02 | STRUCTURAL EXTRUSIONS

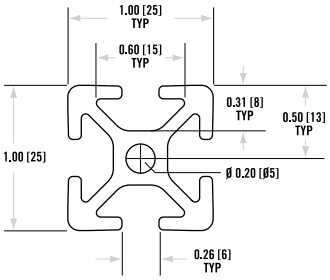
There are six 10 Series extrusions to choose from - 1"x1", 1"x1" QR, 1"x2", 1"x3", 2"x2" and 2"x4". The 10 Series TSLOTS have .255" slot widths and are modular to each other. Accessories throughout this catalog allow you to build a complete structure with our 10 Series accessories and transition it to our 15 Series. The 10 Series T-Slot design has an inside radius of .125" to make sliding drop-in T-Nuts easier.

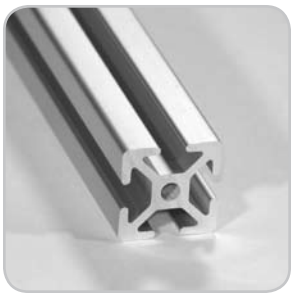
There are twelve 15 Series extrusions to choose from – 1.5"x1.5" to 3"x6". The 15 Series TSLOTS have .322" slot widths and are modular to each other. Accessories throughout this catalog allow you to build a complete structure with our 15 Series accessories and transition it to and from our 10 Series. The 15 Series T-Slot design has an inside radius of .187" to make sliding drop-in T-Nuts easier.

» See the Technical Data section for specific aluminum information.

TS10-10 [fractional]

Item Number: **650000**



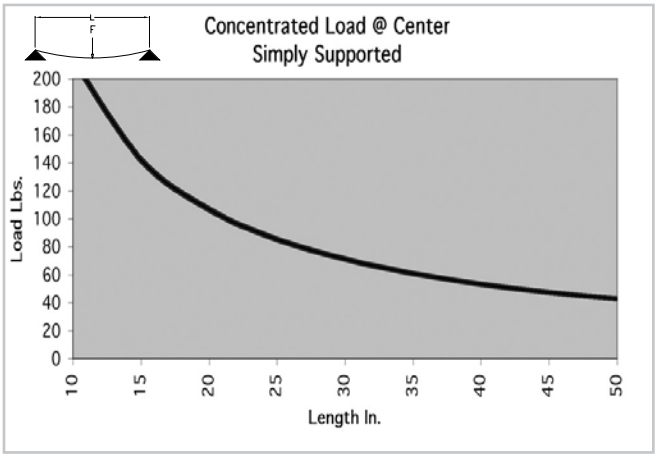


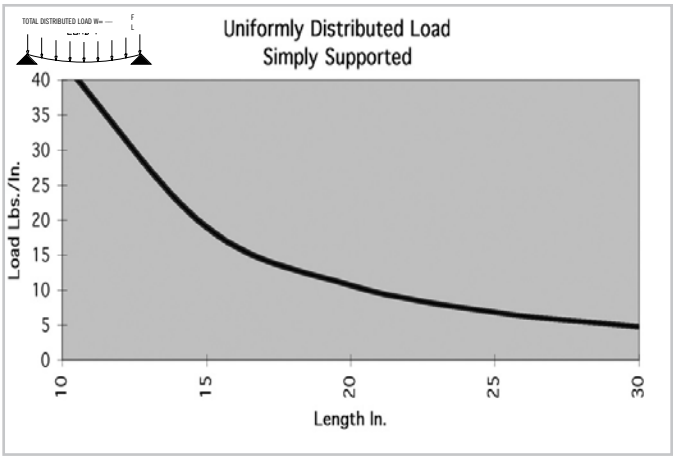
The 1" x 1" extrusion is ideal for machine guarding, sound enclosures, small load work benches, display racks and panel mount racks. Mount accessories such as valves, sensors, switches, slatwall panels, DIN rails and many others directly to TSLOTS.

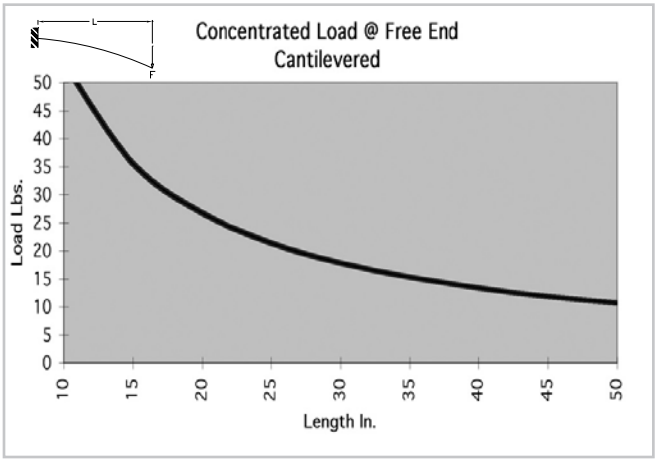
SPECIFICATIONS

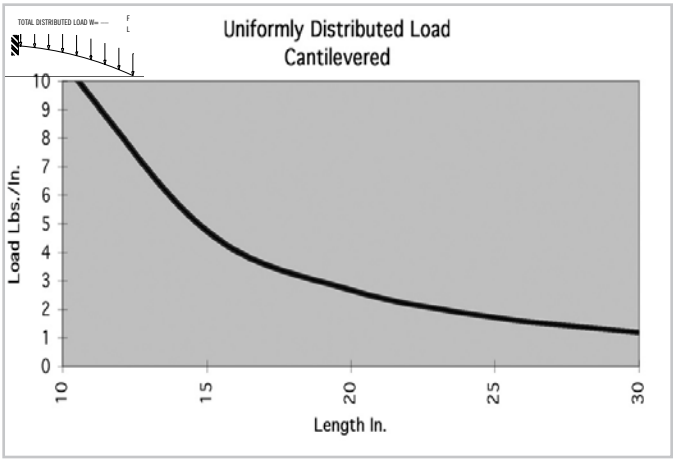
Length	20'
Weight	0.548 lbs/ft (0.816 kg/m)
Estimated Area	0.457 in^2 (2.948 cm^2)
Moment of Inertia	Ix=0.046 in^4 (1.915 cm^4)
	Iy=0.046 in^4 (1.915 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







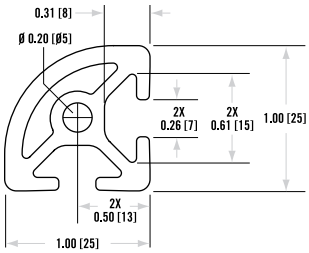


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS10-10QR [fractional]

Item Number: **650040**

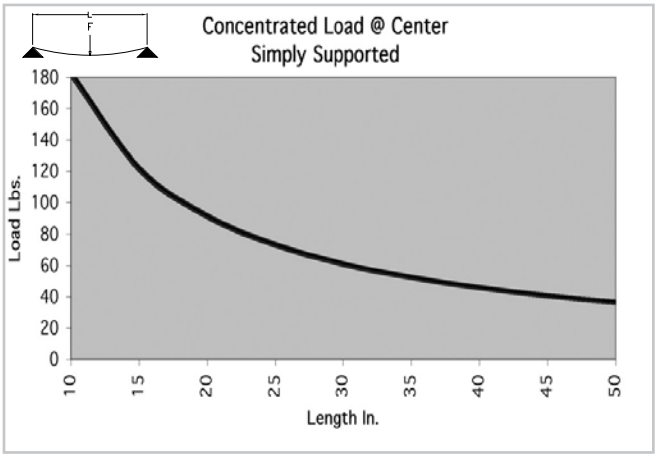


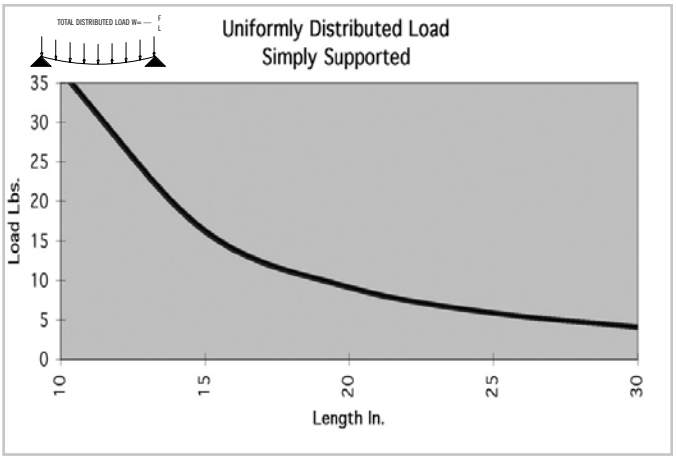
The 1.0" x 1.0" Quarter Round extrusion is ideal for machine guarding, sound enclosures, small load work benches, display racks and panel mount racks. Mount accessories such as valves, sensors, switches, slatwall panels, DIN rails and many others directly to TSLOTS. Adds aesthetics to your design.

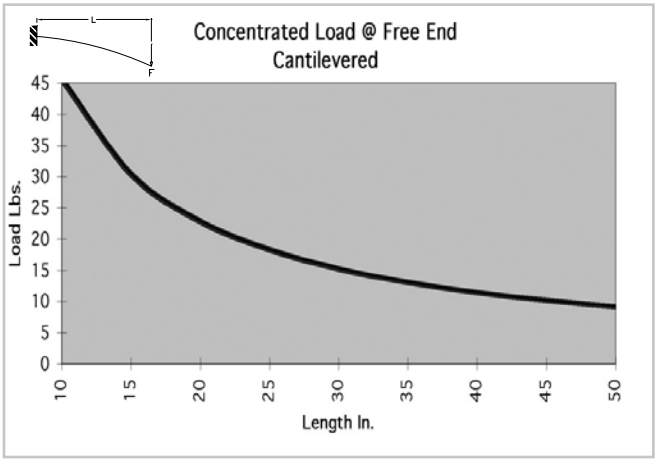
SPECIFICATIONS

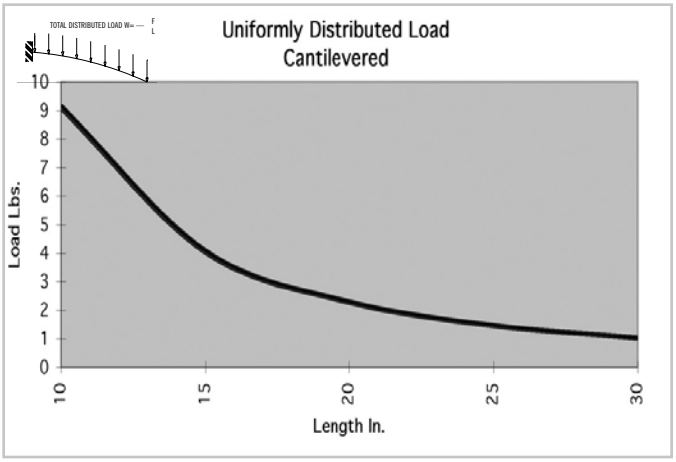
Length	20'
Weight	0.567 lbs/ft (.844 kg/m)
Estimated Area	0.4727 in^2 (3.05 cm^2)
Moment of Inertia	Ix=.0435 in^4 (1.81 cm^4)
	Iy=.0435 in^4 (1.81 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







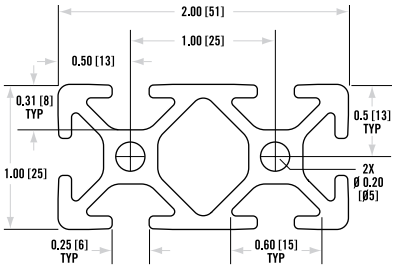


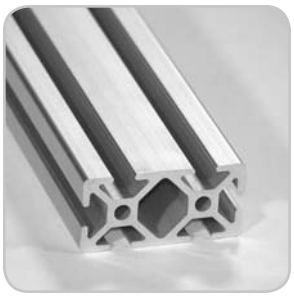
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

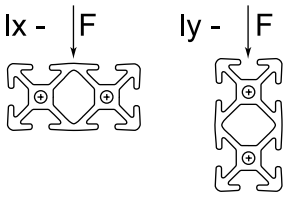
» For deflection equations see page 01:04.

