 3/4          | 2.38                    | 1.88 | 3.00 | 3/8             | 9/16           | 25             |
| GPL-14-X    | #8 SOL – #4 STR            | —                    | 1                   | 2.63                    | 1.38 | 2.75 | 3/8             | 9/16           | 10             |
| GPL-15-X    | #4 SOL – 2/0 STR           | —                    | 1                   | 2.63                    | 1.63 | 2.75 | 3/8             | 9/16           | 10             |
| GPL-16-X    | 2/0 SOL – 250 kcmil        | —                    | 1                   | 2.63                    | 1.88 | 3.25 | 3/8             | 9/16           | 10             |
| GPL-20-X    | #8 SOL – #4 STR            | —                    | 1 1/4               | 3.00                    | 1.38 | 3.50 | 3/8             | 9/16           | 10             |
| GPL-21-X    | #4 SOL – 2/0 STR           | —                    | 1 1/4               | 3.00                    | 1.63 | 3.50 | 3/8             | 9/16           | 10             |
| GPL-22-X    | 2/0 SOL – 250 kcmil        | —                    | 1 1/4               | 3.00                    | 1.88 | 3.50 | 3/8             | 9/16           | 10             |
| GPL-26-X    | #8 SOL – #4 STR            | —                    | 1 1/2               | 3.25                    | 1.38 | 4.00 | 3/8             | 9/16           | 10             |
| GPL-27-X    | #4 SOL – 2/0 STR           | —                    | 1 1/2               | 3.25                    | 1.63 | 4.00 | 3/8             | 9/16           | 10             |
| GPL-28-X    | 2/0 SOL – 250 kcmil        | —                    | 1 1/2               | 3.25                    | 1.88 | 4.00 | 3/8             | 9/16           | 10             |
| GPL-32-3    | #8 SOL – #4 STR            | —                    | 2                   | 3.75                    | 1.38 | 4.25 | 3/8             | 9/16           | 3              |
| GPL-33-3    | #4 SOL – 2/0 STR           | —                    | 2                   | 3.75                    | 1.63 | 4.25 | 3/8             | 9/16           | 3              |
| GPL-34-3    | 2/0 SOL – 250 kcmil        | —                    | 2                   | 3.75                    | 1.88 | 4.25 | 3/8             | 9/16           | 3              |
| GPL-39-3    | #4 SOL – 2/0 STR           | —                    | 2 1/2               | 4.25                    | 1.63 | 5.00 | 3/8             | 9/16           | 3              |
| GPL-40-3    | 2/0 SOL – 250 kcmil        | —                    | 2 1/2               | 4.25                    | 1.88 | 5.00 | 3/8             | 9/16           | 3              |
| GPL-44-1    | #8 SOL – #4 STR            | —                    | 3                   | 4.75                    | 1.38 | 5.50 | 3/8             | 9/16           | 1              |
| GPL-45-1    | #4 SOL – 2/0 STR           | —                    | 3                   | 4.75                    | 1.63 | 5.50 | 3/8             | 9/16           | 1              |
| GPL-46-1    | 2/0 SOL – 250 kcmil        | —                    | 3                   | 4.75                    | 1.88 | 5.50 | 3/8             | 9/16           | 1              |
| GPL-51-1    | #4 SOL – 2/0 STR           | —                    | 3 1/2               | 5.25                    | 1.63 | 6.25 | 3/8             | 9/16           | 1              |
| GPL-52-1    | 2/0 SOL – 250 kcmil        | —                    | 3 1/2               | 5.25                    | 1.88 | 6.25 | 3/8             | 9/16           | 1              |
| GPL-57-1    | #4 SOL – 2/0 STR           | —                    | 4                   | 5.75                    | 1.63 | 6.38 | 3/8             | 9/16           | 1              |
| GPL-58-1    | 2/0 SOL – 250 kcmil        | —                    | 4                   | 5.75                    | 1.88 | 6.38 | 3/8             | 9/16           | 1              |
| GPL-75-X    | #4 SOL – 2/0 STR           | —                    | 6                   | 7.88                    | 1.58 | 7.85 | 3/8             | 1 1/4          | 10             |
| GPL-76-1    | 2/0 SOL – 250 kcmil        | —                    | 6                   | 7.94                    | 1.00 | 6.81 | 3/8             | 9/16           | 1              |

# StructuredGround™ Mechanical Connectors



## Bronze Grounding Clamp, U-Bolt, for Two Cables

- Used to ground two copper code conductors parallel to a rod, tube, or pipe
- Made from high strength, electrolytic cast bronze
- High strength silicon bronze hardware provides long term reliable assembly
- Accommodates a wide range of pipe, tube, rod and conductor sizes – minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete

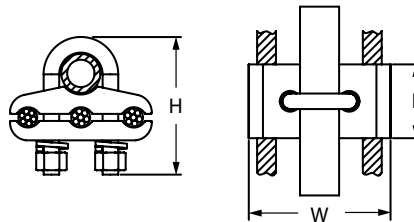


| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Bolt Dia (In.) | Hex Size (In.) | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|----------------|----------------|
|             |                            |                      | L                       | W    | H    |                |                |                |
| GU-2-X      | #4 SOL – 2/0 STR           | 1                    | 2.75                    | 1.13 | 3.25 | 3/8            | 9/16           | 10             |
| GU-4-X      | #8 SOL – #4 STR            | 1 1/4                | 3.00                    | 1.13 | 3.25 | 3/8            | 9/16           | 10             |
| GU-11-X     | #4 SOL – 2/0 STR           | 2                    | 1.31                    | 3.62 | 4.44 | 3/8            | 9/16           | 10             |
| GU-13-3     | 300 kcmil – 500 kcmil      | 2                    | 4.00                    | 1.50 | 4.63 | 1/2            | 3/4            | 3              |



## Bronze Grounding Clamp, U-Bolt, for Three Cables

- Used to ground three equal size parallel copper conductors parallel to rod, tube, or pipe
- Made from high strength, electrolytic cast bronze
- High strength silicon bronze hardware provides long term reliable assembly
- Accommodates a wide range of pipe, tube, rod, and conductor sizes – minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



