

ALUMINUM EXTRUSION  
PROFILE AND ACCESORIES



**MEXFRAME**



**MEXFRAME**

**PART NUMBER**

- MM-90x90
- MM-45x90
- MM-45x45
- MM-45x45HR
- MM-45x45LR
- MM-40x40
- MM-30x30
- MM-20x20
- MM-60x60
- MM-30x60
- MM-45X45R

**DESCRIPTION**

EXTRUDED ALUMINUM

Length: 20ft (6.1mt)



## Aluminum vs Steel

Think about the fact that, volume for volume aluminum is one third the weight of iron, steel, copper or brass. Yet it has yield strength of 35, 000 psi, which means it is comparable to A36 steel carbon (frequently used in applications such as equipment and machinery supports as well as building frames). Furthermore, aluminum is resilient and can flex under loads or reshape itself after the shock of impact.

### 80/20 T-slot Aluminim

Modularity is just a part of the many benefits aluminum offers to those looking for an alternative to steel and iron. Other benefits:

- Weighs less than steel
- Corrosion-resistant
- No welding required
- Costs less than steel
- Strength similar to steel
- Machining not required

### Welded Steel Frame

For the skilled welder, steel can be a viable option but for many it's not an option for many reasons:

- More time and labor
- Welding required
- Machining required
- More expensive
- Needs painting
- One fixed design

## Mexico

### North Central Area

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### Durango

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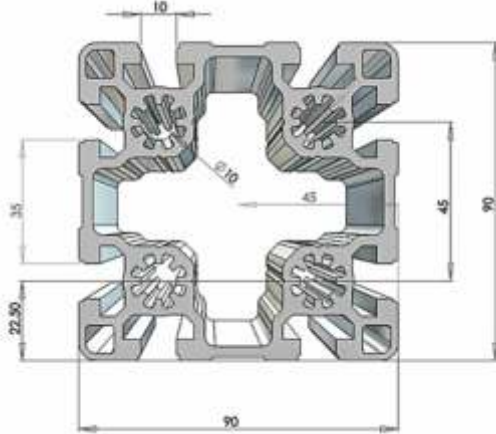
### Center Area

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Tel. +(55) 4321 1317

### Northwest Area

salesne@viratechnologies.net  
Cel. +52 1 (662) 368 9747

## Part No. MM-90x90



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**90x90**

$A = 24,1 \text{ cm}^2$

$I_x = 211,1 \text{ cm}^4$

$I_y = 211,1 \text{ cm}^4$

$W_x = 46,9 \text{ cm}^3$

$W_y = 46,9 \text{ cm}^3$

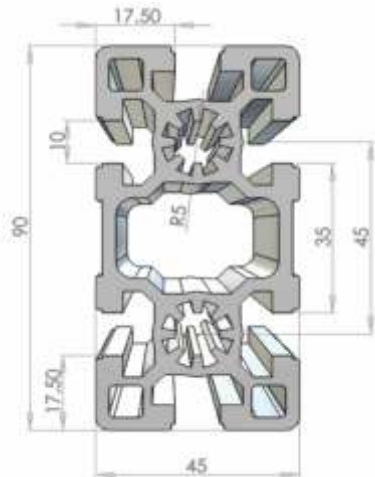
$m = 6,5 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	38,4	299,8	299,8	66,7	66,7	10,4

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-45x90



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**45x90**

$A = 15,4 \text{ cm}^2$

$I_x = 124,6 \text{ cm}^4$

$I_y = 32,8 \text{ cm}^4$

$W_x = 27,7 \text{ cm}^3$

$W_y = 14,6 \text{ cm}^3$

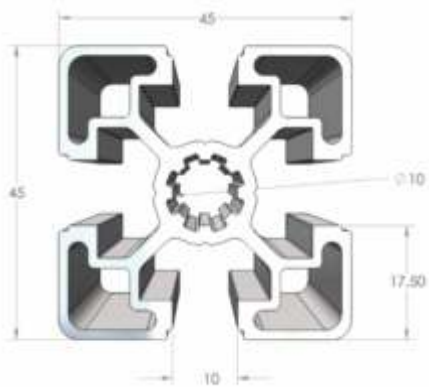
$m = 4,2 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	15,4	124,6	32,8	27,7	14,6	4,2

