Construction Tie Products, Inc. is committed to supplying the highest quality masonry tie and construction systems in North America and satisfying all stringent national codes and standards for today’s building structures. CTP, Inc. promises to be a reliable product source along with on-time business integrity for all demanding builders. Call anytime for technical assistance or recommendations.

CTP is now part of the PROSOCO family

**CTP STONE-GRIP TIE**

Strong and secure solutions to re-anchor stone/precast panels and thin masonry veneers!

**NEW!**

CTP Grip-Max Connection™

ANOTHER CTP ORIGINAL!

COMPRESSION SLEEVE

CTP STONE-GRIP TIE

**Usage Shown Here Re-Anchoring Granite Façade to Solid Back-Up**

Re-Attach Existing Stone and Precast Panel Veneers with Strength

- Mechanical fixes for long term anchorage and monitoring
- No grout/epoxy resins are required
- More effective and predictable than helical style anchors
- Connections that function with grip and strength

CTP, Inc. • www.CTPanchors.com
Phone: (785) 830-7380 • Fax: (219) 874-3626

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Dimensional Stone and Precast Panel Re-Anchoring Systems

Reattach Existing Stone and Precast Panels Without Removal or Resetting

CTP

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CTP Stone-Grip Tie for Reattaching Existing Stone and Precast Panel Veneers Without Removal or Resetting

**Product Line Description**

Stone and precast panel veneers may become unstable and possibly life threatening in the event of a connection failure. This failure can be the result of inadequate ties when built; existing material or anchor quality issues; the rusting or oxidation of existing anchors; or the delaminating of composite panels. A re-anchoring solution is possible using retro-fit anchors that would preclude the removal and resetting of the panel. The functional and performance characteristics of various retro-fit anchors must be capable of fulfilling typical anchorage expectations. The **CTP Stone-Grip Tie** product line offers those solutions.

Regardless of the panel type on the building envelope, it is subjected to two types of forces: Dead Loads – induced by gravity, and Live Loads – resulting commonly from wind and other external forces. Retro-fit anchors may be required to “Support” dead loads and/or “Resist” live loads. Their selection depends on assessing the qualitative and quantitative characteristics they provide.

**CTP Stone-Grip Ties** are the solution for re-anchoring unstable dimensional stone and precast panel facades. The anchors provide a positive means to re-anchor to the parent structure. The anchors are manufactured of corrosion resistant materials for ultimate long term performance and dependability. The functional and performance characteristics of the various ties are capable of fulfilling typical panel anchoring expectations for “live” or “dead” loads. The anchors have been engineered to re-attach the veneer panel to back-up structures constructed of either concrete, brick, masonry, structural steel, and wood/steel stud materials without the costly removal and resetting of the panels. The retro-fit connections can be concealed with like material Dutchmen or plugs, or it can be aesthetically exposed to create a new look for the building. The **CTP Stone-Grip Tie** product line provides cost effective solutions to removing and replacing existing stone and precast panel veneers.

**Basic Applications**

Use where there is a need to re-attach existing stone and precast veneers that require additional restraint, or support, to resist live and dead loads. **CTP Stone-Grip Ties** can accommodate bilateral live load resistance, uni-directional forces, support loading, and combinations of all types. The back up material will determine the style of anchorage required.

**Performance**

Each construction site is unique and the appropriate use of this product is the responsibility of the engineers, architects, and other professionals who are familiar with the specific requirements of the project. The data reflects results of lab, field and in-house tests and are provided as a guideline for the designer. Site testing is encouraged for verification of load capacity.
The CTP Grip-Max Type II Connection

- Adaptable to Variable Site Conditions
- Inspection Quality Control
- Monitor Anchorage Performance Over Time
- Re-Captures Stone to Structure

1. Concentrically drill appropriate sized holes through stone and back-up.
2. Activate back-up anchor.
3. Activate CTP Grip-Max and position to back of stone.
4. Attach stone panel head.
5. Conceal anchor if desired.

