

STRUT CHANNELS

PART NO: SC / SCS /SBS/SBP

A wide range of support channel sections, all independently tested for loading capabilities. All load information is available on request for spans up to 3.0m.

- 41mm wide support channels for numerous support applications
- Manufactured to BS6946
- Available in five materials/finishes: Pre-galvanised (standard finish for channels); Hot Dip Galvanised; Stainless Steel; Powder Coated; GRP.

Commonly known by the original brand name of Unistrut, these channels have become the construction industry norm for building services supports. Often simply called 'Strut' and manufactured in a range of profiles, materials and finishes to suit different loads and environments.

Our support channel sections can be used in conjunction with a full range of complementary brackets to create a versatile and economical support system.

Our range of support channel sections are independently tested for loading capabilities, we also display the recommended uniformly distributed load (UDL) for 1.0 metre span to enable comparison between the different channels.

What Channel finish should I use?

Pre-Galvanised Finish: pre-galvanised to BS EN 10346 – standard finish for channels. S280 Z275g/m² steel

Hot Dip Galvanised: Hot Dip Galvanised to BS EN 1461, galvanised after manufacture for superior corrosion protection, S280 Steel.

Stainless Steel: stainless steel grade A4/316 for maximum corrosion protection in aggressive environments

Powder Coated: Polyester powder coating on pre-galvanised channel for internal or external use, 40 micron coating, stocked in white – all RAL colours available

GRP: Non-corrosive and non-conductive, high strength and impact resistance combined with light weight

SSS provides an in-house channel section cutting service using a modern semi-automatic bandsaw. This offers some key benefits over cutting on-site:

Faster – rapid turnaround and delivered ready to install;

Safer – avoids handling long lengths and needing 'hot work' permits

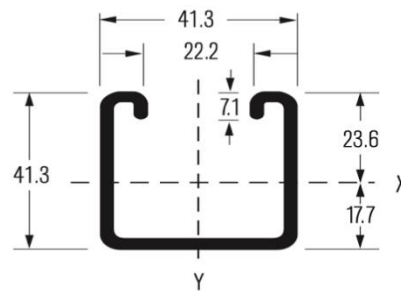
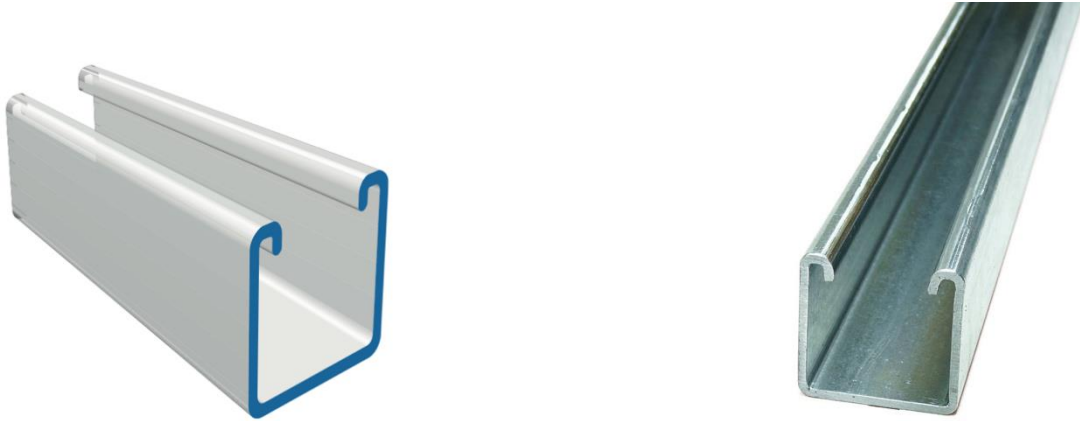
Neater – professionally cut ends.

