

# RECOMMENDED DIMENSIONAL STANDARDS FOR COMMERCIAL STEEL DOORS AND FRAMES

---

## PURPOSE

To provide architects, specifiers and users with standard modular dimensional guidelines for commercial steel door and frame product in both the Imperial and Metric (SI) measurement systems.

## SCOPE

The selection of steel door and frame sizes, frame profiles and hardware locations for specific applications are dependent upon a variety of criteria including fire and life safety, barrier free access and/or building codes, security, aesthetic and budgetary considerations.

In addition, product sizing must be consistent with the measurement system selected for the project and the commercially recognized modules for that system. Construction in the imperial system utilizes a 4 inch module, whereas metric modules are based on 100 millimeters.

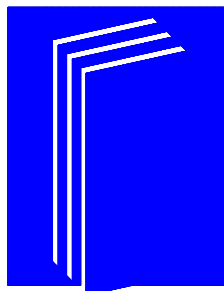
The metric values indicated in this publication are hard conversions of their corresponding imperial sizes, based upon the metric module. Imperial and metric values are not equal.

This guide is intended to address dimensional standards for steel doors and frames in commercial, industrial and institutional construction.

The CSDMA is a voluntary, non-profit organization representing full line manufacturers of commercial steel door and frame products. The objectives of the Association are to promote the use of steel doors and frames, to develop uniform standards and specifications and to provide technical expertise to the construction industry, Standards Writing Organizations and Code Authorities. Inquiries may be directed to the Association offices or any of the member companies listed on the back cover.

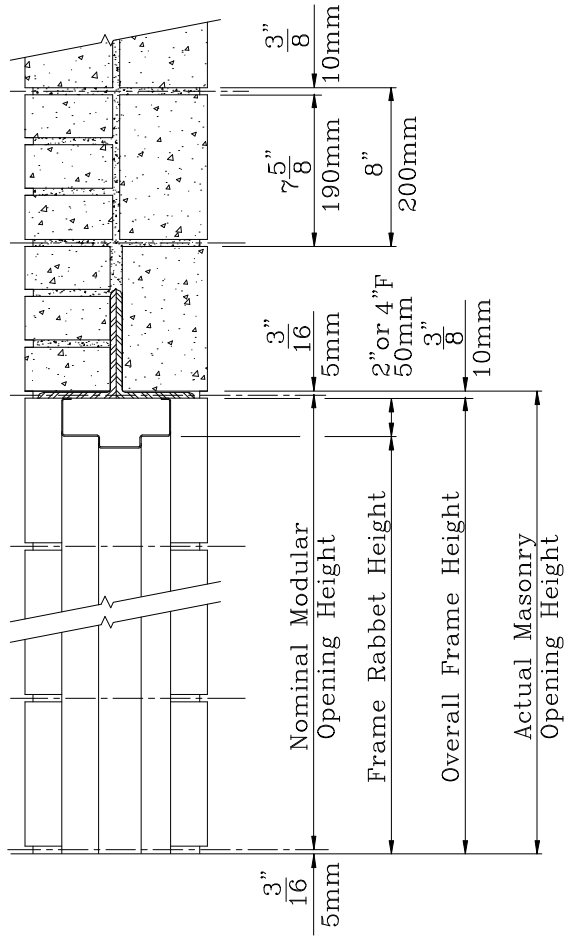
---

**CANADIAN  
STEEL DOOR  
MANUFACTURERS  
ASSOCIATION**

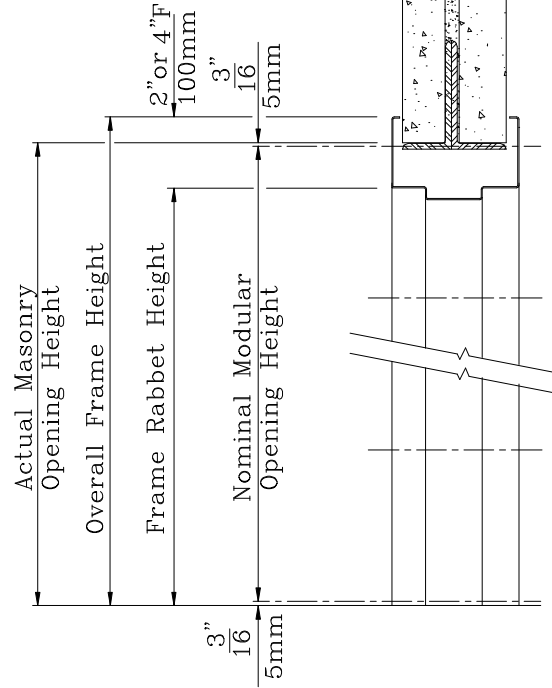


**L'ASSOCIATION  
CANADIENNE  
DES FABRICANTS  
DE PORTES D'ACIER**

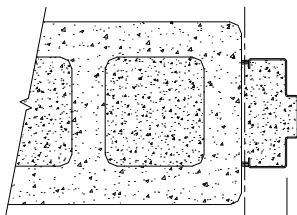
MODULAR IMPERIAL AND METRIC BLOCK OR BRICK