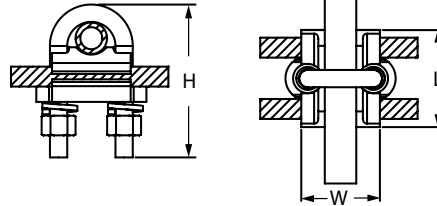
| Part Number  | Conductor Size Range (AWG) | Ground Rod Size (In.) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Bolt Dia (In.) | Hex Size (In.) | Std. Pkg. Qty. |
|--------------|----------------------------|-----------------------|----------------------|-------------------------|------|------|----------------|----------------|----------------|
|              |                            |                       |                      | L                       | W    | H    |                |                |                |
| GPC3250-38-X | 2/0 SOL-250 kcmil          | 5/8 or 3/4            | 3/8                  | 3.00                    | 1.56 | 2.81 | 3/8            | 9/16           | 10             |

# StructuredGround™ Mechanical Connectors



## Bronze Grounding Clamp, U-Bolt, for Two Parallel Conductors

- Used to ground two equal size parallel copper conductors perpendicular to rod, tube, or pipe
- Made from high strength, electrolytic cast bronze
- High strength silicon bronze hardware provides long term reliable assembly
- Accommodates a wide range of pipe, tube, rod, and conductor sizes – minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete

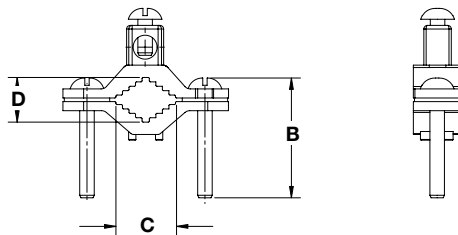


| Part Number  | Conductor Size Range (AWG) | Ground Rod Size (In.) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |     | Bolt Dia (In.) | Hex Size (In.) | Std. Pkg. Qty. |
|--------------|----------------------------|-----------------------|----------------------|-------------------------|------|-----|----------------|----------------|----------------|
|              |                            |                       |                      | L                       | W    | H   |                |                |                |
| GPC22/0-38-X | #4 SOL – 2/0 STR           | 5/8 or 3/4            | 3/8                  | 1.62                    | 1.38 | 2.8 | 3/8            | 9/16           | 10             |
| GPC2250-38-X | 2/0 SOL – 250 kcmil        | 5/8 or 3/4            | 3/8                  | 1.85                    | 1.50 | 2.8 | 3/8            | 9/16           | 10             |



## Bronze Ground Clamp

- Bonds water pipe to copper conductors
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



| Part Number          | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|----------------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|                      |                            |                      | B                       | C    | D    |                |
| <b>Standard Duty</b> |                            |                      |                         |      |      |                |
| GPC2-1-Q             | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.78 | 0.63 | 25             |
| GPC2-2-L             | #10 SOL – #2 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.44 | 50             |
| GPC2-4-X             | #10 SOL – #2 STR           | 2 1/2 – 4            | 4.25                    | 4.15 | 2.73 | 10             |
| GPC2-6-X             | #10 SOL – #2 STR           | 4 1/2 – 6            | 5.20                    | 6.00 | 2.85 | 10             |
| <b>Light Duty</b>    |                            |                      |                         |      |      |                |
| GPCJ2-1-C            | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.90 | 0.51 | 100            |

# StructuredGround™ Mechanical Connectors



## Bronze Ground Hubs

- Combine with bronze ground clamps to bond water pipes to rigid conduit and to copper conductors in EMT and rigid conduit
- When used with bronze ground clamps, installation flexibility is increased and inventory costs are decreased compared to stocking complete clamp assemblies
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



Figure 1

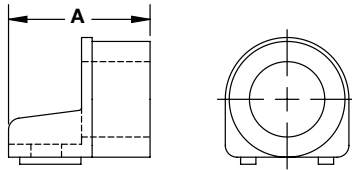
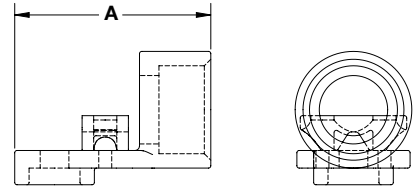


Figure 2

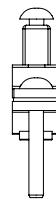
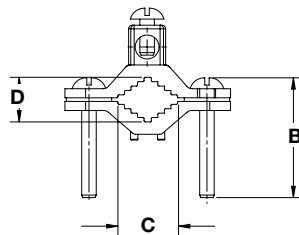


| Part Number | Figure No. | Conductor Size Range (AWG) | Conduit Hub Size (In.) | Figure Dimensions (In.) |  | Std. Pkg. Qty. |
|-------------|------------|----------------------------|------------------------|-------------------------|--|----------------|
|             |            |                            |                        | A                       |  |                |
| GHC4-12-T   | 1          | #8 SOL – #4 STR            | 1/2                    | 1.27                    |  | 200            |
| GHC4-34-C   | 1          | #8 SOL – #4 STR            | 3/4                    | 1.51                    |  | 100            |
| GHC4-1-C    | 1          | #8 SOL – #4 STR            | 1                      | 1.61                    |  | 100            |
| GHC2/0-12-C | 2          | #10 SOL – 2/0 STR          | 1/2                    | 1.98                    |  | 100            |
| GHC2/0-34-L | 2          | #10 SOL – 2/0 STR          | 3/4                    | 2.14                    |  | 50             |
| GHC3/0-1-L  | 2          | #10 SOL – 3/0 STR          | 1                      | 2.16                    |  | 50             |



## Bronze Ground Clamp, Direct Burial

- Bonds water pipe to copper conductors
- Made from high strength, electrolytic cast bronze
- High strength phos bronze hardware provides long term reliable assembly
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|             |                            |                      | B                       | C    | D    |                |
| GPC2-1D-C   | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.78 | 0.63 | 100            |
| GPC2-2D-L   | #10 SOL – #2 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.44 | 50             |
| GPC2-4D-E   | #10 SOL – #2 STR           | 2 1/2 – 4            | 4.25                    | 4.15 | 2.73 | 20             |

