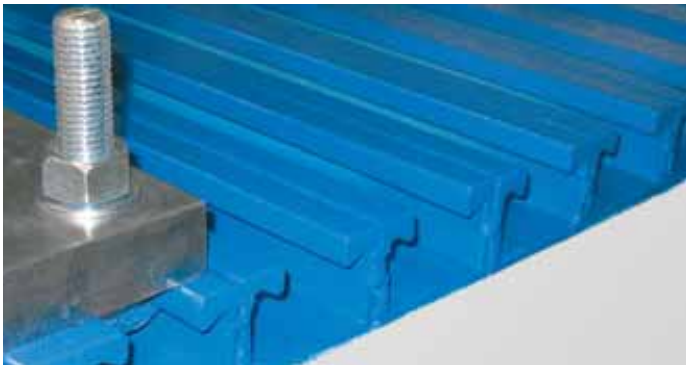
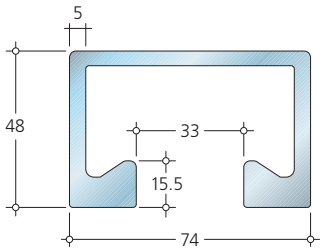
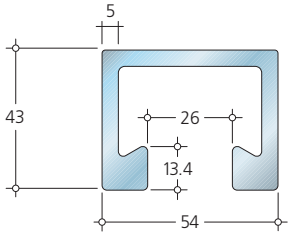
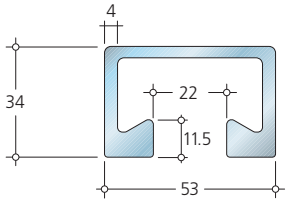
Plain back channels JM, hot-rolled

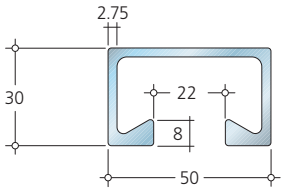
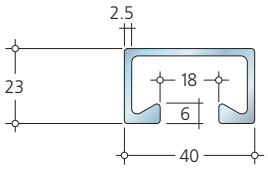
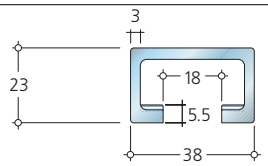
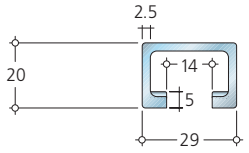
The JM-W hot-rolled series, as mounting channels, are distinguished by

- **solid channel lips, large contact areas and high tightening torques**
- **right-angled profile edges and low residual stresses, for good weldability**

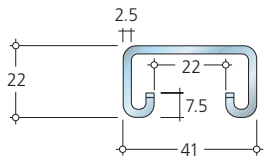
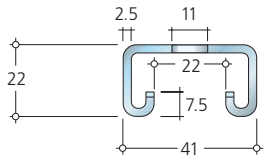
All cross section properties for static calculations will be found on pages 48/49.



	Profile	Bolts / locking plates
	**JM W 74/48** wb, fv, A4 8.85 kg/m[1)]	JA M 20–30/ JGM A M 20–30
	**JM W 54/43** wb, fv 6.57 kg/m[1)]	JE M 24; JB M 10–20/ JGM B M 6–16
	**JM W 53/34** wb, fv, A4 4.96 kg/m[1)]	JB M 10–20/ JGM B M 6–16

	Profile	Bolts / locking plates
	**JM W 50/30** wb, fv, A4 3.25 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JM W 40/22** wb, fv, A4 2.12 kg/m[1)]	JC M 10–16/ JGM C M 6–16
	**Toothed profile JXM W 38/23** wb, fv, A4 2.42 kg/m[1)]	Toothed bolt JXH M 12–16 Hammerhead bolt JUH M 16/ —
	**Toothed profile JXM W 29/20** wb, fv, A4 1.55 kg/m[1)]	Toothed bolt JXD M 12 Hammerhead bolt JUD M 12/ —