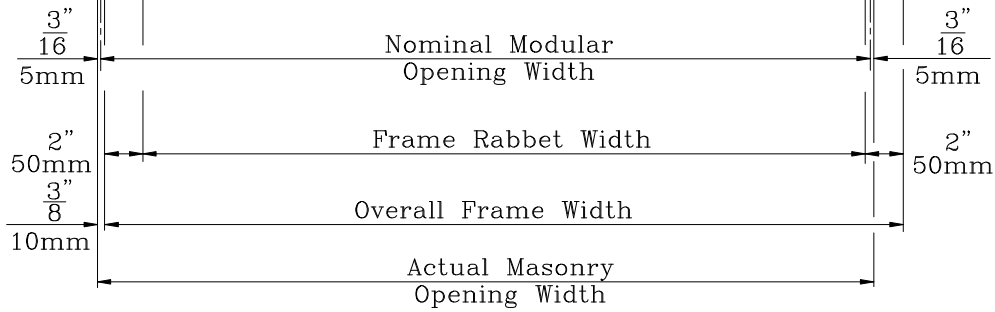
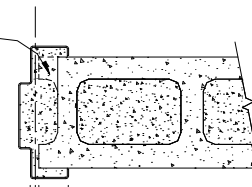
BUTT APPLICATION



WRAP APPLICATION



Notch masonry to clear mortar boxes at mortise hardware preparations as necessary



STANDARD RABBET WIDTHS, RABBET HEIGHTS, JAMB DEPTHS & THROAT OPENINGS

MODULAR BLOCK OR BRICK OPENING HEIGHTS				
Number of Block/Brick Courses	Imperial Masonry Opening Height		Metric Masonry Opening Height	
	Nominal	Actual	Nominal	Actual
10/30	80"	80-3/8"	2000	2010
10.5/-	84"	84-3/8"	2100	2110
11/33	88"	88-3/8"	2200	2210
11.5/-	92"	92-3/8"	2300	2310
12/36	96"	96-3/8"	2400	2410
12.5/-	100"	100-3/8"	2500	2510
13/39	104"	104-3/8"	2600	2610
13.5/-	108"	108-3/8"	2700	2710
14/42	112"	112-3/8"	2800	2810
14.5/-	116"	116-3/8"	2900	2910
15/45	120"	120-3/8"	3000	3010

MODULAR BLOCK THICKNESS			
Imperial		Metric	
Nominal	Actual	Nominal	Actual
4"	3-5/8"	100	90
6"	5-5/8"	150	140
8"	7-5/8"	200	190
10"	9-5/8"	250	240
12"	11-5/8"	300	290

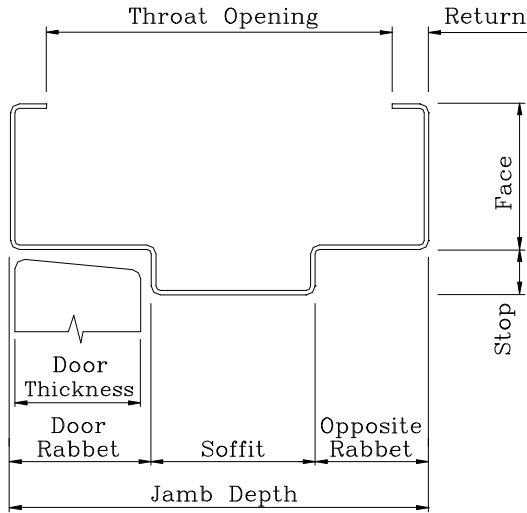
MODULAR FRAME RABBET HEIGHTS + HEAD FACE SIZES				
Number of Block/Brick Courses	Butt Application		Wrap Application	
	Imperial	Metric	Imperial	Metric
10/30	-	-	6'8" + 2" or 4"	-
10.5	6'8" + 4" 6'10" + 2"	2050 + 50	6'10" + 4" 7'0" + 2" or 4"	2050 + 100
11/33	7'0" + 4" 7'2" + 2"	2150 + 50	7'2" + 4"	2150 + 100
11.5	7'4" + 4"	2250 + 50	7'6" + 4"	2250 + 100
12/36	7'6" + 2"	2350 + 50	8'0" + 2" or 4"	2350 + 100
12.5	-	2450 + 50	-	2450 + 100
13/39	8'0" + 4"	2550 + 50	8'6" + 4"	2550 + 100
13.5	8'6" + 2"	2650 + 50	9'0" + 2" or 4"	2650 + 100
14/42	-	2750 + 50	-	2750 + 100
14.5	9'0" + 4"	2850 + 50	9'6" + 4"	2850 + 100
15/45	-	2950 + 50	10'0" + 2" or 4"	2950 + 100