# StructuredGround™ Mechanical Connectors



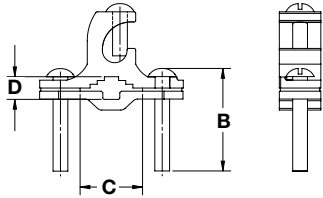
## Bronze Ground Clamp with Lay-in Feature, Direct Burial

- Bonds water pipe to copper conductors
- Used for quick installation of a continuous grounding conductor
- Made from high strength, electrolytic cast bronze
- High strength phos bronze hardware provides long term reliable assembly

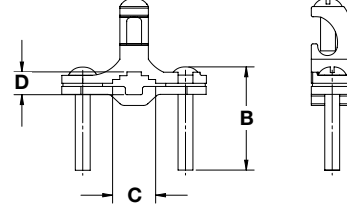
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



GPLAC2-1-C



GPLBC2-1-C



| Part Number                            | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|--|----------------------------|----------------------|-------------------------|------|------|----------------|
|  |                            |                      | B                       | C    | D    |                |
| <b>Conductor Parallel to Pipe</b>      |                            |                      |                         |      |      |                |
| GPLAC2-1-C                             | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.68 | 0.36 | 100            |
| <b>Conductor Perpendicular to Pipe</b> |                            |                      |                         |      |      |                |
| GPLBC2-1-C                             | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.68 | 0.36 | 100            |



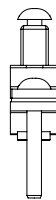
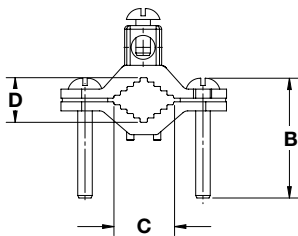
## Zinc Ground Clamp

- Bonds steel and aluminum pipe to aluminum conductors
- Made from die cast zinc
- Zinc plated steel hardware

- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



GPCZ2-1-C



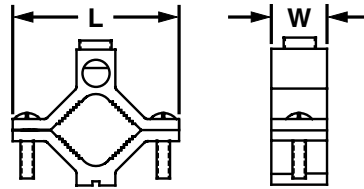
| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|             |                            |                      | B                       | C    | D    |                |
| GPCZ2-1-C   | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.81 | 0.55 | 100            |

# StructuredGround™ Mechanical Connectors

## Aluminum Grounding Clamp for Water Pipes

- Dual-rated for grounding aluminum or copper code conductors to copper water pipe, galvanized pipe, or steel conduit
- Made from high strength, extruded aluminum alloy to provide long term durability
- Tin-plated to inhibit corrosion and oxidation and for low contact resistance

- Plated steel screws provide high strength and inhibit corrosion
- Accommodates a wide range of pipe, tube, and conductor sizes – minimizes inventory requirements, saves cost
- UL 467 Listed for grounding and bonding

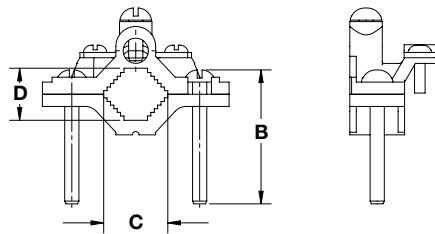


| Part Number | Conductor Size Range (AWG) | Conduit Pipe or Water Tube Size (In.) | Figure Dimensions (In.) |      | Std. Pkg. Qty. |
|-------------|----------------------------|---------------------------------------|-------------------------|------|----------------|
|             |                            |                                       | L                       | W    |                |
| GC-15A-Q    | #14 – 1/0                  | 1/2 – 3/4 – 1                         | 2.25                    | 0.69 | 25             |
| GC-18A-X    | #6 – 250 kcmil             | 1 1/4 – 1 1/2 – 2                     | 3.75                    | 0.81 | 10             |
| GC-22A-4    | #6 – 250 kcmil             | 2 1/2 – 3 – 3 1/2 – 4                 | 6.31                    | 1.00 | 4              |

## Bronze Ground Clamp, Armored Cable

- Bonds water pipe to copper conductors in armored cables
- Made from high strength, electrolytic cast bronze
- Wire range-taking capability minimizes inventory requirements, saves cost

- cULus 467 Listed for grounding and bonding; GPCA2-1D-C is suitable for direct burial in earth or concrete



| Part Number                        | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|------------------------------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|                                    |                            |                      | B                       | C    | D    |                |
| <b>Phos Bronze Hardware</b>        |                            |                      |                         |      |      |                |
| GPCA2-1D-C                         | #8 SOL – #4 STR            | 1/2 – 1              | 1.65                    | 1.00 | 0.59 | 100            |
| <b>Zinc Plated Steel Hardware*</b> |                            |                      |                         |      |      |                |
| GPCA2-1-C*                         | #8 SOL – #4 STR            | 1/2 – 1              | 1.65                    | 1.00 | 0.59 | 100            |
| GPCA2-2-L*                         | #8 SOL – #4 STR            | 1 1/4 – 2            | 2.22                    | 2.22 | 1.19 | 50             |
| GPCA2-4-X*                         | #8 SOL – #4 STR            | 2 1/2 – 4            | 4.25                    | 3.83 | 2.70 | 10             |
| GPCA2-6-X*                         | #8 SOL – #4 STR            | 4 1/2 – 6            | 5.20                    | 5.96 | 4.50 | 10             |

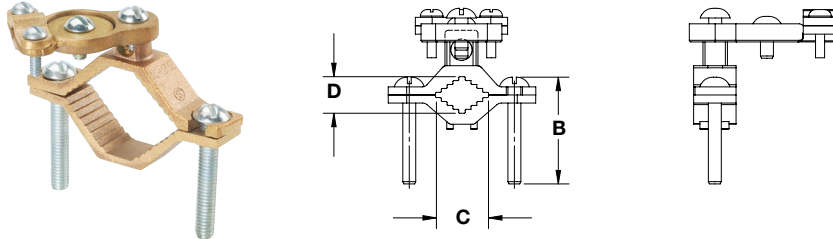
\*Not DB Rated

# StructuredGround™ Mechanical Connectors



## Bronze Ground Clamp for Armored Cable with Swivel

- Bonds water pipe to copper conductors in armored cables
- Swivel feature provides easy alignment of conductor to clamp
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

