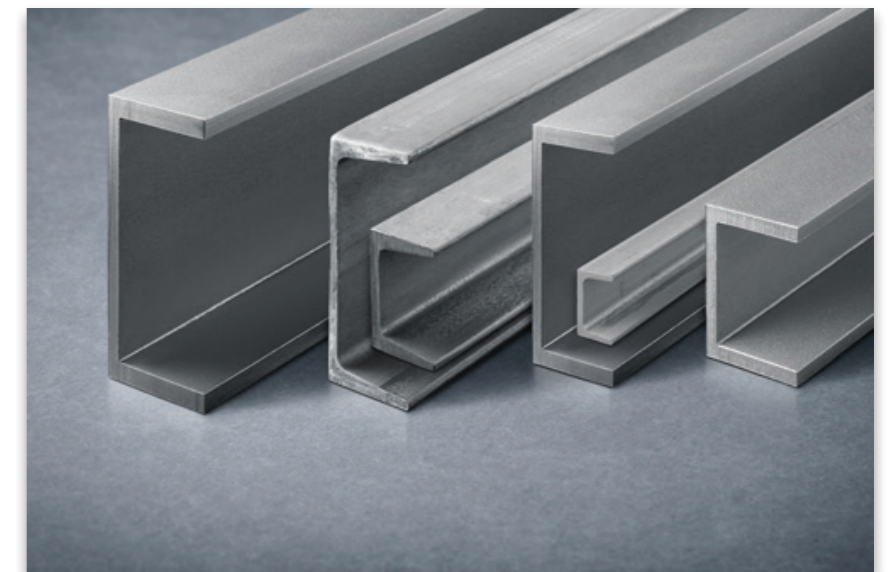




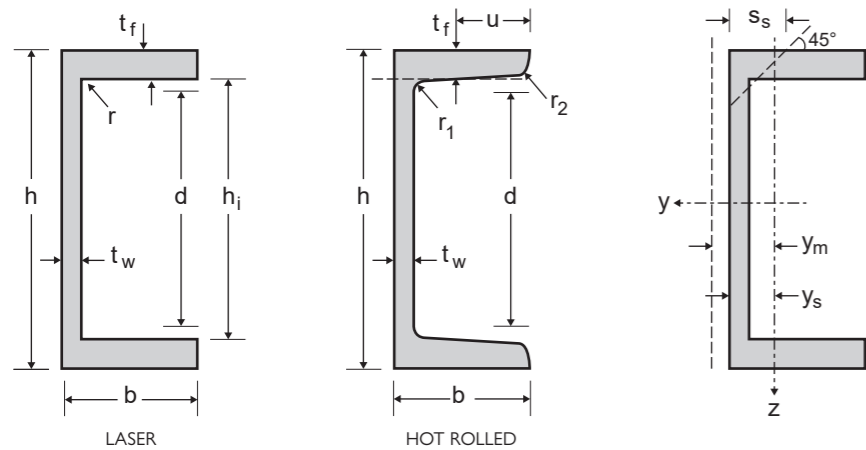
ROYAL GROUP

UPN CHANNELS



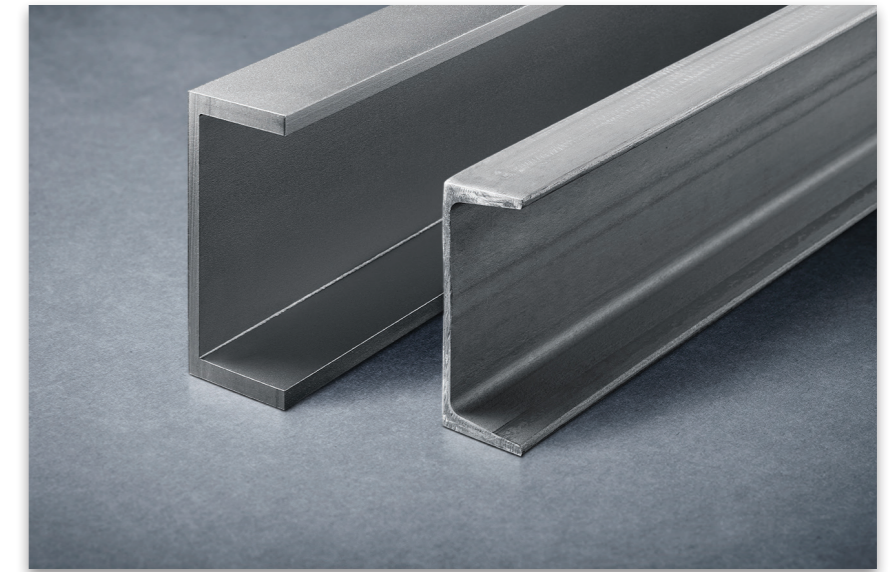
LASER WELDED &
HOT ROLLED PROFILES

UPN EUROPEAN STANDARD CHANNELS



Product Description

Dimensions: in accordance with EN 10365
 Tolerances: EN 10279: 2000
 Grade according to EN 10088-3: 1D
 Surface condition: blasted and pickled

