Hilti Modular Support System

Submission Folder

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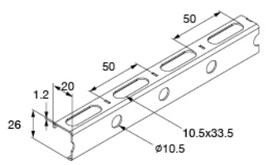
Channels

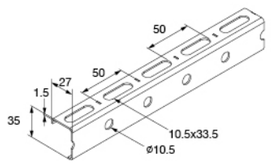
Technical data

Material composition	S250GD	EN 10346	MT-30
	S280GD	EN 10346	MT-10/MT-15/MT-20/MT-40/MT-50/MT-60/MT-40D
Surface finish		Pre-galvanized Z275-for C1 indoor use	EN 10346
		ZM, ZM310-for C3 outdoor use	EN 10346 ASTM A1046

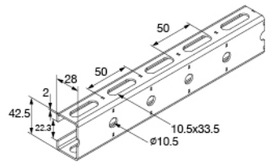
Item Description	Material Thickness (mm)	Dimensions (H x B)	Weight (g/m)	Sales Pack (m)	Item Number
MT-10	1.20	26.0 × 19.4	388	2	2268492
MT-15	1.50	35.0 x 27.0	678	2	2268493
MT-15 OC	1.50	35.0 x 27.0	678	2	2268494
MT-20	1.75	28.0 × 42.5	1267	2	2268495
MT-20 OC	1.75	28.0 × 42.5	1267	2	2268496
MT-30	2.00	23.0 × 42.5	1486	6	2268498
MT-30 OC	2.00	23.0 × 42.5	1486	6	2268500
MT-40 T	1.75	42.5 × 42.5	1690	6	2268502
MT-40 T OC	1.75	42.5 × 42.5	1690	6	2268504
MT-40	2.00	42.5 × 42.5	2039	6	2268506
MT-40 OC	2.00	42.5 × 42.5	2039	6	2268508
MT-50	2.75	42.5 × 42.5	2661	6	2268510
MT-50 OC	2.75	42.5 × 42.5	2661	6	2268512
MT-60	2.75	72.0 × 42.5	3853	6	2268514
MT-60 OC	2.75	72.0 × 42.5	3853	6	2268516
MT-40D	2.00	85.0 × 42.5	4299	6	2268518
MT-40D OC	2.00	85.0 × 42.5	4299	6	2268520



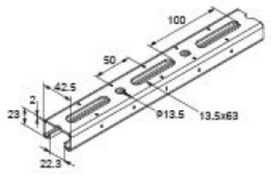
MT-10



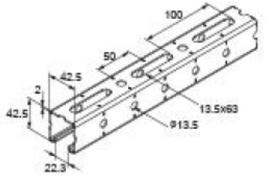
MT-15 / MT-15 OC



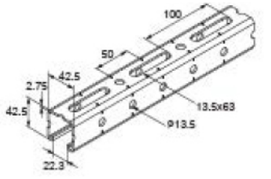
MT-20 / MT-20 OC



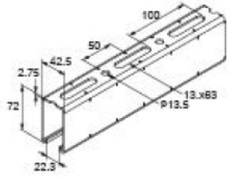
MT-30 / MT-30 OC



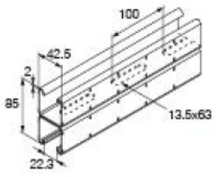
MT-40 / MT-40 OC



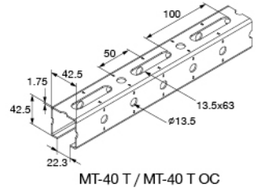
MT-50 / MT-50 OC



MT-60 / MT-60 OC



MT-40D / MT-40D OC



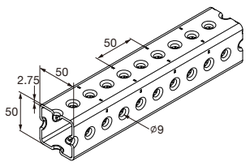
MT-40 T / MT-40 T OC

Girder

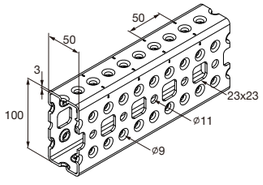
Technical data

Material composition			S350GD EN 10346
Surface finish		ZM310 ZM, ZM310-for C3 outdoor use	EN 10346 ASTM A1046

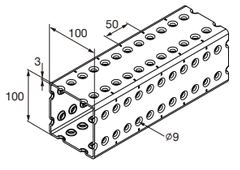
Item Description	Material thickness	Height × Width	Weight	Sales pack	Item number
MT-70 OC	2.75	50 × 50	3909	6	2268365
MT-80 OC	3.0	100 × 50	6058	6	2268367
MT-90 OC	3.0	100 × 100	8973	6	2268369
MT-100 OC	4.0	150 × 100	15096	6	2268491



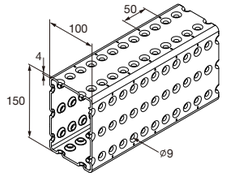
MT-70 OC



MT-80 OC



MT-90 OC

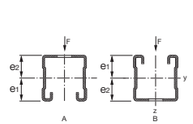


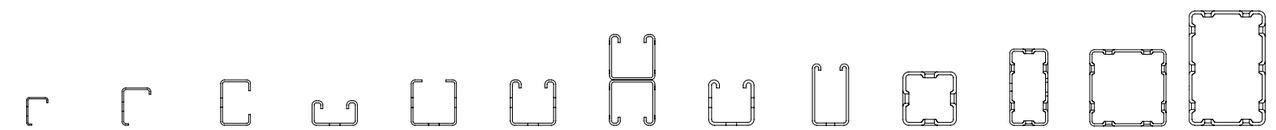
MT-100 OC

TECHNICAL DATA MT CHANNEL SYSTEM

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

Definition of axes





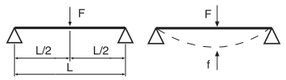
			MT-10	MT-15/ MT-15 OC	MT-20/ MT-20 OC	MT-30/ MT-30 OC	MT-40 T/ MT-40 T OC	MT-40 MT-40 OC	MT-40D/ MT-40D OC	MT-50/ MT-50 OC	MT-60/ MT-60 OC	MT-70 OC	MT-80 OC	MT-90 OC	MT-100 OC
Channel wall thickness	t	[mm]	1.2	1.5	1.75	2.0	1.75	2.0	2.0	2.75	2.75	2.75	3,0	3.0	4,0
Cross-sectional area	A	[mm²]	48.43	85.2	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/mm²]	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/mm²]	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	[cm⁴]	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}	[cm³]	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}	[cm³]	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	[cm⁴]	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	[cm³]	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

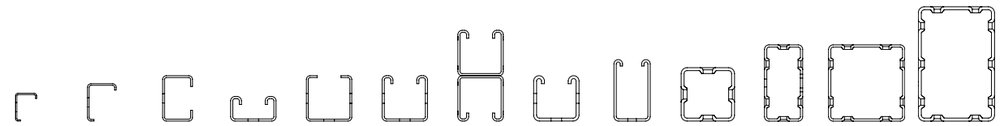
Design resistance

• MT-10 to MT-70: The permissible stress σ_D / $\gamma_{G/Q}$ where y = 1,4. σ_D results from the higher yield strength (point) resulting from cold forming as per EN 1993-1-3: 2010: $\sigma_D = f_{yk} / \gamma_M$ where $\gamma_M = 1,1$.
• MT-80 to MT-100: The permissible stress σ_D / $\gamma_{G/Q}$ 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) My = δ_{perm} x min. (W_{y1}, W_{y2})

POINT LOAD IN THE MIDDLE OF SPAN

Technical data for channel profiles MT (max. span width/deflection - point Load in the middle of span)





Max. span width L [cm] / deflection f [mm] - Result

	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	
load F [kN]	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**	**L**	**f**
0,25	83	0.4	157	7.8	260	12.9	152	7.6	294	14.7	317	15.8	600	29.4	339	16.9	600	29.9	469	23.4	600	11.6	600	8.3	600	3.6
0,50	42	0.1	93	3.2	188	9.3	109	5.5	215	10.7	234	11.7	489	24.4	254	12.6	482	24.1	368	18.4	600	17.7	600	11.9	600	4.7
0,75	28	0.0	62	1.4	155	7.7	90	4.5	178	8.9	194	9.6	418	20.9	212	10.6	411	20.5	311	15.5	600	23.8	600	15.4	600	5.8
1,00	21	0.0	47	0.8	134	6.6	75	3.5	154	7.6	169	8.4	371	18.5	185	9.3	363	18.1	274	13.6	600	29.9	600	19.0	600	6.9
1,25	17	0.0	37	0.5	113	5.0	60	2.3	134	6.2	151	7.6	336	16.8	167	8.3	329	16.4	247	12.3	551	27.5	600	22.5	600	8.0
1,50	14	0.0	31	0.4	94	3.4	50	1.6	112	4.3	138	6.9	309	15.4	152	7.6	302	15.0	227	11.3	512	25.6	600	26.1	600	9.1
1,75	12	0.0	27	0.3	81	2.5	43	1.2	96	3.2	122	5.5	287	14.4	141	7.0	281	14.0	211	10.5	479	23.9	600	29.6	600	10.2
2,00	10	0.0	23	0.2	71	1.9	38	0.9	84	2.4	107	4.2	270	13.5	132	6.5	264	13.2	198	9.9	452	22.6	572	28.6	600	11.3
2,25	9	0.0	21	0.2	63	1.5	34	0.7	75	1.9	95	3.3	248	11.6	117	5.1	249	12.4	187	9.3	429	21.4	545	27.2	600	12.4
2,50	8	0.0	19	0.1	57	1.2	30	0.6	67	1.6	86	2.7	224	9.5	106	4.2	237	11.8	177	8.8	409	20.4	522	26.0	600	13.5
2,75	8	0.0	17	0.1	52	1.0	27	0.5	61	1.3	78	2.2	204	7.9	96	3.5	227	11.3	169	8.4	391	19.5	501	25.0	600	14.6
3,00	7	0.0	16	0.1	47	0.9	25	0.4	56	1.1	71	1.9	188	6.7	88	2.9	208	9.6	162	8.1	376	18.8	482	24.1	600	15.7
3,50	6	0.0	13	0.1	41	0.6	22	0.3	48	0.8	61	1.4	161	4.9	76	2.1	179	7.1	150	7.5	349	17.4	450	22.5	600	17.9
4,00	5	0.0	12	0.1	36	0.5	19	0.2	42	0.6	54	1.1	141	3.8	66	1.6	157	5.4	141	7.0	328	16.3	424	21.2	600	20.1
4,50	5	0.0	10	0.0	32	0.4	17	0.2	37	0.5	48	0.8	126	3.0	59	1.3	140	4.3	128	5.9	310	15.5	401	20.0	600	22.3
5,00	4	0.0	9	0.0	28	0.3	15	0.1	34	0.4	43	0.7	113	2.4	53	1.1	126	3.5	115	4.8	295	14.7	382	19.0	600	24.5
6,00	3	0.0	8	0.0	24	0.2	13	0.1	28	0.3	36	0.5	95	1.7	44	0.7	105	2.4	96	3.3	270	13.5	350	17.5	600	28.9
7,00	3	0.0	7	0.0	20	0.2	11	0.1	24	0.2	31	0.3	81	1.2	38	0.5	90	1.8	82	2.4	232	10.0	325	16.2	571	28.5
8,00	3	0.0	6	0.0	18	0.1	9	0.1	21	0.2	27	0.3	71	1.0	33	0.4	79	1.4	72	1.9	204	7.7	305	15.2	537	26.8

Design resistance

Selection example:

- 1,0 kN (≈ 100 kg) should be carried by a channel with a channel span width L = 100cm (single span sinply supported).

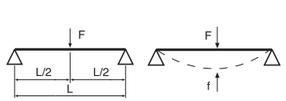
Solution:

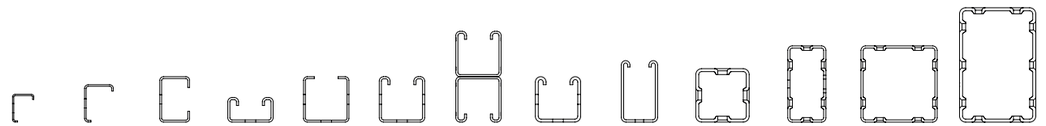
- Select the line with the load, F = 1,0 kN.
- The channels MT-20, MT-40 T up to MT-100 can be used because the permissible span width (table value) is larger or equal to the required span width of L = 100cm.

Load tables are based on stress and deflection calculations, lateral torsional buckling is not considered.