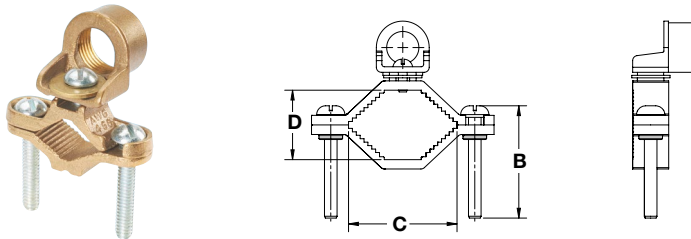


| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|             |                            |                      | B                       | C    | D    |                |
| GPCWA6-1-L  | #10 SOL – #6 STR           | 1/2 – 1              | 1.65                    | 0.78 | 0.63 | 50             |
| GPCWA6-2-L  | #10 SOL – #6 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.44 | 50             |
| GPCWA6-4-X  | #10 SOL – #6 STR           | 2 1/2 – 4            | 4.25                    | 4.15 | 2.73 | 10             |



## Bronze Ground Clamp for Conduit

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Includes high strength bronze conduit hub to ensure a durable connection to conduit
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



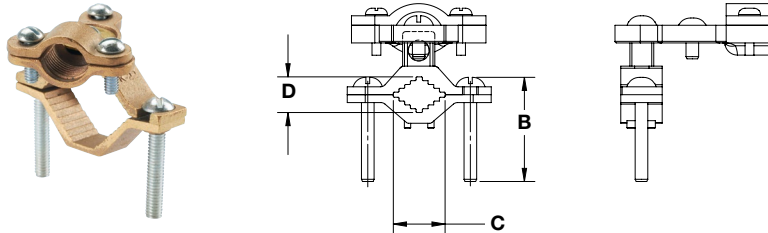
| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|------------------------|-------------------------|------|------|----------------|
|             |                            |                      |                        | B                       | C    | D    |                |
| GPC4-1-12-Q | #8 SOL – #4 STR            | 1/2 – 1              | 1/2                    | 1.65                    | 1.00 | 0.56 | 25             |
| GPC4-1-34-L | #8 SOL – #4 STR            | 1/2 – 1              | 3/4                    | 1.65                    | 1.00 | 0.56 | 50             |
| GPC4-1-1-L  | #8 SOL – #4 STR            | 1/2 – 1              | 1                      | 1.65                    | 1.00 | 0.56 | 50             |
| GPC4-2-12-L | #8 SOL – #4 STR            | 1 1/4 – 2            | 1/2                    | 2.22                    | 2.08 | 1.33 | 50             |
| GPC4-2-34-Q | #8 SOL – #4 STR            | 1 1/4 – 2            | 3/4                    | 2.22                    | 2.08 | 1.33 | 25             |
| GPC4-2-1-Q  | #8 SOL – #4 STR            | 1 1/4 – 2            | 1                      | 2.22                    | 2.08 | 1.33 | 25             |
| GPC4-4-12-X | #8 SOL – #4 STR            | 2 1/2 – 4            | 1/2                    | 4.25                    | 3.81 | 2.75 | 10             |
| GPC4-4-34-X | #8 SOL – #4 STR            | 2 1/2 – 4            | 3/4                    | 4.25                    | 3.81 | 2.75 | 10             |
| GPC4-4-1-X  | #8 SOL – #4 STR            | 2 1/2 – 4            | 1                      | 4.25                    | 3.81 | 2.75 | 10             |
| GPC4-6-12-X | #8 SOL – #4 STR            | 4 1/2 – 6            | 1/2                    | 5.20                    | 6.00 | 2.90 | 10             |
| GPC4-6-34-5 | #8 SOL – #4 STR            | 4 1/2 – 6            | 3/4                    | 5.20                    | 6.00 | 2.90 | 5              |
| GPC4-6-1-X  | #8 SOL – #4 STR            | 4 1/2 – 6            | 1                      | 5.20                    | 6.00 | 2.90 | 10             |

# StructuredGround™ Mechanical Connectors



## Bronze Ground Clamp with Conduit Hub and Swivel

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Split hub design provides conduit range-taking capability to minimize inventory requirements, saves cost
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

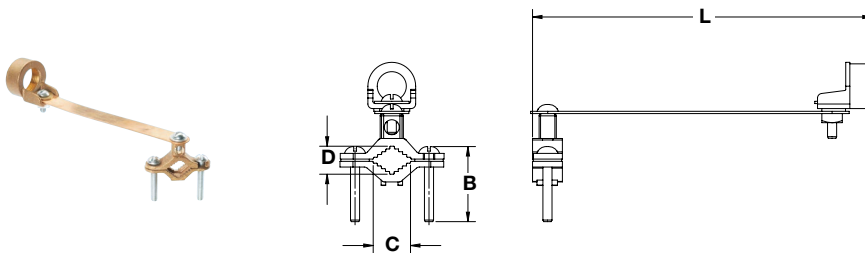


| Part Number  | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.)     | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|--------------|----------------------------|----------------------|----------------------------|-------------------------|------|------|----------------|
|              |                            |                      |                            | B                       | C    | D    |                |
| GPCW6-1-12-L | #10 SOL – #6 STR           | 1/2 – 1              | 1/2 – 3/4 EMT<br>1/2 Rigid | 1.65                    | 0.78 | 0.63 | 50             |
| GPCW6-2-12-Q | #10 SOL – #6 STR           | 1 1/4 – 2            | 1/2 – 3/4 EMT<br>1/2 Rigid | 2.22                    | 2.09 | 1.44 | 25             |
| GPCW6-4-12-X | #10 SOL – #6 STR           | 2 1/2 – 4            | 1/2 – 3/4 EMT<br>1/2 Rigid | 4.25                    | 4.15 | 2.73 | 10             |



## Bronze Ground Clamp for Conduit with Strap

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Copper contact strip included to isolate conduit system from water pipe vibrations
- Includes high strength bronze conduit hub to ensure a durable connection to conduit
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



