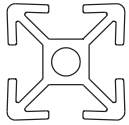
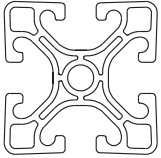


Profiles

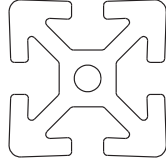
Specifications	A2
Taper-Lock Fastening Feature	A3
Dimensional Data and Moment of Inertia	A4-A5
Deflection Data	A6-A7



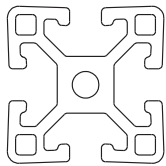
ESL2828



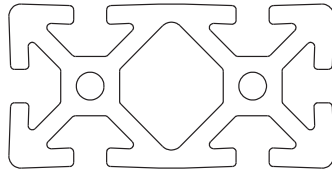
ESV4040



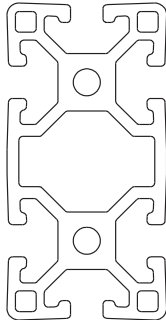
ESH4040



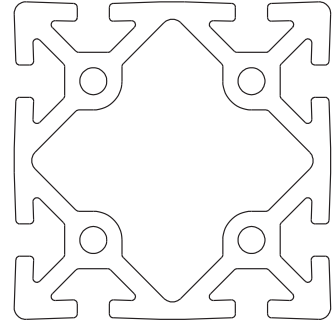
ESL4040



ESH4080



ESL4080



ESH8080

Material: 6063-T6 Aluminum Alloy

Yield Strength: 21,400 N/cm² @ .2% offset (31,000 psi)

Tensile Strength: 24,100 N/cm² (35,000 psi)

Elongation (in 2"): 12%

Modulus of Elasticity: 6,895,000 N/cm² (10,000,000 psi)

Brinell Hardness: 73 HB, approximately

Surface Finish: 204R1 Clear Anodize, with an approximate depth of 10 microns

Straightness: Within .66 mm per meter, not to exceed 3 mm over 6 meter length

Twist: Within .75° per meter, not to exceed 1.50° over 6 meter length

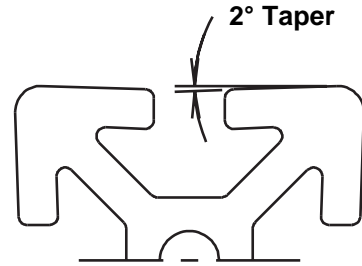
EXTRUSION SPECIFICATIONS

Profile No.	Profile Type	Weight		Maximum Length*		Cross Sectional Area	
		kg/m	lb/ft	m	ft	cm ²	in ²
ESL2828	Standard	0.83	0.56	6	20	2.99	0.46
ESV4040	Light	1.50	1.01	6	20	5.44	0.84
ESL4040	Standard	1.86	1.25	6	20	6.71	1.04
ESH4040	Heavy	2.43	1.63	6	20	8.63	1.35
ESL4080	Standard	3.34	2.24	6	20	12.02	1.86
ESH4080	Heavy	4.35	2.92	6	20	15.67	2.43
ESH8080	Heavy	6.63	4.45	6	20	23.90	3.70

*Consult factory for longer lengths.

• **Keeps your fasteners tight ...**

All profiles are designed with a Taper-Lock Fastening Feature which acts as a built-in lockwasher. This feature prevents fasteners from working loose, even in high vibration applications.



FASTENER TORQUE REQUIREMENTS

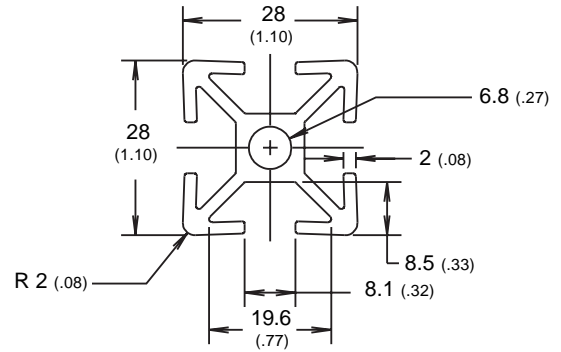
Fastener Description	Recommended Torque	
	Nm	lb-ft
M8 or 5/16-18 End Fastener in 28 x 28 Profile	24	18
M8 or 5/16-18 End Fastener in all other Profiles	24	18
M8 or 5/16-18 Anchor Fastening Assembly	24	18
M8 or 5/16-18 T-Slot Stud, Washer and Hex Nut	30	22
M5 or 10-32 BHSCS with Standard T-Nut	5.5	4
M6 or 1/4-20 BHSCS with Standard T-Nut	9.5	7
M8 or 5/16-18 BHSCS with Standard T-Nut	24	18

Part No. ESL2828

The ESL2828 profile is suitable for light duty applications such as machine guarding/enclosures and very light framework.