Profile Length - Standard 1 mtr , 3 mtr & 6 mtrs length

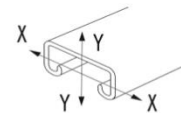
Perforation systems – Standard according to drawing

STRUT CHANNELS WITHOUT SLOTS

PART NO: SC 41 (2.5mm)



Mass: 2.59kg/m



A	-	330mm ²
kg/m	-	2.59kg/m
I x-x	=	0.069 10 ⁶ mm ⁴
Z x-x	=	2.920 10 ³ mm ³
r x-x	=	14.5mm
I y-y	=	0.092 10 ⁶ mm ⁴
Z y-y	=	4.451 10 ³ mm ³
r y-y	=	16.7mm

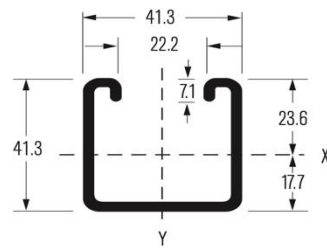
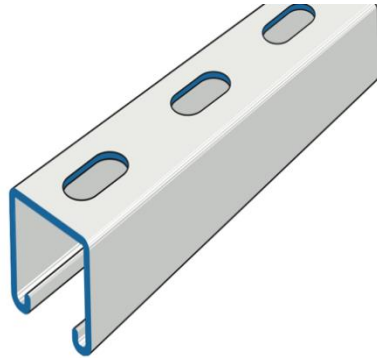
L (mm)	F _{max} (kN)	f (mm)	f _{max} (mm)	F (kN)
250	14.83		0.22	45.51
500	7.42		0.87	36.84
750	4.94		1.97	28.22
1000	3.71		3.50	21.44
1250	2.97		5.46	16.42
1500	2.47		7.87	13.20
1750	2.12 (2)		10.71	11.00
2000	1.85 (2)		13.99	9.35
2250	1.65 (2)		17.70	8.05
2500	1.48 (2)		21.85	7.01
2750	1.35 (2)		26.44	6.14
3000	1.24 (2)		31.47	-

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

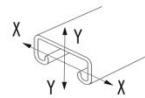
STRUT CHANNELS WITH SLOTS

PART NO: SCS 41 (2.5mm)

Slots 14 wide x 28 long
at 50mm centres (approx.)



Mass: 2.32kg/m



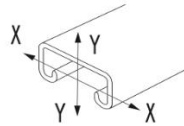
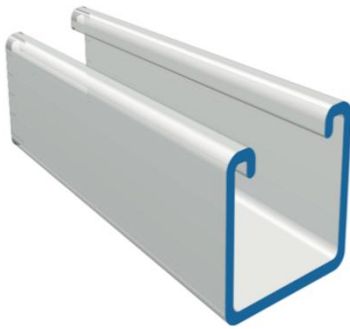
A	-	295mm ²
kg/m	-	2.32kg/m
I x-x	=	0.059 10 ⁶ mm ⁴
Z x-x	=	2.698 10 ³ mm ³
r x-x	=	14.1mm
I y-y	=	0.091 10 ⁶ mm ⁴
Z y-y	=	4.423 10 ³ mm ³
r y-y	=	17.6mm

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	13.35		0.20	40.96
500	6.68		0.78	33.16
750	4.49		1.77	25.40
1000	3.34		3.15	19.30
1250	2.67		4.91	14.78
1500	2.22		7.08	11.88
1750	1.91 (2)		9.64	9.90
2000	1.66 (2)		12.59	8.41
2250	1.48 (2)		15.93	7.24
2500	1.33 (2)		19.66	6.31
2750	1.21 (2)		23.80	5.53
3000	1.12 (2)		28.32	-

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

STRUT CHANNELS WITHOUT SLOTS

PART NO : SC 41 (1.5mm)



A	-	228mm ²
kg/m	-	1.79 kg/m
I x-x	=	0.052 10 ⁶ mm ⁴
Z x-x	=	2.297 10 ³ mm ³
r x-x	=	15.2mm
I y-y	=	0.065 10 ⁶ mm ⁴
Z y-y	=	3.143 10 ³ mm ³
r y-y	=	16.9mm

