



Hilti Modular Support System

Submission Folder

| | |
|---------------------|----|
| Product Information | 2 |
| Test Reports | |
| ETA Approval | 18 |
| Letters | |
| Country of Origin | 35 |
| Job Reference | 40 |



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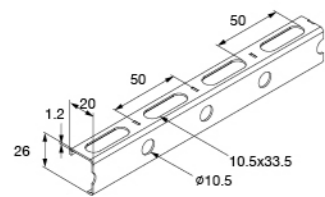
Channels



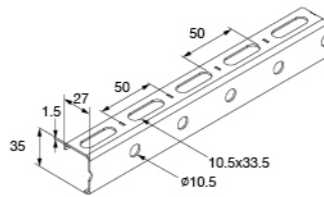
Technical data

| | |
|----------------------|--|
| 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 |

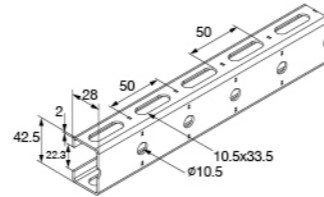
| Item Description | Material Thickness (mm) | Dimensions (H x B) | Weight (g/m) | Sales Pack (m) | Item Number |
|------------------|-------------------------|--------------------|--------------|----------------|-------------|
| MT-10 | 1.20 | 26.0 x 19.4 | 388 | 2 | 2268492 |
| MT-15 | 1.50 | 35.0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



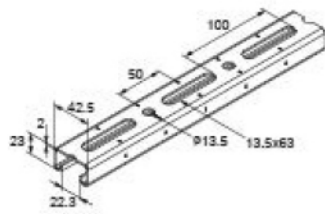
MT-10



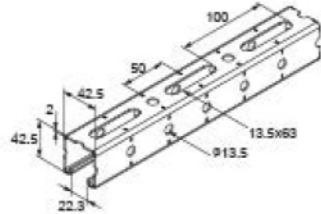
MT-15 / MT-15 OC



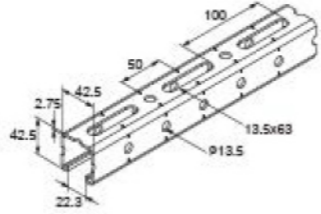
MT-20 / MT-20 OC



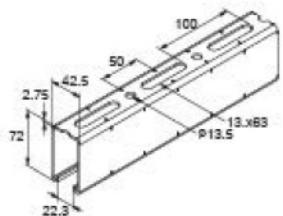
MT-30 / MT-30 OC



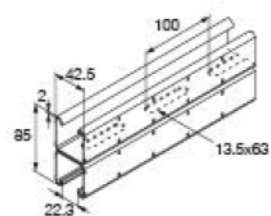
MT-40 / MT-40 OC



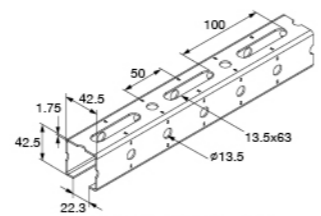
MT-50 / MT-50 OC



MT-60 / MT-60 OC



MT-40D / MT-40D OC



MT-40 T / MT-40 T OC

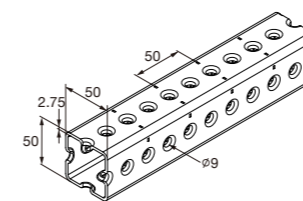
Girder



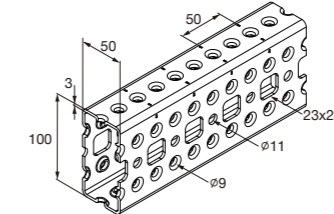
Technical data

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

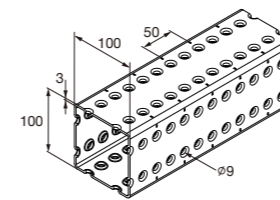
| Item Description | Material thickness | Height x Width | Weight | Sales pack | Item number |
|------------------|--------------------|----------------|--------|------------|-------------|
| MT-70 OC | 2.75 | 50 x 50 | 3909 | 6 | 2268365 |
| MT-80 OC | 3.0 | 100 x 50 | 6058 | 6 | 2268367 |
| MT-90 OC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



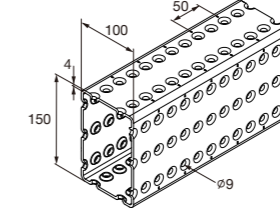
MT-70 OC



MT-80 OC



MT-90 OC

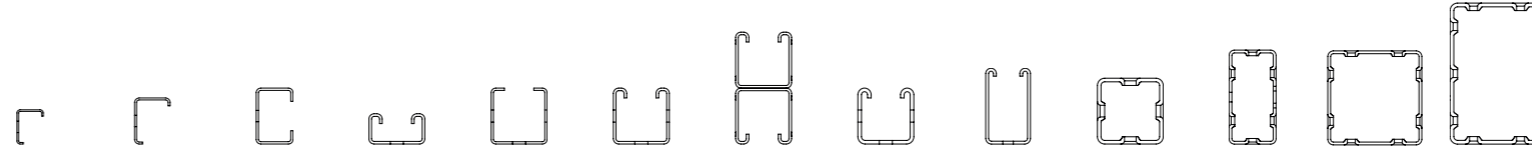
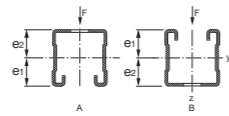


MT-100 OC

TECHNICAL DATA MT CHANNEL SYSTEM

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

Definition of axes



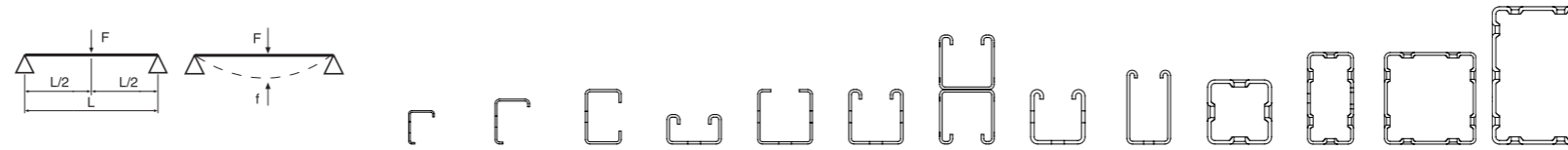
| | | MT-10 | MT-15/ MT-15 OC | MT-20/ MT-20 OC | MT-30/ MT-30 OC | MT-40 T/ MT-40 T OC | MT-40 MT-40 OC | MT-40D/ MT-40D OC | MT-50/ MT-50 OC | MT-60/ MT-60 OC | MT-70 OC | MT-80 OC | MT-90 OC | MT-100 OC |
|---|--------------------------------------|--------|--------------------|--------------------|--------------------|------------------------|---------------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

Design resistance

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

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

| load F [kN] | 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 | |
|-------------|-------|-----|--------------------|-----|--------------------|------|--------------------|-----|------------------------|------|--------------------|------|----------------------|------|--------------------|------|--------------------|------|----------|------|----------|------|----------|------|-----------|------|
| | 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 simply supported).

