

QTBMC (Blue Masonry) Installation Instructions

(3/16" Quick Tie)

- Installation shall be by persons who have successfully received training by Quick Tie Products. Visit our website (quicktieproducts.com) for information on training requirements/procedures and catalog details and load tables.
1. Lay out Quick Tie locations on the concrete foundation using Quick Tie QTML (QTM anchor locator) to locate 3/8"x12" anchor, in accordance with the approved shop drawings or as required by structure loads and the load tables in the Quick Tie Catalog.
 2. The QTML Locates the center of the anchor bolt 3-7/8" from the edge of the concrete. **This edge distance shall NOT be less than 3-7/8", but may be more than 3-7/8"**. The center of the bolt must be at least 8 inches from the center of another QTBMC, QTGMC, QTOMC, or QTRMC Quick Tie anchor. The depth of the anchor bolt shall be at least 9-3/4" inches as measured from the top of the concrete. Corner locations shall not be less than 12" from the corner in each direction.
 3. After concrete has set, break away the concrete forms and metal tab from the anchor bolt locator attached to the form, leaving the embedded anchor bolt in place with the coupler visible above the concrete.
 4. The mason shall lay the CMU walls. He shall remove the block face in cell of the first course where Quick Tie anchor bolt couplers are located. All other CMU units shall be laid in a normal running bond.
 5. **If the professional building designer notes on his/her drawing that restrained cables are necessary, follow step 6. If the professional building designer does not require restrained cables skip to step 7.**
 6. The mason shall install a total of three (3) Quick Tie grout containment funnels ([RT8, or RT8S or RT12, or TR12S]), at 1/4 points up the wall where quick tie cables are present.
 7. Once wall is completed, install a double 2x8 top plate. The bottom member shall be pressure treated No.2 SYP lumber or better. The top member shall be No.2 SYP lumber or better. Splices shall overlap by 7 1/4", and corners shall be lapped across each other. Nail members together using eight (8) .131 x 3 inch framing nails staggered at each side of the splice. Nail corners with the same nail using five (5) nails in the lapped members.
 8. Layout truss locations on the top plate to make sure the truss is not going to conflict with the QuickTie plate washer. Drill a 7/8" hole through the center of the double 2x8 top plate directly above each opening in the bottom CMU course containing a Quick Tie cable location. If a conflict with a truss is apparent, drill the hole for the Quick Tie left or right just enough to resolve the conflict.
 9. Feed the Quick Tie Masonry Cable through the hole (and funnels, if applicable) until the cable is visible through the opening in bottom course. Either double-nut the top threaded end of the cable, or, make sure 5/8" of thread on the top end of the QuickTie cable is exposed on top of the single nut on the cable.
 10. At the bottom course reach through the opening and knock off the wax coating exposing the coupler (if the coupler has been coated)]. Place the threaded end of the cable directly above the coupler and begin spinning the coupler up onto the threaded end of the cable until all threads on the cable are no longer visible.
 11. After the connection is made between the cable and the embedded anchor bolt remove the top nut (if applicable) and tighten the remaining nut at the top of the QTBMC Quick Tie until the wire rope is snug. At this point, the rope is slightly tensioned.
 12. Tension the QTBMC by setting the special jacking device over the QTBMC and connecting the device to the QTBMC using a connector coupler. After the jacking device is in place, start the jack and continue until the jack stops at the preset tension of 1545 psi, (3400 lbs.). While under tension, run down the nut snug to the plate washer. Then, remove the pressure from the jack, unscrew the coupler and remove the jack. The [TIDB] will curl up indicating the cable is tensioned to the correct load. *NOTE: Jacking equipment shall be calibrated every six (6) months, the equipment shall have a label verifying the calibration date.*
 13. Inspect the anchorage installation. All QTBMC Quick Ties should be connected to the embedded anchor bolt with a coupler and the anchor bolt should show no evidence of "withdrawing" from its embedment. If withdrawal or a missed cable has occurred, cut the face shell of the block on the first and second course at the QTBMC location. Drill a new hole no less than 1" from the existing hole or anchor bolt. Clean the hole with compressed air, brush the hole, shoot a second blast of compressed air, then re-install per steps [11-15] in the epoxy installation instructions. Do not exceed the Quick Tie criteria for plumbness.
 14. **If the professional building designer notes on his/her drawings that restrained cables are necessary**, use a hammer or masonry drill bit to break out a 1-1/8" diameter hole in the face shell, 3/4" above the mortar joint where the retainer funnels are located. Through the hole fill the retainer funnel in the CMU cell with grout until the 1-1/8" diameter hole is plugged. The grout should be mixed exactly to manufacturer's specifications in order to properly fill the funnel.