Mass: 1.79kg/m

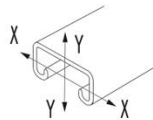
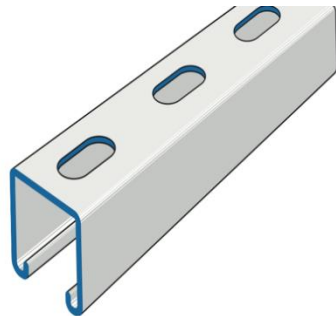
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	10.30		0.20	32.92
500	6.06		0.94	26.55
750	4.04		2.12	19.21
1000	3.03		3.77	12.91
1250	2.42		5.89	9.03
1500	2.02		8.48	6.89
1750	1.73 (2)		11.54	5.56
2000	1.27 (2)		8.41	5.46
2250	1.35 (2)		19.07	4.02
2500	1.21 (2)		23.55	3.53
2750	1.10 (2)		28.49	3.14
3000	1.01 (2)		33.91	2.82

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

STRUT CHANNELS WITH SLOTS

PART NO : SCS 41(1.5mm)

Slots 14 wide x 28 long
at 50mm centres (approx.)



A - 206mm²
kg/m - 1.62kg/m
I x-x = 0.045 10⁸mm⁴
Z x-x = 2.136 10³mm³
r x-x = 14.7mm
I y-y = 0.065 10⁸mm⁴
Z y-y = 3.125 10³mm³
r y-y = 17.7mm

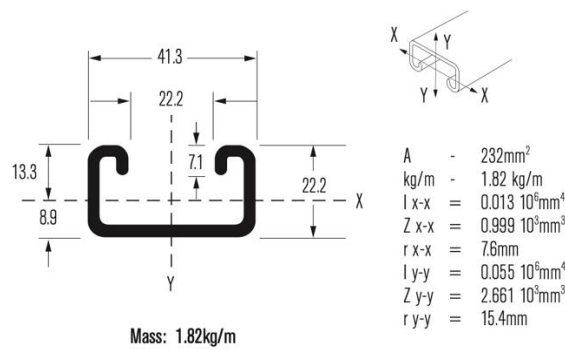
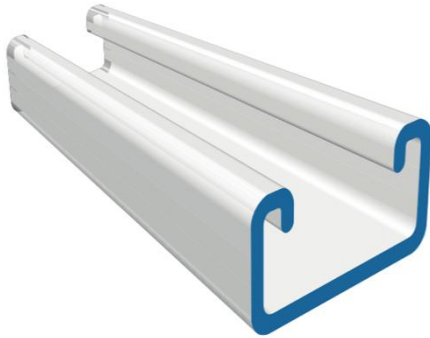
Mass: 1.62kg/m

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	9.27		0.18	29.63
500	5.45		0.85	23.90
750	3.64		1.91	17.29
1000	2.73		3.39	11.62
1250	2.18		5.30	8.13
1500	1.82		7.63	6.20
1750	1.56 (2)		10.39	5.00
2000	1.14 (2)		7.57	4.91
2250	1.22 (2)		17.16	3.62
2500	1.09 (2)		21.20	3.18
2750	0.99 (2)		25.64	2.83
3000	0.91 (2)		30.52	2.54

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

STRUT CHANNELS WITHOUT SLOTS

PART NO : SC 21 (2.5mm)

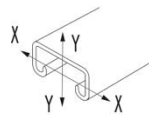
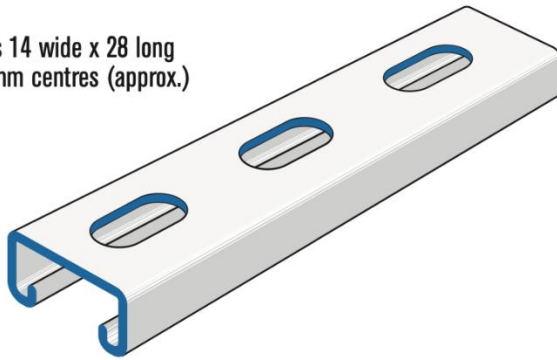


L(mm)	F _{max} (kN)	f	f _{max} (mm)	F(kN)
250	5.52		0.42	34.88
500	2.76		1.68	27.76
750	1.84		3.79	19.42
1000	1.38		6.74	12.08
1250	1.10		10.53	7.90
1500	0.92		15.16	5.56
1750	0.79 (2)		20.63	-
2000	0.69 (2)		26.95	-
2250	0.61 (2)		34.11	-
2500	0.55 (2)		42.11	-
2750	0.50 (2)		50.95	-
3000	0.46 (2)		60.63	-

