

Coventry® Wall and Tudor Wall™

Tools: Shovel, wheelbarrow, level, string line, hammer, tape measure, wooden stakes, dead blow hammer, plate compactor, and splitter for splitting block.

CALCULATE WALL MATERIALS NEEDED

Coventry Wall and Tudor Wall are sold by the square foot. Determine the square footage of wall block needed by multiplying the wall's length by its height (don't forget that you'll need to bury a portion of the wall — see "Prepare the Footing"). Both the 3' high and 6' high pallets contain 50 sf wall block. Due to the walls' modular height, both heights can be combined within the same wall. To calculate the number of pins needed, subtract one from the number of non-cap courses and multiply that result by the total lineal feet of wall. For example, for a 20' long wall, five courses high plus a cap, you would need $(5-1) \times 20 = 80$ pins. To calculate the number of caps needed, divide the total lineal feet of wall by 1.33 ($20' \text{ long wall} \div 1.33 = 15 \text{ caps}$) for the 16" long rectangular cap.

PREPARE THE FOOTING

Dig a trench 24" wide and a minimum of 12" below grade depending on the overall height of the wall. As a rule of thumb, you will bury 10 percent of the wall height or a minimum of 6", whichever is greater. Make sure the soil at the bottom of the trench is well compacted to prevent settling. In heavy or clay soils for best results, wrap the footer trench in a "U" shape configuration with geotextile. This will preserve the stone base over time and keep it from migrating into the clay soil. Using a vibratory plate compactor, install 6" of modified stone in two 3" layers making sure the surface of the last layer is smooth and level.

Tip: Add a 1" layer of sand or stone screenings on top of the footing to make the base course easier to level.

INSTALL THE BASE COURSE*

Install the first layer of the walls by placing the units, narrowest slot ($\frac{1}{2}$ " wide) on the top of the block and towards the back, on the prepared base. For a battered wall (where each course sets back), level the units with a carpenter's level from front to back and side-to-side. For non-battered walls, level the units from side-to-side, but tilt the bottom block slightly back so that the entire wall, when constructed, leans slightly towards the soil being retained. Check for straightness by using a string line on top of the block, using the slot as a guide. Each pallet of the walls comes with five different length stones; use a combination of sizes.

Note: EP Henry offers Base Course Block and Torpedo Base Block which facilitate ease of installation and provide improved structural stability.

Note: Structurally, battered walls are superior to non-battered walls.

INSERT THE PINS

Insert one pin, as shown, in each block except the 4" long unit. Adhesive should be used to hold the 4" units in place. The 16" units may require the use of two pins. Note that pin placement for battered walls is different than that for non-battered walls (see diagram at far right).

BACKFILL THE WALL

Backfill 12" behind each layer of the wall with well-draining granular fill #57 (1-1/4", 3/4" and 1/2") or #67 (3/4") clean stone. All soil behind the wall must be compacted. Use only lightweight mechanical compaction equipment within 3' of the back of the units.

Tip: Consider using a geotextile landscape fabric directly behind the wall block to prevent fine soil particles from washing through to the front. Also consider overlaying the drainage stone behind the wall with geotextile to prevent covering soil or mulch from clogging the drainage stone.

INSTALLING ADDITIONAL COURSES

Place the next and additional courses of the wall in a staggered or half bond fashion, randomly using all sizes. Avoid having a vertical line span more than two layers of block. Insert pins in each course as you build the wall, making sure that every pin is oriented the same way. Backfill each course as the wall is being built. For building combination walls that use both the 3' and 6' high units, the ratio depends on your personal taste. Generally, a combination wall will be 70 percent 6" units and 30 percent 3" units. Special note on 3"-6" combination walls with a set-back: When laying two courses of 3" block, it is important that you only batter one of them; this will help keep the set-back in line with your 6" courses. Maximum unreinforced height for the walls is 24' for non-battered walls and 36" for walls built with a set-back, under ideal conditions.

CAP THE WALL

Attach the wall cap blocks with a high strength, flexible concrete adhesive. An overhang of 1" in the front looks best. Some cutting may be necessary; consult your EP Henry Authorized Hardscaping Distributor® for cutting equipment suggestions.

ADDITIONAL TIPS:

BUILDING 90° CORNERS

Special units are available to construct true 90° corners. They are 14" long and available in both 3" and 6" heights. To build 90° corners, begin construction at the corner of the wall and work outward. Alternate the long dimension of corner units to maintain a running bond pattern. Use a high strength flexible adhesive to bond the corner blocks together, as there are no slots for pins. Also, any single battered wall with a 90° corner on each end requires cutting the corner units to accommodate the wall batter as the wall rises to maintain the running bond pattern.

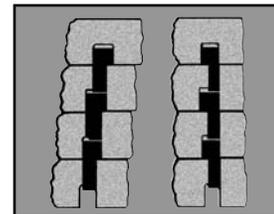
STEPS

The installation of steps requires careful layout and planning. It is critical that the base be properly installed; see "Prepare the Footing" for details. A minimum of 6" of modified stone base is required under all risers. Check local construction codes for minimum riser height and tread depth. Use the wall blocks to create the riser and the 12"x3"x16" or Universal Caps for the tread. Bullnose Pavers may also be used for the tread.

When constructing steps, bury a block behind the visible riser. In other words, each step should be at least two blocks deep. This will give the tread (cap) more stability by allowing the front block of the upper step to bear on the back block of the lower step. Use a high strength concrete adhesive to attach the treads to the risers.



▲ This wall has been engineered due to its height



BATTER

For walls with a set-back, insert pin as shown above.

NO BATTER

For walls without a set-back, insert pin as shown above.

PIN

Please see page 22 for more information on EP Henry Base Course Block and Torpedo Base Block.

Note: These instructions are meant as a general guideline for walls under ideal conditions, and assuming no slopes or surcharges. Site-specific conditions may warrant additional installation requirements.

Caution: Dry sawing or grinding of concrete products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). The use of a NIOSH-Approved respirator and tight-fitting goggles are recommended when sawing or grinding operations are in progress.