

Machining Services

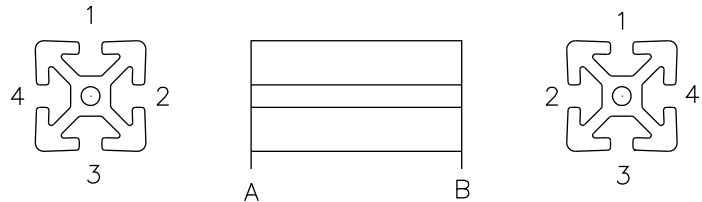
In addition to the basic structural framing components that are available, a complete set of machining services can be specified. Using these services, a ready-to-assemble frame can be designed and ordered. There are nine basic machining services:

- **Saw profile to length**
- **Tap profile end**
- **Counterbore anchor/butt fastening assembly**
- **Drill access hole**
- **Saw profile (miter) and counterbore**
- **Saw panels & wire mesh**
- **Notch panel for profile/fastener clearance**
- **Drill panel for push button latch assembly**
- **Drill extrusion for L-handle latch assembly**

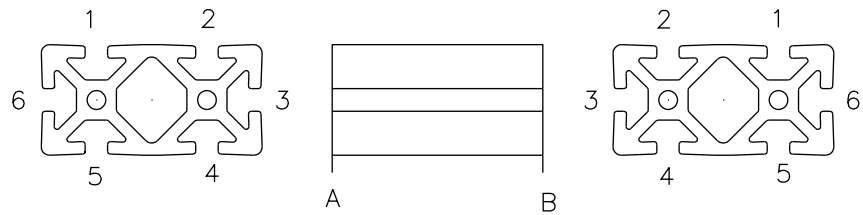
In order to make specifying the machining services simple and straightforward, it is necessary to identify the machinable surfaces of each extrusion profile. Please refer to the drawings on the next page for basic identification of each type of profile.

The following pages will provide ordering details and examples for each individual machining service. Also, details are included to machine the components on-site.

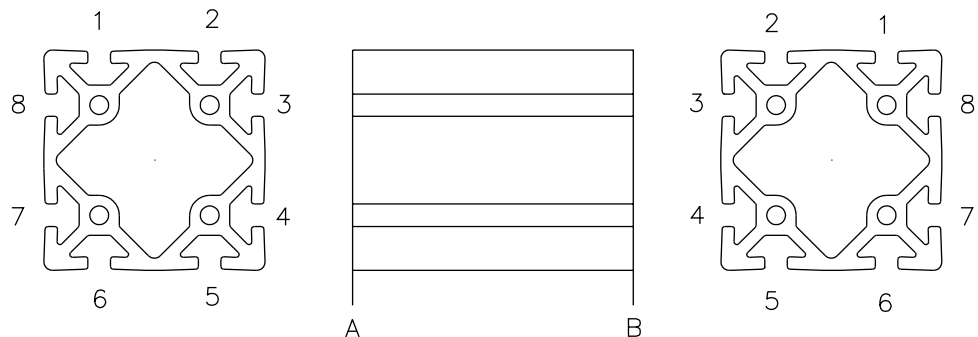
40 x 40 Profiles



40 x 80 Profiles



80 x 80 Profiles



Machining Services

Saw Profile to Length*

A cut to length extrusion profile can be ordered by specifying this machining service.

Tolerances: Length = ± 0.4 cm (± 0.15 in)
Squareness = ± 0.04 cm/cm (± 0.03 in/in)

Maximum Length*: 620 cm (244 in) for all profiles

Saw Cut Machining Service Numbers

Profile to be Cut	Machining Service Number
TSV4040	TSE4040
TSL4040	TSE4040
TSV4080	TSE4080
TSL4080	TSE4080
TSL8080	TSE8080

Ordering Note:

Saw cut requirements should be described by specifying the machining service number and length of cut required, in centimeters or inches.