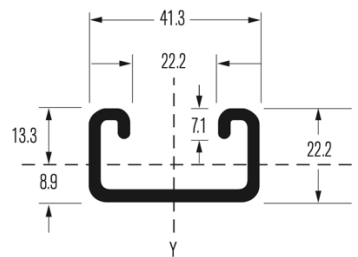
NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

PART NO : SCS 21 (2.5mm) STRUT CHANNELS WITH SLOTS

Slots 14 wide x 28 long
at 50mm centres (approx.)



A - 197mm²
 kg/m - 1.55kg/m
 I_{x-x} = 0.011 10⁶mm⁴
 Z_{x-x} = 0.912 10³mm³
 r_{x-x} = 7.5mm
 I_{y-y} = 0.054 10⁶mm⁴
 Z_{y-y} = 2.634 10³mm³
 r_{y-y} = 16.6mm



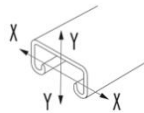
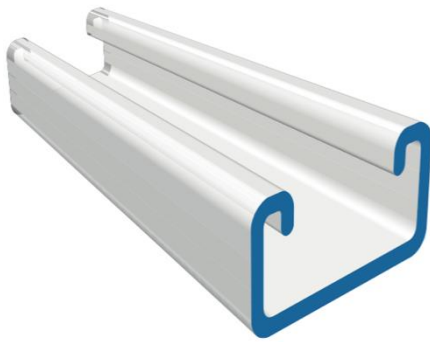
Mass: 1.55kg/m

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	4.97		0.38	31.39
500	2.48		1.51	24.98
750	1.66		3.41	17.48
1000	1.24		6.07	10.87
1250	0.99		9.48	7.11
1500	0.83		13.64	5.00
1750	0.71 (2)		18.57	-
2000	0.62 (2)		24.26	-
2250	0.55 (2)		30.70	-
2500	0.50 (2)		37.90	-
2750	0.45 (2)		45.86	-
3000	0.41 (2)		54.57	-

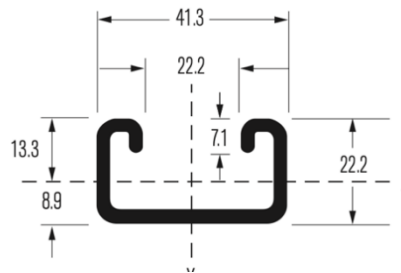
NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

STRUT CHANNELS WITHOUT SLOTS

PART NO : SC 21 (1.5mm)



A - 160mm²
 kg/m - 1.26kg/m
 I x-x = 0.010 10⁶mm⁴
 Z x-x = 0.786 10³mm³
 r x-x = 7.8mm
 I y-y = 0.039 10⁶mm⁴
 Z y-y = 1.880 10³mm³
 r y-y = 15.6mm



Mass: 1.26kg/m

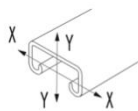
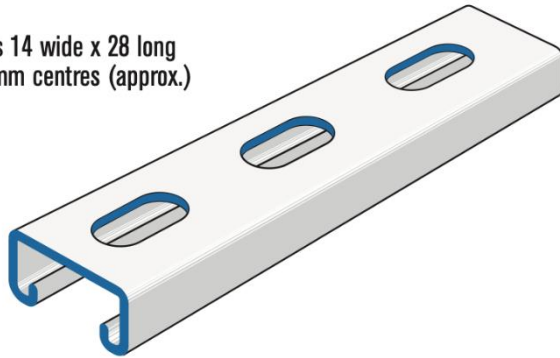
L(mm)	Fmax(kN)	fmax(mm)	F(kN)
250	4.20	0.44	22.36
500	2.10	1.77	16.30
750	1.40	3.98	10.46
1000	1.05	7.08	6.54
1250	0.84	11.07	4.54
1500	0.70 (2)	15.94	3.35
1750	0.60 (2)	21.69	-
2000	0.52 (2)	28.33	-
2250	0.47 (2)	35.86	-
2500	0.42 (2)	44.27	-
2750	0.38 (2)	53.57	-
3000	0.35 (2)	63.57	-

