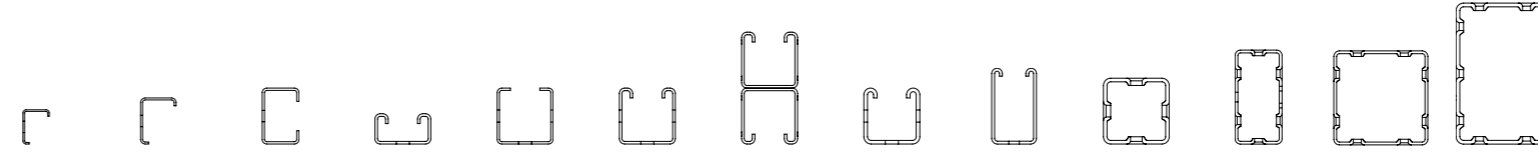
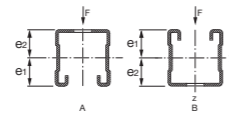


TECHNICAL DATA MT CHANNEL SYSTEM

Technical data for channel profile MT (pregalvanized & zinc magnesium)

Definition of axes



		MT-10	MT-15/ MT-15 OC	MT-20/ MT-20 OC	MT-30/ MT-30 OC	MT-40 T/ MT-40 T OC	MT-40 MT-40 OC	MT-40D/ MT-40D OC	MT-50/ MT-50 OC	MT-60/ MT-60 OC	MT-70 OC	MT-80 OC	MT-90 OC	MT-100 OC
Channel wall thickness	t [mm]	1.2	1.5	1.75	2.0	1.75	2.0	2.0	2.75	2.75	2.75	3.0	3.0	4.0
Cross-sectional area	A [mm ²]	48.43	85.2	148.65	180	175.59	214	429.52	276.05	500.1	428.78	592.66	976.08	1555.34
Channel weight	[kg/m]	0.3888	0.6784	1.267	1.486	1.69	2.039	4.299	2.744	4.017	3.909	6.058	8.973	15.096
Delivered length	[m]	2	2	2	3/6	6	3/6	3/6	3/6	3/6	3/6	3/6	3/6	3/6
Material														
Steel grade		S280GD	S280GD	S280GD	S250GD	S280GD	S280GD	S280GD	S280GD	S280GD	S350GD	S350GD	S350GD	S350GD
Permissible stress	δ_{perm} [N/mm ²]	207.8	206.7	205.8	188.3	200.5	202.2	202.2	207.8	202.3	227.3	233.3	233.3	233.3
E-Modul	[N/mm ²]	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000
Surface														
pregalvanized (DIN EN ISO 10346)		•	•	•	•	•	•	•	•	•				
zinc magnesium (EN 10346 & ASTM A1046)			•	•	•	•	•	•	•	•	•	•	•	•
Cross-section values Y-axis														
Axis of gravity A ¹⁾	e ₁ [mm]	9.25	11.90	21.25	12.04	23.05	21.76	42.50	22.04	36.62	25.00	50.00	50.00	75.00
Axis of gravity B	e ₂ [mm]	16.75	23.10	21.25	10.96	19.45	20.74	42.50	20.46	35.38	25.00	50.00	50.00	75.00
Moment of inertia	I _y [cm ⁴]	0.40	1.27	3.65	1.21	4.84	5.77	29.96	7.04	28.67	15.87	87.97	150.85	487.36
Permtion modulus A	W _{y1} [cm ³]	0.25	0.57	1.73	1.00	2.10	2.65	7.05	3.19	7.83	6.35	17.59	30.17	64.98
Permtion modulus B	W _{y2} [cm ³]	0.41	1.00	1.73	1.10	2.48	2.78	7.05	3.44	8.10	6.35	17.59	30.17	64.98
Radius of gyration	i _y [cm]	0.91	1.22	1.57	0.82	1.66	1.64	2.64	1.60	2.39	1.92	3.85	3.93	5.60
Permissible moment ²⁾	M _y [Nm]	52	180	355	189	421	536	1425	663	1584	1443	4105	7040	15162
Z-axis														
Moment of inertia	I _z [cm ⁴]	0.23	0.72	1.85	5.19	5.71	6.59	13.18	8.27	17.11	15.87	24.50	150.85	260.98
Permtion modulus	W _z [cm ³]	0.15	0.36	1.07	2.44	2.69	3.10	6.20	3.89	8.05	6.35	9.80	30.17	52.20
Radius of gyration	i _z [cm]	0.69	0.92	1.12	1.70	1.80	1.76	1.75	1.73	1.85	1.92	2.03	3.93	4.10

Design resistance

- MT-10 to MT-70: The permissible stress $\sigma_D / Y_{G/Q}$ where $y = 1.4$. σ_D results from the higher yield strength (point) resulting from cold forming as per EN 1993-1-3: 2010: $\sigma_D = f_{yk} / Y_M$ where $Y_M = 1.1$.
 - MT-80 to MT-100: The permissible stress $\sigma_D / Y_{G/Q}$ where $y = 1.5$.
- 1) For the arithmetical bending dimensioning is the smaller value (W_{y1} , W_{y2}) decisive to ($W_{y1} = I_y / e_1$ bzw. $W_{y2} = I_y / e_2$).
- 2) $M_y = \delta_{perm} \times \min. (W_{y1}, W_{y2})$