Toothed channels JZM, cold-rolled

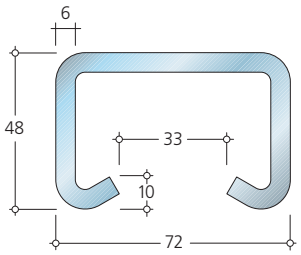
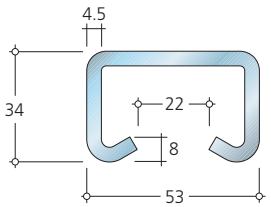
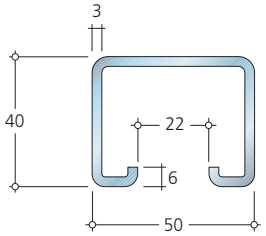
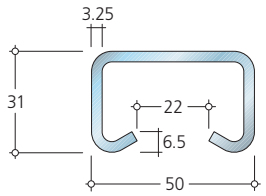
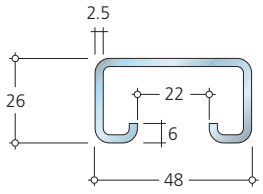
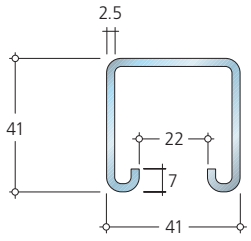
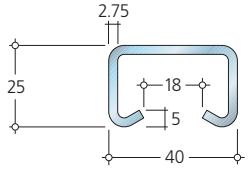
	Profile	Toothed bolts
	**JZM K 41/22** wb, fv, A4 1.88 kg/m[1)]	JZS M 12–16/ —
	**Slotted profile JZML K 41/22** wb, fv, A4 LL 11×40 1.74 kg/m[1)]	

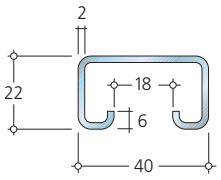
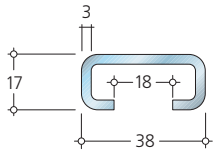
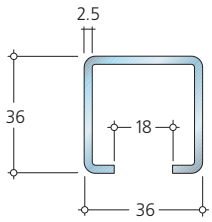
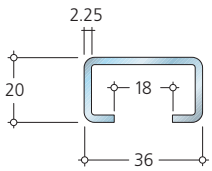
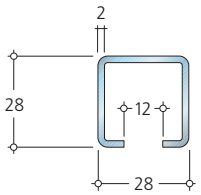
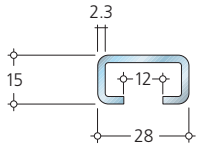
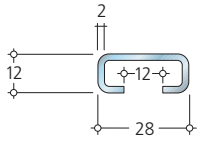
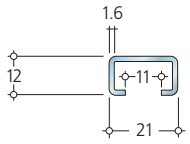
1) *Weights per metre for the mill finish design*
(for galvanized profiles: weight per metre × 1.10)
(for stainless steel profiles: weight per metre × 1.02)

wb = mill finish steel
fv = hot-dip galvanized steel
sv = Sendzimir galvanized steel
A2 = stainless steel 1.4403/1.4541
A4 = stainless steel 1.4401/1.4404/1.4571

Mounting channels, Framing channels

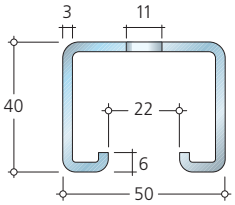
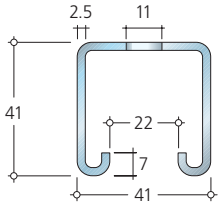
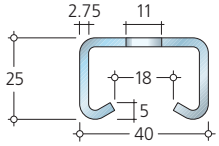
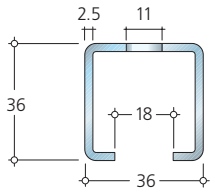
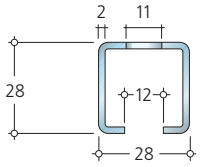
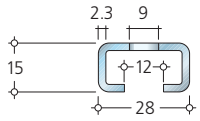
Plain back channels JM, cold-rolled

