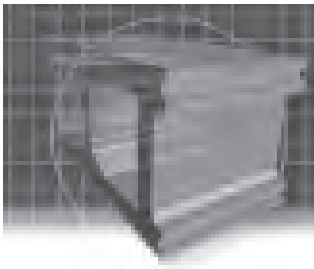
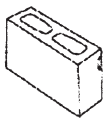
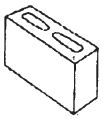
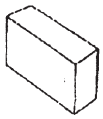


Physical Properties

PHYSICAL PROPERTIES OF STANDARD METRIC SIZE BLOCK

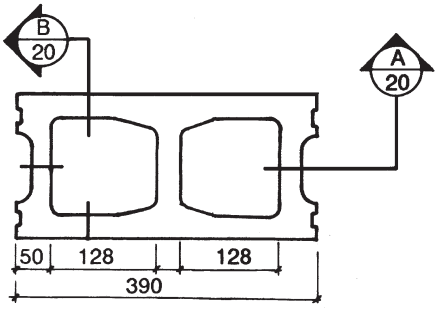
SIZE CODE 20

ACTUAL DIMENSIONS (mm) Width 190 Length 390 Height 190		NOTES*	STANDARD CONFIGURATION		
			HOLLOW	75% SOLID	SOLID
PROPERTIES					
Dimensions (mm)	Minimum Face Shell Thickness	1	32	60	N/A
	Minimum Web Thickness	1	26	30	N/A
	Equivalent Thickness	2	106	148	190
Area (mm^2)	Gross Area	3	7.41×10^4	7.41×10^4	7.41×10^4
	Net Area	4	4.15×10^4	5.78×10^4	7.41×10^4
	Core Area	5	1.53×10^4	6.75×10^3	N/A
Volume (mm^3)	Gross Volume	6	14.079×10^6	14.079×10^6	14.079×10^6
	Net Volume	7	7.88×10^6	10.97×10^6	14.08×10^6
Percent Solid (%)	Net Volume/Gross Volume		56%	78%	100%
Typical Unit Mass (kg)	CSA "A" - Type "A" Concrete	8	16.5	23.0	29.6
	CSA "C" - Type "C" Concrete		13.8	19.2	24.6
	CSA "D" - Type "D" Concrete		13.2	18.4	23.6
Typical Wall Mass (kg/m^2) (with mortar)	CSA "A" - Type "A" Concrete		223.0	311.0	399.0
	CSA "C" - Type "C" Concrete		186.2	259.4	332.5
	CSA "D" - Type "D" Concrete		175.6	244.5	313.5
Minimum Compressive Strength (Mpa)	Based on Net Area		15.0	15.0	15.0
	Based on Gross Area		8.4	11.7	15.0
Fire Performance Rating (Hours)	Normal Weight - N.B.C.		1.8	3.2	4+
	Light Weight - N.B.C.	9			
	$-L_2$20S		2.5	4+	4+
Sound Properties	Sound Transmission Class - (STC)				
	-CSA Type "A" Concrete	10	50	53	56
	-CSA Type "C", "D" Concrete		46	51	53
Thermal Properties (m^2 °C/W)	RSI Factors				
	-CSA Type "A" Concrete	11	.21	N/A	N/A
	-CSA Type "C", "D" Concrete		.30	N/A	N/A
Moment of Inertia (mm^4)	Per Block **I**		194.2×10^6	217.1×10^6	222.9×10^6
	Per Metre **I**m		498.0×10^6	556.6×10^6	571.6×10^6
Section Modulus (mm^3)	Per Block S		2.045×10^6	2.285×10^6	2.347×10^6
	Per Block Sm		5.242×10^6	5.859×10^6	6.017×10^6

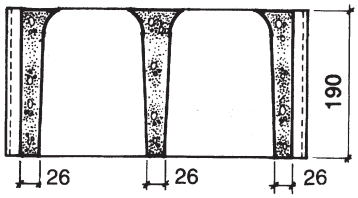
* Information to be used in conjunction with explanatory notes on Page 4-11

Physical Properties

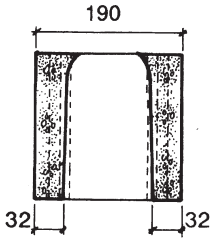
CCMPA METRIC SIZE CODE
20
HOLLOW
Dimensions in mm



PLAN

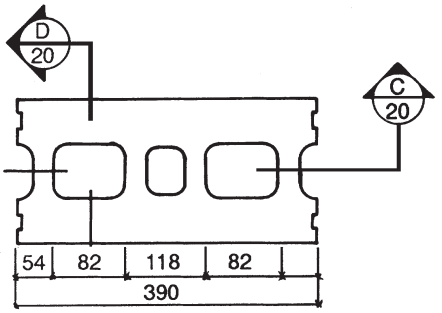


SECTION A-20

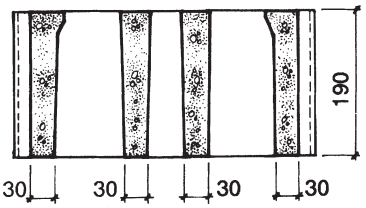


SECTION B-20

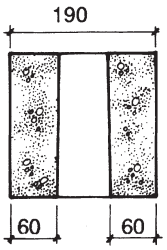
CCMPA METRIC SIZE CODE
20
75% SOLID
Dimensions in mm



PLAN



SECTION C-20



SECTION D-20

Physical Properties

Explanatory Notes

NUMBER	DESCRIPTION
1	Due to manufacturing process, dimensions may exceed minimum requirements.
2	Equivalent thickness is the net thickness of a unit, other than a solid unit, re-shaped to form a voidless unit having the same height and length dimensions (190mm x 390mm) and is a direct function of percentage solid content. Therefore, the overall width of a non-solid unit multiplied by its percentage solid content will arrive at its equivalent thickness ratio. The percentage solid content equals net volume (as defined in The Supplement to the National Building Code) divided by gross volume. e.g. Calculating Equivalent Thickness: 20cm Hollow Concrete Block Percentage Solid 56% as per O.C.B.A. specification Equivalent Thickness = Actual Width x Percentage Solid $= 190\text{mm} \times \frac{56}{100}$ Equivalent Thickness = 106mm
3	Gross Area, defined by the CSA-A165.1, is the area parallel to the bearing surface of the masonry unit by calculating the actual measured overall dimensions of the unit including the voids.
4	Net Area is the net cross-sectional area at mid-depth of the unit. This area can be calculated using actual Gross Area multiplied by percentage solid of unit.
5	Core Area is the measurement of the core areas taken at mid-height of unit.
6	Gross Volume, as defined in Supplement to the National Building Code is: "Equal to the actual length of the unit multiplied by the actual height of the unit multiplied by the actual thickness of the unit."
7	Net Volume, as defined in Supplement to the National Building Code is: "Determined by using a volume displacement method that is not influenced by the porous nature of the unit."
8	Refer to CCMPA Specifications for concrete density (kg/m3). Typical Average Weight of Type "A" Concrete 2100 kg/m^3 Typical Average Weight of Type "C" Concrete 1750 kg/m^3 Typical Average Weight of Type "D" Concrete 1650 kg/m^3
9	Fire Ratings are based on the Supplement to the National Building Code.
10	For more detailed information, refer to Section 7 – Sound Properties.
11	Refer to Section 6 – Thermal Properties, for detailed information.