Note: The T-slot detail for this extrusion is different from the 40 and 80mm profiles.

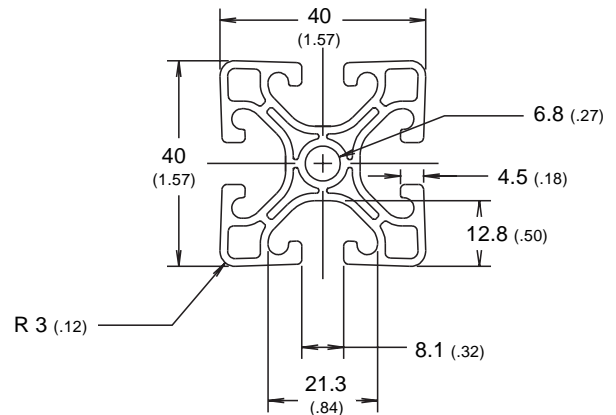
Weight: .83 kg/m (.56 lb/ft)
 Cross-Sectional Area: 2.99 cm² (.464 in²)
 Moment of Inertia: 2.38 cm⁴ (.057 in⁴)
 Section Modulus: 1.70 cm³ (.104 in³)



Part No. ESV4040

The ESV4040 profile is suitable for very light duty applications such as machine guarding/enclosures and for light duty structural applications.

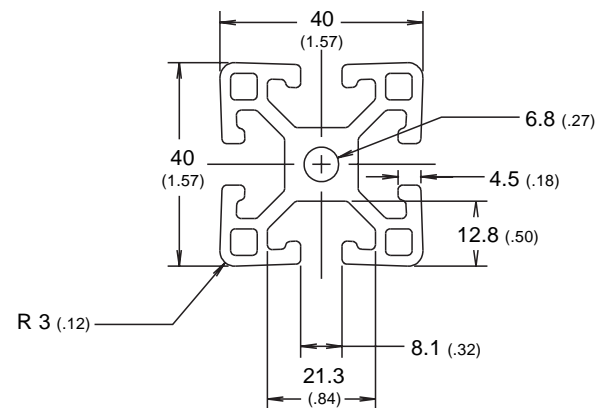
Weight: 1.50 kg/m (1.01 lbs/ft)
 Cross-Sectional Area: 5.44 cm² (.84 in²)
 Moment of Inertia: 8.36 cm⁴ (.201 in⁴)
 Section Modulus: 4.18 cm³ (.255 in³)



Part No. ESL4040

The ESL4040 profile is suitable for light duty applications such as machine guarding/enclosures and for light to medium duty structural applications.

Weight: 1.86 kg/m (1.25 lb/ft)
 Cross-Sectional Area: 6.71 cm² (1.04 in²)
 Moment of Inertia: 10.07 cm⁴ (.242 in⁴)
 Section Modulus: 5.04 cm³ (.307 in³)

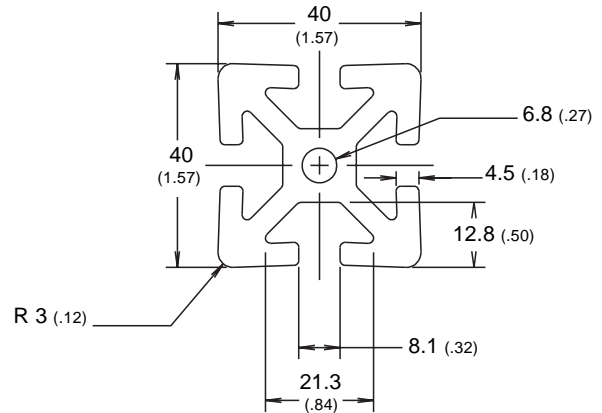


Note: All dimensions shown in mm (in)

Part No. ESH4040

The ESH4040 profile is suitable for light to medium duty structural applications.

