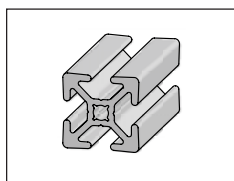
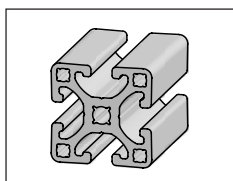


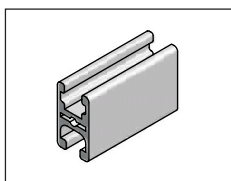
## Section 1 –Profiles



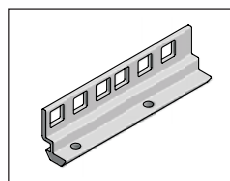
Basic Profiles - 1"  
Pages 16-17



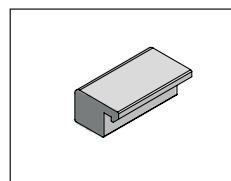
Basic Profiles - 1.5"  
Pages 18-24



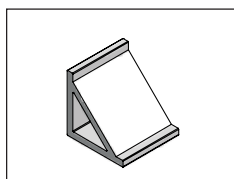
32x18 Door Profile  
Page 25



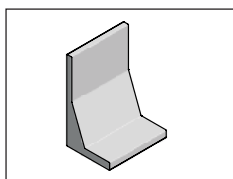
Rack Angle Profile  
Page 26



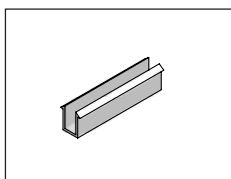
Clamp Bar Profile  
Page 27



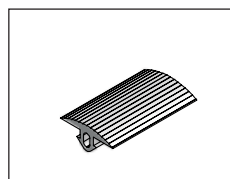
Gusset Profile  
Page 27



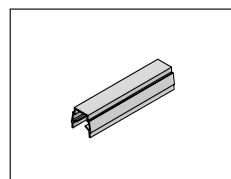
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Page 27



Panel Gaskets  
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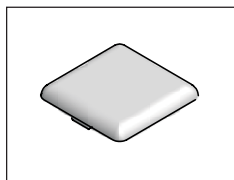


Extrusion Covers  
Page 28

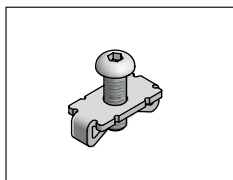


T-Slot Cover Strips  
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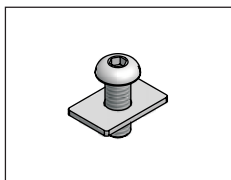
## Section 2 –End Caps & Fasteners



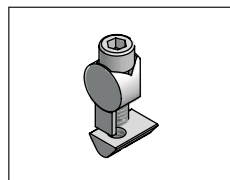
End Caps  
Page 31



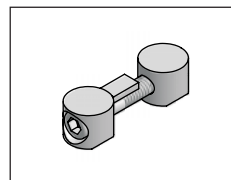
Standard Fasteners  
Page 32



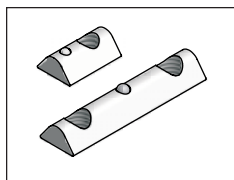
Flat Plate Fasteners  
Page 32



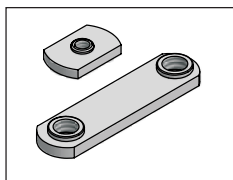
Universal Fasteners  
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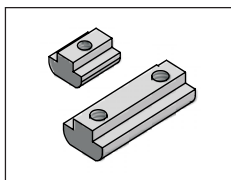
Butt Fasteners  
Page 33



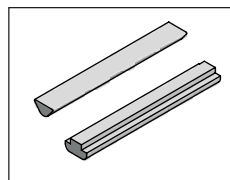
T-Slot Nuts  
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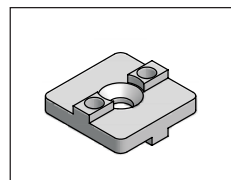
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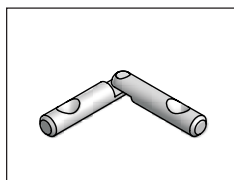
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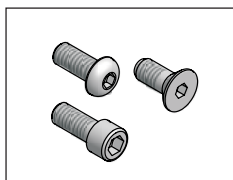
T-Slot Bars  
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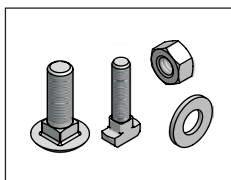
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Miter Connectors  
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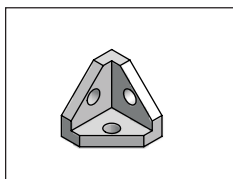