MODULAR FRAME RABBET WIDTHS				
	Imperial	Metric(mm)	Butt	Wrap
Singles	2'0"	600		*
	2'2"	-		
	2'4"	700	*	
	2'6"	-		*
	2'8"	800		*
	2'10"	-		
	3'0"	900	*	
	3'4"	1000		*
	3'6"	-		
	3'8"	1100	*	
Pairs	4'0"	1200		*
	4'0"	1200		*
	-	1300	*	
	4'8"	1400		*
	5'0"	1500	*	
	5'4"	1600		*
	-	1700	*	
	6'0"	1800		*
	6'4"	1900	*	
	6'8"	2000		*
7'0"	2100	*		
7'4"	2200		*	
-	2300	*		
8'0"	2400		*	

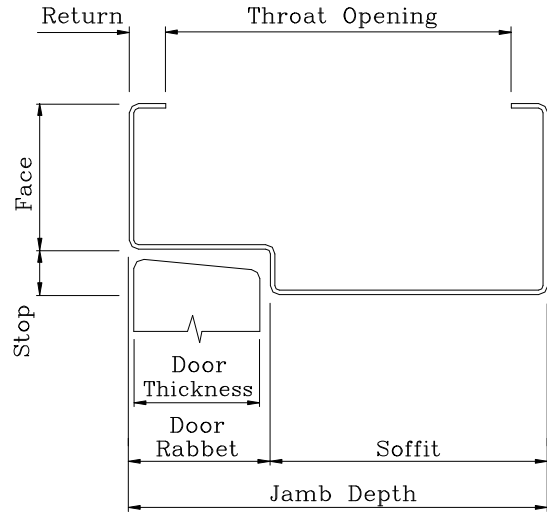
COMMON PROFILES				
Profiles	Imperial (1/2" Returns)		Metric (13mm Returns)	
	Jamb Depth	Throat Opening	Jamb Depth	Throat Opening
DW	4-1/2"	3-1/2"	114	89
M,CO,DW	4-3/4"	3-3/4"	121	95
DW	5-5/8"	4-5/8"	143	117
M,CO	5-3/4"	4-7/8"	146	124**
DW	5-7/8"	4-7/8"	149	124
DW	6-1/4"	5-1/4"	159	133
DW	6-5/8"	5-5/8"	168	143
M,CO	6-3/4"	5-3/4"	172	146
DW	7-1/8"	6-1/8"	181	156
M,CO,DW	7-3/4"	6-3/4"	197	172
DW	8-1/4"	7-1/4"	210	184
M,CO	8-3/4"	7-3/4"	222	197
DW	9-1/2"	8-1/2"	241	216

\* : Indicates appropriate application  
 \*\* : 5 3/4" (146mm) jamb depths utilize 7" (11mm) returns  
 Profiles : M - Masonry  
 CO - Cased-Open  
 DW - Drywall

FRAME PROFILE TERMINOLOGY AND STANDARD SIZING

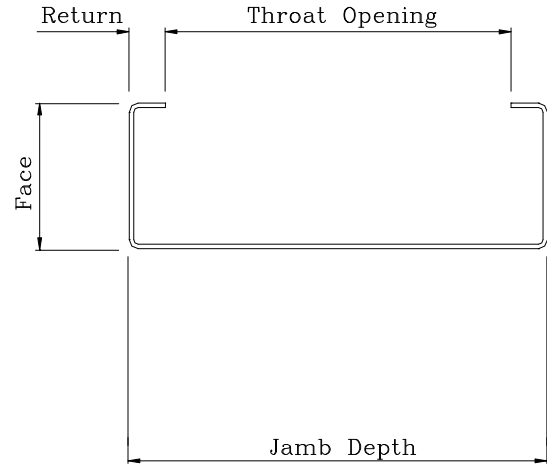


TYPICAL DOUBLE RABBET  
MASONRY PROFILE



TYPICAL SINGLE RABBET  
MASONRY PROFILE

Door Thickness		Door Rabbet	
Imperial	Metric	Imperial	Metric
1-3/8"	35mm	1-1/2"	38
		1-9/16"	40
1-3/4"	45mm	1-7/8"	48
		1-15/16"	49