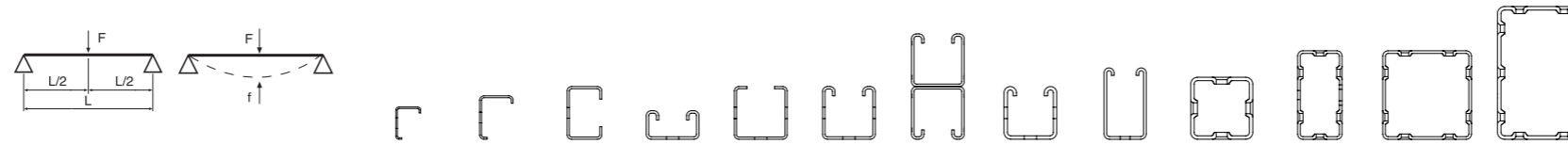
Solution:

- 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

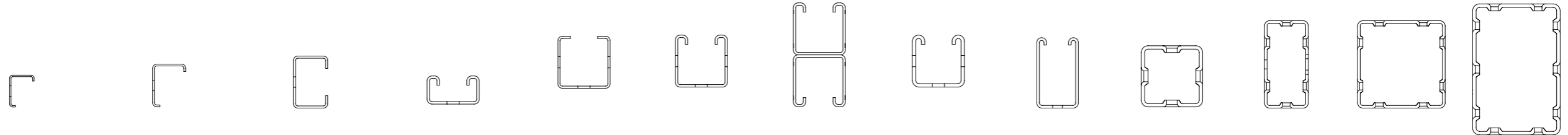
| span width L [cm] | MT-10 | | MT-15/ MT-15 OC | | MT-20/ MT-20 OC | | MT-30/ MT-30 OC | | MT-40 T/ MT-40 T OC | | MT-40/ MT-40 OC | | MT-40D/ MT-40D OC | | MT-50/ MT-50 OC | | MT-60/ MT-60 OC | | MT-70 OC | | MT-80 OC | | MT-90 OC | | MT-100 OC | |
|-------------------|-------|------|--------------------|------|--------------------|------|--------------------|------|------------------------|------|--------------------|------|----------------------|------|--------------------|------|--------------------|------|----------|------|----------|------|----------|-------|-----------|------|
| | 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 | 3.08 | 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.

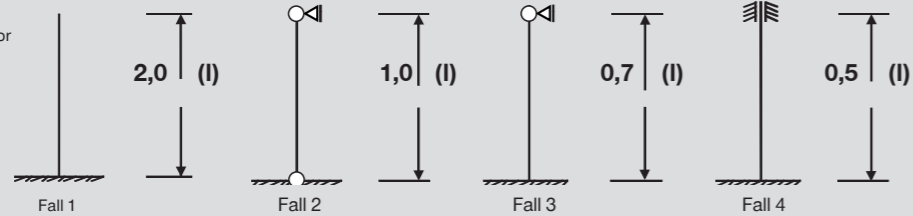
BUCKLING

Permissible buckling load for channel profile MT



| Buckling length Sk [cm] | MT-10 | 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 |
|----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] | permissible buckling load [kN] |
| 25 | | | 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 | N/A | N/A | 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
 $= l \cdot \beta$



Design resistance

- MT-10 to MT-70: $\gamma_{M0} = 1,4 \rightarrow F_{0,0}^* = \text{permissible buckling load} \times 1,4$
- MT-80 to MT-100: $\gamma_{M0} = 1,5 \rightarrow F_{0,0}^* = \text{permissible buckling load} \times 1,5$
- 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

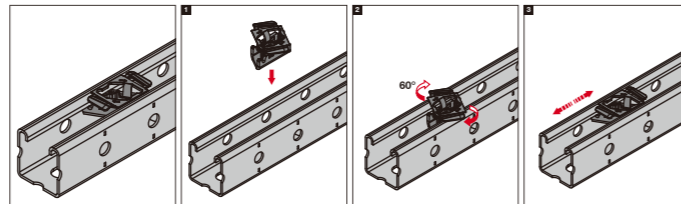
Technical data

| | |
|----------------|---|
| 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)

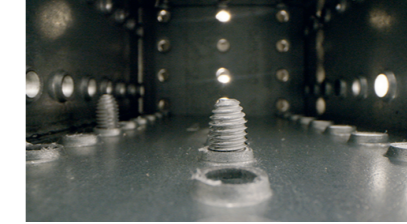
MT-TLB 30 is used only with brackets (MT-BR's) for fixation to open channels with TL's

Thread Forming Bolt (MT-TFB)



APPLICATIONS

- Fastening of any component, media to MT girders

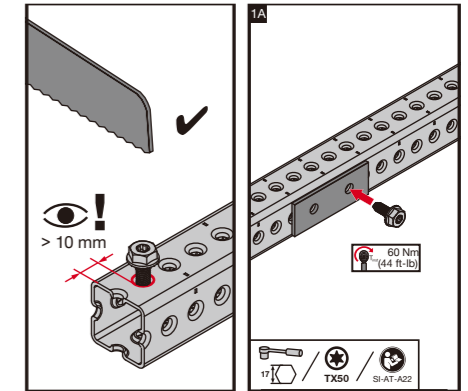


ADVANTAGES

- 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

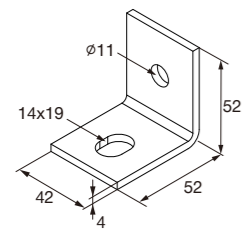
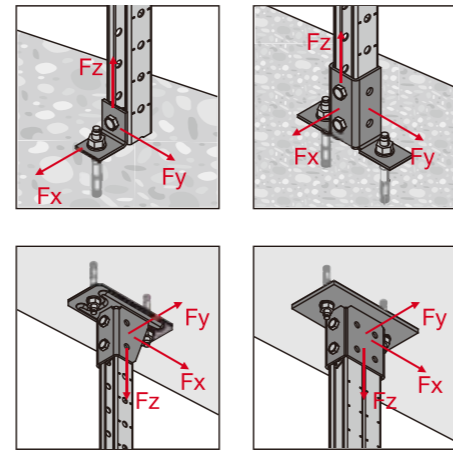
- Reliable and easy to use
- Connection of channels to any base material
- Simplest and most cost effective solution