CTP Grip-Max Stiffness vs Stainless Steel Toggle

- 3/8" Toggle (Ultimate Capacity ≥ 2200 lb)
- 1/4" Toggle (Ultimate Capacity ≥ 1200 lb)
- 1/8" Toggle (Ultimate Capacity ≥ 425 lb)
The **Stone-Grip Tie** anchoring systems by CTP are a mechanical anchoring method to re-attach existing stone and precast cladding veneers to various back-up materials. Cladding materials can be as thin as 20mm and be manufactured from:

- Granite
- Marble
- Travertine
- Limestone
- Sandstone
- Precast Concrete
- Terra-Cotta
- Stucco

---

**Product Series Overview of CTP Stone-Grip Ties**

**Type 1 Anchors**

**Wind Restraint**

- One Direction Stone Load

- **CTP 6000**
  - 1 Series
  - SOLID BACK-UP

- **CTP 6100**
  - 1 Series
  - HOLLOW BACK-UP

---

**Type 2 Anchors**

**Wind Restraint**

- Two Direction Stone Load

- **CTP 6000**
  - 2 Series
  - SOLID BACK-UP

- **CTP 6100**
  - 2 Series
  - HOLLOW BACK-UP

---

**Type 2 Lite-Duty Anchors**

**Wind Restraint and Support**

- One Direction Stone Load

- **CTP 6200**
  - 2 Series
  - STRUCTURAL STEEL BACK-UP

- **CTP 6300**
  - 2 Series
  - METAL/WOOD STUD BACK-UP

---

**Type 3 Anchors**

**Wind Restraint and Support**

- One Direction Stone Load

- **CTP 6400**
  - 2LD Series
  - SOLID BACK-UP

- **CTP 6500/6600**
  - 3 Series
  - SOLID BACK-UP

---

**CTP STONE-GRIP TIE**

**CONSTRUCTION TIE PRODUCTS, INC.**

CTP, Inc. • www.CTPanchors.com • Phone: (785) 830-7380 • Fax: (219) 874-3626
## Product Series Comparison of CTP Stone-Grip Ties

### Ultimate Pullout Capacity (lb) Per CTP Anchor

<table>
<thead>
<tr>
<th>Back-Up Material</th>
<th>CTP 6000</th>
<th>CTP 6100</th>
<th>CTP 6200</th>
<th>CTP 6300</th>
<th>CTP 6400 LD</th>
<th>CTP 6500</th>
<th>CTP 6600</th>
<th>CTP 6800 (1/2&quot;)</th>
<th>CTP 6800 (3/8&quot;)</th>
<th>CTP 6800 (1/4&quot;)</th>
<th>CTP 6800 (3/4&quot;)</th>
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<td>100</td>
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</table>
CTP 6000-1 Series Anchor

Requires 3/4" Socket and CTP 501 Setting Tool

Installation Procedure and Criteria to Restrain Stone Panel to Solid Back-up

Type 1: Wind load restraint for one direction loading to solid back-up.

1. Locate anchor placement per specified location.
2. Drill 1/2" diameter hole thru the stone with a suitable “stone drilling” bit, without percussión.
3. Using a suitable 1/2" diameter quality carbide, drill a 1/2" hole into the solid back-up, on center with the 1/2" façade hole, 2" deeper than the "A" dimension as measured from the face of the stone. Blow out drill fines.
4. On center with the 1/2" drilled hole, drill a counter-bore 1-1/8" minimum diameter hole into the stone façade 3/8" - 1/2" deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft without head to the CTP 501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the concrete drilled hole; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. Attach CTP Stone-Grip Hex Tie Head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 - 25 in-lbs; remove tool.
7. Installation complete, patch or conceal anchorage per specification requirements.

CTP 6000-2 & 2LD Series Anchor

Requires CTP Hex Key, CTP 501 Setting Tool, Compression Sleeve Positioning Tool, 1/2" Deep Well Socket and Toggle Tool for 2LD

Installation Procedure and Criteria to Restain Stone Panel to Solid Back-up

Type 2: Wind load & Type 2LD: Light Duty) restraint for dual direction loading to solid back-up.

