

# Aluminium Structural Framing

## ➔ **Aluminium vs Steel**

How do T-slots compare to welded steel products? T-slots were created to build structures faster and easier than welded steel. You merely insert a t-nut and fastener into the extrusion and tighten it to create a durable, strong and light weight structure that's both functional and attractive.

## ● **Compatibility**

Compatibility is a big deal. That's why we've made it a point to ensure that all of our sections are compatible with all the other major suppliers.

# Versatile Form and Function

## Versatile Form and Function

Our Structural framing system simplifies the creation of structures without sacrificing good environmental design or aesthetic appeal:

- Environmentally friendly Aluminium products rated by eco-specifier.
- Design and Build anything.
- High Quality components for a wide range of architectural applications.
- Mechanical engineer available for any questions
- Excellent fit and finish
- Lightweight components - high strength to weight ratio
- Easy to Assemble and disassemble
- Pre- Assemble in one location, break it down and re-assemble at the final site.
- Superior fit and finish
- Eliminate welding. So increased build times

Smoothedge clean well-designed structural framing systems that can shape any environment with:

- Superior fit and finish.
- Sleek, Clean, anodised or powder coated to match you spec.
- Scratch and corrosion resistant surfaces.
- From smallest to largest - picture frames, tv display rack to large buildings and modular housing and facades.

## How can I use it?

Initially designed to create frames, workstations and machine bases for industrial applications, structural framing literally has “everything to build anything.” Aluminum Framing can be used to build perimeter guarding, work tables, machine bases, industrial guarding, tool racks, robot stands, workstations, carts, display units, (stairs, room dividers, shelving), display elements, booths and information kiosks, commercial and gallery displays, and even modular homes.



# 30 x 30mm T-slot

- Ideal for Medium-duty, medium-stress construction, such as guarding, partitioning shelves, etc.
- Has four 8mm T-slots.

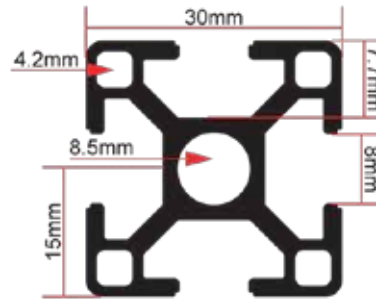
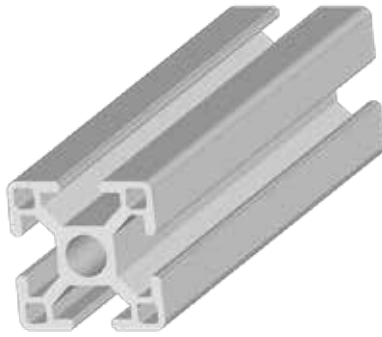
Moments of Inertia  
 $I_x$  (cm<sup>4</sup>) 2,628  
 $I_y$  (cm<sup>4</sup>) 2,628

Section Modulus  
 $W_x$  (cm<sup>4</sup>) 1,852  
 $W_y$  (cm<sup>4</sup>) 1,852

Profile Mass  
Kg/M 0,855

Outer Perimeter  
Sq M 0,275

Profile Groove  
8mm



## 45 x 45mm Light Duty T-slot

- General Purpose, Medium-duty profile used in a variety of applications.
- Has four 10mm T-slots.

Moments of Inertia  
 $I_x$  (cm<sup>4</sup>) 10,85  
 $I_y$  (cm<sup>4</sup>) 10,85

