

**Dimensional
Stone and Precast Panel
Re-Anchoring Systems**

AGAIN! ANOTHER
CTP SOLUTION!

CTP STONE-GRIP TIE

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



*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*

Made in the U.S.A.

CTP, Inc. • www.ctpanchors.com
Phone: (219) 878-1427 • Fax: (219) 874-3626

**Reattach Existing
Stone and Precast Panels
Without Removal
or Resetting**



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 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.

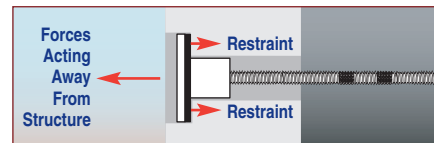
Use where there is a need to re-attach existing stone and precast veneers that require additional restraint, or support, to resist live and dead loads. **CTP Stone-Grip Ties** can accommodate bilateral live load resistance, uni-directional forces, support loading, and combinations of all types. The back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

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.

Anchor components are manufactured of austenitic stainless steel and corrosion resistant brass materials. The anchors are capable of re-attaching stone panels for the following typical applications:

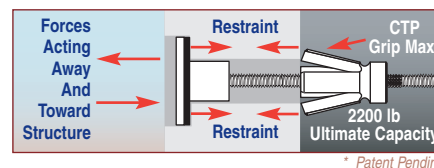
Type 1

Wind load restraint for one direction (i.e. suction or movement away from the structure) loading.



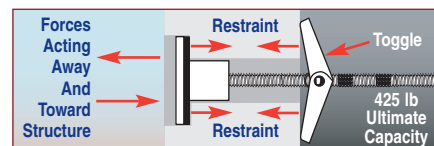
Type 2

Wind load restraint for dual direction (i.e. suction and compression wind effects) loading.



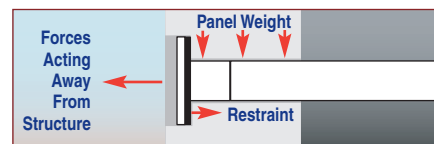
Type 2LD

Light duty wind load restraint for dual direction (i.e. suction and compression wind effects) loading.



Type 3

Wind load restraint for one direction (i.e. suction or movement away from the structure) loading and **panel support** to solid back-up.

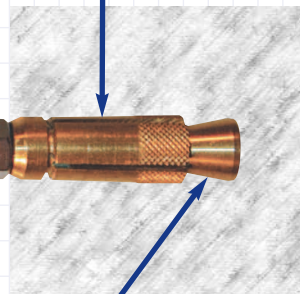
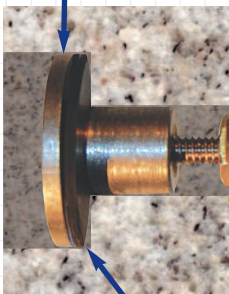


The CTP Grip-Max Type II Connection

Large Flat Bearing Area (1.4 in²)
for Effective
Suction Load Resistance (→)

Corrosion Resistant Fastener
to
Parent Structure

Corrosion Resistant Shaft and
Hardware for Effective Load
Transfer and Longevity



* Patent Pending

Positive Inward (←)
Load Resistance.
Solid Contact Area
(4 places max)

