MODULAR SUPPORT SYSTEMS

Elevator Divider Beam Connectors: Technical Supplement Guide 2023

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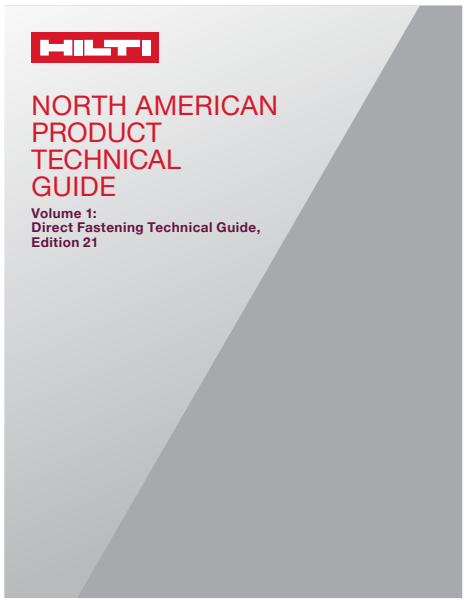
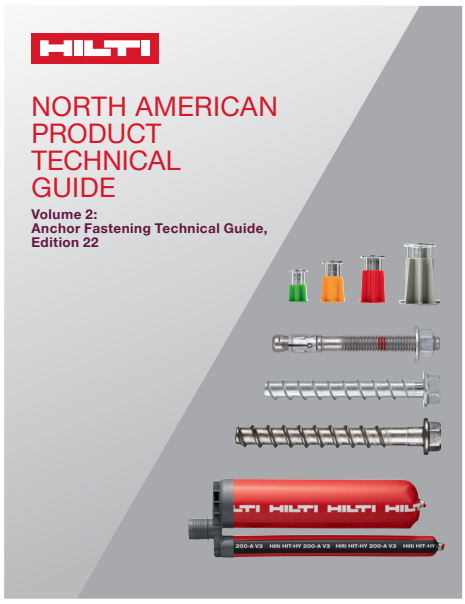
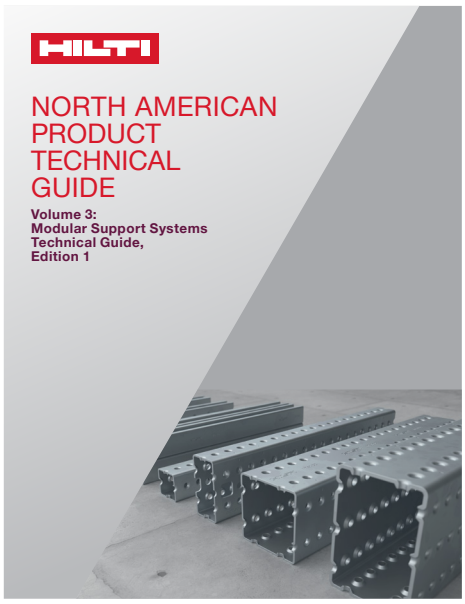
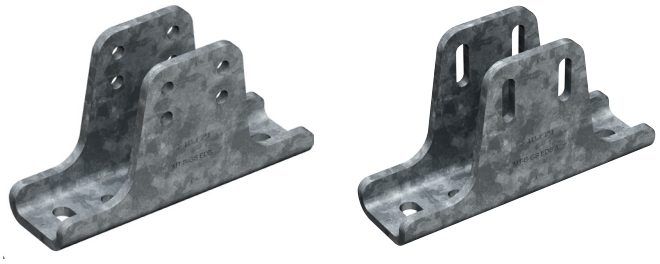






MODULAR SUPPORT SELECTION GUIDE

MT EDB CONNECTORS

MT-B-GS EDB (pg 3)	**MT-B-GS EDB A** (pg 3)
	
● 2353804 (SET)	● 2353805

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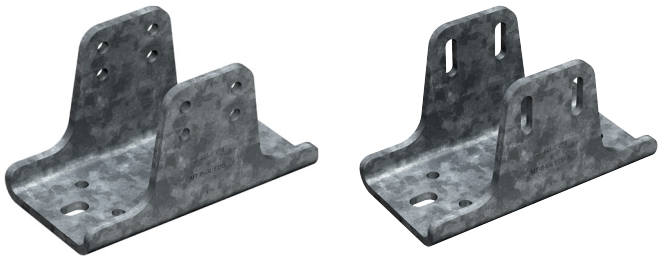
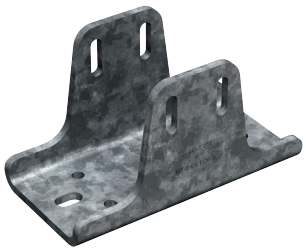
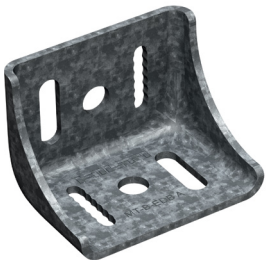
	
● 2353802 (SET)	● 2353803

MT-BRS-EDB (pg 10)	**MT-BRL-EDB** (pg 12)	**MT-B-EDB A** (pg 14)
		
● 2353808 (M12) ● 2353809 (M16)	● 2353806 (M12) ● 2353807 (M16)	● 2353810

*(SET) indicates that the item is packaged as part of a set along with the adjustable version of the same connector.

*Tabulated technical data for all connectors in this Technical Supplement Guide is based on following the Instructions For Use (IFU), packaged with each product, for special installation parameters and additional hardware required.

Installation System Material Finish:	
● Electro-Galvanized (EG)	● Hot-Dipped Galvanized (HDG)

1.0 MODULAR SUPPORT SYSTEM
MT-B-GS EDB OC (SET) / MT-B-GS EDB A OC

Description

MT-B-GS EDB OC (SET): Elevator divider beam connection set for MT-80 girders. A set consists of one MT-B-GS EDB OC connector and one MT-B-GS EDB A OC connector. Each connector can be used as a standard base connector for MT-70 and MT-80 girders for non-elevator applications.