1. Locate anchor placement per specified location.
2. Drill 1/2" diameter hole thru the stone with a suitable “stone drilling” bit, without percussión.
3. Using a suitable 1/2" diameter quality carbide, drill a 1/2" hole into the solid back-up, on center with the 1/2" façade hole, 2" deeper than the max "A" dimension as measured from the face of the stone. Blow out drill fines.
4. On center with the 1/2" drilled hole, drill a counter-bore 1-1/8" minimum diameter hole into the stone façade 3/8" - 1/2" deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft with the CTP Grip-Max compression anchor or SS Toggle (located approximately 1" - 2" from the anchor shaft end) to the CTP 501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the concrete drilled hole; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. For the CTP Grip-Max: Using a 1/2" Deep Well socket and wrench, expand the "Compression Sleeve" by turning the hex nut plug 6 – 10 turns, remove socket.
7a. For the CTP Grip-Max: Using the twin tang “Compression Sleeve” positioning tool, slide prong of tool into the slot of the expanded sleeve until contact is made. Rotate counterclockwise until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
7b. For the toggle: Using the toggle positioning tool, slide tool into the channel section of sprung open toggle until contact is made. Rotate toggle counterclockwise until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
8. Attach CTP Stone-Grip head with EPDM washer to the anchor shaft using the "T" handle hex wrench, rotate clockwise until the washer and head bottom out into the counter-bore, tighten 20 - 25 in-lbs; remove tool.
9. Installation complete, patch or conceal anchorage per specification requirements.
CTP 6100-1 Series Anchor

INSTALLATION PROCEDURE AND CRITERIA TO RESTRRAIN STONE PANEL TO HOLLOW AND SOLID BACK-UP

Type 1: Wind load restraint for one direction loading to hollow and solid back-up.

FACE OF VENEER TO FACE OF BACK-UP (A)

1. Locate anchor placement per specified location.
2. Drill 1/2” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 3/8” diameter quality carbide, drill a 3/8” hole into the back-up, on center with the 1/2” facade hole, 2” deeper then the "A" dimension as measured from the face of the stone. Blow out drill fines.
4. On center with the 1/2” drilled hole, drill a Counter-bore 1-1/8” minimum diameter hole into the stone facade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft, without head, to the CTP 501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the back-up drilled hole; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. Attach CTP Stone-Grip Tie Hex Head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.

CTP 6100-2 & 2LD Series Anchor

INSTALLATION PROCEDURE AND CRITERIA TO RESTRAIN STONE PANEL TO HOLLOW BACK-UP

Type 2: Wind load restraint (Type 2LD: Light Duty) restraint for dual direction loading to hollow back-up.

FACE OF VENEER TO FACE OF BACK-UP (A)

1. Locate anchor placement per specified location.
2. Drill 3/8” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 3/8” diameter quality carbide, drill a 3/8” hole into the solid back-up, on center with the 3/8” facade hole, 2” deeper then the max ‘A’ dimension as measured from the face of the stone. Blow out drill fines.
4. On center with the 3/8” drilled hole, drill a 4” nominal hole thru the stone facade. Counter-bore a 1-1/2” – 1-5/8” hole into the stone facade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft with the CTP Grip-Max compression anchor or SS Toggle (located approximately 1” – 2” from the anchor shaft end) to the CTP-501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the back-up drilled hole; tighten by turning clockwise until 50 – 100 in-lbs of torque is reached; remove setting tool.
6. For the CTP Grip-Max: Using a 1/2” Deep Well socket and wrench, expand the “Compression Sleeve” by turning the hex nut plug 6 – 10 turns, remove socket.
7a. For the CTP Grip-Max: Using the twin tang “Compression Sleeve” positioning tool, slide prong of tool into the slot of the expanded sleeve until contact is made. Rotate counterclockwise the assembly until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
7b. For the toggle: Using the toggle positioning tool, slide tool into the channel section of sprung open TOGGLE until contact is made. Rotate toggle counterclockwise until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
8. Attach CTP Stone-Grip Tie Hex Head and washer with EPDM washer to the anchor shaft using the ‘T’ handle hex wrench, rotate clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
9. Installation complete, patch or conceal anchorage per specification requirements.
### INSTALLATION PROCEDURE AND CRITERIA TO RESTRAIN STONE PANEL TO STEEL BACK-UP

