Designation: C 909 – 93 (Reapproved 2000)

Standard Practice for Dimensions of a Modular Series of Refractory Brick and Shapes[1]

This standard is issued under the fixed designation C 909; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice lists the dimensions for rectangular and tapered brick in common usage in the United States.

1.2 The dimensions are modular based on 38 mm as the basic module as described in Practice C 861.

2. Referenced Documents

2.1 *ASTM Standards:*

C 861 Practice for Determining Metric Dimensions of Standard Series Refractory Brick and Shapes[2]

IEEE/ASTM SI 10 Standard for Use of the International System of Units (SI) (The Modernized Metric System)[3]

3. Significance and Use

3.1 The dimensions listed in this practice represent the dimensions of rectangular and tapered refractory shapes manufactured and used in the United States.

3.2 The modular concept of dimensions permits a versatile arrangement of bonding during the construction of masonry units.

4. Standard Dimensions

4.1 Table 1 lists the standard nominal dimensions for straight, split, soap, arch, wedge, and key brick.

4.2 Table 2 lists the standard nominal dimensions for key brick for oxygen steelmaking furnaces.

[1] This practice is under the jurisdiction of ASTM Committee C-8 on Refractories and is the direct responsibility of Subcommittee C08.92, the Joseph E. Kopanda Subcommittee for Editorial and Terminology.

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[2] *Annual Book of ASTM Standards*, Vol 15.01.

[3] *Annual Book of ASTM Standards*, Vol 14.02.

TABLE 1 Standard Dimensions, mm

NOTE 1—It is recognized there are brick sizes, designated by the International Standards Organization, whose dimensions closely approximate some of the shapes shown in Table 1.

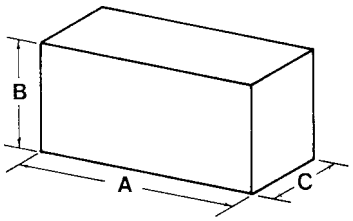
Name	A	B	B′	C	C′	Name	A	B	B′	C	C′
											
Straight 64mm	228	114		64			228	114		76	
	228	152		64			228	152		76	
	228	171		64			228	171		76	
	228	228		64			228	228		76	
	304	114		64		Straight	304	114		76	
						76 mm	304	152		76	
	342										
	342	114		64			342	114		76	
		152		64			342	152		76	
Split						Split	228	114		51	
							228	114		38	
							228	114		32	
							228	114		25	

TABLE 1 *Continued*

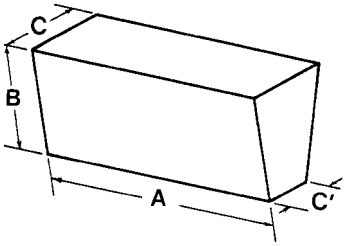
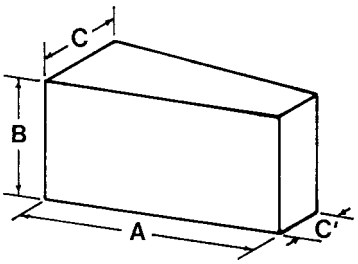
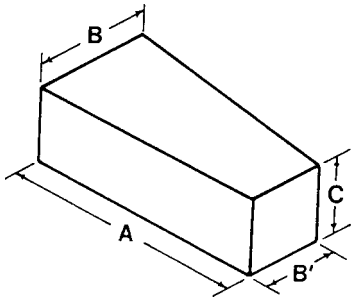
Name	A	B	B′	C	C′	Name	A	B	B′	C	C′
Soap 64 mm	228	57		64		Soap 76 mm	228	57		76	
	228	89		64							
											
Arch 64 mm	228	114		64	54		228	114		76	70
	228	114		64	44		228	114		76	64
	228	114		64	25		228	114		76	51
							228	114		76	25
	228	171		64	57		228	228		776	73
	228	171		64	44		228	228		76	70
							228	228		76	64
							228	228		76	51
	228	228		64	57		304	114		67	70
	228	228		64	48		304	114		76	64
	228	228		64	38		304	114		76	51
	304	114		64	54		342	114		76	70
	304	114		64	44		342	114		76	64
	304	114		64	25		342	114		76	51
							342	114		76	25
	342	114		64	54		342	152		76	70
	342	114		64	44		342	152		76	64
	342	114		64	25		342	152		76	51
											
Wedge 64 mm	228	114		64	57		228	114		76	73
	228	114		64	48		228	114		76	70
	228	114		64	38		228	114		76	64
							228	114		76	51
	228	171		64	57	Wedge 76 mm	228	171		76	73
	228	171		64	48		228	171		76	70
	228	171		64	38		228	171		76	64
							228	171		76	51
							304	114		76	73
							304	114		76	70
							304	114		76	64
							304	114		76	51
							342	114		76	73
							342	114		76	70
							342	114		76	64
							342	114		76	51
							342	152		76	73
	342	114		64	48		342	152		76	70
	342	114		64	38		342	152		76	64
							342	152		76	51

TABLE 1 *Continued*

Name	A	B	B′	C	C′	Name	A	B	B′	C	C′
											
Key 64 mm	228	114	102	64			228	114	102	76	
	228	114	89	64			228	114	89	76	
	228	114	76	64			228	114	76	76	
	228	114	57	64			228	114	57	76	
							228[A]	145	130	76	
							228[A]	150	144	76	
	228	152	137	64		Key	228	152	137	76	
	228	152	122	64		76 mm	228	152	122	76	
	228	152	76	64			228	152	76	76	
							304	152	143	76	
							304	152	140	76	
							304	152	127	76	
							304	152	114	76	
							342[A]	152	144	76	
							342[A]	152	130	76	
	342	152	127	64			342	152	127	76	
	342	152	111	64			342	152	111	76	
	342	152	76	64			342	152	76	76	

[A]All-key blast furnace lining shapes.

TABLE 2 Standard Brick for Oxygen Steelmaking Furnaces, mm

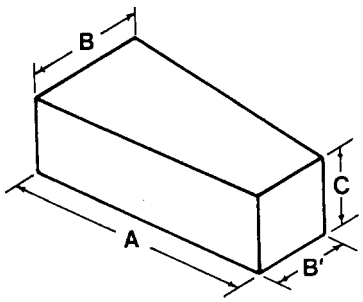
	A	B	B′	C
				
	380	152	152	76
	380	152	140	76
	380	152	127	76
	380	152	102	76
	456	152	152	76
	456	152	140	76
	456	152	127	76

TABLE 2 *Continued*

A	B	B′	C
456	152	102	76
532	152	152	76
532	152	140	76
532	152	127	76
532	152	102	76
608	152	152	76
608	152	140	76
608	152	127	76
608	152	102	76
648	152	152	76
648	152	140	76
684	152	127	76
684	152	102	76
760	152	152	76
760	152	140	76
760	152	127	76
760	152	102	76