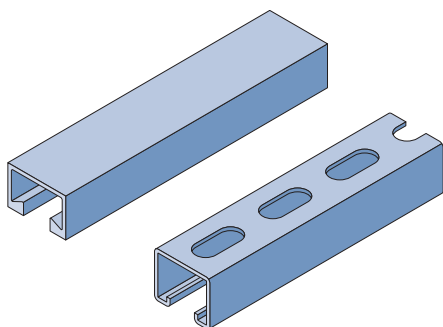


Channel profiles without anchors



Introduction

These two pages give data on Halfen channel profiles without anchors.

Plain or slotted back

The channels are available either plain back (HM) or with regularly spaced slotted holes (HL). Plain back channels may be bolted or welded to the surface of a structure; slotted channels can be through-fixed or hung from suspension rods without the need to drill the channel. Most channels have smooth lips; some (HZM/HZL) are toothed.

Materials/finishes

Channels are available in either carbon steel or stainless steel. Carbon steel may be hot dip galvanised or pre-galvanised.

T head bolts/locking plates

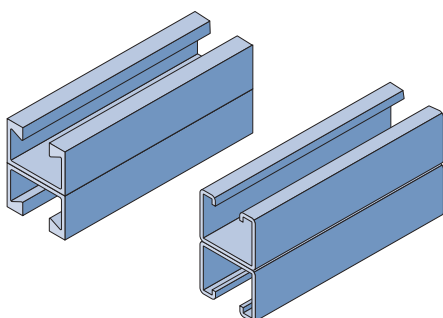
Fixings can be made at any point along the Halfen profile using T-head bolts or locking plates.

Section properties/safe loads

The table opposite gives the sectional properties for Halfen plain and slotted back channels. The loads quoted are for guidance only, and are restricted by a working stress of 140N/mm².

Channels welded back-to-back

Halfen will weld channels back-to-back to order, as below. Please contact Halfen Limited.



Channel profiles – availability (shown thus: ●) (For load data see table opposite)					
Channel type	Plain back (HM), slotted back (HL) or toothed (-Z-)	Carbon steel black/plain oiled	Carbon steel hot dip galv.	Carbon steel pre-galv.	Stainless steel
Hot rolled - surface-fixed channels					
72/48	HM	●	●	-	●
	HL	-	-	-	-
52/34	HM	●	●	-	●
	HL	-	-	-	-
50/30	HM	●	●	-	●
	HL	-	-	-	-
40/22	HM	●	●	-	●
	HL	-	-	-	-
38/23	HZM	●	●	-	-
	HZL	-	-	-	-
29/20	HZM	●	●	-	-
	HZL	-	-	-	-
Cold formed - surface-fixed channels					
54/33	HM	●	●	-	●
	HL	-	-	-	-
49/30	HM	●	●	-	●
	HL	-	-	-	-
40/25	HM	●	●	-	●
	HL	-	-	-	-
40/23	HM	-	-	●	-
	HL	-	-	-	-
38/17	HM	●	●	-	●
	HL	-	●	-	●
28/15	HM	●	●	-	●
	HL	●	●	-	●
41/41	HM	●	●	●	●
	HL	●	●	●	●
	HZM	●	●	-	●
	HZL	●	●	-	●
41/22	HM	●	●	-	●
	HL	●	●	-	●
	HZM	●	●	-	●
	HZL	●	●	-	●
50/40	HM	●	●	-	●
	HL	-	●	-	●
36/36	HM	●	●	-	●
	HL	●	●	-	●
28/28	HM	●	●	●	●
	HL	●	●	●	●
35/50	HM	-	-	●	-
	HL	-	-	●	-
36/20	HM	●	●	-	-
	HL	-	-	-	-
Channels for special applications					
28/12	HM	●	●	-	-
	HL	-	-	-	-
20/12	HM	●	●	-	●
	HL	●	●	-	●
26/26	HM	-	-	●	-
	HL	-	-	●	-
26/18	HM	-	-	●	-
	HL	-	-	●	-