TS10-20 [fractional]

Item Number: **650002**







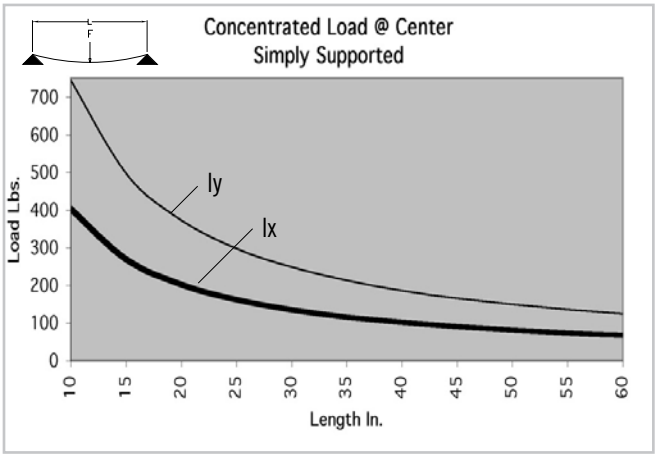
The 1" x 2" shape is designed for machine guarding, work benches, sound enclosures and mounting devices. The 1" x 2" shape can be used to run air lines or as a pressure or vacuum manifold.

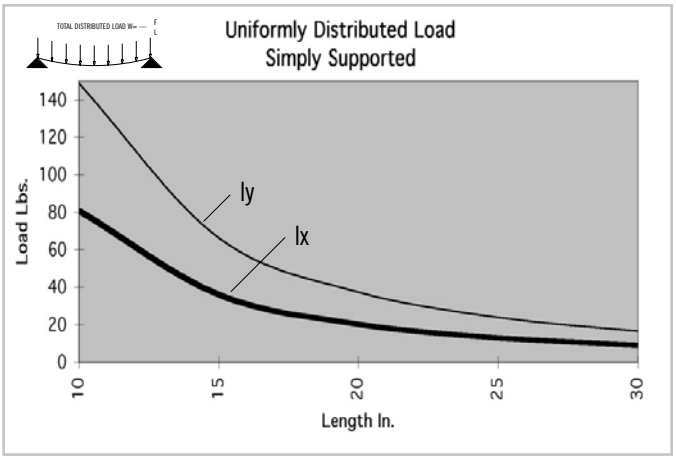
Other Industry Standard and custom extruded shapes available upon request.

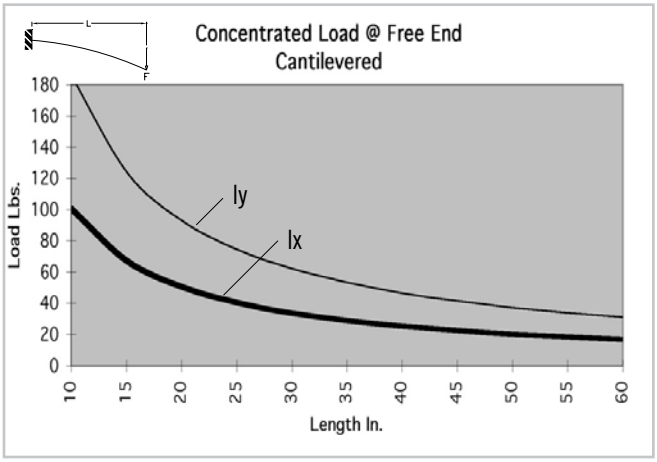
SPECIFICATIONS

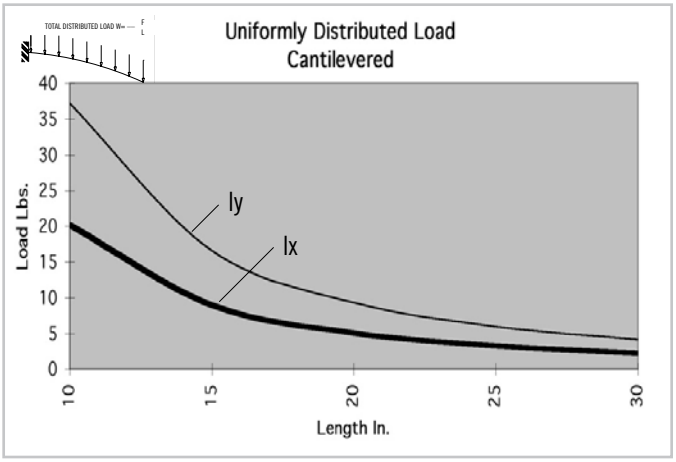
Length	20'
Weight	0.989 lbs/ft (1.472 kg/m)
Estimated Area	0.824 in^2 (5.316 cm^2)
Moment of Inertia	Ix=.087 in^4 (3.621 cm^4)
	Iy=.321 in^4 (13.361 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







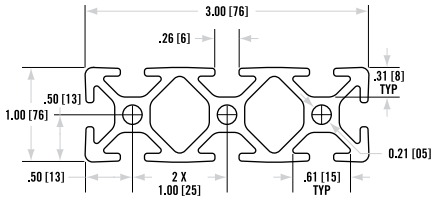


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

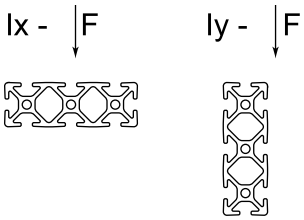
TS10-30 [fractional]

Item Number: **650001**



The 1" x 3" shape is designed for machine guarding, work benches, sound enclosures and mounting devices. The 1" x 3" shape can be used to run air lines or as a pressure or vacuum manifold.

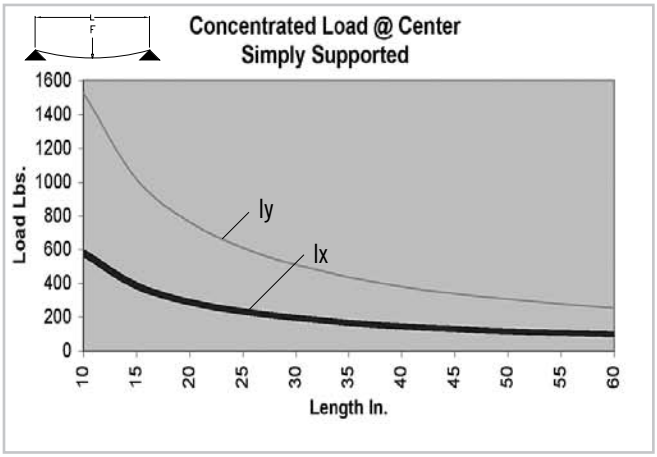
Other Industry Standard and custom extruded shapes available upon request.

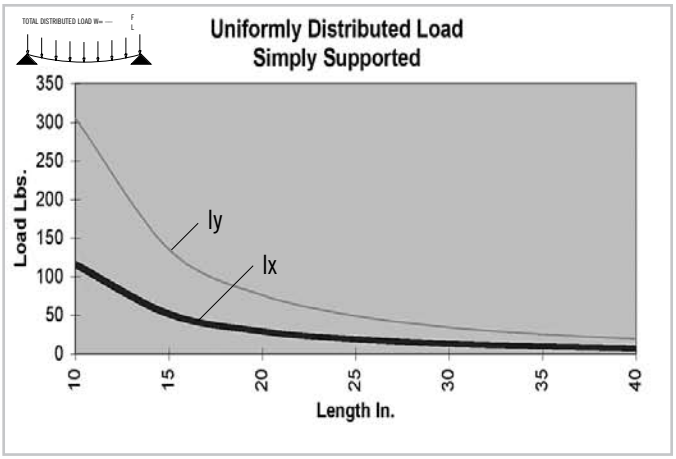


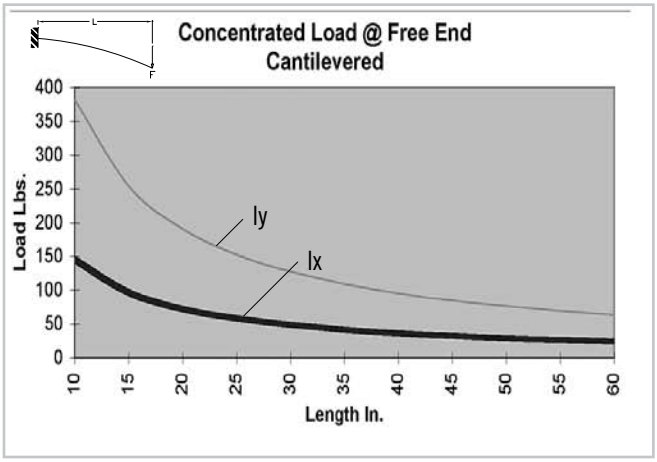
SPECIFICATIONS

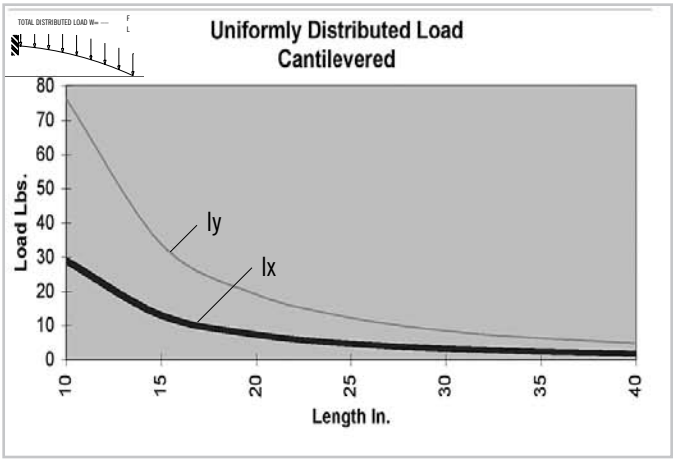
Length	20'
Weight	1.403 lbs/ft (2.087 kg/m)
Estimated Area	1.169 in^2 (7.806 cm^2)
Moment of Inertia	Ix=.125 in^4 (5.202 cm^4)
	Iy=.986 in^4 (41.040 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







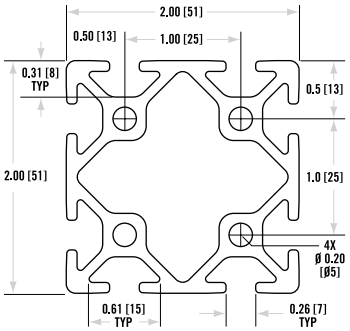


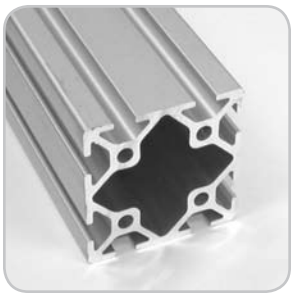
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS20-20 [fractional]

Item Number: **650003**



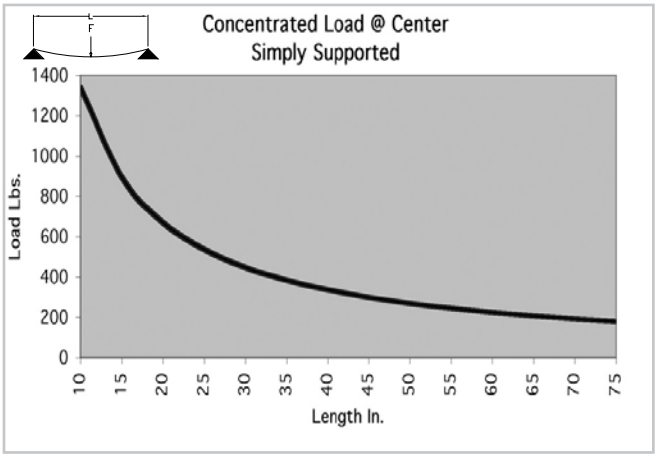


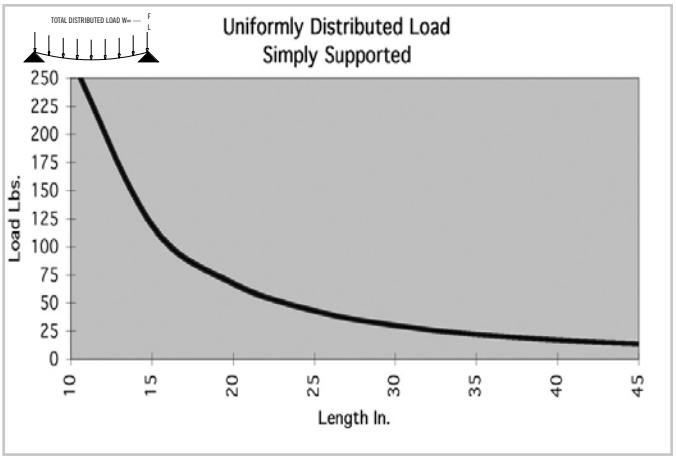
The 2" x 2" extrusion is ideal for structures where more strength is needed for smaller frame assemblies. The center of the 2" x 2" can be used to run air lines or serve as a pressure or vacuum manifold up to 150 p.s.i. The 2" x 2" TSLOTS extrusion accepts 10 Series fasteners, accessories and stanchions.