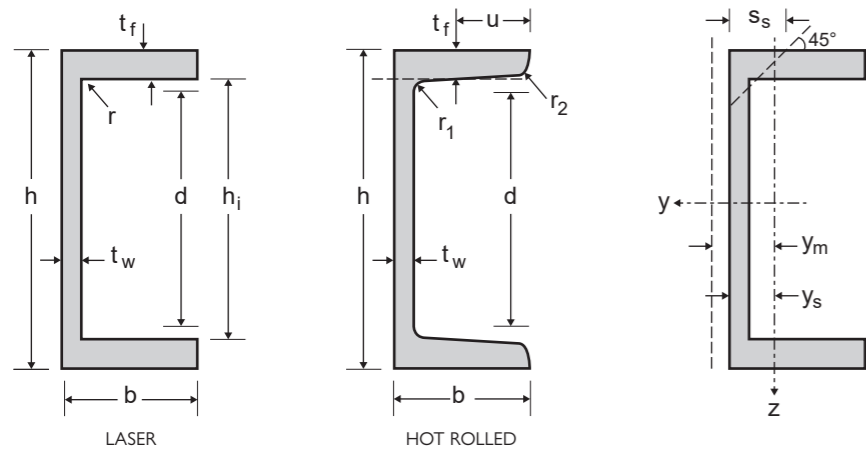


General properties												Structural properties													
Designation		Dimensions							Dimensions for detailing			Strong axis y-y					Weak axis z-z								
	G kg/m	h mm	b mm	t _w mm	t _f mm	r ₁ mm	r ₂ mm	A mm ² ×10 ²	h _i mm	d mm	u = 8%	I _y mm ⁴ ×10 ⁴	W _{ely} mm ³ ×10 ³	W _{ply} mm ³ ×10 ³	i _y mm ×10	A _{vz} mm ² ×10 ²	I _z mm ⁴ ×10 ⁴	W _{elz} mm ³ ×10 ³	W _{plz} mm ³ ×10 ³	i _z mm ×10	S _s mm	I _t mm ⁴ ×10 ⁴	I _w mm ⁶ ×10 ⁹	y _s mm ×10	y _m mm ×10
UPN 20 × 10 × 3	0.89	20	10	3	3.5	3.5	2.5	1.11	-	6.28	5.0	0.56	0.56	0.76	0.70	0.67	0.10	0.15	0.26	0.29	5.57	0.08	0.00	0.37	0.52
UPN 30 × 15 × 4	1.78	30	15	4	4.5	4.5	2.5	2.23	-	12.10	7.5	2.62	1.74	2.33	1.07	1.31	0.43	0.45	0.75	0.44	7.16	0.27	0.00	0.54	0.79
UPN 30 × 15 × 4*	1.76	30	15	4	4.5	1	< 1	2.19	21.00	19.00		2.53	1.69	2.17	1.07	1.07	0.42	0.44	0.59	0.44	5.09	0.15	0.00	0.54	0.82
UPN 30 × 33 × 5	4.37	30	33	5	7	7	3	5.46	-	2.00	16.5	6.62	4.41	5.90	1.08	1.85	5.68	3.01	4.56	1.00	11.14	1.29	0.00	1.41	2.38
UPN 40 × 20 × 3	1.83	40	20	3	3.3	3.5	3	2.29	-	26.80	10.0	5.51	2.76	3.41	1.53	1.26	0.86	0.63	1.13	0.60	5.25	0.12	0.00	0.63	1.15
UPN 40 × 20 × 3*	1.92	40	20	3	3.5	1	< 1	2.39	33.00	31.00		5.59	2.79	3.39	1.53	1.13	0.89	0.66	0.78	0.61	4.09	0.09	0.00	0.65	1.21
UPN 40 × 20 × 4	2.43	40	20	4	4.5	4.5	3	3.04	-	22.00	10.0	6.89	3.44	4.41	1.48	1.71	1.10	0.83	1.47	0.59	7.16	0.32	0.00	0.67	1.12
UPN 40 × 20 × 4*	2.44	40	20	4	4.5	1	< 1	3.04	31.00	29.00		6.70	3.35	4.17	1.48	1.47	1.09	0.82	1.03	0.60	5.09	0.21	0.00	0.67	1.15
UPN 40 × 35 × 5	4.98	40	35	5	7	7	3	6.23	-	12.00	17.5	14.61	7.31	9.41	1.51	2.35	7.47	3.57	5.55	1.08	11.14	1.38	0.01	1.41	2.48
