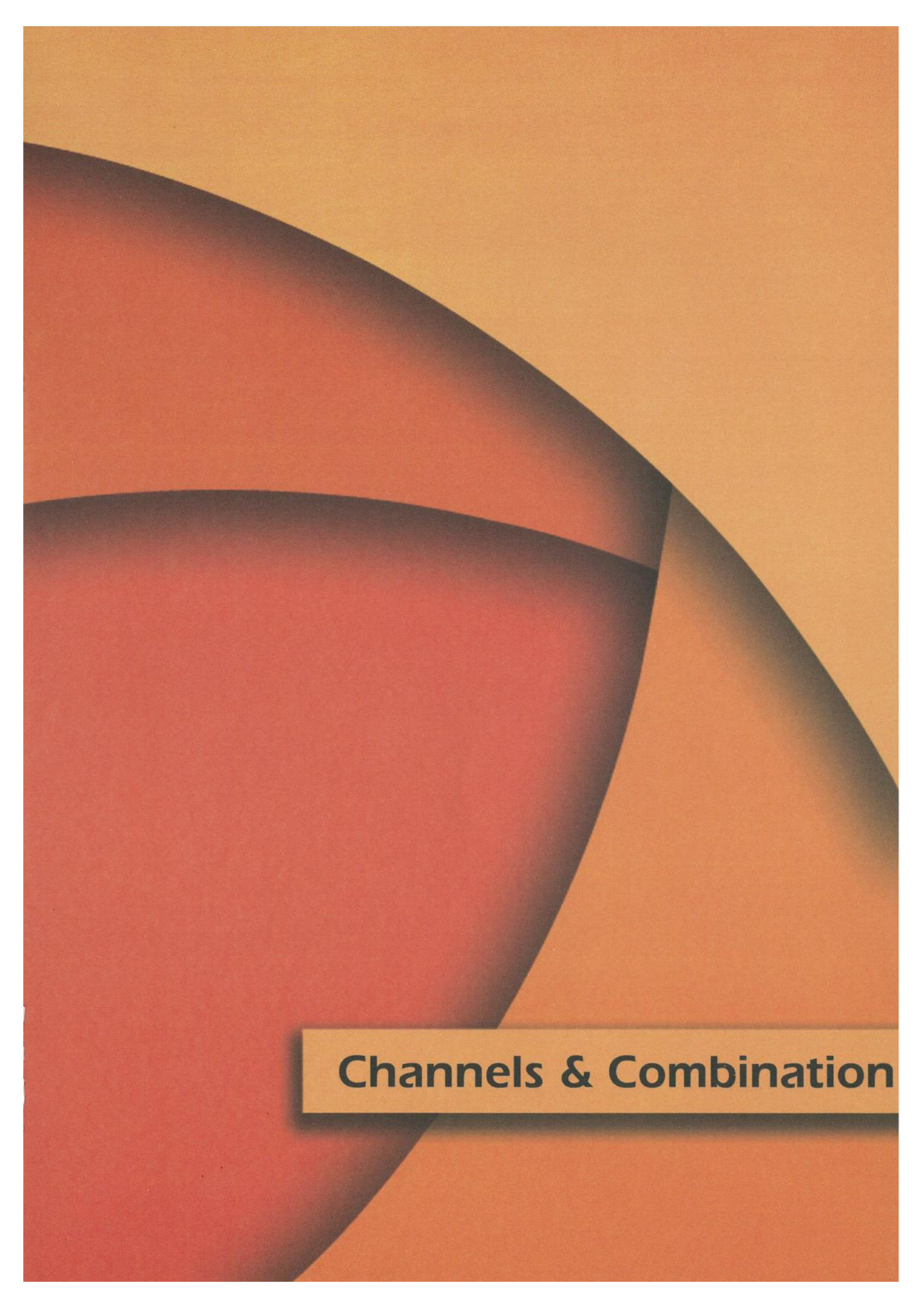




Channels & Combination

**Material**

UliStrut® single channels are accurately cold roll-formed from mild steel complying with BS1449 Part1 : 1983 in accordance with the BS6946:1988 with a guaranteed minimum Yield Stress of 250N/mm².

UliStrut® channels are also available in stainless steel grade 316 in accordance with BS1449 Part2 : 1983. According to requirement, UliStrut® channels can also be supplied in other grades of stainless steel, aluminium alloys and glass reinforced polyester (GRP).

Welding

Combination channels are manufactured (joined) by staggered welding. Welds are spaced to meet the loadings specified in this section. Other combination channels are available upon request.

Finishes

The standard finish is hot-dip galvanized to ASTM A123:1989/EN ISO 1461:1999(E) which supersedes BS729:1971. Other finishes are available upon request.