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-45x45



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**45x45**

$A = 7,5 \text{ cm}^2$

$I_x = 13,8 \text{ cm}^4$

$I_y = 13,8 \text{ cm}^4$

$W_x = 6,1 \text{ cm}^3$

$W_y = 6,1 \text{ cm}^3$

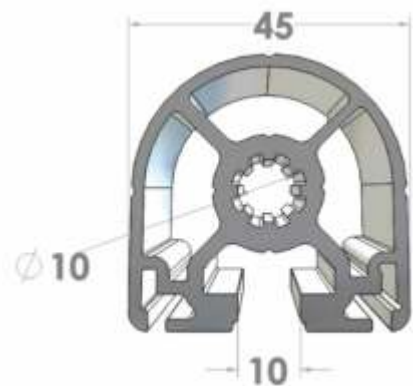
$m = 2,0 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	6,0	11,7	11,7	5,2	5,2	1,6

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-45x45HR



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**45x45HR**

$A = 6,6 \text{ cm}^2$

$I_x = 11,0 \text{ cm}^4$

$I_y = 10,7 \text{ cm}^4$

$W_x = 4,4 \text{ cm}^3$

$W_y = 4,8 \text{ cm}^3$

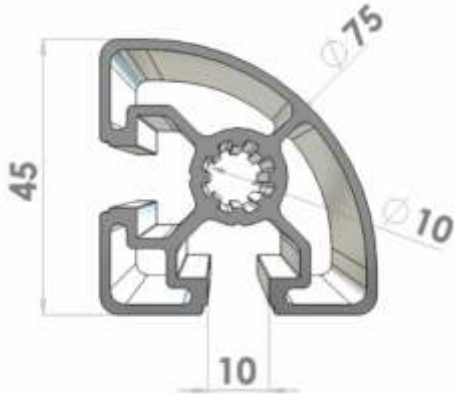
$m = 1,8 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	3,6	11,0	10,7	4,4	4,8	1,8

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-45x45LR



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**45x45LR**

$A = 4,9 \text{ cm}^2$

$I_x = 8,6 \text{ cm}^4$

$I_y = 8,6 \text{ cm}^4$

$W_x = 5,0 \text{ cm}^3$

$W_y = 5,0 \text{ cm}^3$

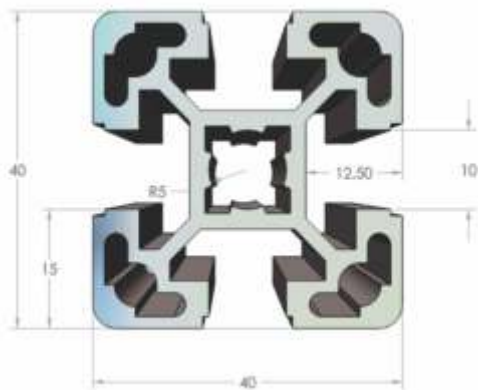
$m = 1,3 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	4,9	8,6	8,6	5,0	5,0	1,3

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-40x40L



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**40x40L**

$A = 5,6 \text{ cm}^2$

$I_x = 9,1 \text{ cm}^4$

$I_y = 9,1 \text{ cm}^4$

$W_x = 4,5 \text{ cm}^3$

$W_y = 4,5 \text{ cm}^3$

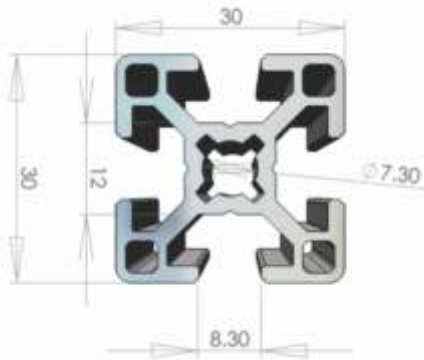
$m = 1,5 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	5,6	9,1	9,1	4,5	4,5	1,5

