The following excerpt are pages from the North American Product Technical Guide Volume 3: Modular Support Systems Technical Guide, Edition 1 .

Please refer to the publication in its entirety for complete details on this product including load values, approvals/listings, general suitability, finishes, quality, etc.

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3.0 MODULAR SUPPORT SYSTEM

3.1 MT PROFILES

Approvals / Listings

ICC-ES (International Code Council)	ESR-5019 for Cold-Formed Steel per AISI S100-16/ICC-ES AC46 ELC-5019 for Cold-Formed Steel per CSA S136-16
ETA (European Technical Assessment)	ETA-21/0414 for HILTI Installation Channels of MT System ETA-21/1017 for HILTI Channel Connectors of MT System ETA-21/1045 for HILTI Base Connectors of MT System ETA-21/1046 for HILTI Angle Connectors of MT System ETA-22/0194 for HILTI Saddle Nuts of MT System ETA-22/0195 for HILTI Cantilevers of MT System
COLA (City of Los Angeles)	2023 LABC Supplement (within ESR-5019)
California Building Code	2022 California Building Code (CBC) Supplement (within ESR-5019)

Table 1 - MT Profile Material Specifications, Corrosion Protection, and Ordering Information

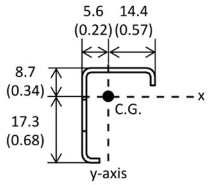
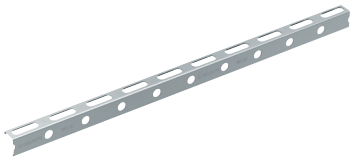
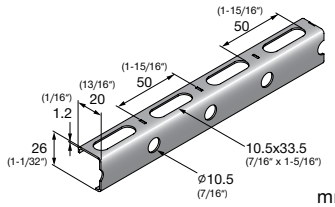
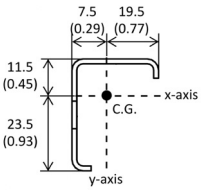
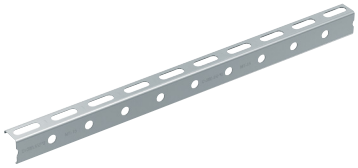
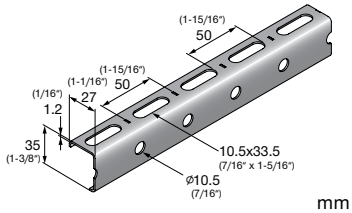
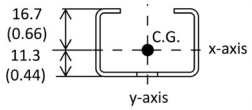
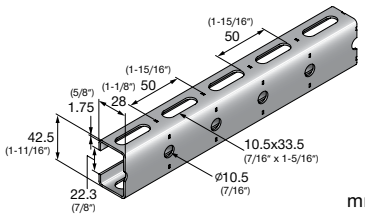
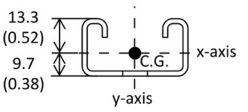
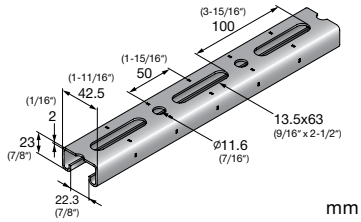
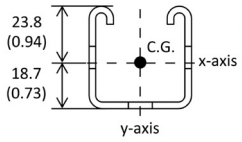
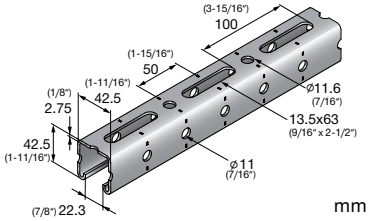
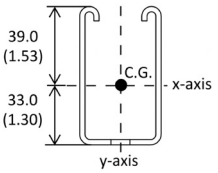
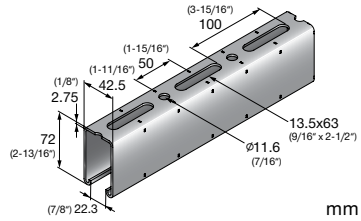
Description	Material Specifications [1,2]	Type of Coating	Finish	Length ft (m)	Item No.
MT-10	EN 10346 S280GD	Indoor	Pre-Galvanized	6'-6 3/4" (2)	2268492
MT-15	EN 10346 S280GD	Indoor	Pre-Galvanized	6'-6 3/4" (2)	2268493
MT-15 OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	6'-6 3/4" (2)	2268494
MT-20	EN 10346 S280GD	Indoor	Pre-Galvanized	6'-6 3/4" (2)	2268495
MT-20 OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	6'-6 3/4" (2)	2268496
MT-30 S	EN 10346 S280GD	Indoor	Pre-Galvanized	9'-10" (3)	2268497
MT-30	EN 10346 S280GD	Indoor	Pre-Galvanized	19'-8 1/4" (6)	2268498
MT-30 S OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268499
MT-30 OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268500
MT-50 S	EN 10346 S280GD	Indoor	Pre-Galvanized	9'-10" (3)	2268509
MT-50	EN 10346 S280GD	Indoor	Pre-Galvanized	19'-8 1/4" (6)	2268510
MT-50 S OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268511
MT-50 OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268512
MT-60 S	EN 10346 S280GD	Indoor	Pre-Galvanized	9'-10" (3)	2268513
MT-60	EN 10346 S280GD	Indoor	Pre-Galvanized	19'-8 1/4" (6)	2268514
MT-60 S OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268515
MT-60 OC	EN 10346 S280GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268516
MT-70 S OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268364
MT-70 OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268365
MT-80 S OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268366
MT-80 OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268367
MT-90 S OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268368
MT-90 OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268369
MT-100 S OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	9'-10" (3)	2268490
MT-100 OC	EN 10346 S350GD	Outdoor	Zinc Magnesium	19'-8 1/4" (6)	2268491

1. Mechanical properties of EN 10346 Grade S280 GD meet or exceed the mechanical properties of ASTM A653/A1046 SS Grade 37.
2. Mechanical properties of EN 10346 Grade S350 GD meet or exceed the mechanical properties of ASTM A653/A1046 SS Grade 50 Cl4.