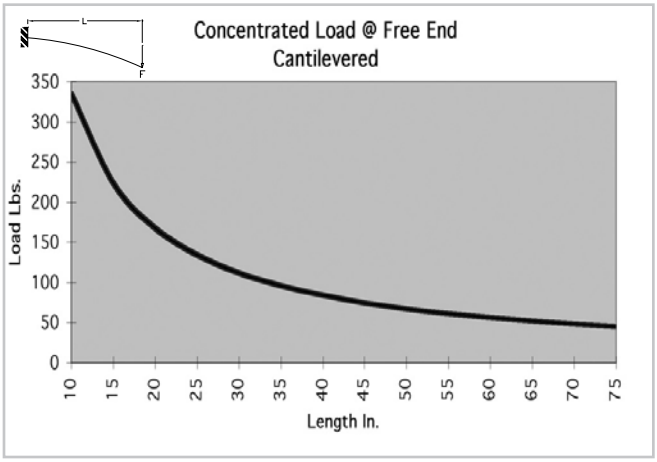
SPECIFICATIONS

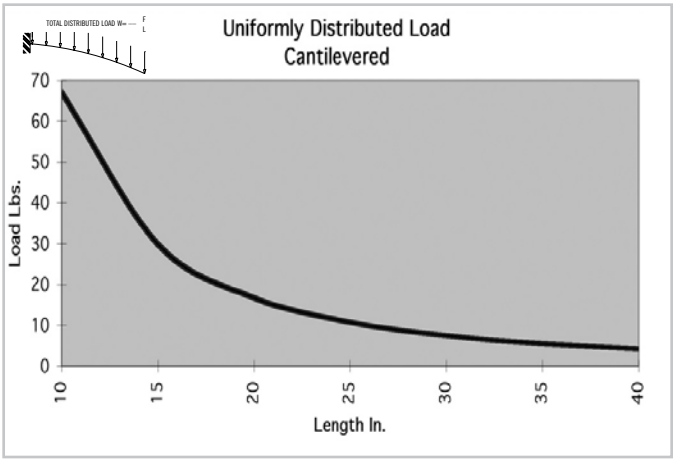
Length	20'
Weight	1.542 lbs/ft (2.295 kg/m)
Estimated Area	1.285 in^2 (8.290 cm^2)
Moment of Inertia	Ix=.578 in^4 (24.058 cm^4)
	Iy=.578 in^4 (24.058 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







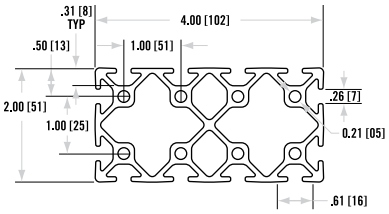


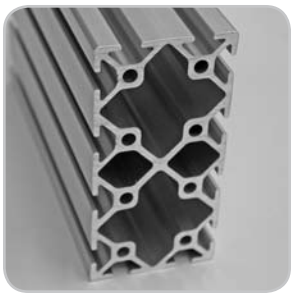
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

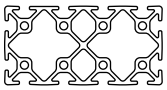
TS20-40 [fractional]

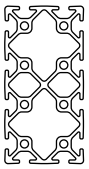
Item Number: **650004**





Ix - F Iy - F



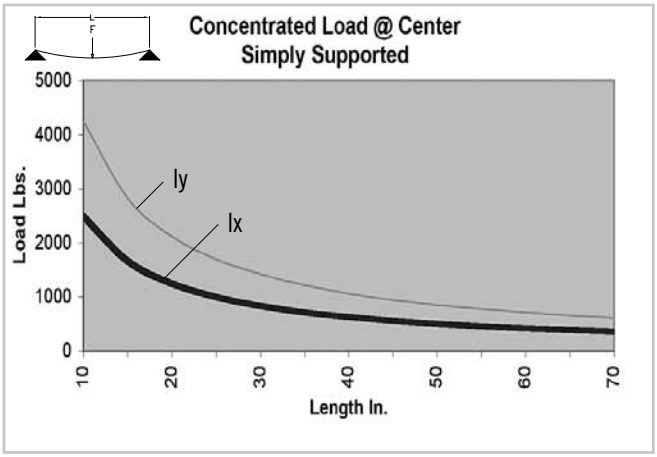


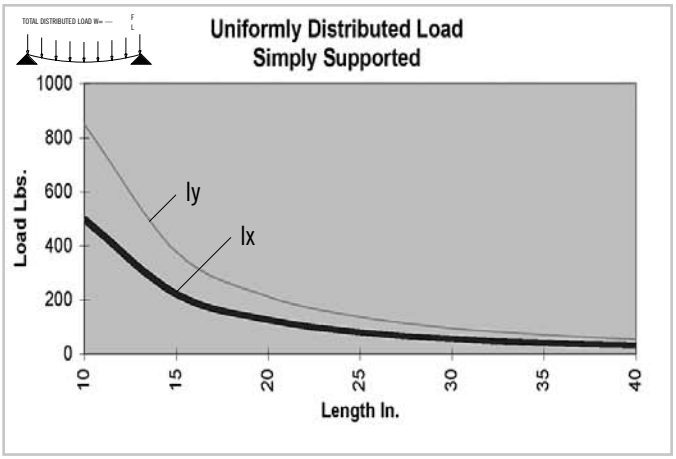
Our 2" x 4" shape is the largest 10 S shape available. It was created for structures that require very high load requirements. The 2" x 4" shape is ideal for heavy duty machine bases, support structures, stairways, mezzanines and anywhere where maximum structural strength is needed. The 2" x 4" shape also has four hollow centers that will accomodate multiple air manifolds. Pressure up to 150 p.s.i.

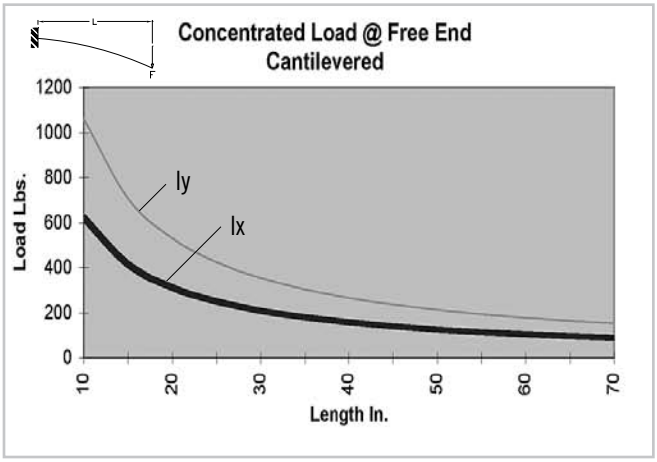
SPECIFICATIONS

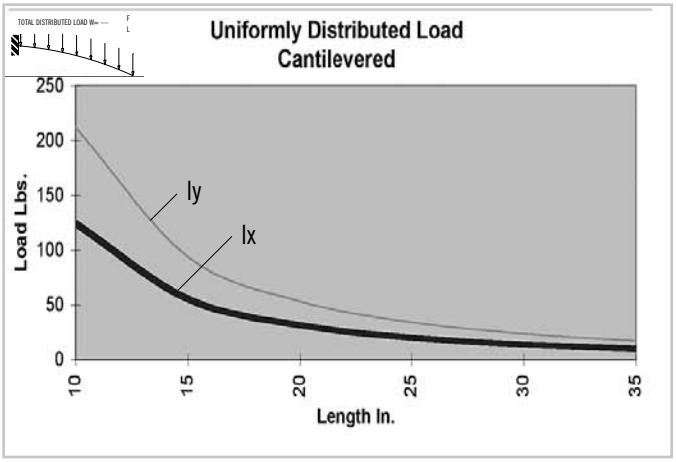
Length	20'
Weight	2.820 lbs/ft (4.195 kg/m)
Estimated Area	2.350 in^2 (15.157 cm^2)
Moment of Inertia	Ix=1.075 in^4 (44.744 cm^4)
	Iy=3.656 in^4 (152.174 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







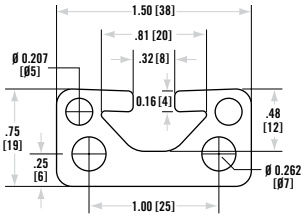


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS 15-75 [fractional]

Item Number: **650007**

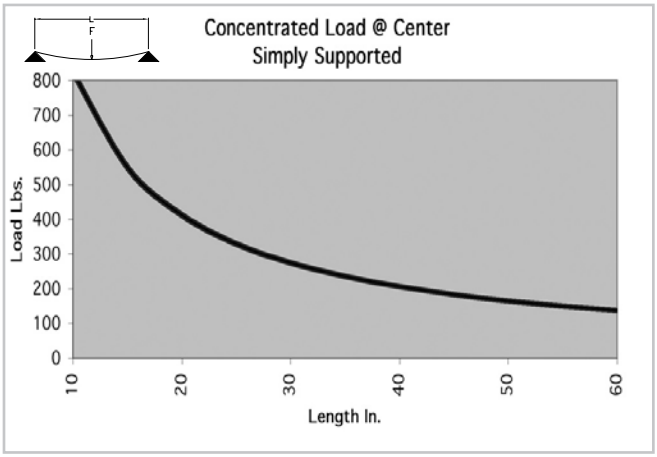


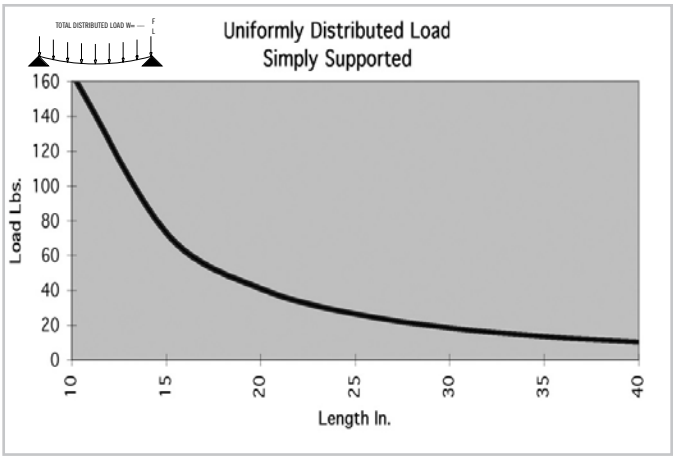
The 1.5" x 1.5" extrusion can be used as a door rail or a support for clamps, valves, etc. It can also be used as a handrail.

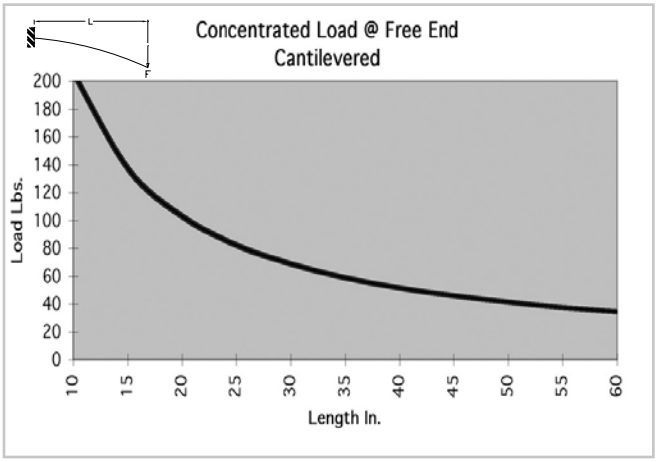
SPECIFICATIONS

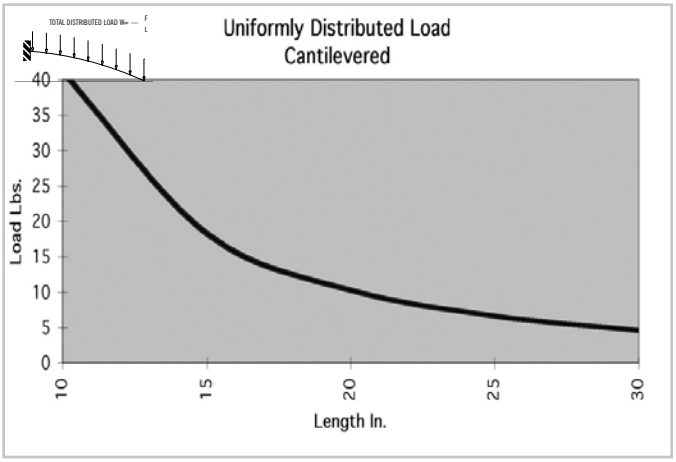
Length	20'
Weight	0.8328 lbs/ft (1.238 kg/m)
Estimated Area	0.694 in^2 (4.476 cm^2)
Moment of Inertia	Ix=.037 in^4 (1.522 cm^4)
	Iy=.147 in^4 (6.114 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