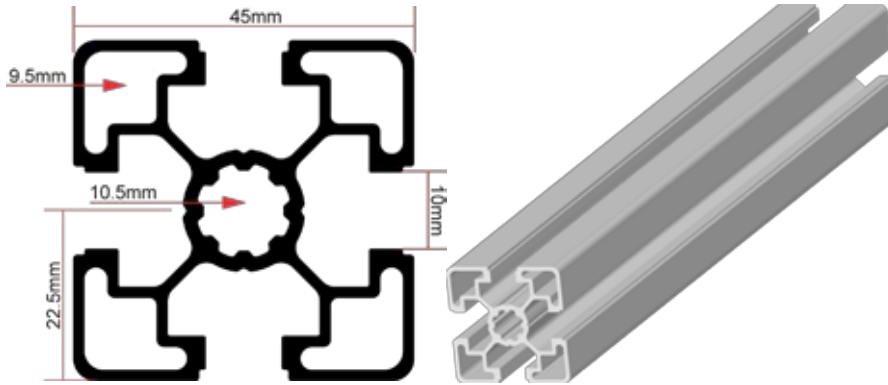
Section Modulus  
 $W_x$  (cm<sup>4</sup>) 4,882  
 $W_y$  (cm<sup>4</sup>) 4,882

Profile Mass  
 Kg/M 1,476

Outer Perimeter  
 Sq M 0,476

Profile Groove

10mm



## 45 x 45mm Heavy Duty T-slot

- General Purpose, Medium-duty profile used in a variety of applications.
- Has four 10mm T-slots.

Moments of Inertia  
 $I_x$  (cm<sup>4</sup>) 16,20  
 $I_y$  (cm<sup>4</sup>) 16,20

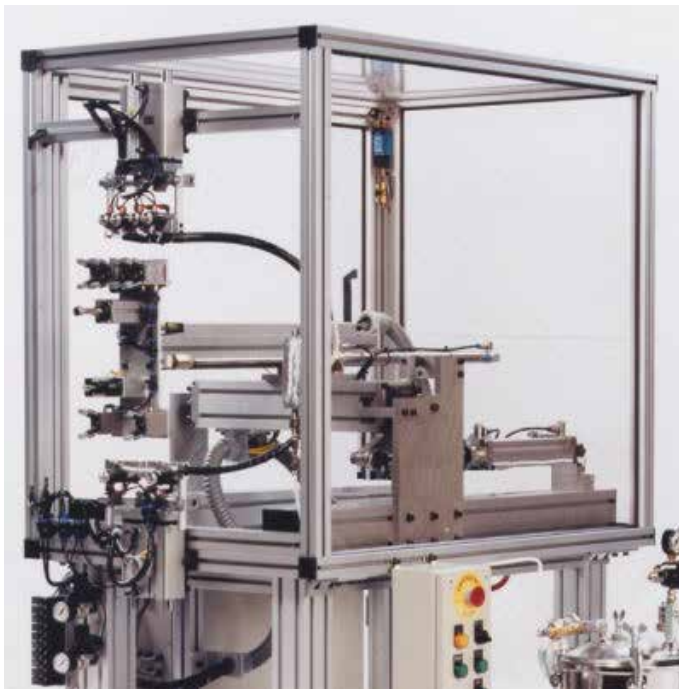
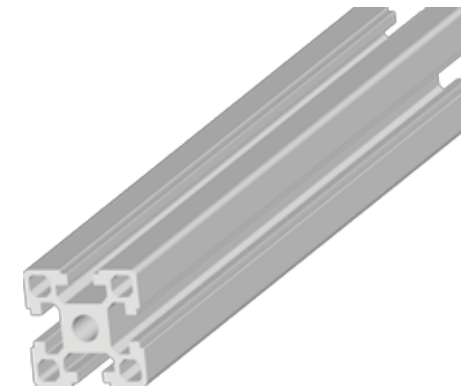
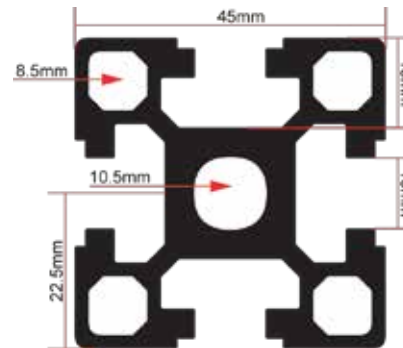
Section Modulus  
 $W_x$  (cm<sup>4</sup>) 7,100  
 $W_y$  (cm<sup>4</sup>) 7,100

Profile Mass  
 Kg/M 2,335

Outer Perimeter  
 Sq M 0,470

Profile Groove

10mm





## 90 x 45mm Light Duty T-slot

- Light-duty applications.
- Has six 10mm T-slots.