Technical data

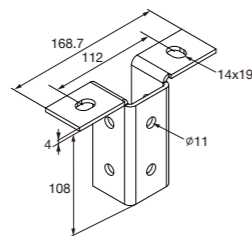
| | | |
|----------------------|---|------------|
| Material composition | Q235B GB/T 1591-2018 | |
| Surface finish | Pre-galvanized galvanized 12µm-for C1 indoor use | ISO 2081 |
| | HDG, 56µm-for C3 outdoor use | ASTM A153M |

| 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 |

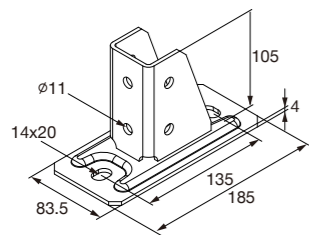
| Item Description | Twist-Lock Qty.(pc) | -F _z Design Load kN | +F _z Design Load kN |
|------------------|---------------------|--------------------------------|--------------------------------|
| MT-B-L | 1 | 7.0 | 2.9 |
| MT-B-T | 2 | 12.6 | 8.4 |
| MT-B-O2 | 2 | 14.0 | 12.6 |
| MT-B-O2B | 2 | 17.6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



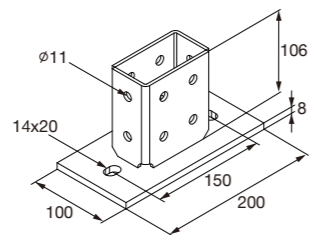
MT-B-L / MT-B-L OC



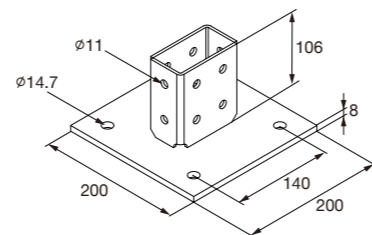
MT-B-T / MT-B-T OC



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

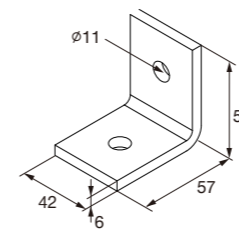
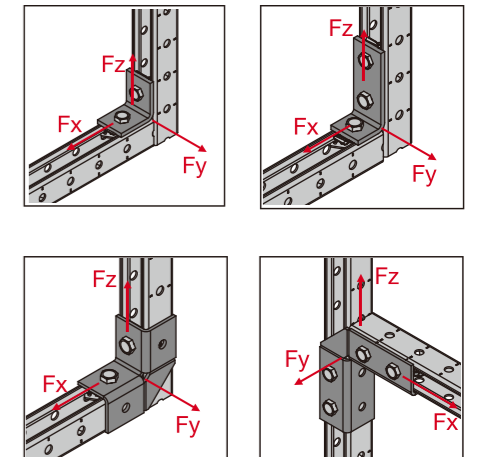
| | | |
|----------------------|---|------------|
| Material composition | Q355B GB/T 1591-2018 | |
| Surface finish | Pre-galvanized galvanized 12µm-for C1 indoor use | ISO 2081 |
| | HDG, 56µm-for C3 outdoor use | ASTM A153M |

90° Angle connector

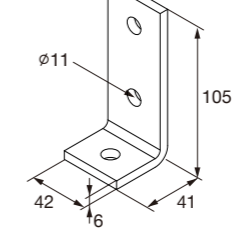
| Item Description | Angle | Material thickness | For Channel types | Weight | Sales pack | Item number |
|------------------|-------|--------------------|-------------------|--------|------------|-------------|
| MT-C-L1 | 90° | 6.0 | MT-30,MT-40 | 199 | 20 | 2271514 |
| MT-C-L1 OC | 90° | 6.0 | MT-50,MT-60 | 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

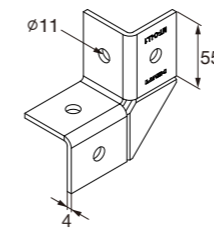
| kN Item Description | Twist-Lock Qty. | -F _z Design Load kN | +F _z Design Load kN |
|---------------------|-----------------|--------------------------------|--------------------------------|
| MT-C-L1 | 2 | 5.6 | 4.6 |
| MT-C-L2 | 3 | 7.0 | 7.0 |
| MT-C-LL1 | 2 | 5.2 | 7.0 |
| MT-C-LL2 | 4 | 6.5 | 5.8 |



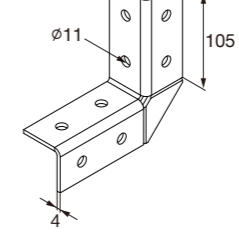
MT-C-L1 / MT-C-L1 OC



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

- 5b[Y V f U M] b[k] h ' A H W U b b Y ' g

ADVANTAGES

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

Technical data

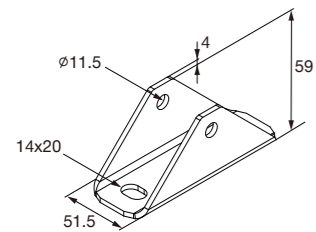
Material composition Q235B GB/T 700-2006

Surface finish Pre-galvanized galvanized 12µm-for C1 indoor use ISO 2081

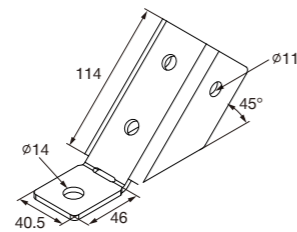
Surface finish HDG, 56µm-for C3 outdoor use ASTM A153M

45° Angle connector

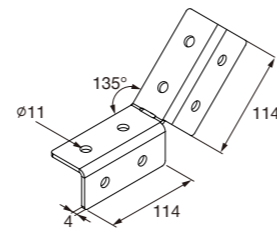
| Item Description | Angle | Material thickness | For Channel types | 重量(g) Weight | 包装数量(pcs) Sales pack | 品号 Item number |
|------------------|------------|--------------------|-------------------|-----------------|-------------------------|-------------------|
| MT-AB A | Adjustable | 4.0 | MT-40,MT-50 | 441 | 12 | 2346395 |
| 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 | 2272113 |
| 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