Plain back channels (HM) – properties and performance

Channel type	Section properties						Safe loads W (kN) assuming 'partial fixity', eg bolted to brickwork or concrete, or welded to steel. Working stress = 140 N/mm ²			
	Mass (kg/m)	Section area (cm ²)	I _{xx} (cm ⁴)	Z _{xx} (cm ³)	I _{yy} (cm ⁴)	Z _{yy} (cm ³)	Maximum Load L < 150	L = 250	L = 500	L = 750
72/48 HM	8.82	11.23	34.99	14.33	83.07	23.08	27.0	27.0	20.0	13.3
52/34 HM	4.96	6.32	9.42	5.49	24.13	9.19	20.0	15.37	7.69	5.12
50/30 HM	3.23	4.11	5.23	3.55	14.15	5.78	11.0	9.94	4.97	3.31
40/22 HM	2.12	2.70	2.02	1.65	5.85	2.96	7.0	4.62	2.31	1.54
49/30 HM	3.01	3.82	4.35	2.45	13.95	5.58	10.0	6.86	3.43	2.29
40/25 HM	2.08	2.65	2.05	1.39	6.15	3.07	7.0	3.89	1.95	1.30
38/17 HM	1.77	2.26	0.79	0.78	4.05	2.16	4.0	2.18	1.09	0.73
28/15 HM	1.07	1.37	0.38	0.43	1.42	1.02	2.5	1.20	0.60	0.40
50/40 HM	3.35	4.27	8.66	3.97	15.50	6.33	10.0	10.0	5.56	3.71
41/41 HM/HZM	2.62	3.25	6.91	2.91	9.10	4.41	8.0	8.0	4.07	2.72
41/22 HZM	1.79	2.22	1.16	0.92	5.21	2.52	5.5	2.58	1.29	0.86
36/36 HM	2.19	2.79	4.51	2.18	5.85	3.25	6.0	6.0	3.05	2.03
28/28 HM	1.36	1.73	1.70	1.08	2.01	1.49	3.5	3.0	1.51	1.01

For hot rolled toothed channels (code HZM), see page 18.

Slotted back channels (HL) – properties and performance

Channel type	Section properties						Safe loads W (kN) assuming 'partial fixity', eg bolted to brickwork or concrete. Working stress = 140 N/mm ²			
	Mass (kg/m)	Section area (cm ²)	I _{xx} (cm ⁴)	Z _{xx} (cm ³)	I _{yy} (cm ⁴)	Z _{yy} (cm ³)	L = 500	L = 750	L = 1000	L = 1500
50/40 HL	3.15	3.73	7.14	3.65	15.36	6.27	5.11	3.41	2.51	1.70
41/41 HL/HZL	2.46	2.98	6.07	2.84	9.16	4.43	3.98	2.65	1.99	1.33
36/36 HL	2.00	2.42	3.65	1.97	5.78	3.21	2.76	1.84	1.38	0.92
28/28 HL	1.22	1.48	1.33	0.95	1.98	1.47	1.33	0.89	0.67	-
28/15 HL	0.86	1.16	0.32	0.40	1.35	0.98	0.56	0.37	-	-

Slotted back channels (HL) – load capacities (simply supported)

Channel type	Safe loads W (kN) assuming simply supported channels, eg hung from drop rods. Working stress = 140 N/mm ²								
	Mid span loads			Multiple loads			Uniformly distributed loads		
	L = 500	L = 1000	L = 1500	L = 500	L = 1000	L = 1500	L = 500	L = 1000	L = 1500
50/40 HL	4.09	2.04	1.36	2.45	1.23	0.82	8.18	4.09	2.73
41/41 HL	3.18	1.59	1.06	1.91	0.95	0.64	6.36	3.18	2.12
36/36 HL	2.21	1.10	0.74	1.32	0.66	0.44	4.41	2.21	1.47
28/28 HL	1.06	0.53	-	0.64	0.32	-	2.13	1.06	-
28/15 HL	0.45	-	-	0.27	-	-	0.90	-	-