	Profile	Bolts / locking plates
	**JM K 72/48** wb, fv, A4 8.09 kg/m[1)]	JA M 20–30/ JGM A M 20
	**JM K 53/34** wb, fv, A4 4.47 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JM K 50/40** wb, fv 3.41 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JM K 50/30** wb, fv, A4 3.04 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JM K 48/26** wb, fv 2.25 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JM K 41/41** wb, fv 2.61 kg/m[1)]	—/ JAM 22 M 6–12 JAM 22 F M 6–12
	**JM K 40/25** wb, fv, A4, A2 2.01 kg/m[1)]	JC M 10–16/ JGM C M 6–16

	Profile	Bolts / locking plates
	**JM K 40/22** wb, fv 1.53 kg/m[1)]	JC M 10–16/ JGM C M 6–16
	**JM K 38/17** wb, fv, A4, A2 1.77 kg/m[1)]	JH M 10–12 JUH M 16/ JGM H M 5–12
	**JM K 36/36** wb, fv, A4 2.22 kg/m[1)]	JH M 10–12 JUH M 16/ JGM H M 5–12
	**JM K 36/20** wb, fv 1.44 kg/m[1)]	JH M 10–12 JUH M 16/ JGM H M 5–12
	**JM K 28/28** wb, fv, A4 1.39 kg/m[1)]	JD M 6–10 JUD M 12/ JGM D M 4–10
	**JM K 28/15** wb, fv, A4, A2 1.08 kg/m[1)]	JD M 6–10 JUD M 12/ JGM D M 4–10
	**JM K 28/12** wb, fv, A4, A2 0.89 kg/m[1)]	JD M 6–10/ JGM D M 4–10
	**JM K 21/12** sv 0.58 kg/m[1)]	JG M 6–8/ JGM G M 4–8

Mounting channels, Framing channels

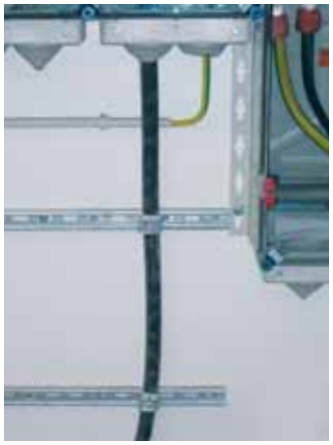
JORDAHL® slotted back channels JML

	Profile	Bolts / locking plates
	**JML K 50/40** wb, fv LL 11 × 40 3.25 kg/m[1)]	JB M 10–20/ JGM B M 6–16
	**JML K 41/41** wb, fv LL 11 × 40 2.47 kg/m[1)]	—/ JAM 22 M 6–12 JAM 22 F M 6–12
	**JML K 40/25** wb, fv, A4 LL 11 × 40 1.86 kg/m[1)]	JC M 10–16/ JGM C M 6–16
	**JML K 36/36** wb, fv, A4 LL 11 × 40 2.09 kg/m[1)]	JH M 10–12 JUH M 16/ JGM H M 5–12
	**JML K 28/28** wb, fv, A4 LL 11 × 40 1.28 kg/m[1)]	JD M 6–10 JUD M 12/ JGM D M 4–10
	**JML K 28/15** wb, fv, A4 LL 9 × 25 1.02 kg/m[1)]	JD M 6–10 JUD M 12/ JGM D M 4–10