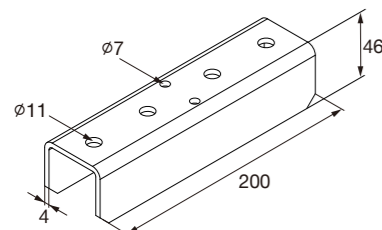
MT-AB-L 45 / MT-AB-L 45 OC



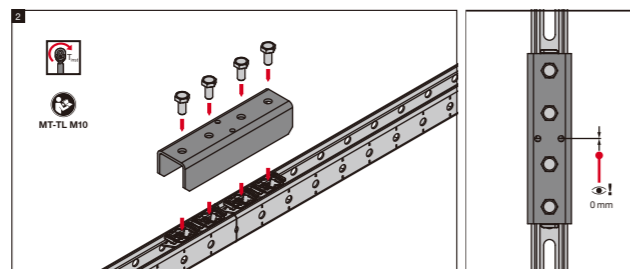
MT-AB-LL2 / MT-AB-LL2 OC

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 |

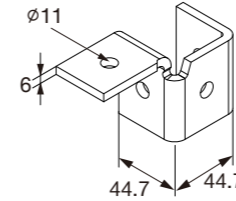


MT-ES-40 / MT-ES-40 OC

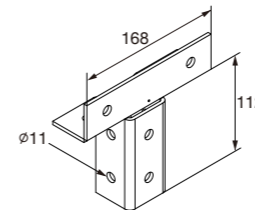


Transverse Connectors - 2D

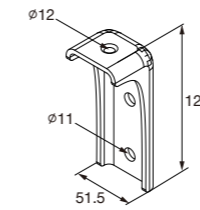
| Item Description | Material | Material thickness | Weight | Sales pack | Item number |
|------------------|----------|--------------------|--------|------------|-------------|
| MT-C-T/1 | Q235B | 6.0 | 435 | 20 | 2272040 |
| MT-C-T/1 OC | Q235B | 6.0 | 435 | 20 | 2272042 |
| MT-C-T/2 | Q355B | 4.0 | 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 |



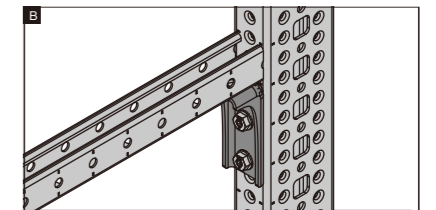
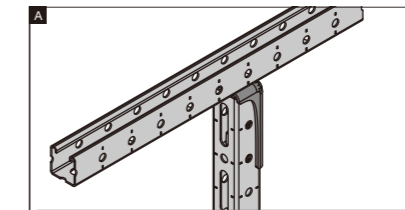
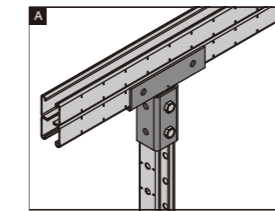
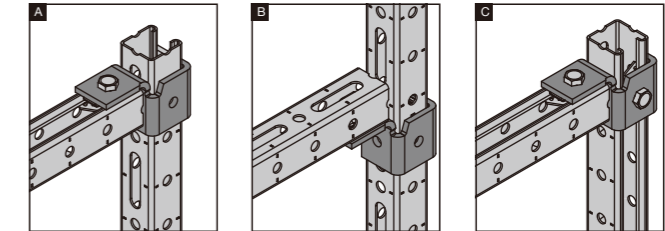
MT-C-T/1 / MT-C-T/1 OC



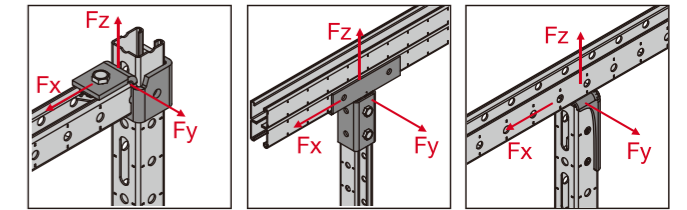
MT-C-T/2 / MT-C-T/2 OC



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

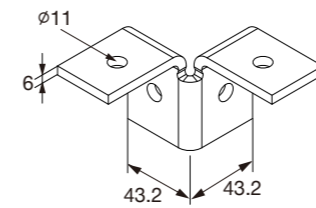


| Item Description | Twist-Lock Qty.(pc) | +F _z Design Load kN | |
|------------------|---------------------|--------------------------------|------|
| MT-C-T/1 | 2 | 4.3 | 5.5 |
| MT-C-T/2 | 4 | 11.9 | 11.3 |
| MT-C-T A | 2 | 14 | 8.8 |

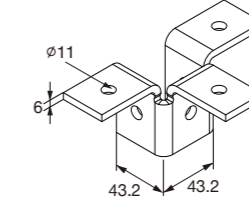


Transverse Connectors - 3D

| 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 |

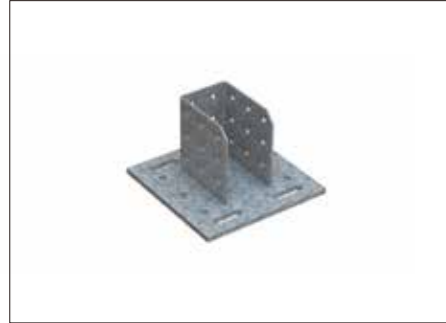


MT-C-T 3D/2 / MT-C-T 3D/2 OC



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

Girder Baseplates



APPLICATIONS

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

ADVANTAGES

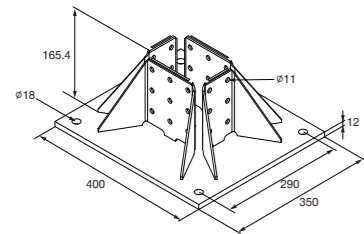
- Connection of girders to both concrete and steel for MT-B-GS connectors

Technical data

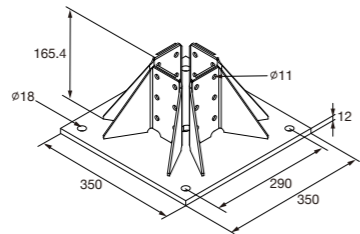
Material composition Q355B GB/T 1591-2018

Surface finish HDG, 56µm-for C3 outdoor use ASTM A153M

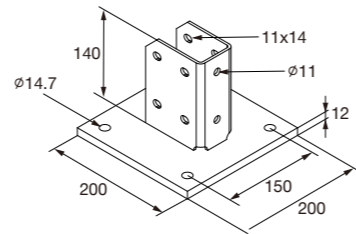
| Item Description | Plate thickness | For Girder Types | Weight | Sales pack | Item number |
|------------------|-----------------|------------------|--------|------------|-------------|
| MT-B-GS T OC | 8.0 | MT-70,MT-80 | 2166 | 2 | 2272100 |
| MT-B-GS O4U OC | 12.0 | MT-70,MT-80 | 4730 | 4 | 2272101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



