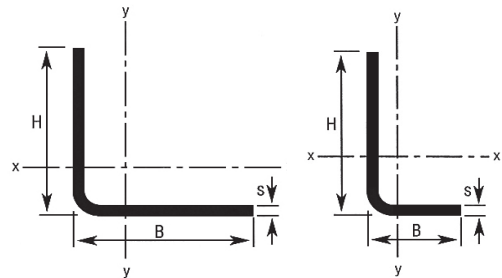


# Cold formed profiles

Heléns offers a wide program of cold formed profiles. Cold formed L and U profiles are a better, simpler and cheaper alternative, since they guarantee an optimum ratio of weight per meter and bending resistance.

## L-PROFILE

The profiles are manufactured according to EN 10162 in quality S235J2C+N from unpickled strip. Additional dimensions and special designs can be offered on request. External stock – lead time approx. 2 weeks.

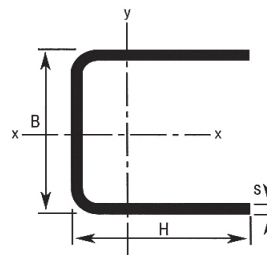


## PRODUCT INFORMATION

H	B	S	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
15	15	2.0	0.42	0.11	0.11	0.11	0.11	×
20	20	2.0	0.58	0.28	0.20	0.28	0.20	×
25	25	2.0	0.74	0.57	0.32	0.57	0.32	×
30	30	2.0	0.89	1.01	0.47	1.01	0.47	
30	30	3.0	1.30	1.43	0.68	1.43	0.68	
40	40	2.0	1.20	2.45	0.84	2.45	0.84	×
40	40	3.0	1.77	3.54	1.23	3.54	1.23	×
40	40	4.0	2.31	4.52	1.60	4.52	1.60	
50	50	3.0	2.24	7.08	1.96	7.08	1.96	×
50	50	4.0	2.94	9.13	2.55	9.13	2.55	×
60	60	3.0	2.72	12.44	2.85	12.44	2.85	×
70	70	5.0	5.15	31.62	6.32	31.62	6.32	×
75	75	4.0	4.50	32.10	5.92	32.10	5.92	×
80	80	5.0	5.90	47.93	8.34	47.93	8.34	×
30	20	2.0	0.74	0.87	0.44	0.32	0.21	×
40	20	2.0	0.89	1.92	0.75	0.35	0.22	×
50	30	3.0	1.77	5.93	1.80	1.67	0.72	×
60	30	3.0	2.01	9.78	2.54	1.72	0.72	×
60	40	3.0	2.22	10.78	2.68	3.98	1.30	×
70	50	4.0	3.55	22.9	4.82	10.0	2.66	×
100	50	4.0	4.50	61.19	9.53	11.09	2.78	×
125	65	5.0	7.10	151.55	18.74	30.31	5.87	×
150	50	5.0	7.60	224.00	24.96	14.50	3.52	×

## U-PROFILE

The profiles are manufactured according to EN 10162 in quality S235J2C+N from unpickled strip. Additional dimensions and special designs can be offered on request. External stock – lead time approx. 2 weeks.

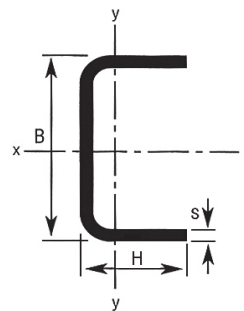


### PRODUCT INFORMATION

H	B	S	s	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
16	16	16	2.0	0.63	0.32	0.39	0.21	0.22	×
20	20	20	2.0	0.84	0.68	0.68	0.43	0.35	×
25	25	25	2.0	1.10	1.42	1.13	0.88	0.56	×
30	30	30	2.0	1.34	2.56	1.71	1.57	0.83	
30	30	30	3.0	1.90	3.40	2.27	2.16	1.19	×
35	35	35	2.0	1.57	4.19	2.39	2.54	1.14	×
35	35	35	3.0	2.25	5.78	3.24	3.61	1.65	×
40	40	40	2.0	1.81	6.40	3.20	3.83	1.50	×
40	40	40	3.0	2.59	8.93	4.46	5.51	2.19	
50	50	50	3.0	3.31	18.26	7.31	11.09	3.48	
50	50	50	4.0	4.31	22.79	9.12	14.14	4.52	×

