Cooper's 600 A Deadbreak Connector Systems are designed to fill the demand for a deadfront underground installation in 600 A main and lateral feeders. They provide a completely shielded, deadfront, fully submersible cable connection for high-voltage apparatus – such as transformers, switchgear, large motors, etc., and can also be used to make splices, junctions, taps and deadends for main underground, distribution feeders. They provide the same high degree of operating flexibility and reliability as our 200 A products. All components fit together easily and assembly variations are available.

These connector systems are designed for installation on various types of cables. The entire system can be applied to concentric neutral cable, and with Cooper's SA Series Shield Adapter Kit to almost any other type of cable.

All Cooper 600 A Deadbreak Connectors meet the electrical, mechanical and dimensional requirements of IEEE Standard 386™ and are designed to be fully interchangeable with those currently available from other major manufacturers.

**900 A RATING**

A 900 A continuous rating can be achieved with Bol-T™, BT-TAP™ and T-OP™ II Systems when used with a copper top compression connector and all copper mating components including apparatus bushing or junction. (See note 1 on page 17 for details when selecting a system.)

**BOL-T™ Connector System**

Cooper’s Bol-T Deadbreak Connector System is designed for use on applications where the terminations would not be operated after installation, would not need a 200 A interface for grounding or arrester provisions, and would not require direct conductor testing or the use of a hotstick. It is a bolted design that is interchangeable with other manufacturers' bolted 600 A systems and requires no special tools for installation.

**BT-TAP™ Connector System**

Cooper’s BT-TAP Deadbreak Connector System includes a 200 A loadbreak tap instead of the standard insulated plug. The other components of BT-TAP are the same as Bol-T, making it an ideal option to retrofit existing Bol-T (or other bolted systems that use unthreaded compression connectors) systems with a 200 A loadbreak tap for testing, grounding, or overvoltage protection.

**T-OP™ II Connector System**

Cooper's T-OP II Deadbreak Connector System also has a 200 A loadbreak tap and has all the advantages of the BT-TAP System. In addition, the T-OP II is single-person hotstick operable, making it ideal for terminations that may require moving or sectionalizing to achieve a visible open or visible ground. The T-OP II design offers added reliability (900 A rated all copper alloy current path) and has several assembly/operating advantages.

**PUSH-OP® Connector System**

Cooper's PUSH-OP Deadbreak Connector System is essentially a T-OP II Termination with a non-bolted design for use on any deadfront apparatus where the terminations may be operated frequently. The PUSH-OP 600 A deadbreak probe and finger contact design eliminates cross-threading and normal thread wear during repeated sectionalizing operations. It is the only available system that allows operators to move the terminator while it is fully grounded. The PUSH-OP System provides stainless steel bracketry and a mechanical lever for the fastest and easiest one-person hotstick operation possible. The PUSH-OP System requires special apparatus bushings, which makes it suitable for new installations only.
### 600 A Replacement Parts