English Screws  
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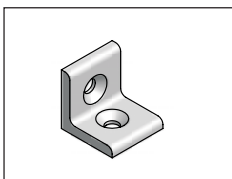


Nuts, Bolts, Washers  
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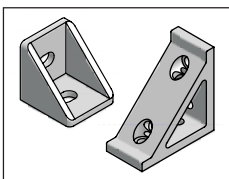
## Section 3 –Gussets, Plates & Brackets



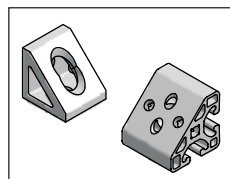
Corner Brackets  
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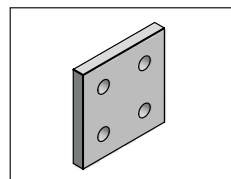
Angle Brackets  
Pages 42-43



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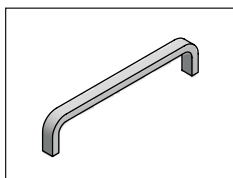


Corner Elements  
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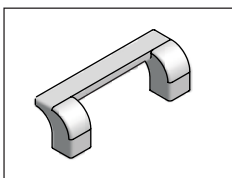


Joining Plates  
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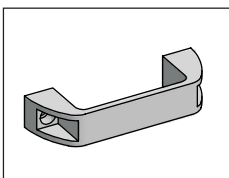
## Section 4 –Handles, Hinges & Safety Switches



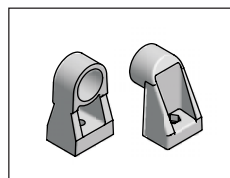
Light Duty Handles  
Page 53



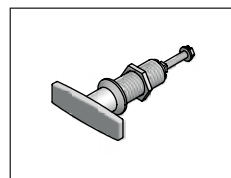
Angled Handles  
Page 53



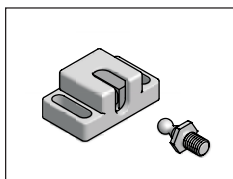
Plastic Handles  
Page 54



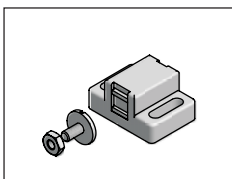
Tube Handle Supports  
Page 54



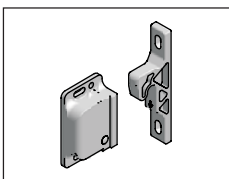
Quarter Turn Latches  
Pages 55-57



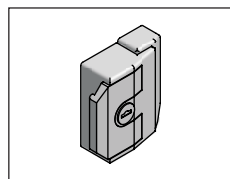
Ball Catches  
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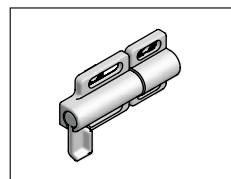
Magnetic Catch  
Page 60



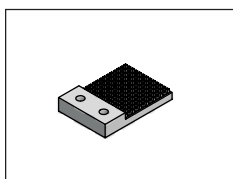
Grabber™ Door Catch  
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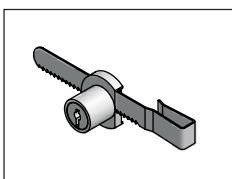
Slam Latch  
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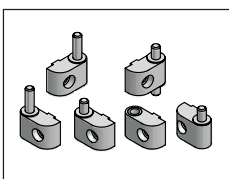
Dead Bolt  
Page 62



