



Dimensions and Sizes for CMU

Three terms are used in referring to dimensions: specified, actual, and nominal.

Specified dimensions are those specified for the manufacture of masonry units or the construction of masonry. Design calculations are based on specified dimensions. Concrete masonry unit (cmu) specified dimensions compensate for a 3/8 (0.375) inch joint for precision and split face cmu, and a 1/2-inch (0.5) joint for Slumpstone™. (See "nominal dimensions" below.) Thus, a precision or split face unit with a nominal size of 8x8x16 has specified dimensions of 7.625x7.625x15.625; Slumpstone™ as 8x6x16 has specified dimensions of 7.5x5.5x15.5

Actual dimensions are the measured dimensions of the unit. ASTM Standards allow the actual dimensions a permissible variation from the specified dimension. For example, the outer dimensions of a 10x8x16 unit (9.625x7.625x15.625 specified) are allowed a variation of + or - 1/8 inch. In this case the width could range from 9.5 to 9.75 inches.

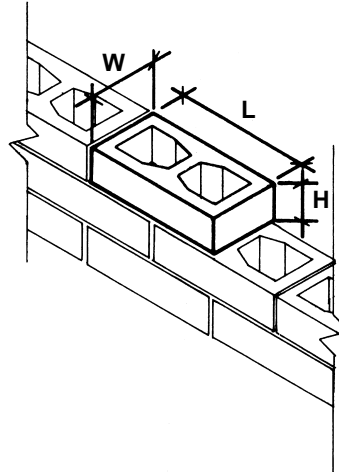
Nominal dimensions are those used in stating the unit size. They are equal to the specified dimensions plus the thickness of the mortar joint.

For Example:

Precision
 nominal dimension: 8 x 4 x 16
 specified dimension: 7 5/8 x 3 5/8 x 15 5/8

Slumpstone™
 nominal dimension: 8 x 4 x 16
 specified dimension: 7 1/2 x 3 1/2 x 15 1/2

Dimensions must be stated in proper order - width, height, and length (WHL). For example, an 8-inch wide, 16-inch long, 4-inch high unit is termed an 8x4x16. Reversing any two dimensions will describe a completely different unit. Using the same example stated as 4x8x16 would indicate a unit 4 inches wide and 8 inches high (not 8 inches wide and 4 inches high).



Specified dimensions for ASTM C140 A1.5.5.2:

(Overall dimensions - width x height x length)

Precision or Split Face	
Nominal Size:	Specified Dimensions
4x8x16	3.625 x 7.625 x 15.625
6x8x16	5.625 x 7.625 x 15.625
8x8x16	7.625 x 7.625 x 15.625
10x8x16	9.625 x 7.625 x 15.625
12x8x16	11.625 x 7.625 x 15.625
16x8x16	15.625 x 7.625 x 15.625

Slumpstone™	
Nominal Size:	Specified Dimensions
6x6x16	5.5 x 5.5 x 15.5
8x6x16	7.5 x 5.5 x 15.5
10x6x16	9.5 x 5.5 x 15.5
12x6x16	11.5 x 5.5 x 15.5

For Slumpstone, only height considered for comparing actual vs. specified.