MT-B-GS EDB A OC: Elevator divider beam connector for MT-80 girders. Connector can be used as a standard base connector for MT-70 and MT-80 girders for non-elevator applications.

MT-B-GS EDB OC

MT-B-GS EDB A OC

Material Specifications

Standard[1]	Grade[1]	F_y, ksi (MPa)	F_u, ksi (MPa)
GB/T 1591	Q355 B	51.49 (355)	68.17 (470)

1. Mechanical properties of GB/T 1591 Grade Q355 B meet or exceed the mechanical properties of ASTM A1011 SS Grade 50.

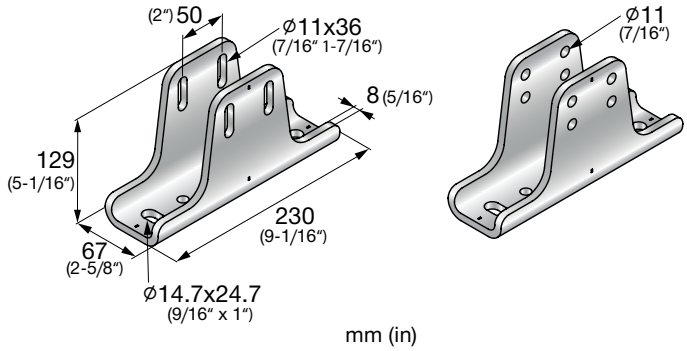
Corrosion Protection

Hot-Dipped Galvanized (HDG)

MT-B-GS EDB OC (SET)
MT-B-GS EDB A OC

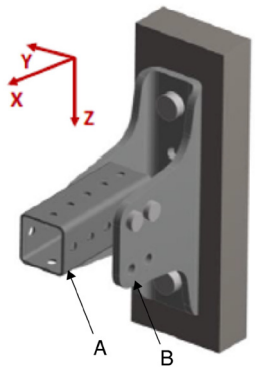
Ordering Information

Description	Weight Per Piece lbs (kg)	Quantity Piece(s)	Item No.
MT-B-GS EDB OC (SET)	11.45 (5.19)	3 SETS	2353804
MT-B-GS EDB A OC	5.68 (2.58)	6	2353805



mm (in)

Figure 1 - MT-70 Standard Base Connection



A. MT-70
B. MT-B-GS EDB OC

Table 1 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
9,390 (41.79)	855 (3.82)	3,480 (15.49)

1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. See Figure 1.

Table 2 - Limit State Design (LSD) Load Data[1,2,3,4]

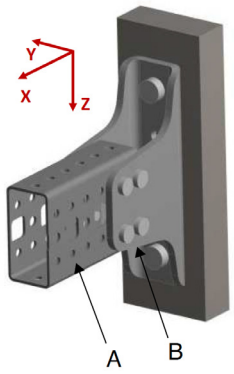
F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
13,240 (58.90)	1,290 (5.74)	5,235 (23.29)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.7.
3. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
4. See Figure 1.

1.0 MODULAR SUPPORT SYSTEM

MT-B-GS EDB OC (SET) / MT-B-GS EDB A OC

Figure 2 - MT-80 Standard Base Connection



A. MT-80 (long side)
B. MT-B-GS EDB OC

Table 3 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_y lb ft (kN m)
10,200 (45.38)	1,745 (7.77)	3,585 (15.95)	1,865 (2.53)

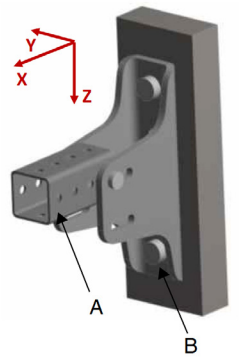
1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.6.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. See Figure 2.

Table 4 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_y lb ft (kN m)
15,330 (68.20)	2,625 (11.68)	5,390 (23.98)	2,425 (3.29)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.6.
3. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
4. See Figure 2.

Figure 3 - MT-70 Standard Base Connection



A. MT-70
B. MT-B-GS EDB A OC

Table 5 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
330 (1.48)	830 (3.70)	4,145 (18.44)

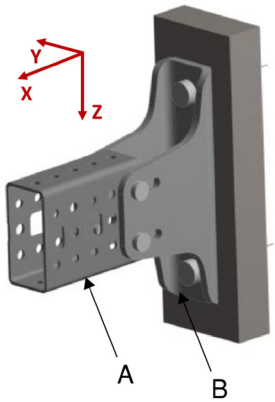
1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. See Figure 3.

Table 6 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
495 (2.21)	1,250 (5.57)	5,235 (23.29)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.7.
3. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
4. See Figure 3.

Figure 4 - MT-80 Standard Base Connection



A. MT-80 (long side)
B. MT-B-GS EDB A OC

Table 7 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
665 (2.96)	1,045 (4.66)	3,970 (17.68)

1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. See Figure 4.

Table 8 - Limit State Design (LSD) Load Data[1,2,3,4]

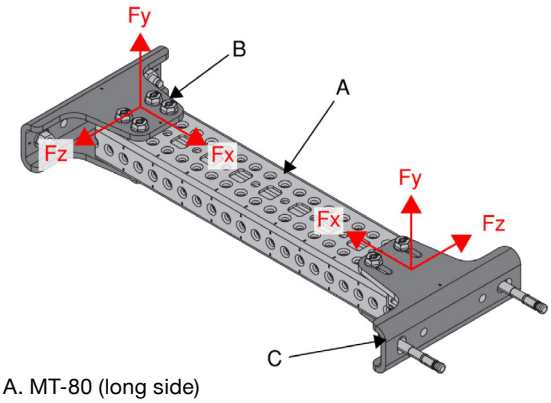
F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
995 (4.43)	1,570 (7.00)	5,305 (23.62)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.7.
3. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
4. See Figure 4.