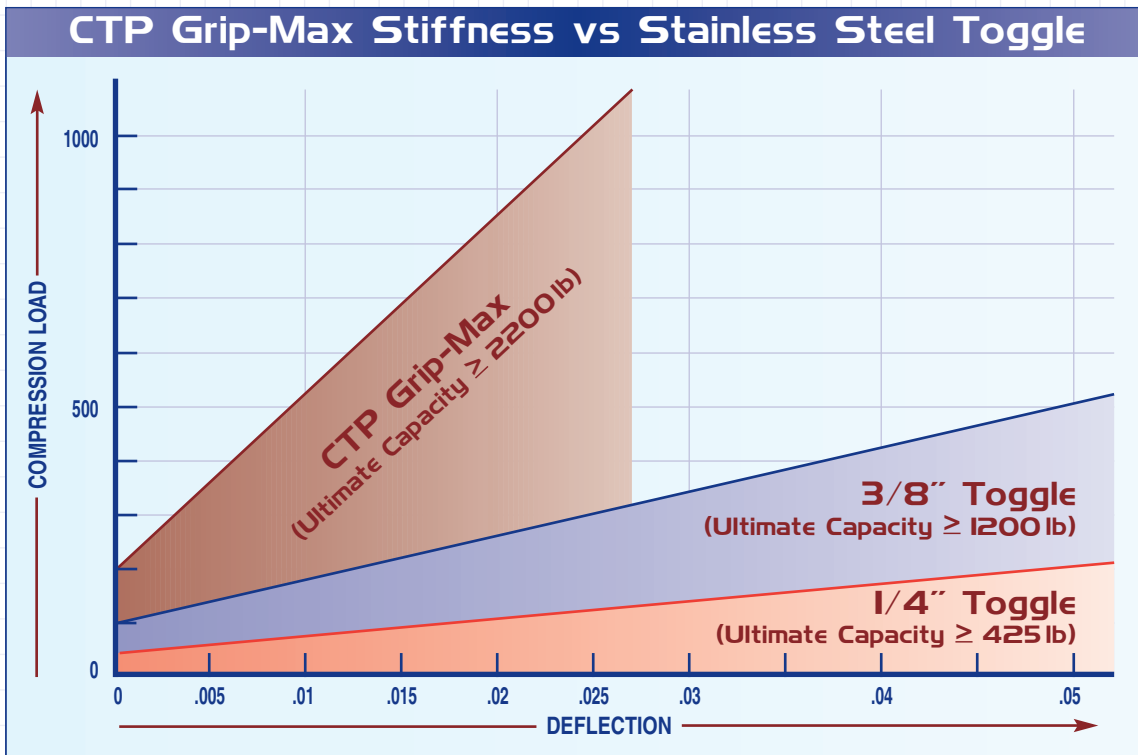
EPDM Cushioning
Washer

Positive Mechanical Lock
in Back-Up Material

CTP Grip-Max *

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

- Installs Easily!
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.






Dimensional Stone and Precast Panel Re-Anchoring Systems

Product Series Overview of CTP Stone-Grip Ties

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**

Type 1 Anchors		Type 2 Anchors		Type 2 Lite-Duty Anchors		Type 3 Anchors
<p>Wind Restraint One Direction Stone Load</p>		<p>Wind Restraint Two Direction Stone Load</p>		<p>Wind Restraint Two Direction Stone Load</p>		<p>Wind Restraint and Support One Direction Stone Load</p>
<p>CTP 6000 1 SERIES SOLID BACK-UP</p> 	<p>CTP 6100 1 SERIES HOLLOW BACK-UP</p> 	<p>CTP 6000 2 SERIES SOLID BACK-UP</p>  <p><i>Patent Pending</i></p>	<p>CTP 6100 2 SERIES HOLLOW BACK-UP</p>  <p><i>Patent Pending</i></p>	<p>CTP 6000 2LD SERIES SOLID BACK-UP</p> 	<p>CTP 6100 2LD SERIES HOLLOW BACK-UP</p> 	<p>CTP 6500/6600 3 SERIES SOLID BACK-UP</p> 
<p>CTP 6200 1 SERIES STRUCTURAL STEEL BACK-UP</p> 	<p>CTP 6300 1 SERIES METAL/WOOD STUD BACK-UP</p> 	<p>CTP 6200 2 SERIES STRUCTURAL STEEL BACK-UP</p>  <p><i>Patent Pending</i></p>	<p>CTP 6300 2 SERIES METAL/WOOD STUD BACK-UP</p>  <p><i>Patent Pending</i></p>	<p>CTP 6200 2LD SERIES STRUCTURAL STEEL BACK-UP</p> 	<p>CTP 6300 2LD SERIES METAL/WOOD STUD BACK-UP</p> 	<p>CTP 6800 HAMMER SET 3 SERIES SOLID BACK-UP</p> 
<p>CTP 6800 HAMMER SET 1 SERIES SOLID BACK-UP (1/4" DIAMETER)</p> 				<p>CTP 6400 2LD SERIES TRAVERTINE-TIE SERIES ANCHOR SOLID BACK-UP</p> 		

Product Series Comparison of CTP Stone-Grip Ties

BACK-UP MATERIAL		Ultimate Pullout Capacity (lb) Per CTP Anchor												
		CTP ANCHOR SERIES												
		RESTRAIN STONE PANEL TO SOLID BACK-UP	RESTRAIN STONE PANEL TO SOLID AND HOLLOW	RESTRAIN STONE PANEL TO STEEL BACK-UP	RESTRAIN STONE PANEL TO STUD BACK-UP	TRAVERTINE TIE TO RESTRAIN STONE PANEL TO SOLID BACK-UP		TORQUE ACTIVATED FOR STONE PANEL TO SOLID BACK-UP WITH OR W/OUT CAVITY		HAMMER SET (HS) TO STABILIZE STONE PANEL TO CONCRETE BACK-UP				
						Façade Pilot Hole		Anchor Diameter		Anchor Diameter				
CTP 6000 TYPE 1, 2, & 2-LD	CTP 6100 TYPE 1, 2, & 2-LD	CTP 6200 TYPE 1, 2, & 2-LD	CTP 6300 TYPE 1, 2, & 2-LD	CTP 6400 LD (3/8")	CTP 6400 LD (1/2")	CTP 6500 (1/2")	CTP 6600 (3/8")	CTP 6800 (1/4")	CTP 6800 (3/8")	CTP 6800 (1/2")	CTP 6800 (3/4")			
Hollow Light Weight CMU			1000											
Hollow Normal Weight CMU			1100											
Grouted CMU (2000 psi grat)		2000	1300			1500	2100	2000	1300	1000	1100	2000	4000	
Concrete (3500 psi)		2000	1100			1500	2000	2000	1500	2000	3200	7100	7500	
Solid Brick		1500	1200			1200	1500	1500	1200					
Clay Tile			700											
Wood Kiln Dried 2x4 Stud					840									
16-Gauge Metal Stud					835									
Steel			2000	2000										
Ultimate Bending	Cavity with 3 cm Stone	1"						680	280		280	680	2300	
		2"						340	140		140	340	1100	
		3"						230	100		100	230	760	
		4"						170	70		70	170	600	
		5"						140	60		60	140	500	
		6"						110	50		50	110	380	
		7"						100	40		40	100	325	