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-30x30



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**30x30**

$A = 3,1 \text{ cm}^2$

$I_x = 2,8 \text{ cm}^4$

$I_y = 2,8 \text{ cm}^4$

$W_x = 1,8 \text{ cm}^3$

$W_y = 1,8 \text{ cm}^3$

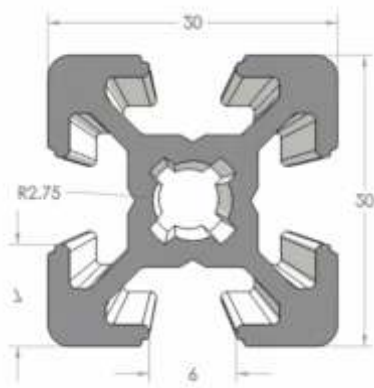
$m = 0,9 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
8	3,1	2,8	2,8	1,8	1,8	0,9

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-20x20



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**20x20**

$A = 1,6 \text{ cm}^2$

$I_x = 0,7 \text{ cm}^4$

$I_y = 0,7 \text{ cm}^4$

$W_x = 0,7 \text{ cm}^3$

$W_y = 0,7 \text{ cm}^3$

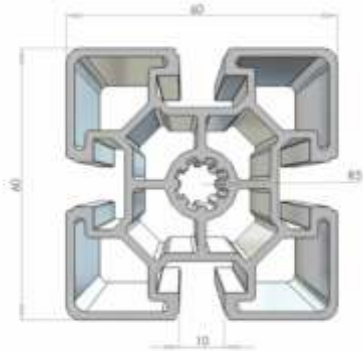
$m = 0,4 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	1,6	0,7	0,7	0,7	0,7	0,4

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-60x60L



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**60x60L**

$A = 9,6 \text{ cm}^2$

$I_x = 32,4 \text{ cm}^4$

$I_y = 32,4 \text{ cm}^4$

$W_x = 10,8 \text{ cm}^3$

$W_y = 10,8 \text{ cm}^3$

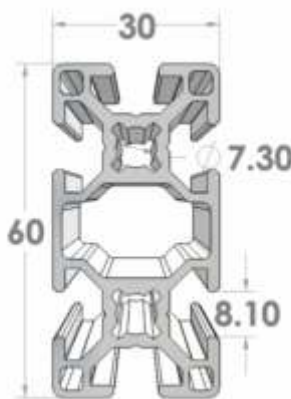
$m = 2,6 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
10	9,6	32,4	32,4	10,8	10,8	2,6

### CHEMICAL ANALYSIS

Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

## Part No. MM-30x60



Hardness (Webster):

T5 (9-11 Wb)

Color:

Matting 12 microns

Application:

Anodized

Film Thickness:

12 to 14 microns

Sealed:

1 drop of 40% nitric acid

1 drop of 1% aluminum blue

**30x60**

$A = 5,5 \text{ cm}^2$

$I_x = 19,6 \text{ cm}^4$

$I_y = 5,1 \text{ cm}^4$

$W_x = 7,0 \text{ cm}^3$

$W_y = 3,9 \text{ cm}^3$













$m = 1,5 \text{ kg/m}$

SPLINE	PROFILE SURFACE A (cm <sup>2</sup> )	MOMENT OF INERTIA		MOMENT OF RESISTANCE		VOLUME m (kg/m)
		I <sub>x</sub> (cm <sup>4</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	W <sub>x</sub> (cm <sup>3</sup> )	W <sub>y</sub> (cm <sup>3</sup> )	
8	5,5	19,6	5,1	7,0	3,9	1,5