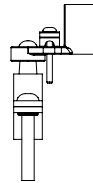
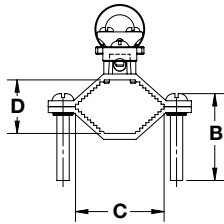
| Part Number  | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.) | Figure Dimensions (In.) |      |      |      | Std. Pkg. Qty. |
|--------------|----------------------------|----------------------|------------------------|-------------------------|------|------|------|----------------|
|              |                            |                      |                        | B                       | C    | D    | L    |                |
| GPCS4-1-12-L | #8 SOL – #4 STR            | 1/2 – 1              | 1/2                    | 1.65                    | 0.78 | 0.63 | 7.25 | 50             |
| GPCS4-2-12-L | #8 SOL – #4 STR            | 1/2 – 1              | 3/4                    | 1.65                    | 0.78 | 0.63 | 7.50 | 50             |
| GPCS4-4-12-L | #8 SOL – #4 STR            | 1/2 – 1              | 1                      | 1.65                    | 0.78 | 0.63 | 7.75 | 50             |

# StructuredGround™ Mechanical Connectors



## Bronze Ground Clamp for Conduit with Guillotine

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Includes high strength bronze conduit hub to ensure a durable connection to conduit
- Guillotine feature provides high clamping force on grounding conductor
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

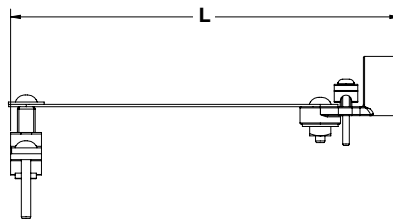
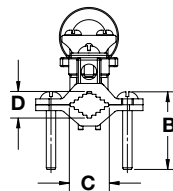


| Part Number    | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|----------------|----------------------------|----------------------|------------------------|-------------------------|------|------|----------------|
|                |                            |                      |                        | B                       | C    | D    |                |
| GPCG2/0-1-12-L | #10 SOL – 2/0 STR          | 1/2 – 1              | 1/2                    | 1.65                    | 0.78 | 0.63 | 50             |
| GPCG2/0-1-34-L | #10 SOL – 2/0 STR          | 1/2 – 1              | 3/4                    | 1.65                    | 0.78 | 0.63 | 50             |
| GPCG3/0-1-1-L  | #10 SOL – 3/0 STR          | 1/2 – 1              | 1                      | 1.65                    | 0.78 | 0.63 | 50             |
| GPCG2/0-2-12-Q | #10 SOL – 2/0 STR          | 1 1/4 – 2            | 1/2                    | 2.22                    | 2.09 | 1.44 | 25             |
| GPCG2/0-2-34-Q | #10 SOL – 2/0 STR          | 1 1/4 – 2            | 3/4                    | 2.22                    | 2.09 | 1.44 | 25             |
| GPCG3/0-2-1-Q  | #10 SOL – 3/0 STR          | 1 1/4 – 2            | 1                      | 2.22                    | 2.09 | 1.44 | 25             |
| GPCG2/0-4-12-E | #10 SOL – 2/0 STR          | 2 1/2 – 4            | 1/2                    | 4.25                    | 4.15 | 2.73 | 20             |
| GPCG2/0-4-34-E | #10 SOL – 2/0 STR          | 2 1/2 – 4            | 3/4                    | 4.25                    | 4.15 | 2.73 | 20             |
| GPCG3/0-4-1-X  | #10 SOL – 3/0 STR          | 2 1/2 – 4            | 1                      | 4.25                    | 4.15 | 2.73 | 10             |



## Bronze Ground Clamp for Conduit with Strap and Guillotine

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Copper contact strip included to isolate conduit system from water pipe vibrations
- Includes high strength bronze conduit hub to ensure a durable connection to conduit
- Guillotine feature provides high clamping force on grounding conductor
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



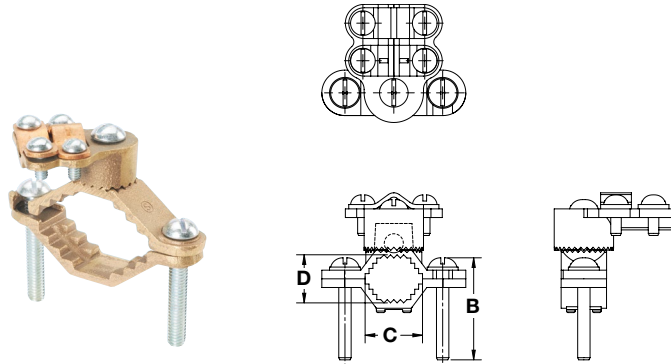
| Part Number   | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.) | Figure Dimensions (In.) |      |      |      | Std. Pkg. Qty. |
|---------------|----------------------------|----------------------|------------------------|-------------------------|------|------|------|----------------|
|               |                            |                      |                        | B                       | C    | D    | L    |                |
| GPCSG4-1-12-X | #8 SOL – #4 STR            | 1/2 – 1              | 1/2                    | 1.65                    | 0.78 | 0.63 | 8.12 | 10             |
| GPCSG4-2-12-Q | #8 SOL – #4 STR            | 1/2 – 1              | 3/4                    | 1.65                    | 0.78 | 0.63 | 8.25 | 25             |
| GPCSG4-4-12-Q | #8 SOL – #4 STR            | 1/2 – 1              | 1                      | 1.65                    | 0.78 | 0.63 | 8.37 | 25             |

# StructuredGround™ Mechanical Connectors



## Bronze Ground Clamp, Heavy Duty

- Bonds water pipe to copper conductors
- Heavy duty construction for increased durability
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

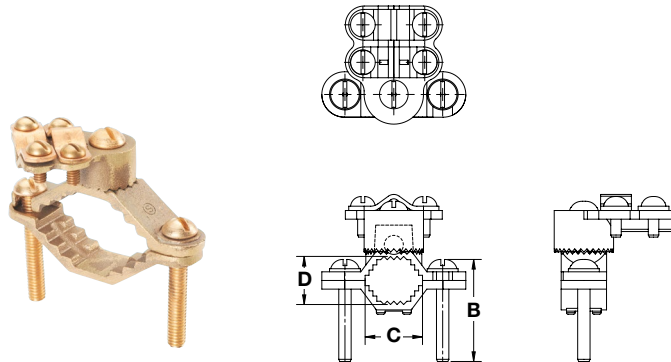


| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|             |                            |                      | B                       | C    | D    |                |
| GPCH4/0-1-L | #8 SOL – 4/0 STR           | 1/2 – 1              | 1.65                    | 0.88 | 0.69 | 50             |
| GPCH4/0-2-Q | #8 SOL – 4/0 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.25 | 25             |
| GPCH4/0-4-E | #8 SOL – 4/0 STR           | 2 1/2 – 4            | 4.25                    | 4.19 | 2.59 | 20             |
| GPCH4/0-6-X | #8 SOL – 4/0 STR           | 4 1/2 – 6            | 5.20                    | 5.94 | 2.64 | 10             |