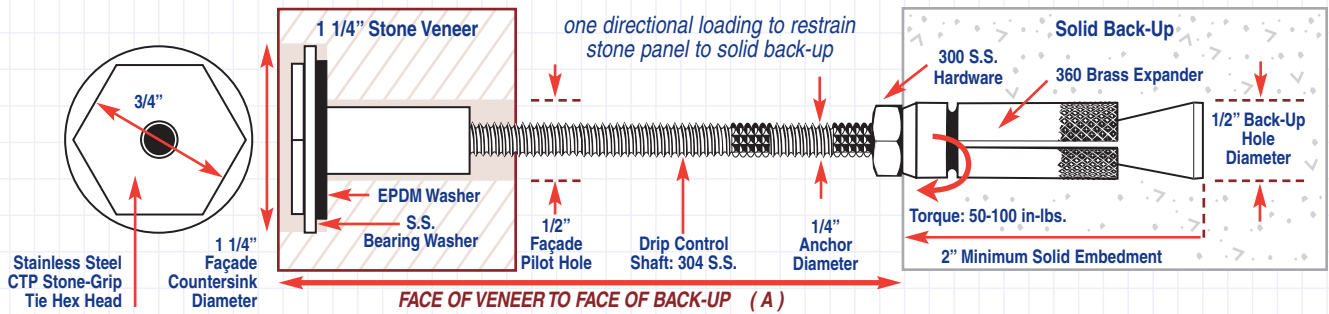
Product Series of CTP Stone-Grip Tie

CTP 6000-1 SERIES ANCHOR

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

Requires 3/4" Socket and CTP 501 Setting Tool

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" drill bit, without percussion.
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 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 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.

CATALOG #	A
CTP-6034	1-5/8" - 2-7/8"
CTP-6040	2-1/8" - 3-3/8"
CTP-6044	2-5/8" - 3-7/8"
CTP-6054	3-5/8" - 4-7/8"
CTP-6064	4-5/8" - 5-7/8"

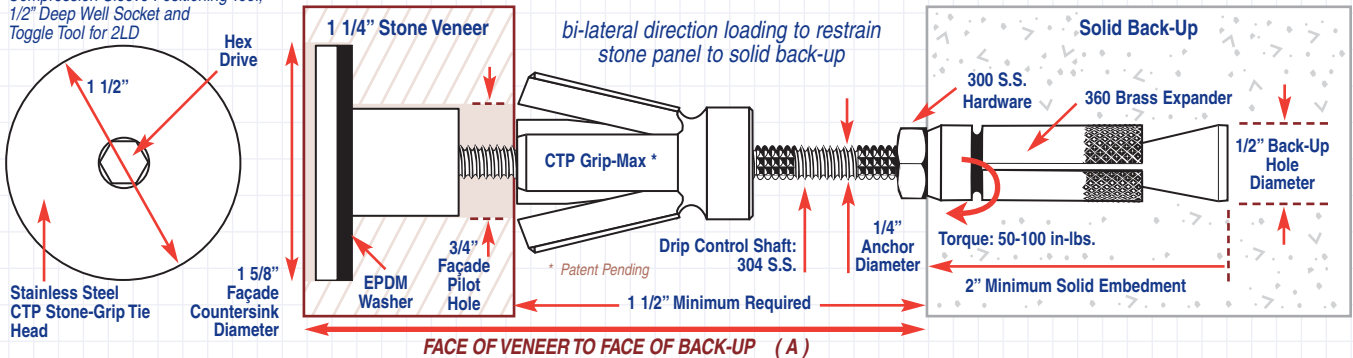
OTHER LENGTHS AVAILABLE UPON REQUEST

CTP 6000-2 & 2LD SERIES ANCHOR

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

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

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" drill bit, without percussion.
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 then 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 3/4" nominal hole through the stone façade. Counter-bore a 1-1/2" - 1-5/8" 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 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 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.