Moments of Inertia  
 $I_x$  (cm<sup>4</sup>) 73,80  
 $I_y$  (cm<sup>4</sup>) 18,35

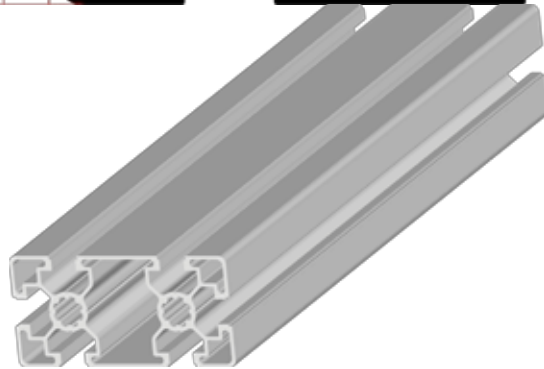
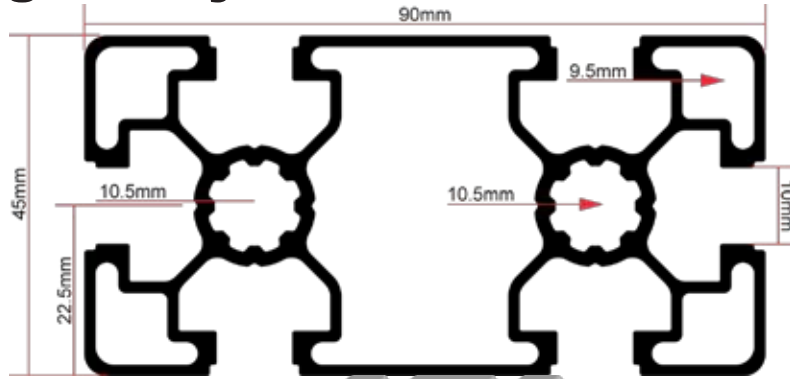
Section Modulus  
 $W_x$  (cm<sup>4</sup>) 16,28  
 $W_y$  (cm<sup>4</sup>) 8,25

Profile Mass  
 Kg/M 2,427

Outer Perimeter  
 Sq M 0,758

Profile Groove

10mm



## 45 x 45mm Heavy Duty T-slot

- Heavy-duty profile for strong, rugged performance

- Has six 10mm T-slots.

Moments of Inertia  
 $I_x$  (cm<sup>4</sup>) 125,0  
 $I_y$  (cm<sup>4</sup>) 33,0

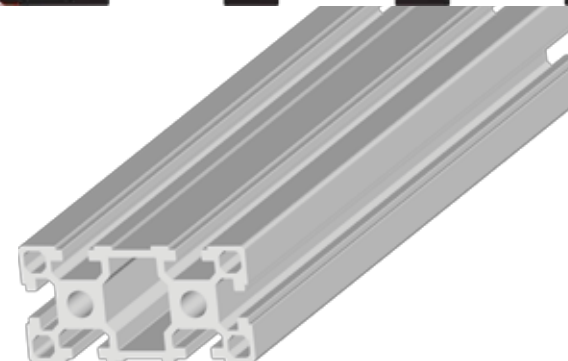
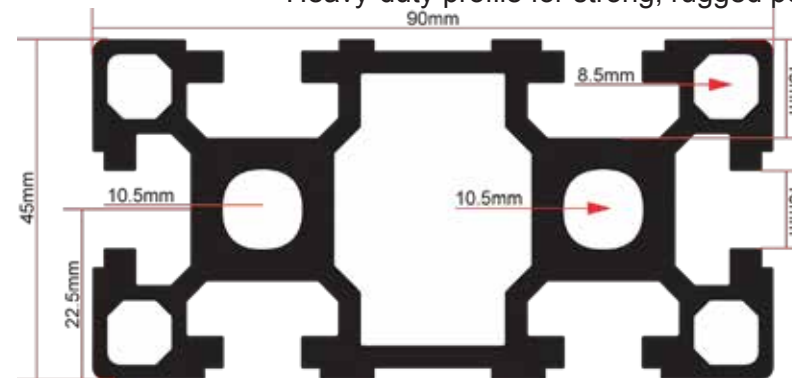
Section Modulus  
 $W_x$  (cm<sup>4</sup>) 27,5  
 $W_y$  (cm<sup>4</sup>) 15,0