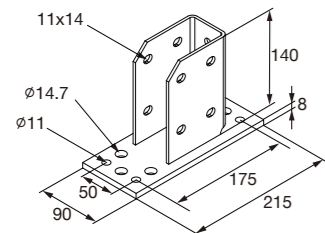
MT-B-GXL O4 OC



MT-B-GL O4 OC

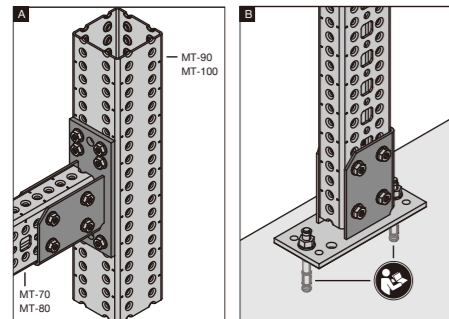


MT-B-GS O4U OC

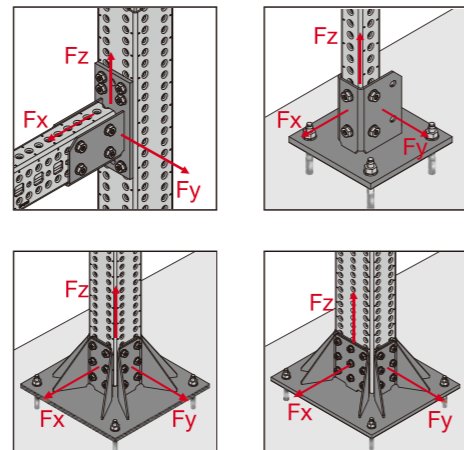


MT-B-GS T OC

| Item Description | ±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

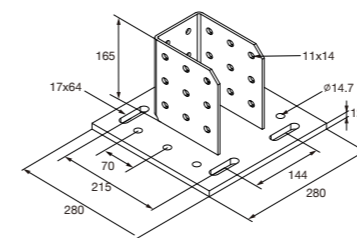
Technical data

Material composition Q355B GB/T 1591-2018

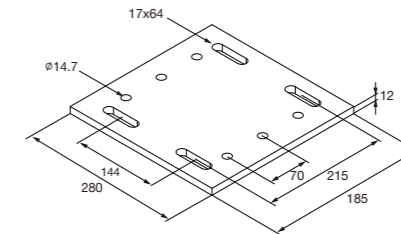
Surface finish HDG, 56µm-for C3 outdoor use ASTM A153M

| 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 |

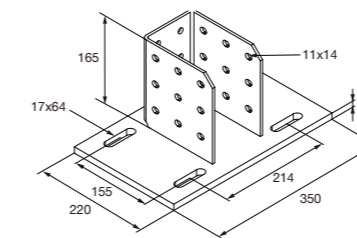
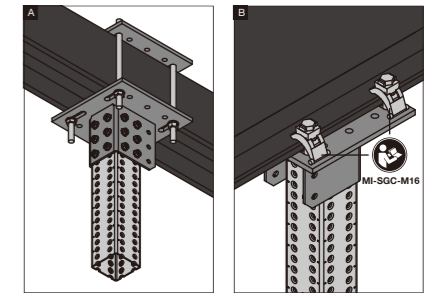
* MT-B-GXL S1/2/3 OC



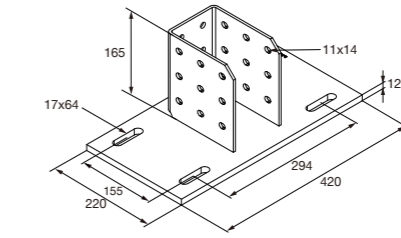
MT-B-GXL S1 OC



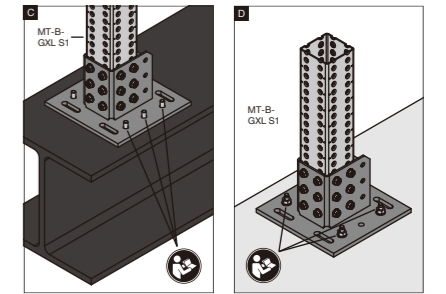
MT-P-GXL S1 OC



MT-B-GXL S2 OC



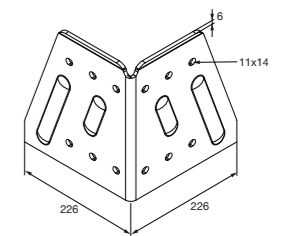
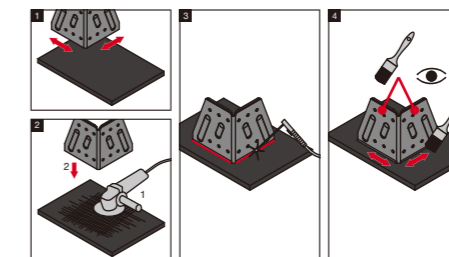
MT-B-GXL S3 OC



* MT-B-GXL S1 OC
 * MT-P-GXL-S1 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

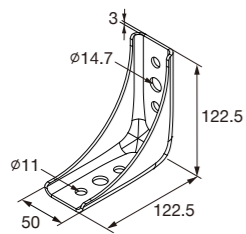
- Possibility to be used as baseplate.
- Designed to provide extra adjustability

Technical data

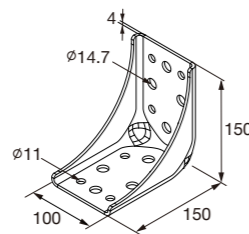
| | | | |
|----------------------|------------------------------|------------|--|
| Material composition | Q355B GB/T 1591-2018 | | |
| Surface finish | HDG, 56µm-for C3 outdoor use | ASTM A153M | |

90° Angle connector

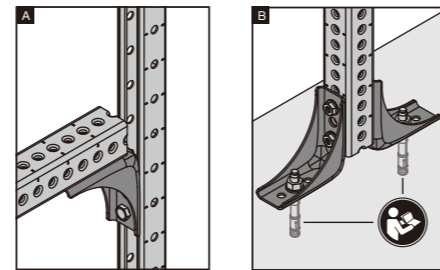
| Item Description | Angle | Material thickness | For Girder Types | adjustment | Weight | Sales pack | Item number |
|------------------|-------|--------------------|------------------|------------|--------|------------|-------------|
| MT-C-GS OC | 90° | 3.0 | MT-70,MT-80 | 25 | 400 | 10 | 2272064 |
| 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 |