<table>
<thead>
<tr>
<th>Catalog Section</th>
<th>Description</th>
<th>kV Class</th>
<th>Base Part Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>600-46</td>
<td>T-Body</td>
<td>15/25 kV</td>
<td>DT625</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 kV</td>
<td>DT635</td>
<td></td>
</tr>
<tr>
<td>600-66</td>
<td>Cap for Insulating Plug</td>
<td>15/25/35 kV</td>
<td>DIPCAP</td>
<td>1, 2</td>
</tr>
<tr>
<td>600-46</td>
<td>Insulating Plug w/o Stud</td>
<td>15/25 kV</td>
<td>DIP625A (Alum)</td>
<td>3, 7</td>
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<td></td>
<td></td>
<td></td>
<td>DIP625C (Copper)</td>
<td></td>
</tr>
<tr>
<td>600-66</td>
<td></td>
<td>35 kV</td>
<td>DIP635A (Alum)</td>
<td>3, 7</td>
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<tr>
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<td></td>
<td></td>
<td>DIP635C (Copper)</td>
<td></td>
</tr>
<tr>
<td>600-46</td>
<td>Connecting Plug w/o Stud</td>
<td>15/25 kV</td>
<td>DCP625A (Alum)</td>
<td>3, 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DCP625C (Copper)</td>
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</tr>
<tr>
<td>600-66</td>
<td></td>
<td>35 kV</td>
<td>DCP635A (Alum)</td>
<td>3, 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DCP635C (Copper)</td>
<td></td>
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<tr>
<td>600-46</td>
<td>Bol-T</td>
<td>15/25 kV</td>
<td>STUD-A (Alum)</td>
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<tr>
<td></td>
<td>Stud</td>
<td></td>
<td>STUD-C (Copper)</td>
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<td>600-66</td>
<td></td>
<td>35 kV</td>
<td>STUD635-A (Alum)</td>
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<td>STUD635-C (Copper)</td>
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<tr>
<td>600-66</td>
<td>T-OP II/BT-TAP Stud</td>
<td>15/25/35 kV</td>
<td>STUD-T</td>
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<tr>
<td>600-66</td>
<td>U-OP Stud</td>
<td>15/25/35 kV</td>
<td>STUDU</td>
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<tr>
<td>600-66</td>
<td>1\1/16 in. Unthreaded Alum.</td>
<td>15/25/35 kV</td>
<td>CC6A CC3 U</td>
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<tr>
<td></td>
<td>Aluminum Compression Connector</td>
<td></td>
<td>(see CC3 Table pg. 18)</td>
<td></td>
</tr>
<tr>
<td>600-66</td>
<td>1\1/16 in. Threaded Copper</td>
<td>15/25/35 kV</td>
<td>CC6C CC3 T</td>
<td>6</td>
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<tr>
<td></td>
<td>Copper Compression Connector</td>
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<td>(see CC3 Table pg. 18)</td>
<td></td>
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<tr>
<td>600-66</td>
<td>Unthreaded Copper Top</td>
<td>15/25/35 kV</td>
<td>CC6C CC3 U</td>
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<tr>
<td></td>
<td>Compression Connector</td>
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<td>(see CC3 Table pg. 18)</td>
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<tr>
<td>600-66</td>
<td>Cable Adapter</td>
<td>15/25 kV</td>
<td>CA625 CR4</td>
<td></td>
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<tr>
<td></td>
<td>(see CR4 Table pg. 18)</td>
<td></td>
<td>CA635 CR5</td>
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<tr>
<td>600-66</td>
<td>BT-TAP and T-OP II</td>
<td>15/25/35 kV</td>
<td>TQHD625</td>
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<tr>
<td></td>
<td>Installation and Torque Tool</td>
<td></td>
<td>TQHD635</td>
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<tr>
<td>600-66</td>
<td>T-OP II Combination</td>
<td>15 kV</td>
<td>OTTQ615</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Operating, Test, and Torque</td>
<td>25 kV</td>
<td>OTTQ625</td>
<td>9</td>
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<tr>
<td></td>
<td>Tool (For single person hotstick operation)</td>
<td>35 kV</td>
<td>OTTQ635</td>
<td>9</td>
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<tr>
<td>600-66</td>
<td>T-WRENCH for BT-TAP/T-OP II</td>
<td>15/25/35 kV</td>
<td>TWRENCH</td>
<td>10</td>
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<tr>
<td>600-66</td>
<td>5\16 in. Hex Shaft with 3/8 in. Drive Tool</td>
<td>15/25 kV</td>
<td>HD625</td>
<td>11</td>
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<td></td>
<td>Socket</td>
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<td>HD635</td>
<td>11</td>
</tr>
<tr>
<td>600-66</td>
<td>Bushing</td>
<td>15/25 kV</td>
<td>DBE625</td>
<td>2</td>
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<tr>
<td></td>
<td>Extender</td>
<td>35 kV</td>
<td>DBE635</td>
<td>2</td>
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<tr>
<td>600-66</td>
<td>Loadbreak</td>
<td>15 kV</td>
<td>LRTP615</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reducing Tap Plug for T-OP II</td>
<td>25 kV</td>
<td>LRTP625</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Stud-T included)</td>
<td>35 kV</td>
<td>LRTP635</td>
<td></td>
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<tr>
<td>600-66</td>
<td>Bol-T Loadbreak</td>
<td>15 kV</td>
<td>BLRT615</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reducing Tap Plug for BT-TAP</td>
<td>25 kV</td>
<td>BLRT625</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Stud-T included)</td>
<td>35 kV</td>
<td>BLRT635</td>
<td></td>
</tr>
</tbody>
</table>