## Bronze Ground Clamp, Heavy Duty, Direct Burial

- Bonds water pipe to copper conductors
- Heavy duty construction for increased durability
- Made from high strength, electrolytic cast bronze
- High strength phos bronze hardware provides long term reliable assembly
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



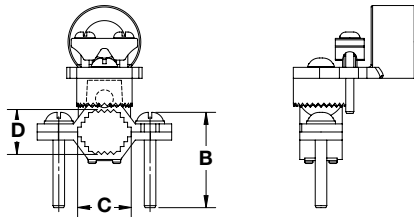
| Part Number  | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|--------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|              |                            |                      | B                       | C    | D    |                |
| GPCH4/0-1D-L | #8 SOL – 4/0 STR           | 1/2 – 1              | 1.65                    | 0.88 | 0.69 | 50             |
| GPCH4/0-2D-Q | #8 SOL – 4/0 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.25 | 25             |

# StructuredGround™ Mechanical Connectors



## Bronze Ground Clamp for Conduit with Guillotine, Heavy Duty

- Bonds water pipe to rigid conduit and to copper conductors in EMT and rigid conduit
- Heavy duty construction for increased durability
- Includes high strength bronze conduit hub to ensure a durable connection to conduit
- Guillotine feature provides high clamping force on grounding conductor
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

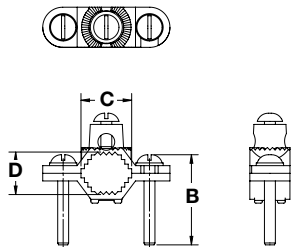
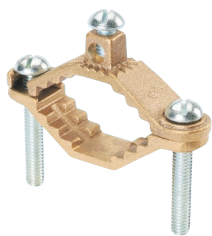


| Part Number    | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Conduit Hub Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|----------------|----------------------------|----------------------|------------------------|-------------------------|------|------|----------------|
|                |                            |                      |                        | B                       | C    | D    |                |
| GPCH2/0-1-12-Q | #10 SOL – 2/0 STR          | 1/2 – 1              | 1/2                    | 1.65                    | 0.88 | 0.69 | 25             |
| GPCH3/0-1-34-Q | #10 SOL – 3/0 STR          | 1/2 – 1              | 3/4                    | 1.65                    | 0.88 | 0.69 | 25             |
| GPCH3/0-1-1-Q  | #10 SOL – 3/0 STR          | 1/2 – 1              | 1                      | 1.65                    | 0.88 | 0.69 | 25             |
| GPCH2/0-2-12-Q | #10 SOL – 2/0 STR          | 1 1/4 – 2            | 1/2                    | 2.22                    | 2.09 | 1.25 | 25             |
| GPCH3/0-2-34-Q | #10 SOL – 3/0 STR          | 1 1/4 – 2            | 3/4                    | 2.22                    | 2.09 | 1.25 | 25             |
| GPCH3/0-2-1-Q  | #10 SOL – 3/0 STR          | 1 1/4 – 2            | 1                      | 2.22                    | 2.09 | 1.25 | 25             |
| GPCH2/0-4-12-X | #10 SOL – 2/0 STR          | 2 1/2 – 4            | 1/2                    | 4.25                    | 4.19 | 2.59 | 10             |
| GPCH3/0-4-34-X | #10 SOL – 3/0 STR          | 2 1/2 – 4            | 3/4                    | 4.25                    | 4.19 | 2.59 | 10             |
| GPCH3/0-4-1-X  | #10 SOL – 3/0 STR          | 2 1/2 – 4            | 1                      | 4.25                    | 4.19 | 2.59 | 10             |
| GPCH2/0-6-12-X | #10 SOL – 2/0 STR          | 4 1/2 – 6            | 1/2                    | 5.20                    | 5.94 | 2.64 | 10             |
| GPCH3/0-6-34-X | #10 SOL – 3/0 STR          | 4 1/2 – 6            | 3/4                    | 5.20                    | 5.94 | 2.64 | 10             |
| GPCH3/0-6-1-X  | #10 SOL – 3/0 STR          | 4 1/2 – 6            | 1                      | 5.20                    | 5.94 | 2.64 | 10             |



## Bronze Ground Clamp, Heavy Duty Base

- Use alone to bond water pipes to copper conductors
- When combined with heavy duty bronze ground hubs, bonds water pipes to conductors and conduits
- When used with heavy duty bronze ground hubs installation flexibility is increased, and inventory costs are decreased compared to stocking complete clamp assemblies
- Heavy duty construction for increased durability
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding



| Part Number | Conductor Size Range (AWG) | Iron Pipe Size (In.) | Figure Dimensions (In.) |      |      | Std. Pkg. Qty. |
|-------------|----------------------------|----------------------|-------------------------|------|------|----------------|
|             |                            |                      | B                       | C    | D    |                |
| GPCH2-1-C   | #10 SOL – #2 STR           | 1/2 – 1              | 1.65                    | 0.88 | 0.69 | 100            |
| GPCH2-2-L   | #10 SOL – #2 STR           | 1 1/4 – 2            | 2.22                    | 2.09 | 1.25 | 50             |
| GPCH2-4-E   | #10 SOL – #2 STR           | 2 1/2 – 4            | 4.25                    | 4.19 | 2.59 | 20             |
| GPCH2-6-X   | #10 SOL – #2 STR           | 4 1/2 – 6            | 5.20                    | 5.94 | 2.64 | 10             |

# StructuredGround™ Mechanical Connectors



## Heavy Duty Bronze Hubs

- Combine with heavy duty bronze ground clamp bases to bond water pipes to rigid conduits and to copper conductors in EMT and rigid conduit
- When used with heavy duty bronze ground clamp bases, installation flexibility is increased, while inventory costs are decreased when compared with stocking complete clamp assemblies