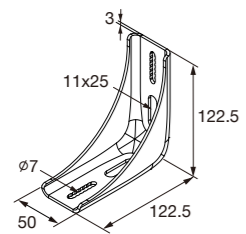
MT-C-GS OC



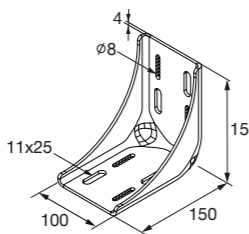
MT-C-GL OC



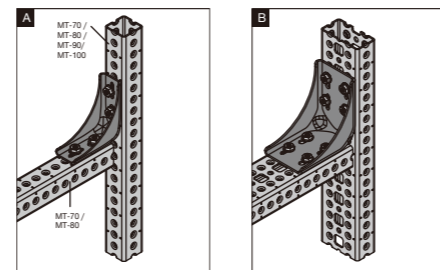
* MT-C-GS OC/ MT-C-GL OC



MT-C-GS A OC



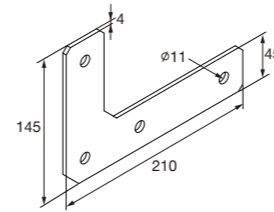
MT-C-GL A OC



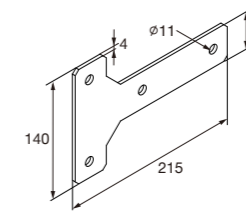
* MT-C-GS A OC / MT-C-GL A OC

Girder Connectors

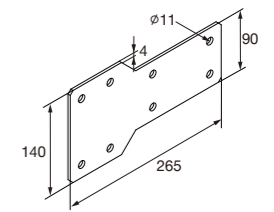
| Item Description | Material thickness | Surface finish | Weight | Sales pack | Item number |
|------------------|--------------------|----------------|--------|------------|-------------|
| MT-C-GSP L OC | 4.0 | HDG | 424 | 10 | 2272073 |
| MT-C-GSP T OC | 4.0 | HDG | 455 | 10 | 2272074 |
| MT-C-GLP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



MT-C-GSP L OC



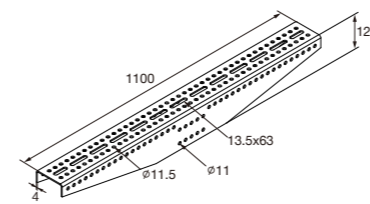
MT-C-GSP T OC



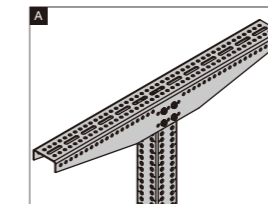
MT-C-GLP T OC

T-Post Connector (U-shaped)

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



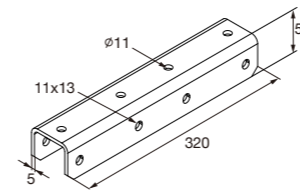
MT-U-GL1 OC



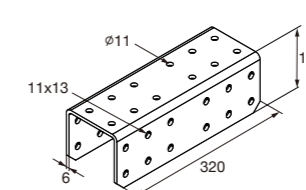
MT-U-GL OC

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 |



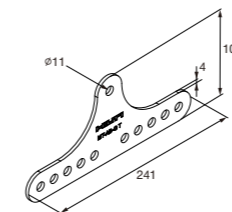
MT-ES-70 OC



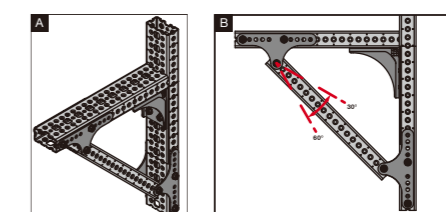
MT-ES-90 OC

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

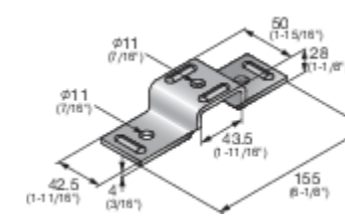
ADVANTAGES

- 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

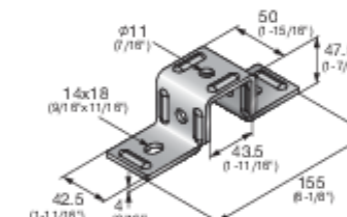
Technical data

| | | | |
|----------------------|---------------------------------|---------------------------------|--------------------------|
| 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 |

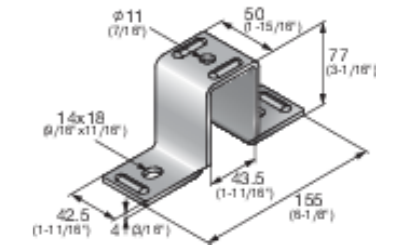
| Order Designation | Material thickness (mm) | Height x Width (mm x mm) | Weight (kg) | Sales pack | Surface finish | Item number |
|-------------------|-------------------------|--------------------------|-------------|------------|-----------------------|-------------|
| MT-CC-30 | 4 | 42.5x155 | 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 |



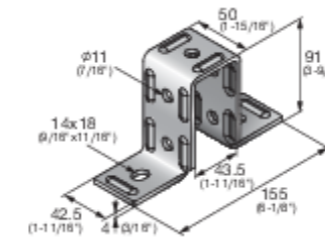
MT-CC-30



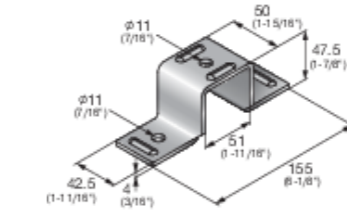
MT-CC-40/50
MT-CC-40/50 OC



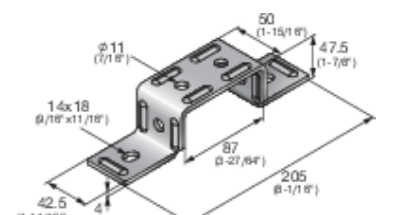
MT-CC-60
MT-CC-60 OC



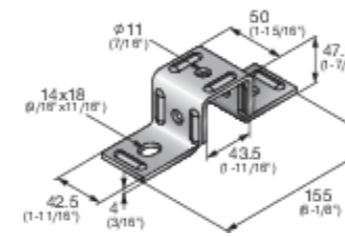
MT-CC-40D
MT-CC-40D OC



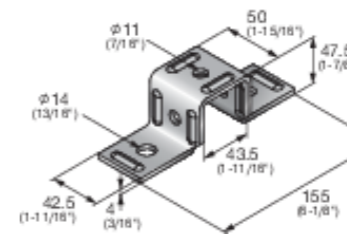
MT-CC-70 OC



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

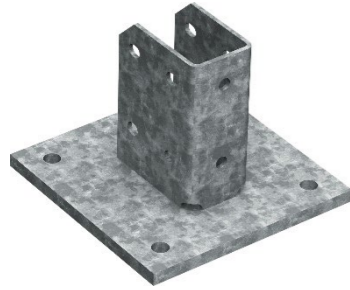


MT-CC-BC 40/50
MT-CC-BC 40/50 OC



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

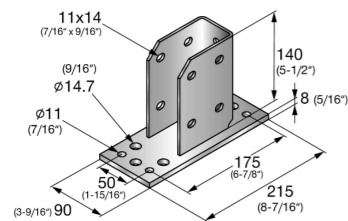
ADVANTAGES

- 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

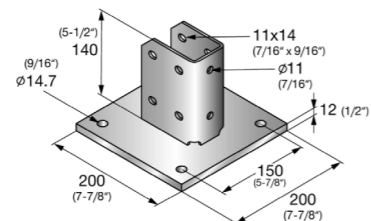
Technical data

| | | |
|----------------------|---------------------------------|--|
| 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 |