POINT LOAD IN THE MIDDLE OF SPAN

Technical data for channel profiles MT (max. span width/deflection - point Load in the middle of span)





Max. span width L [cm] / deflection f [mm] - Result

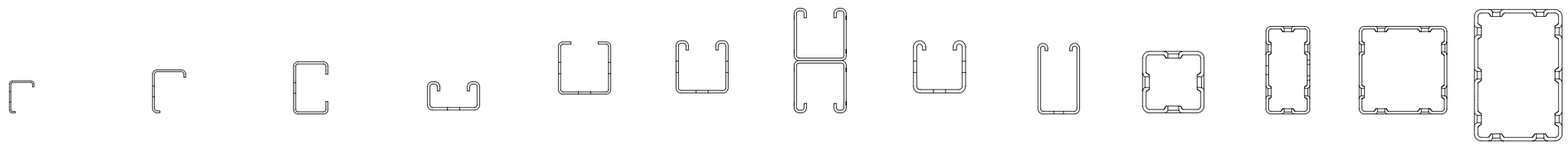
	MT-10		MT-15/ MT-15 OC		MT-20/ MT-20 OC		MT-30/ MT-30 OC		MT-40 T/ MT-40 T OC		MT-40/ MT-40 OC		MT-40D/ MT-40D OC		MT-50/ MT-50 OC		MT-60/ MT-60 OC		MT-70 OC		MT-80 OC		MT-90 OC		MT-100 OC	
span width L [cm]	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**	**F**	**f**
25	0.83	0.0	1.87	0.2	5.69	0.2	3.02	0.4	6.74	0.2	8.58	0.2	22.80	0.1	10.61	0.2	25.35	0.1	23.08	0.2	65.68	0.1	106.17	0.1	222.70	0.1
50	0.42	0.1	0.94	0.9	2.84	1.0	1.51	1.6	3.36	0.9	4.29	0.9	11.39	0.5	5.30	0.9	12.67	0.5	11.53	0.9	32.83	0.5	56.29	0.5	121.26	0.3
75	0.28	0.3	0.62	2.1	1.89	2.2	1.00	3.5	2.24	1.9	2.85	2.1	7.59	1.1	3.53	2.1	8.44	1.2	7.68	2.0	21.87	1.0	37.51	1.0	80.81	0.7
100	0.21	0.5	0.46	3.7	1.42	3.9	0.60	5.0	1.68	3.5	2.14	3.7	5.68	1.9	2.64	3.7	6.32	2.2	5.75	3.6	16.39	1.9	28.11	1.9	60.57	1.2
125	0.16	0.8	0.37	5.7	1.13	6.1	0.38	6.2	1.34	5.4	1.70	5.8	4.53	3.0	2.11	5.9	5.05	3.4	4.59	5.6	13.10	2.9	22.47	2.9	48.43	1.9
150	0.14	1.2	0.28	7.5	0.80	7.5	0.26	7.5	1.07	7.5	1.27	7.5	3.77	4.3	1.55	7.5	4.20	4.9	3.52	7.5	10.90	4.2	18.70	4.2	40.32	2.8
175	0.12	1.6	0.20	8.7	0.59	8.7	0.18	8.7	0.78	8.7	0.93	8.7	3.22	5.8	1.13	8.7	3.59	6.7	2.57	8.7	9.33	5.7	16.01	5.7	34.52	3.8
200	0.10	2.1	0.15	9.9	0.44	10.0	0.13	9.9	0.59	10.0	0.70	10.0	2.81	7.6	0.85	10.0	3.13	8.8	1.95	10.0	8.15	7.4	13.99	7.4	30.17	4.9
225	0.09	2.6	0.12	11.2	0.34	11.2	0.10	11.0	0.46	11.2	0.54	11.2	2.49	9.6	0.66	11.2	2.77	11.1	1.52	11.2	7.23	9.4	12.41	9.4	26.79	6.3
250	0.08	3.2	0.09	12.4	0.27	12.4	0.07	12.2	0.36	12.4	0.43	12.4	2.23	11.9	0.52	12.4	2.24	12.5	1.21	12.4	6.49	11.6	11.15	11.6	24.07	7.7
275	0.07	3.9	0.07	13.6	0.22	13.6	0.05	13.3	0.29	13.6	0.35	13.6	1.91	13.7	0.42	13.6	1.83	13.7	0.98	13.7	5.75	13.7	9.88	13.7	21.85	9.4
300	0.06	4.7	0.06	14.7	0.18	14.8	0.04	14.4	0.24	14.8	0.28	14.8	1.59	14.9	0.34	14.8	1.52	14.9	0.81	14.9	4.80	15.0	8.26	15.0	19.99	11.1
325	0.06	5.5	0.05	15.9	0.15	16.0	0.02	15.4	0.19	16.0	0.23	16.0	1.33	16.1	0.27	16.0	1.28	16.1	0.67	16.1	4.06	16.2	7.00	16.2	18.42	13.1
350	0.05	6.4	0.04	17.0	0.12	17.2	0.01	16.3	0.16	17.2	0.19	17.2	1.13	17.4	0.22	17.1	1.08	17.4	0.56	17.3	3.47	17.4	5.99	17.4	17.06	15.2
375	0.05	7.4	0.03	18.1	0.10	18.3			0.13	18.3	0.15	18.3	0.96	18.6	0.18	18.3	0.92	18.6	0.47	18.4	3.00	18.7	5.17	18.7	15.89	17.4
400	0.04	8.5	0.02	19.1	0.08	19.4			0.11	19.4	0.13	19.4	0.83	19.8	0.15	19.4	0.79	19.8	0.39	19.6	2.60	19.9	4.50	19.9	14.86	19.9
425	0.04	9.6	0.02	20.1	0.06	20.5			0.09	20.5	0.10	20.5	0.71	20.9	0.12	20.4	0.68	21.0	0.33	20.7	2.28	21.1	3.95	21.1	13.16	21.2
450	0.04	10.8	0.01	21.1	0.05	21.6			0.07	21.6	0.08	21.6	0.61	22.1	0.09	21.5	0.59	22.1	0.27	21.9	2.00	22.3	3.48	22.3	11.66	22.4
475	0.03	12.1	0.01	22.0	0.04	22.6			0.05	22.6	0.06	22.6	0.53	23.3	0.07	22.5	0.51	23.3	0.23	22.9	1.77	23.5	308	23.6	10.39	23.6
500	0.03	13.5			0.03	23.6			0.04	23.6	0.05	23.6	0.46	24.4	0.05	23.4	0.44	24.4	0.19	24.0	1.56	24.7	2.73	24.8	9.30	24.9

Design resistance

Load tables are based on stress and deflection calculations, lateral torsional buckling is not considered.

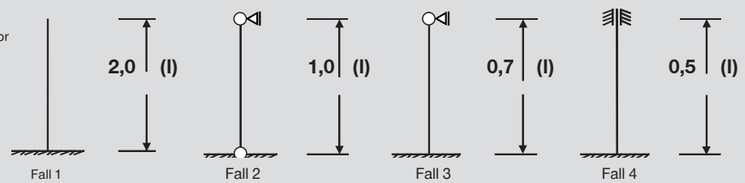
BUCKLING

Permissible buckling load for channel profile MT



Buckling length Sk [cm]	MT-10 permissible buckling load [kN]	MT-15 / MT-15 OC permissible buckling load [kN]	MT-20 / MT-20 OC permissible buckling load [kN]	MT-30 / MT-30 OC permissible buckling load [kN]	MT-40 T / MT-40 T OC permissible buckling load [kN]	MT-40 / MT-40 OC permissible buckling load [kN]	MT-40D / MT-40D OC permissible buckling load [kN]	MT-50 / MT-50 OC permissible buckling load [kN]	MT-60 / MT-60 OC permissible buckling load [kN]	MT-70 OC permissible buckling load [kN]	MT-80 OC permissible buckling load [kN]	MT-90 OC permissible buckling load [kN]	MT-100 OC permissible buckling load [kN]
25	N/A	N/A	29.40	30.51	34.41	42.22	87.97	55.68	68.93	99.01	128.31	219.78	350.41
50			24.86	22.72	29.93	36.62	80.21	47.92	52.16	90.61	118.07	210.74	336.93
75			19.67	15.10	24.91	30.33	72.00	39.23	36.33	81.79	107.42	202.00	323.55
100			14.70	10.03	19.75	23.90	62.95	30.58	25.80	72.10	95.79	193.28	310.24
125			10.86	7.02	15.34	18.45	53.45	23.51	19.47	61.82	83.33	184.34	296.65
150			8.19	5.16	12.00	14.38	44.43	18.32	15.55	51.88	70.94	175.02	282.54
175			6.33	3.96	9.58	11.44	36.66	14.62	12.97	43.12	59.66	165.24	267.77
200			5.03	3.13	7.82	9.31	30.34	11.94	11.18	35.87	50.05	155.00	252.31
225			4.08	2.54	6.51	7.73	25.32	9.97	9.86	30.04	42.18	144.40	236.27
250			3.37	2.11	5.52	6.54	21.35	8.46	8.86	25.40	35.81	133.67	219.89
275			2.83	1.78	4.75	5.62	18.20	7.29	8.06	21.68	30.67	123.05	203.52
300			2.41	1.52	4.14	4.89	15.67	6.36	7.41	18.70	26.51	112.80	187.54

Flexural buckling:
Rod length l (cm) / euler factor
β/Sk (cm) effective length
= l • β



Design resistance

- MT-10 to MT-70: $\gamma_{G,Q}$ = 1,4 → F_D* = permissible buckling load x 1,4
- MT-80 to MT-100: $\gamma_{G,Q}$ = 1,5 → F_D* = permissible buckling load x 1,5
- Bend table is only valid for centric buckling loads. The values in this table aren't allowed for offset torque/oblique position/lateral-torsional buckling and must be engineered.

*(design value)

Twist Lock (MT-TL)

APPLICATIONS

- Fastening of any component, media to MT open C-channels with MT-TLB

ADVANTAGES

- Maximum connection reliability, no reliance on friction, no restriction of positioning steps For use with MT-TLB
- Fastening of any component, media to MT open C-channels with MT-TLB
- Guaranteed performance & productivity setting with SIW-AT module

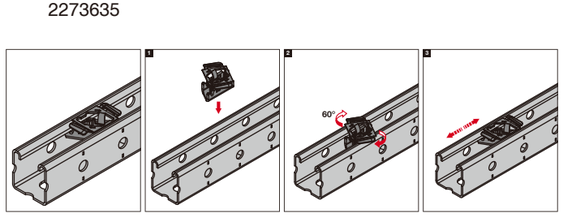
Technical data

Surface finish	Pre-galvanized 12µm-for C1 indoor use
	HDG+ZiNi topcoat 20µm - for C3 outdoor use

Item Description	Thread - M	Weight	Sales pack	Item number
MT-TL M8	M8	32	50	2273630
MT-TL M8 OC	M8	32	50	2273631
MT-TL M10	M10	35	50	2272080
MT-TL M10 OC	M10	35	50	2272082
MT-TL M12	M12	38	50	2273632
MT-TL M12 OC	M12	38	50	2273633
MT-TL M16	M16	37	50	2273634
MT-TL M16 OC	M16	37	50	2273635

* MT-TL M10 is the primary size for connections within the system
* (with connectors & baseplates)

Item Description	Tightening torque - Nm	Shear Load - kN	
MT-TL M10	30	8	7.2
MT-TL M10 OC	40	8	7.2



Twist-Lock Bolt (MT-TLB)

APPLICATIONS

- Fastening of any component, media to MT open C-channels with MT-TL
- For use with Twist-Lock MT-TL

Item Description	Thread - M	Thread length	Wrench size	Weight	Sales pack	Item number
MT-TLB	M10	24	17	25	50	2273254
MT-TLB OC	M10	24	17	25	50	2273256
MT-TLB 30	M10	30	17	31	50	2282190
MT-TLB 30 OC	M10	30	17	31	50	2282191

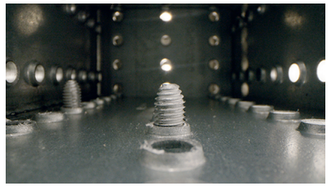
* MT-TLB is the primary size for connections within the system (with connectors & baseplates)

MT-TLB 30 is used only with brackets (MT-BR's) for fixation to open channels with TL's

Thread Forming Bolt (MT-TFB)

APPLICATIONS

- Fastening of any component, media to MT girders

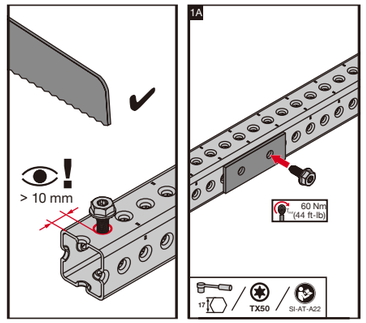


ADVANTAGES

- One bolt for all girder connections
- Fast installation easy to release
- One handed installation - No need for bolts or complex fixation elements
- Guaranteed performance & productivity setting with SIW-AT module
- Releasing, re-positioning, and subsequent re-torquing fully enabled

Item Description	Thread - M	Surface Finish	Weight	Sales pack	Item number
MT-TFB OC	M10	HDG+	28	50	2272084

Item Description	For Girder Types	Tightening torque - Nm	Pull out Load - kN	Shear Load - kN
MT-TFB OC	MT-70,MT-80	60	11	17
MT-TFB OC	MT-90	60	11	20
MT-TFB OC	MT-100	60	17	20



Channel/Girder End Caps (MT-EC)

APPLICATIONS

- Protection of channel/girder cut ends

Technical data

Material composition	Polypropylene (PP)
Colour	Red - RAL 3000

Item Description	For channel/girder types	Weight	Sales pack	Item number
MT-EC-30	MT-30	3.7	20	2273642
MT-EC-40/50	MT-40,50,40D	5.8	20	2273643
MT-EC-60	MT-60	9.1	20	2273644
MT-EC-70	MT-70	8.4	20	2273697
MT-EC-80	MT-80	15.4	20	2273698
MT-EC-90	MT-90	31.0	20	2273699
MT-EC-100	MT-100	45.5	20	2273700

Open C-Channel Baseplates

APPLICATIONS

- For fastening of MT channels to base material

ADVANTAGES

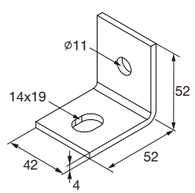
- Reliable and easy to use
- Connection of channels to any base material
- Simplest and most cost effective solution

Technical data

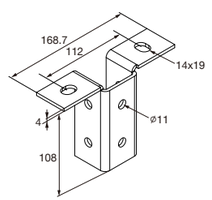
Material composition		Q235B GB/T 1591-2018
Surface finish	Pre-galvanized galvanized 12µm-for C1 indoor use	ISO 2081
	HDG, 56µm-for C3 outdoor use	ASTM A153M

Item Description	Plate thickness	For Channel types	Weight	Sales pack	Item number
MT-B-L	4.0	MT-30,MT-40,MT-50,MT-60	119	20	2272086
MT-B-L OC	4.0	MT-30,MT-40,MT-50,MT-60	119	20	2272088
MT-B-T	4.0	MT-30,MT-40,MT-50,MT-60	565	20	2272090
MT-B-T OC	4.0	MT-30,MT-40,MT-50,MT-60	565	20	2272092
MT-B-O2	4.0	MT-30,MT-40,MT-50,MT-60	1027	12	2272094
MT-B-O2 OC	4.0	MT-30,MT-40,MT-50,MT-60	1027	12	2272096
MT-B-O2B	8.0	MT-40D	2072	6	2282212
MT-B-O2B OC	8.0	MT-40D	2072	6	2282213
MT-B-O4	8.0	MT-40D	3315	4	2272098
MT-B-O4 OC	8.0	MT-40D	3315	4	2272099

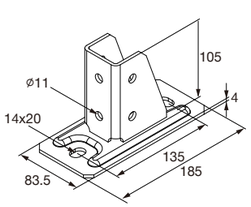
Item Description	Twist-Lock Qty.(pc)	$-F_z^z$ Design Load kN	$+F_z^z$ Design Load kN
MT-B-L	1	7.0	2.9
MT-B-T	2	12.6	8.4
MT-B-O2	2	14.0	12.6
MT-B-O2B	2	17.6	18.4
MT-B-O4	2	17.6	18.4