1.0 MODULAR SUPPORT SYSTEM

MT-B-GS EDB OC (SET) / MT-B-GS EDB A OC

Figure 5 - MT-80 EDB Connection



A. MT-80 (long side)
B. MT-B-GS EDB OC
C. MT-B-GS EDB A OC

Table 9 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GS EDB	10,200 (45.38)	1,745 (7.77)	3,585 (15.95)	430 (0.59)	1,865 (2.53)	580 (0.79)
MT-B-GS EDB A	665 (2.96)	1,045 (4.66)	3,970 (17.68)	300 (0.41)	765 (1.04)	395 (0.54)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 11.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
6. Tabulated values for each connector are valid only for the assembly shown in Figure 5.

Table 10 - Limit State Design (LSD) Load Data[1,2,3,4,5]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GS EDB	15,330 (68.20)	2,625 (11.68)	5,390 (23.98)	650 (0.884)	2,425 (3.29)	750 (1.02)
MT-B-GS EDB A	995 (4.43)	1,570 (7.00)	5,305 (23.62)	455 (0.62)	1,155 (1.57)	595 (0.81)

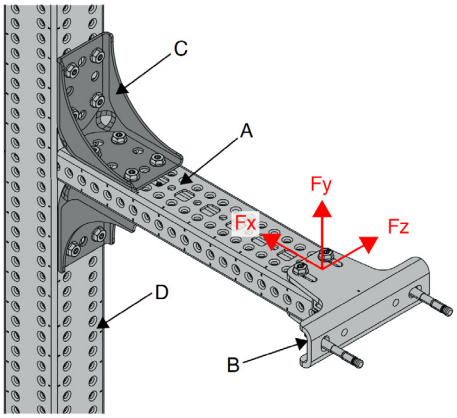
1. Tabulated values are for elevator divider beam applications only.
2 Tabulated values must be used in conjunction with the stiffness values shown in Table 11.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. Tabulated values for each connector are valid only for the assembly shown in Figure 5.

Table 11 - EDB Rotational Stiffness Data[1,2]

Connector	k_{Mx} lb ft / rad (kN m / rad)	k_{My} lb ft / rad (kN m / rad)	k_{Mz} lb ft / rad (kN m / rad)
MT-B-GS EDB	9,335 (12.66)	132,760 (180.00)	34,320 (46.54)
MT-B-GS EDB A	6,435 (8.73)	24,435 (33.13)	31,645 (42.91)

1. Rotational spring stiffness values are to be used in elevator divider beam applications.
2. The spring stiffness, k_{Fx}, for MT-B-GS EDB A should be set to zero.

Figure 6 - MT-80 Girder-to-Wall EDB Connection



A. MT-80 (long side)
B. MT-B-GS EDB A
C. MT-C-GL A
D. MT-90/100

Table 12 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
665 (2.96)	1,045 (4.66)	3,970 (17.68)	300 (0.41)	765 (1.04)	395 (0.54)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 14.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Load values are for MT-B-GS EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
6. Tabulated values for each connector are valid only for the assembly shown in Figure 6.

Table 13 - Limit State Design (LSD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
995 (4.43)	1,570 (7.00)	5,305 (23.62)	455 (0.62)	1,155 (1.57)	595 (0.81)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 14.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. Load values are for MT-B-GS EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
5. Tabulated values for each connector are valid only for the assembly shown in Figure 6.

Table 14 - EDB Girder-to-Wall Rotational Stiffness Data[1,2]

Connector	k_{Mx} lb ft / rad (kN m / rad)	k_{My} lb ft / rad (kN m / rad)	k_{Mz} lb ft / rad (kN m / rad)
MT-B-GS EDB A	6,435 (8.73)	43,255 (58.65)	38,550 (52.27)
MT-C-GL A OC	133,335 (180.78)	55,965 (75.88)	40,025 (54.27)

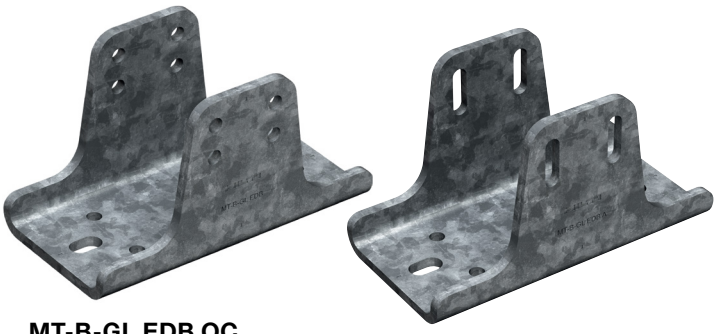
1. Rotational spring stiffness values are to be used in elevator divider beam applications.
2. The spring stiffness, k_{Fx}, for MT-B-GS EDB A should be set to zero.

1.0 MODULAR SUPPORT SYSTEM
MT-B-GL EDB OC (SET) / MT-B-GL EDB A OC

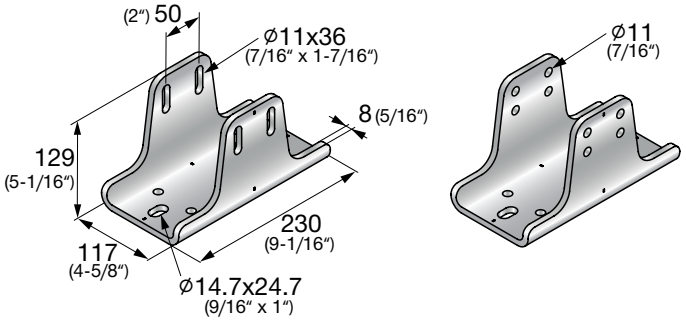
Description

MT-B-GL EDB OC (SET): Elevator divider beam connection set for MT-90 and MT-100 girders. A set consists of one MT-B-GL EDB OC connector and one MT-B-GL EDB A OC connector. Each connector can be used as a standard base connector for MT-90 and MT-100 girders for non-elevator applications.

MT-B-GL EDB A OC: Elevator divider beam connector for MT-90 and MT-100 girders. Connector can be used as a standard base connector for MT-90 and MT-100 girders for non-elevator applications.