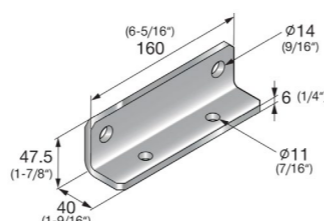
| Order Designation | Material thickness (mm) | Height x Width (mm x mm) | Weight (kg) | Sales pack | Surface finish | Item number |
|-------------------|-------------------------|--------------------------|-------------|------------|--------------------|----------------|
| MT-B-GS T OC | 8 | 140x215 | 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

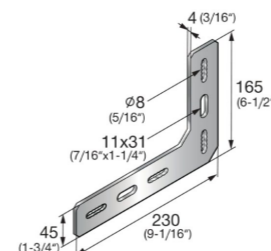
ADVANTAGES

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

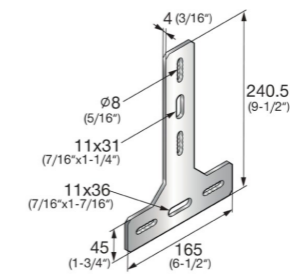
Technical data

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

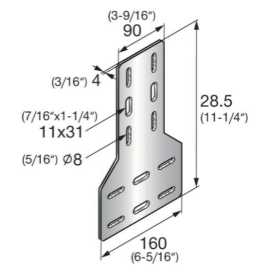
| Order Designation | Material thickness (mm) | Height x Width (mm x mm) | Weight (kg) | Sales pack | Surface finish | Item number |
|-------------------|-------------------------|--------------------------|-------------|------------|--------------------|----------------|
| MT-C-GSP L A OC | 4 | 230 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



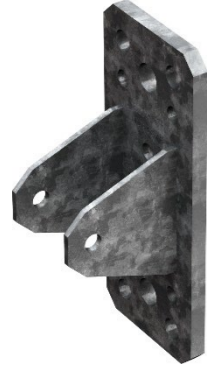
MT-C-GSP T A OC



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

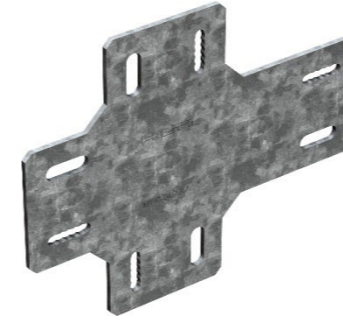
Technical data

| | | |
|----------------------|---------------------------------|--|
| 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 |



Cross plate for Girder



APPLICATIONS

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

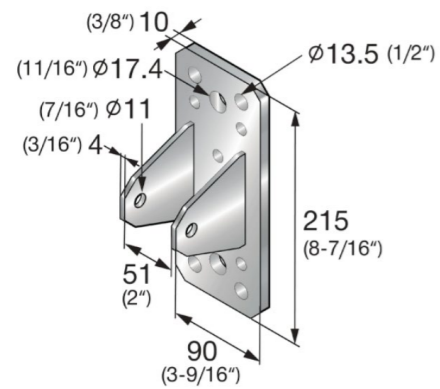
ADVANTAGES

- 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

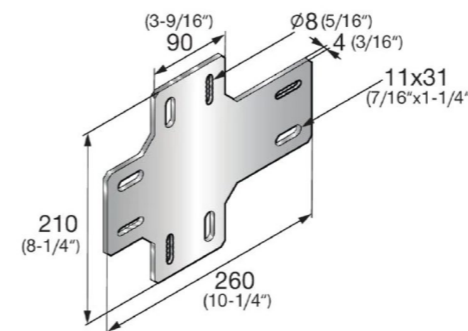
Technical data

| | | |
|----------------------|---------------------------------|--|
| 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



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

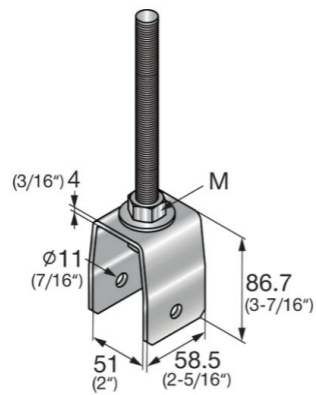
ADVANTAGES

- 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

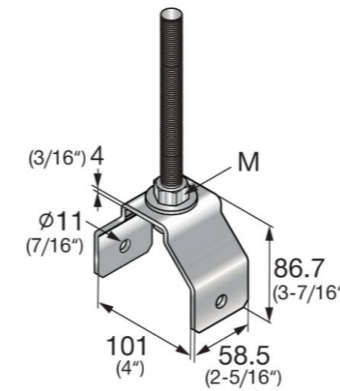
ADVANTAGES

- 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

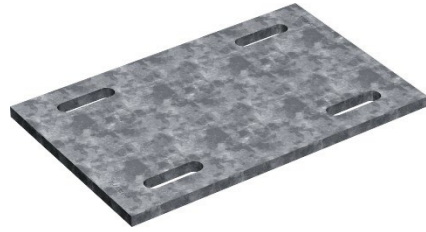
Technical data

| | | |
|----------------------|---------------------------------|--|
| 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



APPLICATIONS

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

ADVANTAGES

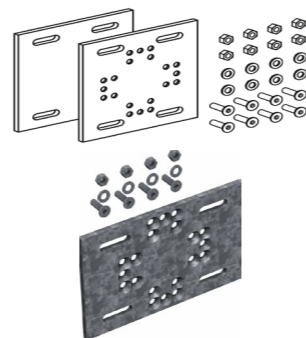
- Easy to install – one-step assembly using Hilti MT-TFB thread-forming bolts
- Adaptable – unlike welding, modular metal framing can be modified for future MEP requirements