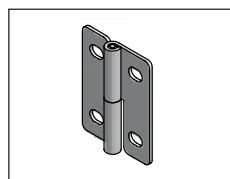
Door Stops  
Page 63



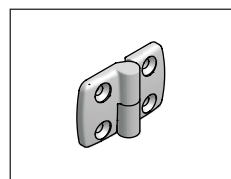
Ratchet Lock  
Page 63



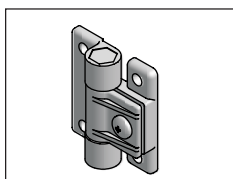
Aluminum Hinges  
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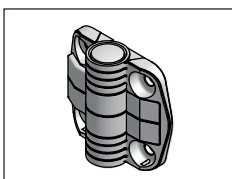
Steel Hinges  
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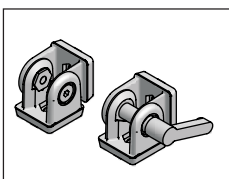
Plastic Hinges  
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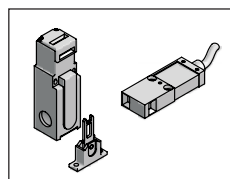
Adjustable Hinges  
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Positioning Hinges  
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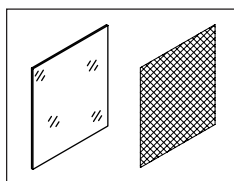


Pivot Joints  
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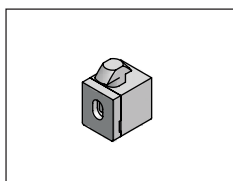


Safety Switches  
Pages 70-74

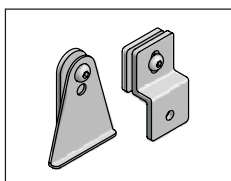
## Section 5 –Panels & Accessories



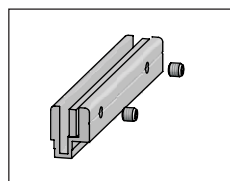
Panels & Wire Mesh  
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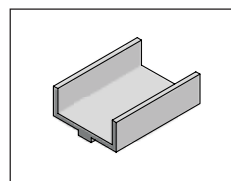
Multiblock Panel Mount  
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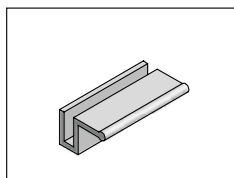
Mesh Retainer  
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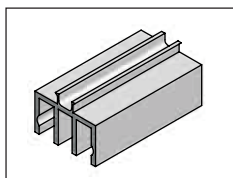
Mesh Clamp  
Page 82



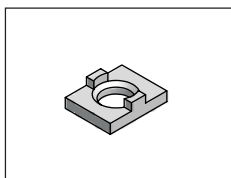
Panel Extrusion  
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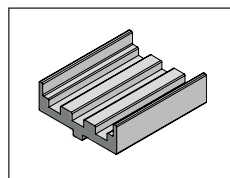
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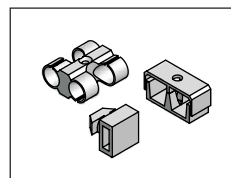
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Bifold Door Glide  
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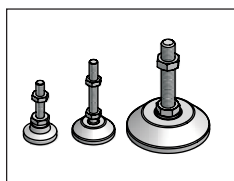


Rolling Door Guide  
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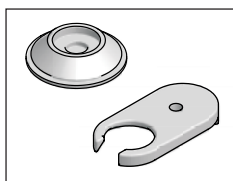


T-Clips/Cable Holders  
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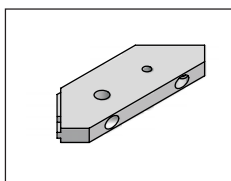
## Section 6 –Feet & Casters



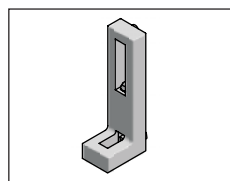
Leveling Feet  
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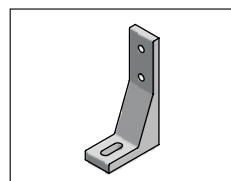
Foot Accessories  
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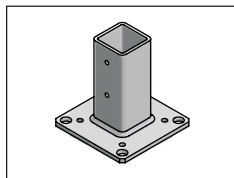
Corner Mounting Plate  
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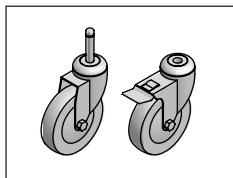
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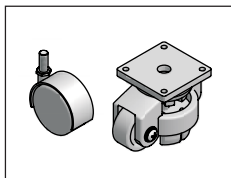
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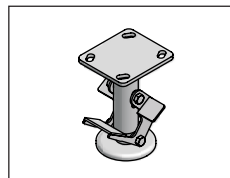
Flange Feet  
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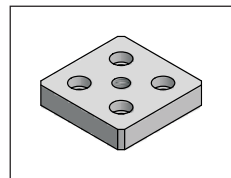
Standard Duty Casters  
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Specialty Casters  
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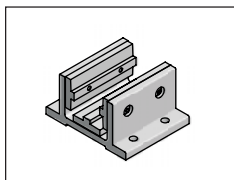