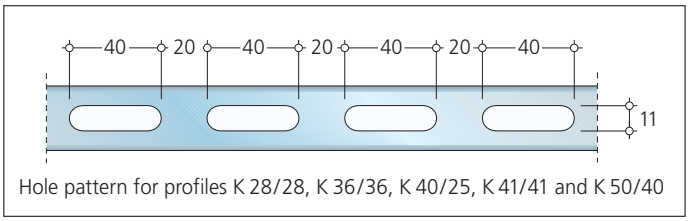
1) *Weights per metre for the mill finish design*
(for galvanized profiles: weight per metre × 1.10)
(for stainless steel profiles: weight per metre × 1.02)

wb = mill finish steel
fv = hot-dip galvanized steel
sv = sendzimir galvanized steel
A2 = stainless steel 1.4403/1.4541
A4 = stainless steel 1.4401/1.4404/1.4571

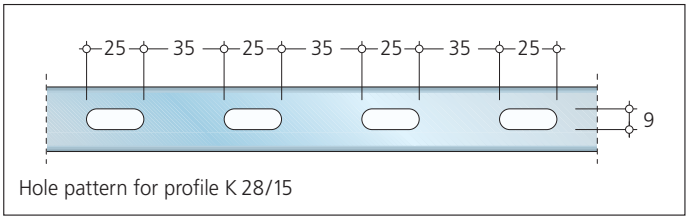
JORDAHL® mounting channels and slotted back channels, as shown in the example, are commonly used for cable fixing (for example with PUK cable clips).



Particularly suitable for this purpose are the types JM K 50/40, 48/26 and 40/22.

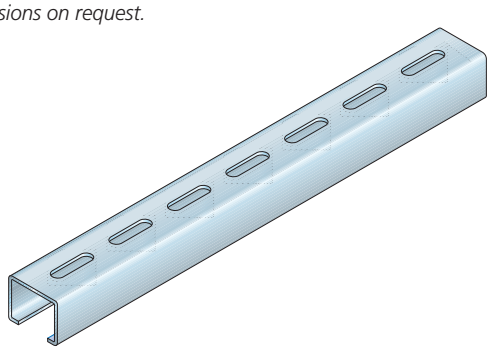


Hole pattern for profiles K 28/28, K 36/36, K 40/25, K 41/41 and K 50/40



Hole pattern for profile K 28/15

Other hole dimensions on request.

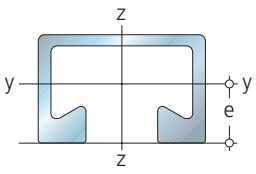


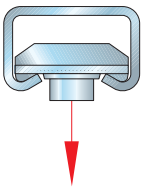
Mounting channels, Framing channels

Weights, cross section properties, point load bearing capacity

F_{Rd} = perm. F × 1.4

The design values of the load bearing capacities are shown in *italics* in the tables.