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

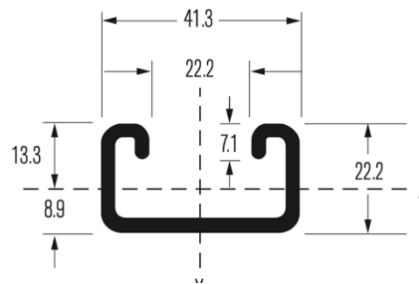
STRUT CHANNELS WITH SLOTS

PART NO : SCS 21 (1.5mm)

Slots 14 wide x 28 long
at 50mm centres (approx.)



A - 138mm²
kg/m - 1.08kg/m
I x-x = 0.008 10⁶mm⁴
Z x-x = 0.729 10³mm³
r x-x = 7.6mm
I y-y = 0.038 10⁶mm⁴
Z y-y = 1.862 10³mm³
r y-y = 16.7mm



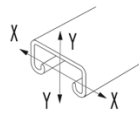
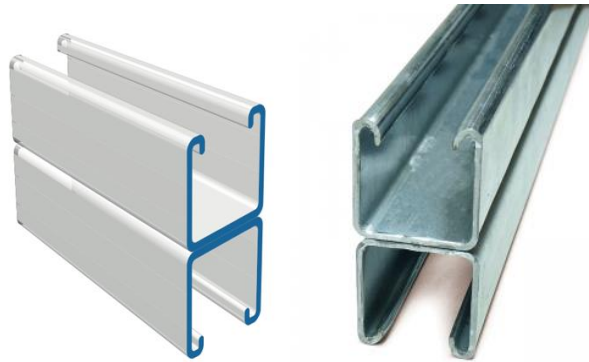
Mass: 1.08kg/m

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	3.78		0.40	20.12
500	1.89		1.59	14.67
750	1.26		3.58	9.41
1000	0.95		6.37	5.89
1250	0.76		9.96	4.09
1500	0.63 (2)		14.35	3.02
1750	0.54 (2)		19.52	-
2000	0.47 (2)		25.50	-
2250	0.42 (2)		32.27	-
2500	0.38 (2)		39.84	-
2750	0.34 (2)		48.21	-
3000	0.32 (2)		57.21	-

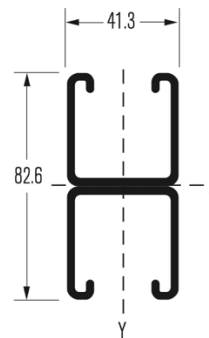
NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

BACK TO BACK WELDED STRUT CHANNELS WITH OUT SLOTS

PART NO : SCB 41X41 (2.5mm)



A - 660mm²
 kg/m - 5.18kg/m
 I x-x = 0.318 10⁶mm⁴
 Z x-x = 7.711 10³mm³
 r x-x = 22.0mm
 I y-y = 0.184 10⁶mm⁴
 Z y-y = 8.902 10³mm³
 r y-y = 16.7mm



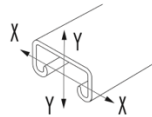
Mass: 5.18kg/m

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	25.64 (1)		0.08	97.71
500	19.58		0.50	94.09
750	13.06*		1.13	88.35
1000	9.79		2.00	80.90
1250	7.83		3.13	72.23
1500	6.53		4.50	62.89
1750	5.60 (2)		6.13	53.40
2000	4.90 (2)		8.01	44.21
2250	4.35 (2)		10.13	35.62
2500	3.92 (2)		12.51	28.85
2750	3.56 (2)		15.14	23.85
3000	3.26 (2)		18.02	20.04

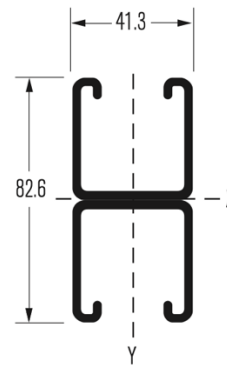
NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