#### Type 1: Wind load restraint for one direction loading to structural steel back-up.

1. Locate anchor placement per specified location.
2. Drill 1/2” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 7/16” diameter quality carbide drill, drill a 7/16” hole into the steel back-up, on center with the 1/2” façade hole.
4. On center with the 1/2” drilled hole, drill a counter-bore 1-1/8” minimum diameter hole into the stone façade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft without head to the CTP 501 setting tool; slide assembly with the nylon spacer through the drilled holes until the expansion anchor bottoms to the steel; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. Attach CTP Stone-Grip Hex Tie Head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
7. Installation complete, patch or conceal anchorage per specification requirements.

#### Type 2: Wind load (Type 2LD : Light Duty) restraint for dual direction loading to steel back-up.

1. Locate anchor placement per specified location.
2. Drill 1/2” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 7/16” diameter quality carbide, drill a 7/16” hole into the steel back-up, on center with the 1/2” façade hole.
4. On center with the 1/2” drilled hole, drill a counter-bore 1-1/8” minimum diameter hole into the stone façade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft with the CTP Grip-Max compression anchor or SS Toggle (located approximately 1” – 2” from the anchor shaft end) to the CTP 501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the back-up drilled hole; tighten by turning clockwise until 50 – 100 in-lbs of torque is reached; remove setting tool.
6. For the CTP Grip-Max: Using a 1/2” Deep Well socket and wrench, expand the “Compression Sleeve” by turning the hex nut plug 6 – 10 turns, remove socket.
7a. For the CTP Grip-Max: Using the twin tang “Compression Sleeve” positioning tool, slide prong of tool into the slot of the expanded sleeve until contact is made. Rotate counterclockwise the assembly until contact is made to the back of the marble veneer plus 1/4 turn; remove the positioning tool.
7b. For the toggle: Using the toggle positioning tool, slide tool into the channel section of sprung open toggle until contact is made. Rotate toggle counterclockwise until contact is made to the back of the marble veneer plus 1/4 turn; remove the positioning tool.
8. Attach CTP Stone-Grip head with EPDM washer to the anchor shaft using the “T” handle hex wrench, rotate clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
9. Installation complete, patch or conceal anchorage per specification requirements.

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**CTP 6200-1 Series Anchor**

Requires 3/4” Socket and CTP 501 Setting Tool

**FACE OF VENEER TO FACE OF BACK-UP (A)**

1. Locate anchor placement per specified location.
2. Drill 1/2” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 7/16” diameter quality drill bit, drill a 7/16” hole into the steel back-up, on center with the 1/2” façade hole.
4. On center with the 1/2” drilled hole, drill a counter-bore 1-1/8” minimum diameter hole into the stone façade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft without head to the CTP 501 setting tool; slide assembly with the nylon spacer through the drilled holes until the expansion anchor bottoms to the steel; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. Attach CTP Stone-Grip Hex Tie Head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
7. Installation complete, patch or conceal anchorage per specification requirements.

**CTP 6200-2 & 2LD Series Anchor**

Requires CTP Hex Key, CTP 501 Setting Tool, Compression Sleeve Positioning Tool, 1/2” Deep Well Socket and Toggle Tool for 2LD