UPN 40 × 35 × 5*	4.96	40	35	5	7	1	< 1	6.20	26.00	24.00		14.28	7.14	8.94	1.52	1.72	7.34	3.56	4.45	1.09	7.59	0.92	0.01	1.43	2.56
UPN 50 × 25 × 5	3.90	50	25	5	6	5	3.5	4.87	-	25.70	12.5	16.80	6.73	8.52	1.85	2.52	2.49	1.48	2.79	0.71	14.60	0.59	0.01	0.81	1.34
UPN 50 × 25 × 5*	3.92	50	25	5	6	1	< 1	4.90	38.00	36.00		16.91	6.76	8.42	1.86	2.26	2.77	1.69	2.11	0.75	6.59	0.55	0.01	0.86	1.47
UPN 50	5.60	50	38	5	7	7	3.5	7.00	-	21.00	19.0	26.40	10.60	13.10	1.92	2.77	9.12	3.75	6.89	1.13	16.70	1.12	0.03	1.37	2.47
UPN 50*	5.70	50	38	5	7	1	< 1	7.12	36.00	34.00		26.77	10.71	13.07	1.94	2.22	10.10	4.36	5.28	1.19	7.59	1.03	0.03	1.48	2.73
UPN 60 × 30 × 6	5.16	60	30	6	6	6	4	6.45	-	35.50	15.0	31.60	10.50	13.30	2.21	3.54	4.51	2.16	4.13	0.84	15.80	0.89	0.02	0.91	1.50
UPN 60 × 30 × 6*	5.19	60	30	6	6	1	< 1	6.48	48.00	46.00		31.91	10.64	13.20	2.22	3.30	5.09	2.50	3.13	0.89	6.59	0.86	0.02	0.97	1.66
UPN 65	7.11	65	42	5.5	7.5	7.5	4	8.88	-	34.00	21.0	57.50	17.70	21.70	2.52	3.68	14.10	5.07	9.48	1.25	18.00	1.61	0.08	1.42	2.60
UPN 65*	7.24	65	42	5.5	7.5	1	< 1	9.05	50.00	48.00		58.12	17.88	21.57	2.53	3.24	15.71	5.92	7.00	1.32	8.09	1.48	0.08	1.54	2.90
UPN 80	8.68	80	45	6	8	8	4	10.85	-	47.00	22.5	106.00	26.50	32.30	3.10	4.90	19.40	6.36	12.08	1.33	19.40	2.20	0.17	1.45	2.67
UPN 80*	8.74	80	45	6	8	2	< 1	11.06	64.00	60.00		106.97	26.74	32.17	3.11	4.50	21.80	7.44	13.28	1.40	15.18	2.09	0.20	1.57	2.97
UPN 100	10.61	100	50	6	8.5	8.5	4.5	13.26	-	64.00	25.0	206.00	41.20	49.00	3.91	6.46	29.30	8.49	16.20	1.47	20.30	2.81	0.41	1.55	2.93
UPN 100*	10.66	100	50	6	8.5	2	< 1	13.50	83.00	79.00		207.30	41.46	49.36	3.92	5.68	33.07	9.98	17.93	1.57	15.68	2.71	0.48	1.69	3.27