Example:

A project requires 4 pieces of the 80 x 80 profile, saw cut to a length of 150 cm each. These profiles would be ordered as follows:

Line 1- Specify the total quantity required:

Part No. = TSL8080, Quantity= 600 cm

Line 2- Specify machining services required:

**Machining Service No. = TSE8080 x 150 cm,
Quantity = 4**

*Maximum length is 620 cm (244 in) for all profiles.

Tap Profile End

This machining service provides one or more tapped holes, M8, M10, 5/16-18, or 1/8" NPT at the end of an extrusion profile. End tapped holes are required for the following fastening and accessory items:

- End fastener assembly
- Leveling foot
- Base plate
- Anchor plate
- Caster mounting plate
- King-pin mount caster
- Pressure plate
- Conduit plate
- Bifold door guide

Ordering Note:

Profile end tapping requirements should be described by specifying the machining service number and the end(s) at which the tapped hole is required.

Example:

A length of TSL4040 profile requires tapping at each end for attachment of the M8 End Fastener Assembly. This machining service would be ordered as follows:

Machining Service No. = TSE0034-A-B

In this example, there would be charges for two profile end tapping services.

Profile End Tapping Service Numbers

Profile to be Tapped	Machining Service Description	Machining Service Number
<i>TSV4040</i> <i>TSL4040</i>	M8 - Std Depth or Bifold Guide	TSE0034
	5/16-18 - Std Depth	TSE1034
	M8 for Leveling Foot	TSE0036
	M10 for Leveling Foot	TSE0042
	1/8" NPT single hole (Specify location)	TSE0044
<i>TSV4080</i> <i>TSL4080</i>	M8 - Std Depth (2-hole pattern)	TSE0038
	5/16-18 - Std Depth (2-hole pattern)	TSE1038
	1/8" NPT single hole (Specify location)	TSE0044
<i>TSL8080</i>	M8 - Std Depth (4-hole pattern)	TSE0041
	M8 - Std Depth (4-hole pattern)	TSE0040
	5/16-18 - Std Depth (4-hole pattern)	TSE1040
	1/8" NPT single hole (Specify location)	TSE0044

Profiles

Counterbore for Anchor/Butt Fastening Assembly

The counterbore machining service is necessary when an anchor or butt fastening assembly is required. For an anchor fastening assembly, the counterbore machining is required in only one of the mating parts. Both of the mating parts must be counterbored for a butt fastening assembly.

Profile	Machining Service No.
40, 80	TSE0002

Ordering Note:

Counterboring requirements should be described by specifying the machining service number, the end to be machined, and the T-slot location at which the counterbore is required. When multiple counterbores are needed on one profile, they should all be called out together, with a hyphen (-) separating each end/T-slot location call-out (See example). See page G3 for information on the correct end and T-slot location call-outs.

Example:

A project requires that two lengths of profile be machined for anchor fastening assemblies. One of the lengths is the TSL4040 profile and requires the counterboring at one end only, on the "top" and "bottom" of the profile. The other length is the TSL4080 profile, and requires machining for two anchor fasteners at each end, on the "top" and "bottom" of the profile only. These services would be ordered as follows:

Case 1 - Profile No. TSL4040

Machining Service No. = TSE0002-A1-A3

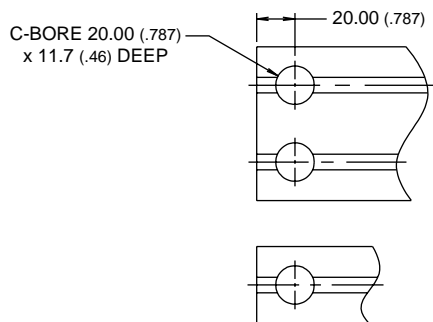
Case 2 - Profile No. TSL4080

Machining Service No. = TSE0002-A1-A2-A4-A5-B1-B2-B4-B5

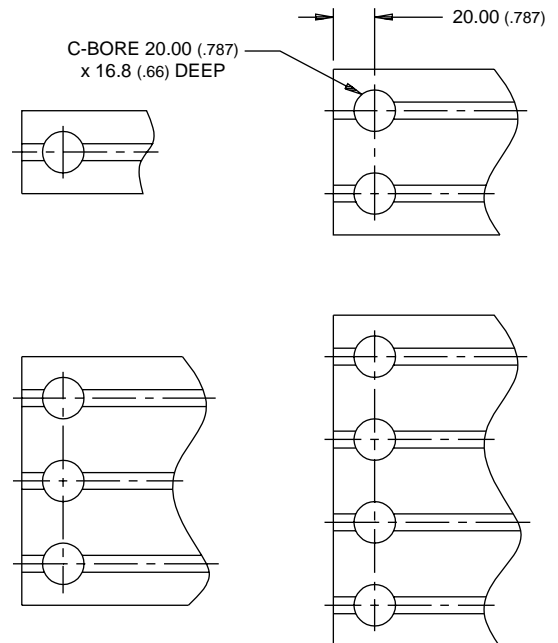
Counterboring machining services will be priced per counterbore required.

Counterbore Machining Details

TSE0003



TSE0002



Note: All dimensions in mm (in)

Profiles

Drill Access Holes

The access hole is a 7 mm diameter thru hole that is required any time an end fastening assembly is used. It allows access for tightening the button-head screw used in the fastening set. Access holes may also be required for general usage of profile T-slots for mounting external items.

Access Hole Machining Service Numbers

Description of Access Hole Machining	Machining Service No.
	40/80mm
Single Access Hole	TSE0010
Two-hole Pattern Inline on a Single T-Slot	TSE0004
Two-hole Pattern Side-by-Side on a Double T-Slot	TSE0006
4-Hole Pattern	TSE0008

Ordering Note:

Access hole requirements should be described by specifying the machining service number, the T-slot(s) location at which the drilling is required, and the distance from the end being used as a reference. If multiple single hole drillings are required on one profile, they should be called out together, with a hyphen (-) separating each drilling location callout. If different access hole drilling services are required on one profile (i.e. 1 x single hole, 1 x 4-hole pattern), they should be called out as separate line items. See page G3 for information on the correct end and T-slot location call-outs.

Example:

A length of TSL4080 profile requires a 4-hole access hole pattern at one end, for attachment of a length of TSL8080 with end fasteners. Also, a length of TSL4040 profile requires a single access hole at both ends for attachment of another length of TSL4040 with end fasteners. These services would be ordered as follows:

Case 1 - Profile No. TSL4080

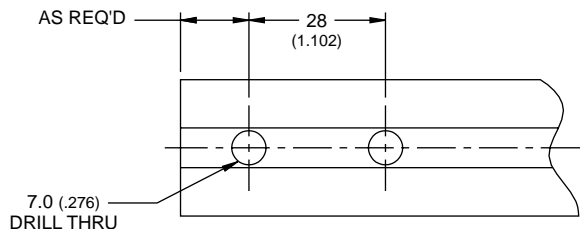
Machining Service No. = TSE0008-A1/20.0mm

Case 2 - Profile No. TSL4040

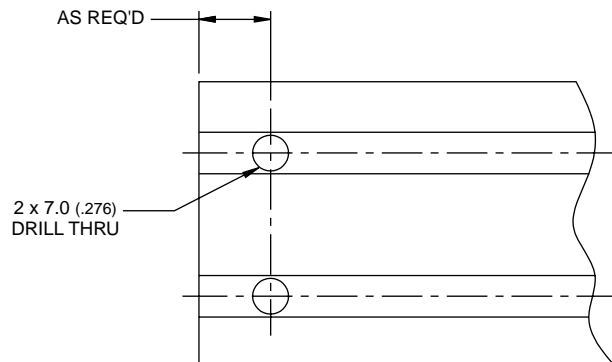
Machining Service No. = TSE0010-A1/14.0mm-B1/14.0mm

Note that the distance specified in both cases (from the reference end of the profile) will provide a flush connection with the mating component.