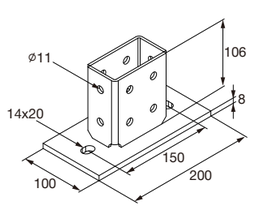
MT-B-L / MT-B-L OC



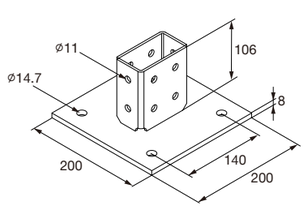
MT-B-T / MT-B-T OC



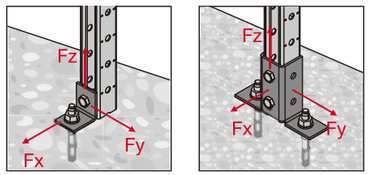
MT-B-O2 / MT-B-O2 OC



MT-B-O2B / MT-B-O2B OC



MT-B-O4 / MT-B-O4 OC



Open C-Channel Connectors

APPLICATIONS

- Assembly of frames and other structures using MT channels
- Simplest form of connectors, for building standard L junctions

ADVANTAGES

- Universal few parts for all applications
- Simplified connectors for multi purpose usage
- Easy to use
- Three-dimensional, thus high strength
- Direct fastening to girders possible (w/ TFB) for MT-C-L1/2

Technical data

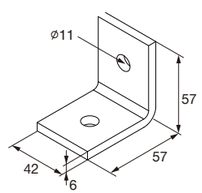
Material composition		Q355B GB/T 1591-2018
Surface finish	Pre-galvanized galvanized 12µm-for C1 indoor use	ISO 2081
	HDG, 56µm-for C3 outdoor use	ASTM A153M

90° Angle connector

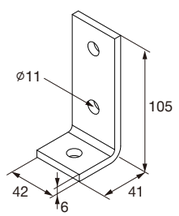
Item Description	Angle	Material thickness	For Channel types	Weight	Sales pack	Item number
MT-C-L1	90°	6.0	MT-30,MT-40	199	20	2271514
MT-C-L1 OC	90°	6.0	MT-50,MT-60	199	20	2271516
MT-C-L2	90°	6.0	MT-30~MT-100	257	20	2271518
MT-C-L2 OC	90°	6.0	MT-30~MT-100	257	20	2271519
MT-C-LL1	90°	4.0	MT-30,MT-40	334	10	2272047
MT-C-LL1 OC	90°	4.0	MT-50,MT-60	334	10	2272049
MT-C-LL2	90°	4.0	MT-30,MT-40	592	10	2272051
MT-C-LL2 OC	90°	4.0	MT-50,MT-60	592	10	2272053

* MT-C-L2/MT-C-L2 OC

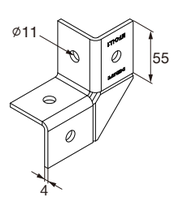
kN Item Description	Twist-Lock Qty.	$-F_z^z$ Design Load kN	$+F_z^z$ Design Load
MT-C-L1	2	5.6	4.6
MT-C-L2	3	7.0	7.0
MT-C-LL1	2	5.2	7.0
MT-C-LL2	4	6.5	5.8



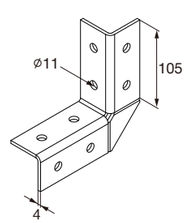
MT-C-L1 / MT-C-L1 OC



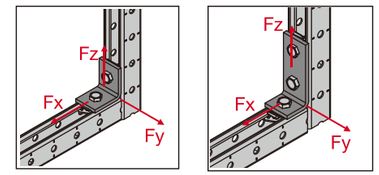
MT-C-L2 / MT-C-L2 OC

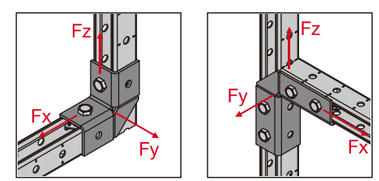


MT-C-LL1 / MT-C-LL1 OC



MT-C-LL2 / MT-C-LL2 OC





Angle Brace Connectors

APPLICATIONS

- Angle bracing with MT channels

ADVANTAGES

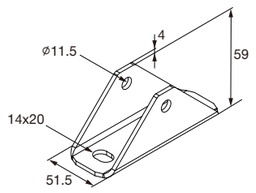
- Wide range of channel compatibility
- Possibility to be used as baseplate (MT-AB A and MT-AB L

Technical data

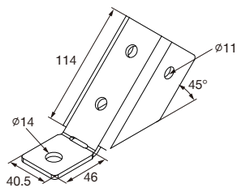
Material composition		Q235B GB/T 700-2006
Surface finish	Pre-galvanized galvanized 12µm-for C1 indoor use	ISO 2081
	HDG, 56µm-for C3 outdoor use	ASTM A153M

45°Angle connector

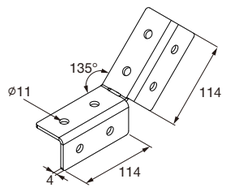
Item Description	Angle	Material thickness	For Channel types	重量(g) Weight	包装数量(pcs) Sales pack	品号 Item number
MT-AB A	Adjustable	4.0	MT-40,MT-50	441	12	2272111
MT-AB A OC	Adjustable	4.0	MT-40,MT-50	441	12	2272112
MT-AB L 45	45°	4.0	MT-40,MT-50	427	10	2272114
MT-AB L 45 OC	45°	4.0	MT-40,MT-50	427	10	2272114
MT-AB LL2	45°	4.0	MT-40,MT-50	553	10	2272115
MT-AB LL2 OC	45°	4.0	MT-60,MT-40D	553	10	2273585



MT-AB A / MT-AB A OC



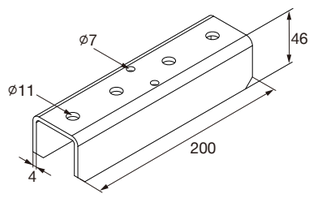
MT-AB- L 45 / MT-AB-L 45 OC



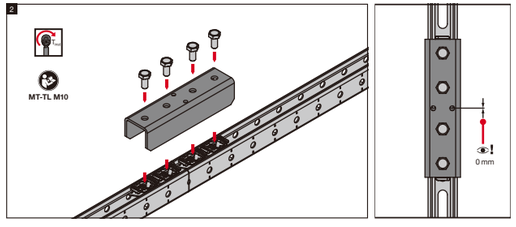
MT-AB-LL2 / MT-AB-LL2 OC

Splice Connectors

Item Description	Material thickness	For Channel types	Weight	Sales pack	Item number
MT-ES-40	4.0	MT-30,MT-40,MT-50,	805	12	2272062
MT-ES-40 OC	4.0	MT-60,MT-40D	805	12	2272063

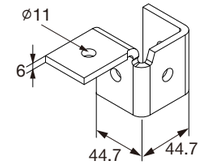


MT-ES-40 / MT-ES-40 OC

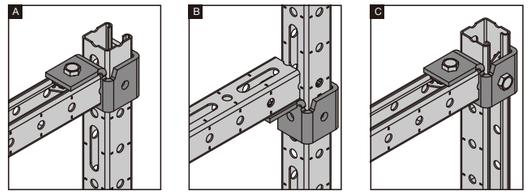


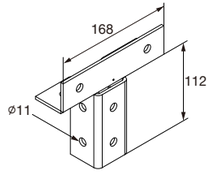
Transverse Connectors - 2D

Item Description	Material	Material thickness	Weight	Sales pack	Item number
MT-C-T/1	Q235B	6.0	435	20	2272040
MT-C-T/1 OC	Q235B	6.0	435	20	2272042
MT-C-T/2	Q355B	4.0	782	15	2272054
MT-C-T/2 OC	Q355B	4.0	782	15	2272055
MT-C-T A	Q355B	4.0	323	20	2272056
MT-C-T A OC	Q355B	4.0	323	20	2272057

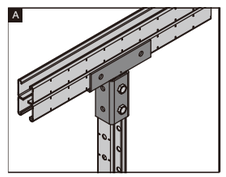


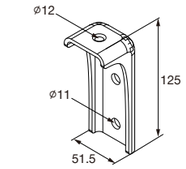
MT-C-T/1 / MT-C-T/1 OC



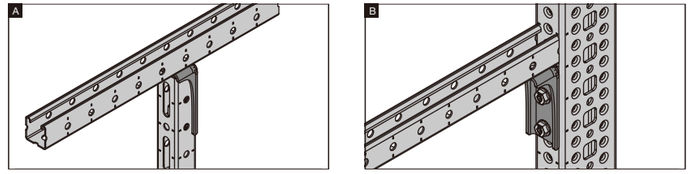


MT-C-T/2 / MT-C-T/2 OC

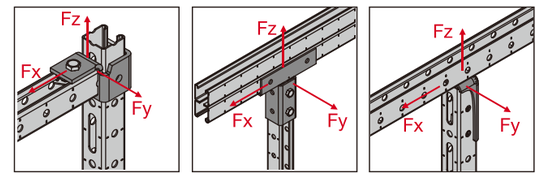




MT-C-T A / MT-C-T A OC

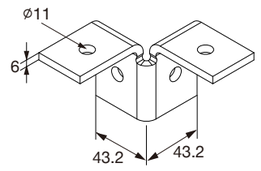


Item Description	Twist-Lock Qty.(pc)		$+F_z$ Design Load kN
MT-C-T/1	2	4.3	5.5
MT-C-T/2	4	11.9	11.3
MT-C-T A	2	14	8.8

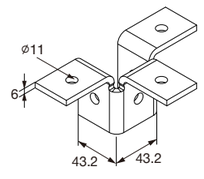


Transverse Connectors - 3D

Item Description	Material	Material thickness	Weight	Sales pack	Item number
MT-C-T 3D/2	Q235B	6.0	418	10	2272058
MT-C-T 3D/2 OC	Q235B	6.0	418	10	2272059
MT-C-T 3D/3	Q235B	6.0	629	10	2272060
MT-C-T 3D/3 OC	Q235B	6.0	629	10	2272061

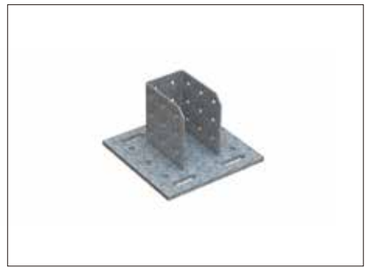


MT-C-T 3D/2 / MT-C-T 3D/2 OC



MT-C-T 3D/3 / MT-C-T 3D/3 OC

Girder Baseplates



APPLICATIONS

- For fastening of MT channels to base material (concrete)

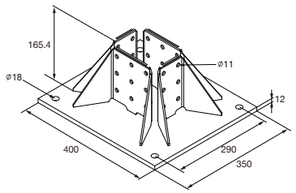
ADVANTAGES

- Connection of girders to both concrete and steel for MT-B-GS connectors

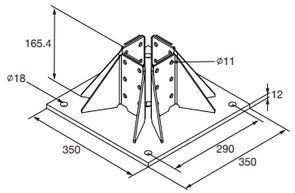
Technical data

Material composition	Q355B GB/T 1591-2018	
Surface finish	HDG, 56µm-for C3 outdoor use	ASTM A153M

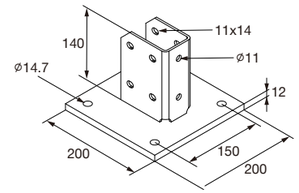
Item Description	Plate thickness	For Girder Types	Weight	Sales pack	Item number
MT-B-GS T OC	8.0	MT-70,MT-80	2166	2	2272100
MT-B-GS O4U OC	12.0	MT-70,MT-80	4730	4	2272101
MT-B-GL O4 OC	12.0	MT-90	14910	1	2272103
MT-B-GXL O4 OC	12.0	MT-100	17031	1	2272104



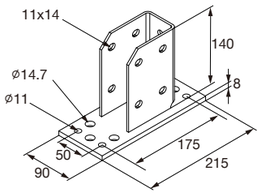
MT-B-GXL O4 OC



MT-B-GL O4 OC

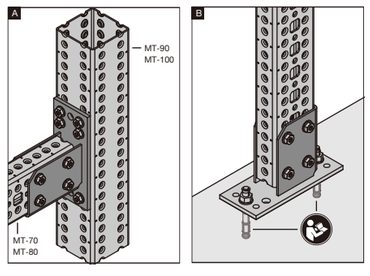


MT-B-GS O4U OC

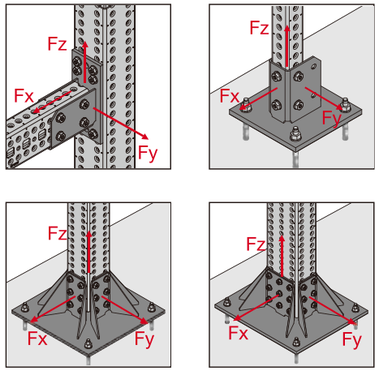


MT-B-GS T OC

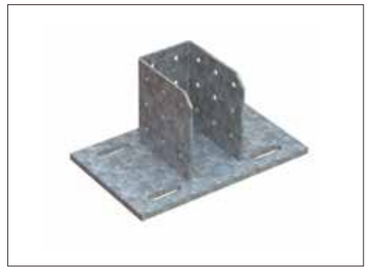
Item Description	$\pm F_z$ Design Load kN	$+F_z$ Design Load kN
MT-B-GS T OC	33.4	25.9
MT-B-GS O4U OC	27.0	90.1
MT-B-GL O4 OC	82.8	183.6
MT-B-GXL O4 OC	140.1	218.6



*MT-B-GS T OC



Girder Baseplates



APPLICATIONS

- For fastening of MT channels to base material（steel)

ADVANTAGES

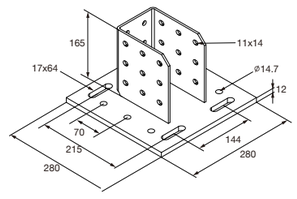
- Connection of girders to I-beam with sandwich plates

Technical data

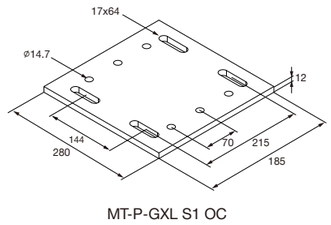
Material composition	Q355B GB/T 1591-2018	
Surface finish	HDG, 56µm-for C3 outdoor use	ASTM A153M

