



Aluminium Extrusion

Loads & Deflections

20 Series | 30 Series | 40 Series | 45 Series

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The subsequent tables illustrate the maximum loads and deflections for our aluminium extrusion profiles.

To calculate the beam deflections, the formulas provided in this resource have been used:
<https://mechanicalc.com/reference/beam-deflection-tables>

For additional assistance, a helpful beam deflection calculator is available at:
<https://deflection.app/?language=en>

To calculate the maximum column load, the formulas provided in this resource have been used: <https://tribby3d.com/blog/column-buckling/> (A value of 1.3 has been used for K)

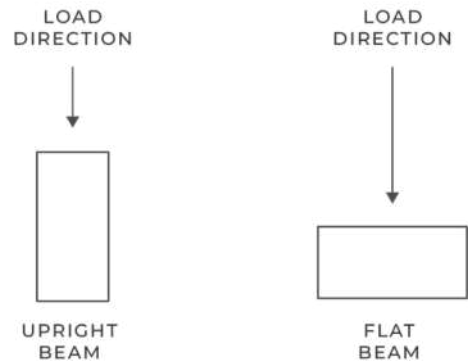
Please be aware that the figures provided are indicative only. They primarily consider beam/column deflection under load. However, real-world performance of a beam/column can also be influenced by factors such as shear stress, bending stress, torsion, buckling, fatigue, resonance, and the specific material properties of the beam/column. Therefore, it is strongly advised to conduct personal design calculations and consider these additional factors to ensure the chosen profile is suitable for the specific application.

We recommend applying appropriate safety factors for your industry to these calculated values. Common safety factors range between 2 and 3 for non-critical applications, providing an additional margin of safety against unforeseen circumstances or inaccuracies in the calculations.

Upright vs Flat

Because aluminium extrusion profile shapes are not always square, the deflections are contingent upon the orientation of the extrusion and the direction of the applied load.

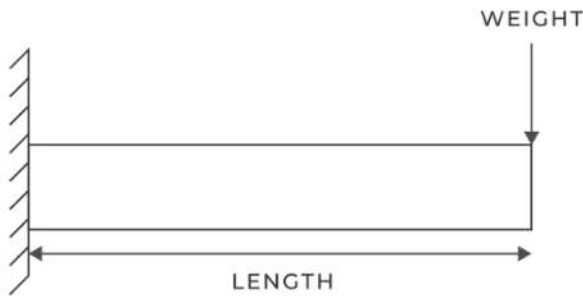
We categorise these orientations as either an 'Upright Beam' or a 'Flat Beam', as illustrated in the accompanying diagram. The following tables provide the deflection values for both these orientations. If the orientation is not mentioned, it is because the profile is a square profile, and thus orientation does not effect the deflection values.



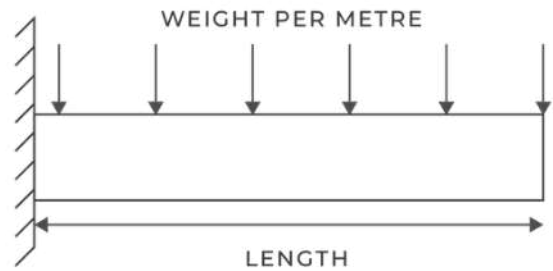
For profiles with 1 or more faces covered, the upright position is always with the extrusion having symmetry about the vertical.

Cantilever Beams

Cantilever Beams are only supported at a single end.



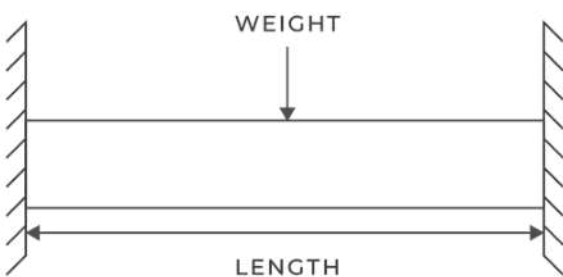
FIXED CANTILEVER
END POINT LOAD



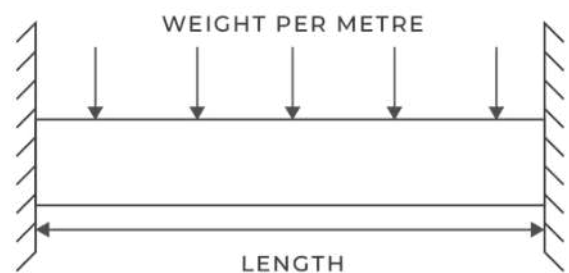
FIXED CANTILEVER
EVENLY DISTRIBUTED LOAD

Fixed Beams

Fixed Beams are supported at both ends.



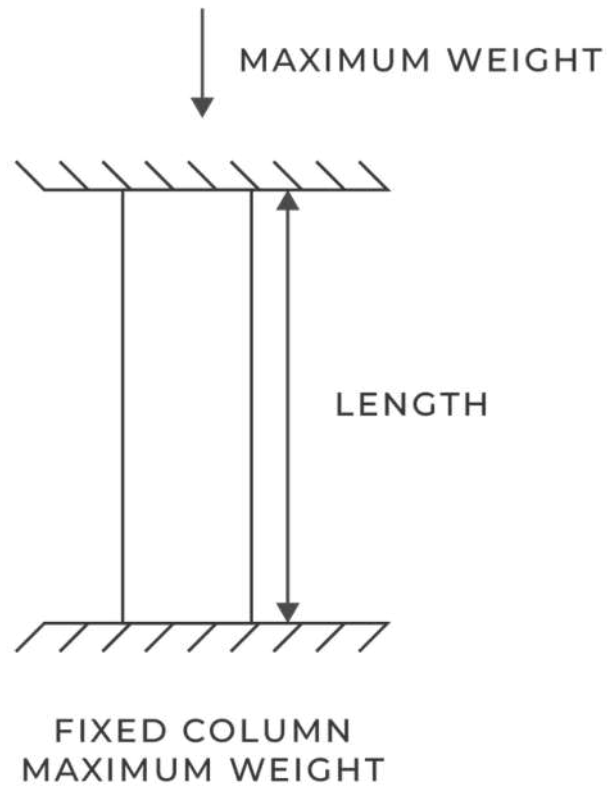
FIXED BEAM
CENTRE POINT LOAD



FIXED BEAM
EVENLY DISTRIBUTED LOAD

Fixed Columns

Fixed Columns are vertical, with the ends fixed at both ends.



20x20 V-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
V-Slot - 20x20	68900000000	2700	0.0001713810	7.03100E-09	7.03100E-09

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.7	45.8	94.9
0.25	0.3	2.9	11.6	32.2	72.1	140.4
0.50	0.5	4.5	17.3	45.7	98.5	186.0
1.00	0.9	7.9	28.7	72.7	151.2	277.1
2.00	1.8	14.7	51.5	126.7	256.7	459.4
5.00	4.3	34.9	119.8	288.7	573.1	1006.1
10.00	8.5	68.7	233.7	558.8	1100.5	1917.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.7	45.8	94.9
0.25	0.1	1.8	9.1	28.9	70.5	146.1
0.50	0.2	2.4	12.3	39.0	95.2	197.4
1.00	0.2	3.7	18.7	59.2	144.6	299.9
2.00	0.4	6.2	31.6	99.7	243.5	504.9
5.00	0.9	13.8	70.0	221.2	540.1	1120.0
10.00	1.7	26.5	134.1	423.7	1034.5	2145.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	1.0	2.0
2.00	0.0	0.2	0.8	2.1	4.2	7.7
5.00	0.1	0.6	1.9	4.6	9.2	16.2
10.00	0.1	1.1	3.7	8.8	17.4	30.5
20.00	0.3	2.1	7.2	17.3	33.9	58.9
40.00	0.5	4.2	14.4	34.1	66.9	115.9
80.00	1.1	8.5	28.6	67.9	132.8	229.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	1.0	2.0
2.00	0.0	0.1	0.7	2.1	5.1	10.5
5.00	0.0	0.3	1.5	4.6	11.3	23.3
10.00	0.0	0.6	2.8	8.8	21.6	44.7
20.00	0.1	1.1	5.5	17.3	42.2	87.4
40.00	0.1	2.1	10.8	34.1	83.4	172.8
80.00	0.3	4.2	21.5	67.9	165.8	343.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	1154	288	128	72	46	32

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
V-Slot - 20x40	68900000000	2700	0.0002999730	4.81820E-08	1.23850E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.7	24.2
0.25	0.0	0.5	2.3	6.8	15.5	30.9
0.50	0.1	0.8	3.2	8.7	19.4	37.5
1.00	0.1	1.3	4.8	12.7	27.1	50.8
2.00	0.3	2.3	8.2	20.5	42.5	77.4
5.00	0.6	5.2	18.1	44.2	88.6	157.2
10.00	1.2	10.1	34.8	83.6	165.6	290.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.6	45.5	94.3
0.25	0.2	2.1	9.1	26.3	60.4	120.1
0.50	0.3	3.1	12.4	34.0	75.4	146.0
1.00	0.6	5.0	18.8	49.3	105.3	197.7
2.00	1.0	8.8	31.8	79.9	165.2	301.2
5.00	2.5	20.3	70.6	171.9	344.8	611.6
10.00	4.9	39.5	135.2	325.2	644.2	1128.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.7	24.2
0.25	0.0	0.4	2.0	6.3	15.3	31.7
0.50	0.0	0.5	2.4	7.7	18.9	39.2
1.00	0.0	0.7	3.4	10.7	26.1	54.2
2.00	0.1	1.0	5.3	16.6	40.5	84.1
5.00	0.1	2.1	10.9	34.3	83.8	173.8
10.00	0.2	4.0	20.2	63.9	156.0	323.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.6	45.5	94.3
0.25	0.1	1.5	7.7	24.4	59.5	123.4
0.50	0.1	1.9	9.5	30.1	73.5	152.5
1.00	0.2	2.6	13.2	41.6	101.6	210.7
2.00	0.3	4.0	20.4	64.6	157.7	327.1
5.00	0.5	8.3	42.3	133.6	326.1	676.3
10.00	1.0	15.5	78.6	248.5	606.8	1258.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

20x40 V-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.3	0.7	1.3
5.00	0.0	0.1	0.3	0.7	1.4	2.6
10.00	0.0	0.2	0.6	1.3	2.6	4.7
20.00	0.0	0.3	1.1	2.6	5.1	8.8
40.00	0.1	0.6	2.1	5.0	9.9	17.1
80.00	0.2	1.2	4.2	9.9	19.5	33.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.5	1.3	2.8	5.2
5.00	0.0	0.3	1.1	2.8	5.6	10.0
10.00	0.1	0.6	2.1	5.2	10.3	18.1
20.00	0.2	1.2	4.2	10.0	19.7	34.3
40.00	0.3	2.4	8.2	19.5	38.4	66.6
80.00	0.6	4.8	16.3	38.7	75.8	131.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.3	0.8	1.8
5.00	0.0	0.0	0.2	0.7	1.7	3.6
10.00	0.0	0.1	0.4	1.3	3.2	6.7
20.00	0.0	0.2	0.8	2.6	6.3	13.0
40.00	0.0	0.3	1.6	5.0	12.3	25.4
80.00	0.0	0.6	3.1	9.9	24.3	50.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.4	1.3	3.3	6.8
5.00	0.0	0.2	0.9	2.8	6.8	14.1
10.00	0.0	0.3	1.6	5.2	12.6	26.2
20.00	0.0	0.6	3.2	10.0	24.3	50.5
40.00	0.1	1.2	6.2	19.5	47.7	99.0
80.00	0.2	2.4	12.2	38.7	94.5	196.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	2032	508	226	127	81	56

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m3 (ρ)	Area m2 (a)	Ixx	Iyy
V-Slot - 20x60	68900000000	2700	0.0004284900	1.49223E-07	1.77350E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.7	2.2	5.4	11.2
0.25	0.0	0.2	1.0	2.8	6.6	13.3
0.50	0.0	0.3	1.2	3.5	7.9	15.5
1.00	0.0	0.5	1.8	4.8	10.4	19.8
2.00	0.1	0.8	2.8	7.3	15.3	28.4
5.00	0.2	1.7	6.1	14.9	30.2	54.1
10.00	0.4	3.3	11.4	27.7	55.1	97.0
20.00	0.8	6.5	22.2	53.1	104.8	182.9
40.00	1.6	12.9	43.6	104.0	204.2	354.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.6	45.4	94.0
0.25	0.2	1.8	8.1	23.9	55.8	112.1
0.50	0.2	2.5	10.4	29.3	66.3	130.2
1.00	0.4	3.8	14.9	40.0	87.2	166.3
2.00	0.7	6.5	23.9	61.4	129.0	238.5
5.00	1.7	14.5	51.0	125.6	254.4	455.3
10.00	3.4	27.9	96.2	232.7	463.5	816.6
20.00	6.8	54.7	186.5	446.7	881.6	1539.1
40.00	13.5	108.2	367.1	874.9	1717.9	2984.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.7	2.2	5.4	11.2
0.25	0.0	0.2	0.8	2.7	6.6	13.6
0.50	0.0	0.2	1.0	3.2	7.7	16.0
1.00	0.0	0.3	1.3	4.1	10.0	20.8
2.00	0.0	0.4	1.9	6.0	14.7	30.5
5.00	0.0	0.7	3.7	11.7	28.7	59.5
10.00	0.1	1.3	6.7	21.3	52.0	107.8
20.00	0.2	2.5	12.8	40.4	98.6	204.4
40.00	0.3	4.9	24.9	78.5	191.7	397.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.6	45.4	94.0
0.25	0.1	1.4	7.1	22.6	55.2	114.4
0.50	0.1	1.7	8.4	26.6	65.0	134.7
1.00	0.1	2.2	11.0	34.6	84.6	175.3
2.00	0.2	3.2	16.0	50.7	123.8	256.6
5.00	0.4	6.2	31.3	98.9	241.4	500.5
10.00	0.7	11.2	56.7	179.1	437.4	906.9
20.00	1.3	21.2	107.5	339.7	829.4	1719.8
40.00	2.6	41.3	209.1	660.8	1613.4	3345.5
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

20x60 V-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.3	0.5
5.00	0.0	0.0	0.1	0.2	0.5	0.9
10.00	0.0	0.1	0.2	0.4	0.9	1.6
20.00	0.0	0.1	0.3	0.8	1.7	2.9
40.00	0.0	0.2	0.7	1.6	3.2	5.6
80.00	0.0	0.4	1.4	3.2	6.3	11.0
160.00	0.1	0.8	2.7	6.4	12.5	21.7
240.00	0.1	1.2	4.0	9.6	18.7	32.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.4	1.1	2.3	4.2
5.00	0.0	0.2	0.8	2.1	4.2	7.6
10.00	0.1	0.4	1.5	3.7	7.5	13.2
20.00	0.1	0.9	2.9	7.1	14.0	24.5
40.00	0.2	1.7	5.8	13.8	27.1	47.1
80.00	0.4	3.4	11.4	27.1	53.2	92.3
160.00	0.8	6.7	22.7	53.9	105.5	182.6
240.00	1.3	10.1	34.0	80.7	157.7	272.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.6	1.2
10.00	0.0	0.0	0.1	0.4	1.1	2.2
20.00	0.0	0.1	0.3	0.8	2.1	4.3
40.00	0.0	0.1	0.5	1.6	4.0	8.3
80.00	0.0	0.2	1.0	3.2	7.9	16.3
160.00	0.0	0.4	2.0	6.4	15.6	32.4
240.00	0.0	0.6	3.0	9.6	23.4	48.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.3	1.1	2.6	5.3
5.00	0.0	0.1	0.7	2.1	5.0	10.4
10.00	0.0	0.2	1.2	3.7	9.1	18.9
20.00	0.0	0.4	2.2	7.1	17.3	35.8
40.00	0.1	0.9	4.4	13.8	33.6	69.7
80.00	0.1	1.7	8.6	27.1	66.3	137.4
160.00	0.2	3.4	17.1	53.9	131.6	272.9
240.00	0.3	5.0	25.5	80.7	196.9	408.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	2910	727	323	182	116	81

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
V-Slot - 20x80	68900000000	2700	0.0005570080	3.35678E-07	2.29460E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.3	3.1	6.5
0.25	0.0	0.1	0.5	1.6	3.7	7.4
0.50	0.0	0.2	0.6	1.8	4.2	8.4
1.00	0.0	0.2	0.9	2.4	5.3	10.3
2.00	0.0	0.4	1.4	3.5	7.5	14.1
5.00	0.1	0.8	2.8	6.9	14.2	25.5
10.00	0.2	1.5	5.2	12.6	25.2	44.6
20.00	0.4	2.9	9.9	23.9	47.3	82.8
40.00	0.7	5.7	19.5	46.5	91.5	159.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.7	45.6	94.5
0.25	0.1	1.7	7.7	22.8	53.6	108.4
0.50	0.2	2.2	9.4	26.9	61.7	122.4
1.00	0.3	3.2	12.9	35.2	77.9	150.3
2.00	0.6	5.3	19.9	51.8	110.2	206.2
5.00	1.4	11.5	40.8	101.4	207.2	373.7
10.00	2.7	21.8	75.7	184.1	368.7	652.9
20.00	5.2	42.5	145.5	349.6	691.9	1211.4
40.00	10.4	83.9	285.1	680.5	1338.3	2328.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.3	3.1	6.5
0.25	0.0	0.1	0.5	1.5	3.6	7.5
0.50	0.0	0.1	0.5	1.7	4.2	8.6
1.00	0.0	0.1	0.7	2.1	5.2	10.8
2.00	0.0	0.2	0.9	3.0	7.3	15.0
5.00	0.0	0.3	1.7	5.5	13.5	27.9
10.00	0.0	0.6	3.1	9.8	23.8	49.4
20.00	0.1	1.1	5.8	18.2	44.5	92.4
40.00	0.1	2.2	11.1	35.2	86.0	178.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.1	1.2	5.9	18.7	45.6	94.5
0.25	0.1	1.4	6.9	21.8	53.1	110.2
0.50	0.1	1.6	7.9	24.9	60.7	125.9
1.00	0.1	1.9	9.8	31.1	75.9	157.3
2.00	0.2	2.7	13.8	43.5	106.2	220.1
5.00	0.3	5.0	25.5	80.7	197.1	408.6
10.00	0.6	8.9	45.2	142.8	348.5	722.7
20.00	1.0	16.7	84.4	266.9	651.5	1351.0
40.00	2.0	32.2	163.0	515.1	1257.5	2607.5
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