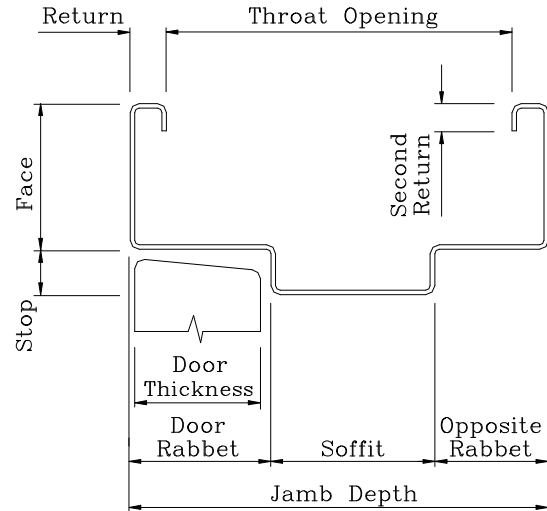
TYPICAL CASED-OPEN  
MASONRY PROFILE

Stop Height	
Imperial	Metric
5/8"	16
3/4"	19

Face	
Imperial	Metric
2"	50
4"	100

Return	
Imperial	Metric
7/16"	11
1/2"	13

Second Return	
Imperial	Metric
3/8"	10

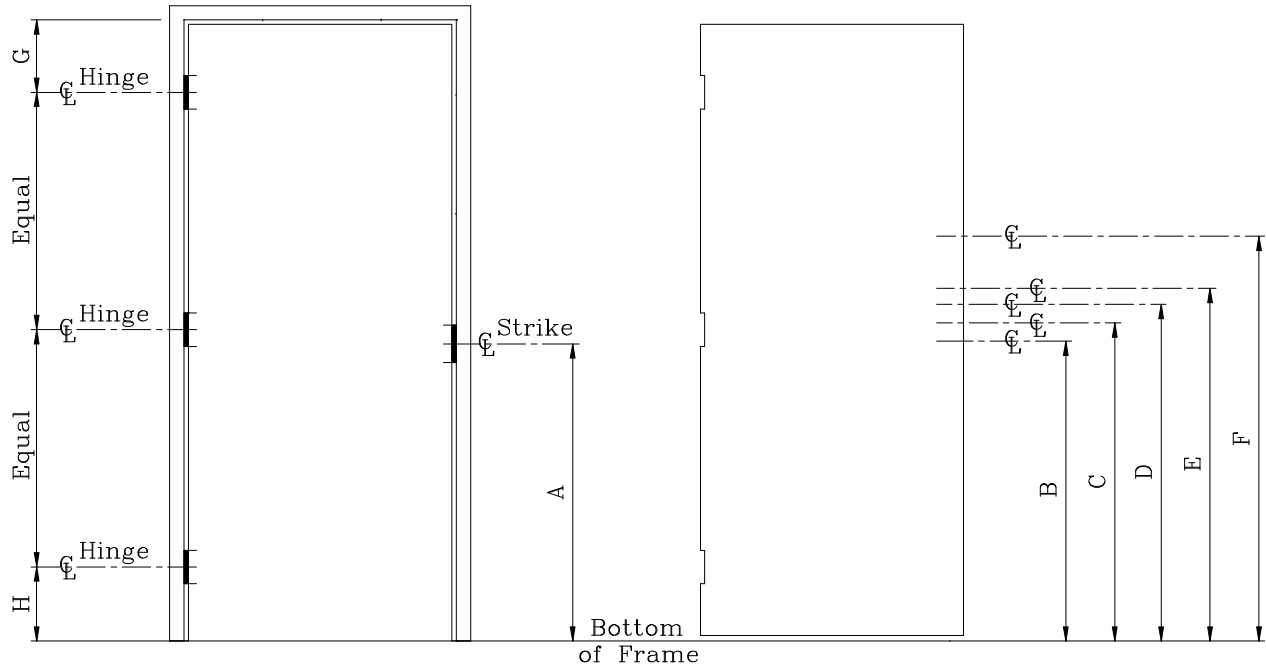


TYPICAL DRYWALL PROFILE

Nominal Material Thickness		
Gauge	Imperial	Metric
20	.036"	0.9
18	.048"	1.2
16	.060"	1.5
14	.075"	1.9
12	.105"	2.7