1. To specify a test point insert a “T” in the sixth digit.
2. To add stud to kit, add a “SA” for an aluminum stud, or a “SC” for a copper stud as the last characters in the part number.
3. To add STUD to kit, add a “S” after the base part number. Material of stud supplied will match with material of the plug conductor ordered.
4. Copper alloy stud for use with BT-TAP or T-OP II Connectors only.
5. Copper stud for use with U-OP Connector only.
6. To specify an all copper connector, add 50 to the conductor code from Table CC3 (page 18). Example: CC6C11T becomes CC6C61T.
7. Stud comes loose in kit, add a “P” as the last character for permanent factory installation.
8. TQHD6_ allows for installation of either BT-TAP or T-OP II Connector to 600 A bushing.
9. OTTQ6_ allows for installation and single hotstick operation of either the BT-TAP or T-OP II Connector.
10. TWRENCH allows for installation of loadbreak reducing tap plug for BT-TAP or T-OP II Connector.
11. HD6_ allows for installation of connecting plug in 600 A Separable Splices.
**Bol-T™ Connector System**

The Bol-T™ Deadbreak Connector System is designed for use on applications that will not be operated, do not need grounding or arrester provisions, and do not require direct conductor testing or the use of a hotstick. It is a bolted design that is interchangeable with other manufacturers’ bolted 600 A systems that require no special tools for installation.

The capacitive test point on the insulating plug provides a means of confirming an energized circuit without disturbing the bolted connection. In addition to the capacitive test point feature on the insulating plug, Cooper offers a capacitive test point on the T-Body. This allows the use of the Cooper Type “TPR” Series Faulted Circuit Indicators, and provides a means of confirming that a circuit is energized when used with high impedance voltage sensing devices designed for test points.

Refer to Figure 1 for Bol-T Connector Kit Components.

**Installation of Bol-T™ on a 600 A Bushing**

The Bol-T Connector is installed on any 600 A bushing using a standard 1-inch socket. No special tools are required.

---

**BT-TAP™ Connector System**

The BT-TAP™ Deadbreak Connector System is designed for use on applications where a 200 A interface is required for testing, grounding, or overvoltage protection. It is primarily used in retrofit applications of existing 600 A Bol-T installations (or other bolted systems that use unthreaded compression connectors).

The BT-TAP Connector System uses the standard unthreaded aluminum compression connector, which makes it ideal for retrofitting existing Bol-T installations into a system with a 200 A tap. It also uses the extended length stud and has an internal rotating nut feature in the loadbreak reducing tap plug that eliminates cross threading.

The BT-TAP provides the following features:

- Visible ground and visible break
- 200 A Interface for:
  - addition of Cooper M.O.V.E.™ Arresters for overvoltage protection
  - addition of Cooper Grounding Elbows
  - access for direct conductor phasing and testing
  - hipot testing of switch or cables

Refer to Figure 2 for BT-TAP Connector Kit Components.

**Installation of BT-TAP™ on a 600 A Bushing**

The BT-TAP Connector is installed on an apparatus bushing using a 600 A Torque Tool.