CATALOG #		A
CTP GRIP-MAX	CTP TOGGLE	
CTP-6044-2	CTP-6044-2LD	3" - 4"
CTP-6054-2	CTP-6054-2LD	4" - 5"
CTP-6064-2	CTP-6064-2LD	5" - 6"
CTP-6074-2	CTP-6074-2LD	6" - 7"

OTHER LENGTHS AVAILABLE UPON REQUEST

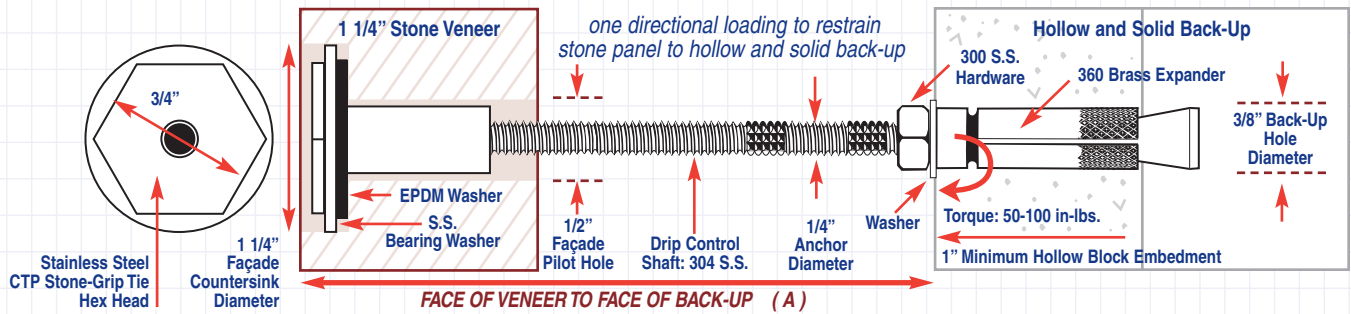
Product Series of CTP Stone-Grip Tie

CTP 6100-1 SERIES ANCHOR

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

Requires 3/4" Socket and CTP 501 Setting Tool

Type 1 : Wind load restraint for one direction loading to hollow and solid 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 3/8" diameter quality carbide, drill a 3/8" hole into the back-up, on center with the 1/2" façade 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 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 back-up drilled hole; tighten by turning clockwise until 50-100 in-lbs of torque is reached; remove setting tool.
8. 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.
9. Installation complete, patch or conceal anchorage per specification requirements.

CATALOG #	A
CTP-6134	1-7/8" - 3"
CTP-6140	2-3/8" - 3-1/2"
CTP-6144	2-7/8" - 4"
CTP-6154	3-7/8" - 5"
CTP-6164	4-7/8" - 6"

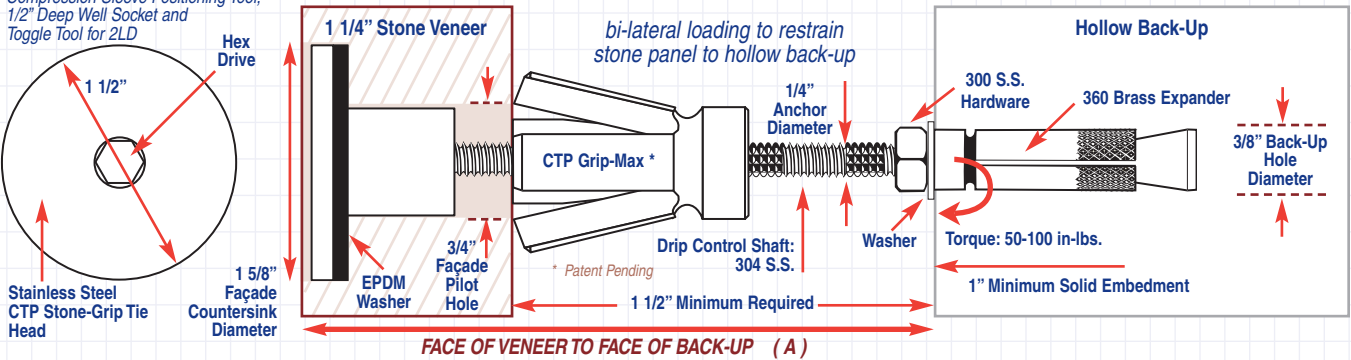
OTHER LENGTHS AVAILABLE UPON REQUEST

CTP 6100-2 & 2LD SERIES ANCHOR

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

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

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



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" façade 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 3/4" nominal hole through the stone façade. Counter-bore a 1-1/2" - 1-5/8" 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 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 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.