Profile	Weight [1]	Cross section properties							Max. point load bearing capacity [2]	
		Cross section	Centre of gravity	Moments of inertia		Moments of resistance				
	G [kg/m]	A [cm²]	e [cm]	I_y [cm⁴]	I_z [cm⁴]	W_y [cm³]	W_z [cm³]	$W_{pl,y}$ [cm³]	perm. F [kN]	F_{Rd} *[kN]*
Hot-rolled plain back channels										
JM W 74/48	8.85	11.27	2.41	34.99	83.46	14.31	23.18	18.29	35.0	*49.0*
JM W 54/43	6.57	8.37	2.17	18.22	35.93	8.41	13.19	11.35	32.0	*44.8*
JM W 53/34	4.96	6.32	1.68	9.40	24.12	5.48	9.19	7.08	25.0	*35.0*
JM W 50/30	3.25	4.15	1.54	5.29	14.18	3.43	5.79	4.39	12.0	*16.8*
JM W 40/22	2.12	2.70	1.22	1.99	5.92	1.63	3.00	2.17	8.0	*11.2*
JXM W 38/23	2.42	3.09	1.33	2.10	6.13	1.58	3.23	2.30	12.0	*16.8*
JXM W 29/20	1.55	1.98	1.12	1.02	2.39	0.91	1.65	1.30	8.0	*11.2*
Cold-rolled plain back channels										
JM K 72/48	8.09	10.31	2.83	28.12	75.36	9.92	20.93	15.30	35.0	*49.0*
JM K 53/34	4.47	5.69	2.01	8.08	22.25	4.02	8.32	6.12	25.0	*35.0*
JM K 50/40	3.41	4.34	2.23	9.37	16.46	4.19	6.59	5.81	12.0	*16.8*
JM K 50/30	3.04	3.87	1.82	4.68	13.71	2.56	5.49	3.85	12.0	*16.8*
JM K 48/26	2.25	2.87	1.50	2.65	9.23	1.76	3.85	2.52	8.0	*11.2*
JM K 41/41	2.61	3.32	2.30	7.03	9.02	3.05	4.40	4.37	8.0	*11.2*
JZM K 41/22	1.88	2.39	1.34	1.50	5.72	1.12	2.79	1.72	5.0	*7.0*
JM K 40/25	2.01	2.56	1.45	1.90	5.75	1.31	2.88	1.99	8.0	*11.2*
JM K 40/22	1.53	1.95	1.26	1.29	4.34	1.02	2.17	1.46	5.0	*7.0*
JM K 38/17	1.77	2.25	1.05	0.82	4.11	0.78	2.16	1.19	7.0	*9.8*
JM K 36/36	2.22	2.83	2.07	4.61	6.09	2.23	3.34	3.24	3.5	*4.9*
JM K 36/20	1.44	1.83	1.20	0.96	3.38	0.80	1.88	1.18	3.5	*4.9*
JM K 28/28	1.39	1.77	1.58	1.77	2.20	1.12	1.57	1.59	3.5	*4.9*
JM K 28/15	1.08	1.38	0.89	0.39	1.39	0.44	1.00	0.66	3.5	*4.9*
JM K 28/12	0.89	1.13	0.71	0.21	1.12	0.29	0.80	0.43	3.5	*4.9*
JM K 21/12	0.58	0.74	0.72	0.13	0.46	0.18	0.44	0.28	2.5	*3.5*
Cold-rolled slotted back channels										
JML K 50/40	3.25	4.01	2.10	8.44	16.41	4.02	6.56	5.29	12.0	*16.8*
JML K 41/41	2.47	3.04	2.15	6.19	8.99	2.87	4.39	3.91	8.0	*11.2*
JZML K 41/22	1.74	2.11	1.24	1.31	5.71	1.06	2.78	1.53	5.0	*7.0*
JML K 40/25	1.86	2.26	1.36	1.70	5.62	1.25	2.85	1.78	8.0	*11.2*
JML K 36/36	2.09	2.55	1.91	4.01	6.06	2.09	3.32	2.86	3.5	*4.9*
JML K 28/28	1.28	1.55	1.42	1.45	2.18	1.03	1.56	1.34	3.5	*4.9*
JML K 28/15	1.02	1.17	0.81	0.32	1.38	0.40	0.99	0.56	3.5	*4.9*

1) All weights per metre for mill finish steel. For galvanized profiles: weights per metre × 1.10. For A4 profiles: weights per metre × 1.02

2) The bolt load bearing capacity and the maximum point load bearing capacity must be noted. The respective lower value is decisive.

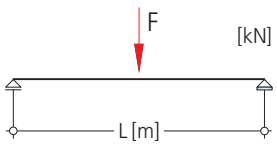
Bending load bearing capacities

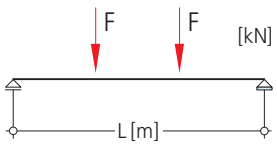
Profile

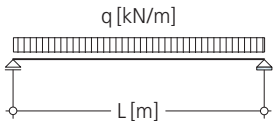
F_{Rd} = perm. F × 1.4

The design values of the load bearing capacities are shown in *italics* in the tables.