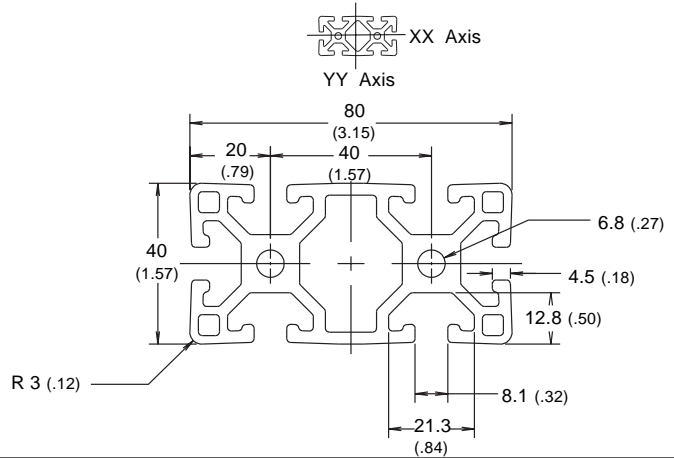
Weight: 2.43 kg/m (1.63 lb/ft)
 Cross-Sectional Area: 8.73 cm² (1.35 in²)
 Moment of Inertia: 13.72 cm⁴ (.330 in⁴)
 Section Modulus: 6.86 cm³ (.419 in³)



Part No. ESL4080

The ESL4080 profile is suitable for light to medium duty structural applications. The center area of the profile can be used to house electrical or air lines, or as a manifold for pressurized air (150 psi maximum).

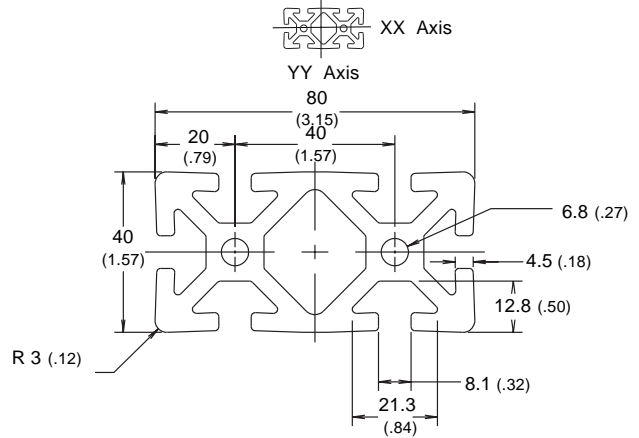
Weight: 3.34 kg/m (2.24 lb/ft)
 Cross-Sectional Area: 12.02 cm² (1.86 in²)
 Moment of Inertia: I_{xx}= 19.37 cm⁴ (.465 in⁴)
 I_{yy}= 73.96 cm⁴ (1.78 in⁴)
 Section Modulus: Z_{xx}= 9.69 cm³ (.591 in³)
 Z_{yy}= 18.49 cm³ (1.13 in³)



Part No. ESH4080

The ESH4080 profile is suitable for medium to heavy duty structural applications. The center area of the profile can be used to house electrical or air lines, or as a manifold for pressurized air (150 psi maximum).

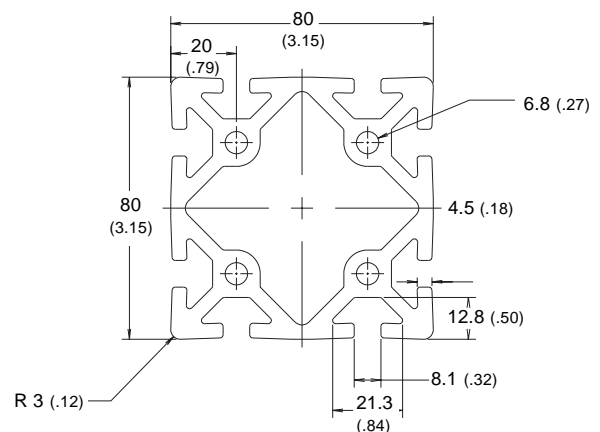
Weight: 4.35 kg/m (2.92 lb/ft)
 Cross-Sectional Area: 15.67 cm² (2.43 in²)
 Moment of Inertia: I_{xx}= 25.94 cm⁴ (.623 in⁴)
 I_{yy}= 97.16 cm⁴ (2.33 in⁴)
 Section Modulus: Z_{xx}= 12.97 cm³ (.791 in³)
 Z_{yy}= 24.29 cm³ (1.48 in³)



Part No. ESH8080

The ESH8080 profile is suitable for medium to heavy duty structural applications. The center of the profile can be used to house electrical or air lines, or as a manifold for pressurized air (150 psi maximum).

