

MW WIRE SYSTEM

LII

BU Installation Installation Technical Manual Typical Applications Product Line Applications

Version 2.2

12.2021



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		Page
MW-Specific General Notes		10
Conditions for transport, storage and Usage		10
Kit & item selection table		11
Safety factors used to calculate load capacities		13
Lock and wire kits according to SMACNA 006-2006		14
Connectors according to Eurocode 3		16
Suspended ceilings according EN 13964		17
Prying Factor of MW-C and the force transferred to the Anchor		19
Picture Configuration	Туре	Page

Ventilation - Rounded Ducts



	Rounded Duct On Concrete Slab	1.01	21
P	Rounded Duct On Concrete Girder	1.02	22
	Rounded Duct On Metal Deck Hook and V-Hanger	1.03	23
	Rounded Duct On Metal Deck V-Hanger With Integrated Nut	1.04	24
	Rounded Duct On Structural Steel Beam Clamps	1.05	25
	Rounded Duct On Structural Steel MM Channels	1.06	26
	Rounded Duct On Structural Steel MQ Channels	1.07	27
	Rounded Duct On Structural Steel Looped Profile	1.08	28



Product	Configuration	Туре	Page
Ventilation	- Trapeze		
	Trapeze On Concrete MQ System	2.01	29
	Trapeze On Concrete MM System	2.02	30
P	Trapeze On Concrete Girder	2.03	31
	Trapeze On Metal Deck Hook and V-Hanger	2.04	32
	Trapeze On Metal Deck	2.05	33
	Trapeze On Structural Steel Beam Clamps	2.06	34
	Trapeze On Structural Steel MM System	2.07	35
	Trapeze On Structural Steel MQ System	2.08	36
	Trapeze On Structural Steel Looped Profile	2.09	37



Product	Configuration	Туре	Page
Ventilation	L,Z –Hangers		
500 (m) (m)	L,Z -Hangers On Concrete	3.01	38
P	L, Z-Hangers On Concrete Girder	3.02	39
	L, Z-Hanger On Metal Deck Hook and V-Hanger	3.03	40
	L, Z-Hanger On Metal Deck V-Hanger With Integrated Nut	3.04	41
	L, Z-Hanger On Structural Steel Beam Clamps	3.05	42
	L, Z-Hanger On Structural Steel MM System	3.06	43
	L, Z-Hanger On Structural Steel MQ System	3.07	44
	L, Z-Hanger On Structural Steel Looped Profile	3.08	45



Product	Configuration	Туре	Page
Ventilation	- Unit		
	Ventilation Unit On Concrete Slab	4.01	46
F	Ventilation Unit On Concrete Girder	4.02	47
	Ventilation Unit On Metal Deck Hook And V-Hanger	4.03	48
	Ventilation Unit On Metal Deck V-Hanger With Integrated Nut	4.04	49
	Ventilation Unit On Structural Steel Beam Clamps	4.05	50
	Ventilation Unit On Structural Steel MM System	4.06	51
	Ventilation Unit On Structural Steel MQ System	4.07	52
	Ventilation Unit On Structural Steel Looped Profile	4.08	53



Product	Configuration	Туре	Page
Electrical -	Cable Tray, Ceiling Panel And Busbar		
	Cable Tray, Ceiling Panel And Busbar On Concrete Slab	5.01	54
P	Cable Tray, Ceiling Panel And Busbar On Concrete Girder	5.02	55
	Cable Tray, Ceiling Panel And Busbar On Metal Deck Hook And V-Hanger	5.03	56
	Cable Tray, Ceiling Panel And Busbar On Metal Deck V-Hanger With Integrated Nut	5.04	57
er	Cable Tray, Ceiling Panel And Busbar On Structural Steel Beam Clamps	5.05	58
	Cable Tray, Ceiling Panel And Busbar On Structural Steel MM System	5.06	59
	Cable Tray, Ceiling Panel And Busbar On Structural Steel MQ System	5.07	60
	Cable Tray, Ceiling Panel And Busbar On Structural Steel Looped Profile	5.08	61