Profile Mass  
 Kg/M 4,127

Outer Perimeter  
 Sq M 0,669

Profile Groove

10mm



# 90 x 90mm Heavy Duty T-slot

- Ideal for heavy-duty applications where added strength is needed and additional T-slot are needed.
- Centre area can be used as a conduit for air lines, or as a pressurised air manifold.
- Has eight 10mm T-slots

## Moments of Inertia

$I_x$ (cm <sup>4</sup> )	245,00
$I_y$ (cm <sup>4</sup> )	245,00

## Section Modulus

$W_x$ (cm <sup>4</sup> )	54,0
$W_y$ (cm <sup>4</sup> )	54,0

## Profile Mass

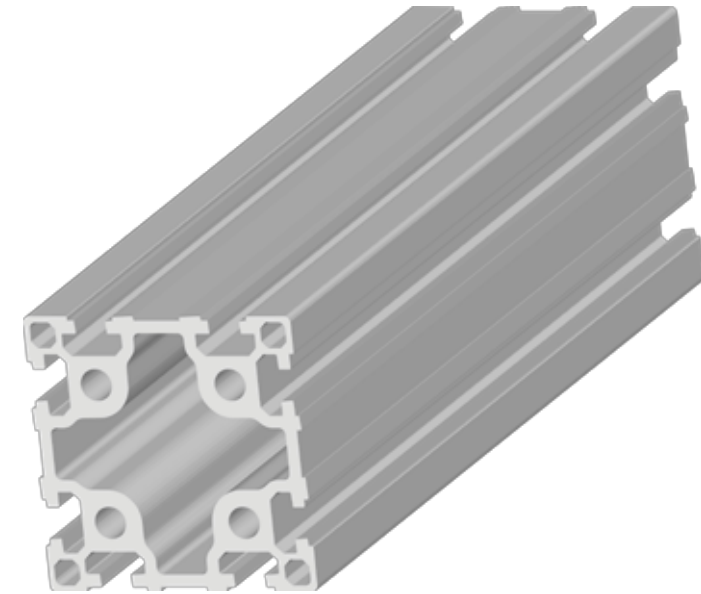
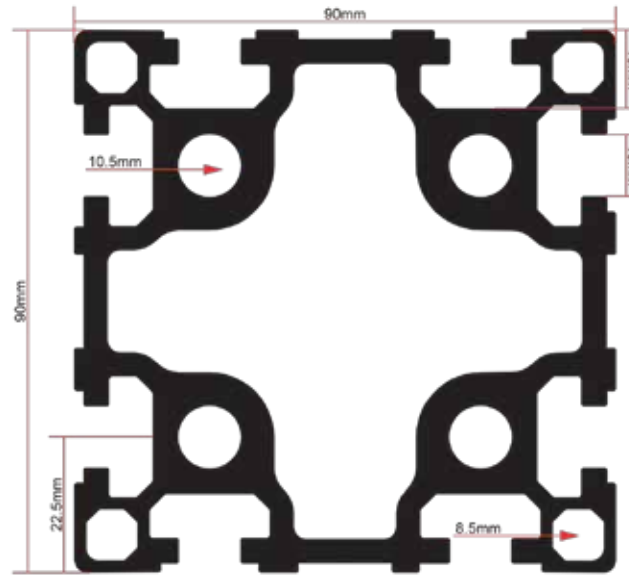
Kg/M 7,350