**FACE OF VENEER TO FACE OF BACK-UP (A)**

1. Locate anchor placement per specified location.
2. Drill 1/2” diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable 7/16” diameter quality carbide, drill a 7/16” hole into the steel back-up, on center with the 1/2” façade hole.
4. On center with the 1/2” drilled hole, drill a 3/4” nominal hole through the stone façade. Counter-bore a 1-1/2” – 1-5/8” diameter hole into the stone façade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft with the CTP Grip-Max compression anchor or SS Toggle (located approximately 1” – 2” from the anchor shaft end) to the CTP 501 setting tool; slide assembly through the drilled holes until the expansion anchor bottoms in the back-up drilled hole; tighten by turning clockwise until 50 – 100 in-lbs of torque is reached; remove setting tool.
6. For the CTP Grip-Max: Using a 1/2” Deep Well socket and wrench, expand the “Compression Sleeve” by turning the hex nut plug 6 – 10 turns, remove socket.
7a. For the CTP Grip-Max: Using the twin tang “Compression Sleeve” positioning tool, slide prong of tool into the slot of the expanded sleeve until contact is made. Rotate counterclockwise the assembly until contact is made to the back of the marble veneer plus 1/4 turn; remove the positioning tool.
7b. For the toggle: Using the toggle positioning tool, slide tool into the channel section of sprung open toggle until contact is made. Rotate toggle counterclockwise until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
8. Attach CTP Stone-Grip head with EPDM washer to the anchor shaft using the “T” handle hex wrench, rotate clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
9. Installation complete, patch or conceal anchorage per specification requirements.

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**CATALOG #**

- **CTP-6234**: 2-1/4” – 3-3/8”
- **CTP-6240**: 2-3/4” – 3-7/8”
- **CTP-6244**: 3-1/4” – 4-3/8”
- **CTP-6254**: 4-1/4” – 5-3/8”
- **CTP-6264**: 5-1/4” – 6-3/8”

**OTHER LENGTHS AVAILABLE UPON REQUEST**
**INSTALLATION PROCEDURE AND CRITERIA TO RESTRAIN STONE PANEL TO STUD BACK-UP**

**Type 1**: Wind load restraint for uni-directional loading to wood or steel stud back-up.

1. Locate anchor placement per specified location.
2. Drill 1/2" diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable twist drill per the diameter illustrated drill a pilot hole into the back-up, on center with the 1/2" façade hole.
4. On center with the 1/2" drilled hole, drill a Counter-bore 1-1/8" minimum diameter hole into the stone façade 3/8" – 1/2" deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft without head to the #501 setting tool; slide assembly through the drilled holes until the shaft bottoms in the back-up stud or reaches the minimum embedment in wood; tighten to desired torque; remove setting tool.
6. Attach CTP Stone-Grip Hex Tie Head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
7. Installation complete, patch or conceal anchorage per specification requirements.

**Type 2**: Wind load restraint for uni-directional loading to wood or steel stud back-up.

1. Locate anchor placement per specified location.
2. Drill 3/4" diameter hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable twist drill per the diameter illustrated drill a pilot hole into the back-up, on center with the 3/4" façade hole.
4. On center with the 3/4" drilled hole, drill a Counter-bore 1-1/4" minimum diameter hole into the stone façade 3/8" – 1/2" deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft with the CTP Grip-Max compression anchor or SS Toggle (located approximately 1 – 2" from the anchor shaft end) to the CTP 501 setting tool; slide assembly through the drilled holes until the shaft bottoms in the back-up drilled hole; tighten by turning clockwise until 50 – 100 in-lbs of torque is reached; remove setting tool.
6. For the CTP Grip-Max: Using a 1/2" Deep Well socket and wrench, expand the “Compression Sleeve” by turning the hex nut plug 6 – 10 turns, remove socket.
7a. For the CTP Grip-Max: Using the twin tang “Compression Sleeve” positioning tool, slide prong of tool into the slot of the expanded sleeve until contact is made. Rotate counterclockwise the assembly until contact is made to the back of the marble veneer plus 1/4 turn; remove the positioning tool.
7b. For the toggle: Using the toggle positioning tool, slide tool into the channel section of sprung open toggle until contact is made. Rotate toggle counterclockwise until contact is made to the back of the stone veneer plus 1/4 turn; remove the positioning tool.
8. Attach CTP Stone-Grip head with EPDM washer to the anchor shaft using the “T” handle hex wrench, rotate clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
9. Installation complete, patch or conceal anchorage per specification requirements.
## Product Series of CTP Stone-Grip Tie