20x80 V-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.1	0.1	0.3
5.00	0.0	0.0	0.0	0.1	0.2	0.4
10.00	0.0	0.0	0.1	0.2	0.4	0.7
20.00	0.0	0.0	0.2	0.4	0.8	1.3
40.00	0.0	0.1	0.3	0.7	1.4	2.5
80.00	0.0	0.2	0.6	1.4	2.8	4.9
160.00	0.0	0.4	1.2	2.9	5.6	9.7
240.00	0.1	0.5	1.8	4.3	8.3	14.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.3	0.9	2.0	3.7
5.00	0.0	0.2	0.7	1.7	3.5	6.3
10.00	0.0	0.3	1.2	3.0	6.0	10.7
20.00	0.1	0.7	2.3	5.6	11.0	19.4
40.00	0.2	1.3	4.5	10.7	21.1	36.9
80.00	0.3	2.6	8.8	21.1	41.3	71.8
160.00	0.6	5.2	17.6	41.8	81.7	141.6
240.00	1.0	7.8	26.3	62.4	122.1	211.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.1	0.2	0.3
5.00	0.0	0.0	0.0	0.1	0.3	0.6
10.00	0.0	0.0	0.1	0.2	0.5	1.0
20.00	0.0	0.0	0.1	0.4	0.9	1.9
40.00	0.0	0.0	0.2	0.7	1.8	3.7
80.00	0.0	0.1	0.5	1.4	3.5	7.3
160.00	0.0	0.2	0.9	2.9	7.0	14.4
240.00	0.0	0.3	1.4	4.3	10.4	21.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.4	0.9	2.0
2.00	0.0	0.1	0.3	0.9	2.2	4.6
5.00	0.0	0.1	0.5	1.7	4.1	8.5
10.00	0.0	0.2	0.9	3.0	7.3	15.1
20.00	0.0	0.3	1.8	5.6	13.6	28.1
40.00	0.0	0.7	3.4	10.7	26.2	54.3
80.00	0.1	1.3	6.7	21.1	51.4	106.7
160.00	0.2	2.6	13.2	41.8	101.9	211.4
240.00	0.2	3.9	19.8	62.4	152.4	316.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	3765	941	418	235	151	105

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
V-Slot - 40x40	68900000000	2700	0.0004733450	8.35700E-08	8.35700E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.6	22.0
0.25	0.0	0.4	1.9	5.5	12.9	25.9
0.50	0.1	0.6	2.3	6.6	15.1	29.7
1.00	0.1	0.8	3.3	8.9	19.5	37.4
2.00	0.2	1.4	5.2	13.4	28.4	52.7
5.00	0.4	3.1	11.0	27.1	55.0	98.7
10.00	0.7	6.0	20.5	49.8	99.4	175.4
20.00	1.4	11.6	39.7	95.2	188.1	328.7
40.00	2.9	23.0	78.0	186.1	365.6	635.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.6	22.0
0.25	0.0	0.3	1.6	5.2	12.7	26.4
0.50	0.0	0.4	1.9	6.1	14.8	30.7
1.00	0.0	0.5	2.5	7.8	19.0	39.3
2.00	0.0	0.7	3.5	11.2	27.3	56.5
5.00	0.1	1.3	6.8	21.4	52.2	108.3
10.00	0.2	2.4	12.2	38.4	93.8	194.5
20.00	0.3	4.5	22.9	72.5	177.0	367.1
40.00	0.5	8.8	44.5	140.7	343.4	712.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.1	0.2	0.4	0.9	1.7
10.00	0.0	0.1	0.3	0.8	1.6	2.9
20.00	0.0	0.2	0.6	1.5	3.0	5.3
40.00	0.0	0.4	1.2	2.9	5.8	10.0
80.00	0.1	0.7	2.4	5.8	11.3	19.6
160.00	0.2	1.4	4.8	11.4	22.4	38.8
240.00	0.3	2.1	7.2	17.1	33.5	58.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.6	1.2
5.00	0.0	0.0	0.1	0.4	1.1	2.3
10.00	0.0	0.1	0.3	0.8	2.0	4.1
20.00	0.0	0.1	0.5	1.5	3.7	7.6
40.00	0.0	0.2	0.9	2.9	7.2	14.8
80.00	0.0	0.4	1.8	5.8	14.1	29.2
160.00	0.0	0.7	3.6	11.4	28.0	58.0
240.00	0.1	1.1	5.4	17.1	41.8	86.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	13711	3428	1523	857	548	381

40x80 (C-Beam) V-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
V-Slot - 40x80 (C-Beam)	68900000000	2700	0.0008216120	5.80945E-07	1.20940E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.7	5.5
0.25	0.0	0.1	0.4	1.3	3.0	6.1
0.50	0.0	0.1	0.5	1.4	3.3	6.6
1.00	0.0	0.1	0.6	1.7	3.9	7.7
2.00	0.0	0.2	0.9	2.4	5.2	9.9
5.00	0.1	0.5	1.7	4.4	9.0	16.5
10.00	0.1	0.9	3.1	7.6	15.4	27.6
20.00	0.2	1.7	5.9	14.2	28.2	49.6
40.00	0.4	3.3	11.4	27.2	53.7	93.7
80.00	0.8	6.6	22.4	53.4	104.8	182.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.7	5.2	12.8	26.4
0.25	0.0	0.4	2.0	6.0	14.3	29.1
0.50	0.0	0.5	2.3	6.8	15.8	31.7
1.00	0.1	0.7	3.0	8.4	18.9	37.0
2.00	0.1	1.1	4.3	11.5	25.0	47.6
5.00	0.3	2.3	8.3	20.9	43.4	79.4
10.00	0.5	4.3	14.9	36.6	74.1	132.4
20.00	1.0	8.2	28.1	68.0	135.4	238.4
40.00	2.0	16.0	54.6	130.8	258.0	450.3
80.00	3.9	31.7	107.6	256.4	503.3	874.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.7	5.5
0.25	0.0	0.1	0.4	1.2	3.0	6.1
0.50	0.0	0.1	0.4	1.3	3.3	6.7
1.00	0.0	0.1	0.5	1.6	3.9	8.0
2.00	0.0	0.1	0.7	2.1	5.0	10.5
5.00	0.0	0.2	1.1	3.5	8.6	17.9
10.00	0.0	0.4	1.9	6.0	14.6	30.3
20.00	0.0	0.7	3.4	10.9	26.6	55.1
40.00	0.1	1.3	6.5	20.7	50.5	104.8
80.00	0.2	2.5	12.8	40.3	98.4	204.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.7	5.2	12.8	26.4
0.25	0.0	0.4	1.8	5.8	14.2	29.4
0.50	0.0	0.4	2.0	6.4	15.6	32.4
1.00	0.0	0.5	2.4	7.6	18.5	38.4
2.00	0.0	0.6	3.1	9.9	24.2	50.3
5.00	0.1	1.1	5.4	17.0	41.5	86.0
10.00	0.1	1.8	9.1	28.8	70.2	145.6
20.00	0.2	3.3	16.6	52.3	127.7	264.8
40.00	0.4	6.2	31.5	99.4	242.7	503.2
80.00	0.8	12.1	61.3	193.6	472.6	980.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x80 (C-Beam) V-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.2	0.3
10.00	0.0	0.0	0.1	0.1	0.3	0.5
20.00	0.0	0.0	0.1	0.2	0.5	0.8
40.00	0.0	0.1	0.2	0.4	0.9	1.5
80.00	0.0	0.1	0.4	0.8	1.7	2.9
160.00	0.0	0.2	0.7	1.7	3.2	5.6
240.00	0.0	0.3	1.0	2.5	4.8	8.4
480.00	0.1	0.6	2.1	4.9	9.6	16.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.6
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.1	0.4	0.7	1.4
10.00	0.0	0.1	0.2	0.6	1.2	2.2
20.00	0.0	0.1	0.4	1.1	2.2	3.9
40.00	0.0	0.3	0.9	2.1	4.1	7.2
80.00	0.1	0.5	1.7	4.0	7.9	13.8
160.00	0.1	1.0	3.3	8.0	15.6	27.0
240.00	0.2	1.5	5.0	11.9	23.3	40.3
480.00	0.4	3.0	10.0	23.7	46.3	80.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.2	0.4
10.00	0.0	0.0	0.0	0.1	0.3	0.6
20.00	0.0	0.0	0.1	0.2	0.6	1.1
40.00	0.0	0.0	0.1	0.4	1.1	2.2
80.00	0.0	0.1	0.3	0.8	2.0	4.3
160.00	0.0	0.1	0.5	1.7	4.0	8.4
240.00	0.0	0.2	0.8	2.5	6.0	12.5
480.00	0.0	0.3	1.6	4.9	12.0	24.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.6
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.1	0.4	0.9	1.8
10.00	0.0	0.0	0.2	0.6	1.5	3.0
20.00	0.0	0.1	0.3	1.1	2.7	5.5
40.00	0.0	0.1	0.7	2.1	5.1	10.5
80.00	0.0	0.3	1.3	4.0	9.8	20.4
160.00	0.0	0.5	2.5	8.0	19.4	40.3
240.00	0.0	0.7	3.8	11.9	29.0	60.2
480.00	0.1	1.5	7.5	23.7	57.8	119.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	19842	4961	2205	1240	794	551

30x30 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x30	68900000000	2700	0.0003140000	2.77000E-08	2.77000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.8	8.7	21.3	44.1
0.25	0.1	1.0	4.2	12.1	28.0	55.7
0.50	0.1	1.4	5.6	15.6	34.7	67.3
1.00	0.2	2.3	8.5	22.4	48.0	90.4
2.00	0.5	4.0	14.3	36.1	74.8	136.6
5.00	1.1	9.1	31.7	77.2	155.1	275.4
10.00	2.2	17.7	60.6	145.8	289.0	506.7
20.00	4.3	34.8	118.4	282.9	556.7	969.3
40.00	8.6	69.1	234.1	557.0	1092.1	1894.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.8	8.7	21.3	44.1
0.25	0.0	0.7	3.6	11.3	27.6	57.1
0.50	0.1	0.9	4.4	13.9	33.8	70.1
1.00	0.1	1.2	6.0	19.0	46.4	96.2
2.00	0.1	1.8	9.3	29.3	71.5	148.2
5.00	0.2	3.8	19.0	60.1	146.8	304.3
10.00	0.4	7.0	35.3	111.5	272.3	564.6
20.00	0.8	13.4	67.8	214.3	523.2	1085.0
40.00	1.6	26.2	132.9	419.9	1025.2	2125.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.1	0.2	0.6	1.3	2.4
5.00	0.0	0.1	0.5	1.3	2.5	4.5
10.00	0.0	0.3	1.0	2.3	4.6	8.1
20.00	0.1	0.5	1.9	4.5	8.8	15.4
40.00	0.1	1.1	3.7	8.7	17.2	29.8
80.00	0.3	2.2	7.3	17.3	33.9	58.7
160.00	0.5	4.3	14.5	34.4	67.4	116.6
240.00	0.8	6.4	21.7	51.6	100.8	174.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.2	0.6	1.5	3.1
5.00	0.0	0.1	0.4	1.3	3.1	6.3
10.00	0.0	0.1	0.7	2.3	5.7	11.8
20.00	0.0	0.3	1.4	4.5	10.9	22.6
40.00	0.0	0.5	2.8	8.7	21.4	44.3
80.00	0.1	1.1	5.5	17.3	42.3	87.7
160.00	0.1	2.2	10.9	34.4	84.1	174.4
240.00	0.2	3.2	16.3	51.6	125.9	261.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	4545	1136	505	284	182	126

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x30 (1 Slot)	68900000000	2700	0.0003690000	3.12000E-08	3.49000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	2.9	9.1	22.2	46.0
0.25	0.1	0.9	4.2	12.1	28.1	56.3
0.50	0.1	1.3	5.4	15.2	34.1	66.6
1.00	0.2	2.1	8.0	21.3	46.0	87.1
2.00	0.4	3.6	13.1	33.4	69.7	128.2
5.00	1.0	8.2	28.5	69.9	141.0	251.4
10.00	1.9	15.8	54.2	130.8	259.9	456.7
20.00	3.8	31.0	105.6	252.5	497.6	867.5
40.00	7.6	61.4	208.2	495.9	972.9	1688.9
80.00	15.2	122.3	413.6	982.6	1923.6	3331.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.1	19.8	41.2
0.25	0.1	0.8	3.7	10.8	25.2	50.3
0.50	0.1	1.2	4.9	13.6	30.5	59.5
1.00	0.2	1.9	7.2	19.0	41.1	77.9
2.00	0.4	3.2	11.8	29.9	62.3	114.6
5.00	0.9	7.3	25.5	62.5	126.1	224.7
10.00	1.7	14.1	48.5	116.9	232.3	408.3
20.00	3.4	27.7	94.4	225.7	444.8	775.5
40.00	6.8	54.9	186.2	443.3	869.8	1509.8
80.00	13.6	109.3	369.7	878.5	1719.7	2978.5
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	2.9	9.1	22.2	46.0
0.25	0.0	0.7	3.6	11.4	27.8	57.6
0.50	0.1	0.9	4.3	13.7	33.3	69.1
1.00	0.1	1.1	5.8	18.2	44.5	92.2
2.00	0.1	1.7	8.7	27.3	66.8	138.4
5.00	0.2	3.4	17.3	54.7	133.6	277.1
10.00	0.4	6.3	31.8	100.4	245.0	508.1
20.00	0.7	12.0	60.6	191.6	467.9	970.1
40.00	1.5	23.4	118.4	374.2	913.5	1894.2
80.00	2.9	46.2	233.9	739.2	1804.8	3742.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.1	19.8	41.2
0.25	0.0	0.6	3.2	10.2	24.8	51.5
0.50	0.0	0.8	3.9	12.2	29.8	61.8
1.00	0.1	1.0	5.2	16.3	39.8	82.5
2.00	0.1	1.5	7.7	24.4	59.7	123.8
5.00	0.2	3.1	15.5	48.9	119.4	247.7
10.00	0.4	5.6	28.4	89.7	219.0	454.2
20.00	0.7	10.7	54.2	171.3	418.3	867.3
40.00	1.3	20.9	105.8	334.5	816.7	1693.4

30x30 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x30	68900000000	2700	0.0003140000	2.77000E-08	2.77000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.8	8.7	21.3	44.1
0.25	0.1	1.0	4.2	12.1	28.0	55.7
0.50	0.1	1.4	5.6	15.6	34.7	67.3
1.00	0.2	2.3	8.5	22.4	48.0	90.4
2.00	0.5	4.0	14.3	36.1	74.8	136.6
5.00	1.1	9.1	31.7	77.2	155.1	275.4
10.00	2.2	17.7	60.6	145.8	289.0	506.7
20.00	4.3	34.8	118.4	282.9	556.7	969.3
40.00	8.6	69.1	234.1	557.0	1092.1	1894.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.8	8.7	21.3	44.1
0.25	0.0	0.7	3.6	11.3	27.6	57.1
0.50	0.1	0.9	4.4	13.9	33.8	70.1
1.00	0.1	1.2	6.0	19.0	46.4	96.2
2.00	0.1	1.8	9.3	29.3	71.5	148.2
5.00	0.2	3.8	19.0	60.1	146.8	304.3
10.00	0.4	7.0	35.3	111.5	272.3	564.6
20.00	0.8	13.4	67.8	214.3	523.2	1085.0
40.00	1.6	26.2	132.9	419.9	1025.2	2125.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.1	0.2	0.6	1.3	2.4
5.00	0.0	0.1	0.5	1.3	2.5	4.5
10.00	0.0	0.3	1.0	2.3	4.6	8.1
20.00	0.1	0.5	1.9	4.5	8.8	15.4
40.00	0.1	1.1	3.7	8.7	17.2	29.8
80.00	0.3	2.2	7.3	17.3	33.9	58.7
160.00	0.5	4.3	14.5	34.4	67.4	116.6
240.00	0.8	6.4	21.7	51.6	100.8	174.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.2	0.6	1.5	3.1
5.00	0.0	0.1	0.4	1.3	3.1	6.3
10.00	0.0	0.1	0.7	2.3	5.7	11.8
20.00	0.0	0.3	1.4	4.5	10.9	22.6
40.00	0.0	0.5	2.8	8.7	21.4	44.3
80.00	0.1	1.1	5.5	17.3	42.3	87.7
160.00	0.1	2.2	10.9	34.4	84.1	174.4
240.00	0.2	3.2	16.3	51.6	125.9	261.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	4545	1136	505	284	182	126