Item Description	Plate thickness	I-beam width (mm)	Weight	Sales pack	Item number
MT-B-GXL S1 OC	15.0	75-165	9401	2	2272106
MT-B-GXL S2 OC	15.0	165-235	9365	2	2272107
MT-B-GXL S3 OC	15.0	235-305	10816	2	2272108
MT-P-GXL S1 OC	15.0	75-165	6902	2	2272110

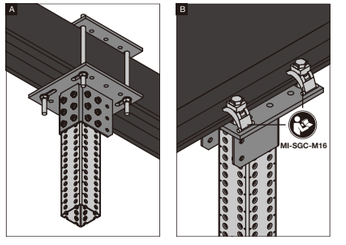
* MT-B-GXL S1/2/3 OC

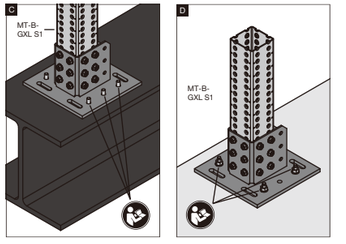


MT-B-GXL S1 OC

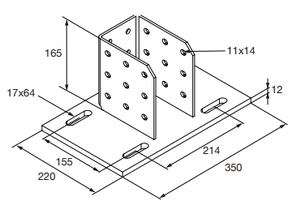


MT-P-GXL S1 OC

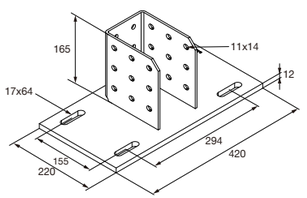




* MT-B-GXL S1 OC
MT-P-GXL-S1 OC
* MT-B-GXL S2 OC, MT-B-GXL S3 OC

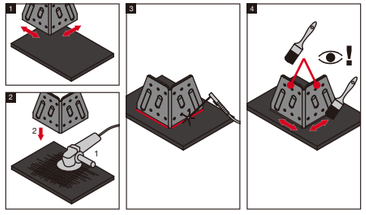


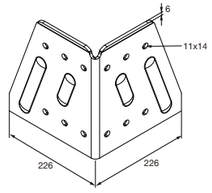
MT-B-GXL S2 OC



MT-B-GXL S3 OC

Item Description	Plate thickness	For Girder Types	Weight	Sales pack	Item number
MT-B-G WS OC	6.0	MT-70,MT-80 MT-90,MT-100	4345	4	2272109





MT-B-G WS OC

Girder Connectors

APPLICATIONS

- Simplest form of connectors, for building standard L junctions with MT girders

ADVANTAGES

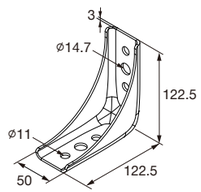
- Possibility to be used as baseplate.
- Designed to provide extra adjustability

Technical data

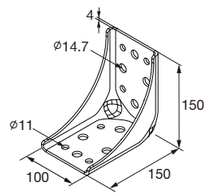
Material composition		Q355B GB/T 1591-2018
Surface finish	HDG, 56µm-for C3 outdoor use	ASTM A153M

90°Angle connector

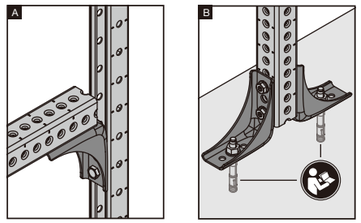
Item Description	Angle	Material thickness	For Girder Types	adjustment	Weight	Sales pack	Item number
MT-C-GS OC	90°	3.0	MT-70,MT-80	25	400	10	2272064
MT-C-GL OC	90°	4.0	MT-90,MT-100	25	1161	10	2272066
MT-C-GS A OC	90°	3.0	MT-70,MT-80	5	390	10	2272068
MT-C-GL A OC	90°	4.0	MT-90,MT-100	5	1145	10	2272069



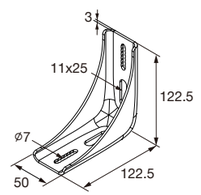
MT-C-GS OC



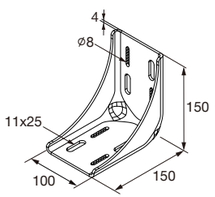
MT-C-GL OC



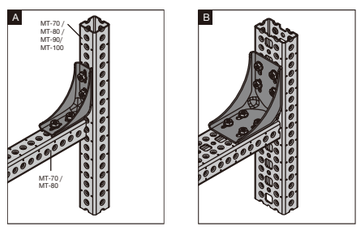
* MT-C-GS OC/ MT-C-GL OC



MT-C-GS A OC



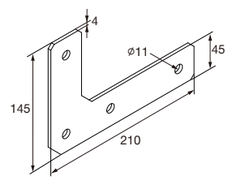
MT-C-GL A OC



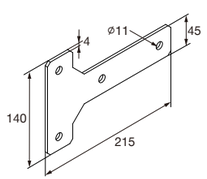
* MT-C-GS A OC / MT-C-GL A OC

Girder Connectors

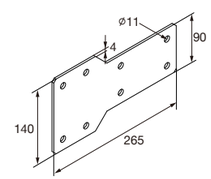
Item Description	Material thickness	Surface finish	Weight	Sales pack	Item number
MT-C-GSP L OC	4.0	HDG	424	10	2272073
MT-C-GSP T OC	4.0	HDG	455	10	2272074
MT-C-GLP T OC	4.0	HDG	884	8	2272075



MT-C-GSP L OC



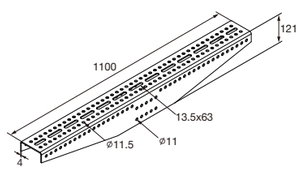
MT-C-GSP T OC



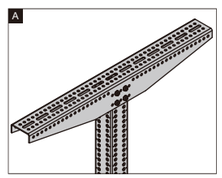
MT-C-GLP T OC

T-Post Coonector (U-shaped)

Item Description	Material thickness	Surface finish	Weight	Sales pack	Item number
MT-U-GL1 OC	4.0	HDG	8827	2	2272070



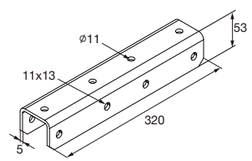
MT-U-GL1 OC



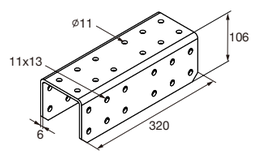
MT-U-GL OC

Splice Connectors

Item Description	Material thickness	Surface finish	Weight	Sales pack	For Girder Types	Item number
MT-ES-70 OC	5.0	HDG	1831	8	MT-70,MT-80	2272078
MT-ES-90 OC	6.0	HDG	4429	4	MT-90,MT-100	2272076



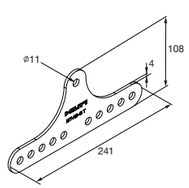
MT-ES-70 OC



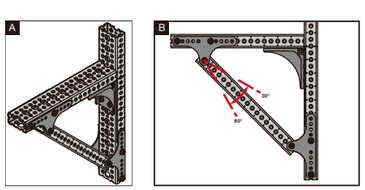
MT-ES-90 OC

Angle bracing connector

Item Description	Angle	Material thickness	Surface finish	Weight	Sales pack	Item number
MT-AB-G T OC	30°~60°	4.0	HDG	348	4	2272116



MT-AB-G T OC



* MT-AB-G T Angle 30°~60°

Channel clamps

APPLICATIONS

- Cross-connection of one strut channel to another channel or girder
- Suitable for use in dry, indoor environments

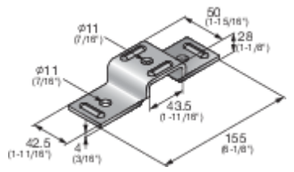
ADVANTAGES

- Compatible with MT Twist-Lock and MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly
- Universal – complete many different applications using few parts
- Twist-lock and Thread Forming Bolt channel connector takes up shear and tensile loads
- Compatible with multiple strut channel/girder profiles

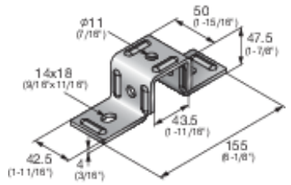
Technical data

Material composition	Q235 or better steel	Use with: MT-30/40/50/60/40D/70	
Surface finish	Pre-galvanised – ISO 2081	Coating Type: Z275	Coating Thickness: 12 µm
	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

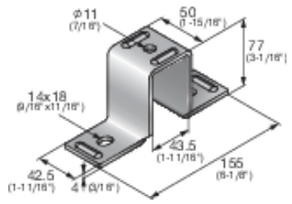
Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-CC-30	4	42.5x155	0.271	10	Electro-galvanised	**2322427**
MT-CC-40/50	4	49.5X155	0.326	20	Electro-galvanised	**2322429**
MT-CC-40/50 OC	4	49.5X155	0.326	20	Hot-dipped galvanized	**2322391**
MT-CC-60	4	79X155	0.425	15	Electro-galvanised	**2322396**
MT-CC-60 OC	4	79X155	0.425	15	Hot-dipped galvanized	**2322431**
MT-CC-40D	4	93X155	0.463	10	Electro-galvanised	**2322398**
MT-CC-40D OC	4	93X155	0.463	10	Hot-dipped galvanized	**2322399**
MT-CC-70 OC	4	57X155	0.358	15	Hot-dipped galvanized	**2322404**
MT-CC-40/50X2	4	49.5X205	0.407	10	Electro-galvanised	**2322392**
MT-CC-40/50X2 OC	4	49.5X205	0.407	10	Hot-dipped galvanized	**2322393**
MT-CC-BC 40/50	4	49.5X155	0.326	20	Electro-galvanised	**2322432**
MT-CC-BC 40/50 OC	4	49.5X155	0.326	20	Hot-dipped galvanized	**2322401**
MT-CC-BS 40/50	4	49.5X155	0.326	20	Electro-galvanised	**2322402**
MT-CC-BS 40/50 OC	4	49.5X155	0.326	20	Hot-dipped galvanized	**2322403**



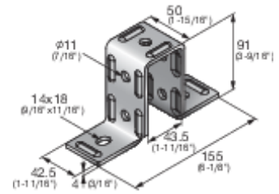
MT-CC-30



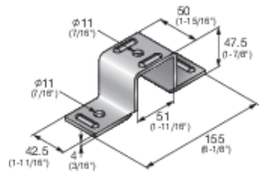
MT-CC-40/50
MT-CC-40/50 OC



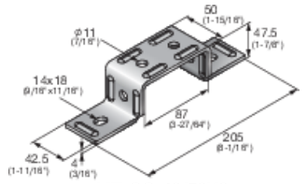
MT-CC-60
MT-CC-60 OC



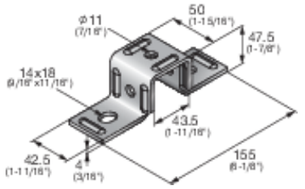
MT-CC-40D
MT-CC-40D OC



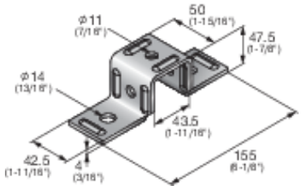
MT-CC-70 OC



MT-CC-40/50X2
MT-CC-40/50X2 OC

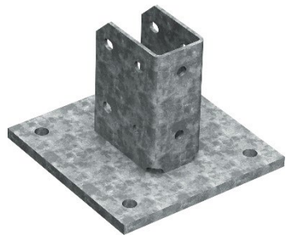


MT-CC-BC 40/50
MT-CC-BC 40/50 OC



MT-CC-BS 40/50
MT-CC-BS 40/50 OC

Base Connector for girder MT-70/MT-80



APPLICATIONS

- Anchoring metal framing and MEP support structures with light loads to a base material
- Fastening MT-70 and MT-80 girders to concrete floors, walls or ceilings
- Fastening MT-70 and MT-80 girders to structural steel
- Suitable for use in moderately corrosive environments

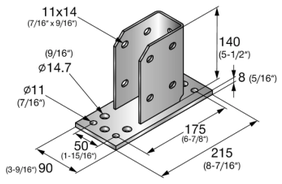
ADVANTAGES

- Easy to install – one-step assembly using Hilti MT-TFB thread-forming bolts
- Adaptable – unlike welding, modular metal framing can be modified for future MEP requirements

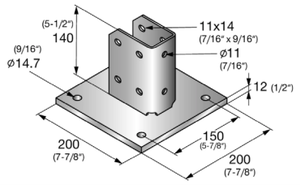
Technical data

Material composition	Q355 or better steel	Use with: MT-70/MT-80	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

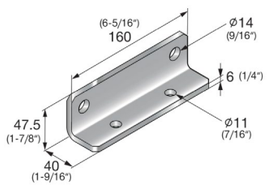
Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-B-GS T OC	8	140x215	2.16	2	Hot-dip galvanized	**2272100**
MT-B-GS O4U OC	12	140x200	4.73	4	Hot-dip galvanized	**2272101**
MT-B-G AS OC	6	47.5x160	0.56	10	Hot-dip galvanized	**2332781**



MT-B-GS T OC



MT-B-GS O4U OC



MT-B-G AS OC

Plate Connector for girder with Cloud Holes

APPLICATIONS

- Assembling and bracing modular support structures consisting of MT-70 and MT-80 girders
- Suitable for use in moderately corrosive environments

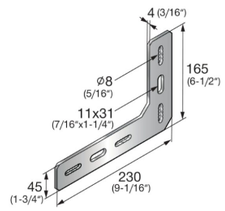
ADVANTAGES

- Adjustable – elongated holes allow 5 mm (1/4") incremental adjustability
- Compatible with MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly

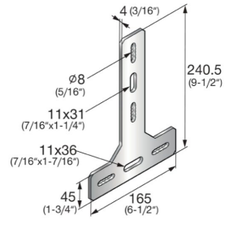
Technical data

Material composition	Q355 or better steel	Use with: MT-70/MT-80 for MT-C-GSP L/T A OC MT-80/MT-90/MT-100 for MT-C-CLP T A OC	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