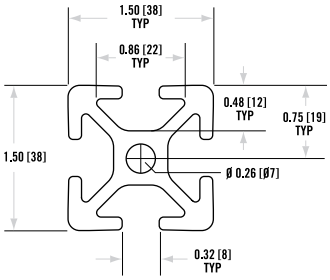


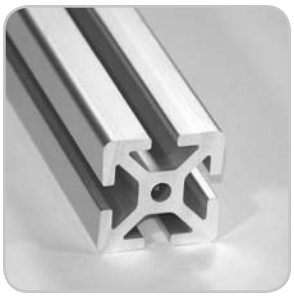
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15 [fractional]

Item Number: **650005**



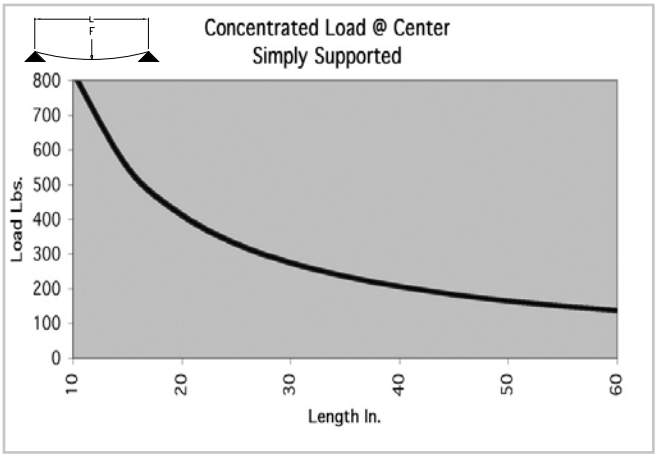


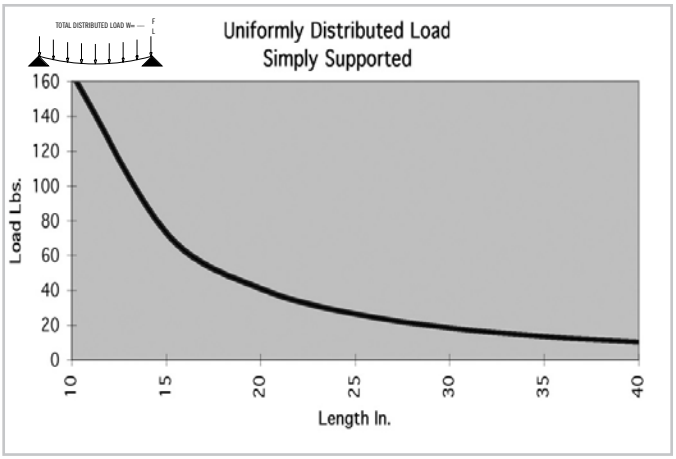
The 1.5" x 1.5" shape has a thicker wall that will accommodate heavier applications than the 1.5" x 1.5"L. Applications include machine frames, workstations, shop carts, tables and machine retrofits.

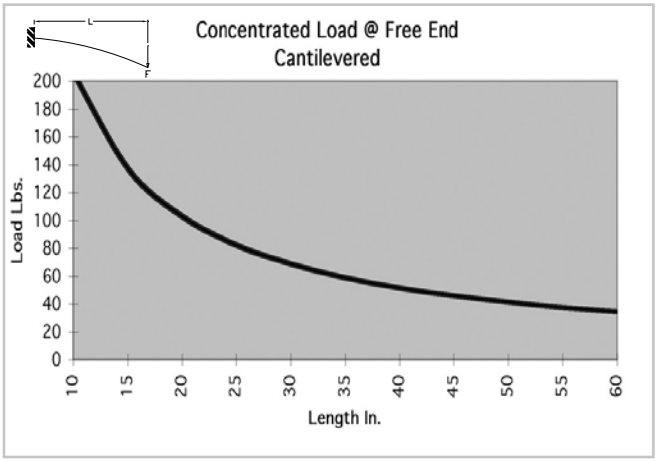
SPECIFICATIONS

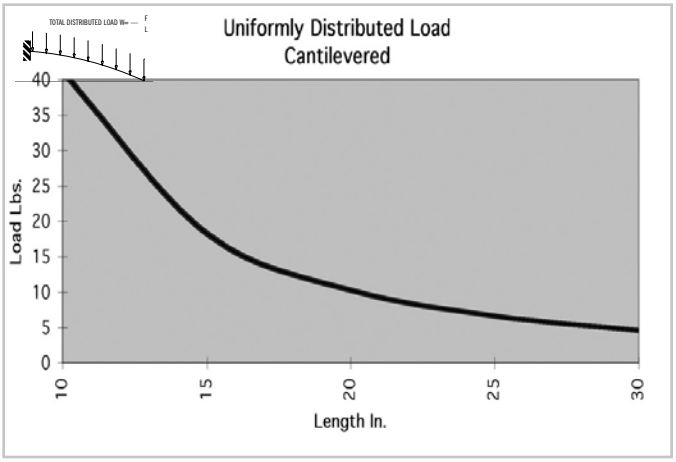
Length	20'
Weight	1.438 lbs/ft (2.140 kg/m)
Estimated Area	1.198 in^2 (7.729 cm^2)
Moment of Inertia	Ix=.266 in^4 (11.072 cm^4)
	Iy=.266 in^4 (11.072 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







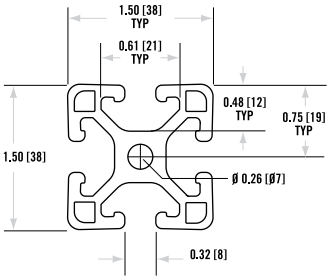


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15L [fractional]

Item Number: **650006**

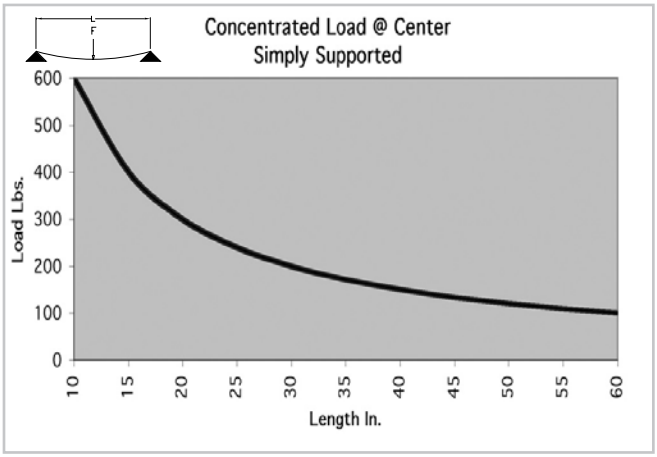


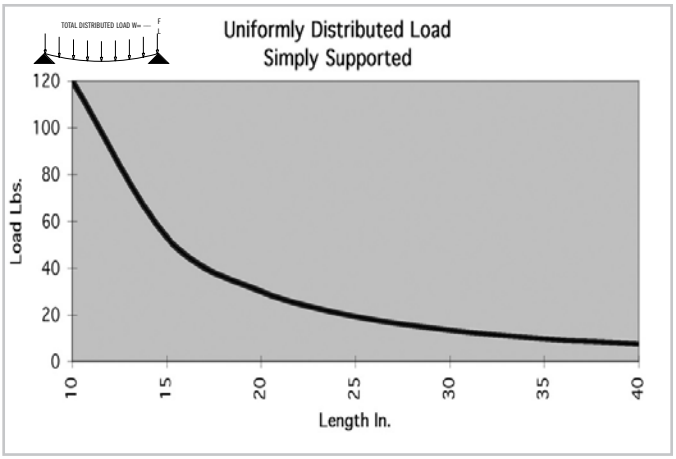
The 1.5" x 1.5"L shape was designed for lighter weight and strength requirements than our 1.5" x 1.5". Applications include lighter load bearing structures, guarding and light weight frames.

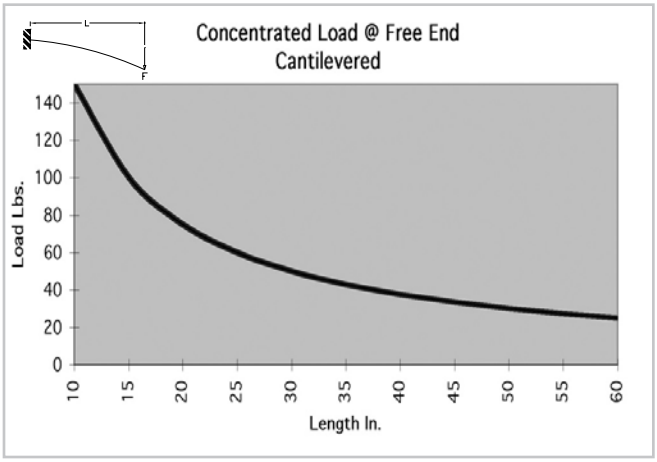
SPECIFICATIONS

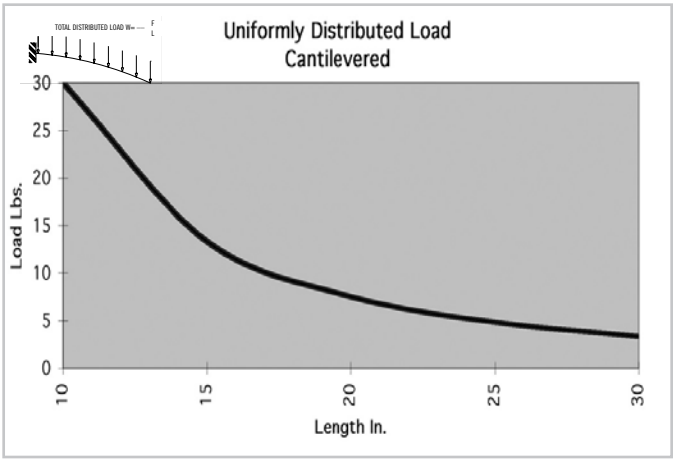
Length	20'
Weight	1.110 lbs/ft (1.652 kg/m)
Estimated Area	0.925 in^2 (5.968 cm^2)
Moment of Inertia	Ix=.194 in^4 (8.075 cm^4)
	Iy=.194 in^4 (8.075 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







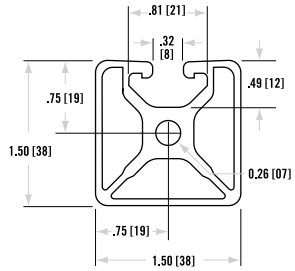


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15 MONOSLOT [fractional]

Item Number: **650014**

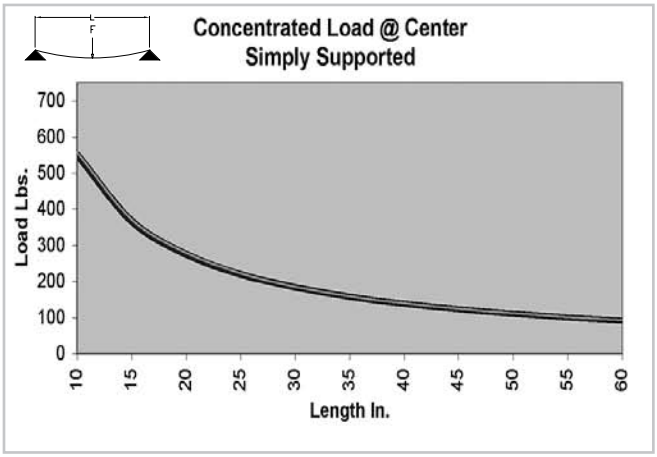


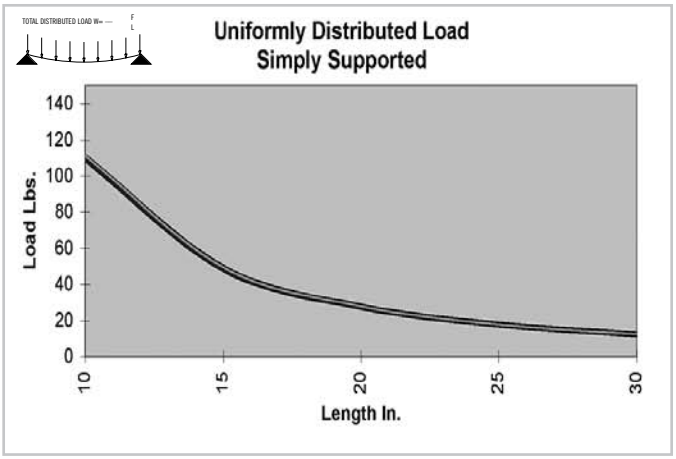
The 1.5" x 1.5"MOS shape was designed for lighter weight and strength requirements where additional cleanliness and aesthetics is needed. Applications include machine enclosures, guarding and light weight frames.