- Heavy duty construction for increased durability
- Made from high strength, electrolytic cast bronze
- Zinc plated steel hardware
- Wire range-taking capability minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding

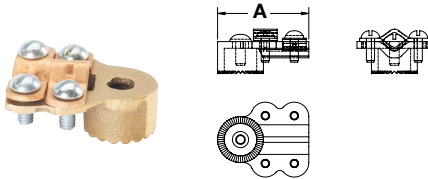


Figure 1

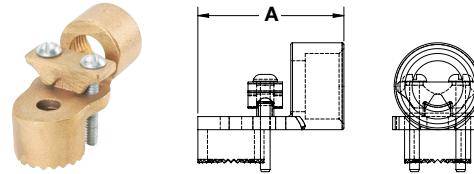


Figure 2

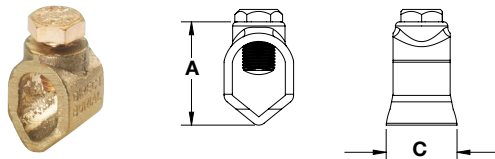
| Part Number  | Conductor Size Range (AWG) | Conduit Hub Size (In.) | Figure No. | Figure Dimensions (In.) | Std. Pkg. Qty. |
|--------------|----------------------------|------------------------|------------|-------------------------|----------------|
|              |                            |                        |            | A                       |                |
| GHCH4/0-C    | #8 SOL – 4/0 STR           | —                      | 1          | 1.89                    | 100            |
| GHCH2/0-12-L | #10 SOL – 2/0 STR          | 1/2                    | 2          | 2.30                    | 50             |
| GHCH3/0-34-L | #10 SOL – 3/0 STR          | 3/4                    | 2          | 2.42                    | 50             |
| GHCH3/0-1-L  | #10 SOL – 3/0 STR          | 1                      | 2          | 2.39                    | 50             |



## Bronze Ground Rod Clamps, Direct Burial

- Used for grounding copper conductor parallel to ground rods
- Made from high strength, seamless electrolytic bronze to provide long term durability

- High strength phos bronze hardware provides long term reliable assembly
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete - for type GRC and GRCH
- UL Listed and CSA Certified for grounding and bonding and suitable for direct burial in earth or concrete - for Type WB



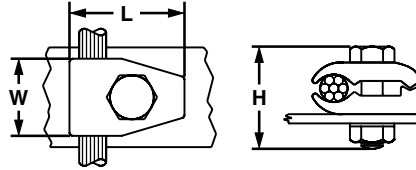
| Part Number          | Conductor Size Range (AWG)          | Ground Rod Size (In.) | Figure Dimensions (In.) |      | Hex Head Size (In.) | Std. Pkg. Qty. |
|----------------------|-------------------------------------|-----------------------|-------------------------|------|---------------------|----------------|
|                      |                                     |                       | A                       | C    |                     |                |
| <b>Standard Duty</b> |                                     |                       |                         |      |                     |                |
| GRC4-38-TL           | #10 SOL – #4 STR                    | 3/8                   | 1.00                    | 0.82 | 1/2                 | 250            |
| GRC2-12-TL           | #10 SOL – #2 STR                    | 1/2                   | 1.19                    | 0.68 | 1/2                 | 250            |
| GRC2-58-TL           | #10 SOL – #2 STR                    | 5/8                   | 1.34                    | 0.64 | 1/2                 | 250            |
| GRC2-34-T            | #10 SOL – #2 STR                    | 3/4                   | 1.48                    | 0.71 | 1/2                 | 200            |
| WB12-L               | #10 SOL – #2 STR                    | 1/2                   | 1.28                    | 0.88 | 1/2                 | 50             |
| WB34-X               | #8 STR – 1/0 STR<br>#8 STR – #2 STR | 5/8<br>3/4            | 1.54                    | 1.03 | 1/2                 | 10             |
| WB58-Q               | #8 STR – 1/0 STR                    | 5/8                   | 1.40                    | 1.04 | 1/2                 | 25             |
| <b>Heavy Duty</b>    |                                     |                       |                         |      |                     |                |
| GRCH2-12-T           | #10 SOL – #2 STR                    | 1/2                   | 1.25                    | 0.82 | 1/2                 | 200            |
| GRCH1/0-58-T         | #8 SOL – 1/0 STR                    | 5/8                   | 1.42                    | 0.99 | 1/2                 | 200            |
| GRCH1/0-34-E         | #8 SOL – 1/0 STR                    | 3/4                   | 1.60                    | 0.97 | 1/2                 | 20             |

# StructuredGround™ Mechanical Connectors



## Bronze Grounding Clamp with Spacer for Flat Surfaces

- Used to ground copper code conductor to flat surfaces
- Cast from high strength, electrolytic bronze to provide reliable grounding connections
- High strength silicon bronze hardware for long term reliable assembly
- Accommodates a wide range of conductor sizes – minimizes inventory requirements, saves cost
- Incorporates spacer plate to separate conductor from mounting surface
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete

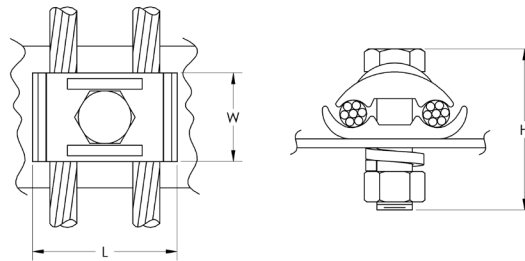


| Part Number | Conductor Size Range (AWG) | Figure Dimensions (In.) |      |      | Hex Size (In.) |      | Std. Pkg. Qty. |
|-------------|----------------------------|-------------------------|------|------|----------------|------|----------------|
|             |                            | L                       | W    | H    | Bolt           | Nut  |                |
| GM-2-Q      | #4 SOL – 2/0 STR           | 1.63                    | 1.13 | 1.75 | 9/16           | 9/16 | 25             |
| GM-3-Q      | 2/0 SOL – 250 kcmil        | 2.13                    | 1.50 | 2.00 | 3/4            | 3/4  | 25             |