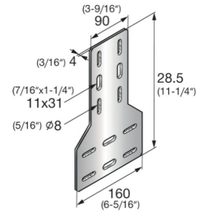
Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-C-GSP L A OC	4	230 x 165	0.44	10	Hot-dip galvanized	**2332786**
MT-C-GSP T A OC	4	240.5 x 165	0.47	10	Hot-dip galvanized	**2332785**
MT-C-GLP T A OC	4	285 x 160	0.94	8	Hot-dip galvanized	**2332784**



MT-C-GSP L A OC

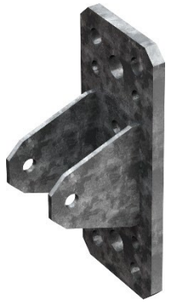


MT-C-GSP T A OC



MT-C-GLP T A OC

Heavy Bracing Connector for Girder MT-70



APPLICATIONS

- Assembling and bracing modular support structures consisting of MT-70 and MT-80 girders
- Fastening modular support structures to concrete and steel

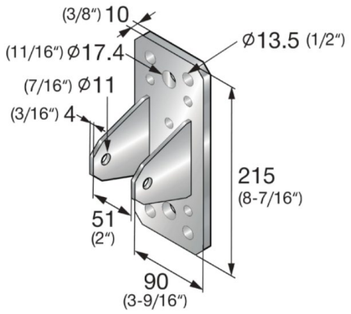
ADVANTAGES

- Versatile – use it as a girder-to-girder connector, for angle braces or for fastening modular support structures to concrete and steel
- Compatible with powder-actuated threaded studs for steel and MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly
- Corrosion resistance – hot-dip galvanized to help protect against moisture and chemical corrosion

Technical data

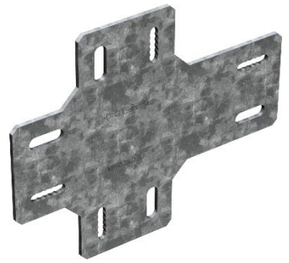
Material composition	Q355 or better steel	Use with: MT-70	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-B-GS AB OC	10	215x90	1.652	8	Hot-dip galvanized	**2332787**



MT-B-GS AB OC

Cross plate for Girder



APPLICATIONS

- Right-angle connections between MT-80 girders (including cantilevers)

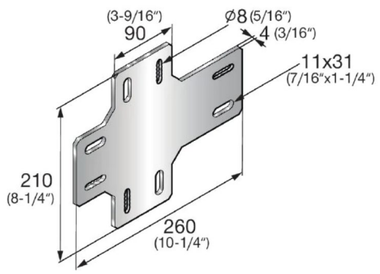
ADVANTAGES

- Increased load resistance for cantilevered girders
- Adjustable – elongated holes allow 5 mm (1/4") adjustability
- Compatible with MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly
- Corrosion resistance – hot-dip galvanized to help protect against moisture and chemical corrosion

Technical data

Material composition	Q355 or better steel	Use with: MT-80	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-C-GLP X A OC	4	210x260	1.017	10	Hot-dip galvanized	**2332783**



MT-B-GS AB OC

Threaded Rod Connector for Girder MT-70/MT-80

APPLICATIONS

- Assembling trapeze for MEP and HVAC installations subject to loads too heavy for strut trapeze

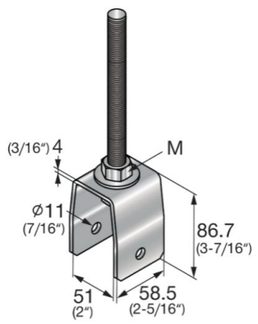
ADVANTAGES

- Simpler inventory – these hangers make it possible to use standard MT girders in more situations
- Compatible with MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly
- Minimize use of heavy members by replacing with threaded rod

Technical data

Material composition	Q355 or better steel	Use with: MT-70/MT-80	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-CTR-GS M12 OC	4	86.7x51	0.437	16	Hot-dip galvanized	**2332789**
MT-CTR-GS M16 OC	4	86.7x51	0.450	16	Hot-dip galvanized	**2332790**
MT-CTR-GS 1/2 OC	4	86.7x51	0.435	16	Hot-dip galvanized	**2332791**
MT-CTR-GS 5/8 OC	4	86.7x51	0.448	16	Hot-dip galvanized	**2332792**



MT-CTR-GS OC

Threaded Rod Connector for Girder MT-90/MT-100

APPLICATIONS

- Assembling trapeze for MEP and HVAC installations subject to loads too heavy for strut trapeze

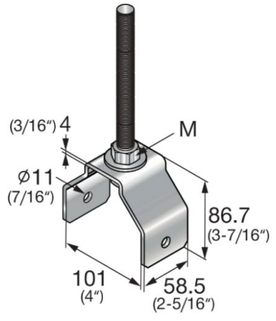
ADVANTAGES

- Simpler inventory – these hangers make it possible to use standard MT girders in more situations
- Compatible with MT Thread Forming Bolt channel connectors – for much faster, adaptable assembly
- Minimize use of heavy members by replacing with threaded rod

Technical data

Material composition	Q355 or better steel	Use with: MT-90/MT-100	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-CTR-GL M12 OC	4	86.7x101	0.479	16	Hot-dip galvanized	**2332793**
MT-CTR-GL M16 OC	4	86.7x101	0.492	16	Hot-dip galvanized	**2332796**
MT-CTR-GL 1/2 OC	4	86.7x101	0.477	16	Hot-dip galvanized	**2332794**
MT-CTR-GL 5/8 OC	4	86.7x101	0.490	16	Hot-dip galvanized	**2332795**



MT-CTR-GL OC

Modular plates

APPLICATIONS

- Assembling a sandwich connection or clamping around a structural steel beam
- Suitable for use in moderately corrosive environments

ADVANTAGES

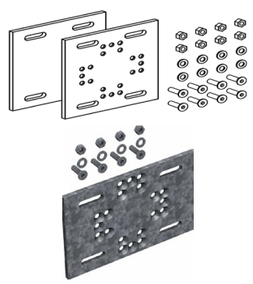
- Easy to install – one-step assembly using Hilti MT-TFB thread-forming bolts
- Adaptable – unlike welding, modular metal framing can be modified for future MEP requirements

Technical data

Material composition	Q355 or better steel	Use with: MT-70/MT-80	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-P-G S1 OC	12	280x280	6.736	2	Hot-dip galvanized	**2343199**
MT-P-G S2 OC	12	220x350	6.604	2	Hot-dip galvanized	**2343280**
MT-P-G S3 OC	12	220x430	8.262	2	Hot-dip galvanized	**2343281**
MT-P-GM S1 OC	12	280x280	7.015	2	Hot-dip galvanized	**2345353**
MT-P-GM S2 OC	12	220x350	6.883	2	Hot-dip galvanized	**2345354**
MT-P-GM S3 OC	12	220x430	8.541	2	Hot-dip galvanized	**2345355**

Order Designation	Main connection hole diameter (mm x mm)	Second connection hole diameter (mm x mm)	Set including	Suitable beam size
MT-P-G S1 OC	17x64	13,5 counter sunk	X2 plates, x8 bolts, washers & nuts	102 - 165
MT-P-G S2 OC	17x64	13,5 counter sunk		165 - 235
MT-P-G S3 OC	17x64	13,5 counter sunk		235 - 305
MT-P-GM S1 OC	17x64	13,5 counter sunk	X1 plate, x4 bolts, washers & nuts	102 - 165
MT-P-GM S2 OC	17x64	13,5 counter sunk		165 - 235
MT-P-GM S3 OC	17x64	13,5 counter sunk		235 - 305



Beam Clamp for girder

APPLICATIONS

- Mounting MT-70 and MT-80 or MT-90 and MT-100 girders on structural steel
- Suitable for use in moderately corrosive environments

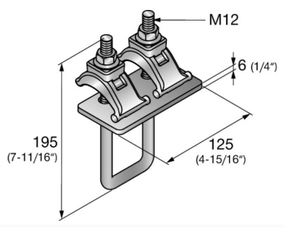
ADVANTAGES

- Part of the Hilti MT system – an economical, all-in-one solution for virtually all modular MEP support structures
- No drilling or hot works – fasten modular girders to structural steel without anchoring or welding

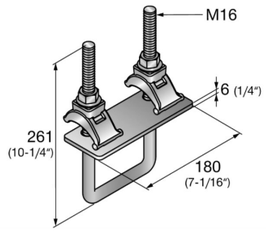
Technical data

Material composition	Q235 or better steel	Use with: MT-70/MT-80 for MT-BC-GS T OC MT-90/MT-100 for MT-BC-GXL T OC	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-BC-GS T OC	6	195x125	1.27	12	Hot-dip galvanized	**2273587**
MT-BC-GXL T OC	6	261x180	2.12	10	Hot-dip galvanized	**2273589**

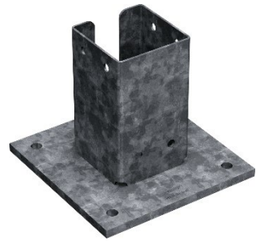


MT-BC-GS T OC



MT-BC-GXL T OC

Heavy-duty baseplate



APPLICATIONS

- Anchoring metal framing and MEP support structures with light loads to a base material
- Fastening MT-90 girders to concrete floors, walls or ceilings
- Fastening MT-90 girders to structural steel
- Suitable for use in moderately corrosive environments

ADVANTAGES

- Easy to install – one-step assembly using Hilti MT-TFB thread-forming bolts
- Adaptable – unlike welding, modular metal framing can be modified for future MEP requirements

Technical data

Material composition	Q355B or better steel	Use with: MT-90	
Surface finish	Hot-dip galvanized - ASTM A153M	Coating Type: HDG	Coating Thickness: 56 µm

Order Designation	Material thickness (mm)	Height x Width (mm x mm)	Weight (kg)	Sales pack	Surface finish	Item number
MT-B-GL O4C OC	3	197 x 230	6.5	2	Hot-dip galvanized	**2343282**

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European Technical Assessment

ETA-21/0414 of 27/07/2021

General Part

Technical Assessment Body issuing the European Technical Assessment	Instytut Techniki Budowlanej
Trade name of the construction product	HILTI installation channels of MT System
Product family to which the construction product belongs	Products for installation systems for supporting technical building equipment
Manufacturer	HILTI AG Feldkircherstraße 100 9494 Schaan FÜRSTENTUM LIECHTENSTEIN
Manufacturing plants	L 1138282, L 8321
This European Technical Assessment contains	17 pages including 3 Annexes which form an integral part of this Assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document EAD 280016-00-0602 "Products for installation systems for supporting technical building equipment"

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Specific Part

1 Technical description of the product

This European Technical Assessment covers HILTI installation channels of MT System: MT-10, MT-15, MT-15 OC, MT-20, MT-20 OC, MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T, MT-40 T OC, MT-40 S, MT-40, MT-40 S OC, MT-40 OC, MT-50 S, MT-50, MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC, MT-60 OC, MT-70 S OC, MT-70 OC, MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC, MT-100 OC, MT-40D S, MT-40D, MT-40D S OC and MT-40D OC.

The HILTI installation channels: MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC are made of thin-walled steel in L- or C shape. Recesses in the form of oblong holes and round holes allow the use of fasteners and fixtures.

The HILTI installation channels: MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T, MT-40 T OC, MT-40 S, MT-40, MT-40 S OC, MT-40 OC, MT-50 S, MT-50, MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC and MT-60 OC are made of thin-walled steel in C shape. The profile flanges are turned at the end which makes it possible to force-fit the channels to specific channel system fixtures. Recesses in the form of oblong holes and round holes allow the use of fasteners and fixtures.

The HILTI installation channels: MT-70 S OC, MT-70 OC, MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC and MT-100 OC are made of thin-walled steel closed profiles in square or rectangular shape with recesses in the form of round holes to allow use of fasteners and fixtures.

The HILTI installation channels: MT-40D S, MT-40D, MT-40D S OC and MT-40D OC consists of two profiles of similar types as MT-40 S, MT-40, MT-40 S OC and MT-40 OC which are connected in the area of back of the channels in a shape-fitting and force-fitting way.

The channels are delivered in length of 2 m for the channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC and in the lengths of 3 m or 6 m for the channels MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T, MT-40 T OC, MT-40 S, MT-40, MT-40 S OC, MT-40 OC, MT-50 S, MT-50, MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC, MT-60 OC, MT-70 S OC, MT-70 OC, MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC, MT-100 OC, MT-40D S, MT-40D, MT-40D S OC and MT-40D OC. The channels can be cut to length as required.

The drawings, dimensions and materials of the HILTI installation channels of MT System are given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

The performances given in clause 3 are only valid if HILTI installation channels of MT System are in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment are based on an assumed working life of the HILTI installation channels of MT System of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

In accordance with the European Assessment Document EAD 280016-00-0602, the products are intended to be used under dry indoor conditions for supporting:

- pipes for the transport of water not intended for human consumption,
- pipes for the transport of gas/fuel intended for the supply of building heating/cooling systems,
- technical building equipment in general,
- components of fixed fire-fighting systems.

3 Performance of the product and references to the methods used for its assessment

3.1 Performance of the product

3.1.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Pull-through resistance of channel back holes under fire exposure	No performance assessed
Bending characteristics under fire exposure	No performance assessed

3.1.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Shape	Annex A
Dimensions	Annex A
Materials and cross-section characteristics	Annexes A and B
Characteristic pull-through resistance of channel back holes	No performance assessed

3.2 Methods used for the assessment

The assessment of the products has been made in accordance with the European Assessment Document EAD 280016-00-0602 "Products for installation systems for supporting technical building equipment".

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

For products for installation systems to be used for supporting pipes for the transport of water not intended for human consumption, according to the Decision 1999/427/EC of the European Commission, amended by the Decision 2001/596/EC, the system 4 of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011) applies.

For products for installation systems intended to be used for supporting pipes for the transport of gas/fuel intended for the supply of building heating/cooling systems, according to the Decision 1999/427/EC of the European Commission, amended by the Decision 2001/596/EC, the system 3 of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011) applies.

For products for installation systems intended to be used for supporting technical building equipment in general according to the Decision 97/161/EC of the European Commission, the system 2+ of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011) applies.

For products for installation systems intended to be used for supporting components of fixed fire-fighting systems according to Decision 96/577/EC of the European Commission, as amended by the Decision 2002/592/EC, the system 1 of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011) applies.