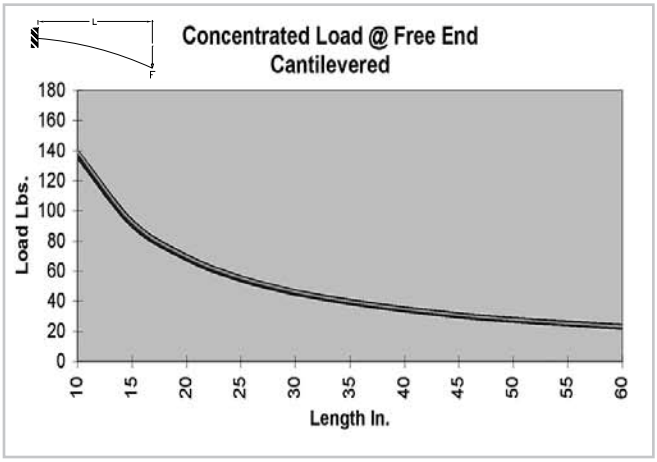
SPECIFICATIONS

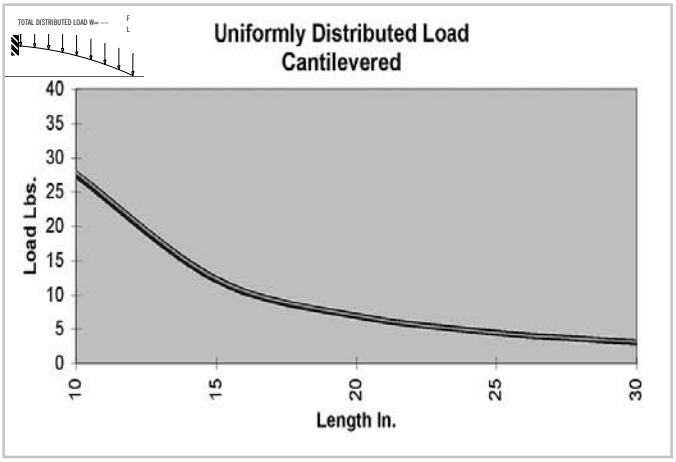
Length	20'
Weight	1.015 lbs/ft (1.510 kg/m)
Estimated Area	0.846 in^2 (5.456 cm^2)
Moment of Inertia	Ix=.178 in^4 (7.408 cm^4)
	Iy=.180 in^4 (7.492 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







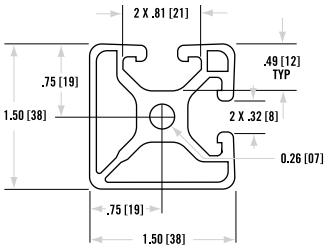


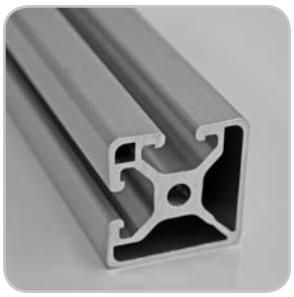
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15 BISLOT AD [fractional]

Item Number: **650015**



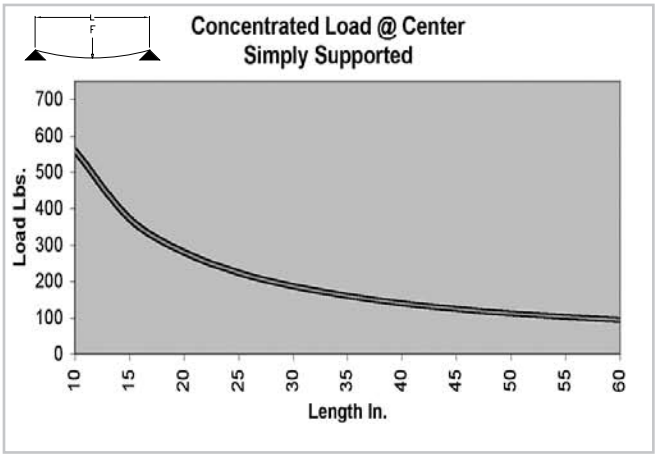


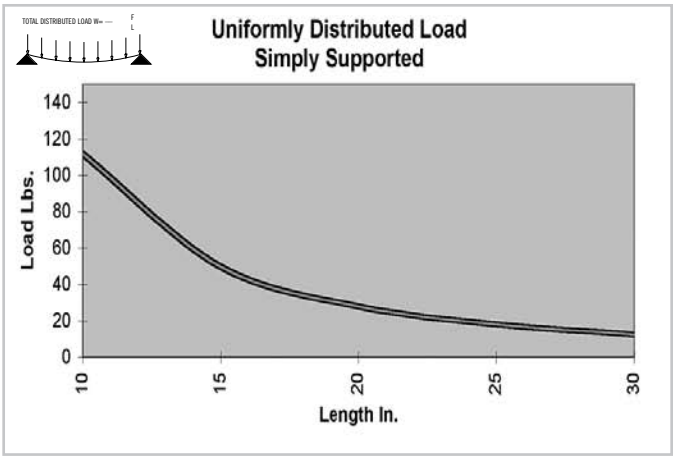
The 1.5" x 1.5"BAS shape was designed for lighter weight and strength requirements where additional cleanliness and aesthetics is needed. Applications include machine enclosures, guarding and light weight frames.

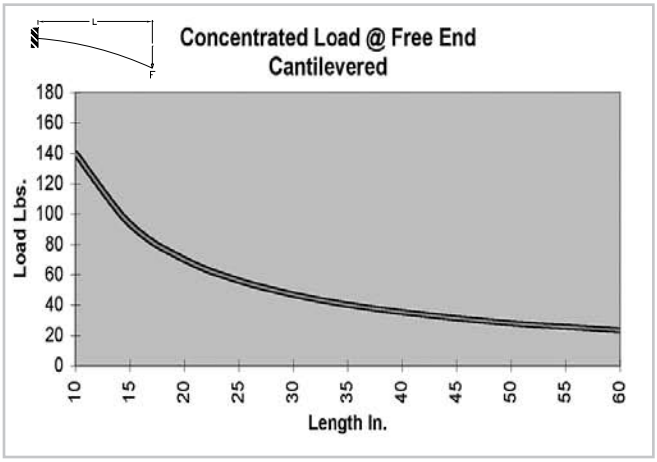
SPECIFICATIONS

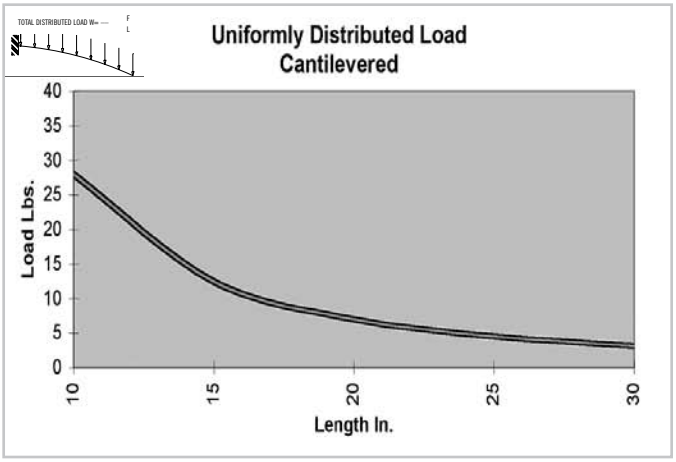
Length	20'
Weight	1.036 lbs/ft (1.541 kg/m)
Estimated Area	0.863 in^2 (5.566 cm^2)
Moment of Inertia	Ix=.181 in^4 (7.533 cm^4)
	Iy=.181 in^4 (7.533 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







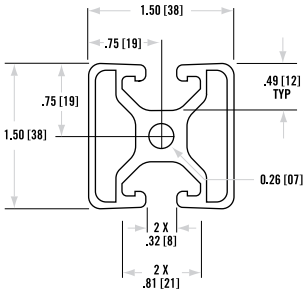


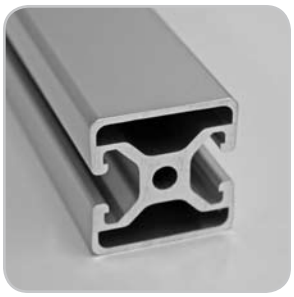
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15 BISLOT OPP [fractional]

Item Number: **650016**



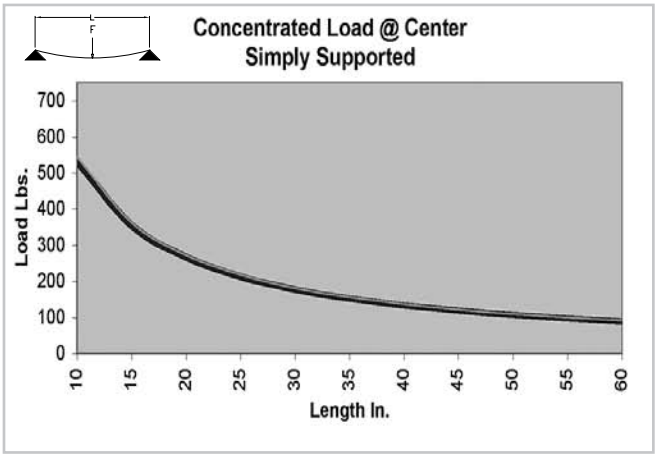


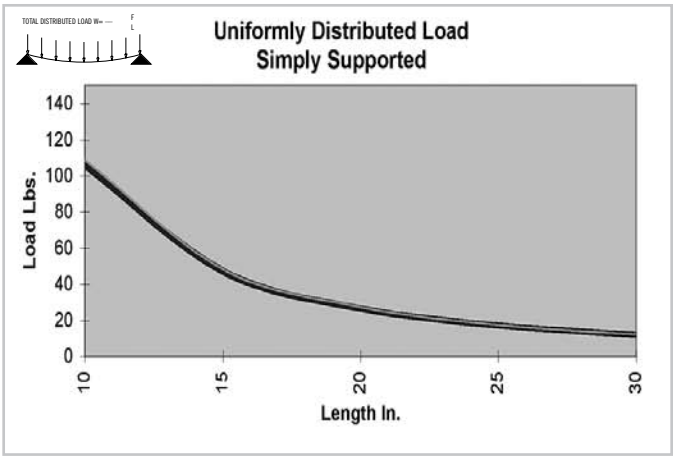
The 1.5" x 1.5"BOS shape was designed for lighter weight and strength requirements where additional cleanliness and aesthetics is needed. Applications include machine enclosures, guarding and light weight frames.

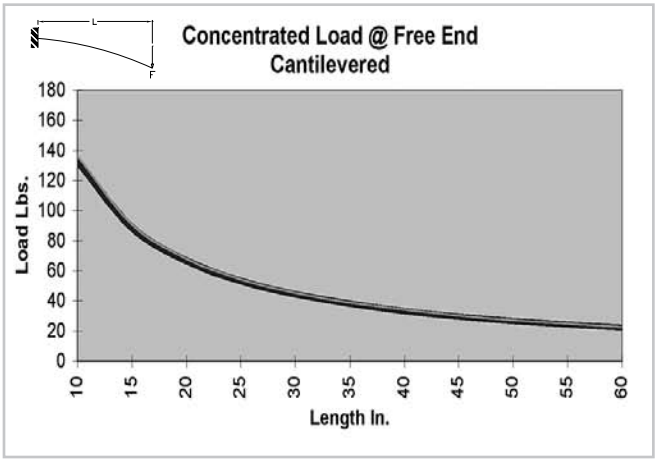
SPECIFICATIONS

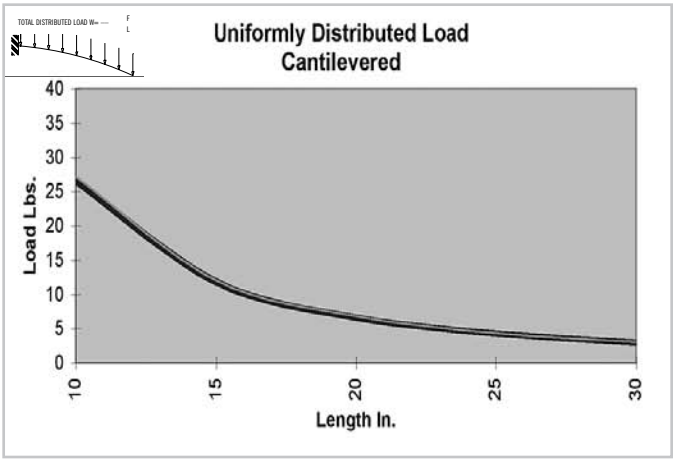
Length	20'
Weight	1.008 lbs/ft (1.499 kg/m)
Estimated Area	0.840 in^2 (5.418 cm^2)
Moment of Inertia	Ix=.172 in^4 (7.159 cm^4)
	Iy=.176 in^4 (7.325 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