### CHEMICAL ANALYSIS








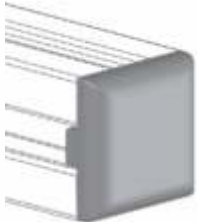




Metal Composition (Alloy)	%Si	%Mg	%Fe	%Cu	%Mn	%Cr	%Ni	%Zn	%Ti
6063	0.20-0.60	0.45-0.90	<0.35	<0.10	<0.10	<0.10	-	<0.10	<0.10

# Slots




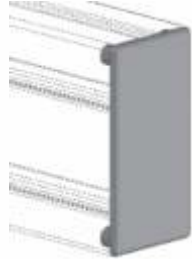

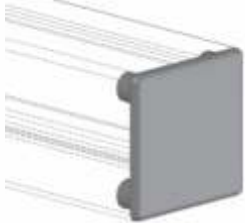




PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
1.PPA.001	Rigid cover profile perfil 6 mm		
1.PPA.003	Rigid cover profile profile 8 mm		
1.PPA.013	Rigid cover profile profile 10 mm		
1.PPA.014	Rubber profile foot stool		
1.PPA.046	Panel gasket rolls 150 mm		
1.PPA.022	Panel gasket rolls 90 mm		



# Covers

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
2.CAP.007	20X20 Black cap		
2.CAP.008	30X30 Black cap		
2.CAP.010	30X60 Black cap		
2.CAP.020	40X40 Black cap		
2.CAP.022	40X80 Black cap		
2.CAP.001	45X45 Black cap		


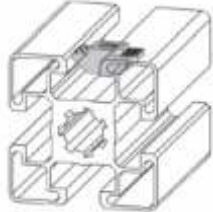

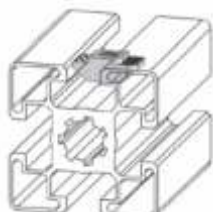

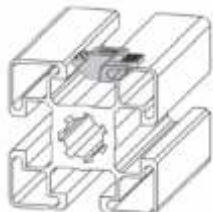

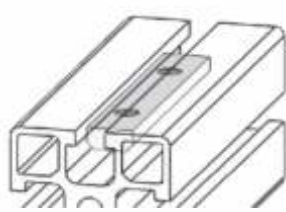




# Covers

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
2.CAP.028	60X60 Black cap		
2.CAP.003	45X90 Black cap		
2.CAP.005	90X90 Black cap		
5.CAP.045	45X45LR Black cap LR		
5.CAP.047	45X45HR Black cap HR		

# Connection Angles

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
1.ANG.016	Connection angle 18x18 with references		
1.ANG.003	Connection angle 29x29		
1.ANG.004	Connection angle 59x59		
1.ANG.002	Connection angle 27,5x59		
1.ANG.009	Connection angle 38x38		
1.ANG.010	Connection angle 40x80		
1.ANG.027	Connection angle with slot 8 teeth		
1.ANG.024	Connection angle 43x86 with slot 10 teeth		
1.ANG.026	Connection angle 86x86 with slot 10 teeth		