Other custom sizes are available upon request

* Profiles are also available as laser welded with full penetration, non tapered, equivalent to hot rolled (r = laser seam).

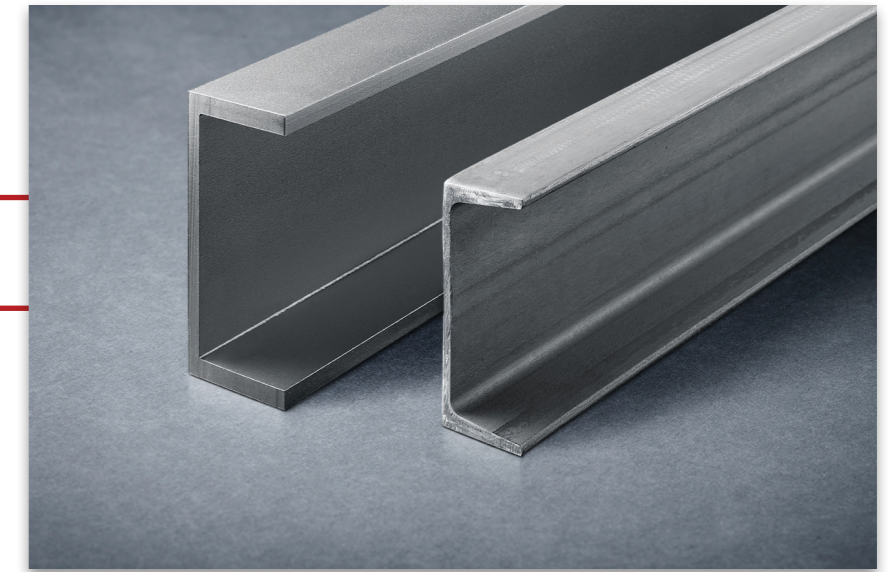
UPN EUROPEAN STANDARD CHANNELS



STAINLESS STEEL

Product Description

Dimensions: in accordance with EN 10365
 Tolerances: EN 10279: 2000
 Grade according to EN 10088-3: 1D
 Surface condition: blasted and pickled