Note : Dimensions shown may be subject to minor variation by individual manufacturers

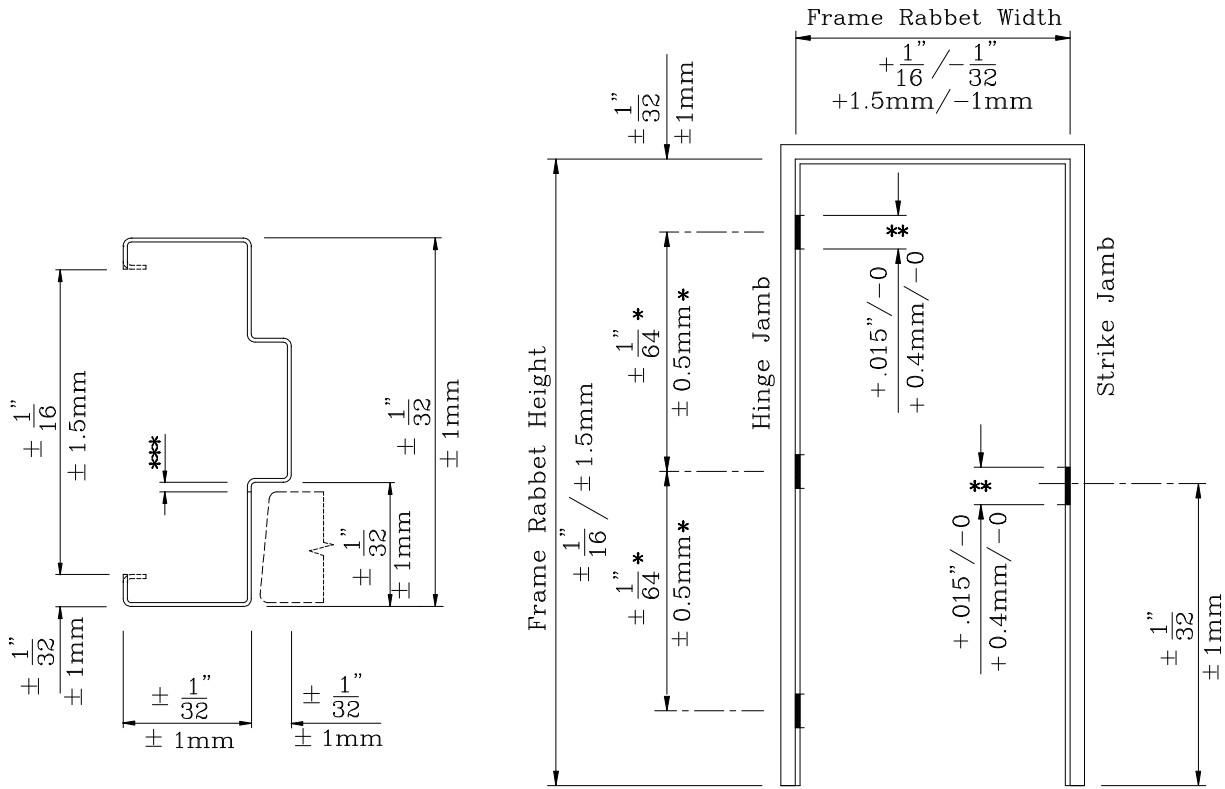
STANDARD HARDWARE LOCATIONS



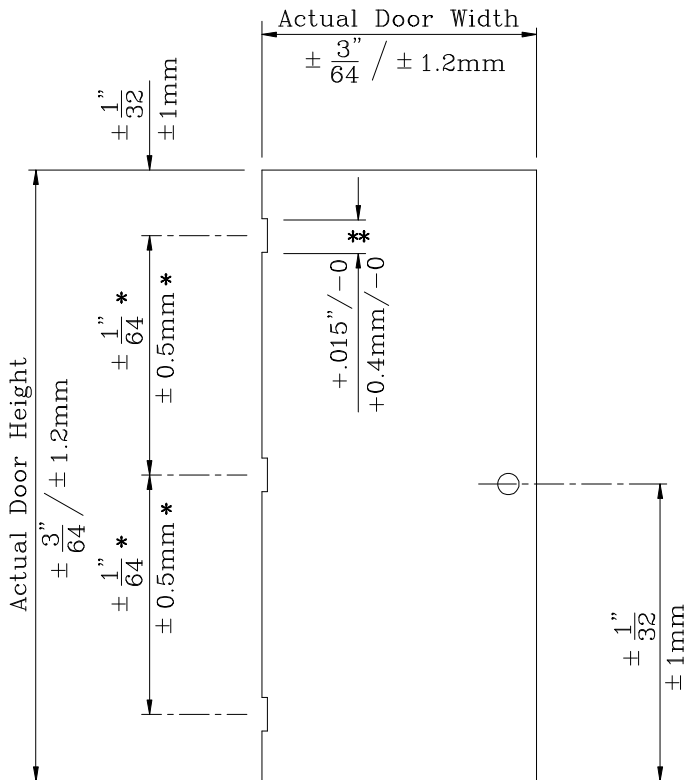
	Hardware Device	Imperial	Metric
A	Centerline of Strike for Knob Locks, Handle Sets, Exit Bolt Locks & Roller Latches	Up to 40 $\frac{5}{16}$ "	Up to 1035
B	Centerline of Pull Grip and Push-Pull Bar	42"	1065
C	Centerline of Hospital Arm Pull Latch	45"	1145
D	Centerline of Hospital Arm Pull (Vertical Type)	47"	1195
E	Centerline of Hospital Push Plate	48"	1220
F	Centerline of Deadlock	48"	1220
G	Centerline of Top Hinge (max)	9 $\frac{3}{4}$ "	250
H	Centerline of Bottom Hinge (max)	13"	330

Note : Dimensions shown may be subject to minor variations by individual manufacturers