MT-B-GL EDB OC **MT-B-GL EDB A OC**



mm (in)

Material Specifications

Standard[1]	Grade[1]	F_y, ksi (MPa)	F_u, ksi (MPa)
GB/T 1591	Q355 B	51.49 (355)	68.17 (470)

1. Mechanical properties of GB/T 1591 Grade Q355 B meet or exceed the mechanical properties of ASTM A1011 SS Grade 50.

Corrosion Protection

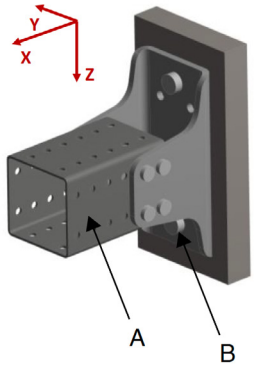
Hot-Dipped Galvanized (HDG)

MT-B-GL EDB OC (SET)
MT-B-GL EDB A OC

Ordering Information

Description	Weight Per Piece lbs (kg)	Quantity Piece(s)	Item No.
MT-B-GL EDB OC (SET)	14.83 (6.73)	2 SETS	2353802
MT-B-GL EDB A OC	7.36 (3.34)	4	2353803

Figure 7 - MT-90 Standard Connection



A. MT-90
B. MT-B-GL EDB OC

Table 15 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
10,360 (46.10)	2,215 (9.87)	4,055 (18.05)	1,400 (1.90)	2,075 (2.82)	1,250 (1.70)

1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. See Figure 7.

Table 16 - Limit State Design (LSD) Load Data[1,2,3,4]

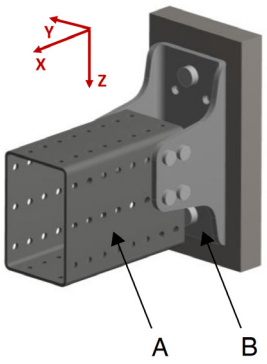
F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
15,575 (69.29)	3,335 (14.84)	6,095 (27.13)	2,105 (2.86)	2,850 (3.87)	1,880 (2.55)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.75.
3. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
4. See Figure 7.

1.0 MODULAR SUPPORT SYSTEM

MT-B-GL EDB OC (SET) / MT-B-GL EDB A OC

Figure 8 - MT-100 Standard Connection



A. MT-100 (long side)
B. MT-B-GL EDB OC

Table 17 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
8,105 (36.07)	1,625 (7.23)	4,165 (18.53)	965 (1.31)	2,105 (2.86)	1,215 (1.65)

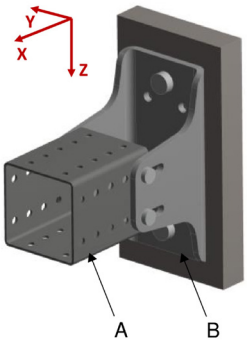
1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.2.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
5. See Figure 8.

Table 18 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
11,510 (51.20)	2,440 (10.86)	6,260 (27.85)	1,450 (1.97)	2,850 (3.87)	1,825 (2.48)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.65.
3. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
4. See Figure 8.

Figure 9 - MT-90 Standard Connection



A. MT-90
B. MT-B-GL EDB A OC

Table 19 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
665 (2.96)	1,300 (5.80)	4,065 (18.09)

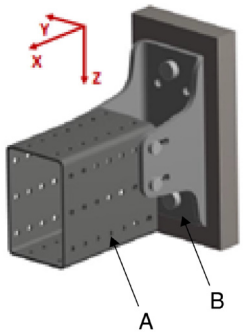
1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
5. See Figure 9.

Table 20 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
995 (4.43)	1,960 (8.72)	6,095 (27.13)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.7.
3. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
4. See Figure 9.

Figure 10 - MT-100 Standard Connection



A. MT-100 (long side)
B. MT-B-GL EDB A

Table 21 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
665 (2.96)	1,100 (4.90)	4,165 (18.53)

1. Tabulated values are for non-elevator applications only.
2. Minimum safety factor, Ω, for tabulated values is 2.1.
3. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
4. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
5. See Figure 10.

Table 22 - Limit State Design (LSD) Load Data[1,2,3,4]

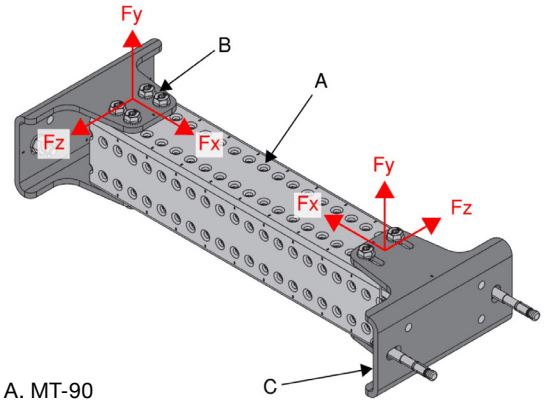
F_x lb (kN)	F_y lb (kN)	F_z lb (kN)
995 (4.43)	1,655 (7.37)	6,260 (27.85)

1. Tabulated values are for non-elevator applications only.
2. Maximum resistance factor, Φ, for tabulated values is 0.7.
3. Load values are for base connector only. The design professional is responsible for checking concrete and fastener strength.
4. See Figure 10.