# Hammer Nuts




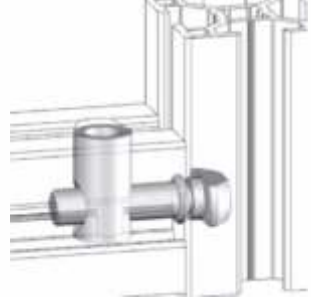

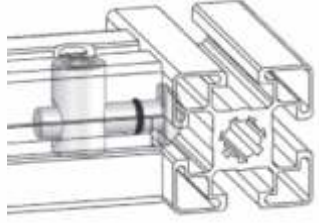

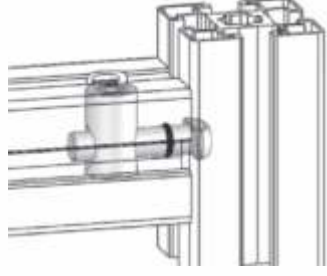

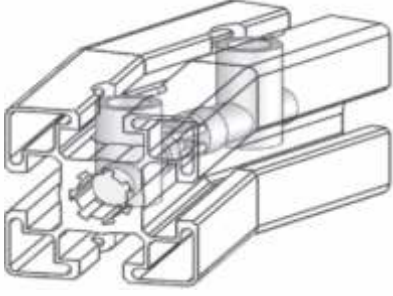
PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
2.NUT.001	Hammer nut M4		
2.NUT.006	Hammer nut M6		
2.NUT.014	Hammer nut Mb		
5.NUT.020	Rectangular nut M8		
1.NUT.001	Flanged nut M8		
2.SCR.012	Self tapping screw S12x30		

# Legs and Supports


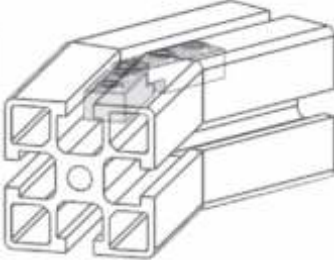








PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
1.SUP.004	M12		
1.SUP.055	M12		
1.SUP.020	Bracket 40 mm suitable for 40x40 profiles		
1.SUP.198	Spindle in zinc plated steel		
1.SUP.032	Anti-slip pads		
1.SUP.252	Spindle in zinc plated steel		
1.SUP.177	Anti-slip pads		
1.SUP.162	Spindle in zinc plated steel		

# Joints

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
2.JNT.002	Linear joint complete of 4 grub screws M5		
2.JNT.001	Linear joint complete of 4 grub screws M6		
2.JNT.009	Linear joint complete of 4 grub screws M8		
2.JNT.029	Angular joint 30° complete of 4 grub screws M8		
2.JNT.030	Angular joint 45° complete of 4 grub screws M8		
2.JNT.015	Inner connector completed of screw and grub screw		

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
2.JNT.005	Quick central connector with vertical hammer suitable for slot 8 profile		
2.JNT.004	Quick central connector with horizontal hammer suitable for slot 8 profile		
2.JNT.006	Quick central connector with vertical hammer suitable for slot 10 profile		
2.JNT.007	Quick central connector with horizontal hammer suitable for slot 10 profile		
2.JNT.002	Central connector adjustable horizontally suitable for slot 10 profile		

# Joints

PART NUMBER	DESCRIPTION	DESIGN	APPLICATION
5.JNT.027	Pivot joint for any angle complete of 4 grub screws M8		
5.JNT.051	3 way body connection angle supplied with screws		
5.JNT.052	3-way black-round cap for 3 way connection angle black		
1.JNT.011	Pivot joint with adjustable antirotation for 40x40 profile		
1.JNT.022	Pivot joint with adjustable antirotation for 40x40 profile		