### CTP 6400-2 Series Anchor

Requires CTP 501R Setting Tool for 3/8” & CTP 501M for 1/2”

**Installation Procedure and Criteria to Restrain Stone Panel to Solid Back-up**

**Type 2LD**: Light duty wind load restraint for dual direction loading to solid back-up.

<table>
<thead>
<tr>
<th>CATALOG #</th>
<th>FACE to FACE (in.)</th>
<th>FACADE PILOT DIAMETER (in.) B1</th>
<th>BACK-UP DIAMETER (in.) B2</th>
<th>DRILLED HOLE DEPTH (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTP-6430R</td>
<td>1-1/4”</td>
<td>3/8”</td>
<td>3/8”</td>
<td>3-1/4”</td>
</tr>
<tr>
<td>CTP-6440R</td>
<td>2-1/4”</td>
<td>3/8”</td>
<td>3/8”</td>
<td>4-1/4”</td>
</tr>
<tr>
<td>CTP-6450R</td>
<td>3-1/4”</td>
<td>3/8”</td>
<td>3/8”</td>
<td>5-1/4”</td>
</tr>
<tr>
<td>CTP-6460R</td>
<td>4-1/4”</td>
<td>3/8”</td>
<td>3/8”</td>
<td>6-1/4”</td>
</tr>
<tr>
<td>CTP-6430</td>
<td>1-1/4”</td>
<td>1/2”</td>
<td>1/2”</td>
<td>3-1/4”</td>
</tr>
<tr>
<td>CTP-6440</td>
<td>2-1/4”</td>
<td>1/2”</td>
<td>1/2”</td>
<td>4-1/4”</td>
</tr>
<tr>
<td>CTP-6450</td>
<td>3-1/4”</td>
<td>1/2”</td>
<td>1/2”</td>
<td>5-1/4”</td>
</tr>
<tr>
<td>CTP-6460</td>
<td>4-1/4”</td>
<td>1/2”</td>
<td>1/2”</td>
<td>6-1/4”</td>
</tr>
</tbody>
</table>

**Other Lengths Available Upon Request**

### CTP 6500 (1/2” Dia.) 3 Series Anchor

**CTP 6600 (3/8” Dia.) 3 Series Anchor**

Requires CTP Hex Key and CTP 501-EXT Setting Tools

**Installation Procedure and Criteria to Restrain Stone Panel to Solid Back-up**

**Type 3**: Wind load restraint and support for one direction loading to solid back-up.

<table>
<thead>
<tr>
<th>CATALOG #</th>
<th>FACE to FACE (in.)</th>
<th>FACADE PILOT DIAMETER (in.) B1</th>
<th>BACK-UP DIAMETER (in.) B2</th>
<th>PILOT HOLE DIAMETER (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTP-6550</td>
<td>0-2”</td>
<td>3/8”</td>
<td>0-3”</td>
<td>5”</td>
</tr>
<tr>
<td>CTP-6550</td>
<td>0-2”</td>
<td>3/8”</td>
<td>0-3”</td>
<td>6”</td>
</tr>
<tr>
<td>CTP-6570</td>
<td>0-4”</td>
<td>3/8”</td>
<td>0-4”</td>
<td>7”</td>
</tr>
<tr>
<td>CTP-6580</td>
<td>0-5”</td>
<td>3/8”</td>
<td>0-5”</td>
<td>8”</td>
</tr>
</tbody>
</table>

**Other Lengths Available Upon Request**

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**FACE OF VENEER TO FACE OF BACK-UP (A)**