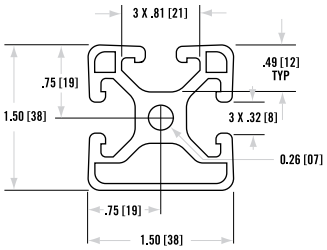


** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15 TRISLOT [fractional]

Item Number: **650017**

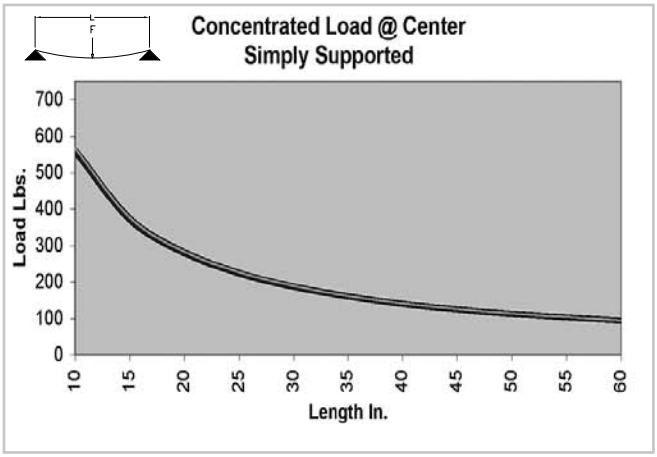


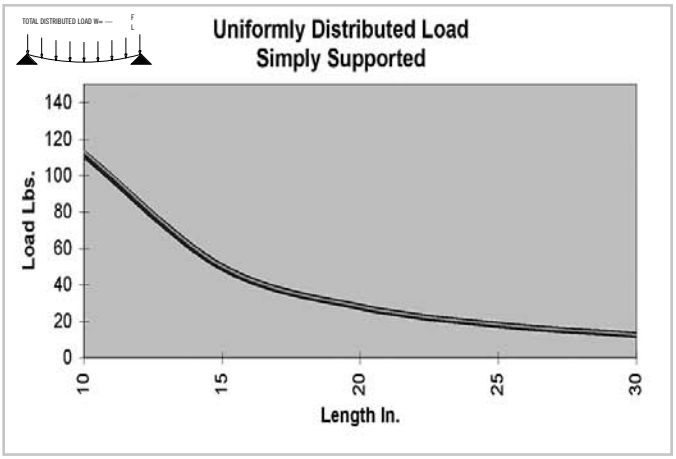
The 1.5" x 1.5"TRS shape was designed for lighter weight and strength requirements where additional cleanliness and aesthetics is needed. Applications include machine enclosures, guarding and light weight frames.

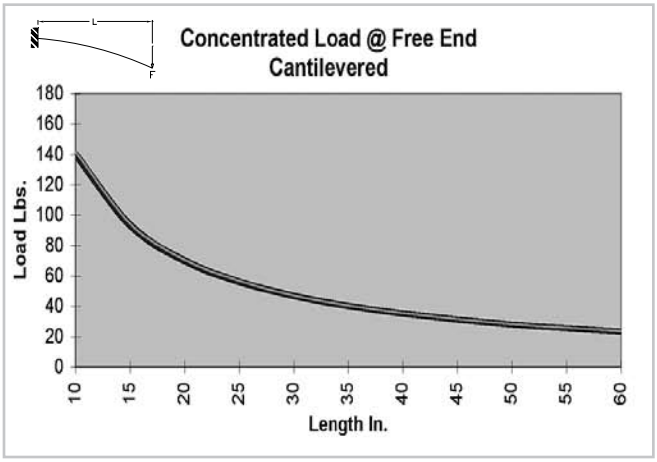
SPECIFICATIONS

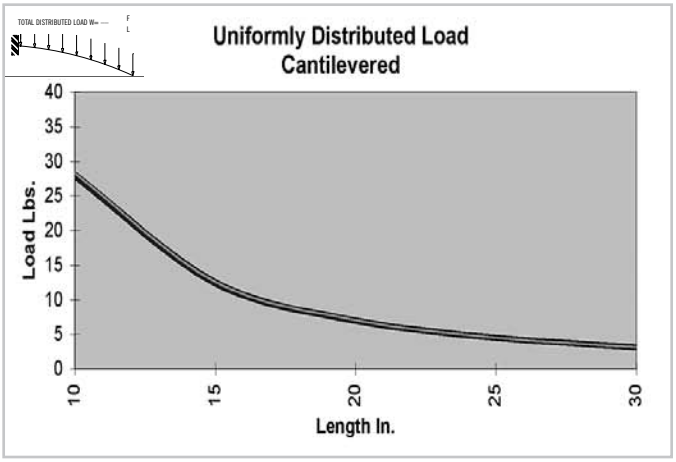
Length	20'
Weight	1.054 lbs/ft (1.568 kg/m)
Estimated Area	0.878 in^2 (5.663 cm^2)
Moment of Inertia	Ix=.181 in^4 (7.533 cm^4)
	Iy=.183 in^4 (7.617 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







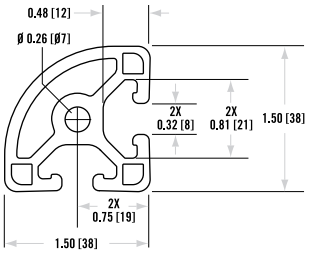


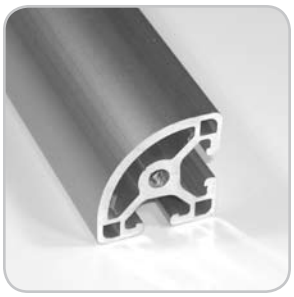
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-15QR [fractional]

Item Number: **650041**



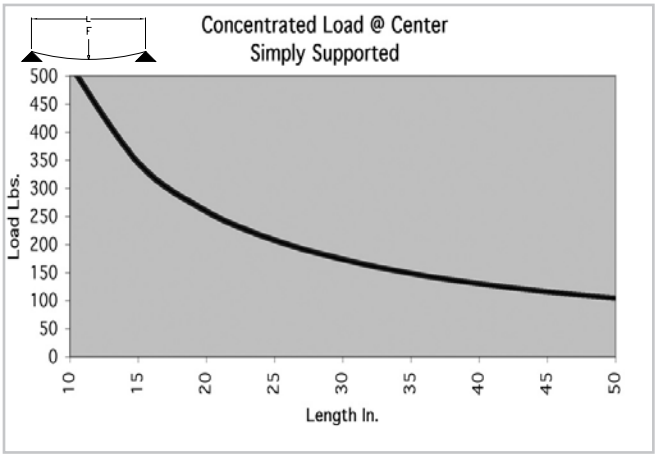


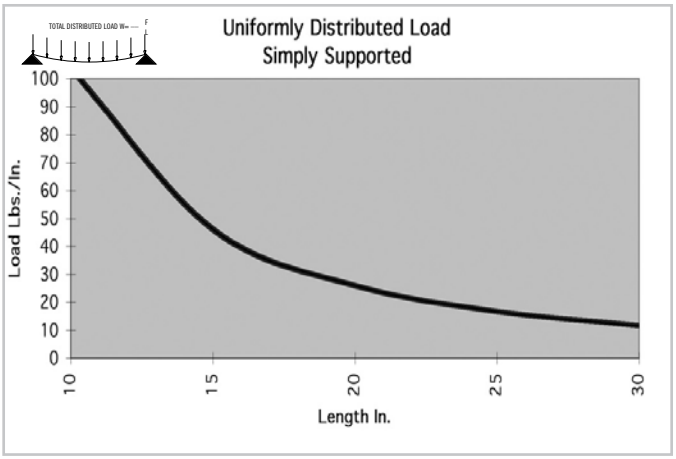
Our 1.5" x 1.5" Quarter Round was designed for lighter weight and strength requirements than our 1.5" x 1.5". Applications include lighter load bearing structures, light weight frames, machine guarding, sound enclosures, small load work benches, display racks and panel mount racks. Adds aesthetics to your design.

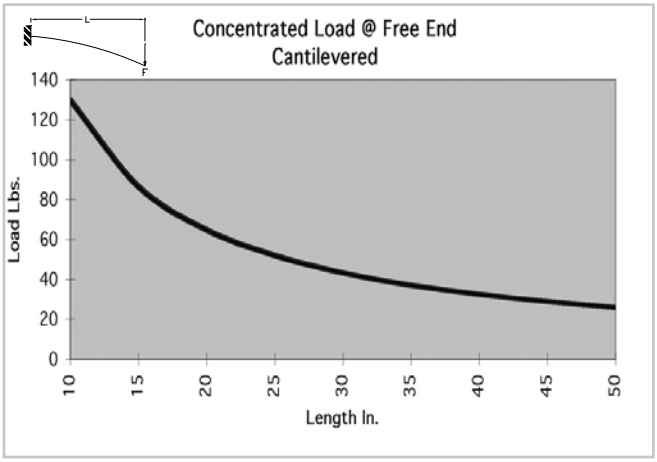
SPECIFICATIONS

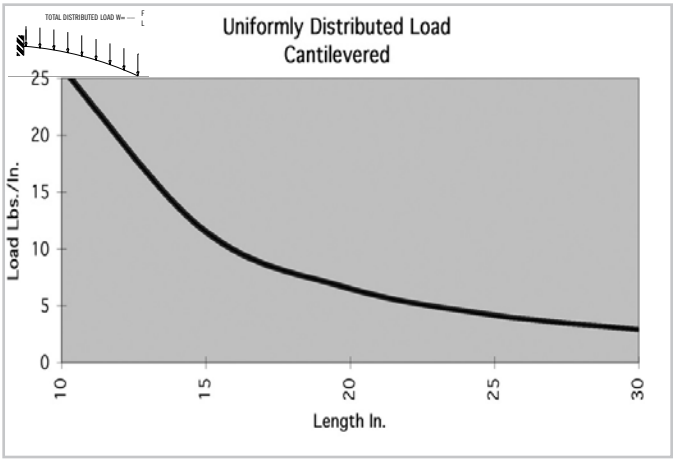
Length	20'
Weight	1.055 lbs/ft (1.57 kg/m)
Estimated Area	0.879 in^2 (5.67 cm^2)
Moment of Inertia	Ix=.172 in^4 (7.16 cm^4)
	Iy=.172 in^4 (7.16 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







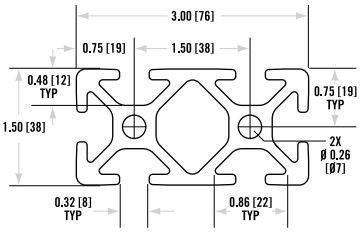


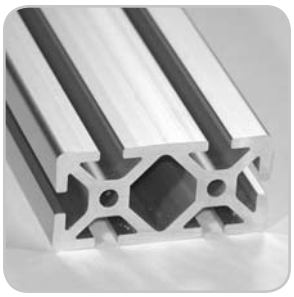
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

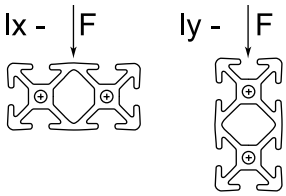
» For deflection equations see page 01:04.

TS15-30 [fractional]

Item Number: **650008**





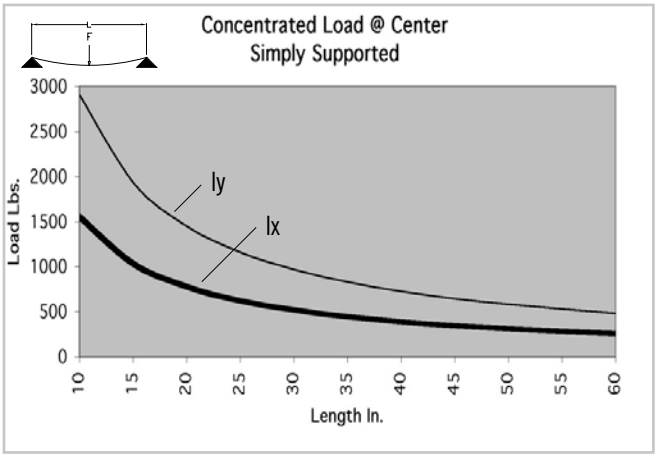


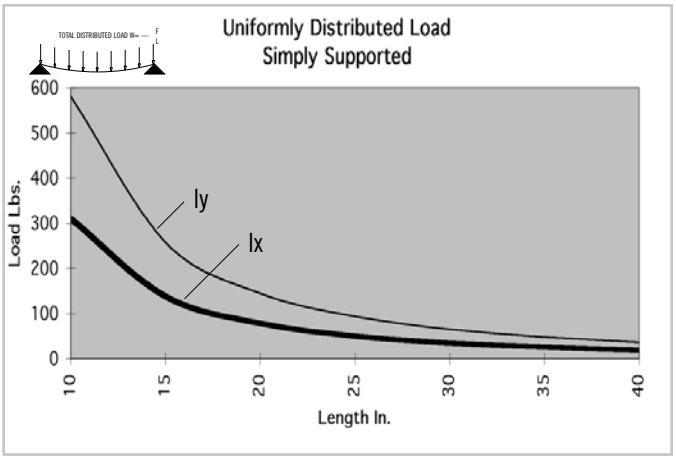
The 1.5" x 3.0" shape is designed for larger and heavier structures where strength is required. Applications for 1.5"x3.0" include framing systems, roller conveyor systems, fixturing, specialty machines, supports, linear slides and automated assembly systems. This shape can be used to run air lines or as a pressure or vacuum manifold up to 150 p.s.i.