30x30 T-Slot - 2 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x30 (2 Slot)	68900000000	2700	0.0003510000	3.48000E-08	2.79000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.5	7.8	18.9	39.3
0.25	0.1	0.8	3.6	10.5	24.3	48.5
0.50	0.1	1.2	4.8	13.2	29.6	57.7
1.00	0.2	1.8	7.1	18.7	40.2	76.1
2.00	0.4	3.2	11.7	29.6	61.6	112.9
5.00	0.9	7.3	25.5	62.3	125.5	223.4
10.00	1.7	14.1	48.5	116.9	232.0	407.5
20.00	3.4	27.8	94.5	226.0	445.1	775.7
40.00	6.8	55.0	186.6	444.2	871.3	1512.2
80.00	13.7	109.6	370.7	880.6	1723.7	2985.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	3.1	9.7	23.6	49.0
0.25	0.1	1.0	4.5	13.1	30.3	60.5
0.50	0.1	1.5	5.9	16.5	36.9	71.9
1.00	0.3	2.3	8.8	23.3	50.2	94.9
2.00	0.5	4.0	14.5	36.9	76.8	140.8
5.00	1.1	9.1	31.8	77.7	156.5	278.6
10.00	2.2	17.6	60.5	145.8	289.4	508.3
20.00	4.3	34.6	117.9	281.8	555.2	967.6
40.00	8.5	68.6	232.7	554.0	1086.8	1886.1
80.00	17.0	136.7	462.4	1098.4	2150.0	3723.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.5	7.8	18.9	39.3
0.25	0.0	0.6	3.1	9.8	23.9	49.6
0.50	0.0	0.7	3.7	11.8	28.9	60.0
1.00	0.1	1.0	5.0	15.9	38.9	80.7
2.00	0.1	1.5	7.6	24.1	58.9	122.1
5.00	0.2	3.0	15.4	48.7	118.8	246.4
10.00	0.3	5.6	28.3	89.6	218.7	453.5
20.00	0.7	10.7	54.2	171.4	418.5	867.8
40.00	1.3	20.9	106.0	335.1	818.0	1696.3
80.00	2.6	41.4	209.6	662.4	1617.1	3353.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	3.1	9.7	23.6	49.0
0.25	0.0	0.8	3.9	12.2	29.8	61.9
0.50	0.1	0.9	4.7	14.8	36.1	74.8
1.00	0.1	1.2	6.3	19.9	48.5	100.6
2.00	0.1	1.9	9.5	30.1	73.5	152.3
5.00	0.2	3.8	19.2	60.7	148.2	307.3
10.00	0.4	7.0	35.4	111.7	272.8	565.7
20.00	0.8	13.4	67.6	213.8	522.0	1082.4
40.00	1.6	26.1	132.2	417.9	1020.3	2115.8
80.00	3.2	51.6	261.4	826.2	2017.1	4182.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

30x30 T-Slot - 2 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.8
2.00	0.0	0.1	0.2	0.5	1.1	2.0
5.00	0.0	0.1	0.4	1.0	2.1	3.7
10.00	0.0	0.2	0.8	1.9	3.7	6.6
20.00	0.1	0.4	1.5	3.6	7.1	12.3
40.00	0.1	0.9	2.9	7.0	13.7	23.8
80.00	0.2	1.7	5.8	13.8	27.0	46.8
160.00	0.4	3.4	11.6	27.4	53.7	92.9
240.00	0.6	5.1	17.3	41.1	80.3	138.9
480.00	1.3	10.2	34.6	82.0	160.2	277.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.1	0.2	0.6	1.3	2.5
5.00	0.0	0.1	0.5	1.3	2.6	4.6
10.00	0.0	0.3	1.0	2.3	4.6	8.2
20.00	0.1	0.5	1.9	4.5	8.8	15.4
40.00	0.1	1.1	3.7	8.7	17.1	29.7
80.00	0.3	2.1	7.2	17.2	33.7	58.4
160.00	0.5	4.3	14.4	34.2	66.9	115.8
240.00	0.8	6.4	21.6	51.2	100.2	173.3
480.00	1.6	12.8	43.1	102.3	199.8	345.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.8
2.00	0.0	0.0	0.2	0.5	1.2	2.5
5.00	0.0	0.1	0.3	1.0	2.5	5.1
10.00	0.0	0.1	0.6	1.9	4.6	9.4
20.00	0.0	0.2	1.1	3.6	8.7	18.1
40.00	0.0	0.4	2.2	7.0	17.0	35.3
80.00	0.1	0.9	4.4	13.8	33.7	69.9
160.00	0.1	1.7	8.7	27.4	67.0	138.9
240.00	0.2	2.6	13.0	41.1	100.3	207.9
480.00	0.3	5.1	25.9	82.0	200.2	415.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.0	0.2	0.6	1.5	3.2
5.00	0.0	0.1	0.4	1.3	3.1	6.4
10.00	0.0	0.1	0.7	2.3	5.7	11.8
20.00	0.0	0.3	1.4	4.5	10.9	22.5
40.00	0.0	0.5	2.8	8.7	21.3	44.1
80.00	0.1	1.1	5.4	17.2	42.0	87.1
160.00	0.1	2.1	10.8	34.2	83.6	173.3
240.00	0.2	3.2	16.2	51.2	125.1	259.4
480.00	0.4	6.4	32.4	102.3	249.7	517.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	4577	1144	509	286	183	127

30x30 T-Slot - 2 Slot Corner

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x30 (2 Slot Corner)	68900000000	2700	0.0003500000	3.11000E-08	3.11000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.7	8.7	21.1	43.8
0.25	0.1	0.9	4.0	11.7	27.1	54.1
0.50	0.1	1.3	5.3	14.8	33.0	64.4
1.00	0.2	2.1	7.9	20.9	45.0	85.0
2.00	0.4	3.6	13.0	33.1	68.8	126.2
5.00	1.0	8.2	28.5	69.7	140.3	249.8
10.00	1.9	15.8	54.2	130.7	259.6	455.8
20.00	3.8	31.1	105.7	252.8	498.0	867.9
40.00	7.7	61.6	208.8	497.0	974.9	1691.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.7	8.7	21.1	43.8
0.25	0.0	0.7	3.5	10.9	26.7	55.4
0.50	0.1	0.8	4.2	13.2	32.3	67.0
1.00	0.1	1.1	5.6	17.8	43.5	90.2
2.00	0.1	1.7	8.5	27.0	65.8	136.5
5.00	0.2	3.4	17.2	54.4	132.9	275.6
10.00	0.4	6.3	31.7	100.2	244.7	507.3
20.00	0.7	12.0	60.7	191.8	468.2	970.9
40.00	1.5	23.4	118.6	374.9	915.3	1898.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.1	0.2	0.6	1.2	2.2
5.00	0.0	0.1	0.5	1.1	2.3	4.1
10.00	0.0	0.2	0.9	2.1	4.2	7.4
20.00	0.1	0.5	1.7	4.0	7.9	13.8
40.00	0.1	1.0	3.3	7.8	15.3	26.7
80.00	0.2	1.9	6.5	15.4	30.2	52.4
160.00	0.5	3.8	12.9	30.7	60.1	103.9
240.00	0.7	5.7	19.4	46.0	89.9	155.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.2	0.6	1.4	2.8
5.00	0.0	0.1	0.4	1.1	2.8	5.7
10.00	0.0	0.1	0.7	2.1	5.1	10.6
20.00	0.0	0.2	1.3	4.0	9.8	20.2
40.00	0.0	0.5	2.5	7.8	19.1	39.5
80.00	0.1	1.0	4.9	15.4	37.7	78.2
160.00	0.1	1.9	9.7	30.7	75.0	155.4
240.00	0.2	2.9	14.5	46.0	112.2	232.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	5103	1276	567	319	204	142

30x30 T-Slot - 3 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	Ixx	Iyy
T-Slot 30x30 (3 Slot)	68900000000	2700	0.0003320000	3.10000E-08	2.78000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.2	20.1	41.7
0.25	0.1	0.9	3.9	11.3	26.1	52.0
0.50	0.1	1.3	5.2	14.4	32.1	62.4
1.00	0.2	2.0	7.8	20.5	44.0	83.0
2.00	0.4	3.6	12.9	32.7	67.9	124.4
5.00	1.0	8.2	28.4	69.5	139.7	248.4
10.00	1.9	15.8	54.3	130.7	259.3	455.0
20.00	3.9	31.1	105.9	253.2	498.5	868.4
40.00	7.7	61.8	209.3	498.1	977.0	1695.1
80.00	15.3	123.0	416.0	988.1	1933.8	3348.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	2.9	9.2	22.4	46.5
0.25	0.1	1.0	4.3	12.6	29.1	58.0
0.50	0.1	1.4	5.8	16.0	35.8	69.5
1.00	0.2	2.3	8.7	22.8	49.1	92.6
2.00	0.5	4.0	14.4	36.5	75.8	138.7
5.00	1.1	9.1	31.7	77.5	155.8	277.0
10.00	2.2	17.6	60.5	145.8	289.2	507.4
20.00	4.3	34.7	118.1	282.3	555.9	968.4
40.00	8.6	68.9	233.4	555.5	1089.4	1890.3
80.00	17.1	137.1	463.8	1101.8	2156.4	3734.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.2	20.1	41.7
0.25	0.0	0.7	3.3	10.5	25.7	53.3
0.50	0.1	0.8	4.1	12.8	31.3	64.9
1.00	0.1	1.1	5.5	17.4	42.5	88.2
2.00	0.1	1.7	8.4	26.6	65.0	134.7
5.00	0.2	3.4	17.1	54.2	132.2	274.2
10.00	0.4	6.3	31.7	100.1	244.4	506.7
20.00	0.7	12.0	60.7	192.0	468.6	971.8
40.00	1.5	23.5	118.9	375.7	917.2	1901.8
80.00	2.9	46.4	235.1	743.1	1814.2	3761.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	2.9	9.2	22.4	46.5
0.25	0.0	0.7	3.7	11.7	28.7	59.4
0.50	0.1	0.9	4.5	14.3	34.9	72.4
1.00	0.1	1.2	6.1	19.4	47.4	98.3
2.00	0.1	1.9	9.4	29.7	72.4	150.2
5.00	0.2	3.8	19.1	60.4	147.5	305.8
10.00	0.4	7.0	35.3	111.6	272.5	565.0
20.00	0.8	13.4	67.7	214.0	522.6	1083.6
40.00	1.6	26.2	132.5	418.9	1022.7	2120.7
80.00	3.2	51.8	262.2	828.6	2023.0	4195.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

30x30 T-Slot - 3 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.1	0.2	0.6	1.2	2.2
5.00	0.0	0.1	0.5	1.1	2.3	4.1
10.00	0.0	0.2	0.9	2.1	4.2	7.3
20.00	0.1	0.5	1.7	4.0	7.9	13.8
40.00	0.1	1.0	3.3	7.8	15.4	26.7
80.00	0.2	1.9	6.5	15.5	30.3	52.5
160.00	0.5	3.8	13.0	30.8	60.2	104.2
240.00	0.7	5.8	19.4	46.1	90.1	155.9
480.00	1.4	11.5	38.8	92.0	179.8	310.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.1	0.2	0.6	1.3	2.4
5.00	0.0	0.1	0.5	1.3	2.6	4.6
10.00	0.0	0.3	1.0	2.3	4.6	8.2
20.00	0.1	0.5	1.9	4.5	8.8	15.4
40.00	0.1	1.1	3.7	8.7	17.1	29.8
80.00	0.3	2.1	7.3	17.3	33.8	58.6
160.00	0.5	4.3	14.5	34.3	67.2	116.2
240.00	0.8	6.4	21.7	51.4	100.5	173.8
480.00	1.6	12.8	43.3	102.6	200.5	346.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.2	0.6	1.4	2.8
5.00	0.0	0.1	0.4	1.1	2.8	5.7
10.00	0.0	0.1	0.7	2.1	5.1	10.6
20.00	0.0	0.2	1.3	4.0	9.8	20.2
40.00	0.0	0.5	2.5	7.8	19.1	39.6
80.00	0.1	1.0	4.9	15.5	37.8	78.4
160.00	0.1	1.9	9.7	30.8	75.2	155.9
240.00	0.2	2.9	14.6	46.1	112.6	233.4
480.00	0.4	5.8	29.1	92.0	224.7	465.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.0	0.2	0.6	1.5	3.1
5.00	0.0	0.1	0.4	1.3	3.1	6.4
10.00	0.0	0.1	0.7	2.3	5.7	11.8
20.00	0.0	0.3	1.4	4.5	10.9	22.6
40.00	0.0	0.5	2.8	8.7	21.3	44.2
80.00	0.1	1.1	5.5	17.3	42.1	87.4
160.00	0.1	2.1	10.9	34.3	83.8	173.8
240.00	0.2	3.2	16.3	51.4	125.5	260.2
480.00	0.4	6.4	32.5	102.6	250.5	519.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	4561	1140	507	285	182	127

30x30 T-Slot - 90 Degree Radius

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	Ixx	Iyy
T-Slot 30x30 (90 Degree Radius)	68900000000	2700	0.0002880000	2.28000E-08	2.28000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	3.1	9.7	23.7	49.2
0.25	0.1	1.1	4.8	13.9	31.8	63.2
0.50	0.2	1.6	6.6	18.0	40.0	77.3
1.00	0.3	2.7	10.1	26.4	56.2	105.4
2.00	0.6	4.8	17.1	43.0	88.8	161.6
5.00	1.3	11.0	38.2	93.0	186.3	330.2
10.00	2.6	21.4	73.3	176.2	349.0	611.2
20.00	5.2	42.2	143.6	342.8	674.2	1173.2
40.00	10.4	83.9	284.1	675.8	1324.7	2297.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.6	3.1	9.7	23.7	49.2
0.25	0.1	0.8	4.1	12.8	31.3	65.0
0.50	0.1	1.0	5.0	16.0	39.0	80.8
1.00	0.1	1.4	7.0	22.2	54.2	112.4
2.00	0.1	2.2	11.0	34.7	84.7	175.6
5.00	0.3	4.5	22.8	72.2	176.2	365.3
10.00	0.5	8.4	42.6	134.6	328.6	681.4
20.00	1.0	16.2	82.1	259.5	633.5	1313.7
40.00	2.0	31.8	161.1	509.3	1243.4	2578.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.1	0.3	0.7	1.5	2.8
5.00	0.0	0.2	0.6	1.5	3.0	5.4
10.00	0.0	0.3	1.2	2.8	5.6	9.8
20.00	0.1	0.7	2.3	5.4	10.7	18.6
40.00	0.2	1.3	4.5	10.6	20.8	36.2
80.00	0.3	2.6	8.8	21.0	41.1	71.3
160.00	0.7	5.2	17.6	41.8	81.8	141.5
240.00	1.0	7.8	26.4	62.6	122.5	211.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.5	1.0
2.00	0.0	0.0	0.2	0.7	1.8	3.7
5.00	0.0	0.1	0.5	1.5	3.7	7.6
10.00	0.0	0.2	0.9	2.8	6.8	14.2
20.00	0.0	0.3	1.7	5.4	13.2	27.4
40.00	0.0	0.7	3.4	10.6	25.9	53.7
80.00	0.1	1.3	6.7	21.0	51.3	106.4
160.00	0.2	2.6	13.2	41.8	102.1	211.8
240.00	0.2	3.9	19.8	62.6	153.0	317.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	3741	935	416	234	150	104

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x60	68900000000	2700	0.0005530000	1.96600E-07	5.09000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.7	2.2	5.3	10.9
0.25	0.0	0.2	0.9	2.6	6.2	12.6
0.50	0.0	0.3	1.1	3.1	7.2	14.2
1.00	0.0	0.4	1.5	4.1	9.1	17.5
2.00	0.1	0.6	2.3	6.0	12.8	24.0
5.00	0.2	1.3	4.8	11.8	24.1	43.5
10.00	0.3	2.5	8.8	21.5	43.0	76.1
20.00	0.6	5.0	17.0	40.8	80.7	141.3
40.00	1.2	9.8	33.3	79.4	156.2	271.7
80.00	2.4	19.4	65.9	156.7	307.0	532.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.4	20.4	42.3
0.25	0.1	0.8	3.4	10.2	24.0	48.6
0.50	0.1	1.0	4.2	12.1	27.7	54.9
1.00	0.1	1.5	5.8	15.8	35.0	67.5
2.00	0.3	2.4	8.9	23.3	49.5	92.6
5.00	0.6	5.2	18.4	45.6	93.2	168.2
10.00	1.2	9.8	34.1	82.9	166.1	294.0
20.00	2.4	19.2	65.6	157.5	311.8	545.8
40.00	4.7	37.8	128.5	306.7	603.2	1049.3
80.00	9.4	75.1	254.4	605.1	1185.9	2056.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.7	2.2	5.3	10.9
0.25	0.0	0.2	0.8	2.5	6.2	12.8
0.50	0.0	0.2	0.9	2.9	7.0	14.6
1.00	0.0	0.2	1.1	3.6	8.8	18.3
2.00	0.0	0.3	1.6	5.1	12.4	25.6
5.00	0.0	0.6	3.0	9.4	23.0	47.6
10.00	0.1	1.0	5.3	16.6	40.6	84.3
20.00	0.1	1.9	9.9	31.1	76.0	157.6
40.00	0.2	3.8	19.0	60.1	146.7	304.3
80.00	0.5	7.4	37.3	118.0	288.2	597.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.4	20.4	42.3
0.25	0.0	0.6	3.1	9.8	23.8	49.4
0.50	0.0	0.7	3.5	11.2	27.2	56.4
1.00	0.1	0.9	4.4	13.9	34.1	70.6
2.00	0.1	1.2	6.2	19.5	47.7	98.9
5.00	0.1	2.3	11.5	36.3	88.7	183.9
10.00	0.3	4.0	20.3	64.3	157.0	325.5
20.00	0.5	7.5	38.0	120.2	293.6	608.7
40.00	0.9	14.5	73.4	232.1	566.7	1175.2
80.00	1.8	28.5	144.3	455.9	1113.1	2308.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