BACK TO BACK WELDED STRUT CHANNELS WITH SLOTS (14X28, 50MM CENTER)

PART NO : SCBS 41X41 (2.5mm)



A - 660mm²
 kg/m - 5.18kg/m
 I x-x = 0.318 10⁶mm⁴
 Z x-x = 7.711 10³mm³
 r x-x = 22.0mm
 I y-y = 0.184 10⁶mm⁴
 Z y-y = 8.902 10³mm³
 r y-y = 16.7mm



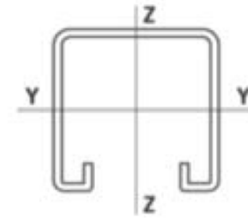
Mass: 5.18kg/m

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	25.64 (1)		0.08	97.71
500	19.58		0.50	94.09
750	13.06*		1.13	88.35
1000	9.79		2.00	80.90
1250	7.83		3.13	72.23
1500	6.53		4.50	62.89
1750	5.60 (2)		6.13	53.40
2000	4.90 (2)		8.01	44.21
2250	4.35 (2)		10.13	35.62
2500	3.92 (2)		12.51	28.85
2750	3.56 (2)		15.14	23.85
3000	3.26 (2)		18.02	20.04

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

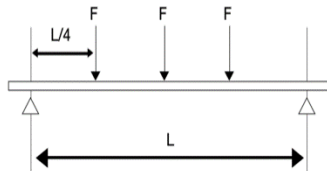
Static Calculation Chart

Type	Weight	Moment of inertia cm ²		Section modulus cm ³	
	(kg/m)	I _y	I _z	W _y	W _z
41 x 21-1.5	1.15	0.78	3.70	0.72	1.80
41 x 41-1.5	1.65	4.46	6.20	2.12	3.00
41 x 21-2.5	1.78	1.01	5.40	0.93	2.61
41 x 41-2.5	2.61	6.26	9.30	2.97	4.50
41 x 62-2.5	3.33	18.03	13.20	5.75	6.39
41 x 82-2.5	4.08	37.31	16.89	9.00	8.18