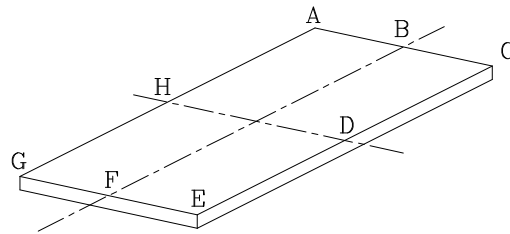
MANUFACTURING TOLERANCES



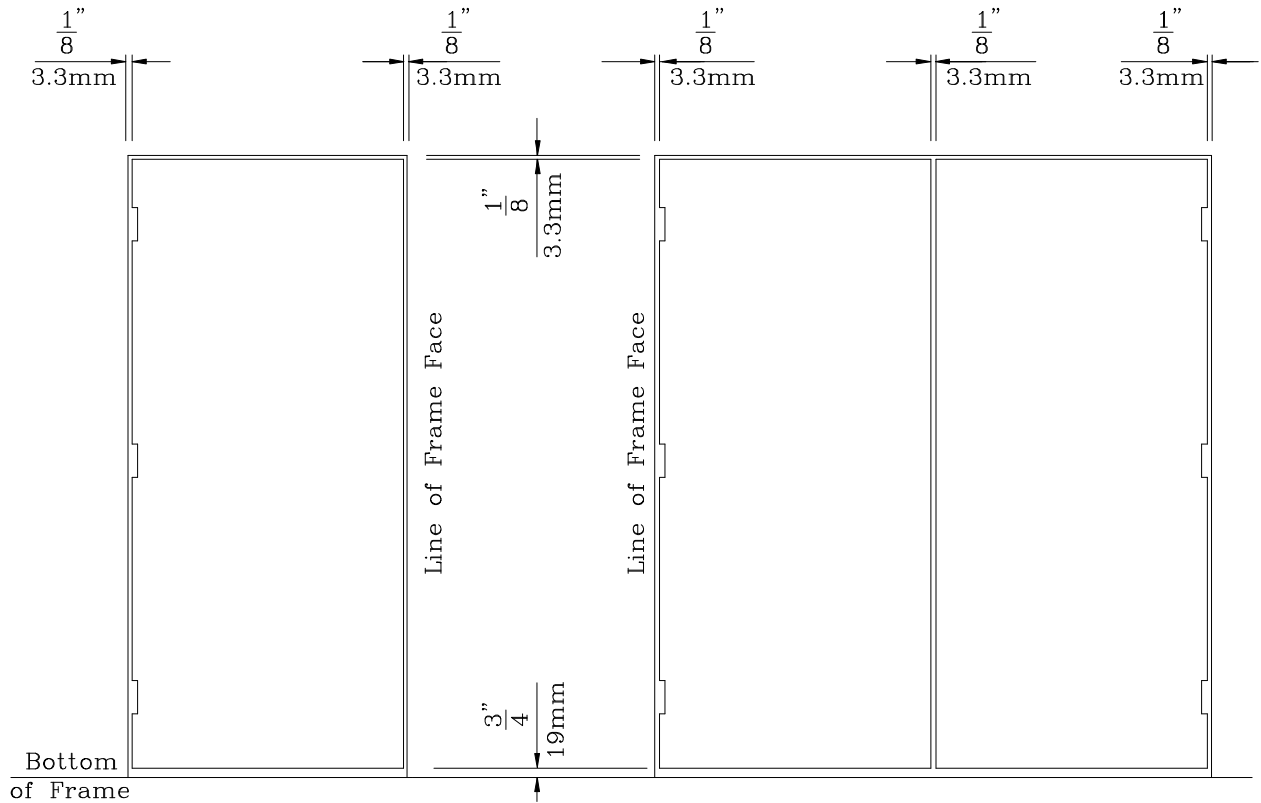
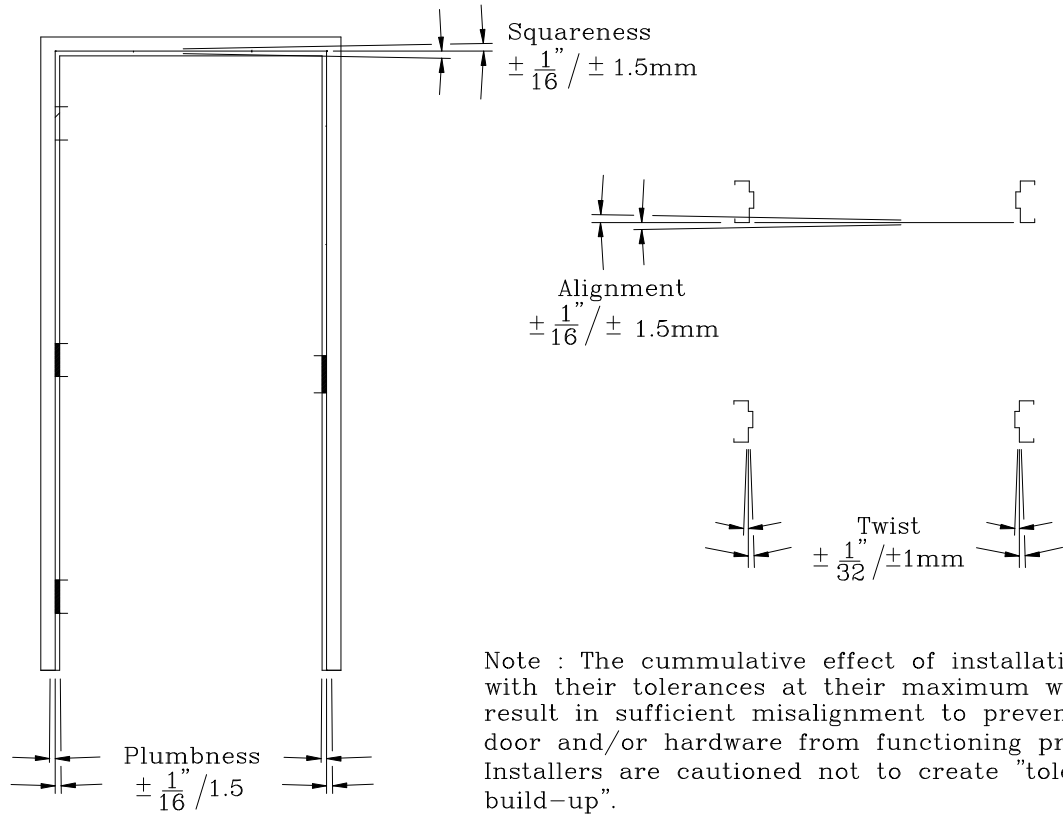
- \* : Tolerances are to be non-accumulative
- \*\* : As per ANSI A115
- \*\*\* : Hinge Backset :  $+\frac{1}{32}$  /  $-\frac{1}{64}$  /  $+1$  /  $-0.5\text{mm}$



Door Thickness:  $\pm \frac{3}{64}$  /  $\pm 1.2\text{mm}$   
 Squareness: AE = CG  $\pm \frac{1}{16}$  /  $\pm 1.5\text{mm}$   
 Flatness at B to F :  $+\frac{3}{16}$  /  $-0$  /  $+4.8\text{mm}$  /  $-0$   
 or D to H :  $+\frac{3}{16}$  /  $-0$  /  $+4.8\text{mm}$  /  $-0$   
 Rack at A, C, E or G:  $\pm \frac{3}{32}$  /  $\pm 2.4\text{mm}$