30x60 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.2	0.4
5.00	0.0	0.0	0.1	0.2	0.4	0.7
10.00	0.0	0.0	0.1	0.3	0.7	1.2
20.00	0.0	0.1	0.3	0.6	1.3	2.3
40.00	0.0	0.2	0.5	1.3	2.5	4.3
80.00	0.0	0.3	1.0	2.5	4.8	8.4
160.00	0.1	0.6	2.1	4.9	9.5	16.5
240.00	0.1	0.9	3.1	7.3	14.3	24.7
480.00	0.2	1.8	6.1	14.5	28.4	49.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.2	0.4	0.9	1.7
5.00	0.0	0.1	0.3	0.8	1.6	2.8
10.00	0.0	0.2	0.5	1.3	2.7	4.8
20.00	0.0	0.3	1.0	2.5	5.0	8.7
40.00	0.1	0.6	2.0	4.8	9.5	16.6
80.00	0.1	1.2	4.0	9.5	18.6	32.4
160.00	0.3	2.3	7.9	18.8	36.8	63.8
240.00	0.4	3.5	11.9	28.1	55.1	95.3
480.00	0.9	7.0	23.7	56.1	109.7	189.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.3	0.5
5.00	0.0	0.0	0.1	0.2	0.5	1.0
10.00	0.0	0.0	0.1	0.3	0.8	1.8
20.00	0.0	0.0	0.2	0.6	1.6	3.3
40.00	0.0	0.1	0.4	1.3	3.1	6.3
80.00	0.0	0.2	0.8	2.5	6.0	12.4
160.00	0.0	0.3	1.5	4.9	11.9	24.7
240.00	0.0	0.5	2.3	7.3	17.8	36.9
480.00	0.1	0.9	4.6	14.5	35.5	73.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.1	0.4	1.0	2.1
5.00	0.0	0.0	0.2	0.8	1.8	3.8
10.00	0.0	0.1	0.4	1.3	3.3	6.8
20.00	0.0	0.2	0.8	2.5	6.1	12.7
40.00	0.0	0.3	1.5	4.8	11.8	24.5
80.00	0.0	0.6	3.0	9.5	23.2	48.1
160.00	0.1	1.2	6.0	18.8	46.0	95.3
240.00	0.1	1.8	8.9	28.1	68.7	142.5
480.00	0.2	3.5	17.8	56.1	137.0	284.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	8351	2088	928	522	334	232

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 30x90	68900000000	2700	0.0007920000	6.14300E-07	7.41000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.0	2.4	5.0
0.25	0.0	0.1	0.4	1.1	2.7	5.5
0.50	0.0	0.1	0.4	1.3	3.0	6.1
1.00	0.0	0.1	0.6	1.6	3.6	7.1
2.00	0.0	0.2	0.8	2.2	4.8	9.2
5.00	0.1	0.4	1.6	4.1	8.5	15.4
10.00	0.1	0.8	2.9	7.2	14.5	25.9
20.00	0.2	1.6	5.5	13.4	26.6	46.7
40.00	0.4	3.2	10.7	25.7	50.7	88.5
80.00	0.8	6.2	21.2	50.4	99.0	171.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.2	20.1	41.6
0.25	0.1	0.7	3.1	9.5	22.6	45.9
0.50	0.1	0.8	3.7	10.8	25.1	50.2
1.00	0.1	1.2	4.8	13.3	30.1	58.9
2.00	0.2	1.8	6.9	18.5	40.1	76.2
5.00	0.4	3.7	13.4	33.8	70.1	128.1
10.00	0.8	6.9	24.2	59.5	120.1	214.5
20.00	1.6	13.3	45.8	110.7	220.2	387.5
40.00	3.2	26.1	89.1	213.2	420.4	733.3
80.00	6.4	51.8	175.5	418.1	820.7	1425.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.0	2.4	5.0
0.25	0.0	0.1	0.4	1.1	2.7	5.6
0.50	0.0	0.1	0.4	1.2	3.0	6.2
1.00	0.0	0.1	0.5	1.5	3.6	7.4
2.00	0.0	0.1	0.6	1.9	4.7	9.7
5.00	0.0	0.2	1.0	3.3	8.1	16.8
10.00	0.0	0.4	1.8	5.6	13.7	28.5
20.00	0.0	0.6	3.2	10.3	25.1	52.0
40.00	0.1	1.2	6.2	19.5	47.7	98.9
80.00	0.1	2.4	12.0	38.1	93.0	192.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.6	8.2	20.1	41.6
0.25	0.0	0.6	2.9	9.2	22.4	46.5
0.50	0.0	0.6	3.2	10.1	24.8	51.3
1.00	0.0	0.8	3.8	12.1	29.4	61.1
2.00	0.1	1.0	5.0	15.9	38.8	80.5
5.00	0.1	1.7	8.7	27.4	67.0	138.9
10.00	0.2	2.9	14.8	46.6	113.9	236.2
20.00	0.3	5.3	26.9	85.1	207.7	430.7
40.00	0.6	10.1	51.2	161.9	395.3	819.8
80.00	1.2	19.7	99.9	315.7	770.6	1598.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

30x90 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.1	0.3
10.00	0.0	0.0	0.0	0.1	0.2	0.4
20.00	0.0	0.0	0.1	0.2	0.4	0.8
40.00	0.0	0.0	0.2	0.4	0.8	1.4
80.00	0.0	0.1	0.3	0.8	1.6	2.7
160.00	0.0	0.2	0.7	1.6	3.1	5.3
240.00	0.0	0.3	1.0	2.3	4.6	7.9
480.00	0.1	0.6	2.0	4.7	9.1	15.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.1	0.3	0.7	1.4
5.00	0.0	0.1	0.2	0.6	1.2	2.2
10.00	0.0	0.1	0.4	1.0	2.0	3.6
20.00	0.0	0.2	0.7	1.8	3.5	6.3
40.00	0.1	0.4	1.4	3.4	6.7	11.7
80.00	0.1	0.8	2.8	6.6	12.9	22.5
160.00	0.2	1.6	5.5	13.0	25.4	44.1
240.00	0.3	2.4	8.2	19.4	37.9	65.7
480.00	0.6	4.8	16.3	38.6	75.5	130.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.2	0.3
10.00	0.0	0.0	0.0	0.1	0.3	0.6
20.00	0.0	0.0	0.1	0.2	0.5	1.1
40.00	0.0	0.0	0.1	0.4	1.0	2.1
80.00	0.0	0.0	0.3	0.8	1.9	4.0
160.00	0.0	0.1	0.5	1.6	3.8	7.9
240.00	0.0	0.1	0.7	2.3	5.7	11.8
480.00	0.0	0.3	1.5	4.7	11.4	23.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.9
2.00	0.0	0.0	0.1	0.3	0.8	1.7
5.00	0.0	0.0	0.2	0.6	1.4	2.9
10.00	0.0	0.1	0.3	1.0	2.4	4.9
20.00	0.0	0.1	0.6	1.8	4.3	9.0
40.00	0.0	0.2	1.1	3.4	8.2	17.1
80.00	0.0	0.4	2.1	6.6	16.1	33.3
160.00	0.1	0.8	4.1	13.0	31.7	65.7
240.00	0.1	1.2	6.1	19.4	47.3	98.1
480.00	0.2	2.4	12.2	38.6	94.2	195.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	12157	3039	1351	760	486	338

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	Ixx	Iyy
T-Slot 30x120	68900000000	2700	0.0009940000	1.36140E-06	9.69000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.2	0.6	1.4	2.8
0.25	0.0	0.0	0.2	0.6	1.5	3.1
0.50	0.0	0.1	0.2	0.7	1.6	3.3
1.00	0.0	0.1	0.3	0.8	1.9	3.8
2.00	0.0	0.1	0.4	1.1	2.5	4.7
5.00	0.0	0.2	0.8	2.0	4.1	7.5
10.00	0.0	0.4	1.4	3.4	6.8	12.3
20.00	0.1	0.7	2.5	6.1	12.3	21.7
40.00	0.2	1.4	4.9	11.7	23.2	40.5
80.00	0.4	2.8	9.6	22.9	44.9	78.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.5	7.9	19.3	39.9
0.25	0.0	0.6	2.9	8.9	21.2	43.2
0.50	0.1	0.7	3.3	9.8	23.1	46.5
1.00	0.1	1.0	4.1	11.8	26.9	53.2
2.00	0.2	1.5	5.8	15.7	34.6	66.4
5.00	0.3	2.9	10.8	27.5	57.5	106.0
10.00	0.6	5.4	19.0	47.1	95.8	172.2
20.00	1.3	10.3	35.6	86.3	172.3	304.4
40.00	2.5	20.1	68.6	164.6	325.4	568.9
80.00	4.9	39.7	134.7	321.3	631.5	1097.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.2	0.6	1.4	2.8
0.25	0.0	0.0	0.2	0.6	1.5	3.1
0.50	0.0	0.0	0.2	0.7	1.6	3.4
1.00	0.0	0.0	0.2	0.8	1.9	3.9
2.00	0.0	0.1	0.3	1.0	2.4	5.0
5.00	0.0	0.1	0.5	1.6	3.9	8.1
10.00	0.0	0.2	0.8	2.7	6.5	13.4
20.00	0.0	0.3	1.5	4.7	11.6	24.0
40.00	0.0	0.6	2.8	8.9	21.8	45.2
80.00	0.1	1.1	5.5	17.3	42.2	87.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.5	2.5	7.9	19.3	39.9
0.25	0.0	0.5	2.7	8.6	21.0	43.6
0.50	0.0	0.6	3.0	9.4	22.8	47.4
1.00	0.0	0.7	3.4	10.8	26.4	54.8
2.00	0.1	0.9	4.4	13.8	33.6	69.7
5.00	0.1	1.4	7.1	22.6	55.1	114.3
10.00	0.1	2.3	11.8	37.3	91.0	188.7
20.00	0.3	4.2	21.1	66.7	162.7	337.5
40.00	0.5	7.8	39.7	125.4	306.2	635.0
80.00	0.9	15.2	76.9	243.0	593.2	1230.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

30x120 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.0	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.1
10.00	0.0	0.0	0.0	0.1	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.2	0.4
40.00	0.0	0.0	0.1	0.2	0.4	0.6
80.00	0.0	0.0	0.2	0.4	0.7	1.2
160.00	0.0	0.1	0.3	0.7	1.4	2.4
240.00	0.0	0.1	0.4	1.1	2.1	3.6
480.00	0.0	0.3	0.9	2.1	4.1	7.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.8
2.00	0.0	0.0	0.1	0.3	0.6	1.2
5.00	0.0	0.0	0.2	0.5	1.0	1.9
10.00	0.0	0.1	0.3	0.8	1.6	2.9
20.00	0.0	0.2	0.6	1.4	2.8	5.0
40.00	0.0	0.3	1.1	2.6	5.2	9.1
80.00	0.1	0.6	2.1	5.1	10.0	17.4
160.00	0.2	1.2	4.2	10.0	19.5	33.9
240.00	0.2	1.8	6.3	14.9	29.1	50.4
480.00	0.5	3.7	12.4	29.6	57.8	100.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.0	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.1	0.3
20.00	0.0	0.0	0.0	0.1	0.2	0.5
40.00	0.0	0.0	0.1	0.2	0.5	0.9
80.00	0.0	0.0	0.1	0.4	0.9	1.8
160.00	0.0	0.0	0.2	0.7	1.7	3.6
240.00	0.0	0.1	0.3	1.1	2.6	5.4
480.00	0.0	0.1	0.7	2.1	5.1	10.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.2	0.4	0.8
2.00	0.0	0.0	0.1	0.3	0.7	1.5
5.00	0.0	0.0	0.1	0.5	1.1	2.4
10.00	0.0	0.0	0.2	0.8	1.9	3.9
20.00	0.0	0.1	0.4	1.4	3.4	7.0
40.00	0.0	0.2	0.8	2.6	6.4	13.2
80.00	0.0	0.3	1.6	5.1	12.4	25.6
160.00	0.0	0.6	3.2	10.0	24.3	50.4
240.00	0.1	0.9	4.7	14.9	36.3	75.2
480.00	0.1	1.8	9.4	29.6	72.1	149.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	15898	3975	1766	994	636	442

60x60 (L-Beam) T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 60x60 (L-Beam)	689000000000	2700	0.0008220000	2.62100E-07	2.62100E-07

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	0.8	2.4	5.9	12.2
0.25	0.0	0.2	0.9	2.8	6.6	13.4
0.50	0.0	0.2	1.1	3.1	7.3	14.7
1.00	0.0	0.3	1.4	3.9	8.7	17.1
2.00	0.1	0.5	2.0	5.3	11.5	22.0
5.00	0.1	1.1	3.8	9.7	20.0	36.7
10.00	0.2	2.0	6.9	16.9	34.2	61.1
20.00	0.5	3.8	13.0	31.4	62.5	110.0
40.00	0.9	7.4	25.2	60.4	119.1	207.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	0.8	2.4	5.9	12.2
0.25	0.0	0.2	0.8	2.7	6.6	13.6
0.50	0.0	0.2	0.9	3.0	7.2	15.0
1.00	0.0	0.2	1.1	3.5	8.5	17.7
2.00	0.0	0.3	1.5	4.6	11.2	23.2
5.00	0.0	0.5	2.5	7.8	19.1	39.7
10.00	0.1	0.8	4.2	13.3	32.4	67.2
20.00	0.1	1.5	7.6	24.1	58.9	122.2
40.00	0.2	2.9	14.5	45.9	112.0	232.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.1	0.3
2.00	0.0	0.0	0.0	0.1	0.2	0.4
5.00	0.0	0.0	0.1	0.2	0.3	0.6
10.00	0.0	0.0	0.1	0.3	0.6	1.0
20.00	0.0	0.1	0.2	0.5	1.0	1.8
40.00	0.0	0.1	0.4	1.0	1.9	3.3
80.00	0.0	0.2	0.8	1.9	3.7	6.4
160.00	0.1	0.5	1.5	3.7	7.2	12.5
240.00	0.1	0.7	2.3	5.5	10.7	18.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.1	0.3
2.00	0.0	0.0	0.0	0.1	0.2	0.5
5.00	0.0	0.0	0.1	0.2	0.4	0.8
10.00	0.0	0.0	0.1	0.3	0.7	1.4
20.00	0.0	0.0	0.2	0.5	1.2	2.5
40.00	0.0	0.1	0.3	1.0	2.3	4.8
80.00	0.0	0.1	0.6	1.9	4.5	9.4
160.00	0.0	0.2	1.2	3.7	9.0	18.6
240.00	0.0	0.3	1.7	5.5	13.4	27.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	43002	10751	4778	2688	1720	1195

60x60 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 60x60	68900000000	2700	0.0009780000	3.97000E-07	3.97000E-07

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.6	1.9	4.6	9.6
0.25	0.0	0.1	0.7	2.1	5.1	10.4
0.50	0.0	0.2	0.8	2.4	5.6	11.2
1.00	0.0	0.2	1.0	2.9	6.5	12.8
2.00	0.0	0.4	1.4	3.8	8.4	16.0
5.00	0.1	0.7	2.6	6.7	14.0	25.7
10.00	0.2	1.3	4.6	11.5	23.3	41.9
20.00	0.3	2.5	8.7	21.0	42.0	74.1
40.00	0.6	4.9	16.7	40.1	79.3	138.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.6	1.9	4.6	9.6
0.25	0.0	0.1	0.7	2.1	5.1	10.5
0.50	0.0	0.1	0.7	2.3	5.5	11.4
1.00	0.0	0.2	0.8	2.6	6.4	13.2
2.00	0.0	0.2	1.1	3.3	8.1	16.9
5.00	0.0	0.3	1.7	5.5	13.4	27.7
10.00	0.0	0.6	2.9	9.1	22.1	45.9
20.00	0.1	1.0	5.1	16.2	39.6	82.2
40.00	0.1	1.9	9.7	30.6	74.7	154.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.2	0.3
5.00	0.0	0.0	0.0	0.1	0.2	0.5
10.00	0.0	0.0	0.1	0.2	0.4	0.7
20.00	0.0	0.0	0.1	0.3	0.7	1.2
40.00	0.0	0.1	0.3	0.6	1.3	2.2
80.00	0.0	0.2	0.5	1.2	2.4	4.2
160.00	0.0	0.3	1.0	2.4	4.8	8.3
240.00	0.1	0.5	1.5	3.6	7.1	12.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.2
2.00	0.0	0.0	0.0	0.1	0.2	0.4
5.00	0.0	0.0	0.0	0.1	0.3	0.6
10.00	0.0	0.0	0.1	0.2	0.5	1.0
20.00	0.0	0.0	0.1	0.3	0.8	1.7
40.00	0.0	0.0	0.2	0.6	1.6	3.2
80.00	0.0	0.1	0.4	1.2	3.0	6.3
160.00	0.0	0.2	0.8	2.4	5.9	12.3
240.00	0.0	0.2	1.1	3.6	8.9	18.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	65135	16284	7237	4071	2605	1809