CATALOG #		A
CTP GRIP-MAX	CTP TOGGLE	
CTP-6144-2	CTP-6144-2LD	3" - 4"
CTP-6154-2	CTP-6154-2LD	4" - 5"
CTP-6164-2	CTP-6164-2LD	5" - 6"

OTHER LENGTHS AVAILABLE UPON REQUEST

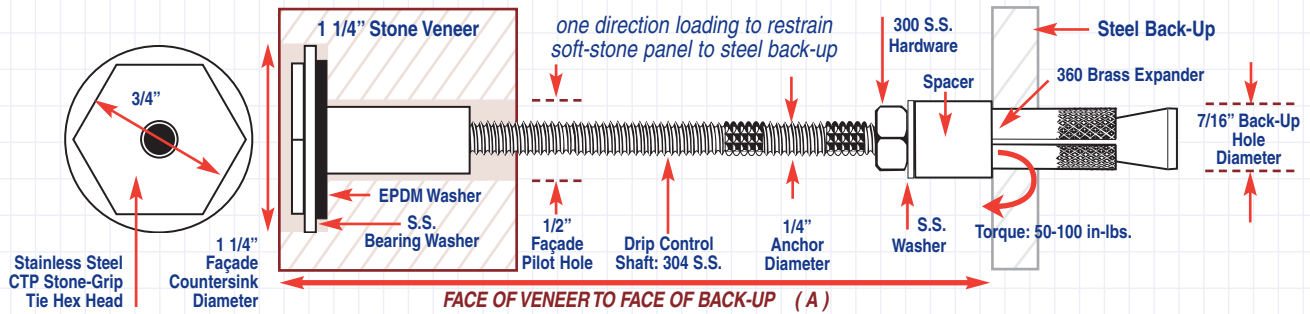
Product Series of CTP Stone-Grip Tie

CTP 6200-1 SERIES ANCHOR

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

Requires 3/4" Socket and CTP 501 Setting Tool

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 drill bit, drill a 7/16" hole into the steel back-up, on center with the 1/2" facade hole.
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 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.

CATALOG #	A
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"

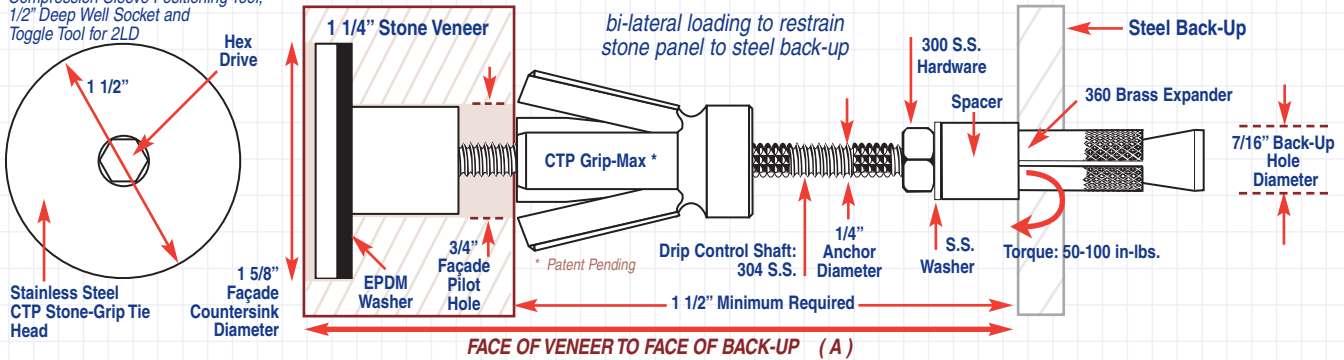
OTHER LENGTHS AVAILABLE UPON REQUEST

CTP 6200-2 & 2LD SERIES ANCHOR

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

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

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" facade hole.
4. On center with the 1/2" drilled hole, drill a 3/4" nominal hole through the stone facade. Counter-bore a 1-1/2" - 1-5/8" 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 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.

CATALOG #		A
CTP GRIP-MAX	CTP TOGGLE	
CTP-6244-2	CTP-6244-2LD	3" - 4"
CTP-6254-2	CTP-6254-2LD	4" - 5"
CTP-6264-2	CTP-6264-2LD	5" - 6"