Weight: 6.63 kg/m (4.45 lb/ft)
 Cross-Sectional Area: 23.90 cm² (3.70 in²)
 Moment of Inertia: 173.87 cm⁴ (4.18 in⁴)
 Section Modulus: 43.47 cm³ (2.65 in³)



Note: All dimensions shown in mm (in)

The graphs on pages 8 and 9 contain information concerning profile deflection under specific load conditions. The graph values illustrated are based on three load conditions:

- Case 1** = fixed at one end, load at other end
- Case 2** = supported at both ends, load at center
- Case 3** = fixed at both ends, load at center

Note:

- (1) The graph values shown do not account for deflection caused by the weight of the profile itself.
- (2) The illustrated deflection values are given in mm/N. To convert to in/lb, multiply the graph value by .175.

Example:

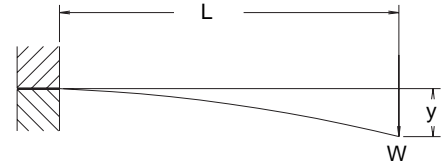
From graph, deflection is .002 mm/N.

To convert to in/lb units, $.002 \times .175 = .000350$

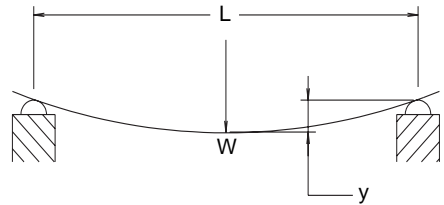
Multiply by the load in pounds to obtain deflection.
 $.000350 \text{ in/lb} \times 1000 \text{ lbs} = .35" \text{ deflection.}$

Load Condition Illustrations:

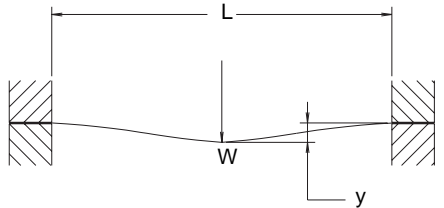
Case 1:



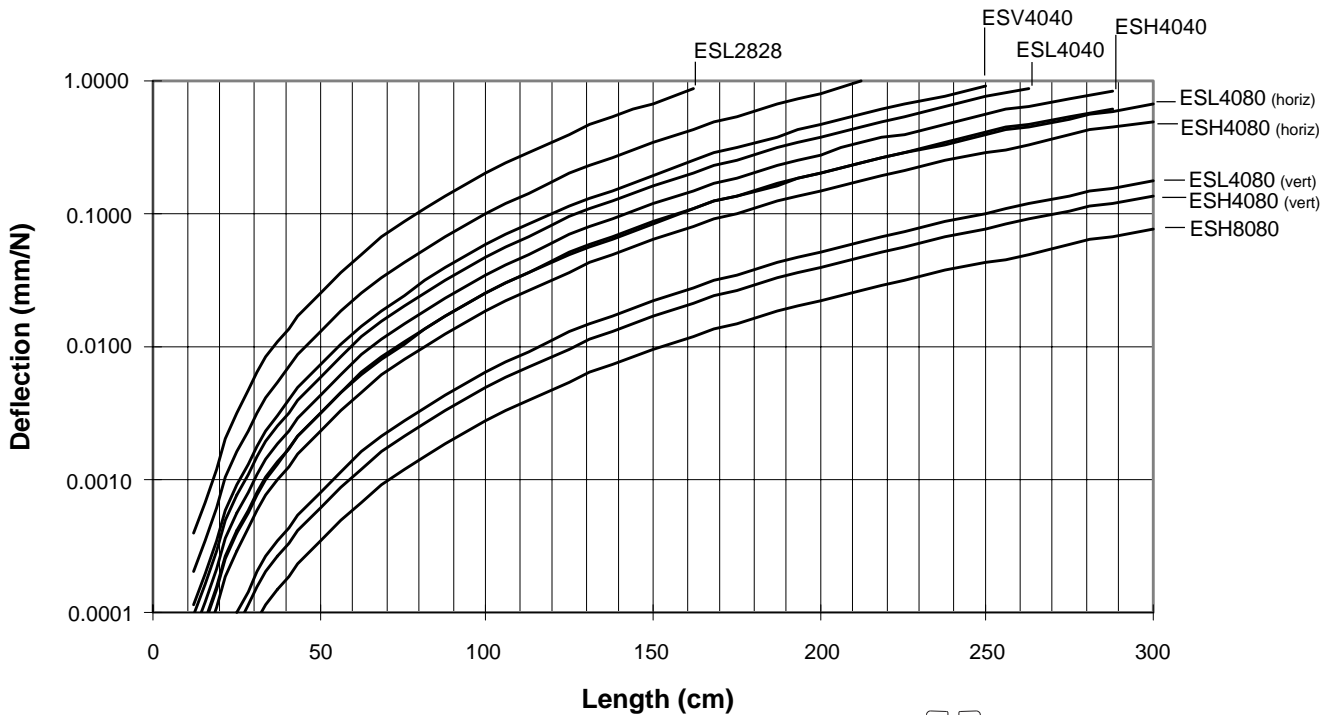
Case 2:



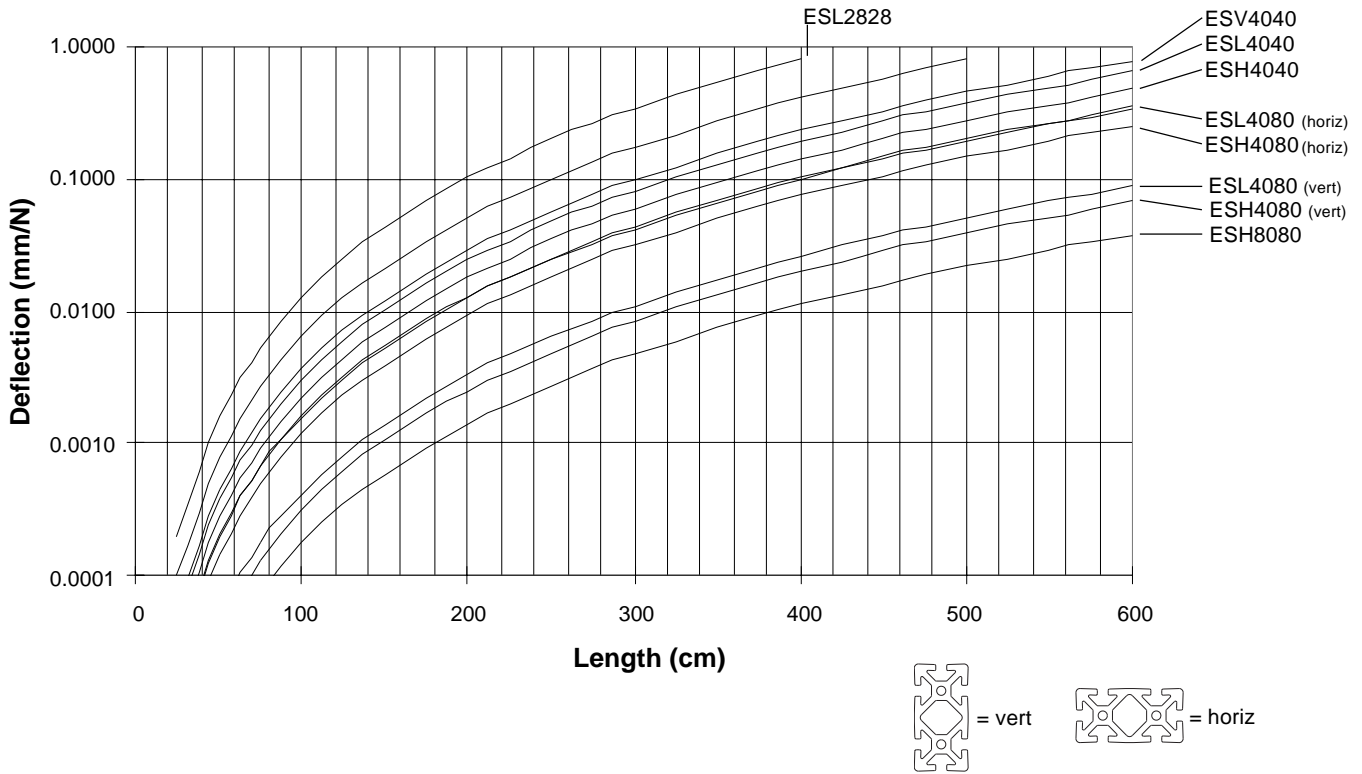
Case 3:



Profile Deflection vs Length - Case 1



Profile Deflection vs Length - Case 2



Profile Deflection vs Length - Case 3