## Bronze Ground Bar Clamp with Spacer for Flat Surfaces, Two Conductor

- Used to ground two copper code conductors to flat surfaces
- Cast from high strength, electrolytic bronze
- Cast body includes anti-rotational flanges to keep hex head bolt from spinning
- High strength silicon bronze hardware for long term reliable assembly
- Incorporates spacer plate to separate conductors from mounting surface
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete



| Part Number  | Conductor Size Range (AWG) | Figure Dimensions (In.) |      |      | Hex Size (In.) |     | Std. Pkg. Qty. |
|--------------|----------------------------|-------------------------|------|------|----------------|-----|----------------|
|              |                            | L                       | W    | H    | Bolt*          | Nut |                |
| GBC2250-12-X | 2/0 SOL - 250 kcmil        | 2.04                    | 1.25 | 2.27 | 3/4            | 3/4 | 10             |



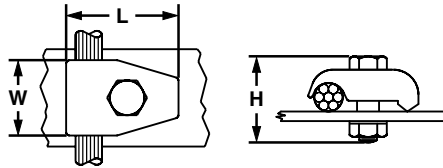
\*Bolt head will be contained within the anti-rotational flanges of cast body

# StructuredGround™ Mechanical Connectors



## Bronze Grounding Clamp with Spacer for Flat Surfaces, One Conductor

- Used to ground copper code conductor to flat surfaces
- Cast from high strength, electrolytic bronze to provide reliable grounding connections
- High strength silicon bronze hardware for long term reliable assembly
- Accommodates a wide range of conductor sizes – minimizes inventory requirements, saves cost
- cULus 467 Listed for grounding and bonding and suitable for direct burial in earth or concrete

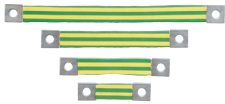


| Part Number | Conductor Size Range (AWG) | Figure Dimensions (In.) |      |      | Hex Size (In.) |      | Std. Pkg. Qty. |
|-------------|----------------------------|-------------------------|------|------|----------------|------|----------------|
|             |                            | L                       | W    | H    | Bolt           | Nut  |                |
| GMS-1-X     | #8 SOL – #4 STR            | 1.25                    | 1.00 | 1.63 | 9/16           | 9/16 | 10             |
| GMS-2-Q     | #4 SOL – 2/0 STR           | 1.63                    | 1.13 | 1.75 | 9/16           | 9/16 | 25             |
| GMS-3-Q     | 2/0 SOL – 250 kcmil        | 2.13                    | 1.50 | 2.00 | 3/4            | 3/4  | 25             |

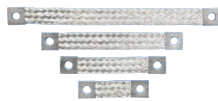


## Flat Braided Bonding Straps

- Used to electrically bond enclosure doors, motors, and machine frames in the construction of control panels or machine structures
- Flat ferrule end design helps to reduce the effects of EMI (Electromagnetic Interference)
- Available with internationally recognized green and yellow insulation for grounding application
- Made of high conductivity copper and tin-plated to inhibit corrosion
- Seamless ferrule ends provide mechanical strength for improved reliability
- cULus 467 Listed



One Hole, Insulated



One Hole, Non-Insulated



Two-Hole, Non-Insulated

| Part Number                    | Conductor Size (AWG) | Length (In.) | Width (In.) | Thickness (In.) | Ferrule Length (In.) | Stud Hole Size (In.) | Stud Hole Spacing (In.) | Std. Pkg. Qty. |
|--------------------------------|----------------------|--------------|-------------|-----------------|----------------------|----------------------|-------------------------|----------------|
| <b>One-Hole, Insulated</b>     |                      |              |             |                 |                      |                      |                         |                |
| BS100445                       | #4                   | 4.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS100645                       | #4                   | 6.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS100845                       | #4                   | 8.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS101245                       | #4                   | 12.00        | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| <b>One-Hole, Non-Insulated</b> |                      |              |             |                 |                      |                      |                         |                |
| BS100445U                      | #4                   | 4.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS100645U                      | #4                   | 6.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS100845U                      | #4                   | 8.00         | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| BS101245U                      | #4                   | 12.00        | 1.06        | 0.13            | 1.00                 | 3/8                  | —                       | 1              |
| <b>Two-Hole, Non-Insulated</b> |                      |              |             |                 |                      |                      |                         |                |
| BS201246EU                     | #4                   | 12.00        | 1.06        | 0.13            | 2.50                 | 3/8                  | 1.25                    | 1              |
| BS201846EU                     | #4                   | 18.00        | 1.06        | 0.13            | 2.50                 | 3/8                  | 1.25                    | 1              |
| BS202446EU                     | #4                   | 24.00        | 1.06        | 0.13            | 2.50                 | 3/8                  | 1.25                    | 1              |

# StructuredGround™ Mechanical Connectors

## Joint Compounds

- Oxide inhibitor for compression conductor connections lowers electrical resistance of compression joint while sealing out air and moisture to prevent the formation of surface oxides
- Wide operating temperature range; can be used in a wide range of electrical and environmental conditions
- Packaged in convenient dispenser bottles



| Part Number        | Part Description   | Std. Pkg. Qty. |
|--------------------|--|----------------|
| <b>CMP-100-1</b>   | Contact aid for pad-to-pad or thread-to-thread aluminum connections, 8 oz. Operating temperature range -60°F (-51°C) to 400°F (204°C).   | 1              |
| <b>CMP-200-1</b>   | Contact aid for cable connections with compression connections made on aluminum conductor, 8 oz. Operating temperature range -40°F (-40°C) to 400°F (204°C). Compatible with all insulating materials.                             | 1              |
| <b>CMP-300-1</b>   | Contact aid for copper-to-copper and copper-to-steel connections, 8 oz. Operating temperature range -40°F (-40°C) to 350°F (177°C). Good for all voltages and suitable for grounding. Also used for anti-seizing thread lubricant. | 1              |
| <b>CMP-300-4-1</b> | Contact aid for copper-to-copper and copper-to-steel connections, 4 oz. Operating temperature range -40°F (-40°C) to 350°F (177°C). Good for all voltages and suitable for grounding. Also used for anti-seizing thread lubricant. | 1              |

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