## Outer Perimeter

Sq M 0,959

## Profile Groove

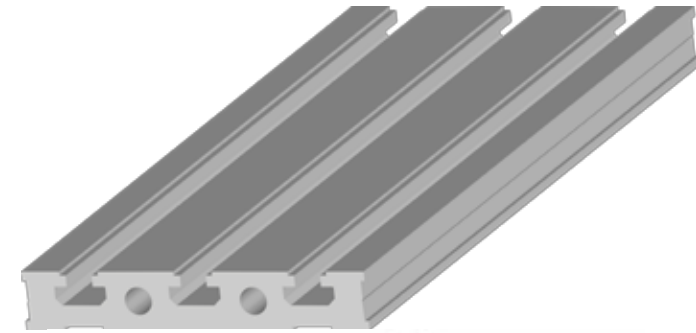
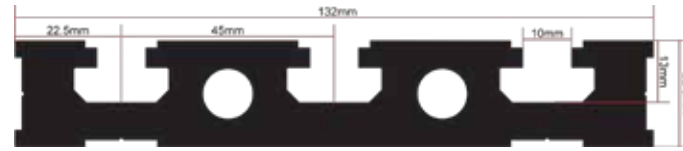
10mm





# Milling Table

- Used for fixturing, end of arm tooling applications.
- Can be used as a carriage profile or bearing block header for linear motion applications
- Has three T-slots



## Moments of Inertia

$I_x$ (cm <sup>4</sup> )	480,00
$I_y$ (cm <sup>4</sup> )	15,00

## Section Modulus

$W_x$ (cm <sup>4</sup> )	45,00
$W_y$ (cm <sup>4</sup> )	16,5

## Profile Mass

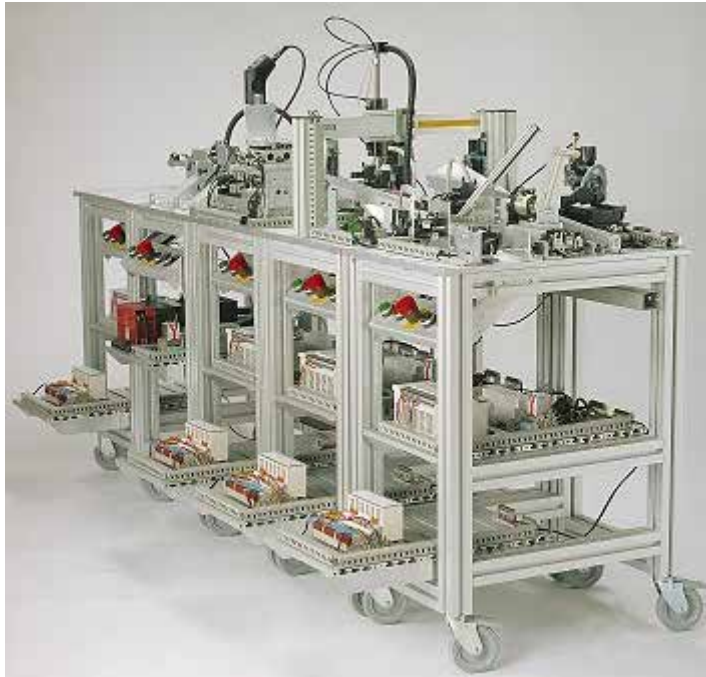
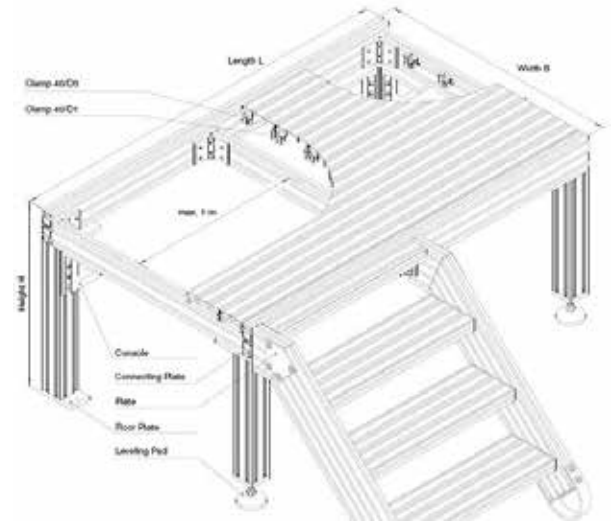
Kg/M	5,857
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## Outer Perimeter