Floor Lock  
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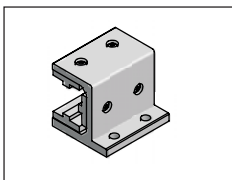


Base Plates  
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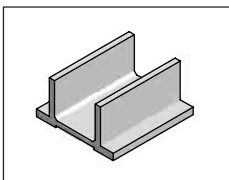
## **Section 7 –Slide Blocks & Linear Motion**



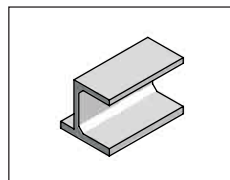
Slide Blocks  
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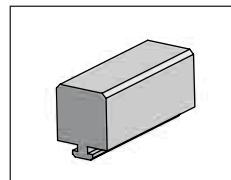
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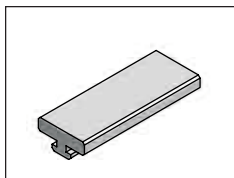
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Side Flange Profiles  
Page 110



Slide Bar Profiles  
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Slide Strip Profiles  
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## **Section 8 –Additional Products**

## **Section 9 –Services and Assembly Tips**

## **Section 10 –Part Number Index**

# Profile Information

Each profile page in the catalog includes:

- application information and examples
- technical information about the product
- dimensions
- how to assemble
- recommended fasteners and end caps
- ordering information (part #, unit and weight)
- UPS packaging, if available
- saw cut part number
- additional accessories

**Application Example**

Catalog **Basic Profiles** Industrial Profile Systems **Profiles**

**1" Series**

**Slot Detail**

**1" T-SLOT DETAIL**

**Dimensions**

**Part #** → 12-1020

**Machining for Assembly**

**Application**

1" Series Profiles are designed for safety guards, enclosures, shelves, and other light to medium duty applications. T-Slots on four sides allows for effortless mounting of accessories directly onto the structure without additional machining. The T-Slot is smaller than the 15 series requiring different hardware. With 12-1020 higher rigidity can be attained by orienting the extrusion on its 'y' axis for heavier applications.

**Technical Data**

Aluminum, Clear Anodized (See Technical Data page for full material and finish Specification)

Part #	Ix [in <sup>4</sup> ]	Iy [in <sup>4</sup> ]	Section [in <sup>2</sup> ]	Weight [lb/ft]
12-1010	0.046	0.046	0.439	0.516
12-1020	0.085	0.310	0.785	0.923

**Ordering Information**

1" X 1" Profile  
1" X 1" UPS Package  
1" X 2" Profile  
1" X 2" UPS Package

**Unit**

Cut off max. 240 in  
6 Pieces @ 96 in  
Cut off max. 240 in  
4 Pieces @ 96 in

**Part #**

12-1010  
12-1010PKG  
12-1020  
12-1020PKG  
19-001

\* Saw Cut Needed for Cut to length  
No saw cut needed for UPS packages.

Full length packages are available. Please consult your local sales representative for details and pricing.

**Quick Reference for Mating Components**

Fasteners	End Caps	Structural Accessories
1" Standard Fastener 25-022	1" X 1" (for 12-1010) 18-1010	Levelers pg xx
1" Universal Fastener 25-023	1" X 2" (for 12-1020) 18-1020	Casters pg xx
		Plates pg xx
		Gussets pg xx
		Pneumatics pg xx

**Technical Information**

**Ordering Information**

**UPS Packaging**

**Saw Cut**

**Mating Components**

**Parker**

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Parker Hannifin Corporation  
Industrial Profile Systems Business Unit  
Wadsworth, Ohio USA

# Product Information

Each product page in the catalog includes:

- application information and examples
- technical information
- dimensions
- how to assemble
- recommended fasteners, if applicable
- ordering information (part #, unit and weight)

## Profile Compatibility

As a quick reference for product usage, a symbol appears next to the Application heading(s) on each page.