Standard lengths

Stocked lengths are 6.0 metres with a tolerance of ± 6 mm. Other lengths are available upon request.

Dimensions

All dimensions used in this section are in millimeters (mm) unless otherwise stated.

Performance

All load data for beams and columns in this section pertain to carbon steel and stainless steel. Load tables are constructed in accordance with the principles of analysis covered by BS5950 Part5:1987 and BS6946:1988.

All beam loads indicated load perpendicular to the X-X axis and include channel weight. Long span beams must be supported to prevent rotation and twist.

Deflection is limited to span/200 for aesthetical appeal. A safety factor of 1.6 applies to all specified loadings in this section.

Channel Selection Chart



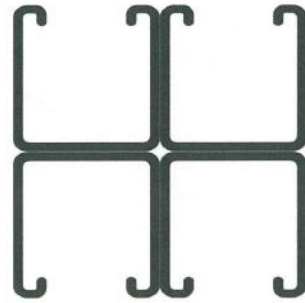
UL1000 Series (Page 6 - 9)



UL1000



L1001



UL1001-C41

UL3300 Series (Page 10 - 12)



UL3300



UL3301

Pierced Channels (Page 13 - 15)



UL3300



UL3301

Slot Details

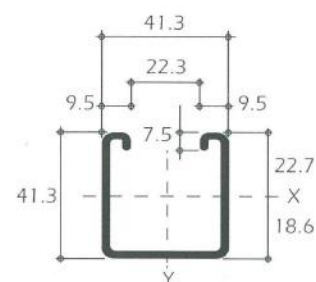
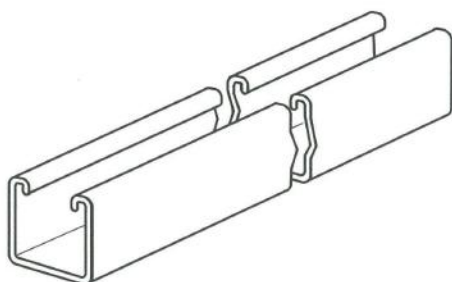
UL1000T and UL3300T slots are
14 x 28mm or 10 x 28mm at 50mm centers

UL1000 Series



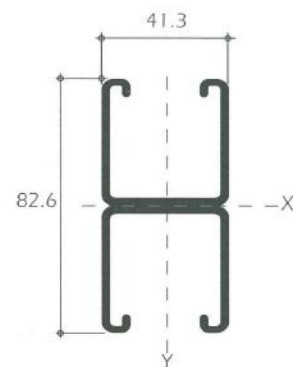
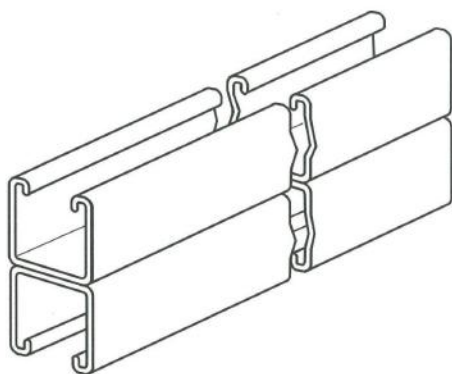
UL1000 Series

Weight: 2.7kg per metre



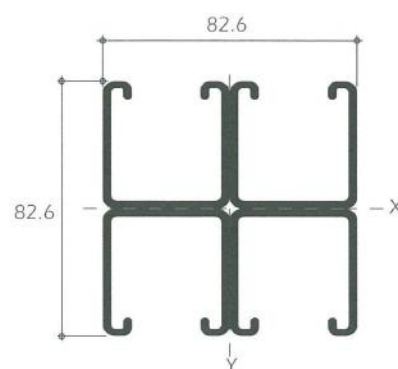
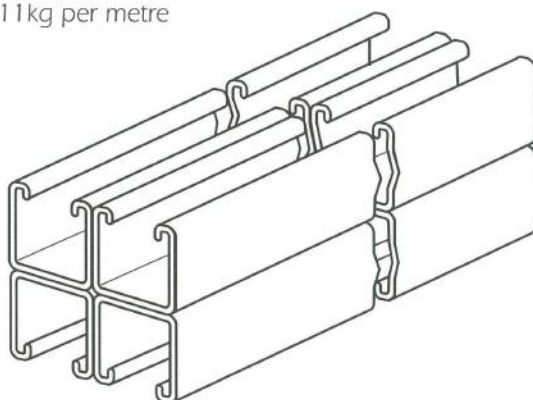
UL1001 Series