Sq M	0,478
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## Profile Groove

10mm



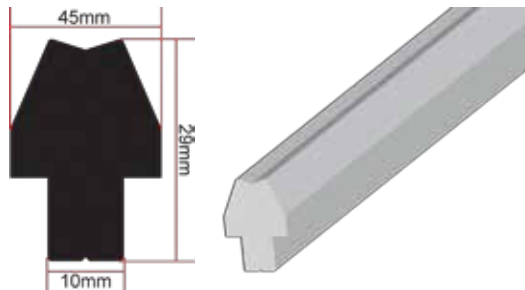
# Rod Support

## Profile Mass

Kg/M	1,110
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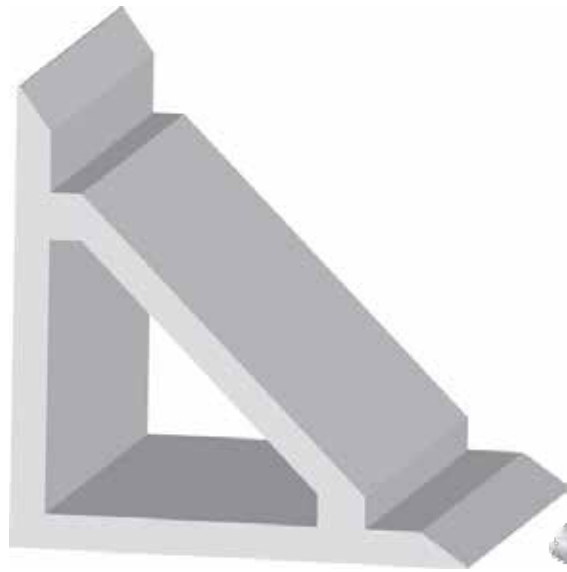
## Outer Perimeter

Sq M	0,100
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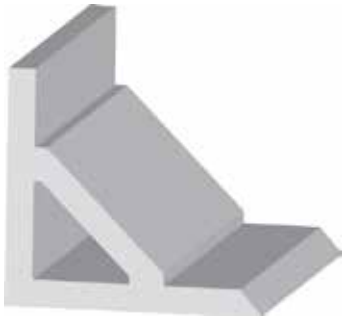
## 79 x 79mm Bracket

- Can be cut to any size
- standard size is 79 x 79 x 90mm.
- Brackets extruded for extra strength.



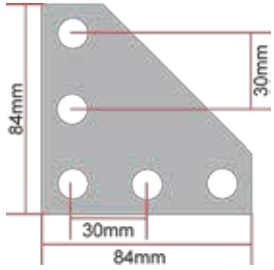
## 52 x 52mm Bracket

- Can be cut to any size
- standard size is 52 x 52 x 90mm, 52 x 52 x 45mm, 52 x 52 x 30mm.
- Brackets extruded for extra strength.