3.0 MODULAR SUPPORT SYSTEM

3.1 MT PROFILES

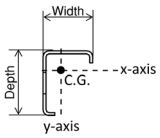
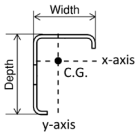
Table 2 - MT Angle and Channel Profile Dimensions

MT-10  mm (in)		 mm (in)
MT-15, MT-15 OC  mm (in)		 mm (in)
MT-20, MT-20 OC  mm (in)		 mm (in)
MT-30 S, MT-30, MT-30 S OC, MT-30 OC  mm (in)		 mm (in)
MT-50 S, MT-50, MT-50 S OC, MT-50 OC  mm (in)		 mm (in)
MT-60 S, MT-60, MT-60 S OC, MT-60 OC  mm (in)		 mm (in)

3.0 MODULAR SUPPORT SYSTEM

3.1.1 CROSS-SECTION PROPERTIES OF MT PROFILES

Table 4 - Cross-Section Properties of MT Angle Profiles [1,3]

Description	Symbol	Units	MT-10	MT-15 MT-15 OC
Profile of cross-section	-	-		
Design thickness	t	in (mm)	0.047 (1.2)	0.059 (1.5)
Width	-	in (mm)	0.79 (20)	1.06 (27)
Depth	-	in (mm)	1.02 (26)	1.38 (35)
Weight	w	lbs/ft (kg/m)	0.314 (0.47)	0.527 (0.78)
Minimum specified yield strength	F_y	ksi (MPa)	40.6 (280)	40.6 (280)
Modulus of elasticity	E	ksi (MPa)	29,500 (203,400)	29,500 (203,400)
Gross Section Properties [2]				
Gross cross-sectional area	A_g	in^2 (mm^2)	0.092 (59.62)	0.155 (99.90)
Moment of inertia of the gross section about x-axis	I_x	in^4 (mm^4)	0.0114 (4,765)	0.0347 (14,440)
Moment of inertia of the gross section about y-axis	I_y	in^4 (mm^4)	0.0063 (2,630)	0.0192 (8,013)
Gross section-modulus about x-axis	S_x	in^3 (mm^3)	0.0168 (275.1)	0.0376 (615.7)
Gross section-modulus about y-axis	S_y	in^3 (mm^3)	0.0112 (183)	0.0251 (410.5)
Radius of gyration of the gross section about x-axis	r_x	in (mm)	0.352 (8.94)	0.473 (12.0)
Radius of gyration of the gross section about y-axis	r_y	in (mm)	0.261 (6.64)	0.353 (8.96)
Net Section Properties				
Net cross-sectional area	A_n	in^2 (mm^2)	0.053 (34.42)	0.106 (68.40)
Net section-modulus about x-axis	S_x	in^3 (mm^3)	0.0135 (221.1)	0.0323 (528.8)
Net section-modulus about y-axis	S_y	in^3 (mm^3)	0.0084 (138.2)	0.0207 (339.9)
Radius of gyration of the gross section about x-axis	r_x	in (mm)	0.398 (10.12)	0.517 (13.14)
Radius of gyration of the gross section about y-axis	r_y	in (mm)	0.296 (7.53)	0.386 (9.81)

1. Tabulated values are in accordance with AISI S100-16, the North American Specification for the Design of Cold-Formed Steel Structural Members.
2. Tabulated gross properties are based on the full unreduced cross section of the profiles, away from the punched holes and slots.
3. C.G. is center of gravity of the profile cross-section.

Trapeze Load Tables for MT Angle Profiles

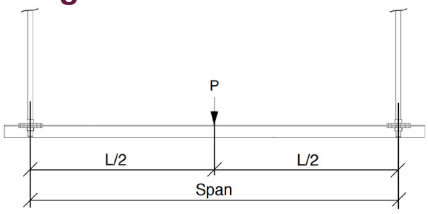


Table 5 - Allowable Beam Loads[1,2,4,5]

Span in (cm)	Max Factored Concentrated Load P, lbs (N)			
	MT-10		MT-15	
	Braced	Unbraced	Braced	Unbraced
24 (61.0)	39 (170)	39 (170)	139 (615)	130 (575)
48 (121.9)	19 (80)	18 (80)	69 (305)	69 (305)
72 (182.9)	12 (50)	9 (40)	45 (200)	45 (200)

Table 6 - Maximum Factored Beam Loads[1,3,5]

Span in (cm)	Max Factored Concentrated Load P, lbs (N)			
	MT-10		MT-15	
	Braced	Unbraced	Braced	Unbraced
24 (61.0)	58 (255)	58 (255)	208 (925)	195 (865)
48 (121.9)	28 (120)	27 (120)	103 (455)	103 (455)
72 (182.9)	18 (80)	13 (55)	67 (295)	67 (295)

1. Loads are based on AISI S100-16 and CSA S136-16, the North American Specification for the Design of Cold-Formed Steel Structural Members.
2. Safety Factor for flexure is 2.0.
3. Resistance Factor for flexure is 0.75.
4. Multiply tabulated load values by 1.5 to obtain Load and Resistance Factor Design (LRFD) values.
5. Profile weight is accounted for in the tabulated load values.