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

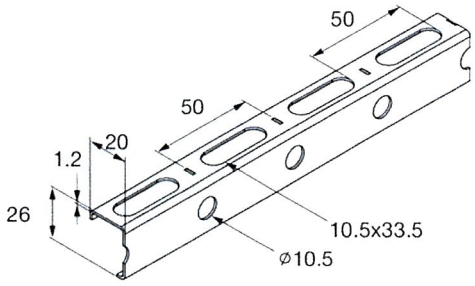
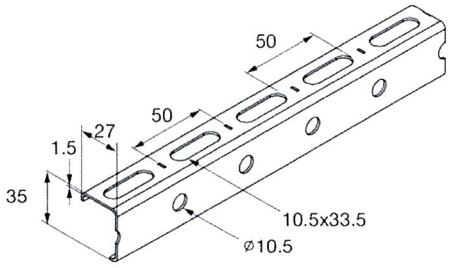
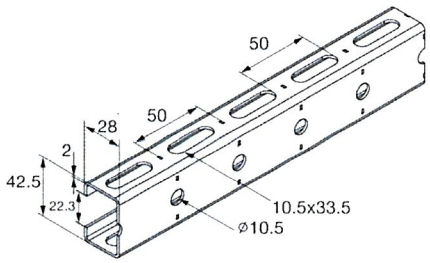
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For the type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 27/07/2021 by Instytut Techniki Budowlanej

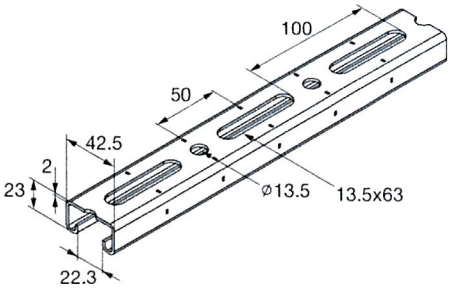
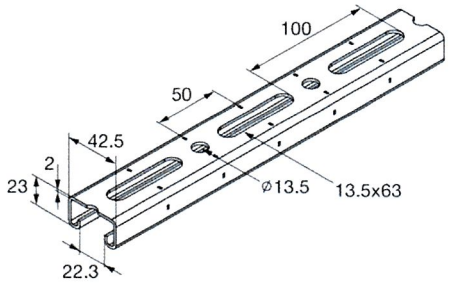
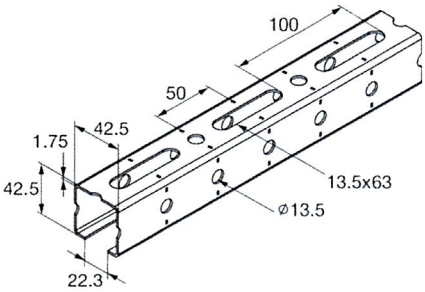
Robert Geryło, Ph.D
Director of ITB

Table A1: Shape, dimensions and materials of channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC

Shape	Item number	Designation	Length [m]	Material
	2268492	MT-10	2	S280GD+ Z275-M-A-C acc. to EN 10346
	2268493	MT-15	2	S280GD+ Z275-M-A-C acc. to EN 10346
	2268494	MT-15 OC	2	S280GD+ ZM310-A-C acc. to EN 10346
	2268495	MT-20	2	S280GD+ Z275-M-A-C acc. to EN 10346
	2268496	MT-20 OC	2	S280GD+ ZM310-A-C acc. to EN 10346

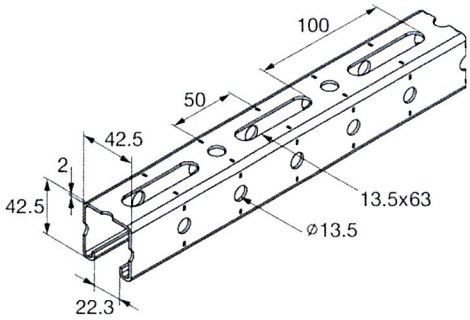
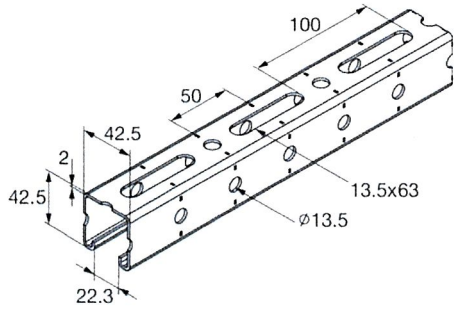
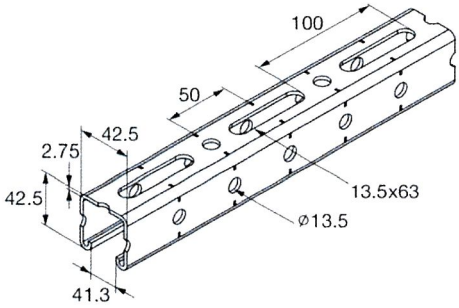
HILTI installation channels of MT System	**Annex A1** of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC	

Table A2: Shape, dimensions and materials of channels MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T and MT-40 T OC

Shape	Item number	Designation	Length [m]	Material
	2268497	MT-30 S	3	S250GD+ Z275-M-A-C acc. to EN 10346
	2268498	MT-30	6	
	2268499	MT-30 S OC	3	S250GD+ ZM310-A-C acc. to EN 10346
	2268500	MT-30 OC	6	
	2268502	MT-40 T	3 6	S280GD+ Z275-M-A-C acc. to EN 10346
	2268504	MT-40 T OC	3 6	S280GD+ ZM310-A-C acc to. EN 10346

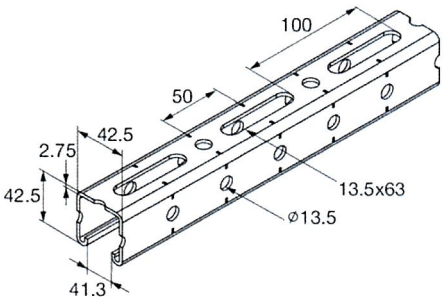
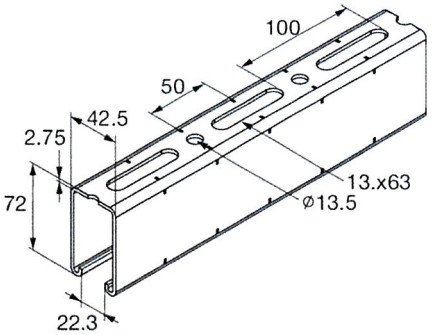
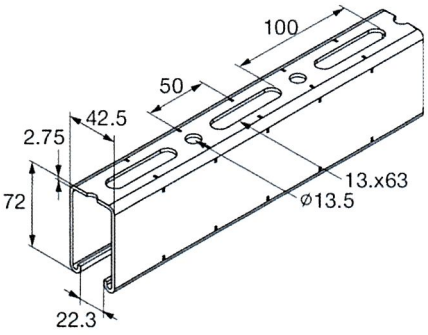
HILTI installation channels of MT System	**Annex A2** of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40T and MT-40 T OC	

Table A3: Shape, dimensions and materials of channels MT-40 S, MT-40, MT-40 S OC, MT-40 OC, MT-50 S and MT-50

Shape	Item number	Designation	Length [m]	Material
	2268505	MT-40 S	3	S280GD+ Z275-M-A-C acc. to EN 10346
	2268506	MT-40	6	
	2268507	MT-40 S OC	3	S280GD+ ZM310-A-C acc. to EN 10346
	2268508	MT-40 OC	6	
	2268509	MT-50 S	3	S280GD+ Z275-M-A-C acc. to EN 10346
	2268510	MT-50	6	

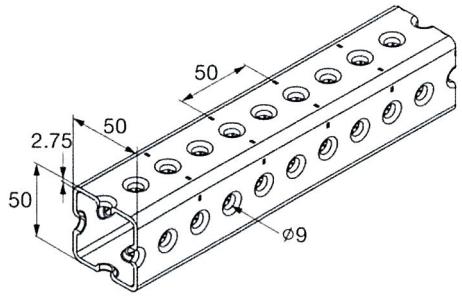
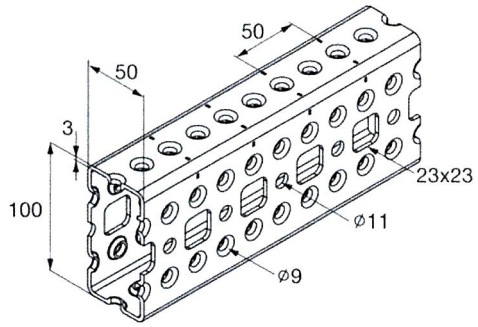
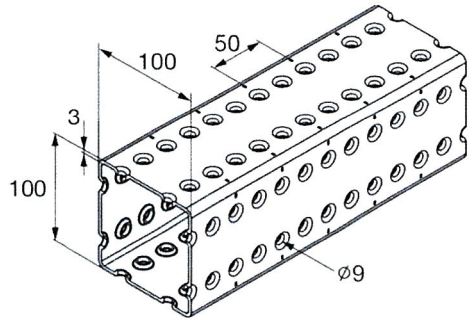
HILTI installation channels of MT System	**Annex A3** of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-40 S, MT-40, MT-40 S OC, MT-40 OC, MT-50 S and MT-50	

Table A4: Shape, dimensions and materials of channels MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC and MT-60 OC

Shape	Item number	Designation	Length [m]	Material
	2268511	MT-50 S OC	3	S280GD+ ZM310-A-C acc to. EN 10346
	2268512	MT-50 OC	6	
	2268513	MT-60 S	3	S280GD+ Z275-M-A-C acc. to EN 10346
	2268514	MT-60	6	
	2268515	MT-60 S OC	3	S280GD+ ZM310-A-C acc. to EN 10346
	2268516	MT-60 OC	6	

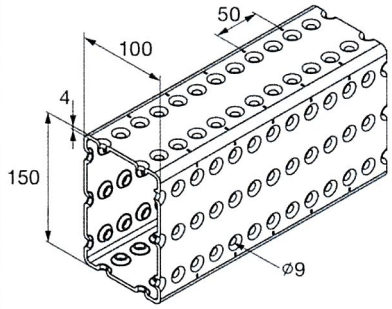
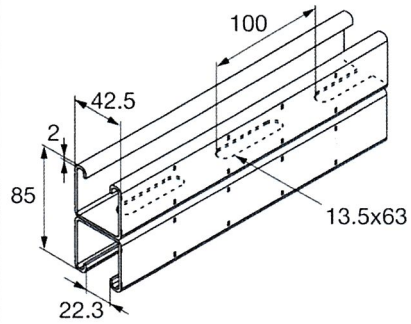
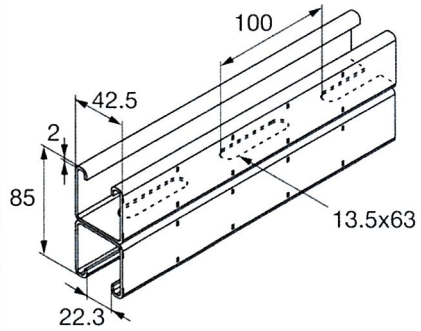
HILTI installation channels of MT System	Annex A4 of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC and MT-60 OC	

Table A5: Shape, dimensions and materials of channels MT-70 S OC, MT-70 OC, MT-80 S OC, MT-80 OC, MT-90 S OC and MT-90 OC

Shape	Item number	Designation	Length [m]	Material
	2268364	MT-70 S OC	3	S350GD+ ZM310-A-C acc. to EN 10346
	2268365	MT-70 OC	6	
	2268366	MT-80 S OC	3	S350GD+ ZM310-A-C acc. to EN 10346
	2268367	MT-80 OC	6	
	2268368	MT-90 S OC	3	S350GD+ ZM310-A-C acc. to EN 10346
	2268369	MT-90 OC	6	

HILTI installation channels of MT System	**Annex A5** of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-70 S OC, MT-70 OC, MT-80 S OC, MT-80 OC, MT-90 S OC and MT-90 OC	

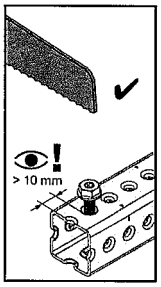
Table A6: Shape, dimensions and materials of channels MT-100 S OC, MT-100 OC, MT-40D S, MT-40D, MT-40D S OC and MT-40D OC

Shape	Item number	Designation	Length [m]	Material
	2268490	MT-100 S OC	3	S350GD+ ZM310-A-C acc. to EN 10346
	2268491	MT-100 OC	6	
	2268517	MT-40D S	3	S280GD+ Z275-M-A-C acc. to EN 10346
	2268518	MT-40D	6	
	2268519	MT-40D S OC	3	S280GD+ ZM310-A-C acc. to EN 10346
	2268520	MT-40D OC	6	

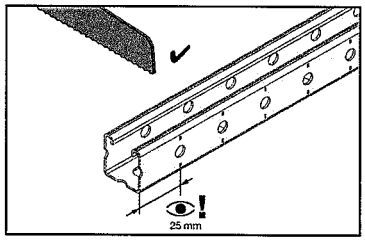
HILTI installation channels of MT System	**Annex A6** of European Technical Assessment ETA-21/0414
Product description Shape, dimensions and materials of channels MT-100 S OC, MT-100 OC, MT-40D S, MT-40 D, MT-40D S OC and MT-40D OC	

Specification of intended use

- HILTI installation channels of MT System are used only for applications at ambient temperature.
- The resistance and deformation apply for static and centric loads.
- In the case of open profile channels, the open side of the channel profile can be orientated in all directions.
- The installation open profile channels and closed profile can be cut anywhere along the whole length.
- For closed profiles the distance between the end of the profile and start of the round hole has to be minimum 10 mm.



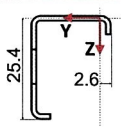
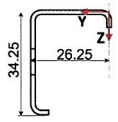
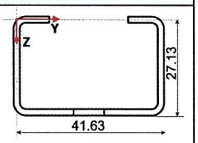
- For open profiles the distance between the end of the profile and center of the first round hole has to be minimum 25 mm.



- Threaded rods and other fixtures are only to be guided through the roundholes or longholes of the channel.
- Prior to installation, it must be ensured that the components to be supported by the installation channels, the connection components, the anchoring of the channels to the base material and the base material itself are suitable to withstand the resistance values of the channels as well as installation systems.
- The installation channels must be installed by appropriately qualified personnel and under the supervision of the site manager, according to the instruction of the manufacturer.