---

**Bol-T™ Specification Information**

To specify the 600 A Bol-T Connector System, include in your specification:

- The system must fully comply with IEEE Standard 386™.
- All cable adapters, insulating plugs, compression connectors and other component parts must be interchangeable with other manufacturers.
- For 900 A rating, full copper current carrying path with copper-top compression connector, copper stud and insulating plug with copper insert.
- Bol-T Connector System base part number BT625 for 15 kV and 25 kV systems and BT635 for 35 kV systems.

---

**BT-TAP™ Specification Information**

To specify a 600 A BT-TAP Connector System, include in your specification:

- The system must fully comply with IEEE Standard 386™.
- The connector system must provide operation with hot line tools, direct conductor phasing and testing.
- It must provide a location to add overvoltage arresters and access for direct conductor phasing or hipot testing of switch or cables.
- Must be easy to install with proper torque such that concern for cross threading is eliminated.
- Loadbreak reducing tap plug must include extended length stud and internal rotating nut features to eliminate cross threading during assembly.
- Loadbreak reducing tap plug must include latch indicator ring.
- BT-TAP Connector System base part number BTP615 for 15 kV, BTP625 for 25 kV and BTP635 for 35 kV.

---

**Figure 1.** Bol-T Connector Kit (BT6_5) Components. For more details, see Cooper catalog sections 600-10, 600-30 and 600-50.

**Figure 2.** BT-TAP Connector Kit (BTP6_5_) Components. For more details, see Cooper catalog sections 600-15, 600-35 and 600-55.
**T-OP™ II Connector System**

The T-OP™ II Deadbreak Connector System is designed for use on applications where a 200 A interface is required for testing, grounding, or overvoltage protection. It is single person hotstick operable and is ideal for terminations that may require moving to achieve a visible open or visible ground. One person can move the T-OP II Deadbreak Terminators from the apparatus bushing to a standoff bushing using a hotstick and Operating Test and Torque Tool (OTTQ6_5). The T-OP II Connector System uses a threaded copper alloy compression connector for a threaded connection. It also has an alignment segment and internal rotating nut feature in the loadbreak reducing tap plug which, along with the extended length stud, eliminates cross threading and ensures proper torque.

The T-OP II system provides the following features:

- Single person hotstick operable
- Mechanical assist
- All copper alloy current path
- 900 A continuous current rating
- 200 A Interface for:
  - addition of Cooper M.O.V.E Arresters for overvoltage protection
  - addition of Cooper Grounding Elbows
  - access for direct conductor phasing and testing
  - hipot testing of switch or cables

Refer to Figure 3 for T-OP II Connector Kit Components.

**Installation of T-OP™ II on a 600 A Bushing**

The T-OP II Connector is installed on an apparatus bushing using a T-Wrench and a 600 A Torque Tool.

---

**T-OP™ II Specification Information**

To specify a 600 A T-OP II System, include in your specification:

- The system must fully comply with IEEE Standard 386™.
- Must include an all copper alloy current path.
- System must include disconnecting back-off feature.
- The connector system must provide operation with live line tools, direct conductor phasing and testing, visible ground and visible break.
- It must provide a location to add overvoltage arresters and access for direct conductor phasing or hipot testing of switch or cables.
- Must be one-person hotstick operable and easy to install with proper torque such that concern for cross threading is eliminated.
- Loadbreak reducing tap plug must include extended length stud, internal rotating nut and an alignment segment feature to eliminate cross threading of this compression connector and ensure proper torque.
- Loadbreak reducing tap plug must include latch indicator ring.
- T-OP II Connector System base part number TP615 for 15 kV, TP625 for 25 kV and TP635 for 35 kV.

---

**U-OP™ Connector System**

The U-OP™ Connector System is used to provide a visible break and visible ground on 600 A distribution systems without having to move the heavy cable. The U-OP Connector is a deadbreak system rated for operation on 15 or 25 kV class equipment, including transformers, switches, switchgear, and other apparatus.