Bending load bearing capacity[2) 3)] for support width L







	L = 0.5 m		L = 1.0 m		L = 1.5 m		L = 0.5 m		L = 1.0 m		L = 1.5 m		L = 0.5 m		L = 1.0 m		L = 1.5 m	
	perm. F [kN]	F_{Rd} *[kN]*	perm. F [kN]	F_{Rd} *[kN]*			perm. F [kN]	F_{Rd} *[kN]*					perm. q [kN/m]	q_{Rd} *[kN/m]*				
Hot-rolled plain back channels																		
JM W 74/48	22.3	*31.2*	11.2	*15.7*	7.4	*10.4*	16.7	*23.4*	8.4	*11.8*	5.6	*7.8*	89.3	*125.0*	22.3	*31.2*	9.9	*13.9*
JM W 54/43	16.2	*22.7*	8.1	*11.3*	5.4	*7.6*	12.2	*17.1*	6.1	*8.5*	3.2	*4.5*	64.9	*90.9*	16.2	*22.7*	5.8	*8.1*
JM W 53/34	8.6	*12.0*	4.3	*6.0*	2.8	*3.9*	6.5	*9.1*	3.2	*4.5*	1.6	*2.2*	34.6	*48.4*	8.6	*12.0*	3.0	*4.2*
JM W 50/30	5.4	*7.6*	2.7	*3.8*	1.6	*2.2*	4.0	*5.6*	2.0	*2.8*	0.9	*1.3*	21.4	*30.0*	5.4	*7.6*	1.7	*2.4*
JM W 40/22	2.8	*3.9*	1.3	*1.8*	0.6	*0.8*	2.1	*2.9*	0.8	*1.1*	0.3	*0.4*	11.3	*15.8*	2.1	*2.9*	0.6	*0.8*
JXM W 38/23	4.2	*5.9*	1.4	*2.0*	0.6	*0.8*	3.1	*4.3*	0.8	*1.1*	0.4	*0.6*	16.7	*23.4*	2.3	*3.2*	0.7	*1.0*
JXM W 29/20	2.4	*3.4*	0.7	*1.0*	0.3	*0.4*	1.6	*2.2*	0.4	*0.6*	—	—	8.8	*12.3*	1.1	*1.5*	0.3	*0.4*
Cold-rolled plain back channels																		
JM K 72/48	21.9	*30.7*	10.9	*15.3*	7.3	*10.2*	16.4	*23.0*	8.2	*11.5*	4.9	*6.9*	87.4	*122.4*	21.9	*30.7*	9.0	*12.6*
JM K 53/34	8.3	*11.6*	4.1	*5.7*	2.4	*3.4*	6.2	*8.7*	3.1	*4.3*	1.4	*2.0*	33.1	*46.3*	8.3	*11.6*	2.6	*3.6*
JM K 50/40	7.1	*9.9*	3.5	*4.9*	2.4	*3.4*	5.3	*7.4*	2.7	*3.8*	1.6	*2.2*	28.4	*39.8*	7.1	*9.9*	3.0	*4.2*
JM K 50/30	5.2	*7.3*	2.6	*3.6*	1.4	*2.0*	3.9	*5.5*	1.8	*2.5*	0.8	*1.1*	20.8	*29.1*	5.0	*7.0*	1.5	*2.1*
JM K 48/26	3.1	*4.3*	1.5	*2.1*	0.8	*1.1*	2.3	*3.2*	1.0	*1.4*	0.5	*0.7*	12.3	*17.2*	2.8	*3.9*	0.8	*1.1*
JM K 41/41	5.3	*7.4*	2.7	*3.8*	1.8	*2.5*	4.0	*5.6*	2.0	*2.8*	1.2	*1.7*	21.3	*29.8*	5.3	*7.4*	2.2	*3.1*
JZM K 41/22	2.1	*2.9*	1.0	*1.4*	0.4	*0.6*	1.6	*2.2*	0.6	*0.8*	0.3	*0.4*	8.4	*11.8*	1.6	*2.2*	0.5	*0.7*