1. Locate anchor placement per specified location.
2. Drill a pilot hole (3/8” for CTP 6400R and 1/2” for the CTP 6400) hole thru the stone with a suitable “stone drilling” drill bit, without percussion.
3. Using a suitable quality carbide, continue drilling the same hole diameter into the solid back-up, on center with the façade hole, to the Drilled Hole Depth indicated on the chart. Blow out drill fines.
4. Fit threaded shaft, with expander assembly opposite, to the CTP 501R or CTP 501M setting tool. (Hex bolt MUST be seated) thread shaft into tool until it stops; insert assembly into drilled hole until it bottoms; tighten 50-100 in-lbs.
5. Remove tool by holding firmly and loosening the hex bolt, then spin tool off anchor shaft manually.
6. Place outer brass shield over main body (slots facing outward) and slide over shaft until it stops against nut; Place slot of tapered cone onto the setting tool tangs; Position tapered cone onto shaft and tighten 50-100 in-lbs.
7. Remove tool, installation complete, patch or conceal anchorage per specification requirements.

**FACE OF VENEER TO FACE OF BACK-UP (B)**

1. Locate anchor placement per specified location.
2. Drill appropriate diameter hole thru the stone with a suitable “stone drilling” drill bit, and into the solid back-up to a depth 3/8” greater than the anchor length.
4. On center with the pilot hole, drill a counter-bore 1-1/4” minimum diameter hole into the stone façade 3/8” – 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble anchor shaft without head to the CTP 501-EXT Setting Tool; slide assembly through the drilled holes until the expansion anchor bottoms in the concrete drilled hole; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
6. Attach CTP Stone-Grip head and washer with EPDM washer to the anchor shaft using an appropriate hex socket, hand tighten clockwise until the washer and head bottom out into the counter-bore, tighten 20 – 25 in-lbs; remove tool.
7. Installation complete, patch or conceal anchorage per specification requirements.
**CTP 6800 (1/4” Dia.) 1 Series Anchor**

**INSTALLATION PROCEDURE AND CRITERIA TO RESTRAIN STONE PANEL TO SOLID BACK-UP**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Anchor Diameter (in.)</th>
<th>Anchor Length (in.)</th>
<th>Min. Overall Hole Depth (in.)</th>
<th>Concrete or Grouted Masonry Back-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTP-683801</td>
<td>2-1/2’</td>
<td>3 - 1/2’</td>
<td>3-3/4’</td>
<td>Concrete or Grouted Masonry Back-Up</td>
</tr>
<tr>
<td>CTP-683802</td>
<td>3 - 1/2’</td>
<td>3-3/4’</td>
<td>4-1/2’</td>
<td>Concrete or Grouted Masonry Back-Up</td>
</tr>
<tr>
<td>CTP-682101</td>
<td>4-1/2’</td>
<td>3 - 1/2’</td>
<td>5-3/4’</td>
<td>Concrete or Grouted Masonry Back-Up</td>
</tr>
</tbody>
</table>

**FACE OF VENEER TO FACE OF BACK-UP (A)**

1. Locate anchor placement per specified location.
2. Drill 5/16” diameter hole thru the stone with a suitable “stone drilling” drill bit.
3. On center with the 5/16” hole, drill a 1/4” diameter hole into the solid back-up to the overall hole depth indicated in the chart.
4. On center with the pilot hole, drill a counter-bore 5/8” minimum diameter hole into the stone façade 3/16” - 3/8” deep from the face of the stone on center with the previous drilled holes.
5. Assemble the anchor shaft without the CTP Stone-Grip Tie Hex Head and washer assembly to the CTP H Series Setting Tool; slide assembly through the drilled holes until the expansion anchor bottoms in the concrete drilled hole; using a hand held hammer, firmly strike the setting tool until hammer rebounds lively; remove setting tool.
6. Attach CTP Stone-Grip Tie Hex Head assembly to the anchor shaft; hand tighten clockwise until the assembly bottoms out into the counter-bore, tighten 20-25 in-lbs.
7. Installation complete, patch or conceal anchorage per specification requirements.