OTHER LENGTHS AVAILABLE UPON REQUEST

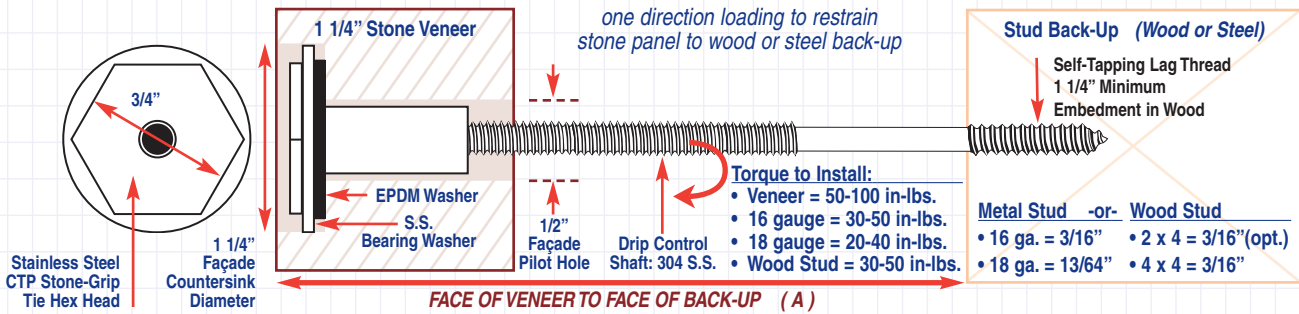
Product Series of CTP Stone-Grip Tie

CTP 6300-1 SERIES ANCHOR

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

Requires 3/4" Socket and CTP 501 Setting Tool

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



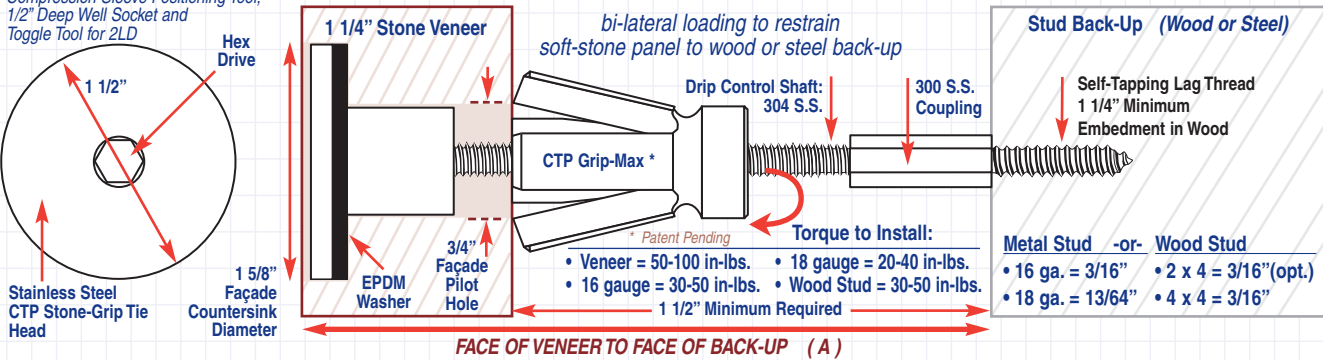
1. Locate anchor placement per specified location.
2. Drill 1/2" diameter hole thru the stone with a suitable "stone drilling" drill bit, without percussion.
3. Using a suitable twist drill per the diameter illustrated drill a pilot hole into the back-up, on center with the 1/2" façade hole.
4. On center 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.

CTP 6300-2 & 2LD SERIES ANCHOR

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

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

Type 2 : Wind load (& Type 2LD : Light Duty) restraint for uni-direction loading to wood or steel 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 1-1/2" - 1-5/8" 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.

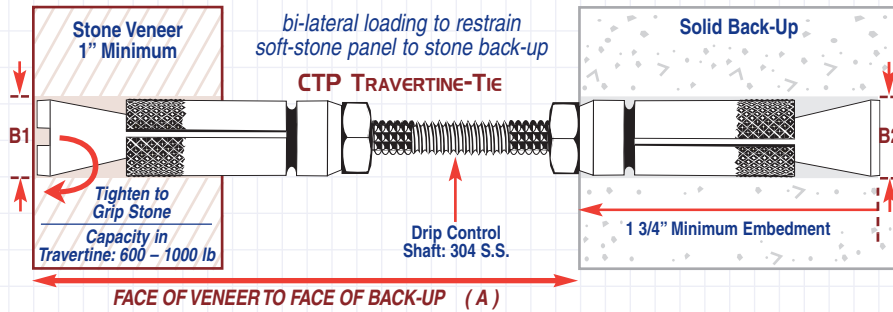
Product Series of CTP Stone-Grip Tie

CTP 6400-2 SERIES ANCHOR

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

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

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



CATALOG #	FACE TO FACE (in.) A	FAÇADE PILOT DIAMETER (in.) B1	BACK-UP HOLE DIAMETER (in.) B2	DRILLED HOLE DEPTH (in.)
CTP-6430R	1-1/4"	3/8"	3/8"	3-1/4"
CTP-6440R	2-1/4"	3/8"	3/8"	4-1/4"
CTP-6450R	3-1/4"	3/8"	3/8"	5-1/4"
CTP-6460R	4-1/4"	3/8"	3/8"	6-1/4"
CTP-6430	1-1/4"	1/2"	1/2"	3-1/4"
CTP-6440	2-1/4"	1/2"	1/2"	4-1/4"
CTP-6450	3-1/4"	1/2"	1/2"	5-1/4"
CTP-6460	4-1/4"	1/2"	1/2"	6-1/4"