## UNEQUAL U-PROFILE

The profiles are manufactured according to EN 10162 in quality S235J2C+N from unpickled strip. Additional dimensions and special designs can be offered on request. External stock – lead time approx. 2 weeks.



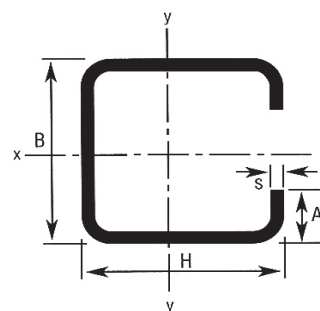
### PRODUCT INFORMATION

H	B	S	s	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
20	30	20	2.0	1.02	1.77	1.18	0.51	0.38	
20	40	20	2.0	1.13	3.47	1.74	0.56	0.40	×
20	50	20	3.0	1.85	8.08	3.23	0.84	0.59	×
30	40	30	3.0	2.12	6.72	3.36	2.47	1.26	
70	40	70	3.0	4.00	15.70	7.55	25.76	6.26	
20	50	20	3.0	1.85	8.08	3.23	0.84	0.59	
25	50	25	3.0	2.12	9.73	3.89	1.61	0.92	×
35	50	35	3.0	2.55	13.06	5.22	4.09	1.77	×
40	50	40	3.0	2.82	14.95	5.98	6.00	2.28	×
30	60	30	3.0	2.60	17.91	5.97	2.87	1.35	×
30	60	30	4.0	3.40	21.78	7.26	3.61	1.74	
40	60	40	3.0	3.08	22.79	7.60	6.41	2.36	×
40	70	40	3.0	3.26	32.14	9.18	6.72	2.42	×
50	70	50	4.0	4.93	49.73	14.22	16.10	4.81	×
40	80	40	3.0	3.55	44.53	11.13	7.08	2.47	×
40	80	40	5.0	5.59	65.76	16.44	10.74	3.91	×
30	100	30	3.0	3.50	6030	12.06	3.33	1.45	×

H	B	S	s	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
50	100	50	3.0	4.49	89.48	17.90	14.17	3.91	×
50	100	50	4.0	5.88	110.14	22.03	18.25	5.11	×
50	100	50	5.0	7.21	132.85	26.57	21.64	6.26	×
40	120	40	4.0	5.97	147.29	24.55	10.37	3.40	×
60	120	60	4.0	7.15	201.14	33.52	32.60	7.48	×
60	120	60	6.0	10.38	275.47	45.91	44.87	10.68	×
60	140	60	4.0	7.80	298.60	42.66	34.18	7.64	×
60	140	60	5.0	9.57	344.40	49.20	41.27	9.37	
60	140	60	6.0	11.32	409.96	58.14	47.78	10.99	×
70	140	70	4.0	8.30	325.84	46.55	51.85	10.27	×
70	140	70	5.0	10.40	390.35	56.48	63.23	12.65	×
60	160	60	5.0	10.40	481.09	60.14	42.76	9.55	×
60	160	60	6.0	12.26	561.17	70.15	49.80	11.18	×
70	160	70	6.0	13.10	631.70	78.96	77.38	15.29	×
70	180	70	6.0	14.00	839.69	92.97	80.27	15.45	×
60	200	60	6.0	14.00	964.77	96.48	53.28	11.58	×
70	200	70	6.0	14.90	1077.72	107.77	82.84	15.69	×
80	200	80	6.0	15.90	1173.50	117.35	120.07	20.22	×
75	250	75	6.0	17.80	1943.00	155.44	107.27	18.43	×

## C-PROFILE

The profiles are manufactured according to EN 10162 in quality S235J2C+N from unpickled strip. Additional dimensions and special designs can be offered on request. External stock – lead time approx. 2 weeks.

