

## CONVERSIONS

### Inches To Millimeters

$$\text{Inches} \times 25.4 = \text{mm}$$

EXAMPLE:  $25 \text{ inches} \times 25.4 = 635 \text{ mm}$   
 $\therefore 25 \text{ inches} = 635 \text{ mm}$

### Millimeters To Meters

$$\text{mm} / 1000 = \text{meters}$$

EXAMPLE:  $6000 \text{ mm} / 1000 = 6 \text{ meters}$   
 $\therefore 6000 \text{ mm} = 6 \text{ meters}$

### Feet To Millimeters

$$\text{Feet} \times 304.8 = \text{mm}$$

EXAMPLE:  $2 \text{ feet} \times 304.8 = 610 \text{ mm}$   
 $\therefore 2 \text{ feet} = 610 \text{ mm}$

### Kilograms To Pounds

$$\text{kg} \times 2.2046 = \text{lbs.}$$

EXAMPLE:  $500 \text{ kg} \times 2.2046 = 1102.3 \text{ lbs}$   
 $\therefore 500 \text{ kg} = 1102.3 \text{ lbs.}$

### Square Inches To Square Millimeters

$$\text{Inches}^2 \times 645.2 = \text{mm}^2$$

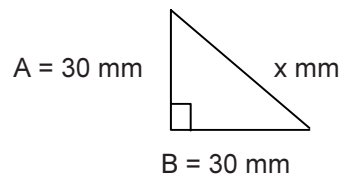
EXAMPLE:  $480 \text{ inches}^2 \times 645.2 = 309,696 \text{ mm}^2$   
 $\therefore 480 \text{ inches}^2 = 309,696 \text{ mm}^2$

### Square Millimeters To Square Meters

$$\text{mm}^2 / 1,000,000 = \text{m}^2$$

EXAMPLE:  $309,696 \text{ mm}^2 / 1,000,000 = 0.309696 \text{ m}^2$   
 $\therefore 309,696 \text{ mm}^2 = 0.31 \text{ m}^2$

## BASIC TRIGONOMETRY



**Problem:** Need to calculate the length of the hypotenuse, or dimension x.

**Solution:**

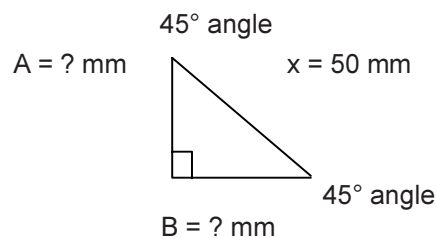
$$A^2 + B^2 = C^2$$

$$30 \text{ mm}^2 + 30 \text{ mm}^2 = x^2$$

$$900 \text{ mm} + 900 \text{ mm} = \sqrt{1800}$$

$$x = 42.43 \text{ mm}$$

∴ the hypotenuse, or x equals 42.43 mm



**Problem:** Need to calculate the rise and the run, or dimension A and dimension B.

**Solution:**

$$A^2 + B^2 = C^2$$

Since it is a right angle triangle, and the two other angles are 45° angles, we know that A length is equal to B length.

Since A = B

$$C^2 / 2 = A^2 \text{ or } B^2$$

$$50 \text{ mm} \times 50 \text{ mm} / 2 = \sqrt{A \text{ or } B}$$

$$2500 / 2 = \sqrt{A \text{ or } B}$$

$$1250 = \sqrt{A \text{ or } B}$$

A and B = 35.36 mm

∴ dimension A and dimension B are 35.36 mm

**PROFILE SIZING**

**MINIMUM LENGTH**

- of a piece of Profile with a connector at each end = 88 mm

**MAXIMUM STOCK LENGTH**

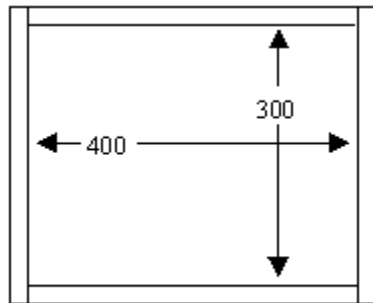
- of a piece of Profile is 6000 mm or 6 meters

**LONGER PIECES**

- arrangements may be possible

**DOOR DESIGN CONSIDERATIONS**

When designing a door, if possible, design according to the sketch below. If strength is an issue, as on large doors / door frames, please consult the factory.