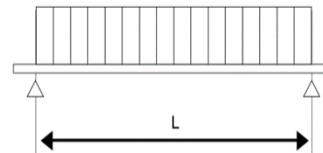


Yielding Strength: 240 N/mm²

Equal concentrated loads at 3 points



Uniform load

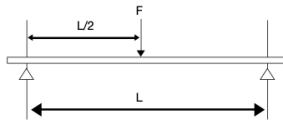


L (mm)	41 x 21		41 x 41				41 x 62	41 x 82	L (mm)	41 x 21		41 x 41				41 x 62	41 x 82
	1.5 mm	2.5 mm	1.5 mm	2.0 mm	2.5 mm	2.5 mm	2.5 mm	1.5 mm		2.5 mm	1.5 mm	2.0 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm	
250	924	1.190	2.714	3.278	3.805	7.365	11.517	250	3.697	4.762	10.854	13.112	15.222	29.460	46.070		
300	770	992	2.261	2.732	3.171	6.138	9.598	300	3.081	3.968	9.045	10.927	12.685	24.550	38.391		
350	660	850	1.938	2.341	2.718	5.261	8.227	350	2.640	3.401	7.753	9.366	10.873	21.043	32.907		
400	578	744	1.696	2.049	2.378	4.603	7.198	400	2.310	2.976	6.784	8.195	9.514	18.413	28.794		
450	513	661	1.508	1.821	2.114	4.092	6.399	450	2.054	2.645	6.030	7.285	8.457	16.367	25.594		
500	462	595	1.357	1.639	1.903	3.683	5.759	500	1.848	2.381	5.427	6.556	7.611	14.730	23.035		
600	385	496	1.131	1.366	1.586	3.069	4.799	600	1.540	1.984	4.523	5.463	6.342	12.275	19.196		
700	306	396	969	1.171	1.359	2.630	4.113	700	1.163	1.503	3.877	4.683	5.436	10.522	16.453		
800	234	303	848	1.024	1.189	2.302	3.599	800	891	1.151	3.392	4.098	4.757	9.206	14.397		
900	185	239	754	911	1.057	2.046	3.199	900	704	909	3.015	3.642	4.228	8.183	12.797		
1.000	150	194	678	820	951	1.841	2.879	1.000	570	737	2.714	3.278	3.805	7.365	11.517		
1.200	104	135	565	683	793	1.534	2.399	1.200	396	512	2.260	2.708	3.170	6.138	9.598		
1.400	77	99	437	524	613	1.315	2.057	1.400	291	376	1.660	1.989	2.329	5.261	8.227		
1.600	59	76	335	401	469	1.151	1.800	1.600	223	288	1.271	1.523	1.783	4.603	7.198		
1.800	46	60	264	317	371	1.023	1.600	1.800	176	227	1.004	1.204	1.409	4.059	6.399		
2.000	38	48	214	257	300	865	1.440	2.000	143	184	814	975	1.141	3.288	5.759		
2.250	30	38	169	203	237	684	1.280	2.250	113	146	643	770	902	2.598	5.119		
2.500	24	31	137	164	192	554	1.146	2.500	91	118	521	624	730	2.104	4.355		
2.750	20	26	113	136	159	458	947	2.750	75	97	430	516	604	1.739	3.599		
3.000	17	22	95	114	133	385	796	3.000	63	82	362	433	507	1.461	3.024		
3.250	14	18	81	97	114	328	678	3.250	54	70	308	369	432	1.245	2.577		
3.500	12	16	70	84	98	283	585	3.500	47	60	266	318	373	1.074	2.222		
3.750	11	14	61	73	85	246	509	3.750	41	52	231	277	325	935	1.936		
4.000	-	12	54	64	75	216	448	4.000	36	46	203	244	285	822	1.701		
4.250	-	11	47	57	67	192	397	4.250	32	41	180	216	253	728	1.507		
4.500	-	-	42	51	59	171	354	4.500	28	36	161	193	225	649	1.344		
4.750	-	-	38	45	53	153	317	4.750	25	33	144	173	202	583	1.206		
5.000	-	-	34	41	48	138	287	5.000	23	29	130	156	183	526	1.089		
5.250	-	-	31	37	44	126	260	5.250	21	27	118	141	166	477	988		
5.500	-	-	28	34	40	114	237	5.500	19	24	108	129	151	435	900		
5.750	-	-	26	31	36	105	217	5.750	17	22	98	118	138	398	823		
6.000	-	-	24	29	33	96	199	6.000	16	20	90	108	127	365	756		

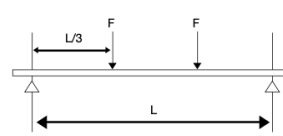
NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.

Maximum Allowable Load of the Construction Channel

Load at 1 point



Equal concentrated loads at 2 points



L (mm)	41 x 21		41 x 41		41 x 62		41 x 82	
	1.5 mm	2.5 mm	1.5 mm	2.0 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm
250	1.848	2.381	5.427	6.556	7.611	14.730	23.035	
300	1.540	1.984	4.523	5.463	6.342	12.275	19.196	
350	1.320	1.701	3.877	4.683	5.436	10.522	16.453	
400	1.155	1.488	3.392	4.098	4.757	9.206	14.397	
450	1.027	1.323	3.015	3.642	4.228	8.183	12.797	
500	924	1.190	2.714	3.278	3.805	7.365	11.517	
600	770	992	2.261	2.732	3.171	6.138	9.598	
700	660	850	1.938	2.341	2.718	5.261	8.227	
800	557	719	1.696	2.049	2.378	4.603	7.198	
900	440	568	1.508	1.821	2.114	4.092	6.399	
1,000	356	460	1.357	1.639	1.903	3.683	5.759	
1,200	247	320	1.131	1.366	1.586	3.069	4.799	
1,400	182	235	969	1.171	1.359	2.630	4.113	
1,600	139	180	794	952	1.114	2.302	3.559	
1,800	110	142	628	752	881	2.046	3.199	
2,000	89	115	508	609	713	1.841	2.879	
2,250	70	91	402	481	564	1.624	2.559	
2,500	57	74	325	390	456	1.315	2.303	
2,750	47	61	269	322	377	1.087	2.094	
3,000	40	51	226	271	317	913	1.890	
3,250	34	44	193	231	270	778	1.611	
3,500	29	38	166	199	233	671	1.389	
3,750	25	33	145	173	203	584	1.210	
4,000	22	29	127	152	178	514	1.063	
4,250	20	25	113	135	158	455	942	
4,500	18	23	100	120	141	406	840	
4,750	16	20	90	108	126	364	754	
5,000	14	18	81	97	114	329	680	
5,250	13	17	74	88	104	298	617	
5,500	12	15	67	81	94	272	562	
5,750	11	14	62	74	86	249	515	
6,000	-	13	56	68	79	228	473	