OTHER LENGTHS AVAILABLE UPON REQUEST

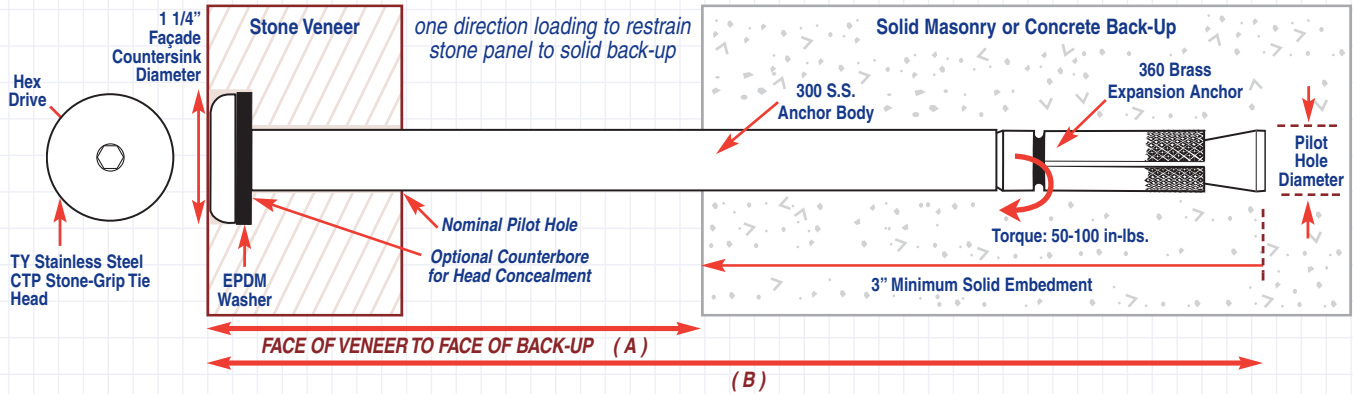
1. Locate anchor placement per specified location.
2. Drill a pilot hole (3/8" for CTP 6400R and 1/2" for the CTP 6400) hole thru the stone with a suitable "stone drilling" drill bit, without percussion.
3. Using a suitable quality carbide, continue drilling the same hole diameter into the solid back-up, 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.

CTP 6500 (1/2" Dia.) 3 SERIES ANCHOR
CTP 6600 (3/8" Dia.) 3 SERIES ANCHOR

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

Requires CTP Hex Key and CTP 501-EXT Setting Tools

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



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.
3. Blow out drill fines.
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.

CATALOG #		A	B
CTP 6500 SERIES	CTP 6600 SERIES		
BACK-UP & PILOT HOLE DIAMETER			
1/2"			
CTP-6550	CTP-6650	0-2"	5"
CTP-6560	CTP-6660	0-3"	6"
CTP-6570	CTP-6670	0-4"	7"
CTP-6580	CTP-6680	0-5"	8"

OTHER LENGTHS AVAILABLE UPON REQUEST

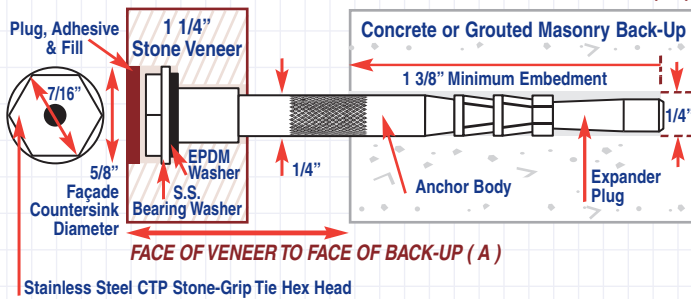
Product Series of CTP Stone-Grip Tie

CTP 6800 (1/4" Dia.) 1 SERIES ANCHOR

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

Requires CTP H Series Setting Tools

CTP Hammer Set (HS) Series Anchor



CATALOG #	AIR CAVITY MINIMUM - MAXIMUM (in.) A	ANCHOR LENGTH (in.) B	MINIMAL OVERALL HOLE DEPTH (in.) C
CTP-683801	2-1/2"	2-1/2"	3-3/4"
CTP-683802	3-1/2"	3-1/2"	4-3/4"
CTP-682101	4-1/2"	4-1/2"	5-3/4"

HEAD CAN BE SURFACE MOUNTED OR RECESSED IN A 3/16" DEEP COUNTERBORE. MINIMUM CONCRETE COVER AT ANCHOR BOTTOM = 3.5 x F. OTHER ANCHOR LENGTHS ARE AVAILABLE ON REQUEST.

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.