FRAME INSTALLATION TOLERANCE AND DOOR CLEARANCE



Clearance Tolerances :  $\pm \frac{1}{16} / \pm 1.5\text{mm}$

## CSDMA Membership

### All Steel Doors 2000 Limited

130 Milner Avenue  
Scarborough, Ontario M1S 3R3  
Tel: (416) 297-8500  
Toll Free: (877) 353-0937  
Fax: (416) 297-0374  
E-Mail: sales@asddoors.com

### Daybar Industries Limited

50 West Drive  
Brampton, Ontario L6T 2J4  
Tel: (905) 625-8000  
Fax: (905) 624-4204  
E-Mail: sales@daybar.com  
Website: www.daybar.com

### Metal Door Limited

P.O. Box 638  
Gormley, Ontario L0H 1G0  
Tel: (905) 888-5151  
Fax: (905) 888-0647  
E-Mail: info@metaldoorltd.com  
Website: www.metaldoorltd.com

### Ambico Limited

1120 Cummings Avenue  
Ottawa, Ontario K1J 7R8  
Tel: (613) 746-4663  
Toll Free: (888) 423-2224  
Fax: (800) 465-8561  
E-Mail: specialized@ambico.com  
Website: www.ambico.com

### Fleming-Baron Door Products

101 Ashbridge Circle  
Woodbridge, Ontario L4L 3R5  
Tel: (416) 749-2111  
Toll Free: (877) 777-9354  
Fax: (905) 851-8346  
Website: www.flemingbaron.com

### M. J. Daley Manufacturing Co. Ltd.

425 Comstock Road  
Scarborough, Ontario M1L 2H4  
Tel: (416) 752-2030  
Toll Free: (888) 423-2539  
Fax: (416) 752-6002  
Toll Free Fax: (888) 899-9883  
E-Mail: mjdaley@interlog.com

### Gensteel Doors

4950 Hickmore Street  
St. Laurent, Quebec H4T 1K6  
Tel: (514) 733-3562  
Toll Free: (866) 436-7833  
Fax: (514) 733-1932  
E-Mail: sales@gensteeldoors.com  
Website: www.gensteeldoors.com

### Trillium Steel Doors Limited

98 Stafford Drive  
Brampton, Ontario L6W 1L4  
Tel: (905) 452-1333  
Fax: (905) 452-9475  
E-Mail: info@trilliumdoors.com  
Website: www.trilliumdoors.com

### Apex Industries, Inc.

100 Millennium Blvd.  
Moncton, New Brunswick E1C 8M6  
Tel: (506) 857-1600  
Fax: (506) 857-1604  
E-Mail: rlkelly@apexindustries.com  
Website: www.apexindustries.com

### Greensteel Industries Ltd.

975 Logan Avenue  
Winnipeg, Manitoba R3E 1P3  
Tel: (204) 774-4533  
Fax: (204) 786-5899  
Website: www.greensteeldoor.com

### Vision Hollow Metal Limited

400 Zenway Blvd.  
Unit # 1,  
Woodbridge, Ontario L4H 0S7  
Tel: (905) 851-1211  
Fax: (905) 851-1261  
E-Mail: info@visionhollowmetal.com  
Website: www.visionhollowmetal.com

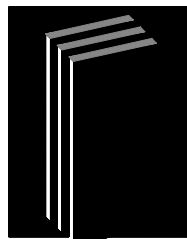
### Artek Door (1985) Limited

1294 South Service Road West  
Oakville, Ontario L6L 5T7  
Tel: (905) 842-6695  
Toll Free: (888) 315-3667  
Toll Free Fax: (888) 882-7835  
E-Mail: sales@artekdoor.com  
Website: www.artekdoor.com

### Les Métaux Tremblay Inc.

3010, boul Losch  
St-Hubert, Quebec, J3Y 3V8  
Tel: (450) 676-9141  
Fax: (450) 462-0082  
E-Mail: reception@mtremblay.com  
Website: www.mtremblay.com

CANADIAN  
STEEL DOOR  
MANUFACTURERS  
ASSOCIATION



L'ASSOCIATION  
CANADIENNE  
DES FABRICANTS  
DE PORTES D'ACIER

One Yonge Street • Suite 1801 • Toronto • Ontario • M5E 1W7  
Tel: (416) 363-7845 • Fax: (416) 369-0515 • E-Mail: marshl@netcom.ca • Website: www.csdma.org