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**CTP 6800-3 Series Anchor**

**INSTALLATION PROCEDURE AND CRITERIA TO STABILIZE AND SUPPORT STONE PANEL CONCRETE BACK-UP AND GROUTED MASONRY**

1. Locate anchor placement per specified location.
2. Drill appropriate diameter hole thru the stone with a suitable “stone drilling” drill bit, and into the solid back-up to a depth indicated in the chart.
4. On center with the pilot hole, drill a counter-bore 1-1/2” minimum diameter hole into the stone façade 3/8” - 1/2” deep from the face of the stone on center with the previous drilled holes.
5. Assemble the anchor shaft without the CTP Stone-Grip Tie Bearing Plate assembly to the CTP H Series Setting Tool; slide assembly through the drilled holes until the expansion anchor bottoms in the concrete drilled hole; using a hand held hammer, firmly strike the setting tool until hammer rebounds lively; remove setting tool.
6. Attach CTP Stone-Grip Tie Bearing Plate assembly to the anchor shaft; hand tighten clockwise until the assembly bottoms out into the counter-bore, tighten 20-25 in-lbs.
7. Installation complete, patch or conceal anchorage per specification requirements.

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**Type 3: Wind load restraint and panel support to concrete or grouted masonry back-up using hammer set expansion activation in the back-up material.**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Face of Veneer to Face of Back-Up (in.)</th>
<th>Anchor Diameter (in.)</th>
<th>Anchor Length (in.)</th>
<th>Min. Overall Hole Depth (in.)</th>
<th>Concrete Hole Diameter (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTP-683801</td>
<td>3-1/2’</td>
<td>3/8”</td>
<td>5-5/8’</td>
<td>6-3/8’</td>
<td>3/8’</td>
</tr>
<tr>
<td>CTP-683802</td>
<td>4-1/2’</td>
<td>3/8”</td>
<td>6-5/8’</td>
<td>7-3/8’</td>
<td>3/8’</td>
</tr>
<tr>
<td>CTP-682101</td>
<td>3-1/2’</td>
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<td>5-5/8’</td>
<td>6-3/8’</td>
<td>1/2’</td>
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<tr>
<td>CTP-681202</td>
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<td>6-5/8’</td>
<td>7-3/8’</td>
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<tr>
<td>CTP-683400</td>
<td>2-1/2’</td>
<td>3/4’</td>
<td>4-5/8’</td>
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<tr>
<td>CTP-683401</td>
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<td>3/4”</td>
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<td>3/4’</td>
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<tr>
<td>CTP-683402</td>
<td>4-1/2’</td>
<td>3/4”</td>
<td>6-5/8’</td>
<td>7-3/8’</td>
<td>3/4’</td>
</tr>
</tbody>
</table>

MINIMUM CONCRETE COVER AT ANCHOR BOTTOM = 3.5 X F. OTHER ANCHOR LENGTHS ARE AVAILABLE UPON REQUEST.
CTP Stone-Grip Tie Planning Guide

CTP Stone-Grip Accessories, Setting Tools, and Options

1. CTP Stone-Grip heads can be customized to suit a particular architectural finish appearance, size, or shape. Contact Customer Service for assistance.
2. CTP Stone-Grip heads can be powder coated for color matching and surface mounting. Contact Customer Service for assistance.
3. Diamond tipped core drills are available upon request for granite drilling. Contact Customer Service for assistance.
4. Upon request, dual diameter diamond tipped core drills are available. Contact Customer Service for assistance.
5. Carbide tipped counter-bore drills are available for drilling into marble, travertine, limestone, sandstone, concrete for hand held drills.
6. EPDM washers can be made to different thickness (.090 is typical) and hardness (60± Durometer typical).

CTP Stone-Grip Tie Setting Tools

CTP 501R and CTP 501M
CTP 501R for 3/8" Tie
CTP 501M for 1/2" Tie
for CTP 6400 Travertine Ties

CTP 501-EXT
for all CTP 6500 and CTP 6600 Series Anchor Setting Tool

CTP H Series
CTP HS14 for 1/4"
CTP HS36 for 3/8"
CTP HS12 for 1/2"
CTP HS34 for 3/4"

CTP Toggle Setting Tool

CTP 501
for all CTP 6000 and 6100 Series Anchor Setting Tool

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Approval
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