1.0 MODULAR SUPPORT SYSTEM

MT-B-GL EDB OC (SET) / MT-B-GL EDB A OC

Figure 11 - MT-90 EDB Connection



A. MT-90
B. MT-B-GL EDB OC
C. MT-B-GL EDB A OC

Table 23 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GL EDB	10,360 (46.10)	2,215 (9.87)	4,055 (18.05)	1,400 (1.90)	2,075 (2.82)	1,250 (1.70)
MT-B-GL EDB A	665 (2.96)	1,300 (5.80)	4,065 (18.09)	750 (1.02)	1,185 (1.61)	460 (0.63)

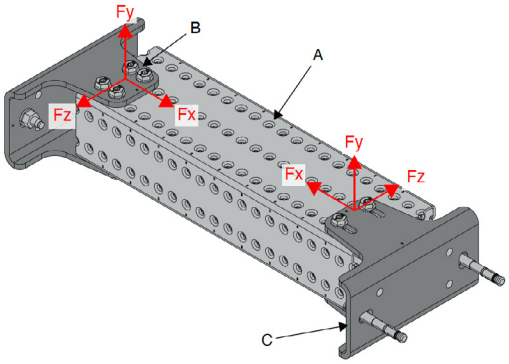
1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 27.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
6. Tabulated values for each connector are valid only for the assembly shown in Figure 11.

Table 24 - Limit State Design (LSD) Load Data[1,2,3,4,5]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GL EDB	15,575 (69.29)	3,335 (14.84)	6,095 (27.13)	2,105 (2.86)	2,850 (3.87)	1,880 (2.55)
MT-B-GL EDB A	995 (4.43)	1,960 (8.72)	6,095 (27.13)	1,125 (1.53)	1,780 (2.42)	690 (0.94)

1. Tabulated values are for elevator divider beam applications only.
2 Tabulated values must be used in conjunction with the stiffness values shown in Table 27.
3. Maximum resistance factor, Φ, for tabulated values is 0.75.
4. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. Tabulated values for each connector are valid only for the assembly shown in Figure 11.

Figure 12 - MT-100 EDB Connection



A. MT-100 (long side)
B. MT-B-GL EDB OC
C. MT-B-GL EDB A OC

Table 25 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GL EDB	8,105 (36.07)	1,625 (7.23)	4,165 (18.53)	965 (1.31)	2,105 (2.86)	1,215 (1.65)
MT-B-GL EDB A	665 (2.96)	1,100 (4.90)	4,165 (18.53)	720 (0.98)	965 (1.31)	470 (0.64)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 27.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
6. Tabulated values for each connector are valid only for the assembly shown in Figure 12.

Table 26 - Limit State Design (LSD) Load Data[1,2,3,4,5]

Connector	F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
MT-B-GL EDB	11,510 (51.20)	2,440 (10.86)	6,260 (27.85)	1,450 (1.97)	2,850 (3.87)	1,825 (2.48)
MT-B-GL EDB A	995 (4.43)	1,655 (7.37)	6,260 (27.85)	1,080 (1.47)	1,445 (1.96)	705 (0.96)

1. Tabulated values are for elevator divider beam applications only.
2 Tabulated values must be used in conjunction with the stiffness values shown in Table 27.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. Load values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
5. Tabulated values for each connector are valid only for the assembly shown in Figure 12.

Table 27 - EDB Rotational Stiffness Data[1,2]

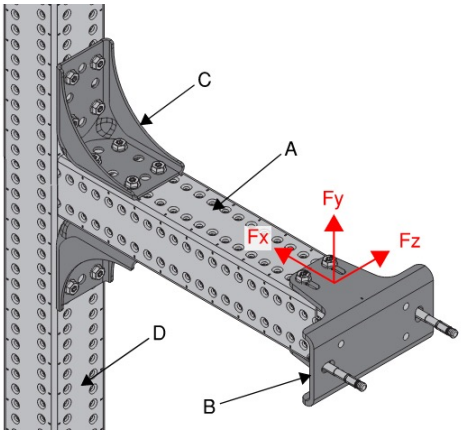
Connector	MT Profile	k_{Mx} lb ft / rad (kN m / rad)	k_{My} lb ft / rad (kN m / rad)	k_{Mz} lb ft / rad (kN m / rad)
MT-B-GL EDB	MT-90	40,210 (54.52)	158,350 (214.7)	187,190 (253.8)
MT-B-GL EDB	MT-100	28,335 (38.42)	306,455 (415.5)	232,255 (314.9)
MT-B-GL EDB A	MT-90	22,440 (30.43)	123,095 (166.9)	184,415 (250.0)
MT-B-GL EDB A	MT-100	20,935 (28.39)	306,455 (415.5)	218,535 (296.3)

1. Rotational spring stiffness values are to be used in elevator divider beam applications.
2. The spring stiffness, k_{Fx}, for MT-B-GL EDB A should be set to zero.

1.0 MODULAR SUPPORT SYSTEM

MT-B-GL EDB OC (SET) / MT-B-GL EDB A OC

Figure 13 - MT-90 Girder-to-Wall EDB Connection



A. MT-90
B. MT-B-GL EDB A
C. MT-C-GL A
D. MT-90/100

Table 28 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
665 (2.96)	1,300 (5.80)	4,065 (18.09)	750 (1.02)	1,185 (1.61)	460 (0.63)

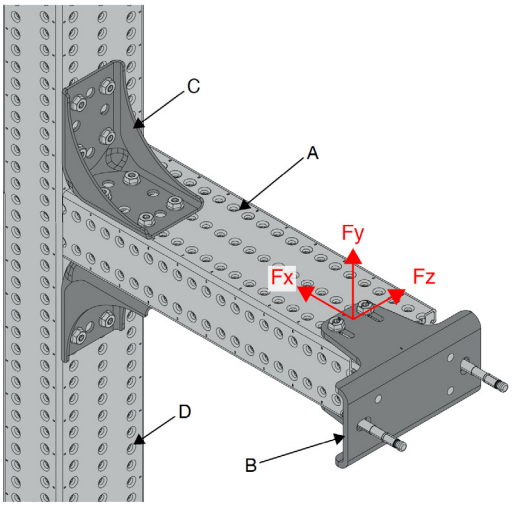
1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 32.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Load values are for MT-B-GL EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
6. See Figure 13.

Table 29 - Limit State Design (LSD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
995 (4.43)	1.960 (8.72)	6,095 (27.13)	1,125 (1.53)	1,780 (2.42)	690 (0.94)

1. Tabulated values are for elevator divider beam applications only.
2 Tabulated values must be used in conjunction with the stiffness values shown in Table 32.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. Load values are for MT-B-GL EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
5. See Figure 13.