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x40	68900000000	2700	0.0005610000	9.06000E-08	9.06000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.6	24.1
0.25	0.0	0.4	1.9	5.8	13.7	27.6
0.50	0.1	0.6	2.4	6.9	15.7	31.2
1.00	0.1	0.8	3.3	9.0	19.8	38.2
2.00	0.1	1.3	5.0	13.1	28.0	52.4
5.00	0.3	2.9	10.3	25.7	52.5	94.8
10.00	0.7	5.5	19.2	46.7	93.5	165.5
20.00	1.3	10.8	36.9	88.6	175.3	307.0
40.00	2.6	21.3	72.2	172.4	339.0	589.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.6	24.1
0.25	0.0	0.3	1.8	5.5	13.5	28.1
0.50	0.0	0.4	2.0	6.3	15.5	32.1
1.00	0.0	0.5	2.5	7.9	19.3	40.0
2.00	0.0	0.7	3.5	11.0	27.0	55.9
5.00	0.1	1.3	6.5	20.5	50.0	103.7
10.00	0.1	2.3	11.5	36.2	88.4	183.2
20.00	0.3	4.2	21.4	67.6	165.1	342.3
40.00	0.5	8.2	41.3	130.5	318.6	660.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.2	0.4	0.9	1.6
10.00	0.0	0.1	0.3	0.8	1.5	2.7
20.00	0.0	0.2	0.6	1.4	2.8	4.9
40.00	0.0	0.3	1.1	2.7	5.4	9.3
80.00	0.1	0.7	2.2	5.3	10.5	18.2
160.00	0.2	1.3	4.5	10.6	20.7	35.9
240.00	0.2	2.0	6.7	15.8	30.9	53.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.6	1.2
5.00	0.0	0.0	0.1	0.4	1.0	2.2
10.00	0.0	0.0	0.2	0.8	1.8	3.8
20.00	0.0	0.1	0.4	1.4	3.4	7.1
40.00	0.0	0.2	0.9	2.7	6.6	13.8
80.00	0.0	0.3	1.7	5.3	13.0	27.0
160.00	0.0	0.7	3.3	10.6	25.8	53.5
240.00	0.1	1.0	5.0	15.8	38.6	80.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	14865	3716	1652	929	595	413

40x40 T-Slot - 1 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x40 (1 Slot)	68900000000	2700	0.0006130000	1.03800E-07	9.73000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.5	11.1	23.0
0.25	0.0	0.4	1.8	5.5	12.9	26.1
0.50	0.0	0.5	2.2	6.4	14.7	29.2
1.00	0.1	0.7	3.0	8.2	18.2	35.3
2.00	0.1	1.2	4.5	11.9	25.4	47.7
5.00	0.3	2.6	9.2	22.8	46.8	84.7
10.00	0.6	4.9	16.9	41.1	82.5	146.4
20.00	1.2	9.4	32.3	77.7	154.0	269.9
40.00	2.3	18.6	63.2	150.9	296.9	516.8
80.00	4.6	36.9	124.9	297.2	582.6	1010.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.8	24.5
0.25	0.0	0.4	1.9	5.8	13.7	27.8
0.50	0.0	0.5	2.4	6.8	15.6	31.1
1.00	0.1	0.8	3.2	8.7	19.4	37.7
2.00	0.1	1.3	4.8	12.6	27.1	50.9
5.00	0.3	2.7	9.8	24.4	49.9	90.4
10.00	0.6	5.2	18.0	43.9	88.0	156.2
20.00	1.2	10.1	34.5	82.9	164.3	287.9
40.00	2.5	19.8	67.4	160.9	316.7	551.3
80.00	4.9	39.3	133.2	317.0	621.5	1078.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.5	11.1	23.0
0.25	0.0	0.3	1.7	5.2	12.8	26.5
0.50	0.0	0.4	1.9	5.9	14.4	29.9
1.00	0.0	0.5	2.3	7.3	17.8	36.9
2.00	0.0	0.6	3.2	10.0	24.5	50.8
5.00	0.1	1.1	5.8	18.3	44.6	92.4
10.00	0.1	2.0	10.1	32.0	78.1	161.9
20.00	0.2	3.7	18.8	59.4	145.0	300.8
40.00	0.4	7.1	36.2	114.3	279.0	578.5
80.00	0.9	14.0	70.9	224.0	546.9	1134.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.8	11.8	24.5
0.25	0.0	0.3	1.8	5.6	13.6	28.2
0.50	0.0	0.4	2.0	6.3	15.4	31.9
1.00	0.0	0.5	2.5	7.8	19.0	39.3
2.00	0.0	0.7	3.4	10.7	26.1	54.2
5.00	0.1	1.2	6.2	19.5	47.6	98.6
10.00	0.1	2.1	10.8	34.1	83.3	172.7
20.00	0.2	4.0	20.1	63.4	154.7	320.8
40.00	0.5	7.6	38.6	121.9	297.6	617.2
80.00	0.9	14.9	75.6	239.0	583.4	1209.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x40 T-Slot - 1 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.2	0.4	0.8	1.4
10.00	0.0	0.1	0.3	0.7	1.3	2.4
20.00	0.0	0.1	0.5	1.2	2.5	4.3
40.00	0.0	0.3	1.0	2.4	4.7	8.2
80.00	0.1	0.6	2.0	4.7	9.2	15.9
160.00	0.1	1.1	3.9	9.2	18.1	31.3
240.00	0.2	1.7	5.8	13.8	27.0	46.8
480.00	0.4	3.4	11.6	27.5	53.8	93.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.2	0.4	0.8	1.5
10.00	0.0	0.1	0.3	0.7	1.4	2.6
20.00	0.0	0.2	0.5	1.3	2.6	4.6
40.00	0.0	0.3	1.1	2.5	5.0	8.7
80.00	0.1	0.6	2.1	5.0	9.8	17.0
160.00	0.2	1.2	4.1	9.9	19.3	33.4
240.00	0.2	1.8	6.2	14.7	28.8	49.9
480.00	0.5	3.7	12.4	29.4	57.4	99.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.1
5.00	0.0	0.0	0.1	0.4	0.9	1.9
10.00	0.0	0.0	0.2	0.7	1.6	3.4
20.00	0.0	0.1	0.4	1.2	3.0	6.3
40.00	0.0	0.1	0.8	2.4	5.8	12.1
80.00	0.0	0.3	1.5	4.7	11.4	23.6
160.00	0.0	0.6	2.9	9.2	22.6	46.8
240.00	0.1	0.9	4.4	13.8	33.7	69.9
480.00	0.1	1.7	8.7	27.5	67.2	139.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.1
5.00	0.0	0.0	0.1	0.4	1.0	2.1
10.00	0.0	0.0	0.2	0.7	1.7	3.6
20.00	0.0	0.1	0.4	1.3	3.2	6.7
40.00	0.0	0.2	0.8	2.5	6.2	12.9
80.00	0.0	0.3	1.6	5.0	12.2	25.2
160.00	0.0	0.6	3.1	9.9	24.1	49.9
240.00	0.1	0.9	4.7	14.7	36.0	74.6
480.00	0.1	1.8	9.3	29.4	71.7	148.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	15964	3991	1774	998	639	443

40x40 T-Slot - 2 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x40 (2 Slot)	68900000000	2700	0.0005960000	1.03600E-07	9.10000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.8	22.4
0.25	0.0	0.4	1.8	5.3	12.6	25.5
0.50	0.0	0.5	2.2	6.3	14.4	28.6
1.00	0.1	0.7	2.9	8.1	18.0	34.8
2.00	0.1	1.2	4.5	11.8	25.1	47.1
5.00	0.3	2.6	9.1	22.7	46.6	84.2
10.00	0.6	4.9	16.9	41.1	82.4	146.1
20.00	1.2	9.4	32.3	77.7	154.0	269.8
40.00	2.3	18.6	63.2	151.0	297.1	517.1
80.00	4.6	36.9	125.1	297.6	583.4	1011.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.6	5.0	12.3	25.5
0.25	0.0	0.4	2.0	6.1	14.3	29.0
0.50	0.1	0.6	2.5	7.1	16.4	32.5
1.00	0.1	0.8	3.4	9.2	20.4	39.6
2.00	0.2	1.4	5.1	13.4	28.6	53.7
5.00	0.3	2.9	10.4	25.9	53.0	95.9
10.00	0.7	5.5	19.2	46.8	93.8	166.3
20.00	1.3	10.7	36.8	88.5	175.3	307.1
40.00	2.6	21.2	72.0	171.9	338.3	588.8
80.00	5.2	42.0	142.4	338.8	664.2	1152.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.8	22.4
0.25	0.0	0.3	1.6	5.1	12.5	25.9
0.50	0.0	0.4	1.8	5.8	14.2	29.3
1.00	0.0	0.4	2.3	7.2	17.5	36.3
2.00	0.0	0.6	3.1	9.9	24.2	50.2
5.00	0.1	1.1	5.7	18.2	44.4	92.0
10.00	0.1	2.0	10.1	31.9	77.9	161.5
20.00	0.2	3.7	18.8	59.4	145.0	300.7
40.00	0.4	7.1	36.2	114.4	279.2	579.0
80.00	0.9	14.0	71.0	224.3	547.6	1135.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.6	5.0	12.3	25.5
0.25	0.0	0.4	1.8	5.8	14.2	29.5
0.50	0.0	0.4	2.1	6.6	16.1	33.4
1.00	0.0	0.5	2.6	8.2	19.9	41.3
2.00	0.0	0.7	3.6	11.3	27.6	57.2
5.00	0.1	1.3	6.5	20.7	50.5	104.7
10.00	0.1	2.3	11.5	36.3	88.7	183.9
20.00	0.3	4.2	21.4	67.6	165.1	342.3
40.00	0.5	8.1	41.2	130.2	317.9	659.2
80.00	1.0	16.0	80.8	255.4	623.5	1292.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x40 T-Slot - 2 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.4	0.9
5.00	0.0	0.0	0.1	0.4	0.8	1.4
10.00	0.0	0.1	0.3	0.7	1.3	2.4
20.00	0.0	0.1	0.5	1.2	2.5	4.3
40.00	0.0	0.3	1.0	2.4	4.7	8.2
80.00	0.1	0.6	2.0	4.7	9.2	15.9
160.00	0.1	1.2	3.9	9.3	18.1	31.4
240.00	0.2	1.7	5.8	13.8	27.1	46.9
480.00	0.4	3.4	11.6	27.6	53.9	93.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.2	0.4	0.9	1.6
10.00	0.0	0.1	0.3	0.8	1.5	2.7
20.00	0.0	0.2	0.6	1.4	2.8	4.9
40.00	0.0	0.3	1.1	2.7	5.3	9.3
80.00	0.1	0.7	2.2	5.3	10.4	18.1
160.00	0.2	1.3	4.4	10.5	20.6	35.7
240.00	0.2	2.0	6.6	15.8	30.8	53.3
480.00	0.5	3.9	13.2	31.4	61.4	106.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.1	0.4	0.9	1.9
10.00	0.0	0.0	0.2	0.7	1.6	3.4
20.00	0.0	0.1	0.4	1.2	3.0	6.3
40.00	0.0	0.1	0.8	2.4	5.8	12.1
80.00	0.0	0.3	1.5	4.7	11.4	23.7
160.00	0.0	0.6	2.9	9.3	22.6	46.9
240.00	0.1	0.9	4.4	13.8	33.8	70.0
480.00	0.1	1.7	8.7	27.6	67.3	139.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.5
2.00	0.0	0.0	0.1	0.2	0.6	1.2
5.00	0.0	0.0	0.1	0.4	1.1	2.2
10.00	0.0	0.0	0.2	0.8	1.8	3.8
20.00	0.0	0.1	0.4	1.4	3.4	7.1
40.00	0.0	0.2	0.9	2.7	6.6	13.7
80.00	0.0	0.3	1.7	5.3	13.0	26.9
160.00	0.0	0.7	3.3	10.5	25.7	53.3
240.00	0.1	1.0	5.0	15.8	38.5	79.7
480.00	0.1	2.0	9.9	31.4	76.7	158.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	14930	3733	1659	933	597	415

40x40 T-Slot - 2 Slot Corner

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x40 (2 Slot Corner)	68900000000	2700	0.0005960000	9.71000E-08	9.71000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.7	11.5	23.9
0.25	0.0	0.4	1.9	5.7	13.4	27.2
0.50	0.0	0.5	2.3	6.7	15.3	30.5
1.00	0.1	0.8	3.1	8.6	19.2	37.1
2.00	0.1	1.3	4.8	12.5	26.8	50.3
5.00	0.3	2.7	9.7	24.3	49.7	89.9
10.00	0.6	5.2	18.0	43.8	87.9	155.9
20.00	1.2	10.1	34.5	82.9	164.3	287.8
40.00	2.5	19.8	67.5	161.1	317.0	551.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.7	11.5	23.9
0.25	0.0	0.3	1.7	5.5	13.3	27.6
0.50	0.0	0.4	2.0	6.2	15.1	31.3
1.00	0.0	0.5	2.4	7.7	18.7	38.7
2.00	0.0	0.7	3.3	10.6	25.8	53.6
5.00	0.1	1.2	6.1	19.4	47.3	98.1
10.00	0.1	2.1	10.8	34.0	83.1	172.4
20.00	0.2	4.0	20.1	63.4	154.7	320.8
40.00	0.5	7.6	38.6	122.0	297.9	617.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.2	0.4	0.8	1.5
10.00	0.0	0.1	0.3	0.7	1.4	2.6
20.00	0.0	0.2	0.5	1.3	2.6	4.6
40.00	0.0	0.3	1.1	2.5	5.0	8.7
80.00	0.1	0.6	2.1	5.0	9.8	17.0
160.00	0.2	1.2	4.2	9.9	19.3	33.5
240.00	0.2	1.8	6.2	14.8	28.9	50.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.1
5.00	0.0	0.0	0.1	0.4	1.0	2.0
10.00	0.0	0.0	0.2	0.7	1.7	3.6
20.00	0.0	0.1	0.4	1.3	3.2	6.7
40.00	0.0	0.2	0.8	2.5	6.2	12.9
80.00	0.0	0.3	1.6	5.0	12.2	25.2
160.00	0.0	0.6	3.1	9.9	24.1	50.0
240.00	0.1	0.9	4.7	14.8	36.0	74.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	15931	3983	1770	996	637	443

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x40 (3 Slot)	68900000000	2700	0.0005790000	9.69000E-08	9.08000E-08

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.6	11.2	23.3
0.25	0.0	0.4	1.9	5.6	13.1	26.6
0.50	0.0	0.5	2.3	6.6	15.0	29.9
1.00	0.1	0.8	3.1	8.5	18.9	36.5
2.00	0.1	1.3	4.8	12.4	26.5	49.7
5.00	0.3	2.7	9.7	24.2	49.5	89.4
10.00	0.6	5.2	18.0	43.8	87.7	155.5
20.00	1.2	10.1	34.5	83.0	164.3	287.7
40.00	2.5	19.9	67.6	161.3	317.3	552.2
80.00	4.9	39.5	133.7	318.1	623.4	1081.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.6	4.9	12.0	24.8
0.25	0.0	0.4	2.0	5.9	14.0	28.3
0.50	0.1	0.6	2.4	7.0	16.1	31.9
1.00	0.1	0.8	3.3	9.1	20.1	38.9
2.00	0.1	1.4	5.1	13.3	28.3	53.0
5.00	0.3	2.9	10.4	25.8	52.8	95.4
10.00	0.7	5.5	19.2	46.7	93.6	165.9
20.00	1.3	10.8	36.8	88.5	175.3	307.1
40.00	2.6	21.2	72.1	172.2	338.6	589.3
80.00	5.2	42.1	142.7	339.4	665.3	1153.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.5	4.6	11.2	23.3
0.25	0.0	0.3	1.7	5.3	13.0	27.0
0.50	0.0	0.4	1.9	6.1	14.8	30.7
1.00	0.0	0.5	2.4	7.5	18.4	38.1
2.00	0.0	0.7	3.3	10.5	25.6	53.0
5.00	0.1	1.2	6.1	19.3	47.1	97.6
10.00	0.1	2.1	10.8	34.0	83.0	172.0
20.00	0.2	4.0	20.1	63.4	154.7	320.8
40.00	0.5	7.6	38.6	122.1	298.2	618.3
80.00	0.9	15.0	75.8	239.7	585.2	1213.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.6	4.9	12.0	24.8
0.25	0.0	0.4	1.8	5.7	13.9	28.8
0.50	0.0	0.4	2.0	6.5	15.8	32.8
1.00	0.0	0.5	2.5	8.0	19.6	40.7
2.00	0.0	0.7	3.5	11.2	27.3	56.6
5.00	0.1	1.3	6.5	20.6	50.3	104.2
10.00	0.1	2.3	11.5	36.3	88.5	183.6
20.00	0.3	4.2	21.4	67.6	165.1	342.4
40.00	0.5	8.1	41.2	130.3	318.2	659.9
80.00	1.0	16.0	80.9	255.8	624.5	1295.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x40 T-Slot - 3 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.2	0.4	0.8	1.5
10.00	0.0	0.1	0.3	0.7	1.4	2.6
20.00	0.0	0.2	0.5	1.3	2.6	4.6
40.00	0.0	0.3	1.1	2.5	5.0	8.7
80.00	0.1	0.6	2.1	5.0	9.8	17.0
160.00	0.2	1.2	4.2	9.9	19.4	33.5
240.00	0.2	1.8	6.2	14.8	28.9	50.1
480.00	0.5	3.7	12.4	29.5	57.6	99.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.2	0.4	0.9	1.6
10.00	0.0	0.1	0.3	0.8	1.5	2.7
20.00	0.0	0.2	0.6	1.4	2.8	4.9
40.00	0.0	0.3	1.1	2.7	5.4	9.3
80.00	0.1	0.7	2.2	5.3	10.5	18.2
160.00	0.2	1.3	4.4	10.6	20.7	35.8
240.00	0.2	2.0	6.6	15.8	30.9	53.4
480.00	0.5	3.9	13.3	31.5	61.5	106.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.1
5.00	0.0	0.0	0.1	0.4	1.0	2.0
10.00	0.0	0.0	0.2	0.7	1.7	3.6
20.00	0.0	0.1	0.4	1.3	3.2	6.7
40.00	0.0	0.2	0.8	2.5	6.2	12.9
80.00	0.0	0.3	1.6	5.0	12.2	25.3
160.00	0.0	0.6	3.1	9.9	24.1	50.1
240.00	0.1	0.9	4.7	14.8	36.1	74.9
480.00	0.1	1.8	9.3	29.5	72.0	149.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.6	1.2
5.00	0.0	0.0	0.1	0.4	1.0	2.2
10.00	0.0	0.0	0.2	0.8	1.8	3.8
20.00	0.0	0.1	0.4	1.4	3.4	7.1
40.00	0.0	0.2	0.9	2.7	6.6	13.7
80.00	0.0	0.3	1.7	5.3	13.0	27.0
160.00	0.0	0.7	3.3	10.6	25.8	53.4
240.00	0.1	1.0	5.0	15.8	38.5	79.9
480.00	0.1	2.0	10.0	31.5	76.8	159.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	14897	3724	1655	931	596	414