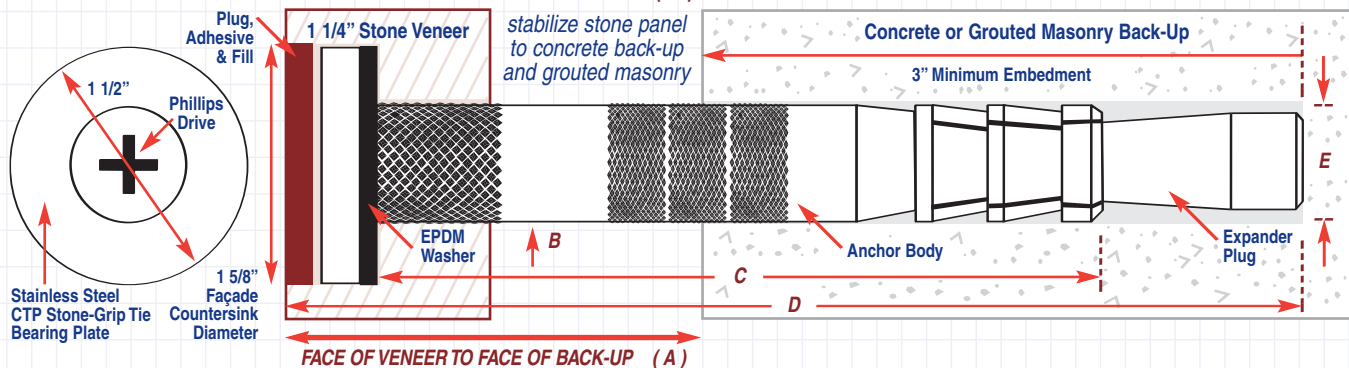
CTP 6800-3 SERIES ANCHOR

Restraint & Gravity Anchor (3/8" x 1/2" x 3/4" dia.)

INSTALLATION PROCEDURE AND CRITERIA FOR STABILIZING AND SUPPORTING STONE PANEL TO CONCRETE BACK-UP AND GROUTED MASONRY

Requires CTP H Series Setting Tools

CTP Hammer Set (HS) Series Anchor



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.
3. Blow out drill fines.
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.

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.

CATALOG #	FACE OF VENEER TO FACE OF BACK-UP (in.) A	ANCHOR DIAMETER (in.) B	ANCHOR LENGTH (in.) C	MINIMAL OVERALL HOLE DEPTH (in.) D	CONCRETE HOLE DIAMETER (in.) E
CTP-683801	3-1/2"	3/8"	5-5/8"	6-3/8"	3/8"
CTP-683802	4-1/2"	3/8"	6-5/8"	7-3/8"	3/8"
CTP-682101	3-1/2"	1/2"	5-5/8"	6-3/8"	1/2"
CTP-681202	4-1/2"	1/2"	6-5/8"	7-3/8"	1/2"
CTP-683400	2-1/2"	3/4"	4-5/8"	5-3/8"	3/4"
CTP-683401	3-1/2"	3/4"	5-5/8"	6-3/8"	3/4"
CTP-683402	4-1/2"	3/4"	6-5/8"	7-3/8"	3/4"

MINIMUM CONCRETE COVER AT ANCHOR BOTTOM = 3.5 x F. OTHER LENGTHS AVAILABLE UPON REQUEST

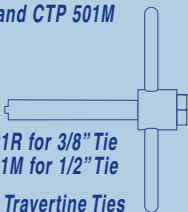
CTP Stone-Grip Tie Planning Guide

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 H Series



ANCHOR SIZE

CTP HS14 for 1/4"
CTP HS38 for 3/8"
CTP HS12 for 1/2"
CTP HS34 for 3/4"

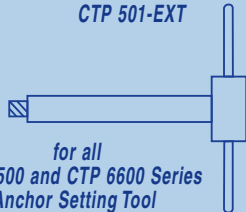
CTP TGL



Hex Drive

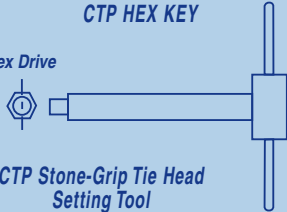
CTP Toggle Setting Tool

CTP 501-EXT



for all
CTP 6500 and CTP 6600 Series
Anchor Setting Tool

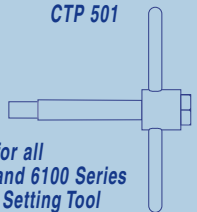
CTP HEX KEY



Hex Drive

CTP Stone-Grip Tie Head
Setting Tool

CTP 501



for all
CTP 6000 and 6100 Series
Anchor Setting Tool

Warranty

Seller makes no warranty of any kind, expressed or implied, except that the goods sold under this agreement shall be of the standard quality of the seller, and buyer assumes all risk and liability resulting from the use of the goods, whether used singly or in combination with other goods. Seller neither assumes nor authorizes any person to assume for seller any other liability in conjunction with the sale or use of the goods sold, and there is no oral agreement or warranty collateral to or affecting this transaction.

Warning

The information contained in this publication does not constitute any professional opinion or judgement and should not be used as a substitute for competent professional determinations. Each construction project 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.



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Approval

