HOMEOWNER REPAIR GUIDE

MASONRY BASICS

Masonry is a term used to indicate the part of construction that uses brick, concrete block, structural clay tile, and stone. These materials are held together with **mortar**.

MORTAR IS NOT CEMENT MIX

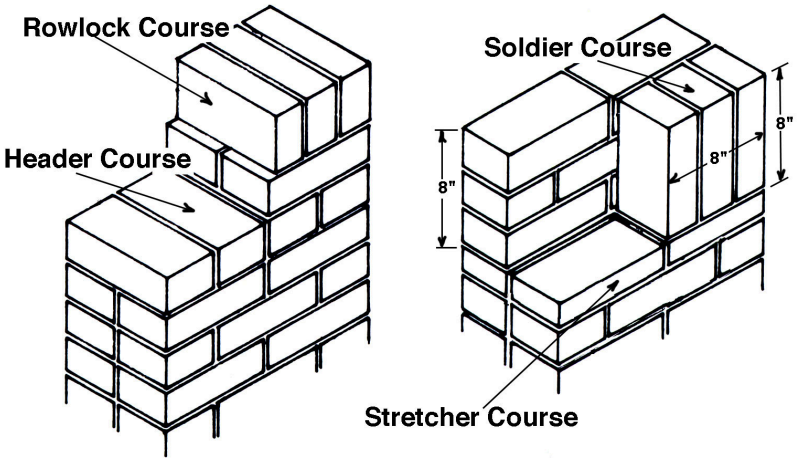
MATERIAL	WHAT'S IN IT
Mortar mix	Mortar for masonry is *not* cement mix. Basically, mortar mix contains lime, sand, and gypsum, each in the proper proportions.
Cement mix	The material used for sidewalks, patios, or driveways. Cement mix, on the other hand, has stones in the sand, and does not contain lime.

While some special mortar compounds may be needed to match the appearance of the existing mortar on your home – some brickwork, for example, has mortar made with lake sand, containing small shells – it is usually easier and more efficient for general use to get a "mason's mix," and then add the correct amount of water. The directions on the bag must be followed to get the right consistency. The resulting mortar will be gray but, if necessary, can be tinted to match the appearance of existing brickwork.

PLANNING WITH THE 8" MODULE

Large masonry projects are best done by a professional, but smaller projects are within the abilities of most do-it-yourselfers. **Bricks** and **blocks** are generally laid in the same manner, with horizontal and vertical courses that must be kept level and plumb. Bricks and blocks are manufactured to work with one another. The basic dimension used is the 8" *module*. (A *half-module* is, of course, 4".) The total horizontal dimension is divided into 8" modules to determine how many standard bricks will be needed in each row.

The height of a particular piece of masonry is also described according to the 8" module, but in a different way. Three horizontal brick courses are eight inches high. Thus, a wall 24" high would have three eight-inch modules with three rows of brick per module, and so would be 9 rows high.

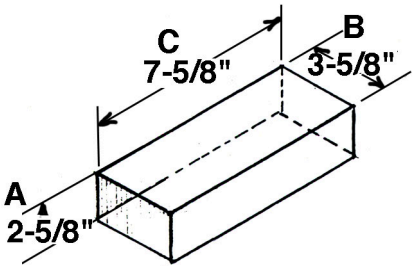


Brick courses – rowlock, header, soldier and stretcher

KNOW YOUR BRICK SIZE

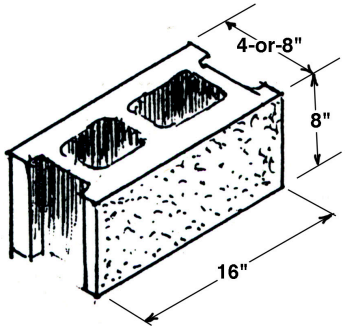
Naturally, if you use bricks other than standard size, the modules will need to be computed differently. For this reason, it is imperative to know what size bricks will be used for your project.

BRICK AND BLOCK SIZES



Brick dimensions A, B and C

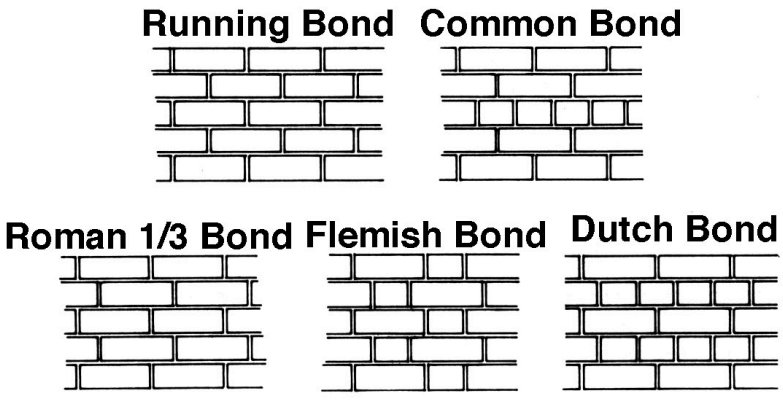
NAME	A	B	C
Standard	2-5/8”	3-5/8”	7-5/8”
Roman	1-1/4”	3-5/8”	11-5/8”
Norman	2-5/8”	3-5/8”	11-5/8”
Brick BL	3-5/8”	3-5/8”	11-5/8”



Standard concrete block dimensions

CHOOSING A BOND

The pattern used when laying bricks is called the **bond.** There are many different types of bonds, but the most common use full bricks or half bricks *(see illustration)*. If you are constructing a masonry project on a do-it-yourself basis, it will be much easier if you employ a bond that uses only full bricks, to avoid the tedious process of cutting bricks to smaller dimensions.



Common brick bonds

If you do need partial bricks, however, you can cut them:

- with a hammer and brick chisel, or
- by hitting them with the pointed end of a mason's hammer, or
- by cutting them with a circular saw and a masonry cut-off blade, or
- by renting a brick saw.

LAYING BRICKS

1. While mixing the mortar, soak the bricks thoroughly in water.
2. Lay a bed of mortar on the footer to get started.
3. Then, “butter” (coat) each end of the brick with mortar, push it gently into the bed on the footer, and tap it lightly into place with the handle of your trowel.
4. After getting the first row straight, and checking it with a level, you can continue on up. As you build, pay close attention to both the horizontal level and the vertical (called “plumb.”) Constantly check both directions with the level to ensure the bricks are straight.

LET IT CURE

After the brickwork is completed, allow it to set and properly harden for several days before putting any weight on it.

Home Repair Resource center

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

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