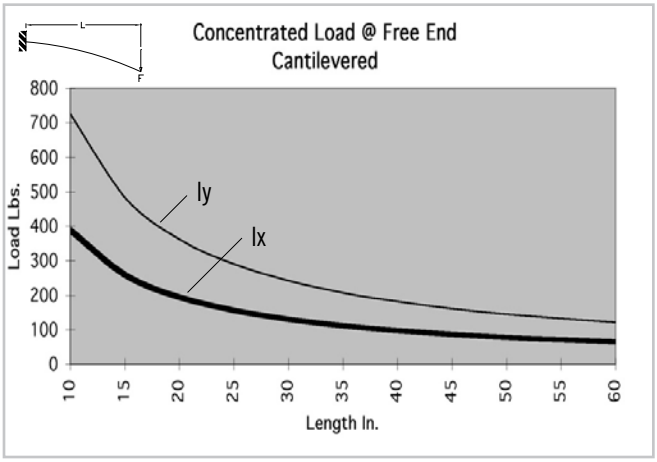
SPECIFICATIONS

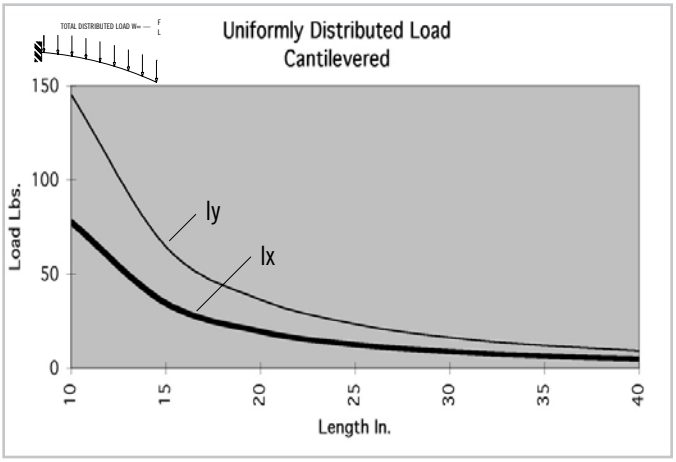
Length	20'
Weight	2.586 lbs/ft (3.848 kg/m)
Estimated Area	2.155 in^2 (13.903 cm^2)
Moment of Inertia	Ix=.502 in^4 (20.895 cm^4)
	Iy=1.877 in^4 (78.127 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







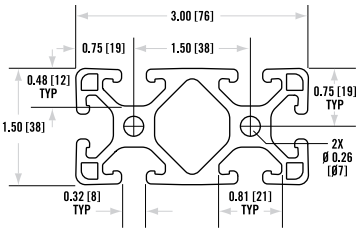


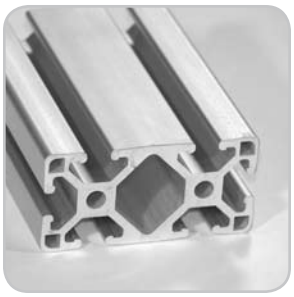
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

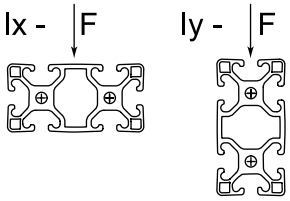
» For deflection equations see page 01:04.

TS15-30L [fractional]

Item Number: **650009**





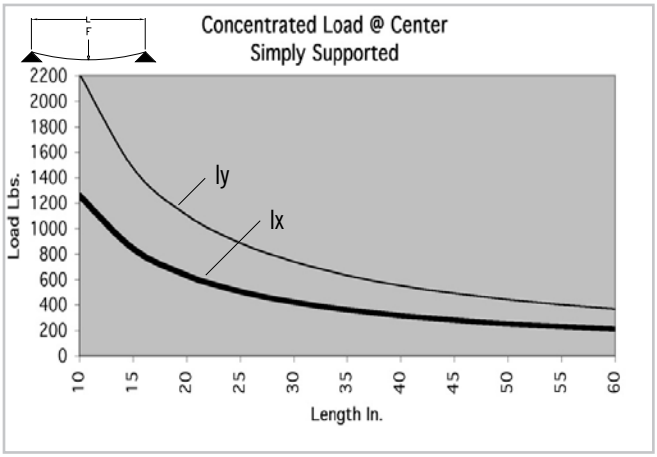


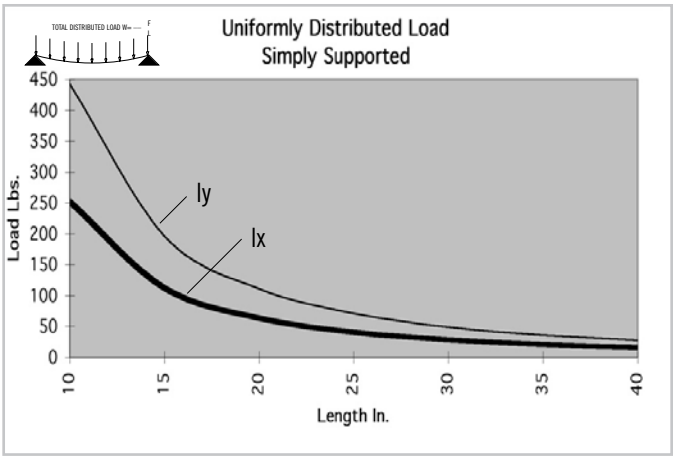
The 1.5" x 3.0"L shape is designed for larger structures where strength is not critical. Applications for 1.5" x 3.0"L include framing and door tracks. This shape can be used to run air lines or as a pressure or vacuum manifold up to 150 p.s.i.

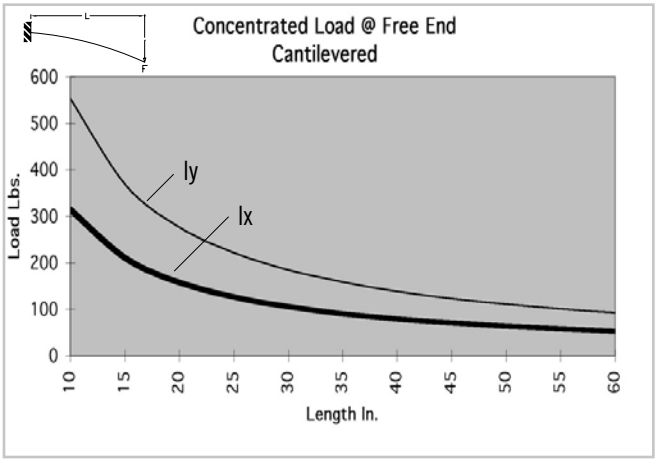
SPECIFICATIONS

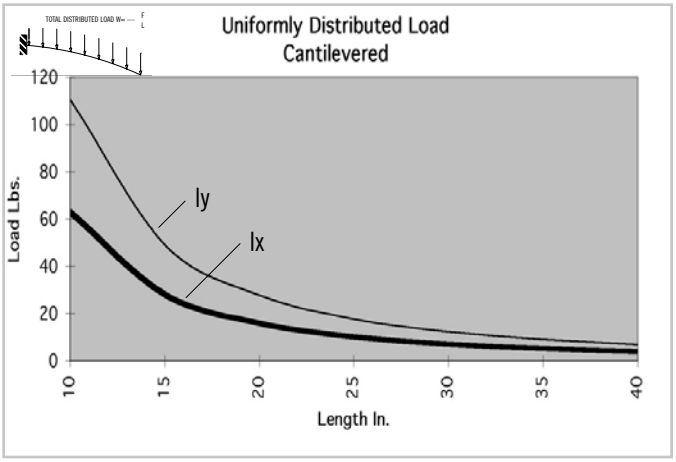
Length	20'
Weight	2.119 lbs/ft (3.153 kg/m)
Estimated Area	1.766 in^2 (11.394 cm^2)
Moment of Inertia	Ix=.408 in^4 (16.982 cm^4)
	Iy=1.431 in^4 (59.563 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







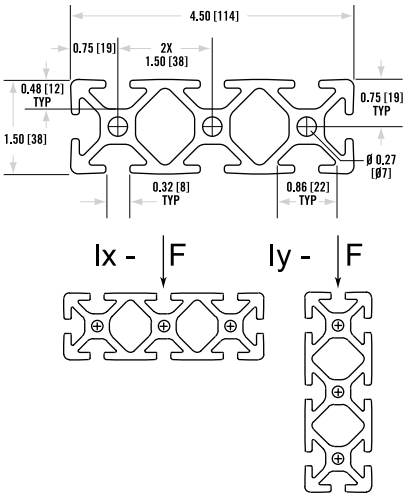


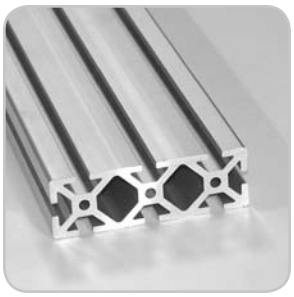
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS15-45 [fractional]

Item Number: **650010**



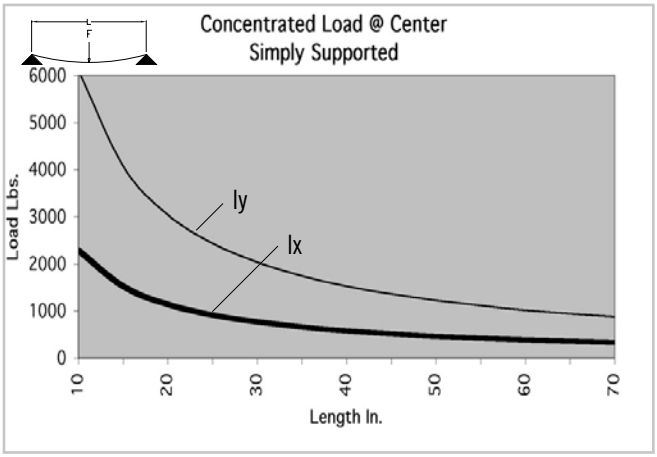


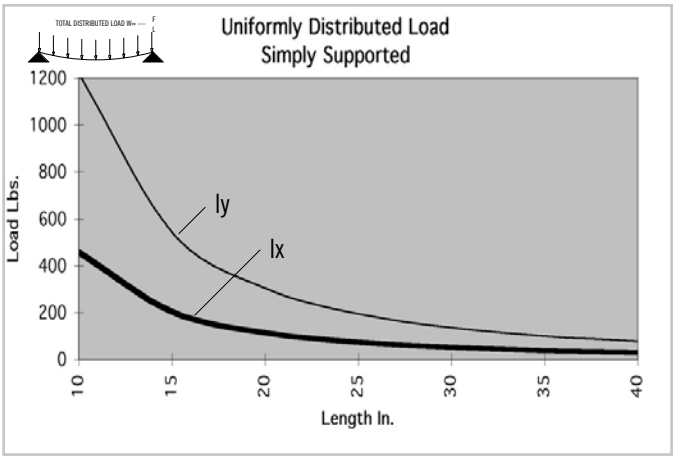
The 1.5" x 4.5" shape is ideal for applications where long lengths without supporting structures are needed. Use the 1.5" x 4.5" in conveyor systems, linear motion, material handling and large machine frames. The two hollow centers are good for dual air manifolds up to 150 p.s.i.