QTGMC (Green Masonry) Installation Instructions

(1/4" Quick Tie)

- Installation shall be by persons who have successfully received training by Quick Tie Products. Visit our website (quicktieproducts.com) for information on training requirements/procedures and catalog details and load tables.
1. Lay out Quick Tie locations on the concrete foundation using Quick Tie QTML (QTM anchor locator) to locate 5/8"x12" anchor, in accordance with the approved shop drawings or as required by structure loads and the load tables in the Quick Tie Catalog.
 2. The QTML Locates the center of the anchor bolt 3-7/8" from the edge of the concrete. **This edge distance shall NOT be less than 3-7/8", but may be more than 3-7/8"**. The center of the bolt must be at least 8 inches from the center of another QTBM, QTGMC, QTOMC, or QTRMC Quick Tie anchor. The depth of the anchor bolt shall be at least 9-3/4" inches as measured from the top of the concrete. Corner locations shall not be less than 12" from the corner in each direction.
 3. After concrete has set, break away the concrete forms and metal tab from the anchor bolt locator attached to the form, leaving the embedded anchor bolt in place with the coupler visible above the concrete.
 4. The mason shall lay the CMU walls. He shall remove the block face in cell of the first course where Quick Tie anchor bolt couplers are located. All other CMU units shall be laid in a normal running bond.
 5. **If the professional building designer notes on his/her drawing that restrained cables are necessary, follow step 6. If the professional building designer does not require restrained cables skip to step 7.**
 6. The mason shall install a total of three (3) Quick Tie grout containment funnels ([RT8, or RT8S or RT12, or TR12S]), at 1/4 points up the wall where quick tie cables are present.
 7. Once wall is completed, install a double 2x8 top plate. The bottom member shall be pressure treated No.2 SYP lumber or better. The top member shall be No.2 SYP lumber or better. Splices shall overlap by 7/4", and corners shall be lapped across each other. Nail members together using eight (8) .131 x 3 inch framing nails staggered at each side of the splice. Nail corners with the same nail using five (5) nails in the lapped members.
 8. Layout truss locations on the top plate to make sure the truss is not going to conflict with the QuickTie plate washer. Drill a 7/8" hole through the center of the double 2x8 top plate directly above each opening in the bottom CMU course containing a Quick Tie cable location. If a conflict with a truss is apparent, drill the hole for the Quick Tie left or right just enough to resolve the conflict.
 9. Feed the Quick Tie Masonry Cable through the hole (and funnels, if applicable) until the cable is visible through the opening in bottom course. Either double-nut the top threaded end of the cable, or, make sure 5/8" of thread on the top end of the QuickTie cable is exposed on top of the single nut on the cable.
 10. At the bottom course reach through the opening and knock off the wax coating exposing the coupler (if the coupler has been coated)]. Place the threaded end of the cable directly above the coupler and begin spinning the coupler up onto the threaded end of the cable until all threads on the cable are no longer visible.
 11. After the connection is made between the cable and the embedded anchor bolt remove the top nut (if applicable) and tighten the remaining nut at the top of the QTGMC Quick Tie until the wire rope is snug. At this point, the rope is slightly tensioned.
 12. Tension the QTGMC by setting the special jacking device over the QTGMC and connecting the device to the QTBM using a connector coupler. After the jacking device is in place, start the jack and continue until the jack stops at the preset tension of 2430 psi, (5350 lbs.). While under tension, run down the nut snug to the plate washer. Then, remove the pressure from the jack, unscrew the coupler and remove the jack. The [TIDG] will curl up indicating the cable is tensioned to the correct load. *NOTE: Jacking equipment shall be calibrated every six (6) months, the equipment shall have a label verifying the calibration date.*
 13. Inspect the anchorage installation. All QTGMC Quick Ties should be connected to the embedded anchor bolt with a coupler and the anchor bolt should show no evidence of "withdrawing" from its embedment. If withdrawal or a missed cable has occurred, cut the face shell of the block on the first and second course at the QTGMC location. Drill a new hole no less than 1" from the existing hole or anchor bolt. Clean the hole with compressed air, brush the hole, shoot a second blast of compressed air, then re-install per steps [11-15] in the epoxy installation instructions. Do not exceed the Quick Tie criteria for plumbness.
 14. **If the professional building designer notes on his/her drawings that restrained cables are necessary**, use a hammer or masonry drill bit to break out a 1-1/8" diameter hole in the face shell, 3/4" above the mortar joint where the retainer funnels are located. Through the hole fill the retainer funnel in the CMU cell with grout until the 1-1/8" diameter hole is plugged. The grout should be mixed exactly to manufacturer's specifications in order to properly fill the funnel.