40x40 T-Slot - 90 Degree Radius

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	Ixx	Iyy
T-Slot 40x40 (90 Degree Radius)	68900000000	2700	0.0004750000	6.84000E-08	6.84000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.7	5.3	13.0	27.0
0.25	0.0	0.5	2.3	6.7	15.7	31.7
0.50	0.1	0.7	2.9	8.1	18.5	36.4
1.00	0.1	1.0	4.0	10.9	23.9	45.8
2.00	0.2	1.7	6.4	16.4	34.7	64.5
5.00	0.5	3.8	13.4	33.1	67.2	120.7
10.00	0.9	7.3	25.1	60.8	121.5	214.4
20.00	1.8	14.2	48.5	116.4	229.9	401.7
40.00	3.5	28.1	95.4	227.4	446.7	776.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.7	5.3	13.0	27.0
0.25	0.0	0.4	2.0	6.4	15.6	32.3
0.50	0.0	0.5	2.3	7.4	18.1	37.6
1.00	0.0	0.6	3.0	9.5	23.2	48.1
2.00	0.1	0.9	4.3	13.7	33.4	69.2
5.00	0.1	1.6	8.3	26.2	63.9	132.4
10.00	0.2	2.9	14.9	47.0	114.7	237.8
20.00	0.3	5.5	28.0	88.6	216.3	448.6
40.00	0.7	10.7	54.4	171.9	419.6	870.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.6
2.00	0.0	0.0	0.1	0.3	0.6	1.1
5.00	0.0	0.1	0.2	0.5	1.1	2.0
10.00	0.0	0.1	0.4	1.0	2.0	3.5
20.00	0.0	0.2	0.8	1.8	3.7	6.4
40.00	0.1	0.4	1.5	3.6	7.0	12.3
80.00	0.1	0.9	3.0	7.0	13.8	24.0
160.00	0.2	1.7	5.9	14.0	27.4	47.4
240.00	0.3	2.6	8.8	20.9	40.9	70.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.3	0.6
2.00	0.0	0.0	0.1	0.3	0.7	1.4
5.00	0.0	0.0	0.2	0.5	1.3	2.8
10.00	0.0	0.1	0.3	1.0	2.4	5.0
20.00	0.0	0.1	0.6	1.8	4.5	9.3
40.00	0.0	0.2	1.1	3.6	8.7	18.1
80.00	0.0	0.4	2.2	7.0	17.2	35.7
160.00	0.1	0.9	4.4	14.0	34.2	70.8
240.00	0.1	1.3	6.6	20.9	51.1	105.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	11222	2806	1247	701	449	312

40x80 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x80	68900000000	2700	0.0009860000	6.32400E-07	1.72300E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.2	2.9	6.1
0.25	0.0	0.1	0.4	1.3	3.2	6.6
0.50	0.0	0.1	0.5	1.5	3.5	7.1
1.00	0.0	0.1	0.6	1.8	4.1	8.1
2.00	0.0	0.2	0.9	2.4	5.3	10.1
5.00	0.1	0.5	1.6	4.2	8.8	16.2
10.00	0.1	0.8	2.9	7.2	14.7	26.3
20.00	0.2	1.6	5.4	13.2	26.4	46.6
40.00	0.4	3.1	10.5	25.2	49.8	87.1
80.00	0.8	6.1	20.6	49.2	96.7	168.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.7	22.3
0.25	0.0	0.3	1.6	5.0	11.8	24.1
0.50	0.0	0.4	1.9	5.5	12.9	26.0
1.00	0.1	0.6	2.3	6.6	15.0	29.7
2.00	0.1	0.8	3.3	8.8	19.3	37.1
5.00	0.2	1.7	6.0	15.4	32.3	59.5
10.00	0.4	3.0	10.7	26.4	53.8	96.6
20.00	0.7	5.8	20.0	48.5	96.8	171.0
40.00	1.4	11.3	38.6	92.5	182.9	319.8
80.00	2.8	22.3	75.8	180.7	355.1	617.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.2	2.9	6.1
0.25	0.0	0.1	0.4	1.3	3.2	6.6
0.50	0.0	0.1	0.5	1.4	3.5	7.2
1.00	0.0	0.1	0.5	1.6	4.0	8.3
2.00	0.0	0.1	0.7	2.1	5.1	10.6
5.00	0.0	0.2	1.1	3.5	8.4	17.5
10.00	0.0	0.4	1.8	5.7	13.9	28.9
20.00	0.0	0.6	3.2	10.2	24.9	51.7
40.00	0.1	1.2	6.1	19.2	46.9	97.3
80.00	0.1	2.3	11.8	37.2	90.9	188.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.4	10.7	22.3
0.25	0.0	0.3	1.5	4.8	11.8	24.4
0.50	0.0	0.3	1.7	5.2	12.8	26.5
1.00	0.0	0.4	1.9	6.1	14.8	30.6
2.00	0.0	0.5	2.4	7.7	18.8	39.0
5.00	0.0	0.8	4.0	12.7	30.9	64.1
10.00	0.1	1.3	6.6	20.9	51.1	105.9
20.00	0.1	2.3	11.9	37.5	91.4	189.6
40.00	0.3	4.4	22.3	70.5	172.1	356.9
80.00	0.5	8.5	43.2	136.6	333.5	691.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x80 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.2	0.3
10.00	0.0	0.0	0.0	0.1	0.2	0.4
20.00	0.0	0.0	0.1	0.2	0.4	0.8
40.00	0.0	0.0	0.2	0.4	0.8	1.4
80.00	0.0	0.1	0.3	0.8	1.5	2.7
160.00	0.0	0.2	0.6	1.5	3.0	5.2
240.00	0.0	0.3	1.0	2.3	4.5	7.7
480.00	0.1	0.6	1.9	4.5	8.9	15.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.4	0.7
5.00	0.0	0.0	0.1	0.3	0.6	1.0
10.00	0.0	0.0	0.2	0.4	0.9	1.6
20.00	0.0	0.1	0.3	0.8	1.6	2.8
40.00	0.0	0.2	0.6	1.5	2.9	5.1
80.00	0.0	0.4	1.2	2.8	5.6	9.8
160.00	0.1	0.7	2.4	5.6	11.0	19.1
240.00	0.1	1.0	3.5	8.4	16.4	28.4
480.00	0.3	2.1	7.0	16.6	32.5	56.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.2	0.4
10.00	0.0	0.0	0.0	0.1	0.3	0.6
20.00	0.0	0.0	0.1	0.2	0.5	1.1
40.00	0.0	0.0	0.1	0.4	1.0	2.0
80.00	0.0	0.0	0.2	0.8	1.9	3.9
160.00	0.0	0.1	0.5	1.5	3.7	7.7
240.00	0.0	0.1	0.7	2.3	5.6	11.5
480.00	0.0	0.3	1.4	4.5	11.1	22.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.3	0.6	1.3
10.00	0.0	0.0	0.1	0.4	1.1	2.2
20.00	0.0	0.0	0.2	0.8	1.9	4.0
40.00	0.0	0.1	0.5	1.5	3.6	7.4
80.00	0.0	0.2	0.9	2.8	6.9	14.4
160.00	0.0	0.4	1.8	5.6	13.7	28.4
240.00	0.0	0.5	2.6	8.4	20.4	42.3
480.00	0.1	1.0	5.3	16.6	40.6	84.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	28269	7067	3141	1767	1131	785

40x120 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x120	68900000000	2700	0.0015350000	2.01950E-06	2.77600E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.2	0.6	1.4	3.0
0.25	0.0	0.0	0.2	0.6	1.5	3.1
0.50	0.0	0.0	0.2	0.7	1.6	3.3
1.00	0.0	0.1	0.3	0.8	1.8	3.6
2.00	0.0	0.1	0.3	1.0	2.2	4.2
5.00	0.0	0.2	0.6	1.5	3.3	6.1
10.00	0.0	0.3	1.0	2.5	5.1	9.3
20.00	0.1	0.5	1.8	4.3	8.8	15.6
40.00	0.1	1.0	3.4	8.1	16.1	28.3
80.00	0.2	1.9	6.5	15.6	30.8	53.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.3	10.4	21.5
0.25	0.0	0.3	1.5	4.6	11.0	22.7
0.50	0.0	0.4	1.6	4.9	11.7	23.8
1.00	0.0	0.4	1.9	5.6	13.1	26.1
2.00	0.1	0.6	2.5	7.0	15.7	30.8
5.00	0.1	1.1	4.2	11.1	23.7	44.6
10.00	0.2	2.0	7.1	17.9	37.1	67.7
20.00	0.4	3.7	12.9	31.6	63.8	113.8
40.00	0.9	7.1	24.4	59.0	117.2	206.2
80.00	1.7	13.9	47.5	113.7	224.1	390.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.2	0.6	1.4	3.0
0.25	0.0	0.0	0.2	0.6	1.5	3.1
0.50	0.0	0.0	0.2	0.7	1.6	3.3
1.00	0.0	0.0	0.2	0.7	1.8	3.7
2.00	0.0	0.1	0.3	0.9	2.1	4.4
5.00	0.0	0.1	0.4	1.3	3.1	6.5
10.00	0.0	0.1	0.6	2.0	4.9	10.1
20.00	0.0	0.2	1.1	3.4	8.3	17.2
40.00	0.0	0.4	2.0	6.2	15.2	31.5
80.00	0.0	0.7	3.8	11.9	29.0	60.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.3	10.4	21.5
0.25	0.0	0.3	1.4	4.5	11.0	22.8
0.50	0.0	0.3	1.5	4.8	11.6	24.1
1.00	0.0	0.3	1.7	5.3	12.9	26.7
2.00	0.0	0.4	2.0	6.3	15.4	31.9
5.00	0.0	0.6	3.0	9.4	22.9	47.5
10.00	0.1	0.9	4.6	14.5	35.4	73.5
20.00	0.1	1.5	7.8	24.8	60.5	125.4
40.00	0.2	2.8	14.3	45.3	110.6	229.2
80.00	0.3	5.4	27.3	86.3	210.7	437.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x120 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.0	0.1
5.00	0.0	0.0	0.0	0.0	0.0	0.1
10.00	0.0	0.0	0.0	0.0	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.1	0.3
40.00	0.0	0.0	0.1	0.1	0.3	0.5
80.00	0.0	0.0	0.1	0.2	0.5	0.9
160.00	0.0	0.1	0.2	0.5	0.9	1.6
240.00	0.0	0.1	0.3	0.7	1.4	2.4
480.00	0.0	0.2	0.6	1.4	2.8	4.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.4	0.8
10.00	0.0	0.0	0.1	0.3	0.6	1.2
20.00	0.0	0.1	0.2	0.5	1.1	1.9
40.00	0.0	0.1	0.4	0.9	1.9	3.3
80.00	0.0	0.2	0.7	1.8	3.6	6.2
160.00	0.1	0.4	1.5	3.5	6.9	12.0
240.00	0.1	0.6	2.2	5.2	10.2	17.8
480.00	0.2	1.3	4.4	10.3	20.3	35.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.0	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.1
10.00	0.0	0.0	0.0	0.0	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.2	0.4
40.00	0.0	0.0	0.0	0.1	0.3	0.7
80.00	0.0	0.0	0.1	0.2	0.6	1.3
160.00	0.0	0.0	0.2	0.5	1.2	2.4
240.00	0.0	0.0	0.2	0.7	1.8	3.6
480.00	0.0	0.1	0.5	1.4	3.5	7.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.0	0.1	0.3	0.7
5.00	0.0	0.0	0.1	0.2	0.5	1.0
10.00	0.0	0.0	0.1	0.3	0.7	1.5
20.00	0.0	0.0	0.2	0.5	1.3	2.6
40.00	0.0	0.1	0.3	0.9	2.3	4.8
80.00	0.0	0.1	0.6	1.8	4.4	9.1
160.00	0.0	0.2	1.1	3.5	8.6	17.8
240.00	0.0	0.3	1.7	5.2	12.7	26.4
480.00	0.0	0.6	3.3	10.3	25.3	52.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	45545	11386	5061	2847	1822	1265

40x160 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 40x160	68900000000	2700	0.0021180000	4.79630E-06	3.79100E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.3	0.8	1.7
0.25	0.0	0.0	0.1	0.4	0.9	1.8
0.50	0.0	0.0	0.1	0.4	0.9	1.9
1.00	0.0	0.0	0.1	0.4	1.0	2.0
2.00	0.0	0.0	0.2	0.5	1.1	2.3
5.00	0.0	0.1	0.3	0.7	1.6	3.1
10.00	0.0	0.1	0.4	1.1	2.4	4.4
20.00	0.0	0.2	0.8	1.9	3.9	7.1
40.00	0.1	0.4	1.4	3.5	7.0	12.4
80.00	0.1	0.8	2.8	6.7	13.2	23.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.3	10.5	21.7
0.25	0.0	0.3	1.5	4.5	11.0	22.6
0.50	0.0	0.3	1.6	4.8	11.5	23.4
1.00	0.0	0.4	1.8	5.3	12.4	25.1
2.00	0.0	0.5	2.2	6.3	14.4	28.5
5.00	0.1	0.9	3.5	9.3	20.3	38.6
10.00	0.2	1.5	5.6	14.3	30.0	55.5
20.00	0.3	2.8	9.8	24.3	49.6	89.3
40.00	0.6	5.3	18.3	44.4	88.7	157.0
80.00	1.3	10.3	35.2	84.4	167.0	292.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.1	0.3	0.8	1.7
0.25	0.0	0.0	0.1	0.4	0.9	1.8
0.50	0.0	0.0	0.1	0.4	0.9	1.9
1.00	0.0	0.0	0.1	0.4	1.0	2.0
2.00	0.0	0.0	0.1	0.5	1.1	2.3
5.00	0.0	0.0	0.2	0.6	1.6	3.2
10.00	0.0	0.1	0.3	0.9	2.3	4.7
20.00	0.0	0.1	0.5	1.5	3.7	7.7
40.00	0.0	0.2	0.9	2.7	6.6	13.7
80.00	0.0	0.3	1.6	5.1	12.4	25.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.3	10.5	21.7
0.25	0.0	0.3	1.4	4.5	10.9	22.7
0.50	0.0	0.3	1.5	4.7	11.4	23.6
1.00	0.0	0.3	1.6	5.0	12.3	25.5
2.00	0.0	0.4	1.8	5.8	14.2	29.4
5.00	0.0	0.5	2.5	8.1	19.7	40.8
10.00	0.0	0.7	3.7	11.8	28.8	59.8
20.00	0.1	1.2	6.1	19.3	47.2	97.8
40.00	0.1	2.1	10.9	34.3	83.8	173.9
80.00	0.3	4.0	20.4	64.4	157.2	326.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

40x160 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.1
10.00	0.0	0.0	0.0	0.0	0.0	0.1
20.00	0.0	0.0	0.0	0.0	0.1	0.1
40.00	0.0	0.0	0.0	0.1	0.1	0.2
80.00	0.0	0.0	0.0	0.1	0.2	0.4
160.00	0.0	0.0	0.1	0.2	0.4	0.7
240.00	0.0	0.0	0.1	0.3	0.6	1.0
480.00	0.0	0.1	0.3	0.6	1.2	2.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.4	0.7
10.00	0.0	0.0	0.1	0.2	0.5	1.0
20.00	0.0	0.0	0.2	0.4	0.8	1.5
40.00	0.0	0.1	0.3	0.7	1.4	2.6
80.00	0.0	0.2	0.6	1.3	2.7	4.7
160.00	0.0	0.3	1.1	2.6	5.1	8.9
240.00	0.1	0.5	1.6	3.8	7.6	13.1
480.00	0.1	0.9	3.2	7.6	14.9	25.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.0
2.00	0.0	0.0	0.0	0.0	0.0	0.0
5.00	0.0	0.0	0.0	0.0	0.0	0.1
10.00	0.0	0.0	0.0	0.0	0.0	0.1
20.00	0.0	0.0	0.0	0.0	0.1	0.2
40.00	0.0	0.0	0.0	0.1	0.1	0.3
80.00	0.0	0.0	0.0	0.1	0.3	0.5
160.00	0.0	0.0	0.1	0.2	0.5	1.0
240.00	0.0	0.0	0.1	0.3	0.7	1.5
480.00	0.0	0.0	0.2	0.6	1.5	3.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.4	0.8
10.00	0.0	0.0	0.1	0.2	0.6	1.2
20.00	0.0	0.0	0.1	0.4	1.0	2.0
40.00	0.0	0.0	0.2	0.7	1.7	3.6
80.00	0.0	0.1	0.4	1.3	3.3	6.8
160.00	0.0	0.2	0.8	2.6	6.3	13.1
240.00	0.0	0.2	1.2	3.8	9.4	19.5
480.00	0.0	0.5	2.4	7.6	18.6	38.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	62198	15550	6911	3887	2488	1728

80x80 (L-Beam) T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 80x80 (L-Beam)	68900000000	2700	0.0015430000	9.15200E-07	9.15200E-07