L (mm)	41 x 21		41 x 41		41 x 62		41 x 82	
	1.5 mm	2.5 mm	1.5 mm	2.0 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm
250	1.386	1.786	4.070	4.917	5.708	11.048	17.276	
300	155	1.488	3.392	4.098	4.757	9.206	14.397	
350	990	1.275	2.907	3.512	4.077	7.891	12.340	
400	866	1.116	2.544	3.073	3.568	6.905	10.798	
450	770	992	2.261	2.732	3.174	6.138	9.598	
500	693	893	2.035	2.459	2.854	5.524	8.638	
600	578	744	1.696	2.049	2.378	4.603	7.198	
700	427	552	1.454	1.756	2.039	3.946	6.170	
800	327	422	1.272	1.537	1.784	3.452	5.399	
900	258	334	1.131	1.366	1.586	3.069	4.799	
1,000	209	270	1.018	1.229	1.427	2.762	4.319	
1,200	145	188	829	993	1.163	2.302	3.599	
1,400	107	138	609	730	854	1.973	3.085	
1,600	82	106	466	559	654	1.726	2.699	
1,800	65	83	368	442	517	1.489	2.399	
2,000	52	68	298	358	419	1.206	2.160	
2,250	41	53	236	283	331	953	1.920	
2,500	33	43	191	229	268	772	1.598	
2,750	28	36	158	189	221	638	1.320	
3,000	23	30	133	159	186	536	1.109	
3,250	20	26	113	135	159	457	945	
3,500	17	22	97	117	137	394	815	
3,750	15	19	85	102	119	343	710	
4,000	13	17	75	89	105	302	624	
4,250	12	15	66	79	93	267	553	
4,500	10	13	59	71	83	238	493	
4,750	-	12	53	63	74	214	443	
5,000	-	11	48	57	67	193	399	
5,250	-	-	43	52	61	175	362	
5,500	-	-	39	47	55	159	330	
5,750	-	-	36	43	51	146	302	
6,000	-	-	33	40	47	134	277	

*For all brackets above, two 1/2" (M12) bolts and 1/2" (M12) SSS Channel Nuts are required for mounting (not included).

Standard Dimensions for 1⁵/₈" (41mm) width series channel fittings(Unless Otherwise Shown on Drawing)

hole Diameter: ⁹/₁₆" (14mm); hole spacing - From end: ¹³/₁₆" (21mm); hole spacing - On Center: ¹⁷/₈" (48mm); Width: 1⁵/₈" (41mm); thickness: ¹/₄" (6mm)

Manufactured to BSEN 6946 :1988 MATERIAL : Fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635, or A36 / BS EN 10025 . The fitting steel also meets the physical requirements of ASTM A1011 SS GR 33. The pick-ling of the steel produces a smooth surface free from scale.

Many fittings are also available in stainless steel, aluminium and fiberglass. Consult our manufacturing for ordering information.

FINISH : Perma-Green III (GR), Electro-galvanized (Z), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (H) BS EN ISO 1461:2009 / ASTM A123 / A153 , Plain Oiled (PO), Pre-galvanise (PG) BS EN 10326 2004, STAINLESS STEEL 304 (S4) & STAINLESS STEEL 316 (S6) BS EN10088-2.

Always use genuine Strut Support Systems © manufactured accessories for better result. Visit www.strutindia.com to know more products .

NOTE: The above-mentioned data has been derived from in-house testing. Please check before ordering.



PACKING - 50PCS/BUNDLE