QTOMC (Orange Masonry) Installation Instructions

(5/16" Quick Tie)

- Installation shall be by persons who have successfully received training by Quick Tie Products. Visit our website (quicktieproducts.com) for information on training requirements/procedures and catalog details and load tables.
1. Lay out Quick Tie locations on the concrete foundation using Quick Tie QTML (QTM anchor locator) to locate 5/8"x12" anchor, in accordance with the approved shop drawings or as required by structure loads and the load tables in the Quick Tie Catalog.
 2. The QTML Locates the center of the anchor bolt 3-7/8" from the edge of the concrete. **This edge distance shall NOT be less than 3-7/8", but may be more than 3-7/8"**. The center of the bolt must be at least 8 inches from the center of another QTBM, QTGMC, QTOMC, or QTRMC Quick Tie anchor. The depth of the anchor bolt shall be at least 9-3/4" inches as measured from the top of the concrete. Corner locations shall not be less than 12" from the corner in each direction.
 3. After concrete has set, break away the concrete forms and metal tab from the anchor bolt locator attached to the form, leaving the embedded anchor bolt in place with the coupler visible above the concrete.
 4. The mason shall lay the CMU walls. He shall remove the block face in cell of the first course where Quick Tie anchor bolt couplers are located. All other CMU units shall be laid in a normal running bond.
 5. **If the professional building designer notes on his/her drawing that restrained cables are necessary, follow step 6. If the professional building designer does not require restrained cables skip to step 7.**
 6. The mason shall install a total of three (3) Quick Tie grout containment funnels ([RT8, or RT8S or RT12, or TR12S]), at 1/4 points up the wall where quick tie cables are present.
 7. Once wall is completed, install a double 2x8 top plate. The bottom member shall be pressure treated No.2 SYP lumber or better. The top member shall be No.2 SYP lumber or better. Splices shall overlap by 7/4", and corners shall be lapped across each other. Nail members together using eight (8) .131 x 3 inch framing nails staggered at each side of the splice. Nail corners with the same nail using five (5) nails in the lapped members.
 8. Layout truss locations on the top plate to make sure the truss is not going to conflict with the QuickTie plate washer. Drill a 7/8" hole through the center of the double 2x8 top plate directly above each opening in the bottom CMU course containing a Quick Tie cable location. If a conflict with a truss is apparent, drill the hole for the Quick Tie left or right just enough to resolve the conflict.
 9. Feed the Quick Tie Masonry Cable through the hole (and funnels, if applicable) until the cable is visible through the opening in bottom course. Either double-nut the top threaded end of the cable, or, make sure 5/8" of thread on the top end of the QuickTie cable is exposed on top of the single nut on the cable.
 10. At the bottom course reach through the opening and knock off the wax coating exposing the coupler (if the coupler has been coated)]. Place the threaded end of the cable directly above the coupler and begin spinning the coupler up onto the threaded end of the cable until all threads on the cable are no longer visible.
 11. After the connection is made between the cable and the embedded anchor bolt remove the top nut (if applicable) and tighten the remaining nut at the top of the QTRMC Quick Tie until the wire rope is snug. At this point, the rope is slightly tensioned.
 12. Tension the QTRMC by setting the special jacking device over the QTRMC and connecting the device to the QTBM using a connector coupler. After the jacking device is in place, start the jack and continue until the jack stops at the preset tension of 3320 psi, (7300 lbs.). While under tension, run down the nut snug to the plate washer. Then, remove the pressure from the jack, unscrew the coupler and remove the jack. The [TIDR] will curl up indicating the cable is tensioned to the correct load. *NOTE: Jacking equipment shall be calibrated every six (6) months, the equipment shall have a label verifying the calibration date.*
 13. Inspect the anchorage installation. All QTRMC Quick Ties should be connected to the embedded anchor bolt with a coupler and the anchor bolt should show no evidence of "withdrawing" from its embedment. If withdrawal or a missed cable has occurred, cut the face shell of the block on the first and second course at the QTRMC location. Drill a new hole no less than 1" from the existing hole or anchor bolt. Clean the hole with compressed air, brush the hole, shoot a second blast of compressed air, then re-install per steps [11-15] in the epoxy installation instructions. Do not exceed the Quick Tie criteria for plumbness.
 14. **If the professional building designer notes on his/her drawings that restrained cables are necessary**, use a hammer or masonry drill bit to break out a 1-1/8" diameter hole in the face shell, 3/4" above the mortar joint where the retainer funnels are located. Through the hole fill the retainer funnel in the CMU cell with grout until the 1-1/8" diameter hole is plugged. The grout should be mixed exactly to manufacturer's specifications in order to properly fill the funnel.