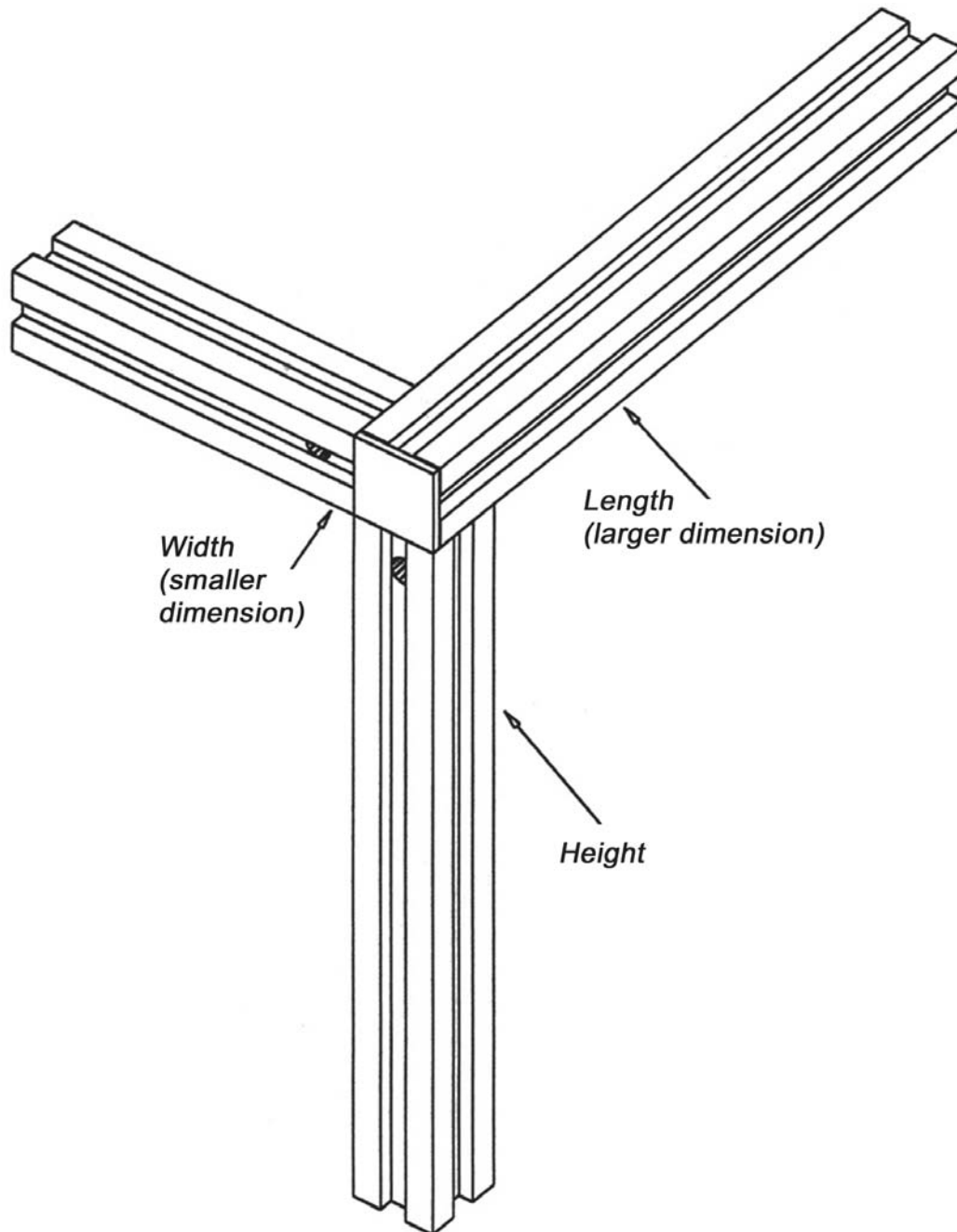
The panel size for this frame would be 414 x 314 for a plastic panel and 412 x 312 for a gridguard panel if constructed with 35 mm or 50 mm profile.