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.3	3.2	6.6
0.25	0.0	0.1	0.5	1.4	3.4	6.9
0.50	0.0	0.1	0.5	1.5	3.6	7.3
1.00	0.0	0.1	0.6	1.7	4.0	8.0
2.00	0.0	0.2	0.8	2.1	4.8	9.4
5.00	0.0	0.3	1.3	3.4	7.2	13.6
10.00	0.1	0.6	2.2	5.4	11.3	20.6
20.00	0.1	1.1	3.9	9.6	19.4	34.6
40.00	0.3	2.2	7.4	17.9	35.6	62.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.4	1.3	3.2	6.6
0.25	0.0	0.1	0.4	1.4	3.4	7.0
0.50	0.0	0.1	0.5	1.5	3.5	7.3
1.00	0.0	0.1	0.5	1.6	3.9	8.1
2.00	0.0	0.1	0.6	1.9	4.7	9.7
5.00	0.0	0.2	0.9	2.9	7.0	14.4
10.00	0.0	0.3	1.4	4.4	10.8	22.3
20.00	0.0	0.5	2.4	7.5	18.4	38.1
40.00	0.1	0.9	4.3	13.7	33.6	69.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.2	0.4
20.00	0.0	0.0	0.1	0.2	0.3	0.6
40.00	0.0	0.0	0.1	0.3	0.6	1.0
80.00	0.0	0.1	0.2	0.5	1.1	1.9
160.00	0.0	0.1	0.4	1.1	2.1	3.6
240.00	0.0	0.2	0.7	1.6	3.1	5.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.1	0.3
10.00	0.0	0.0	0.0	0.1	0.2	0.5
20.00	0.0	0.0	0.0	0.2	0.4	0.8
40.00	0.0	0.0	0.1	0.3	0.7	1.4
80.00	0.0	0.0	0.2	0.5	1.3	2.8
160.00	0.0	0.1	0.3	1.1	2.6	5.4
240.00	0.0	0.1	0.5	1.6	3.9	8.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	150155	37539	16684	9385	6006	4171

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 80x80	68900000000	2700	0.0018450000	1.32620E-06	1.32620E-06

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.1	2.8	5.7
0.50	0.0	0.1	0.4	1.2	2.9	5.9
1.00	0.0	0.1	0.5	1.4	3.2	6.4
2.00	0.0	0.1	0.6	1.6	3.7	7.3
5.00	0.0	0.2	0.9	2.5	5.4	10.2
10.00	0.0	0.4	1.5	3.9	8.2	15.1
20.00	0.1	0.8	2.8	6.8	13.8	24.7
40.00	0.2	1.5	5.2	12.5	25.0	44.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.1	2.7	5.7
0.50	0.0	0.1	0.4	1.2	2.9	6.0
1.00	0.0	0.1	0.4	1.3	3.1	6.5
2.00	0.0	0.1	0.5	1.5	3.7	7.6
5.00	0.0	0.1	0.7	2.1	5.2	10.9
10.00	0.0	0.2	1.0	3.2	7.9	16.3
20.00	0.0	0.3	1.7	5.4	13.1	27.2
40.00	0.0	0.6	3.1	9.7	23.6	48.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.1	0.3
20.00	0.0	0.0	0.0	0.1	0.2	0.4
40.00	0.0	0.0	0.1	0.2	0.4	0.7
80.00	0.0	0.0	0.2	0.4	0.8	1.3
160.00	0.0	0.1	0.3	0.7	1.5	2.5
240.00	0.0	0.1	0.5	1.1	2.2	3.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.2	0.3
20.00	0.0	0.0	0.0	0.1	0.3	0.6
40.00	0.0	0.0	0.1	0.2	0.5	1.0
80.00	0.0	0.0	0.1	0.4	0.9	1.9
160.00	0.0	0.0	0.2	0.7	1.8	3.7
240.00	0.0	0.1	0.3	1.1	2.7	5.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	217587	54397	24176	13599	8703	6044

45x45 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m3 (p)	Area m2 (a)	Ixx	Iyy
T-Slot 45x45	68900000000	2700	0.0005730000	1.10000E-07	1.10000E-07

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.0	9.8	20.3
0.25	0.0	0.4	1.6	4.9	11.5	23.2
0.50	0.0	0.5	2.0	5.7	13.1	26.1
1.00	0.1	0.7	2.7	7.5	16.5	31.9
2.00	0.1	1.1	4.2	10.9	23.3	43.6
5.00	0.3	2.4	8.5	21.3	43.5	78.5
10.00	0.6	4.6	15.8	38.5	77.2	136.8
20.00	1.1	8.9	30.4	73.0	144.6	253.3
40.00	2.2	17.5	59.5	142.1	279.4	486.2
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.0	9.8	20.3
0.25	0.0	0.3	1.5	4.7	11.4	23.6
0.50	0.0	0.3	1.7	5.3	12.9	26.8
1.00	0.0	0.4	2.1	6.6	16.1	33.4
2.00	0.0	0.6	2.9	9.2	22.4	46.5
5.00	0.1	1.1	5.4	16.9	41.4	85.8
10.00	0.1	1.9	9.5	29.9	73.0	151.3
20.00	0.2	3.5	17.6	55.8	136.2	282.4
40.00	0.4	6.7	34.0	107.6	262.6	544.5
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.4	0.7	1.3
10.00	0.0	0.1	0.3	0.6	1.3	2.2
20.00	0.0	0.1	0.5	1.2	2.3	4.1
40.00	0.0	0.3	0.9	2.2	4.4	7.7
80.00	0.1	0.5	1.8	4.4	8.6	15.0
160.00	0.1	1.1	3.7	8.7	17.1	29.5
240.00	0.2	1.6	5.5	13.0	25.5	44.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.1	0.4	0.9	1.8
10.00	0.0	0.0	0.2	0.6	1.5	3.2
20.00	0.0	0.1	0.4	1.2	2.8	5.9
40.00	0.0	0.1	0.7	2.2	5.5	11.3
80.00	0.0	0.3	1.4	4.4	10.7	22.3
160.00	0.0	0.5	2.8	8.7	21.3	44.1
240.00	0.1	0.8	4.1	13.0	31.8	65.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	18047	4512	2005	1128	722	501

45x45 T-Slot - 1 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 45x45 (1 Slot)	68900000000	2700	0.0006250000	1.18400E-07	1.26800E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.1	9.9	20.5
0.25	0.0	0.4	1.6	4.9	11.5	23.3
0.50	0.0	0.5	2.0	5.7	13.0	26.0
1.00	0.1	0.7	2.6	7.3	16.2	31.4
2.00	0.1	1.1	4.0	10.5	22.4	42.2
5.00	0.3	2.3	8.0	20.1	41.2	74.7
10.00	0.5	4.3	14.8	36.1	72.5	128.8
20.00	1.0	8.3	28.3	68.2	135.2	237.0
40.00	2.0	16.3	55.4	132.3	260.4	453.5
80.00	4.0	32.3	109.5	260.6	511.0	886.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.8	9.3	19.2
0.25	0.0	0.3	1.5	4.5	10.7	21.7
0.50	0.0	0.4	1.8	5.3	12.2	24.2
1.00	0.1	0.6	2.5	6.8	15.1	29.3
2.00	0.1	1.0	3.7	9.8	20.9	39.4
5.00	0.2	2.1	7.5	18.8	38.5	69.7
10.00	0.5	4.0	13.8	33.7	67.7	120.2
20.00	1.0	7.7	26.5	63.7	126.2	221.3
40.00	1.9	15.2	51.7	123.6	243.2	423.4
80.00	3.8	30.2	102.3	243.3	477.1	827.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.1	9.9	20.5
0.25	0.0	0.3	1.5	4.7	11.4	23.6
0.50	0.0	0.3	1.7	5.3	12.8	26.6
1.00	0.0	0.4	2.0	6.5	15.8	32.7
2.00	0.0	0.6	2.8	8.9	21.7	44.9
5.00	0.1	1.0	5.1	16.1	39.3	81.4
10.00	0.1	1.8	8.9	28.1	68.6	142.3
20.00	0.2	3.3	16.5	52.2	127.3	264.1
40.00	0.4	6.3	31.7	100.3	244.8	507.6
80.00	0.8	12.3	62.2	196.5	479.6	994.6
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.8	9.3	19.2
0.25	0.0	0.3	1.4	4.4	10.6	22.0
0.50	0.0	0.3	1.6	4.9	12.0	24.9
1.00	0.0	0.4	1.9	6.0	14.7	30.6
2.00	0.0	0.5	2.6	8.3	20.2	41.9
5.00	0.1	0.9	4.8	15.0	36.7	76.0
10.00	0.1	1.6	8.3	26.2	64.1	132.9
20.00	0.2	3.0	15.4	48.7	118.9	246.6
40.00	0.4	5.9	29.6	93.6	228.6	473.9
80.00	0.7	11.5	58.0	183.4	447.9	928.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

45x45 T-Slot - 1 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.3	0.7	1.3
10.00	0.0	0.1	0.2	0.6	1.2	2.1
20.00	0.0	0.1	0.4	1.1	2.2	3.8
40.00	0.0	0.3	0.9	2.1	4.1	7.2
80.00	0.1	0.5	1.7	4.1	8.0	14.0
160.00	0.1	1.0	3.4	8.1	15.9	27.5
240.00	0.2	1.5	5.1	12.1	23.7	41.0
480.00	0.4	3.0	10.2	24.1	47.2	81.6
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.7
5.00	0.0	0.0	0.1	0.3	0.6	1.2
10.00	0.0	0.1	0.2	0.5	1.1	2.0
20.00	0.0	0.1	0.4	1.0	2.0	3.6
40.00	0.0	0.2	0.8	2.0	3.8	6.7
80.00	0.1	0.5	1.6	3.8	7.5	13.0
160.00	0.1	0.9	3.2	7.6	14.8	25.7
240.00	0.2	1.4	4.8	11.3	22.1	38.3
480.00	0.4	2.8	9.5	22.5	44.1	76.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.5	0.9
5.00	0.0	0.0	0.1	0.3	0.8	1.7
10.00	0.0	0.0	0.2	0.6	1.4	3.0
20.00	0.0	0.1	0.3	1.1	2.7	5.5
40.00	0.0	0.1	0.7	2.1	5.1	10.6
80.00	0.0	0.3	1.3	4.1	10.0	20.7
160.00	0.0	0.5	2.6	8.1	19.8	41.0
240.00	0.0	0.8	3.8	12.1	29.6	61.3
480.00	0.1	1.5	7.6	24.1	58.9	122.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.9
5.00	0.0	0.0	0.1	0.3	0.8	1.6
10.00	0.0	0.0	0.2	0.5	1.3	2.8
20.00	0.0	0.1	0.3	1.0	2.5	5.1
40.00	0.0	0.1	0.6	2.0	4.8	9.9
80.00	0.0	0.2	1.2	3.8	9.3	19.3
160.00	0.0	0.5	2.4	7.6	18.5	38.3
240.00	0.0	0.7	3.6	11.3	27.6	57.2
480.00	0.1	1.4	7.1	22.5	55.0	114.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	20804	5201	2312	1300	832	578

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 45x45 (2 Slot)	68900000000	2700	0.0006080000	1.10400E-07	1.26600E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.2	10.3	21.4
0.25	0.0	0.4	1.7	5.1	12.0	24.3
0.50	0.0	0.5	2.1	6.0	13.7	27.2
1.00	0.1	0.7	2.8	7.7	17.1	33.0
2.00	0.1	1.1	4.2	11.1	23.8	44.7
5.00	0.3	2.4	8.6	21.4	43.9	79.5
10.00	0.6	4.6	15.8	38.6	77.5	137.5
20.00	1.1	8.9	30.4	73.0	144.7	253.6
40.00	2.2	17.5	59.4	141.8	279.0	485.7
80.00	4.3	34.7	117.4	279.4	547.7	950.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.7	9.0	18.7
0.25	0.0	0.3	1.5	4.4	10.5	21.2
0.50	0.0	0.4	1.8	5.2	11.9	23.8
1.00	0.1	0.6	2.4	6.7	14.9	28.8
2.00	0.1	1.0	3.7	9.7	20.7	38.9
5.00	0.2	2.1	7.5	18.7	38.3	69.3
10.00	0.5	4.0	13.8	33.7	67.6	119.9
20.00	1.0	7.7	26.5	63.7	126.2	221.1
40.00	1.9	15.2	51.8	123.7	243.3	423.6
80.00	3.8	30.2	102.4	243.6	477.6	828.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.2	10.3	21.4
0.25	0.0	0.3	1.5	4.9	11.9	24.7
0.50	0.0	0.3	1.7	5.5	13.5	28.0
1.00	0.0	0.4	2.2	6.8	16.6	34.5
2.00	0.0	0.6	3.0	9.4	22.9	47.6
5.00	0.1	1.1	5.4	17.1	41.8	86.7
10.00	0.1	1.9	9.5	30.0	73.3	152.0
20.00	0.2	3.5	17.7	55.8	136.3	282.6
40.00	0.4	6.7	34.0	107.4	262.2	543.8
80.00	0.8	13.2	66.6	210.6	514.1	1066.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.7	9.0	18.7
0.25	0.0	0.3	1.3	4.3	10.4	21.5
0.50	0.0	0.3	1.5	4.8	11.8	24.4
1.00	0.0	0.4	1.9	5.9	14.5	30.1
2.00	0.0	0.5	2.6	8.2	20.0	41.5
5.00	0.1	0.9	4.7	14.9	36.5	75.6
10.00	0.1	1.6	8.3	26.2	63.9	132.6
20.00	0.2	3.0	15.4	48.7	118.8	246.4
40.00	0.4	5.9	29.6	93.7	228.7	474.2
80.00	0.7	11.5	58.1	183.6	448.3	929.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

45x45 T-Slot - 2 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.4	0.7	1.4
10.00	0.0	0.1	0.3	0.6	1.3	2.3
20.00	0.0	0.1	0.5	1.2	2.3	4.1
40.00	0.0	0.3	0.9	2.2	4.4	7.7
80.00	0.1	0.5	1.8	4.4	8.6	15.0
160.00	0.1	1.1	3.7	8.7	17.0	29.5
240.00	0.2	1.6	5.5	13.0	25.4	44.0
480.00	0.4	3.2	10.9	25.9	50.6	87.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.7
5.00	0.0	0.0	0.1	0.3	0.6	1.2
10.00	0.0	0.1	0.2	0.5	1.1	2.0
20.00	0.0	0.1	0.4	1.0	2.0	3.6
40.00	0.0	0.2	0.8	2.0	3.8	6.7
80.00	0.1	0.5	1.6	3.8	7.5	13.0
160.00	0.1	0.9	3.2	7.6	14.8	25.7
240.00	0.2	1.4	4.8	11.3	22.2	38.3
480.00	0.4	2.8	9.5	22.6	44.1	76.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.1	0.4	0.9	1.8
10.00	0.0	0.0	0.2	0.6	1.5	3.2
20.00	0.0	0.1	0.4	1.2	2.8	5.9
40.00	0.0	0.1	0.7	2.2	5.5	11.3
80.00	0.0	0.3	1.4	4.4	10.7	22.2
160.00	0.0	0.5	2.7	8.7	21.2	44.0
240.00	0.1	0.8	4.1	13.0	31.7	65.7
480.00	0.1	1.6	8.2	25.9	63.2	131.0
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.9
5.00	0.0	0.0	0.1	0.3	0.8	1.6
10.00	0.0	0.0	0.2	0.5	1.3	2.8
20.00	0.0	0.1	0.3	1.0	2.5	5.1
40.00	0.0	0.1	0.6	2.0	4.8	9.9
80.00	0.0	0.2	1.2	3.8	9.3	19.4
160.00	0.0	0.5	2.4	7.6	18.5	38.3
240.00	0.0	0.7	3.6	11.3	27.6	57.3
480.00	0.1	1.4	7.1	22.6	55.1	114.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	20771	5193	2308	1298	831	577

45x45 T-Slot - 2 Slot Corner

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 45x45 (2 Slot Corner)	68900000000	2700	0.0006080000	1.18200E-07	1.18200E-07

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.3	4.0	9.7	20.0
0.25	0.0	0.3	1.6	4.8	11.2	22.7
0.50	0.0	0.4	1.9	5.6	12.8	25.4
1.00	0.1	0.6	2.6	7.2	15.9	30.9
2.00	0.1	1.1	4.0	10.4	22.2	41.7
5.00	0.3	2.3	8.0	20.0	41.0	74.2
10.00	0.5	4.3	14.8	36.1	72.4	128.4
20.00	1.0	8.3	28.4	68.2	135.1	236.8
40.00	2.0	16.3	55.5	132.4	260.6	453.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.3	4.0	9.7	20.0
0.25	0.0	0.3	1.4	4.6	11.1	23.1
0.50	0.0	0.3	1.6	5.2	12.6	26.1
1.00	0.0	0.4	2.0	6.4	15.5	32.2
2.00	0.0	0.5	2.8	8.8	21.4	44.4
5.00	0.1	1.0	5.1	16.0	39.1	81.0
10.00	0.1	1.8	8.9	28.0	68.5	142.0
20.00	0.2	3.3	16.5	52.1	127.3	263.9
40.00	0.4	6.3	31.7	100.3	244.9	507.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.3	0.7	1.3
10.00	0.0	0.1	0.2	0.6	1.2	2.1
20.00	0.0	0.1	0.4	1.1	2.2	3.8
40.00	0.0	0.3	0.9	2.1	4.1	7.2
80.00	0.1	0.5	1.7	4.1	8.0	14.0
160.00	0.1	1.0	3.4	8.1	15.9	27.5
240.00	0.2	1.5	5.1	12.1	23.7	41.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.9
5.00	0.0	0.0	0.1	0.3	0.8	1.7
10.00	0.0	0.0	0.2	0.6	1.4	3.0
20.00	0.0	0.1	0.3	1.1	2.7	5.5
40.00	0.0	0.1	0.7	2.1	5.1	10.6
80.00	0.0	0.3	1.3	4.1	10.0	20.7
160.00	0.0	0.5	2.6	8.1	19.8	41.1
240.00	0.0	0.8	3.8	12.1	29.6	61.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	19393	4848	2155	1212	776	539