- This symbol represents the 1.5" series. Products with this symbol are compatible with the T-slots of the 1.5" profiles



- This symbol represents the 1" series. Products with this symbol are compatible with the T-slots of the 1" profiles

Catalog  
**Corner Brackets**

Industrial Profile Systems  
**Gussets, Plates & Brackets**

**Corner Bracket**

**How to Assemble** →

**Technical Information** →

**Profile Compatibility** →

**Application Information** →

**Recommended Fasteners** →

**Ordering Information** →

**Application Example** →

**Application**

Corner brackets are used for connecting 1.5" Series profiles at right angles. Ideal solution for construction of display cases, tables, cover hoods, etc. Corner caps are designed to match the contour of the profile.

**Recommended Fastening Hardware (Included)**  
Screws 5/16-18 x 3/4" [25-112-5]

Ordering Information	Unit	Weight	Part #
Corner Bracket 1.5"	Each	4.23 oz	22-153
Connector Cap 1.5", Radius	Each	0.28 oz	22-154
Connector Cap 1.5", 3 x 45°	Each	0.32 oz	22-155

**Technical Data**

Bracket  
Die Cast Zinc  
End Cap  
Glass-filled Nylon, Black

Tap profiles to accommodate screw 5/16-18 x 3/4".

**Dimensions**

**Part #**

22-153

22-154

22-155

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Parker Hannifin Corporation  
Industrial Profile Systems Business Unit  
Wadsworth, Ohio USA

## Ordering Choices

Parker offers several ways to order Inch product so that you can choose a level of service to suit your needs. You can order everything from a bundle of uncut profiles to a completely assembled structure.



- **Bundles** –IPS Inch product line can be ordered as bundles of profiles and packages of fasteners and accessories to machine and assemble at your location.
- **Order profile by bundle** –bundle sizes are shown on page detailing the profile
- **Order UPS packages of extrusion** –details and quantity of pieces specified on profile pages. These bundles are specifically cut to length and packaged to be shipped out of our facility via courier to get to your location quicker.
- **Kits** –IPS Inch product line can be ordered in a kit form where the profiles are cut and machined to order and fasteners and accessories are included based on a parts list. This kit can be assembled at your location.
- **Complete Assembly** –IPS Inch product line can be ordered completely assembled and shipped as an assembled unit. Shipping costs should be a consideration when using this method.

## Machining Services

- **Order cut to size** –specify the length in inches. Either fractional or decimal dimensions can be used. E.g. 23.5 inches or 23  $\frac{1}{2}$  inches; (see conversion chart for fraction to decimal conversion). A cut charge will be included with cut-to-size lengths.
- **Additional machining** should also be specified along with the profile if it is required for fasteners or accessories. Standard machining options include tapping, drilling, and counter boring. See machining services pages in this catalog for correct part numbers. Any additional custom machining can be done by our expert machinists to ensure that your design is complete and to your requirements.

## Choosing a Fastener/Accessory

### What aspect is critical for fastening?

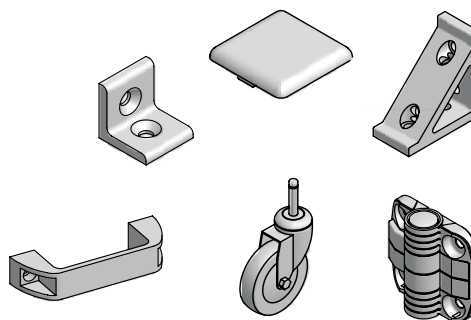
- Aesthetics/hidden (standard fastener, universal)
- Strength (universal fastener, standard)
- Ease-of-assembly/no machining (joining plate, gussets)
- Adjustability (gussets, angle bracket, universal)

When ordering universal fasteners or standard fasteners, machining operations are required for the fastener to work in a profile. Part numbers and descriptions for machining operations are found in the machining services section of the catalog.

### Choices of Accessories

A full range of accessories are available to complete an assembly:

- T-slot covers
- end caps
- brackets and gussets
- joining and base plates
- casters
- hinges
- handles



### What aspect is critical for accessories?

Parker offers a wide range of accessories to provide the right part for the special considerations of your application.