Figure 14 - MT-100 Girder-to-Wall EDB Connection



A. MT-100 (long side)
B. MT-B-GL EDB A
C. MT-C-GL A
D. MT-90/100

Table 30 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
665 (2.96)	1,100 (4.90)	4,165 (18.53)	720 (0.98)	965 (1.31)	470 (0.64)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 32.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Load values are for MT-B-GL EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
6. See Figure 14.

Table 31 - Limit State Design (LSD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
995 (4.43)	1,655 (7.37)	6,260 (27.85)	1,080 (1.47)	1,445 (1.96)	705 (0.96)

1. Tabulated values are for elevator divider beam applications only.
2 Tabulated values must be used in conjunction with the stiffness values shown in Table 32.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. Load values are for MT-B-GL EDB A base connector only. Design professional is responsible for checking concrete and fastener strength. Refer to the Modular Support Systems Technical Guide for MT-C-GL A capacities.
5. See Figure 14.

Table 32 - EDB Girder-to-Wall Rotational Stiffness Data[1,2]

Connector	MT Profile	k_{Mx} lb ft / rad (kN m / rad)	k_{My} lb ft / rad (kN m / rad)	k_{Mz} lb ft / rad (kN m / rad)
MT-B-GL EDB A	MT-90	22,440 (30.43)	45,555 (61.77)	111,370 (151.00)
MT-B-GL EDB A	MT-100	20,935 (28.39)	53,455 (72.48)	163,440 (221.61)
MT-C-GL A OC	MT-90	133,335 (180.78)	96,690 (131.10)	86,265 (116.96)
MT-C-GL A OC	MT-100	133,335 (180.78)	131,370 (178.12)	60,840 (82.49)

1. Rotational spring stiffness values are to be used in elevator divider beam applications.
2. The spring stiffness, k_{Fx}, for MT-B-GL EDB A should be set to zero.

1.0 MODULAR SUPPORT SYSTEM MT-BRS-EDB

Description

Guide rail bracket connection to MT-80.

MT-BRS-EDB M12

MT-BRS-EDB M16

Material Specifications

Standard[1]	Grade[1]	F_y, ksi (MPa)	F_u, ksi (MPa)
GB/T 1591	Q355 B	51.49 (355)	68.17 (470)

1. Mechanical properties of GB/T 1591 Grade Q355 B meet or exceed the mechanical properties of ASTM A1011 SS Grade 50.

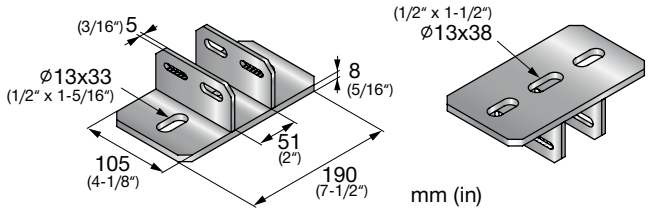
Corrosion Protection

Electro-Galvanized (EG)

MT-BRS-EDB M12
MT-BRS-EDB M16

Ordering Information

Description	Weight Per Piece lbs (kg)	Quantity Piece(s)	Item No.
MT-BRS-EDB M12	3.66 (1.66)	6	2353808
MT-BRS-EDB M16	3.76 (1.71)	6	2353809



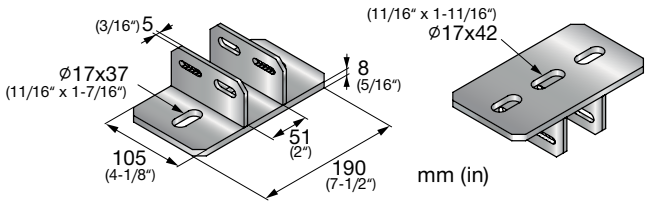
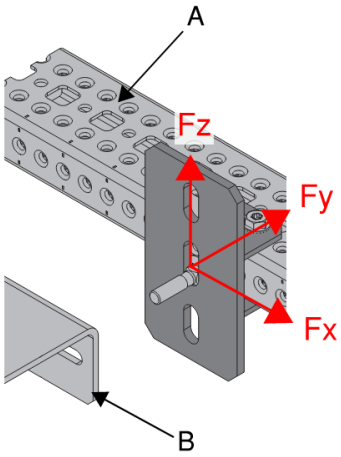


Figure 15 - L-Bracket Connection to MT Girder



A. MT-80 (long side)
B. L-bracket not by Hilti

Table 33 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_z lb ft (kN m)
3,145 (14.00)	2,220 (9.89)	600 (2.67)	855 (1.16)	550 (0.75)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 35.
3. Tabulated values are for elevator divider beam applications only.
4. Minimum safety factor, Ω, for tabulated values is 2.3.
5. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
6. See Figure 15.

Table 34 - Limit State Design (LSD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_z lb ft (kN m)
5,035 (22.40)	3,555 (15.82)	900 (4.01)	1,105 (1.50)	715 (0.97)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 35.
3. Tabulated values are for elevator divider beam applications only.
4. Maximum resistance factor, Φ, for tabulated values is 0.6.
5. See Figure 15.

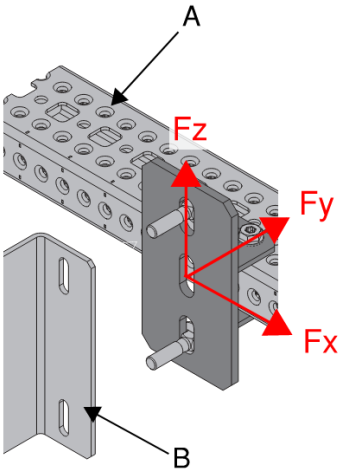
Table 35 - EDB L-Bracket Connection Stiffness Data[1,2]

Connector	k_{Fx} (kips / in) (kN / mm)	k_{Fy} (kips / in) (kN / mm)	k_{Mz} lb ft / rad (kN m / rad)
MT-BRS-EDB M12	2,855 (500)	57.84 (10.13)	11,785 (15.98)
MT-BRS-EDB M16	2,855 (500)	57.84 (10.13)	11,785 (15.98)

1. Spring stiffness values are to be used in elevator divider beam applications.
2. The rotational spring stiffness, k_{My}, for MT-BRS-EDB L-bracket connections should be set to zero.