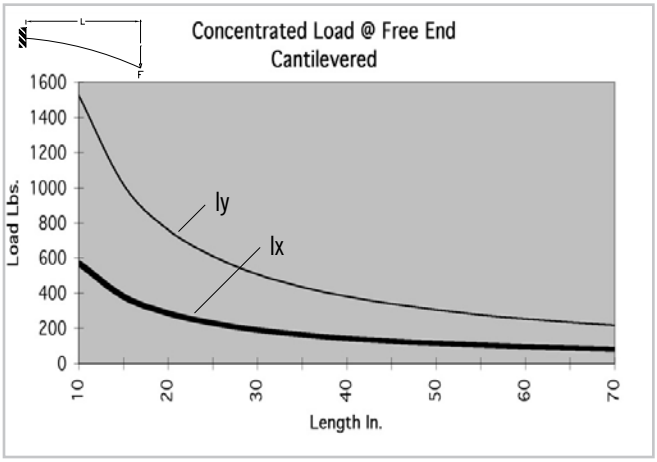
SPECIFICATIONS

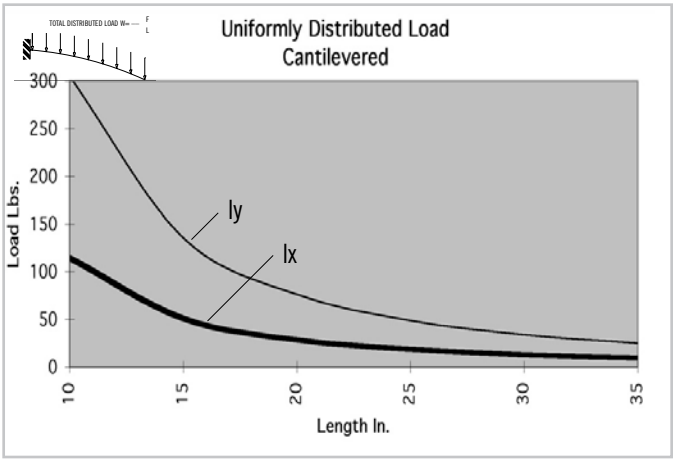
Length	20'
Weight	3.74 lbs/ft (5.566 kg/m)
Estimated Area	3.113 in^2 (20.084 cm^2)
Moment of Inertia	Ix=.739 in^4 (30.760 cm^4)
	Iy=5.913 in^4 (246.118 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







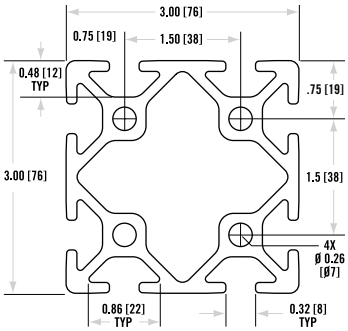


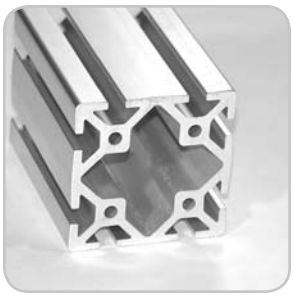
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS30-30 [fractional]

Item Number: **650012**



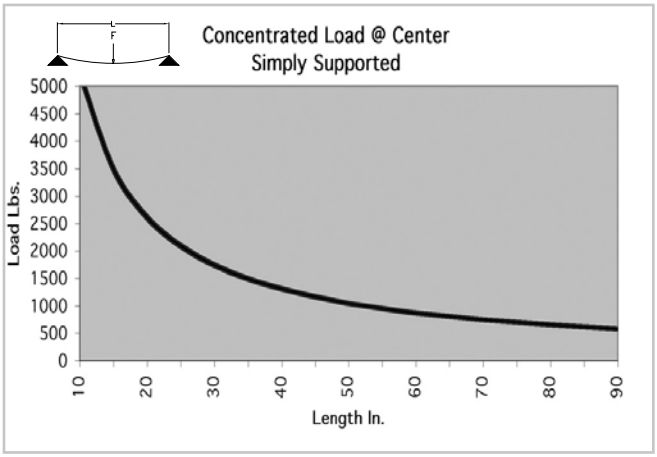


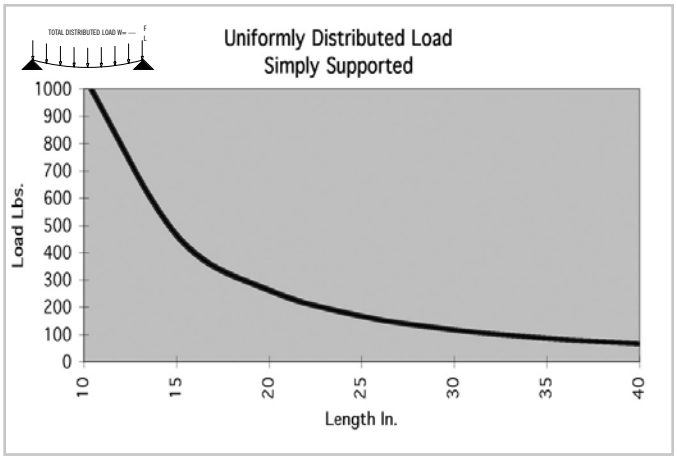
Our 3" x 3" shape has a thicker wall and is designed for heavier and stronger structures where strength is critical. This shape can be used to run air lines or as a pressure or vacuum manifold up to 150 p.s.i.

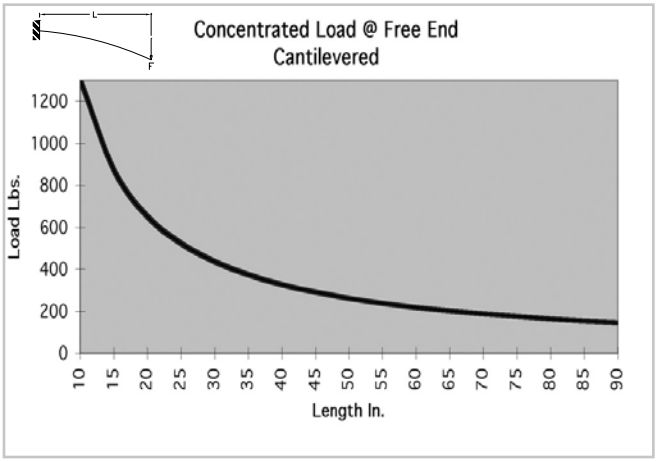
SPECIFICATIONS

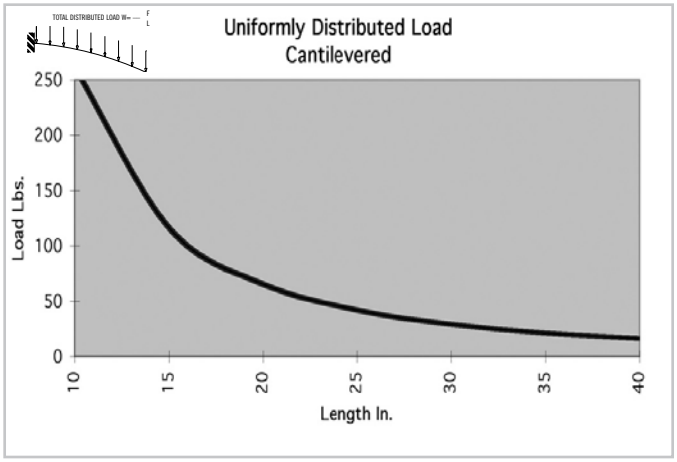
Length	20'
Weight	4.027 lbs/ft (5.993 kg/m)
Estimated Area	3.356 in^2 (21.652 cm^2)
Moment of Inertia	Ix=3.379 in^4 (140.645 cm^4)
	Iy=3.379 in^4 (140.645 cm^4)

BEAM SELECTION BY LOAD AND LENGTH







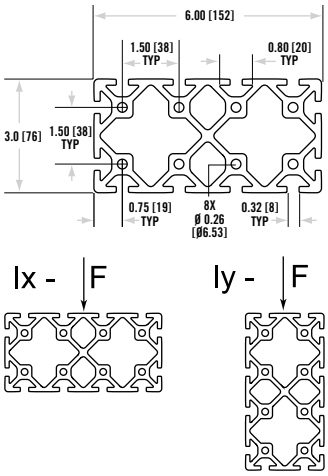


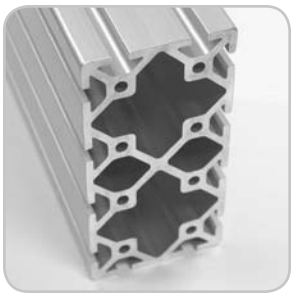
** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.

TS30-60 [fractional]

Item Number: **650042**



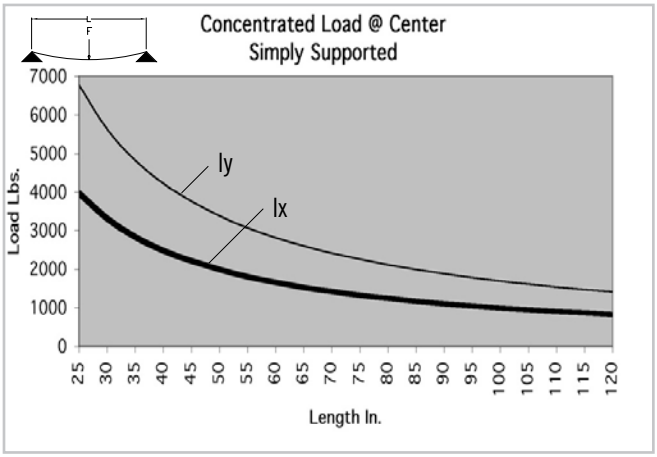


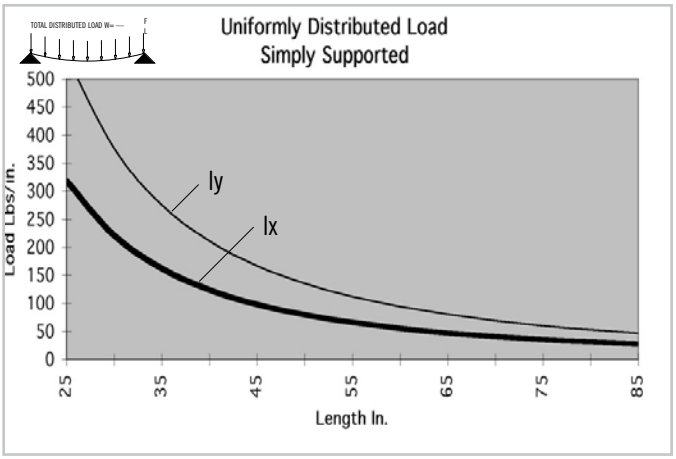
Our 3" x 6" shape is the largest shape available. It was created for structures that require very high load requirements. The 3" x 6" shape is ideal for heavy duty machine bases, support structures, stairways, mezzanines and anywhere where maximum structural strength is needed. The 3" x 6" shape also has four hollow centers that will accomodate multiple air manifolds. Pressure up to 150 p.s.i.

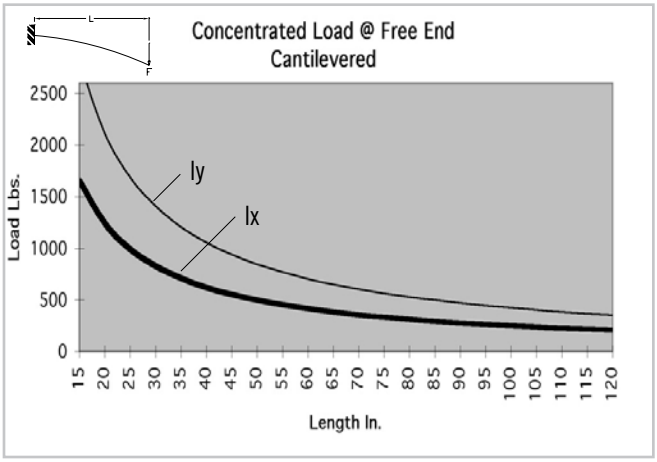
SPECIFICATIONS

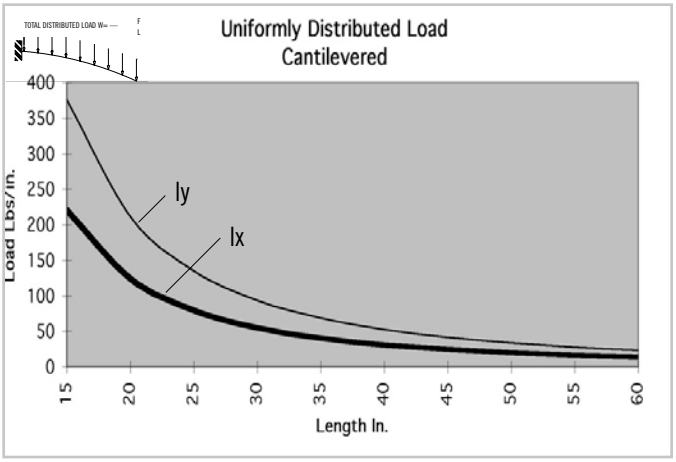
Length	20'
Weight	7.462 lbs/ft (11.105 kg/m)
Estimated Area	6.219 in^2 (40.123 cm^2)
Moment of Inertia	Ix=6.4300 in^4 (267.637 cm^4)
	Iy=21.8559 in^4 (909.711 cm^4)

BEAM SELECTION BY LOAD AND LENGTH









** Charts based on allowable loads related to yield strength with a margin of safety equal to five.*

» For deflection equations see page 01:04.