Product	Configuration	Туре	Page
Piping - Bracin	ng - Single Fastening Points		
	Fastening Points On Concrete Slab Single Connection	6.01	62
	Fastening Points On Concrete Slab Double Connection	6.02	63
Product Bracing - Trap	Configuration eze On Rods and Frame	Туре	Page
	Bracing – Trapeze On Rods On Concrete Slab	/.01	64
Bracing – Trap	eze Frame		
	Bracing – Trapeze Frame On Concrete Slab	7.02	65





MW-SPECIFIC GENERAL NOTES

- This application is for static loading only not including lifting or nor accessed by persons
- Hilti wire ropes are manufactured according ASTM-A1023 and are not pre-stretched. When installing, it must be considered that the wire ropes undergo a constructional stretch (extension). The constructional stretch according ASTM-A1023 (extension) is the amount of extension that is attributed to the initial bedding down of wires within the strands and the strands within the rope due to loading. Initial extension cannot be determined by calculation. Stretching over time also uncertain. The height of the suspended parts can be adjusted with the lock.
- Please always refer to the latest instruction manual of the supported media, for example: pipes or cable trays, structures and attachments. The media needs to withstand the local wire rope force, taking into account the angle of loading.
- The wire rope shall not be connected with a hardened steel (max. 170 HB) interface.
- The wire rope interface shall be free of sharp corners (min. 0.5mm x 45° or radius 0.5mm with a minimum thickness of 5mm) to avoid local damage of the wire rope.
- Check that all parts are not damaged before installing. For example, a bent wire will not fit properly in the lock or could disable the locking mechanism.
- Only one wire may be suspended from each connector and/or anchor.
- Before installing, the instructions for use must be consulted.
- Oil, grease, paint and dirt can reduce the load capacity of the wire system and must be avoided.
- The load capacity values are only valid when this system is used exclusively with Hilti locks, wires, connectors and anchors in the recommended combinations shown in the ITM (larger diameter anchors are permitted).
- Ensure the correct cutting tool is used to cut the wire, as shown in the instructions for use. The cut wire end must be protected from fraying. If the wrong cutting tool is used the wire may not fit into the lock or could unravel over time.
- The wire system locks, MW-L and MW-CL together with wire can be reused maximum 3 times during installation (loaded to maximum load), for the purpose of adjusting the position. Without loading the locks can be repositioned as many times as necessary. The MW-C clip is single-use only.
- For all MW-EB eye-bolt loop applications the load must be applied such that the eye-bolt and wire are aligned (±5°). Counter nuts must be used as shown in the ITM to ensure the eye-bolt does not loosen over time.
- For any applications requiring angles > 5° the MW-C clip in combination with MW-LP wire loop must be used.

CONDITIONS FOR TRANSPORT, STORAGE AND USAGE

- Packaging of all wire system items must not be damaged during transport and storage.
- All wire system items must be transported, stored and used in a dry, indoor (non-condensing) atmosphere
- Corrosion protection class C1 C2 (medium), 15 years ((based on EN ISO 12944-6 and EN ISO 12944-1). For C2 please contact Hilti Engineering Services.
- Do not use in corrosive or chlorinated environments.
- Temperatures:
 - Transportation, storage and operation: -20°C to 50°C
 - Assembly -5°C to 50°C
- Can be used with various base materials. The customer must ensure that the base materials and anchors used have a sufficient load capacity.
- For further information please contact Hilti engineering services.