1.0 MODULAR SUPPORT SYSTEM
MT-BRS-EDB

Figure 16 - Omega Bracket Connection to MT Girder



A. MT-80 (long side)
B. Omega bracket not by Hilti

Table 36 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
3,145 (14.00)	2,920 (13.00)	1,200 (5.35)	855 (1.16)	445 (0.61)	550 (0.75)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 38.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. See Figure 16.

Table 37 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
5,035 (22.40)	4,675 (20.80)	1,800 (8.01)	1,105 (1.50)	670 (0.91)	715 (0.97)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 38.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. See Figure 16.

Table 38 - EDB Omega Bracket Connection Stiffness Data[1,2]

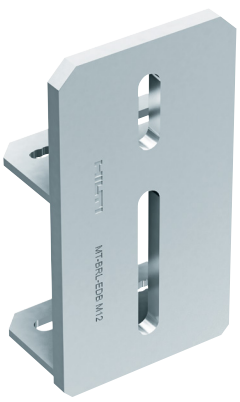
Connector	k_{Fx} (kips / in) (kN / mm)	k_{Fy} (kips / in) (kN / mm)	k_{Mz} lb ft / rad (kN m / rad)
MT-BRS-EDB M12	2,855 (500)	26.55 (4.65)	11,785 (15.98)
MT-BRS-EDB M16	2,855 (500)	26.55 (4.65)	11,785 (15.98)

1. Spring stiffness values are to be used in elevator divider beam applications.
2. The rotational spring stiffness, k_{My}, for MT-BRS-EDB L-bracket connections should be set to zero.

1.0 MODULAR SUPPORT SYSTEM MT-BRL-EDB

Description

Guide rail bracket connection to MT-90 and MT-100.



MT-BRL-EDB M12

MT-BRL-EDB M16

Material Specifications

Standard[1]	Grade[1]	F_y, ksi (MPa)	F_u, ksi (MPa)
GB/T 1591	Q355 B	51.49 (355)	68.17 (470)

1. Mechanical properties of GB/T 1591 Grade Q355 B meet or exceed the mechanical properties of ASTM A1011 SS Grade 50.

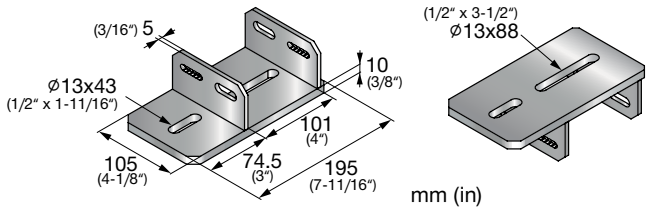
Corrosion Protection

Electro-Galvanized (EG)

MT-BRL-EDB M12
MT-BRL-EDB M16

Ordering Information

Description	Weight Per Piece lbs (kg)	Quantity Piece(s)	Item No.
MT-BRL-EDB M12	4.39 (1.99)	10	2353806
MT-BRL-EDB M16	4.48 (2.03)	10	2353807



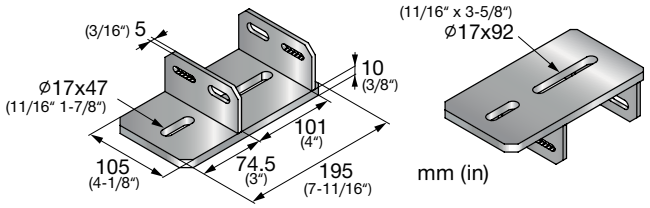
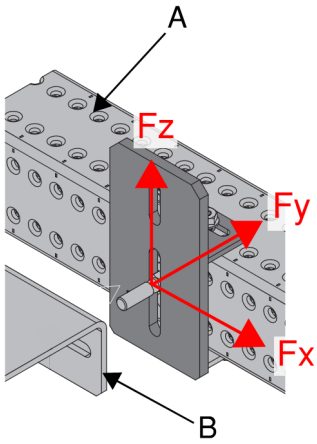


Figure 17 - L-Bracket Connection to MT Girder



A. MT-90/100 (long side)
B. L-bracket not by Hilti

Table 39 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_z lb ft (kN m)
3,380 (15.05)	2,630 (11.70)	600 (2.67)	1,980 (2.69)	560 (0.76)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 41.
3. Tabulated values are for elevator divider beam applications only.
4. Minimum safety factor, Ω, for tabulated values is 2.75.
5. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
6. See Figure 17.

Table 40 - Limit State Design (LSD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_z lb ft (kN m)
5,410 (24.08)	4,205 (18.72)	900 (4.01)	2,580 (3.50)	720 (0.98)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 41.
3. Tabulated values are for elevator divider beam applications only.
4. Maximum resistance factor, Φ, for tabulated values is 0.5.
5. See Figure 17.

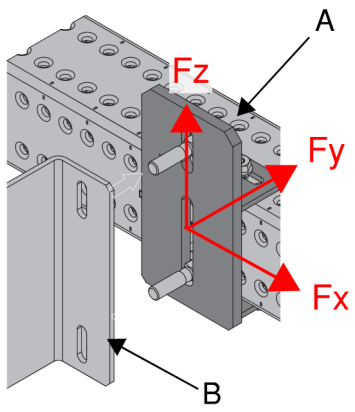
Table 41 - EDB L-Bracket Connection Stiffness Data[1,2]

Connector	k_{Fx} kips / in (kN / mm)	k_{Fy} kips / in (kN / mm)	k_{Mz} lb ft / rad (kN m / rad)
MT-BRL-EDB M12	2,855 (500)	68.75 (12.04)	12,905 (17.50)
MT-BRL-EDB M16	2,855 (500)	68.75 (12.04)	12,905 (17.50)

1. Spring stiffness values are to be used in elevator divider beam applications.
2. The rotational spring stiffness, k_{My}, for MT-BRL-EDB L-bracket connections should be set to zero.