PART NUMBER

DESCRIPTION

DESIGN

1.HNG.021

Hinge for 30x30 profiles  
locking with M5x20



1.HNG.022

Hinge for 40x40 profiles  
locking with M6x20



1.HNG.023

Hinge for 45x45 profiles  
locking with M8x20



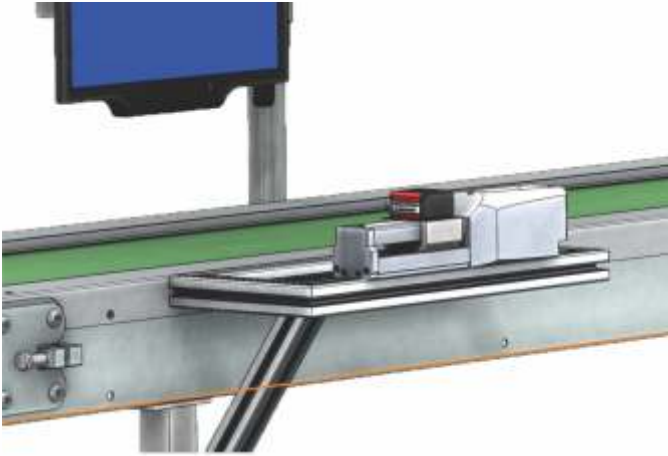
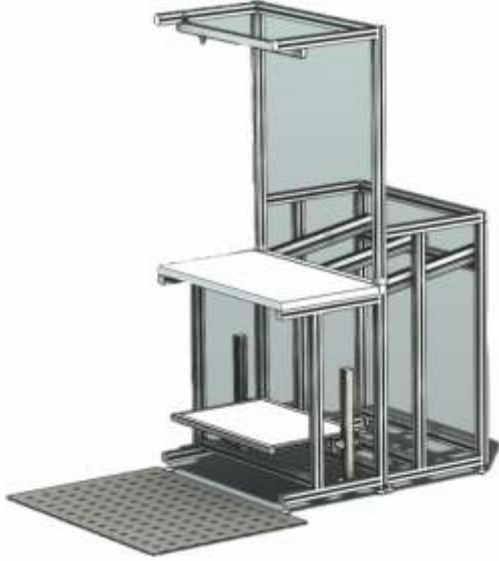
1.HNG.024

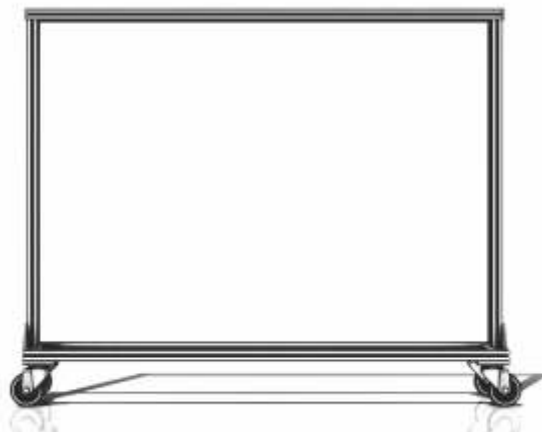
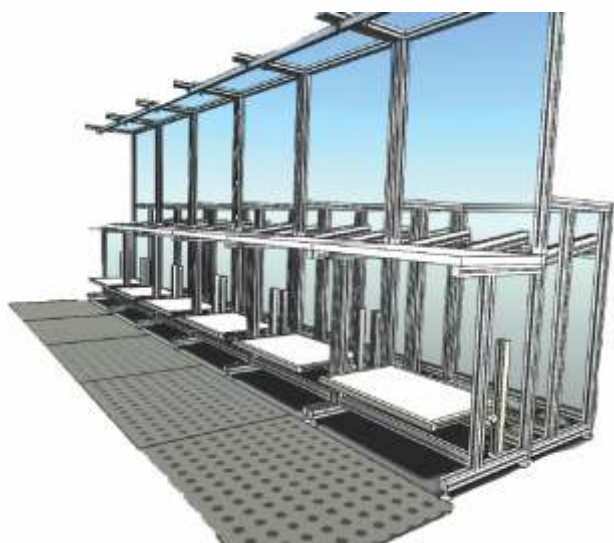
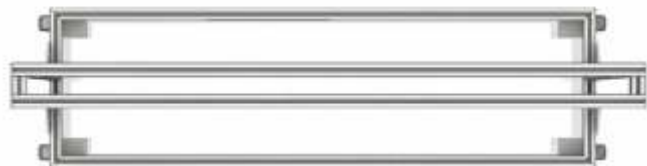
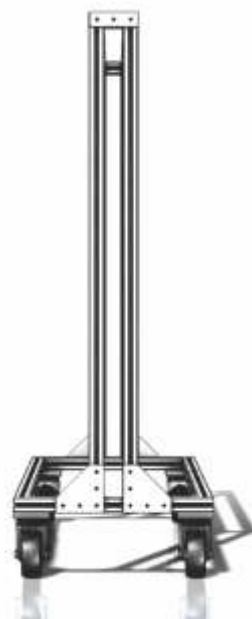
Hinge for 30 series  
locking with m4x10



# Applications

of aluminum profile and accessories







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