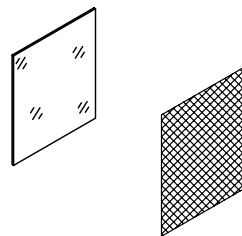
- Aesthetics
- Ease-of-assembly
- Load on structure/accessory
- Functionality

## Panels & Wire Mesh

Panels and Wire mesh can be ordered as a full sheet or cut to a specified dimension in sq ft. When ordering full sheets, please add a P to the end of the part number that you are ordering (e.g. 26-790-6P)

Standard panel choices include:

- Polycarbonate
- Trespa®
- Expanded PVC
- ABS
- PVC coated wire mesh
- Aluminum Composite



Specialty panels of any material can be ordered for any project. Additional time may be required to expedite any specials.



## Mechanical Properties

- All structural IPS profiles are prime aluminum, mill-certified with metallurgical properties of 6105-T5, 6005-T5, 6061-T6 or 6063-T6 specifications.

- Yield (0.2 limit) Rm min. 35,000 psi

- Tensile strength Rm min. 38,000 psi

Note: Cross sectional thickness variations of the profiles may influence yield and tensile strength.

- Elongation for 2 in. long specimens:

6105-T5 (up thru 0.5 in.), 6005-T5 (thickness up thru 0.124 in.), 6061-T6 (up thru 0.249 in.) - 8% min

6005-T5 (thickness 0.125-1 in.), 6061-T6 (0.25 in. and over) - 10% min

- Elasticity E approximately 10,150 kpsi

- Brinell Hardness approximately 75 HB 2.5/187.5

- The molecular structure of the 6005-T5 alloy is generally stable in an ambient temperature range of:

-40°F to +392°F

Extreme temperature fluctuations may change the mechanical properties.

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## Profile Finish

- Clear anodizing: 204R1, Clear
- Minimum depth: 0.0004 in.
- Custom anodizing and protective finishes available

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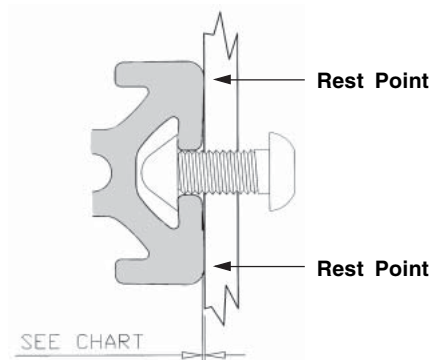
## Tolerances

- Outer dimensions depending on size  $\pm 0.008$  in. - 0.016 in.
- Extrusions conforming to Aluminum Association Standards Table 11.2 and to IPS blueprints.
- Twist per 1 foot length not to exceed 0.25° and total twist over 20 foot length not to exceed 1.5°.
- Flatness 0.004 in. per 1 in. of width.
- Straightness 0.0125 in. per 1 ft. of length and not exceeding 0.12 in. over 20 ft. of extrusion.

Maximum bow 0.12 in. over 20 ft.

## Defined Rest Points

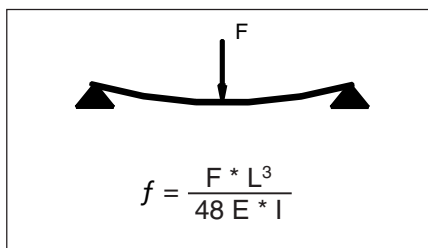
All 1.5" and 1" series profiles have a taper built-in to the T-slot. Preload in the material elastic range results in a vibration safe connection because the T-slot lips are pulled flush with the connecting surface during fastener tightening. The high quality material ensures that the profile T-slot will remember it's original shape if disassembly is required, making all IPS profiles completely reusable.