QTRMC (Red Masonry) Installation Instructions

(3/8" Quick Tie)

- Installation shall be by persons who have successfully received training by Quick Tie Products. Visit our website (quicktieproducts.com) for information on training requirements/procedures and catalog details and load tables.
1. Lay out Quick Tie locations on the concrete foundation using Quick Tie QTML (QTM anchor locator) to locate 5/8"x12" anchor, in accordance with the approved shop drawings or as required by structure loads and the load tables in the Quick Tie Catalog.
 2. The QTML Locates the center of the anchor bolt 3-7/8" from the edge of the concrete. **This edge distance shall NOT be less than 3-7/8", but may be more than 3-7/8"**. The center of the bolt must be at least 8 inches from the center of another QTBMC, QTGMC, QTOMC, or QTRMC Quick Tie anchor. The depth of the anchor bolt shall be at least 9-3/4" inches as measured from the top of the concrete. Corner locations shall not be less than 12" from the corner in each direction.
 3. After concrete has set, break away the concrete forms and metal tab from the anchor bolt locator attached to the form, leaving the embedded anchor bolt in place with the coupler visible above the concrete.
 4. The mason shall lay the CMU walls. He shall remove the block face in cell of the first course where Quick Tie anchor bolt couplers are located. All other CMU units shall be laid in a normal running bond.
 5. **If the professional building designer notes on his/her drawing that restrained cables are necessary, follow step 6. If the professional building designer does not require restrained cables skip to step 7.**
 6. The mason shall install a total of three (3) Quick Tie grout containment funnels ([RT8, or RT8S or RT12, or TR12S]), at 1/4 points up the wall where quick tie cables are present.
 7. Once wall is completed, install a double 2x8 top plate. The bottom member shall be pressure treated No.2 SYP lumber or better. The top member shall be No.2 SYP lumber or better. Splices shall overlap by 7 1/4", and corners shall be lapped across each other. Nail members together using eight (8) .131 x 3 inch framing nails staggered at each side of the splice. Nail corners with the same nail using five (5) nails in the lapped members.
 8. Layout truss locations on the top plate to make sure the truss is not going to conflict with the QuickTie plate washer. Drill a 7/8" hole through the center of the double 2x8 top plate directly above each opening in the bottom CMU course containing a Quick Tie cable location. If a conflict with a truss is apparent, drill the hole for the Quick Tie left or right just enough to resolve the conflict.
 9. Feed the Quick Tie Masonry Cable through the hole (and funnels, if applicable) until the cable is visible through the opening in bottom course. Either double-nut the top threaded end of the cable, or, make sure 5/8" of thread on the top end of the QuickTie cable is exposed on top of the single nut on the cable.
 10. At the bottom course reach through the opening and knock off the wax coating exposing the coupler (if the coupler has been coated)]. Place the threaded end of the cable directly above the coupler and begin spinning the coupler up onto the threaded end of the cable until all threads on the cable are no longer visible.
 11. After the connection is made between the cable and the embedded anchor bolt remove the top nut (if applicable) and tighten the remaining nut at the top of the QTRMC Quick Tie until the wire rope is snug. At this point, the rope is slightly tensioned.