TSE0046



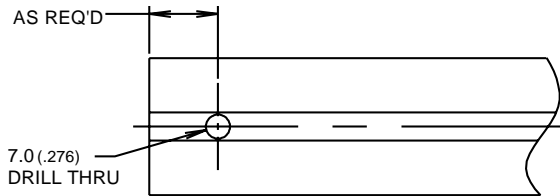
TSE0048



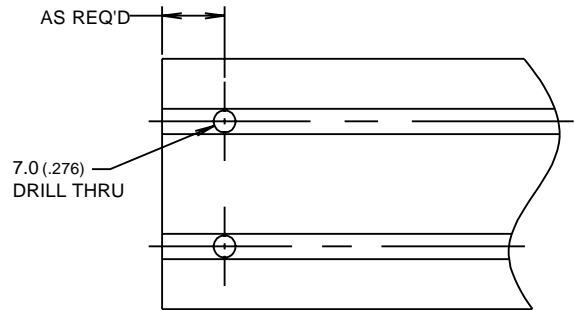
Note: All dimensions in mm (in)

Access Hole Machining Details

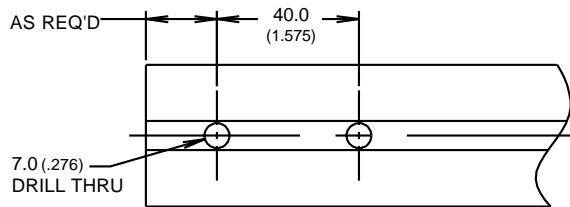
**Service No.
TSE0010**



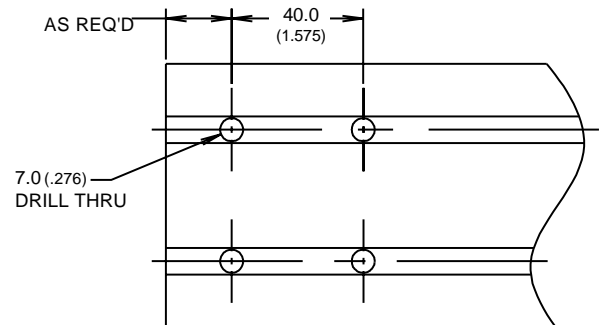
**Service No.
TSE0006**



Service No. TSE0004



Service No. TSE0008



Note: All dimensions in mm (in)

Profiles

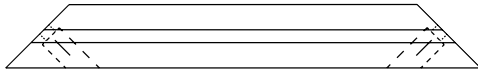
Miter Saw Cut/Counterbore

For custom 45° support brackets and other types of brackets, a miter saw cut and counterbore machining service is required.

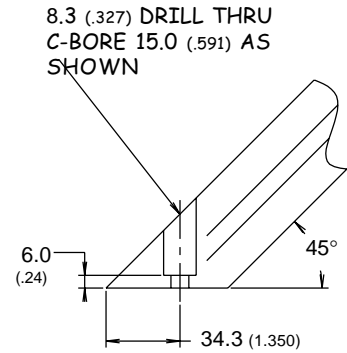
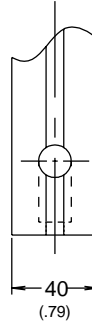
Machining Service Numbers

Profile to be Miter Cut and Counterbored	Machining Service Number
TSL4040/TSH4040	TSE0014
TSL4080/TSH4080	TSE0016

After machining, the support bracket would look as illustrated below:



Service No. TSE0014



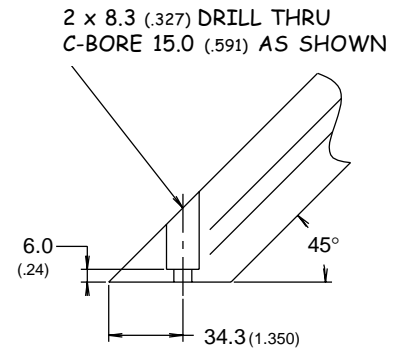
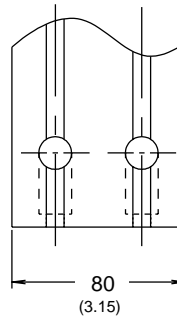
Ordering Note:

Miter cut & counterbore requirements should be described by specifying the machining service number, the end at which the machining is required, and the face from which a bolt would be installed into the counterbore. Also, indicate the length of the finished profile from corner to corner. To specify the correct face on a 40 x 80 profile (where there are multiple T-slots), specify only one of the T-slot locations on that face.