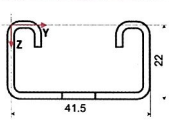
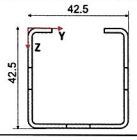
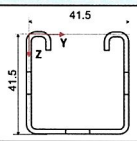
HILTI installation channels of MT System	**Annex B1** of European Technical Assessment ETA-21/0414
Intended use Specifications	

Table C1. Properties of the cross section of channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC

Description	Symbol	Unit	MT-10	MT-15 / MT-15 OC	MT-20 / MT-20 OC
Cross section (dimensions in mm)	-	-			
Classification cross section in accordance with EN 1993-1-1	-	-	3	3	3
Cross section areas	A	cm^2	0.49	0.85	1.49
	A_{tot}	cm^2	0.49	0.85	1.49
Shear areas	A_y	cm^2	0.08	0.15	0.36
	A_z	cm^2	0.17	0.30	0.35
Centroid position	$y_{C,0}$	cm	1.22	1.93	2.02
	$z_{C,0}$	cm	0.92	1.19	1.64
Moments of inertia	I_y	cm^4	0.41	1.27	1.86
	I_z	cm^4	0.23	0.72	3.66
Polar moments of inertia	I_p	cm^4	0.64	1.98	5.52
	$I_{p,M}$	cm^4	1.26	3.80	14.71
Radii of gyration	i_y	cm	0.91	1.22	1.12
	i_z	cm	0.69	0.92	1.57
Polar radii of gyration	i_p	cm	1.14	1.53	1.92
	$i_{p,M}$	cm	1.61	2.11	3.14
Warping radius of gyration	$i_{\omega,M}$	cm	0.12	0.15	0.78
Torsional constant	J	cm^4	0.0015	0.0045	0.01
Secondary torsional constant	J_s	cm^4	0.18	0.47	2.21
Location of the shear center	$y_{M,0}$	cm	1.78	2.67	2.02
	$z_{M,0}$	cm	-0.06	-0.07	4.12
	y_M	cm	0.56	0.74	0.00
	z_M	cm	-0.99	-1.26	2.48
Warping constants	$I_{\omega,C}$	cm^6	0.54	2.86	31.61
	$I_{\omega,M}$	cm^6	0.02	0.09	9.04
Section moduli	$S_{y,max}$	cm^3	0.25	0.57	1.78
	$S_{y,min}$	cm^3	-0.41	-1.00	-1.08
	$S_{z,max}$	cm^3	0.45	1.03	1.73
	$S_{z,min}$	cm^3	-0.16	-0.36	-1.73
Torsional section modulus	S_t	cm^3	0.01	0.03	0.06
Max. plastic bending moment	$M_{pl,y,k}$	kNm	NPA	NPA	NPA
	$M_{pl,z,k}$	kNm	NPA	NPA	NPA
Max. plastic section moduli	Z_y	cm^3	NPA	NPA	NPA
	Z_z	cm^3	NPA	NPA	NPA
Plastic shear areas	$A_{pl,y}$	cm^2	NPA	NPA	NPA
	$A_{pl,z}$	cm^2	NPA	NPA	NPA
Area bisecting axis position	$f_{y,0}$	cm	NPA	NPA	NPA
	$f_{z,0}$	cm	NPA	NPA	NPA
Plastic shear forces	$V_{pl,y,k}$	kN	NPA	NPA	NPA
	$V_{pl,z,k}$	kN	NPA	NPA	NPA
Plastic axial forces	$N_{pl,k}$	kN	NPA	NPA	NPA
Buckling curves	BC_y	-	c	c	c
	BC_z	-	c	c	c

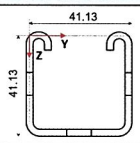
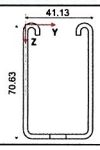
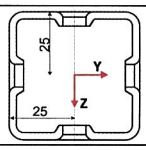
HILTI installation channels of MT System	**Annex C1** of European Technical Assessment ETA-21/0414
Performances Cross section characteristic of channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC	

Table C2. Properties of the cross section of channels MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T, MT-40 T OC, MT-40 S, MT-40, MT-40 S OC and MT-40 OC

Description	Symbol	Unit	MT-30 S / MT-30 / MT-30 S OC / MT-30 OC	MT-40 T / MT-40 T OC	MT-40 S / MT-40 / MT-40 S OC / MT-40 OC
Cross section (dimensions in mm)	-	-			
Classification cross section in accordance with EN 1993-1-1	-	-	3	3	3
Cross section areas	A	cm^2	1.81	1.76	2.15
	A_{tot}	cm^2	1.81	1.76	2.15
Shear areas	A_y	cm^2	0.25	0.43	0.24
	A_z	cm^2	0.62	1.30	1.39
Centroid position	$y_{C,0}$	cm	2.02	2.13	2.02
	$z_{C,0}$	cm	1.10	2.30	2.07
Moments of inertia	I_y	cm^4	1.22	4.85	5.80
	I_z	cm^4	5.22	5.73	6.61
Polar moments of inertia	I_p	cm^4	6.43	10.58	12.41
	$I_{p,M}$	cm^4	16.42	40.93	55.83
Radii of gyration	i_y	cm	0.82	1.66	1.64
	i_z	cm	1.70	1.80	1.75
Polar radii of gyration	i_p	cm	1.89	2.45	2.40
	$i_{p,M}$	cm	3.01	4.82	5.10
Warping radius of gyration	$i_{\omega,M}$	cm	0.72	0.80	0.83
Torsional constant	J	cm^4	0.02	0.02	0.03
Secondary torsional constant	J_s	cm^4	3.83	7.78	8.74
Location of the shear center	$y_{M,0}$	cm	2.02	2.13	2.02
	$z_{M,0}$	cm	3.45	6.45	6.57
	y_M	cm	0.00	0.00	0.00
	z_M	cm	2.35	4.15	4.49
Warping constants	$I_{\omega,C}$	cm^6	37.34	125.13	172.04
	$I_{\omega,M}$	cm^6	8.52	26.38	38.40
Section moduli	$S_{y,max}$	cm^3	1.11	2.49	2.79
	$S_{y,min}$	cm^3	-1.01	-2.11	-2.67
	$S_{z,max}$	cm^3	2.45	2.69	3.11
	$S_{z,min}$	cm^3	-2.45	-2.69	-3.11
Torsional section modulus	S_t	cm^3	0.08	0.12	0.13
Max. plastic bending moment	$M_{pl,y,k}$	kNm	NPA	NPA	NPA
	$M_{pl,z,k}$	kNm	NPA	NPA	NPA
Max. plastic section moduli	Z_y	cm^3	NPA	NPA	NPA
	Z_z	cm^3	NPA	NPA	NPA
Plastic shear areas	$A_{pl,y}$	cm^2	NPA	NPA	NPA
	$A_{pl,z}$	cm^2	NPA	NPA	NPA
Area bisecting axis position	$f_{y,0}$	cm	NPA	NPA	NPA
	$f_{z,0}$	cm	NPA	NPA	NPA
Plastic shear forces	$V_{pl,y,k}$	kN	NPA	NPA	NPA
	$V_{pl,z,k}$	kN	NPA	NPA	NPA
Plastic axial forces	$N_{pl,k}$	kN	NPA	NPA	NPA
Buckling curves	BC_y	-	c	c	c
	BC_z	-	c	c	c

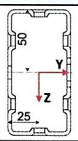
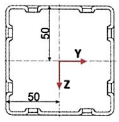
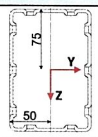
HILTI installation channels of MT System	Annex C2
Performances Cross section characteristic of channels MT-30 S, MT-30, MT-30 S OC, MT-30 OC, MT-40 T, MT-40 T OC, MT-40 S, MT-40, MT-40 S OC and MT-40 OC	of European Technical Assessment ETA-21/0414

Table C3. Properties of the cross section of channels MT-50 S, MT-50, MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC, MT-60 OC, MT-70 S OC and MT-70 OC

Description	Symbol	Unit	MT-50 S / MT-50 / MT-50 S OC / MT-50 OC	MT-60 S / MT-60 / MT-60 S OC / MT-60 OC	MT-70 S OC / MT-70 OC
Cross section (dimensions in mm)	-	-			
Classification cross section in accordance with EN 1993-1-1	-	-	3	4	3
Cross section areas	A	cm^2	2.77	4.70	4.32
	A_{tot}	cm^2	2.77	4.70	4.32
Shear areas	A_y	cm^2	0.32	0.30	1.78
	A_z	cm^2	1.67	3.22	1.78
Centroid position	$y_{C,0}$	cm	1.99	1.99	0.00
	$z_{C,0}$	cm	2.07	3.66	0.00
Moments of inertia	I_y	cm^4	7.07	26.81	15.96
	I_z	cm^4	8.30	16.04	15.96
Polar moments of inertia	I_p	cm^4	15.36	42.85	31.93
	$I_{p,M}$	cm^4	66.91	267.95	31.93
Radii of gyration	i_y	cm	1.60	2.39	1.92
	i_z	cm	1.73	1.85	1.92
Polar radii of gyration	i_p	cm	2.35	3.02	2.72
	$i_{p,M}$	cm	4.91	7.55	2.72
Warping radius of gyration	$i_{\omega,M}$	mm	0.78	0.74	0.25
Torsional constant	J	cm^4	0.05	0.09	19.95
Secondary torsional constant	J_s	cm^4	9.76	17.64	3.12
Location of the shear center	$y_{M,0}$	cm	1.99	1.99	0.00
	$z_{M,0}$	cm	6.38	10.59	0.00
	y_M	cm	0.00	0.00	0.00
	z_M	cm	4.31	6.92	0.00
Warping constants	$I_{\omega,C}$	cm^6	195.50	914.85	2.04
	$I_{\omega,M}$	cm^6	41.10	144.98	2.04
Section moduli	$S_{y,max}$	cm^3	3.46	7.89	6.39
	$S_{y,min}$	cm^3	-3.21	-7.09	-6.39
	$S_{z,max}$	cm^3	3.90	7.55	6.39
	$S_{z,min}$	cm^3	-3.90	-7.55	-6.39
Torsional section modulus	S_t	cm^3	0.17	0.31	7.62
Max. plastic bending moment	$M_{pl,y,k}$	kNm	NPA	NPA	NPA
	$M_{pl,z,k}$	kNm	NPA	NPA	NPA
Max. plastic section moduli	Z_y	cm^3	NPA	NPA	NPA
	Z_z	cm^3	NPA	NPA	NPA
Plastic shear areas	$A_{pl,y}$	cm^2	NPA	NPA	NPA
	$A_{pl,z}$	cm^2	NPA	NPA	NPA
Area bisecting axis position	$f_{y,0}$	cm	NPA	NPA	NPA
	$f_{z,0}$	cm	NPA	NPA	NPA
Plastic shear forces	$V_{pl,y,k}$	kN	NPA	NPA	NPA
	$V_{pl,z,k}$	kN	NPA	NPA	NPA
Plastic axial forces	$N_{pl,k}$	kN	NPA	NPA	NPA
Buckling curves	BC_y	-	c	c	c
	BC_z	-	c	c	c

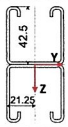
HILTI installation channels of MT System	Annex C3 of European Technical Assessment ETA-21/0414
Performances Cross section characteristic of channels MT-50 S, MT-50, MT-50 S OC, MT-50 OC, MT-60 S, MT-60, MT-60 S OC, MT-60 OC, MT-70 S OC and MT-70 OC	

Table C4. Properties of the cross section of channels MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC and MT-100 OC

Description	Symbol	Unit	MT-80 S OC / MT-80 OC	MT-90 S OC / MT-90 OC	MT-100 S OC / MT-100 OC
Cross section (dimensions in mm)	-	-			
Classification cross section in accordance with EN 1993-1-1	-	-	3	3	3
Cross section areas	A	cm^2	5.96	9.80	15.63
	A_{tot}	cm^2	5.96	9.80	15.63
Shear areas	A_y	cm^2	1.78	3.94	4.49
	A_z	cm^2	4.62	3.94	8.27
Centroid position	$y_{C,0}$	cm	0.00	0.00	0.00
	$z_{C,0}$	cm	0.00	0.00	0.00
Moments of inertia	I_y	cm^4	88.39	151.49	490.02
	I_z	cm^4	24.61	151.49	262.25
Polar moments of inertia	I_p	cm^4	113.00	302.97	752.27
	$I_{p,M}$	cm^4	113.00	302.97	752.27
Radii of gyration	i_y	cm	3.85	3.93	5.60
	i_z	cm	2.03	3.93	4.10
Polar radii of gyration	i_p	cm	4.36	5.56	6.94
	$i_{p,M}$	cm	4.36	5.56	6.94
Warping radius of gyration	$i_{\omega,M}$	cm	0.60	0.23	0.63
Torsional constant	J	cm^4	67.13	204.70	475.42
Secondary torsional constant	J_s	cm^4	9.24	22.23	23.94
Location of the shear center	$y_{M,0}$	cm	0.00	0.00	0.00
	$z_{M,0}$	cm	0.00	0.00	0.00
	y_M	cm	0.00	0.00	0.00
	z_M	cm	0.00	0.00	0.00
Warping constants	$I_{\omega,C}$	cm^6	40.95	15.47	303.04
	$I_{\omega,M}$	cm^6	40.95	15.47	303.04
Section moduli	$S_{y,max}$	cm^3	17.68	30.30	65.34
	$S_{y,min}$	cm^3	-17.68	-30.30	-65.34
	$S_{z,max}$	cm^3	9.84	30.30	52.45
	$S_{z,min}$	cm^3	-9.84	-30.30	-52.45
Torsional section modulus	S_t	cm^3	16.26	33.99	50.87
Max. plastic bending moment	$M_{pl,y,k}$	kNm	NPA	NPA	NPA
	$M_{pl,z,k}$	kNm	NPA	NPA	NPA
Max. plastic section moduli	Z_y	cm^3	NPA	NPA	NPA
	Z_z	cm^3	NPA	NPA	NPA
Plastic shear areas	$A_{pl,y}$	cm^2	NPA	NPA	NPA
	$A_{pl,z}$	cm^2	NPA	NPA	NPA
Area bisecting axis position	$f_{y,0}$	cm	NPA	NPA	NPA
	$f_{z,0}$	cm	NPA	NPA	NPA
Plastic shear forces	$V_{pl,y,k}$	kN	NPA	NPA	NPA
	$V_{pl,z,k}$	kN	NPA	NPA	NPA
Plastic axial forces	$N_{pl,k}$	kN	NPA	NPA	NPA
Buckling curves	BC_y	-	c	c	c
	BC_z	-	c	c	c