Weight: 5.5kg per metre



UL1001 - C41 Series

Weight: 11kg per metre



Elements of Section

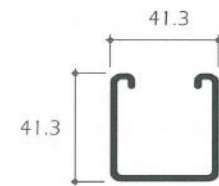
Channel Description	Thickness	Area of Section	Weight Steel	Axis X - X			Axis Y-Y		
				I 10^3	Z 10^3	r	I 10^3	Z 10^3	r
	mm	mm ²	kg/m	mm ⁴	mm ³	mm	mm ⁴	mm ³	mm
UL1000	2.50	335.6	2.75	72.13	3.13	14.66	91.77	4.44	16.54
UL1001	2.50	671.2	5.52	367.95	8.91	23.41	183.54	8.88	16.54
UL1001-C41	2.50	1342.4	11.02	838.98	19.38	25.00	1055.76	24.38	28.04

L = Moment of Inertia

Z = Section Modulus

r = Radius of Gyration

UL1000 Channel



Beam Loading Data UL1000

Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
250	1409	704	1409	704
500	704	352	704	352
750	470	235	470	235
1000	352	176	352	176
1250	282	141	282	141
1500	235	117	235	117
1750	201	101	181	101
2000	176	88	138	87
2250	157	78	109	68
2500	141	70	89	55
2750	128	64	73	46
3000	117	59	62	38

Column Loading Data UL1000

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
250	4713	4663	4609	1353
500	4493	4364	4223	1326
750	4223	3988	3726	1289
1000	3904	3535	3117	1238
1250	3535	3005	2392	1166
1500	3117	2392	1863	1061
1750	2624	1938	1496	961
2000	2192	1605	1226	871
2250	1863	1352	1006	791
2500	1605	1152	823*	718
2750	1397	971	687*	643
3000	1226	823	584*	575

* KL exceeds 200 r

UL1001 Combination Channel



Beam Loading Data UL1001

Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
500	787*	787*	787	787
1000	787*	501	787	501
1500	668	334	668	334
2000	501	251	501	251
2500	401	200	401	200
3000	334	167	314	167
3500	286	143	231	143
4000	251	125	177	110
4500	223	111	140	87
5000	200	100	113	71
5500	182	91	93	58
6000	167	84	78	49

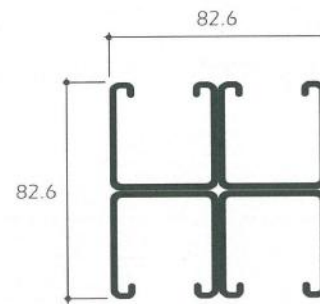
* Limited by weld shear

Column Loading Data UL1001

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
500	9095	8878	8642	2261
1000	8110	7502	6815	2160
1500	6815	5622	4401	1971
2000	5159	3807	2936	1688
2500	3807	2765	2072	1447
3000	2936	2072	1465*	1231
3500	2330	1545*	1099*	1023
4000	1831	1202*	861*	861
4500	1465*	968*	699*	734
5000	1202*	800*		633
5500	1009*	674*		553
6000	861*			

* $\frac{KL}{r}$ exceeds 200

UL1001 - C41 Combination Channel



Beam Loading Data UL1001-C41

Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
500	1616*	1616*	1616	1616
1000	1616*	1090	1616	1090
1500	1454	727	1454	727
2000	1090	545	1090	545
2500	872	436	872	436
3000	727	363	727	363
3500	623	311	623	311
4000	545	273	545	273
4500	485	242	485	242
5000	436	218	412	218
5500	396	198	341	198
6000	363	182	286	179

* Limited by weld shear

Column Loading Data UL1001-C41

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
500	-	-	-	-
1000	-	-	-	-
1500	-	-	-	-
2000	14618	12708	10424	4209
2500	12708	9870	7695	3843
3000	10424	7695	5939	3462
3500	8464	6186	4714	3120
4000	7031	5079	3716	2811
4500	5939	4204	2972*	2521
5000	5079	3438*	2439*	2223
5500	4385	2871*	2045*	1971
6000	3716	2439*	1746*	1758

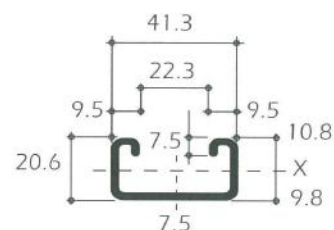
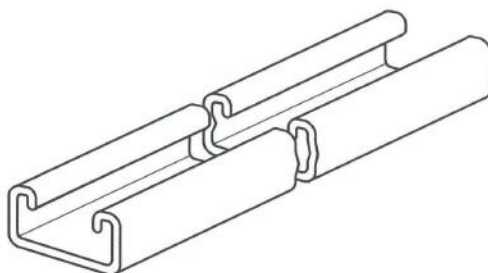
* $\frac{KL}{r}$ exceeds 200