Example:

A custom support bracket is required for a project. This TSL4040 bracket must be 40 cm long from corner to corner and must be machined from the same face at both ends. This machining service would be ordered as follows:

Machining Service No. = TSE0014-A1-B1 x 40 cm



Service No. TSE0016

Note: All dimensions in mm (in)

Panels & Wire Mesh

Cut to Size

A cut-to-size machining service is available for polycarbonate panels, expanded PVC panels, and wire mesh.

Machining Service Number: TSE0018

Maximum Size:

The maximum size single panel available is 122 cm x 244 cm (48 in x 96 in).

Ordering Note:

Panel saw cut requirements should be described by specifying the type of panel required, and the size required in centimeters or inches. Pricing is calculated on a square foot basis. The saw cut charge will appear as a separate line item.

Example:

A machine guard project requires a clear Lexan® panel, part no. TSP0004, cut to a size of 3 ft x 2 ft. This panel would be ordered as follows:

Line 1- Specify the total quantity required:

Part No. = TSP0004, Quantity = 6 ft²

Line 2- Specify machining services required:

Machining Service No. = TSE0018-3 ft x 2 ft

Panels

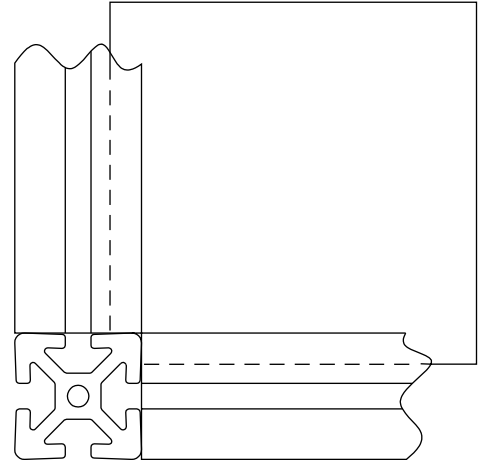
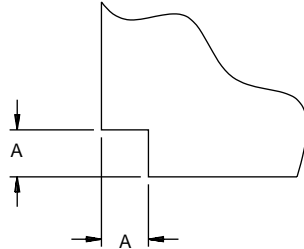
Notch Corner for Extrusion Clearance

Notch gives clearance for perpendicularly mounted extrusions. This service is needed only when panels are installed in T-slots.

Profile	Service Number
40	TSE0062

Dimensions

Profile	A
40	10.2 (.400)



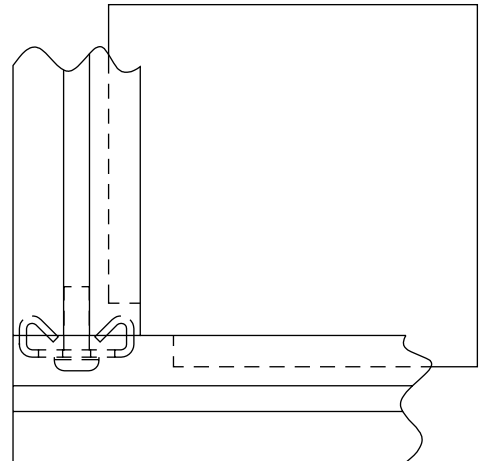
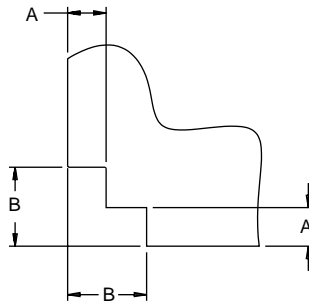
Notch Corner for End Fastener Clearance

Notch gives clearance for end fastener. This service is needed only when panels are installed in T-slots.