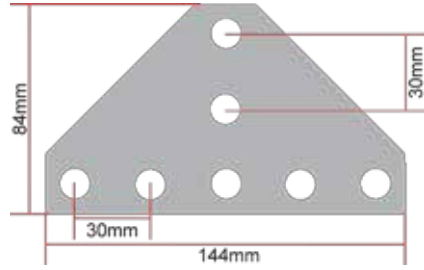




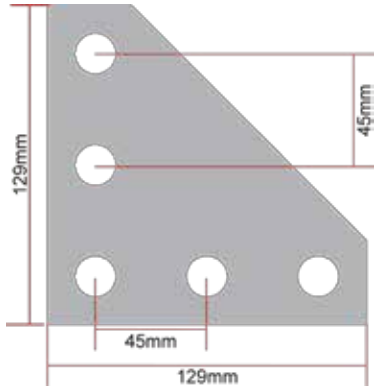
# Plate Brackets



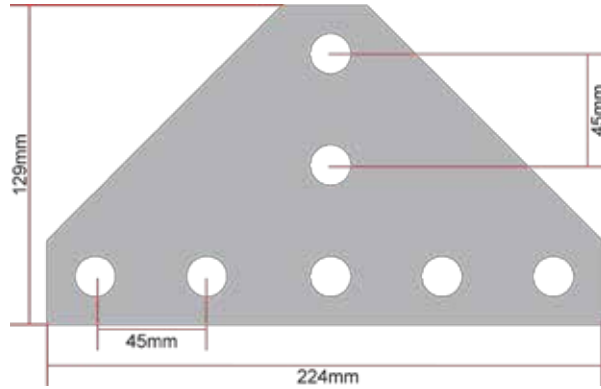
30mm External Corner Bracket



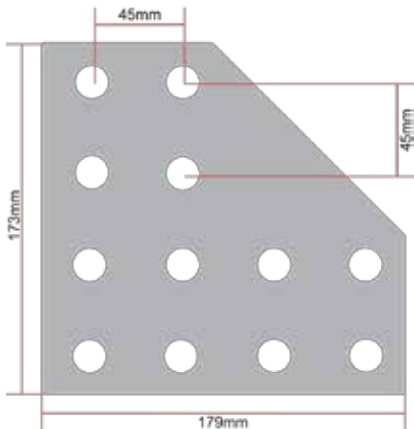
30mm Joining Plate



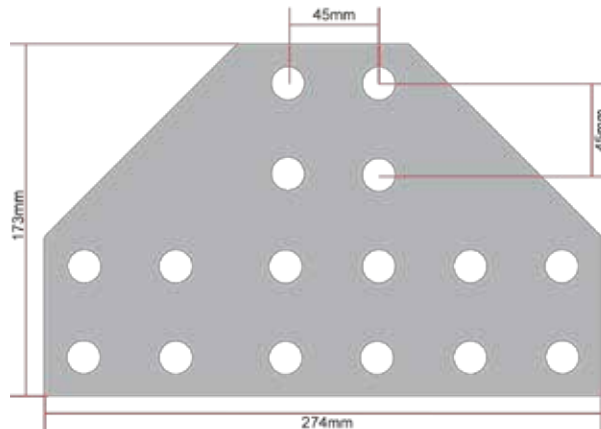
45mm External Corner Bracket



45mm Joining Plate



90mm External Corner Bracket



90mm Joining Plate

# T-slot Nuts and Bolts



- **End Caps Available**
- **Swivel Feet and Roller Castors available**
- **Hinges and handles available**

**Paid Services Available**

**Drilling**

**Drilling in Sequence**

**Cross Milling**

**Cross Milling in Sequence**

**Lengthwise Milling**

**Lengthwise Milling in Sequence**

**Through Hole**

**Blind Hole Drilling**

**Thread Cutting**

**Standard Milling**

**Cutting and Mitre Cutting Free of Charge**

**CAD Drawings and Designs  
available on request**

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