HILTI installation channels of MT System	**Annex C4** of European Technical Assessment ETA-21/0414
Performances Cross section characteristic of channels MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC and MT-100 OC	

Table C5. Properties of the cross section of channels MT-40D S, MT-40D, MT-40D S OC and MT-40D OC

Description	Symbol	Unit	MT-40D S / MT-40D / MT-40D S OC / MT-40D OC
Cross section (dimensions in mm)	-	-	
Classification cross section in accordance with EN 1993-1-1	-	-	3
Cross section areas	A	cm^2	4.31
	A_{tot}	cm^2	4.31
Shear areas	A_y	cm^2	0.47
	A_z	cm^2	1.16
Centroid position	$y_{C,0}$	cm	0.00
	$z_{C,0}$	cm	0.00
Moments of inertia	I_y	cm^4	30.13
	I_z	cm^4	13.22
Polar moments of inertia	I_p	cm^4	43.35
	$I_{p,M}$	cm^4	43.35
Radii of gyration	i_y	cm	2.64
	i_z	cm	1.75
Polar radii of gyration	i_p	cm	3.17
	$i_{p,M}$	cm	3.17
Warping radius of gyration	$i_{\omega,M}$	cm	1.89
Torsional constant	J	cm^4	0.05
Secondary torsional constant	J_s	cm^4	6.79
Location of the shear center	$y_{M,0}$	cm	0.00
	$z_{M,0}$	cm	0.00
	y_M	cm	0.00
	z_M	cm	0.00
Warping constants	$I_{\omega,C}$	cm^6	154.25
	$I_{\omega,M}$	cm^6	154.25
Section moduli	$S_{y,max}$	cm^3	7.09
	$S_{y,min}$	cm^3	-7.09
	$S_{z,max}$	cm^3	6.22
	$S_{z,min}$	cm^3	-6.22
Torsional section modulus	S_t	cm^3	0.26
Max. plastic bending moment	$M_{pl,y,k}$	kNm	NPA
	$M_{pl,z,k}$	kNm	NPA
Max. plastic section moduli	Z_y	cm^3	NPA
	Z_z	cm^3	NPA
Plastic shear areas	$A_{pl,y}$	cm^2	NPA
	$A_{pl,z}$	cm^2	NPA
Area bisecting axis position	$f_{y,0}$	cm	NPA
	$f_{z,0}$	cm	NPA
Plastic shear forces	$V_{pl,y,k}$	kN	NPA
	$V_{pl,z,k}$	kN	NPA
Plastic axial forces	$N_{pl,k}$	kN	NPA
Buckling curves	BC_y	-	c
	BC_z	-	c

HILTI installation channels of MT System	**Annex C5** of European Technical Assessment ETA-21/0414
Performances Cross section characteristic of channels MT-40D S, MT-40D, MT-40D S OC and MT-40D OC	

Attn. : To whom it may concern

Date : 16 March 2023
Ref. : 016/FP/DY/23

Subject : Country of Origin - Hilti MT System Portfolio VI

Dear Sir / Madam,

Enclosed please find the information of Hilti MT System portfolio VI.

Brand Name : Hilti

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Dennis Yeung

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Dennis Yeung (+852 9723 4621)

Country of Origin : *(Attached)*

Should you have further questions, please do not hesitate to contact our Technical Representatives, Customer Service Hotline at 8228-8118, or email us at hksales@hilti.com.

Yours Faithfully,

Dennis Yeung
Head of Product Leadership Strategy, F&P

Item number	Model Name	Country of Origin
2268492	I.-Channel MT-10	Turkey
2268493	I.-Channel MT-15	
2268494	I.-Channel MT-15 OC	
2268495	I.-Channel MT-20	
2268496	I.-Channel MT-20 OC	
2268502	I.-Channel MT-40 T	
2268504	I.-Channel MT-40 T OC	
2268498	I.-Channel MT-30	Austria
2268500	I.-Channel MT-30 OC	
2268506	I.-Channel MT-40	
2268508	I.-Channel MT-40 OC	
2268510	I.-Channel MT-50	
2268512	I.-Channel MT-50 OC	
2268514	I.-Channel MT-60	
2268516	I.-Channel MT-60 OC	
2268365	I.-Girder MT-70 OC	
2268367	I.-Girder MT-80 OC	
2268369	I.-Girder MT-90 OC	
2268491	I.-Girder MT-100 OC	
2273630	Twist-Lock MT-TL M8	Bulgaria
2273631	Twist-Lock MT-TL M8 OC	
2272080	Twist-Lock MT-TL M10	
2272082	Twist-Lock MT-TL M10 OC	
2273632	Twist-Lock MT-TL M12	
2273633	Twist-Lock MT-TL M12 OC	
2273634	Twist-Lock MT-TL M16	
2273635	Twist-Lock MT-TL M16 OC	
2273254	Hexagon bolt MT-TLB	Turkey
2273256	Hexagon bolt MT-TLB OC	
2282190	Hexagon bolt MT-TLB 30	
2282191	Hexagon bolt MT-TLB 30 OC	
2272084	Thread forming bolt MT-TFB OC	Taiwan
2273642	Channel end cap MT-EC-30	China
2273643	Channel end cap MT-EC-40/50	
2273644	Channel end cap MT-EC-60	
2273697	Girder end cap MT-EC-70	
2273698	Girder end cap MT-EC-80	
2273699	Girder end cap MT-EC-90	
2273700	Girder end cap MT-EC-100	
2272086	1-hole Baseplate MT-B-L	
2272088	1-hole Baseplate MT-B-L OC	
2272090	2-hole Baseplate MT-B-T	
2272092	2-hole Baseplate MT-B-T OC	
2272094	2-hole Baseplate MT-B-O2	
2272096	2-hole Baseplate MT-B-O2 OC	
2282212	2-hole Baseplate MT-B-O2B	
2282213	2-hole Baseplate MT-B-O2B OC	
2272098	4-hole Baseplate MT-B-O4	
2272099	4-hole Baseplate MT-B-O4 OC	
2271514	Angle connector MT-C-L1	
2271516	Angle connector MT-C-L1 OC	

2271518	Angle connector MT-C-L2	China
2271519	Angle connector MT-C-L2 OC	
2272047	Angle connector MT-C-LL1	
2272049	Angle connector MT-C-LL1 OC	
2272051	Angle connector MT-C-LL2	
2272053	Angle connector MT-C-LL2 OC	
2272111	Angle brace MT-AB A adjustable	
2272112	Angle brace MT-AB A OC adjustable	
2272113	Angle brace MT-AB-L 45	
2272114	Angle brace MT-AB-L 45 OC	
2272115	Angle brace MT-AB-LL2 45	
2273585	Angle brace MT-AB-LL2 45 OC	
2272040	Connector MT-C-T/1 transversal	
2272042	Connector MT-C-T/1 OC transversal	
2272054	Connector MT-C-T/2 transversal	
2272055	Connector MT-C-T/2 OC transversal	
2272056	Connector MT-C-T A adj transv	
2272057	Connector MT-C-T A OC adj transv	
2272062	Splice connector MT-ES-40	
2272063	Splice connector MT-ES-40 OC	
2272078	Splice connector MT-ES-70 OC	
2272076	Splice connector MT-ES-90 OC	
2272058	Connector MT-C-T 3D/2 transversal	
2272059	Connector MT-C-T 3D/2 OC transversal	
2272060	Connector MT-C-T 3D/3 transversal	
2272061	Connector MT-C-T 3D/3 OC transversal	
2272100	Baseplate MT-B-GS T OC	
2272101	4-hole Baseplate MT-B-GS O4U OC	
2272103	4-hole Baseplate MT-B-GL O4 OC	
2272104	4-hole Baseplate MT-B-GXL O4 OC	
2272106	Baseplate MT-B-GXL S1 OC	
2272107	Baseplate MT-B-GXL S2 OC	
2272108	Baseplate MT-B-GXL S3 OC	
2272110	Plate MT-P-GXL S1 OC	
2272109	Starter bracket MT-B-G WS OC	
2272064	Angle connector MT-C-GS OC	
2272066	Angle connector MT-C-GL OC	
2272068	Angle connector MT-C-GS A OC adjustable	
2272069	Angle connector MT-C-GL A OC adjustable	
2272073	Connector MT-C-GSP L OC plate	
2272074	Connector MT-C-GSP T OC plate	
2272075	Connector MT-C-GLP T OC plate	
2272070	T-Beam MT-U-GL1 OC	
2272116	Angle brace MT-AB-G T OC adjustable	
2273645	Hinge MT-S-H1 M10 seismic	
2282199	Hinge MT-S-H1 M10 OC seismic	
2273646	Hinge MT-S-H1 M12 seismic	
2282200	Hinge MT-S-H1 M12 OC seismic	
2273647	Hinge MT-S-H2 M10 seismic	
2282201	Hinge MT-S-H2 M10 OC seismic	
2273648	Hinge MT-S-H2 M12 seismic	
2282202	Hinge MT-S-H2 M12 OC seismic	

2273649	Angle connector MT-S-L 40-50 seismic	China
2282203	Angle connector MT-S-L 40-50 OC seismic	
2273650	Angle connector MT-S-L 60 seismic	
2282204	Angle connector MT-S-L 60 OC seismic	
2273651	Angle connector MT-S-L 40D seismic	
2282205	Angle connector MT-S-L 40D OC seismic	
2282198	Rod stiffener MT-S-RS seismic	
2273584	Rod stiffener MT-S-RS OC seismic	
2273587	Beam clamp MT-BC-GS T OC	
2273589	Beam clamp MT-BC-GXL T OC	
2271288	Bracket MT-BR-30 300	
2271289	Bracket MT-BR-30 300 OC	
2271440	Bracket MT-BR-30 450	
2271441	Bracket MT-BR-30 450 OC	
2271442	Bracket MT-BR-40 300	
2271443	Bracket MT-BR-40 300 OC	
2271444	Bracket MT-BR-40 450	
2271445	Bracket MT-BR-40 450 OC	
2271451	Bracket MT-BR-40 600	
2271452	Bracket MT-BR-40 600 OC	
2271446	Bracket MT-BR-40 1000	
2271447	Bracket MT-BR-40 1000 OC	
2271448	Bracket MT-BR-40D 600	
2271449	Bracket MT-BR-40D 600 OC	
2271450	Bracket MT-BR-40D 1000	
2271453	Bracket MT-BR-40D 1000 OC	
2271455	Bracket MT-BR-40 O4 600 OC	
2271456	Bracket MT-BR-40 O4 1000 OC	
2271459	Bracket MT-BR-40D O4 600 OC	
2271461	Bracket MT-BR-40D O4 1000 OC	
2271287	Bracket MT-BR-40D O4 1500 OC	
2332787	Baseplate MT-B-GS AB OC	
2332793	Connector MT-CTR-GL M12 OC	
2273587	Beam clamp MT-BC-GS T OC	
369677	Beam clamp MQT-82-124	Turkey
369676	Beam clamp MQT-41-82	
284248	Universal joint MQP-U M12	
228155	Clamping bow MAB-17	Germany
2268518	MT-40D	Austria
2268520	MT-40D OC	
2322429	MT-CC-40/50	China
2322391	MT-CC-40/50 OC	
2322396	MT-CC-60	
2322431	MT-CC-60 OC	
2322398	MT-CC-40D	
2322399	MT-CC-40D OC	
2322404	MT-CC 70 OC	
2322392	MT-CC 40/50X2	
2322393	MT-CC 40/50X2 OC	
2322432	MT-CC BC 40/50	
2322401	MT-CC BC 40/50 OC	
2322402	MT-CC-BS 40/50	
2322403	MT-CC-BS 40/50 OC	
2332781	MT-B-G AS OC	

2332786	MT-C-GSP L A OC	China
2332785	MT-C-GSP P A OC	
2332784	MT-C-GLP T A OC	
2332783	MT-C-GLP X A OC	
2332789	MT-CTR-GS M12 OC	
2332790	MT-CTR-GS M16 OC	
2332791	MT-CTR-GS 1/2 OC	
2332792	MT-CTR-GS 5/8 OC	
2332796	MT-CTR-GL M16 OC	
2332794	MT-CTR-GL 1/2 OC	
2332795	MT-CTR-GL 5/8 OC	
2343199	MT-P-G S1 OC	
2343280	MT-P-G S2 OC	
2343281	MT-P-G S3 OC	
2345353	MT-P-GM S1 OC	
2345354	MT-P-GM S2 OC	
2345355	MT-P-GM S3 OC	
2343282	MT-B-GL O4C OC	
2332797	Screw MT-CTAB	
2332788	Screw MT-CTAB OC	

Hilti Multi-Duty Channel System Job Reference

Year	Project Name	Customer Name	Project type
2022	BLACKPOINT D2	WAI KONG FIRE ENGINEERING CO LTD	Industrial
2022	TIN HAU TEMPLE	RANGER ENGINEERING (HK) LIMITED	Utilities
2022	KAI TAK SPORTS PARK	YOUNG'S ENGINEERING COMPANY LIMITED	Sport & Recreation
2022	KAI TAK SPORTS PARK	MEDIA-GO ENGINEERING LTD	Sport & Recreation
2022	BLACKPOINT D2	SIEMENS LIMITED	Industrial
2022	KAI TAK SPORTS PARK	SEM RESOURCES LIMITED	Sport & Recreation
2022	KAI TAK SPORTS PARK	A & R ENGINEERING COMPANY LIMITED	Sport & Recreation
2022	KAI TAK SPORTS PARK	PRODUCTIVE ENGINEERING LIMITED	Sport & Recreation
2022	KAI TAK SPORTS PARK	SIMPLESTAR ENGINEERING LIMITED	Sport & Recreation
2022	KAI TAK SPORTS PARK	MAJESTIC ENGINEERING CO LTD	Sport & Recreation
2022	THE HENDERSON, 2 MURRAY ROAD	KRUEGER ENGINEERING (ASIA) LIMITED	Office
2022	8 HOI FAI ROAD	PCCW SOLUTIONS LIMITED	Transport