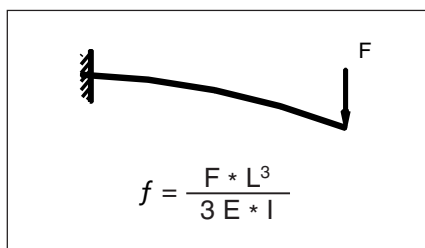
Profile Series	Preload Range
1.5	0.008 inches
1	0.008 inches

## Formulas for calculating deflection at critical points

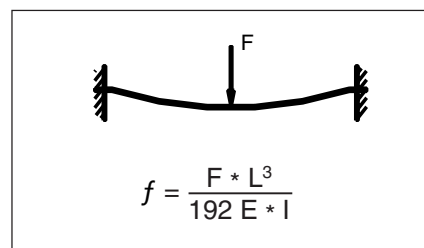
Supported at both ends



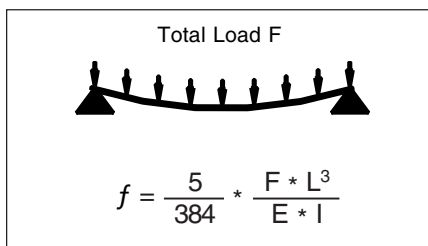
Fixed at one end



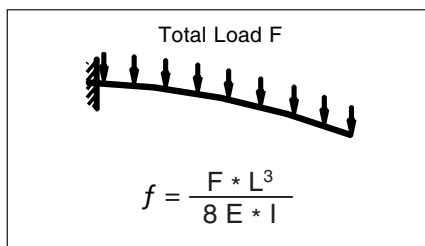
Fixed at both ends



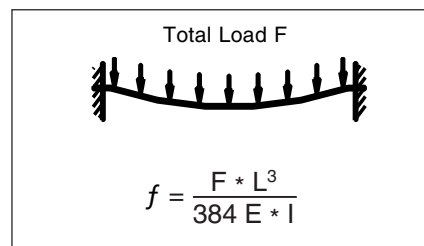
Total Load F



Total Load F

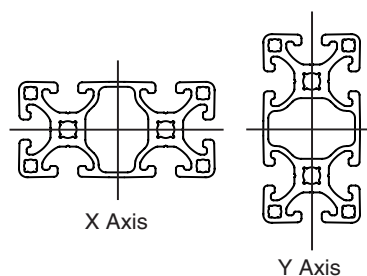


Total Load F



Where:

- $f$  = deflection in inches
- $F$  = Load in pounds (lb)
- $L$  = free profile length in inches
- $E$  = Modulus of Elasticity (10,150,000 lb-in<sup>2</sup>)
- $I$  = Moment of Inertia in in<sup>4</sup>



## Fractions to Decimals

Fraction	Decimal
1/16	0.063
1/8	0.125
3/16	0.188
1/4	0.25
5/16	0.313
3/8	0.375
7/16	0.438
1/2	0.50
9/16	0.563
5/8	0.625
11/16	0.688
3/4	0.75
13/16	0.813
7/8	0.875
15/16	0.938

## Metric/English Conversions

Below is a conversion chart for converting metric and English units of measure for applicable physical conditions with this product line.

	Multiply	by	To Get
Linear	mm	0.03937	Inches
	Inches	25.4	mm
	cm	0.3937	Inches
	m (meter)	3.2808	Feet
	Feet	0.3048	m (meters)
Area	mm <sup>2</sup>	0.00155	Inches <sup>2</sup>
	Inches <sup>2</sup>	645.16	mm <sup>2</sup>
Volume	cm <sup>3</sup>	0.06102	inches <sup>3</sup>
	inches <sup>3</sup>	16.387	cm <sup>3</sup>
	inches <sup>3</sup>	0.0165	liters
	Liters	61.024	inches <sup>3</sup>
Mass	Gram (g)	0.0353	Ounce (oz)
	Ounce (oz)	28.329	Gram (g)
	Kilogram (kg)	2.2046	Pounds (lb)
	Pounds	0.4536	Kilograms (kg)
Velocity	Meters/Minute	3.281	Feet/Minute
	Feet/Minute	0.3048	Meters/Minute
Force	Kilograms-f (kgf)	9.807	Newtons (N)
	Newtons (N)	0.10194	Kilograms-f (kgf)
	Pounds-f (lbf)	4.448	Newtons (N)
	Newtons (N)	0.2248	Pounds-f (lbf)
Pressure	Bar	14.5	PSI
	PSI	0.069	Bar
Torque	Newton-Meters (Nm)	8.851	Pound-Inches (lb-in)
	Pound-Inches	0.11298	Newton-Meters (Nm)
Moment of Inertia	cm <sup>4</sup>	0.02403	inch <sup>4</sup>
	inch <sup>4</sup>	41.623	cm <sup>4</sup>