45x45 T-Slot - 3 Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 45x45 (3 Slot)	68900000000	2700	0.0005830000	1.16500E-07	1.08700E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.8	9.4	19.5
0.25	0.0	0.3	1.6	4.7	11.0	22.2
0.50	0.0	0.4	1.9	5.5	12.6	25.0
1.00	0.1	0.6	2.6	7.1	15.8	30.5
2.00	0.1	1.1	4.0	10.4	22.1	41.5
5.00	0.3	2.3	8.1	20.1	41.2	74.5
10.00	0.5	4.3	15.0	36.4	73.0	129.5
20.00	1.0	8.4	28.7	69.0	136.7	239.5
40.00	2.1	16.5	56.2	134.2	264.0	459.5
80.00	4.1	32.8	111.2	264.6	518.6	899.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.1	10.1	20.9
0.25	0.0	0.4	1.7	5.0	11.8	23.8
0.50	0.0	0.5	2.0	5.9	13.5	26.8
1.00	0.1	0.7	2.8	7.6	16.9	32.7
2.00	0.1	1.1	4.3	11.1	23.7	44.5
5.00	0.3	2.4	8.7	21.6	44.2	79.8
10.00	0.6	4.6	16.0	39.1	78.3	138.8
20.00	1.1	9.0	30.8	74.0	146.5	256.6
40.00	2.2	17.7	60.2	143.8	283.0	492.4
80.00	4.4	35.2	119.2	283.6	555.8	964.0
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.8	9.4	19.5
0.25	0.0	0.3	1.4	4.5	10.9	22.6
0.50	0.0	0.3	1.6	5.1	12.4	25.7
1.00	0.0	0.4	2.0	6.3	15.4	31.9
2.00	0.0	0.5	2.8	8.7	21.3	44.2
5.00	0.1	1.0	5.1	16.1	39.2	81.3
10.00	0.1	1.8	9.0	28.3	69.1	143.2
20.00	0.2	3.3	16.7	52.7	128.7	267.0
40.00	0.4	6.4	32.2	101.6	248.1	514.4
80.00	0.8	12.5	63.1	199.4	486.8	1009.4
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.3	4.1	10.1	20.9
0.25	0.0	0.3	1.5	4.8	11.7	24.2
0.50	0.0	0.3	1.7	5.4	13.3	27.5
1.00	0.0	0.4	2.1	6.7	16.5	34.1
2.00	0.0	0.6	3.0	9.4	22.9	47.4
5.00	0.1	1.1	5.4	17.2	42.0	87.2
10.00	0.1	1.9	9.6	30.3	74.0	153.5
20.00	0.2	3.5	17.9	56.5	138.0	286.1
40.00	0.4	6.8	34.5	108.9	265.9	551.4
80.00	0.8	13.4	67.6	213.7	521.7	1081.9
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

45x45 T-Slot - 3 Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.7
5.00	0.0	0.0	0.1	0.3	0.7	1.3
10.00	0.0	0.1	0.2	0.6	1.2	2.1
20.00	0.0	0.1	0.5	1.1	2.2	3.8
40.00	0.0	0.3	0.9	2.1	4.2	7.3
80.00	0.1	0.5	1.7	4.2	8.2	14.2
160.00	0.1	1.0	3.5	8.2	16.1	27.9
240.00	0.2	1.5	5.2	12.3	24.1	41.7
480.00	0.4	3.1	10.3	24.5	47.9	82.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.8
5.00	0.0	0.0	0.1	0.4	0.7	1.4
10.00	0.0	0.1	0.3	0.6	1.3	2.3
20.00	0.0	0.1	0.5	1.2	2.3	4.1
40.00	0.0	0.3	0.9	2.3	4.5	7.8
80.00	0.1	0.6	1.9	4.5	8.7	15.2
160.00	0.1	1.1	3.7	8.8	17.3	29.9
240.00	0.2	1.6	5.6	13.2	25.8	44.6
480.00	0.4	3.3	11.1	26.3	51.4	88.8
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.4	0.9
5.00	0.0	0.0	0.1	0.3	0.8	1.7
10.00	0.0	0.0	0.2	0.6	1.4	3.0
20.00	0.0	0.1	0.3	1.1	2.7	5.6
40.00	0.0	0.1	0.7	2.1	5.2	10.7
80.00	0.0	0.3	1.3	4.2	10.1	21.0
160.00	0.0	0.5	2.6	8.2	20.1	41.7
240.00	0.0	0.8	3.9	12.3	30.0	62.3
480.00	0.1	1.5	7.8	24.5	59.9	124.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.0	0.1	0.4	0.9	1.8
10.00	0.0	0.0	0.2	0.6	1.5	3.2
20.00	0.0	0.1	0.4	1.2	2.9	6.0
40.00	0.0	0.1	0.7	2.3	5.5	11.5
80.00	0.0	0.3	1.4	4.5	10.9	22.5
160.00	0.0	0.6	2.8	8.8	21.5	44.6
240.00	0.1	0.8	4.2	13.2	32.2	66.7
480.00	0.1	1.6	8.3	26.3	64.2	133.1
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	17834	4459	1982	1115	713	495

45x45 T-Slot - 90 Degree Radius

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m3 (p)	Area m2 (a)	Ixx	Iyy
T-Slot 45x45 (90 Degree Radius)	68900000000	2700	0.0004700000	8.01000E-08	8.01000E-08

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.5	11.0	22.8
0.25	0.0	0.4	1.9	5.7	13.3	26.8
0.50	0.1	0.6	2.4	6.9	15.6	30.8
1.00	0.1	0.9	3.4	9.3	20.3	38.8
2.00	0.2	1.5	5.4	14.0	29.5	54.8
5.00	0.4	3.2	11.4	28.2	57.3	102.8
10.00	0.8	6.2	21.4	51.9	103.6	182.8
20.00	1.5	12.1	41.4	99.3	196.2	342.8
40.00	3.0	24.0	81.4	194.1	381.3	662.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.3	1.4	4.5	11.0	22.8
0.25	0.0	0.3	1.7	5.4	13.2	27.3
0.50	0.0	0.4	2.0	6.3	15.4	31.8
1.00	0.0	0.5	2.6	8.1	19.7	40.8
2.00	0.0	0.7	3.7	11.6	28.4	58.8
5.00	0.1	1.4	7.1	22.3	54.4	112.8
10.00	0.2	2.5	12.7	40.1	97.8	202.8
20.00	0.3	4.7	23.9	75.6	184.6	382.8
40.00	0.6	9.2	46.4	146.7	358.2	742.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.5	1.0
5.00	0.0	0.1	0.2	0.5	1.0	1.7
10.00	0.0	0.1	0.3	0.8	1.7	3.0
20.00	0.0	0.2	0.7	1.6	3.1	5.5
40.00	0.0	0.4	1.3	3.1	6.0	10.5
80.00	0.1	0.7	2.5	6.0	11.8	20.5
160.00	0.2	1.5	5.0	11.9	23.4	40.5
240.00	0.3	2.2	7.5	17.9	34.9	60.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.5
2.00	0.0	0.0	0.1	0.2	0.6	1.2
5.00	0.0	0.0	0.1	0.5	1.1	2.4
10.00	0.0	0.1	0.3	0.8	2.0	4.2
20.00	0.0	0.1	0.5	1.6	3.8	8.0
40.00	0.0	0.2	1.0	3.1	7.5	15.5
80.00	0.0	0.4	1.9	6.0	14.7	30.5
160.00	0.0	0.7	3.8	11.9	29.2	60.5
240.00	0.1	1.1	5.7	17.9	43.6	90.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	13142	3285	1460	821	526	365

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 45x90	68900000000	2700	0.0011290000	8.18200E-07	2.35300E-07

Fixed Cantilever - Upright - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.2	2.8	5.8
0.50	0.0	0.1	0.4	1.3	3.0	6.2
1.00	0.0	0.1	0.5	1.5	3.5	6.9
2.00	0.0	0.2	0.7	2.0	4.4	8.5
5.00	0.0	0.4	1.3	3.4	7.1	13.2
10.00	0.1	0.6	2.3	5.7	11.7	21.0
20.00	0.1	1.2	4.3	10.3	20.7	36.7
40.00	0.3	2.4	8.2	19.6	38.8	68.0
80.00	0.6	4.7	16.0	38.2	75.1	130.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.7	9.0	18.7
0.25	0.0	0.3	1.3	4.1	9.8	20.0
0.50	0.0	0.3	1.5	4.5	10.6	21.4
1.00	0.0	0.4	1.8	5.3	12.2	24.1
2.00	0.1	0.6	2.5	6.9	15.3	29.6
5.00	0.1	1.2	4.6	11.8	24.8	45.9
10.00	0.3	2.2	8.0	19.8	40.5	73.1
20.00	0.5	4.3	14.8	36.0	72.0	127.6
40.00	1.0	8.3	28.4	68.2	135.1	236.5
80.00	2.0	16.4	55.6	132.8	261.1	454.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.1	2.8	5.8
0.50	0.0	0.1	0.4	1.2	3.0	6.3
1.00	0.0	0.1	0.4	1.4	3.4	7.1
2.00	0.0	0.1	0.6	1.8	4.3	8.9
5.00	0.0	0.2	0.9	2.8	6.8	14.2
10.00	0.0	0.3	1.4	4.5	11.1	23.0
20.00	0.0	0.5	2.5	8.0	19.6	40.6
40.00	0.1	0.9	4.7	15.0	36.6	75.8
80.00	0.1	1.8	9.1	28.9	70.6	146.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.2	1.2	3.7	9.0	18.7
0.25	0.0	0.2	1.3	4.0	9.7	20.2
0.50	0.0	0.3	1.4	4.3	10.5	21.7
1.00	0.0	0.3	1.6	4.9	12.0	24.8
2.00	0.0	0.4	1.9	6.1	14.9	30.9
5.00	0.0	0.6	3.1	9.7	23.8	49.3
10.00	0.1	1.0	5.0	15.8	38.6	79.9
20.00	0.1	1.7	8.8	27.9	68.1	141.2
40.00	0.2	3.3	16.5	52.1	127.2	263.7
80.00	0.4	6.3	31.8	100.5	245.4	508.8
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

45x90 T-Slot Continued

Fixed Beam - Upright - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.2	0.4
20.00	0.0	0.0	0.1	0.2	0.3	0.6
40.00	0.0	0.0	0.1	0.3	0.6	1.1
80.00	0.0	0.1	0.3	0.6	1.2	2.1
160.00	0.0	0.1	0.5	1.2	2.3	4.0
240.00	0.0	0.2	0.7	1.8	3.5	6.0
480.00	0.1	0.4	1.5	3.5	6.9	11.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.4	0.8
10.00	0.0	0.0	0.1	0.3	0.7	1.2
20.00	0.0	0.1	0.2	0.6	1.2	2.1
40.00	0.0	0.1	0.4	1.1	2.2	3.8
80.00	0.0	0.3	0.9	2.1	4.1	7.2
160.00	0.1	0.5	1.7	4.1	8.1	14.0
240.00	0.1	0.8	2.6	6.1	12.0	20.8
480.00	0.2	1.5	5.1	12.2	23.8	41.2
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Upright - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.1	0.1	0.3
10.00	0.0	0.0	0.0	0.1	0.2	0.5
20.00	0.0	0.0	0.1	0.2	0.4	0.8
40.00	0.0	0.0	0.1	0.3	0.8	1.6
80.00	0.0	0.0	0.2	0.6	1.5	3.0
160.00	0.0	0.1	0.4	1.2	2.9	6.0
240.00	0.0	0.1	0.6	1.8	4.3	8.9
480.00	0.0	0.2	1.1	3.5	8.6	17.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Flat - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.1	0.2	0.4
2.00	0.0	0.0	0.0	0.1	0.3	0.6
5.00	0.0	0.0	0.1	0.2	0.5	1.0
10.00	0.0	0.0	0.1	0.3	0.8	1.7
20.00	0.0	0.0	0.2	0.6	1.4	2.9
40.00	0.0	0.1	0.3	1.1	2.6	5.5
80.00	0.0	0.1	0.7	2.1	5.1	10.6
160.00	0.0	0.3	1.3	4.1	10.0	20.8
240.00	0.0	0.4	1.9	6.1	15.0	31.0
480.00	0.0	0.8	3.9	12.2	29.7	61.7
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	38605	9651	4289	2413	1544	1072

90x90 (L-Beam) T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (p)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 90x90 (L-Beam)	68900000000	2700	0.0021010000	1.51950E-06	1.51950E-06

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.1	2.7	5.6
0.50	0.0	0.1	0.4	1.2	2.8	5.8
1.00	0.0	0.1	0.4	1.3	3.1	6.2
2.00	0.0	0.1	0.5	1.6	3.6	7.1
5.00	0.0	0.2	0.9	2.3	5.0	9.6
10.00	0.0	0.4	1.4	3.6	7.5	13.8
20.00	0.1	0.7	2.4	6.1	12.4	22.2
40.00	0.2	1.3	4.6	11.1	22.1	39.1
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	1.1	2.6	5.4
0.25	0.0	0.1	0.4	1.1	2.7	5.6
0.50	0.0	0.1	0.4	1.2	2.8	5.9
1.00	0.0	0.1	0.4	1.3	3.1	6.3
2.00	0.0	0.1	0.5	1.4	3.5	7.3
5.00	0.0	0.1	0.6	2.0	4.9	10.1
10.00	0.0	0.2	0.9	2.9	7.2	14.9
20.00	0.0	0.3	1.5	4.8	11.7	24.4
40.00	0.0	0.5	2.7	8.6	20.9	43.3
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.2	0.4
40.00	0.0	0.0	0.1	0.2	0.4	0.6
80.00	0.0	0.0	0.1	0.3	0.7	1.2
160.00	0.0	0.1	0.3	0.6	1.3	2.2
240.00	0.0	0.1	0.4	1.0	1.9	3.3
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.1	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.2
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.1	0.1	0.3
20.00	0.0	0.0	0.0	0.1	0.2	0.5
40.00	0.0	0.0	0.1	0.2	0.4	0.9
80.00	0.0	0.0	0.1	0.3	0.8	1.7
160.00	0.0	0.0	0.2	0.6	1.6	3.3
240.00	0.0	0.1	0.3	1.0	2.3	4.9
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	249301	62325	27700	15581	9972	6925

90x90 T-Slot

Extrusion Specification

Extrusion	Elastic Modulus (E)	Density kg/m ³ (ρ)	Area m ² (a)	I _{xx}	I _{yy}
T-Slot 90x90	68900000000	2700	0.0023460000	2.10500E-06	2.10500E-06

Fixed Cantilever - End Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	0.9	2.1	4.3
0.25	0.0	0.1	0.3	0.9	2.2	4.5
0.50	0.0	0.1	0.3	0.9	2.3	4.6
1.00	0.0	0.1	0.3	1.0	2.4	4.9
2.00	0.0	0.1	0.4	1.2	2.8	5.6
5.00	0.0	0.2	0.7	1.8	3.9	7.4
10.00	0.0	0.3	1.0	2.7	5.6	10.4
20.00	0.1	0.5	1.8	4.5	9.1	16.5
40.00	0.1	1.0	3.3	8.1	16.2	28.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Cantilever - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.1	0.3	0.9	2.1	4.3
0.25	0.0	0.1	0.3	0.9	2.2	4.5
0.50	0.0	0.1	0.3	0.9	2.3	4.7
1.00	0.0	0.1	0.3	1.0	2.4	5.0
2.00	0.0	0.1	0.4	1.1	2.8	5.7
5.00	0.0	0.1	0.5	1.5	3.7	7.8
10.00	0.0	0.1	0.7	2.2	5.4	11.2
20.00	0.0	0.2	1.1	3.6	8.7	18.0
40.00	0.0	0.4	2.0	6.3	15.3	31.7
Maximum Recommended Deflection	2.8	5.6	8.3	11.1	13.9	16.7

Fixed Beam - Centre Point Load

Weight (kg)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.1
10.00	0.0	0.0	0.0	0.0	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.2	0.3
40.00	0.0	0.0	0.1	0.1	0.3	0.5
80.00	0.0	0.0	0.1	0.2	0.5	0.9
160.00	0.0	0.1	0.2	0.5	0.9	1.6
240.00	0.0	0.1	0.3	0.7	1.4	2.4
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Fixed Beam - Normally Distributed Load

Weight (kg/m)	Length (m)					
	0.50	1.00	1.50	2.00	2.50	3.00
0 (Self weight)	0.0	0.0	0.0	0.0	0.0	0.1
2.00	0.0	0.0	0.0	0.0	0.1	0.1
5.00	0.0	0.0	0.0	0.0	0.1	0.2
10.00	0.0	0.0	0.0	0.0	0.1	0.2
20.00	0.0	0.0	0.0	0.1	0.2	0.4
40.00	0.0	0.0	0.0	0.1	0.3	0.7
80.00	0.0	0.0	0.1	0.2	0.6	1.2
160.00	0.0	0.0	0.1	0.5	1.1	2.4
240.00	0.0	0.0	0.2	0.7	1.7	3.5
Maximum Recommended Deflection	1.4	2.8	4.2	5.6	6.9	8.3

Column Buckling - Fixed Both Ends

Column Length	0.50	1.00	1.50	2.00	2.50	3.00
Maximum Load	345363	86341	38374	21585	13815	9593