UL3300 Series



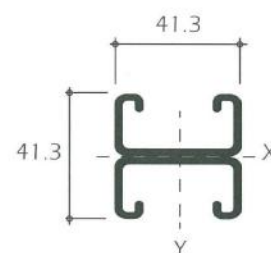
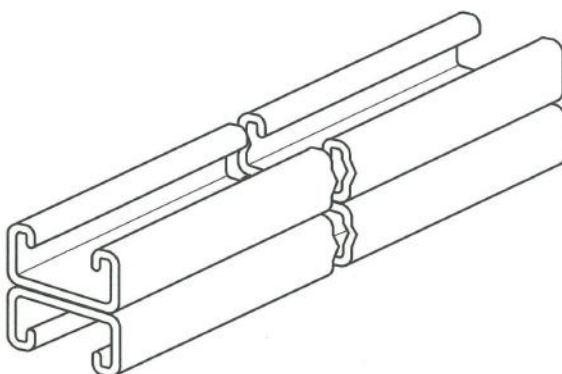
UL3300

Weight: 1.97kg per metre



UL3301

Weight: 3.91kg per metre



Elements of Section

Channel Description	Thickness	Area of Section	Weight Steel	Axis X - X			Axis Y-Y		
				I 10^3	Z 10^3	r	I 10^3	Z 10^3	r
	mm	mm ²	kg/m	mm ⁴	mm ³	mm	mm ⁴	mm ³	mm
UL3300	2.5	232.1	1.97	11.86	0.98	7.15	52.76	2.55	15.05
UL3301	2.5	464.2	3.91	56.91	2.76	11.07	105.52	5.11	15.05

L = Moment of Inertia

Z = Section Modulus

r = Radius of Gyration

UL3300 Combination Channel



Beam Loading Data UL3300

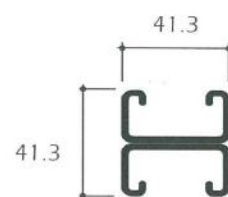
Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
250	441	221	441	221
500	221	110	221	110
750	147	74	147	74
1000	110	55	91	55
1250	88	44	58	36
1500	74	37	40	25
1750	63	32	30	19
2000	55	28	23	14
2250	49	25	18	11
2500	44	22	15	9
2750	40	20	12	8
3000	37	18	10	6

Column Loading Data UL3300

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
250	3099	3007	2905	821
500	2676	2410	2109	769
750	2190	1600	1245	662
1000	1465	1071	816	550
1250	1071	766	543*	457
1500	816	543*	386*	367
1750	619	407*	291*	299
2000	481*	318*	230*	248
2250	386*	258*	-	210
2500	318*	214*	-	180
2750	268*	-	-	-
3000	229*	-	-	-

* KL exceeds 200
r

UL3301 Combination Channel



Beam Loading Data UL3301

Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
250	381*	381*	381	381
500	381*	311	381	311
750	381*	207	381	207
1000	311	155	311	155
1250	248	124	248	124
1500	207	104	194	104
1750	177	89	143	89
2000	155	78	109	68
2250	138	69	86	54
2500	124	62	70	44
2750	113	56	58	36
3000	104	52	49	30

* Limited by weld shear

Column Loading Data UL3301

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
250	6248	6328	6219	1452
500	5980	5712	5413	1417
750	5413	4908	4337	1361
1000	4725	3909	3060	1271
1250	3909	2894	2242	1141
1500	3060	2242	1714	1024
1750	2473	1788	1315	918
2000	2042	1444	1020*	817
2250	1714	1153*	819*	715
2500	1444	945*	674*	629
2750	1203	791*	567*	557
3000	1020*	674*	487*	497

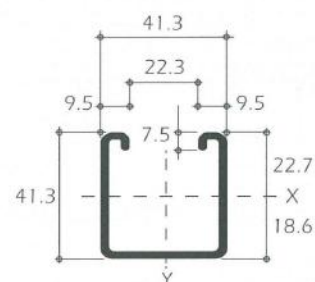
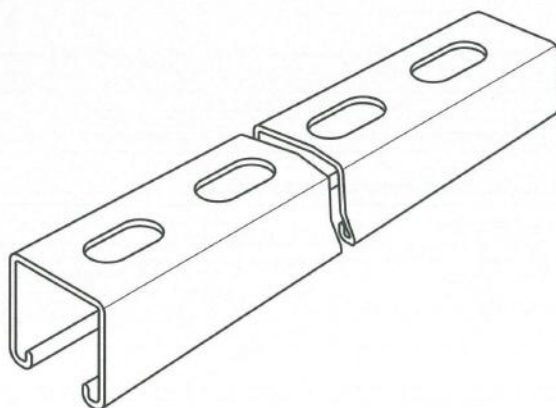
* $\frac{KL}{r}$ exceeds 200