Under normal operating conditions, the current path is through the apparatus bushing, through the U-connector, through a two-way 600 A deadbreak junction, and through a T-OP II 600 A Connector (sold separately) to the underground cable. When isolating underground cable, a grounded standoff bushing can be put in the parking stand (with the system de-energized). The U-connector can then be removed, rotated 90°, and re-installed over the apparatus bushing and grounded standoff bushing, to ground the apparatus bushing.

A grounding elbow can be installed on the 200 A interface of the T-OP II Connector to ground the cable. A 600 A U-OP Protective Cap can then be put on the upper bushing to insulate that bushing. Since all bushings of the connector system are then insulated or grounded, and if the cable is grounded on the other end, it is safe to perform work on the underground cable. See Figure 4 for a typical U-OP Connector configuration.

**U-OP™ Specification Information**

To specify a 600 A U-OP Connector System that achieves a visible break and visible ground without having to move heavy cable, include in your specification:

- The system must fully comply with IEEE Standard 386™.
- The system must provide a visible break and visible ground without having to move 600 A cable.
- A U-connection shall remain connected on the equipment even while performing repair to the underground cable to ensure the interfaces are not exposed to the environment and thus potentially contaminated.
- U-OP Connector System base part number UOP625 for both 15 and 25 kV.

---

**Figure 4.**

U-OP Connector Kit (UOP625) Components. For more details, see Cooper catalog section 600-34.
**600 A Stacking Dimensions**

**BT-TAP™ and T-OP™ II Deadbreak Connector 15 kV and 25 kV**

**Bol-T™ Deadbreak Connector**

**PUSH-OP® Deadbreak Connector (15 kV shown)**

**Bushing Adapter with LRTP (15 kV shown)**

**PUSH-OP® Standoff Bushing (15/25 kV shown)**

**Standoff Bushing**

**Standard Protective Cap**

**Protective Cap for T-OP™ II and U-OP™ (15/25 kV shown)**

**Separable Splice**
Deadbreak Junction (15/25 kV shown)

**TABLE 15/25 kV**

<table>
<thead>
<tr>
<th>Number of Interfaces</th>
<th>Physical Dimensions in.(mm)</th>
<th>M4 Mounting Dimensions in.(mm)</th>
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</thead>
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<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>19.0</td>
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</tr>
<tr>
<td>3</td>
<td>23.0</td>
<td>11.0</td>
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<tr>
<td></td>
<td>(584)</td>
<td>(279)</td>
</tr>
<tr>
<td>4</td>
<td>27.0</td>
<td>15.0</td>
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<tr>
<td></td>
<td>(686)</td>
<td>(381)</td>
</tr>
</tbody>
</table>

Configuration 1. Both feet turned out.
Configuration 2. One foot turned out, the other in.
Configuration 3. Both feet turned in.

Deadbreak Junction (35 kV shown)

**TABLE 35 kV**

<table>
<thead>
<tr>
<th>Number of Interfaces</th>
<th>Physical Dimensions in.(mm)</th>
<th>Mounting Dimensions in.(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>21.5</td>
<td>(546)</td>
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<tr>
<td>3</td>
<td>27.5</td>
<td>(699)</td>
</tr>
<tr>
<td>4</td>
<td>33.5</td>
<td>(851)</td>
</tr>
</tbody>
</table>

Note: C and D are minimum and maximum stud centerline separations for mounting.

**Dim. 15/25 kV**

- E 4.0" (101 mm)
- F 4.1" (102 mm)
- G 3.0" (76 mm)
- S7 0.75" (19 mm)
- S9 3.4" (86 mm)
- S10 6.2" (157 mm)
- S11 7.2" (182 mm)

**Dim. 35 kV**

- E 6.0" (152 mm)
- F 6.2" (158 mm)
- G 3.0" (76 mm)
- H 3.8" (96 mm)
- S7 0.75" (19 mm)
- S9 5.55" (141 mm)
- S10 7.0" (178 mm)
- S11 10.4" (264 mm)