Profile	Service Number
40	TSE0072

Dimensions

Profile	A	B
40	10.2 (.400)	20.30 (.800)



Notch Corner for Anchor Fastener Clearance

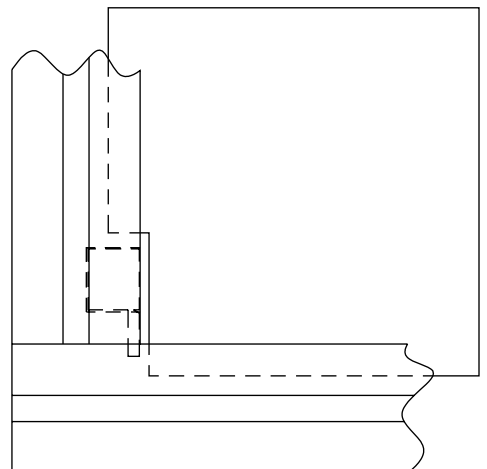
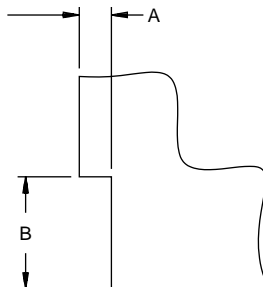
Notch gives clearance for anchor fastener. This service is needed only when panels are installed in T-slots.

Profile	Service Number
40	TSE0082

Note: Panel should be installed after the anchor fastener is tightened.

Dimensions

Profile	A	B
40	12.7 (.500)	44.50 (1.750)



Note: All dimensions in mm (in)

Latch Assemblies

Drill Panel for Push Button Latch Assembly

Machining Service No.: TSE0020

Example:

A machine guard needs a polycarbonate door with a latching system. This door would be ordered as follows:

Line 1- Specify the total quantity required:

Part No.= TSP0004, Quantity= 6 ft²

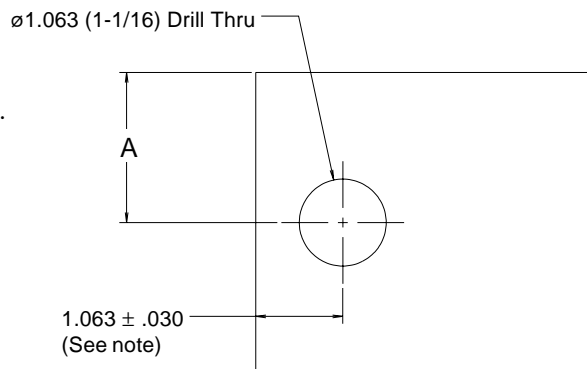
Line 2- Specify machining services required:

Machining Service No.= TSE0018-3 ft x 2 ft

Line3- Specify machining services required:

Machining Service No.= TSE0020 - A @ customer specification

Note: The hole location shown is for a tight fit between the panel and frame. For clearance fit, subtract the amount of clearance from this dimension.



Drill Extrusion for L-handle Latch Assembly

Profiles	Machining Service Number
40 & 80	TSE0024

Example:

A framed door using 40 x 40 profiles with a latching system is required. The framed door would be ordered as follows:

Line 1- Specify the total length (height) of door:

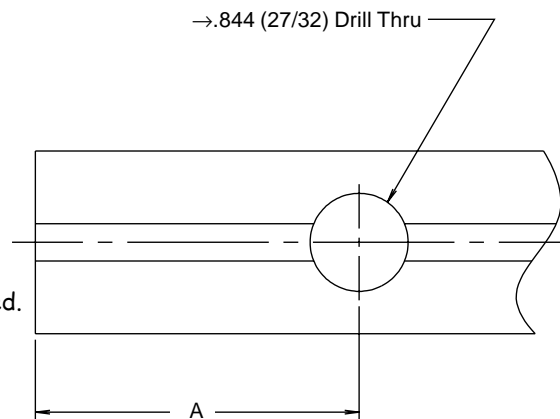
Part No.= TSL4040, 30"

Line 2- Specify machining services required:

Machining Service No.= TSE4040, 1 pc @ 30"

Line3- Specify machining services required:

Machining Service No.= TSE0024, A1 @ customer specification



Note: All dimensions in mm (in)