UL1000T & UL3300T Pierced Channel



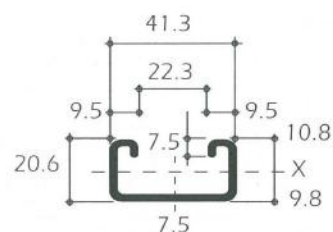
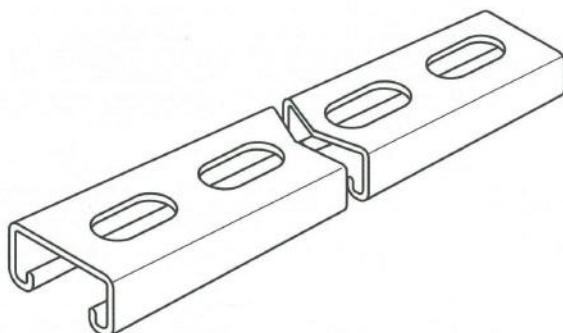
UL1000T

Weight: 2.5kg per metre



UL3300T

Weight: 1.65kg per metre



Elements of Section

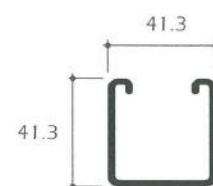
Channel Description	Thickness	Area of Section	Weight Steel	Axis X - X			Axis Y-Y		
				I 10^3	Z 10^3	r	I 10^3	Z 10^3	r
	mm	mm ²	kg/m	mm ⁴	mm ³	mm	mm ⁴	mm ³	mm
UL1000T	2.50	310.6	2.5	64.31	2.96	14.39	91.56	4.43	17.17
UL3300T	2.50	207.1	1.65	10.39	0.92	7.08	52.55	2.54	15.93

L = Moment of Inertia

Z = Section Modulus

r = Radius of Gyration

UL1001T Pierced Channel



Beam Loading Data UL1000T

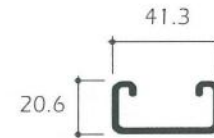
Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
250	1332	666	1332	666
500	666	333	666	333
750	444	222	444	222
1000	333	167	333	167
1250	266	133	266	133
1500	222	111	220	111
1750	190	95	161	95
2000	167	83	123	77
2250	148	74	98	61
2500	133	67	79	49
2750	121	61	65	41
3000	111	56	55	34

Column Loading Data UL1000T

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
250	4359	4311	4260	1328
500	4150	4027	3893	1299
750	3893	3670	3419	1260
1000	3589	3238	2839	1205
1250	3238	2731	2159	1127
1500	2839	2159	1680	1016
1750	2369	1748	1347	915
2000	1978	1447	1103	825
2250	1680	1217	898	744
2500	1447	1035	735*	672
2750	1258	867	614*	597
3000	1103	735*	523*	531

* $\frac{KL}{r}$ exceeds 200

UL3300T Pierced Channel



Beam Loading Data UL3300T

Simply supported beam - Span	Safe total working load on beams			
	load applied as UDL for stress - cum - stability criteria	load applied as concentrated load for stress - cum - stability criteria	load applied as UDL for deflection criteria - Span / 200	load applied as concentrated load for deflection criteria - Span / 200
mm	kg	kg	kg	kg
250	414	207	414	207
500	207	104	207	104
750	138	69	138	69
1000	104	52	80	50
1250	83	41	51	32
1500	69	35	35	22
1750	59	30	26	16
2000	52	26	20	12
2250	46	23	16	10
2500	41	21	13	8
2750	38	19	11	7
3000	35	17	9	6

Column Loading Data UL3300T

Unbraced Column height	Safe total working load on column applied at the centroid of the section			Safe total working load on column applied at the slot of the section
	K = 0.80	K = 1.00	K = 1.20	
mm	kg	kg	kg	kg
250	2762	2678	2587	802
500	2379	2138	1865	746
750	1865	1409	1095	632
1000	1290	942	717	517
1250	942	673	475*	424
1500	717	475*	338*	336
1750	542	356*	255*	272
2000	421*	279*	202*	224
2250	338*	226*	-	198
2500	279*	-	-	-
2750	235*	-	-	-
3000	200*	-	-	-

* $\frac{KL}{r}$ exceeds 200