JM K 40/25	2.7	*3.8*	1.3	*1.8*	0.6	*0.8*	2.0	*2.8*	0.7	*1.0*	0.3	*0.4*	10.8	*15.1*	2.0	*2.8*	0.6	*0.8*
JM K 40/22	1.8	*2.5*	0.9	*1.3*	0.4	*0.6*	1.3	*1.8*	0.5	*0.7*	—	—	7.1	*9.9*	1.4	*2.0*	0.4	*0.6*
JM K 38/17	1.6	*2.2*	0.6	*0.8*	—	—	1.2	*1.7*	0.3	*0.4*	—	—	6.4	*9.0*	0.9	*1.3*	0.3	*0.4*
JM K 36/36	4.0	*5.6*	2.0	*2.8*	1.3	*1.8*	3.0	*4.2*	1.5	*2.1*	0.8	*1.1*	15.8	*22.1*	4.0	*5.6*	1.5	*2.1*
JM K 36/20	1.4	*2.0*	0.6	*0.8*	0.3	*0.4*	1.1	*1.5*	0.4	*0.6*	—	—	5.8	*8.1*	1.0	*1.4*	0.3	*0.4*
JM K 28/28	1.9	*2.7*	1.0	*1.4*	0.5	*0.7*	1.5	*2.1*	0.7	*1.0*	0.3	*0.4*	7.8	*10.9*	1.9	*2.7*	0.6	*0.8*
JM K 28/15	0.8	*1.1*	0.3	*0.4*	—	—	0.6	*0.8*	—	—	—	—	3.2	*4.5*	0.4	*0.6*	—	—
JM K 28/12	0.5	*0.7*	—	—	—	—	0.3	*0.4*	—	—	—	—	1.8	*2.5*	—	—	—	—
JM K 21/12	0.3	*0.4*	—	—	—	—	—	—	—	—	—	—	1.1	*1.5*	—	—	—	—
Cold-rolled slotted back channels																		
JML K 50/40	6.5	*9.1*	3.2	*4.5*	2.2	*3.1*	4.8	*6.7*	2.4	*3.4*	1.5	*2.1*	25.8	*36.1*	6.5	*9.1*	2.7	*3.8*
JML K 41/41	4.8	*6.7*	2.4	*3.4*	1.6	*2.2*	3.6	*5.0*	1.8	*2.5*	1.1	*1.5*	19.1	*26.7*	4.8	*6.7*	2.0	*2.8*
JZML K 41/22	1.9	*2.7*	0.9	*1.3*	0.4	*0.6*	1.4	*2.0*	0.5	*0.7*	—	—	7.5	*10.5*	1.4	*2.0*	0.4	*0.6*
JML K 40/25	2.2	*3.1*	1.1	*1.5*	0.5	*0.7*	1.6	*2.2*	0.7	*1.0*	0.3	*0.4*	8.7	*12.2*	1.8	*2.5*	0.5	*0.7*
JML K 36/36	3.5	*4.9*	1.7	*2.4*	1.2	*1.7*	2.6	*3.6*	1.3	*1.8*	0.7	*1.0*	14.0	*19.6*	3.5	*4.9*	1.3	*1.8*
JML K 28/28	1.6	*2.2*	0.8	*1.1*	0.4	*0.6*	1.2	*1.7*	0.6	*0.8*	0.3	*0.4*	6.5	*9.1*	1.6	*2.2*	0.5	*0.7*
JML K 28/15	0.7	*1.0*	—	—	—	—	0.5	*0.7*	—	—	—	—	2.7	*3.8*	0.3	*0.4*	—	—

3) All load bearing capacities are calculated elastically-plastically in accordance with Eurocode EC3, γ_F = 1.4. Deflection f < l / 150 for steel. Given more accurate knowledge, verifications with partial safety margins must be carried out by the static designer. The practitioner is recommended to use an estimate of about 80% of the values specified above.