 12. Tension the QTRMC by setting the special jacking device over the QTRMC and connecting the device to the QTBMC using a connector coupler. After the jacking device is in place, start the jack and continue until the jack stops at the preset tension of 4790 psi, (10530 lbs.). While under tension, run down the nut snug to the plate washer. Then, remove the pressure from the jack, unscrew the coupler and remove the jack. The [TIDR] will curl up indicating the cable is tensioned to the correct load. *NOTE: Jacking equipment shall be calibrated every six (6) months, the equipment shall have a label verifying the calibration date.*
 13. Inspect the anchorage installation. All QTRMC Quick Ties should be connected to the embedded anchor bolt with a coupler and the anchor bolt should show no evidence of "withdrawing" from its embedment. If withdrawal or a missed cable has occurred, cut the face shell of the block on the first and second course at the QTRMC location. Drill a new hole no less than 1" from the existing hole or anchor bolt. Clean the hole with compressed air, brush the hole, shoot a second blast of compressed air, then re-install per steps [11-15] in the epoxy installation instructions. Do not exceed the Quick Tie criteria for plumbness.
 14. **If the professional building designer notes on his/her drawings that restrained cables are necessary**, use a hammer or masonry drill bit to break out a 1-1/8" diameter hole in the face shell, 3/4" above the mortar joint where the retainer funnels are located. Through the hole fill the retainer funnel in the CMU cell with grout until the 1-1/8" diameter hole is plugged. The grout should be mixed exactly to manufacturer's specifications in order to properly fill the funnel.

CMU OR CONCRETE BLOWOUT REMEDIATION

Definition

With a 3 7/8" typical edge distance, there will be times when drilling the stud anchorage holes may result in the exterior face of concrete or CMU being broken out. This could be due to:

- Interference of embedded items such as rebar.
- Or when the hammer drill cannot be exactly plumb and the hole angles toward the exterior face of the concrete or CMU.

This is typically referred to as a "blowout". It can result in a weakened pull-out resistance of the stud and utilize excessive amounts of adhesive.

The installer should be aware of this condition and check the exterior face of the concrete or CMU whenever there are indications of a misalignment or evidence of an oversized hole.

Primary Remediation

The first level of remediation is to carefully re-drill in a new location at least 3" from the blowout and proceed with the installation.

Secondary Remediation

When rebar interference or some other limiting condition precludes re-drilling a nearby hole, the following remediation procedure should be followed:

1. From the outside face of the concrete or CMU blowout, remove all loose pieces and brush out the recessed area thoroughly, removing any debris or grit.
2. Blow out the recess to remove dust and assure good epoxy bond.
3. Cover the outside surface with a flat "forming material". This can be adhesive backed sheeting or a piece of cardboard duct taped into position.
4. Fill the entire void with adhesive.
5. Allow adhesive to reach its appropriate load time without any disturbance to the area.
6. Stress the cable carefully monitoring the base concrete to assure that no movement takes or further cracking takes place.
7. Remove the "forming" on the exterior face and grind or patch as necessary to achieve required finish.