**NOTE:** Reference the following page for a note on main frame design, illustrating how to construct the upper corners of the frame.

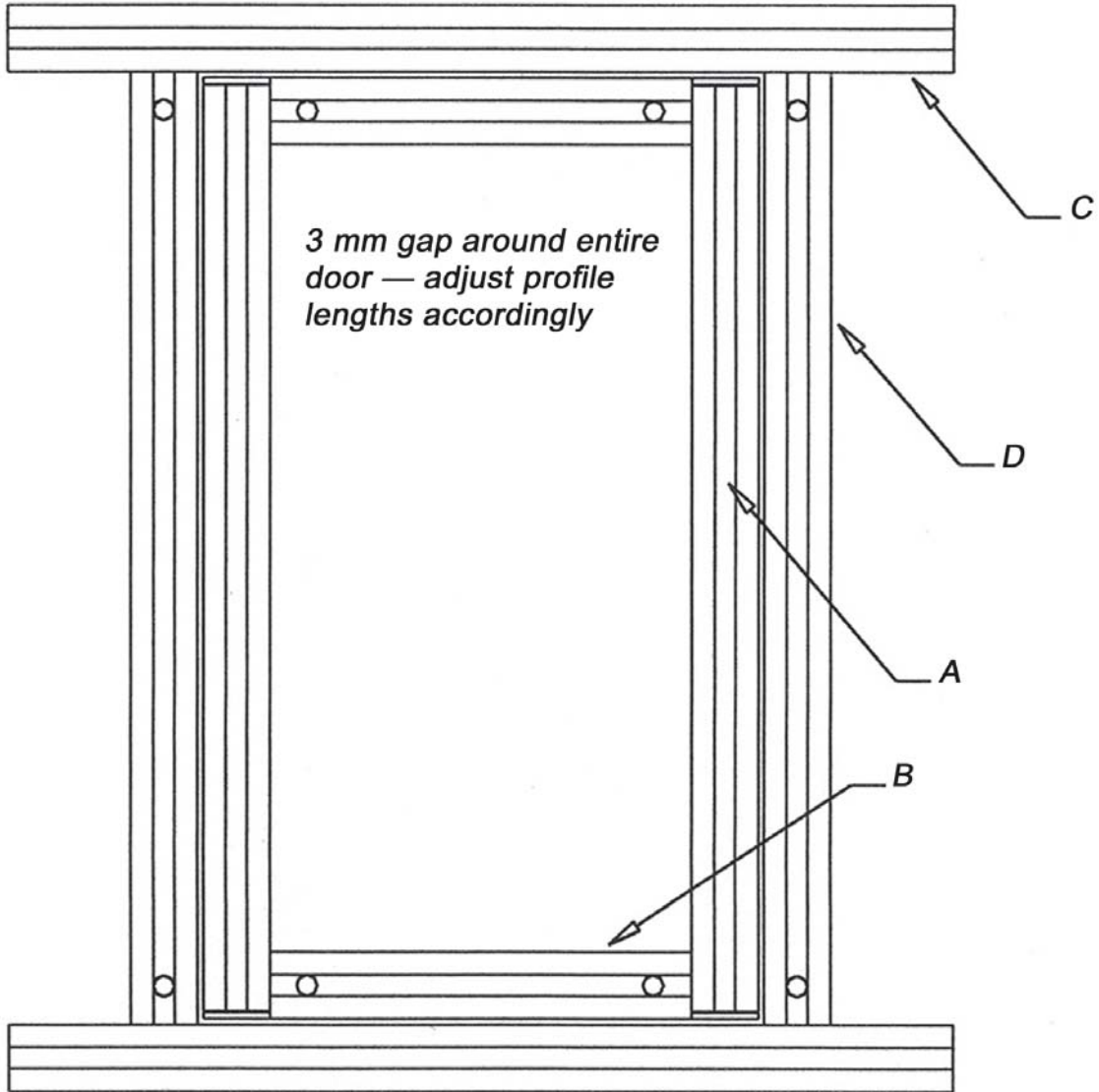
**PANEL SIZING**

- 35 x 35 and larger frames
- Grid Guard — add 12 mm
- Plastic — add 14 mm

# Main Frame Corner Construction



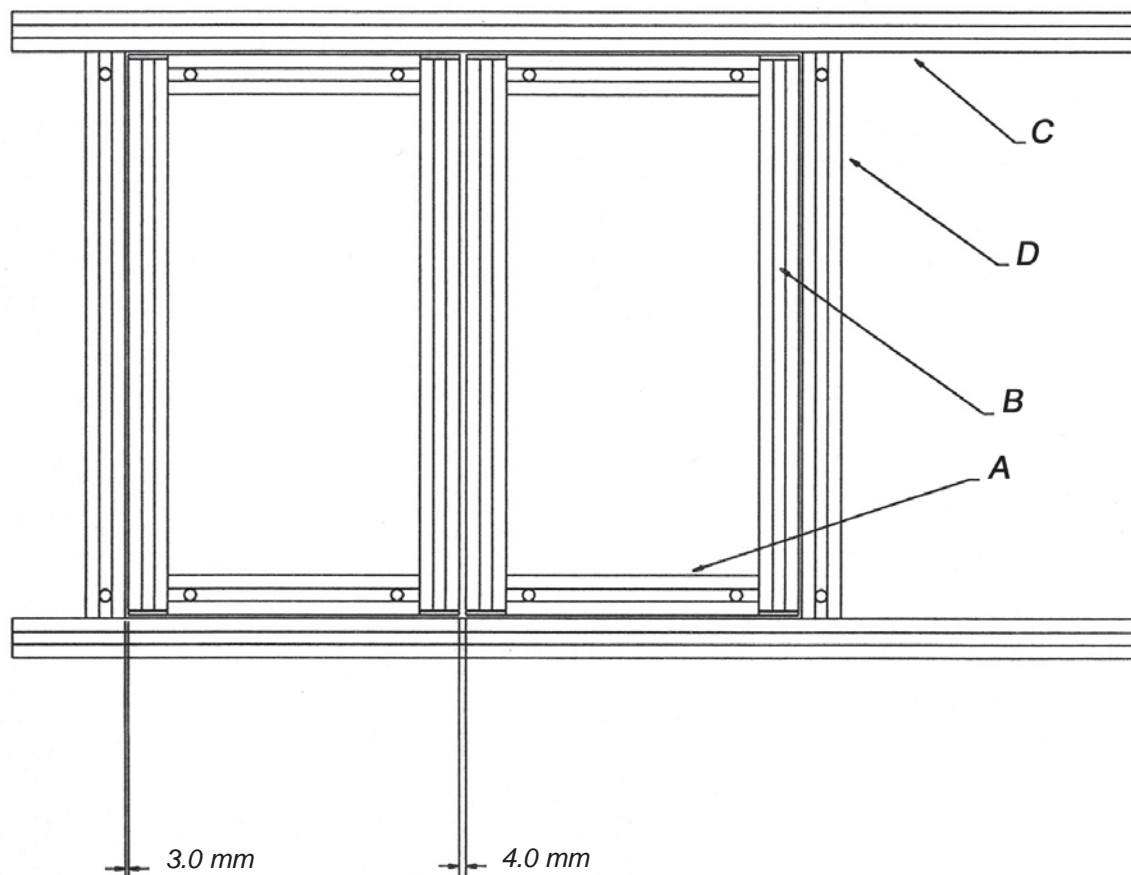
# Sizing For A Single Door In A Frame



Item	Profile	Process	Length	Quantity	Hardware
A	35354	02	486	2	3535-4001
B	35354	04	224	2	35-1001
C	35354	02	500	2	
D	35354	04	500	2	35-1001

- NOTE:**
1. For 35 mm — 3 mm gap around entire door.
  2. For 50 mm — 3 mm gap at the top and bottom of the door — 4 mm gap at the sides of the door.

# Double Doors Inside A Frame



Item	Profile	Process	Length	Quantity	Hardware
A	35354	04	224	4	35-1001
B	35354	02	486	4	3535-4001
C	35354	02	1000	2	
D	35354	04	500	2	35-1001

**NOTE:** 1. For 35 and 50 mm — 3 mm gap all around — 4 mm gap in the middle.