1.0 MODULAR SUPPORT SYSTEM
MT-BRL-EDB

Figure 18 - Omega Bracket Connection to MT Girder



A. MT-90/100 (long side)
B. Omega bracket not by Hilti

Table 42 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
3,380 (15.05)	3,300 (14.68)	1,200 (5.34)	1,980 (2.69)	1,035 (1.41)	560 (0.76)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 44.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. See Figure 18.

Table 43 - Limit State Design (LSD) Load Data[1,2,3,4]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
5,410 (24.08)	5,280 (23.49)	1,800 (8.01)	2,580 (3.50)	1,555 (2.11)	720 (0.98)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 44.
3. Maximum resistance factor, Φ, for tabulated values is 0.7.
4. See Figure 18.

Table 44 - EDB Omega Bracket Connection Stiffness Data[1]

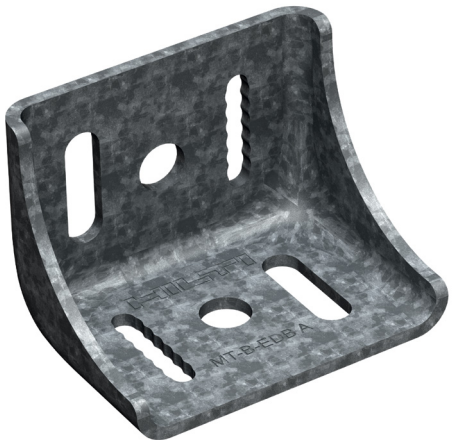
Connector	k_{Fx} kips / in (kN / mm)	k_{Fy} kips / in (kN / mm)	k_{Mz} lb ft / rad (kN m / rad)
MT-BRL-EDB M12	2,855 (500)	36.60 (6.41)	12,905 (17.50)
MT-BRL-EDB M16	2,855 (500)	36.60 (6.41)	12,905 (17.50)

1. Spring stiffness values are to be used in elevator divider beam applications.

1.0 MODULAR SUPPORT SYSTEM
MT-B-EDB A OC

Description

Parallel beam wall connector for MT-90 girders.



Material Specifications

Standard[1]	Grade[1]	F_y, ksi (MPa)	F_u, ksi (MPa)
GB/T 1591	Q355 B	51.49 (355)	68.17 (470)

1. Mechanical properties of GB/T 1591 Grade Q355 B meet or exceed the mechanical properties of ASTM A1011 SS Grade 50.

Corrosion Protection

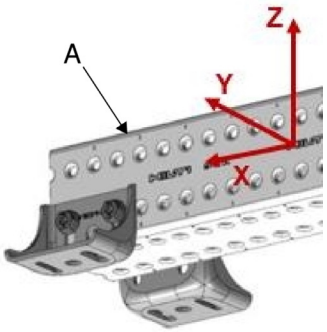
Hot-Dipped (HDG)

MT-B-EDB A OC

Ordering Information

Description	Weight Per Piece lbs (kg)	Quantity Piece(s)	Item No.
MT-B-EDB A OC	1.01 (0.46)	10	2353810

Figure 19 - MT Girder Connection



A. MT-90

Table 45 - Allowable Strength Design (ASD) Load Data[1,2,3,4,5,6,7]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
1,820 (8.11)	1,055 (4.70)	3,190 (14.21)	80 (0.11)	420 (0.57)	2,665 (3.62)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 47.
3. Minimum safety factor, Ω, for tabulated values is 2.1.
4. Multiply tabulated values by 1.5 to obtain minimum Load and Resistance Factor Design (LRFD) values.
5. Tabulated values represent the total allowable load on a pair of base connectors. Connectors must be installed in pairs.
6. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
7. See Figure 19.

Table 46 - Limit State Design (LSD) Load Data[1,2,3,4,5,6]

F_x lb (kN)	F_y lb (kN)	F_z lb (kN)	M_x lb ft (kN m)	M_y lb ft (kN m)	M_z lb ft (kN m)
2,915 (12.97)	1,690 (7.52)	5,110 (22.74)	125 (0.17)	530 (0.72)	2,835 (3.85)

1. Tabulated values are for elevator divider beam applications only.
2. Tabulated values must be used in conjunction with the stiffness values shown in Table 47.
3. Maximum resistance factor, ϕ, for tabulated values is 0.7.
4. Tabulated values represent the total factored design load on a pair of base connectors. Connectors must be installed in pairs.
5. Tabulated values are for base connector only. Design professional is responsible for checking concrete and fastener strength.
6. See Figure 19.

Table 47 - EDB Connection Stiffness Data[1]

Connector	k_{Mz} lb ft / rad (kN m / rad)
MT-B-EDB A	27,110 (36.76)

1. Spring stiffness values are to be used in elevator divider beam applications.

2.0 TERMS AND CONDITIONS OF SALE

Terms and Conditions of Sale (U.S.)

All sales are subject to Hilti's Terms and Conditions of Sale.

The U.S. Terms and Conditions are here: https://www.hilti.com/content/hilti/W1/US/en/company/legal-and-footer-information/terms-conditions/terms-and-conditions-of-sales.html

Terms and Conditions of Sale (Canada)

All sales are subject to Hilti's Terms and Conditions of Sale.

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The data contained in this literature was current as of the date of publication. Updates and changes may be made based on later testing. If verification is needed that the data is still current, please contact the Hilti Technical Support Specialists at 1-800-879-8000. All published load values contained in this literature represent the results of testing by Hilti or test organizations. Local base materials were used. Because of variations in materials, on-site testing is necessary to determine performance at any specific site.

WHD • 07/23