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 |

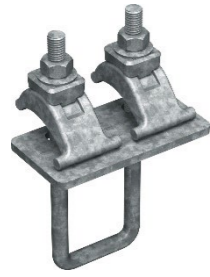
| Order Designation | Material thickness (mm) | Height x Width (mm x mm) | Weight (kg) | Sales pack | Surface finish | Item number |
|-------------------|-------------------------|--------------------------|-------------|------------|--------------------|----------------|
| MT-P-G S1 OC | 12 | 280x280 | 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 | | 102 - 165 |
| MT-P-G S2 OC | 17x64 | 13,5 counter sunk | X2 plates, x8 bolts, washers & nuts | 165 - 235 |
| MT-P-G S3 OC | 17x64 | 13,5 counter sunk | | 235 - 305 |
| MT-P-GM S1 OC | 17x64 | 13,5 counter sunk | | 102 - 165 |
| MT-P-GM S2 OC | 17x64 | 13,5 counter sunk | X1 plate, x4 bolts, washers & nuts | 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

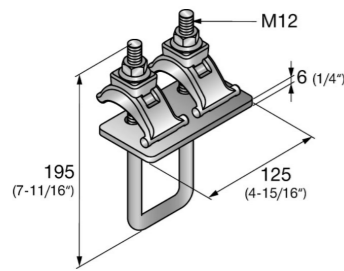
ADVANTAGES

- 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

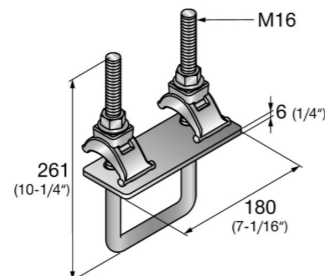
Technical data

| | | | |
|-----------------------------|---------------------------------|--|--------------------------|
| 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 |



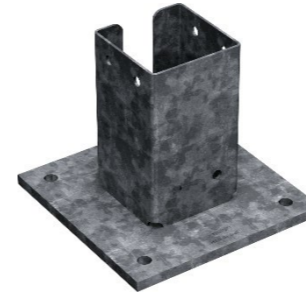
MT-BC-GS T OC



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

A handwritten signature in blue ink, appearing to read "R. Geryło".

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

Product description

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

Annex A1

of European
Technical Assessment
ETA-21/0414

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 | |

HILTI installation channels of MT System

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

Annex A2

of European
Technical Assessment
ETA-21/0414

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 |
| <p style="text-align: center;">Product description</p> 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

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

Annex A4
 of European
 Technical Assessment
 ETA-21/0414



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

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

Annex A5

of European
Technical Assessment
ETA-21/0414

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

Product description

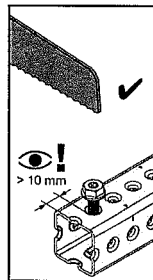
Shape, dimensions and materials of channels MT-100 S OC, MT-100 OC, MT-40D S, MT-40 D, MT-40D S OC and MT-40D OC

Annex A6

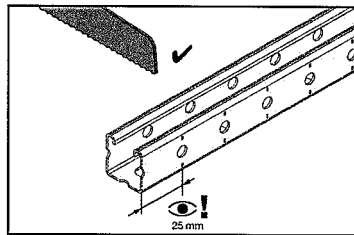
of European
Technical Assessment
ETA-21/0414

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

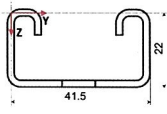
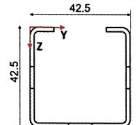
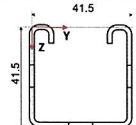
| Description | Symbol | Unit | MT-10 | MT-15 / MT-15 OC | MT-20 / MT-20 OC |
|---|---------------------|-----------------|--------|------------------|------------------|
| Cross section (dimensions in mm) | - | - | | | |
| Classification cross section in accordance with EN 1993-1-1 | - | - | 3 | 3 | 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 _{ω,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 _{ω,C} | cm ⁶ | 0.54 | 2.86 | 31.61 |
| | I _{ω,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

Performances
 Cross section characteristic of channels MT-10, MT-15, MT-15 OC, MT-20 and MT-20 OC

Annex C1
 of European
 Technical Assessment
 ETA-21/0414

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 _{ω,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 _{ω,C} | cm ⁶ | 37.34 | 125.13 | 172.04 |
| | I _{ω,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
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

Annex C2

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 _{ω,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 _{ω,C} | cm ⁶ | 195.50 | 914.85 | 2.04 |
| | I _{ω,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

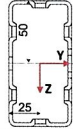
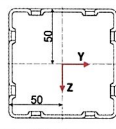
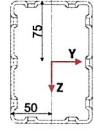
Performances

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

Annex C3

of European Technical Assessment ETA-21/0414

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 _{ω,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 _{ω,C} | cm ⁶ | 40.95 | 15.47 | 303.04 |
| | I _{ω,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
Performances

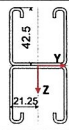
Cross section characteristic of channels MT-80 S OC, MT-80 OC, MT-90 S OC, MT-90 OC, MT-100 S OC and MT-100 OC

Annex C4

of European
Technical Assessment
ETA-21/0414



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 _{w,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 _{w,C} | cm ⁶ | 154.25 |
| | I _{w,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 | |
| 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 | |
| 2346395 | 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 | |

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| 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 | Germany |
| 228155 | Clamping bow MAB-17 | |
| 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 | |

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| 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 | KAI TAK SPORTS PARK | YOUNG'S ENGINEERING COMPANY LIMITED | Sport & Recreation |
| 2022 | 2 MURRAY RD | KRUEGER ENGINEERING (ASIA) LIMITED | Office |
| 2022 | SHING KAI RD, KAI TAK NKIL 6607 | SEM RESOURCES LIMITED | Hospitality |
| 2023 | WAN PO RD, TKO TOWN LOT 131 - DATA CENTRE - (IATAL DATA CENTRE INFRASTRUCTURE LTD | | Office |
| 2023 | KAI TAK SPORTS PARK | YOUNG'S ENGINEERING COMPANY LIMITED | Sport & Recreation |
| 2023 | WEST KOWLOON - LYRIC THEATRE - (IPS) | LUEN HOP METAL AND ALUMINIUM | Community & Cultural |
| 2023 | HKIA 3508 TERMINAL 2 | LI LING DECORATION ENGINEERING | Transport |
| 2024 | HKIA 3508 TERMINAL 2 | LI LING DECORATION ENGINEERING | Transport |
| 2024 | QUEEN MARY HOSPITAL PH1 (SS F501) | ABLE CONTRACTORS LIMITED | Health |
| 2024 | WEST KOWLOON - LYRIC THEATRE - (IPS) | LUEN HOP METAL AND ALUMINIUM | Community & Cultural |
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