General properties												Structural properties													
Designation		Dimensions							Dimensions for detailing			Strong axis y-y						Weak axis z-z							
	G kg/m	h mm	b mm	t _w mm	t _f mm	r ₁ mm	r ₂ mm	A mm ² ×10 ²	h _i mm	d mm	u = 8%	I _y mm ⁴ ×10 ⁴	W _{ely} mm ³ ×10 ³	W _{ply} mm ³ ×10 ³	i _y mm ×10	A _{vz} mm ² ×10 ²	I _z mm ⁴ ×10 ⁴	W _{elz} mm ³ ×10 ³	W _{plz} mm ³ ×10 ³	i _z mm ×10	S _s mm	I _t mm ⁴ ×10 ⁴	I _w mm ⁶ ×10 ⁹	y _s mm ×10	y _m mm ×10
UPN 120	13.40	120	55	7	9	9	4.5	16.75	-	82.00	27.5	364.00	60.70	72.60	4.62	8.80	43.20	11.10	21.26	1.59	22.20	4.15	0.90	1.60	3.03
UPN 120*	13.48	120	55	7	9	2	< 1	17.06	102.00	98.00		367.96	61.33	73.33	4.64	7.97	49.15	13.08	23.67	1.70	17.18	3.99	1.04	1.74	3.38
UPN 140	16.08	140	60	7	10	10	5	20.10	-	98.00	30.0	605.00	86.40	103.00	5.45	10.40	62.70	14.80	28.31	1.75	23.90	5.68	1.80	1.75	3.37
UPN 140*	16.13	140	60	7	10	2	< 1	20.42	120.00	116.00		609.41	87.06	103.40	5.46	9.32	71.05	17.36	31.44	1.87	18.18	5.46	2.08	1.91	3.76
UPN 160	18.96	160	65	7.5	10.5	10.5	5.5	23.70	-	115.00	32.5	925.00	116.00	138.00	6.21	12.60	85.30	18.30	35.15	1.89	25.30	7.39	3.26	1.84	3.56
UPN 160*	19.03	160	65	7.5	10.5	2	< 1	24.09	139.00	135.00		932.63	116.58	138.50	6.22	11.44	97.42	21.67	39.21	2.01	19.18	7.09	3.76	2.00	3.98
UPN 180	22.09	180	70	8	11	11	5.5	27.61	-	133.00	35.0	1350.00	150.00	179.00	6.95	15.10	114.00	22.40	43.05	2.02	26.70	9.55	5.57	1.92	3.75
UPN 180*	22.17	180	70	8	11	2	< 1	28.06	158.00	154.00		1365.17	151.69	180.33	6.98	13.76	130.28	26.60	48.04	2.15	20.18	9.06	6.44	2.10	4.20
UPN 200*	25.53	200	75	8.5	11.5	2	< 1	32.31	177.00	173.00		1928.35	192.83	229.46	7.73	16.27	170.62	32.20	58.04	2.30	21.18	11.42	10.50	2.20	4.42
UPN 220*	29.68	220	80	9	12.5	2	< 1	37.57	195.00	191.00		2713.15	246.65	293.39	8.50	18.94	225.67	39.87	71.87	2.45	22.68	15.32	16.83	2.34	4.71
UPN 240*	33.53	240	85	9.5	13	2	< 1	42.45	214.00	210.00		3627.90	302.32	359.97	9.24	21.84	285.51	47.12	84.83	2.59	23.68	18.78	25.51	2.44	4.93
UPN 260*	38.25	260	90	10	14	2	< 1	48.42	232.00	228.00		4859.51	373.81	444.92	10.02	24.90	365.32	56.92	102.48	2.75	25.18	24.36	38.35	2.58	5.22
UPN 280*	42.28	280	95	10	15	2	< 1	53.52	250.00	246.00		6313.62	450.97	534.30	10.86	26.82	457.00	67.84	122.32	2.92	26.18	29.60	55.66	2.76	5.63
UPN 300*	46.47	300	100	10	16	2	< 1	58.82	268.00	264.00		8066.44	537.76	634.42	11.71	28.74	564.28	80.02	144.59	3.10	27.18	35.77	78.95	2.95	6.05
UPN 320*	59.18	320	100	14	17.5	2	< 1	74.92	285.00	281.00		10719.93	670.00	814.15	11.96	42.72	642.94	88.18	159.10	2.93	32.68	62.98	102.40	2.71	5.23
UPN 350*	60.46	350	100	14	16	2	< 1	76.54	318.00	314.00		12687.32	724.99	888.88	12.88	47.10	618.19	82.40	149.34	2.84	31.18	58.09	121.50	2.50	4.83
UPN 380*	62.91	380	102	13.5	16	2	< 1	79.64	348.00	344.00		15565.03	819.21	1003.37	13.98	49.48	667.24	86.53	156.47	2.89	30.68	57.75	156.40	2.49	4.90
UPN 400*	71.56	400	110	14	18	2	< 1	90.58	364.00	360.00		20089.49	1004.47	1220.72	14.89	53.86	921.06	112.31	202.22	3.19	33.18	77.02	236.10	2.80	5.56

Other custom sizes are available upon request

Profiles are * also available or + only available as laser welded with full penetration, non tapered, equivalent to hot rolled (r = laser seam).

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