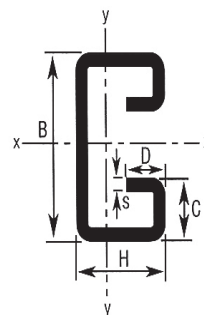


## PRODUCT INFORMATION

A	H	B	H	A	s	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
8.0	15	28	15	8.0	2.0	0.97	1.44	1.03	0.40	0.46	
8.5	19	34	19	8.5	2.0	1.18	2.75	1.63	0.77	0.67	
7.0	25	25	25	7.0	2.0	1.19	1.61	1.29	1.30	0.93	×
10.0	30	30	30	10.0	2.0	1.54	2.92	1.95	2.50	1.52	
14.0	30	50	30	14.0	3.0	2.76	9.02	3.61	2.78	1.50	×
10.0	40	50	40	10.0	3.0	3.04	16.86	6.74	8.50	3.54	×
15.0	50	100	50	15.0	3.0	4.95	103.54	20.71	22.11	6.79	×

## ANCHOR PROFILE

The profiles are manufactured according to EN 10162 in quality S235J2C+N from unpickled strip. Additional dimensions and special designs can be offered on request. External stock – lead time approx. 2 weeks.



## PRODUCT INFORMATION

D	C	H	B	H	C	D	s	KG/M	LX CM <sup>4</sup>	WX CM <sup>3</sup>	LY CM <sup>4</sup>	WY CM <sup>3</sup>	FROM STOCKHOLDER
6	11	22	40	22	11	6	2	1.57	4.82	2.41	1.31	1.02	
6	13	26	48	26	13	6	2	1.86	1.86	3.50	2.40	1.60	×
8	14	30	50	30	14	8	3	2.99	2.99	5.73	5.10	3.07	×

## MECHANICAL CHARACTERISTICS

STEEL QUALITY IN ACCORDANCE WITH EN	YIELD STRENGTH R <sub>eh</sub> MPA MIN MM <sup>2</sup>	TENSILE STRENGTH R <sub>m</sub> MPA	EXTENSION A <sub>5</sub> MIN%
S235J2C+N	235	360-440	25

## COLD FORMED PROFILES OR HOT ROLLED UNP BEAM?

Cold formed profiles give an more accurate cross-section shape and better straightness compared to the UNP-beam. Cold formed profiles also give the freedom to choose materials that are the most suitable for the application. Another advantage of the cold formed sections is that the length can be tailored which give less waste with better yield.

Below examples of U-profiles are part of a series, that has been developed with the same outer dimensions as the UNP-beams to make it easier to replace hot-rolled beams. The wall thickness is selected so that the U-profile has the same bending strength as the UNP-beam. A significant weight reduction is achieved by using a steel with higher strength.

COLD FORMED U-PROFILES S355MC							HOT ROLLED UNP-BEAMS S235JR EN 10025-2					
H (MM)	B (MM)	T (MM)	M KG/M	NR** KN	VR*** KN	MR* KNM	MR* KNM	VR*** KN	NR** KN	M KG/M	UNP	
50	38	5	4.27	193	43.80	2.82	2.49	25.40	167	5.59	50	
65	42	5	5.17	234	57.60	4.50	4.16	38.80	212	7.09	65	
80	45	5	6.00	271	71.20	6.40	6.23	56.40	259	8.64	80	
100	50	5	7.17	324	89.30	9.55	9.68	71.10	317	10.60	100	
120	55	5	9.91	448	127.60	15.48	14.30	99.00	400	13.40	120	
140	60	5	11.32	512	149.20	20.61	20.30	116.00	479	16.00	140	

\* MR - Bending strength

\*\* NR - Tensile strength

\*\*\* VR - Shear strength