KIT & ITEM SELECTION TABLE

MW Wire & Lock Kits

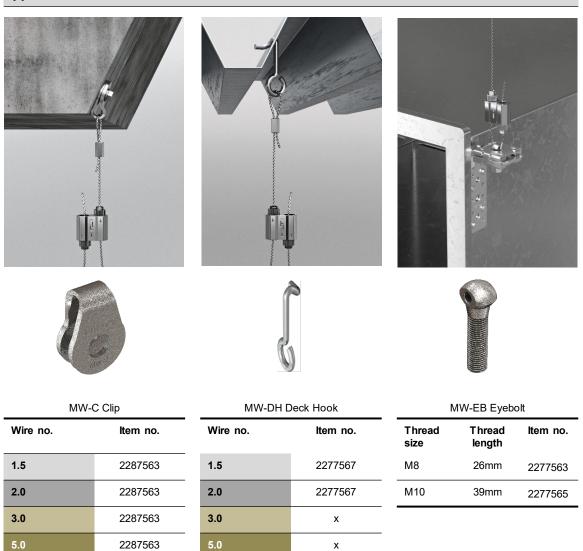
	Wire no.	1.5	2.0	3.0	5.0
	Working load limit	30 kg	56 kg	113kg	270kg
Kit wire & lock	Wire length				
	1m	2280019	2280044	2280049	2280054
	2m	2280040	2280045	2280050	2280055
	3m	2280041	2280046	2280051	2280056
	5m	2280042	2280047	2280052	2280057
MW-EB M8/10/12 L Kit	10m	2280043	2280048	2280053	2280058
	1m	2280072	2280077	2280082	2287096
	2m	2280073	2280078	2280083	2287097
Y Y	3m	2280074	2280079	2280084	2287098
	5m	2280075	2280080	2280085	2287099
MW-LP L Kit	10m	2280076	2280081	2280086	2287580
	Wire no.	1.5	2.0	3.0	5.0
	Working load limit		46kg	98kg	
Channel lock & wire	Working load limit Wire length		46kg	98kg	
Channel lock & wire	•		46kg 2280062	98kg 2280067	
Channel lock & wire	Wire length				
Channel lock & wire	Wire length		2280062	2280067	
Channel lock & wire	Wire length 1m 2m		2280062 2280063	2280067 2280068	
Channel lock & wire	Wire length 1m 2m 3m		2280062 2280063 2280064	2280067 2280068 2280069	
	Wire length 1m 2m 3m 5m		2280062 2280063 2280064 2280065	2280067 2280068 2280069 2280070	
	Wire length 1m 2m 3m 5m 10m		2280062 2280063 2280064 2280065 2280066	2280067 2280068 2280069 2280070 2280071	
	Wire length 1m 2m 3m 5m 10m 1m		2280062 2280063 2280064 2280065 2280066 2280087	2280067 2280068 2280069 2280070 2280071 2280092	
	Wire length 1m 2m 3m 5m 10m 1m 2m		2280062 2280063 2280064 2280065 2280066 2280087 2280088	2280067 2280068 2280069 2280070 2280071 2280092 2280093	



KIT & ITEM SELECTION TABLE

MW Accessories

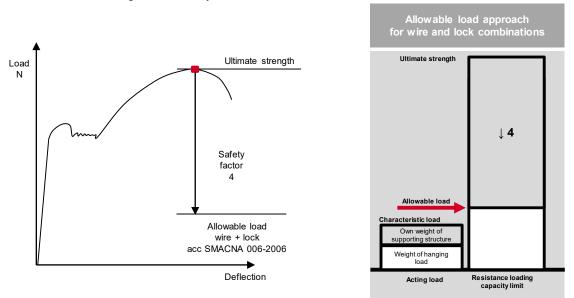
Application



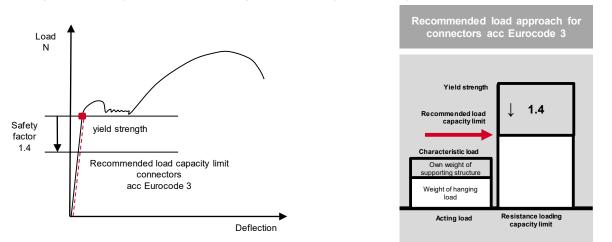


SAFETY FACTORS USED TO CALCULATE LOAD CAPACITIES

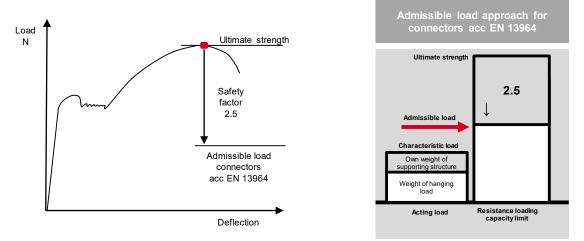
For all **lock and wire combinations**, the **allowable loads** are calculated from the normalized ultimate limit with a safety factor of 4 according to SMACNA 006-2006 (HVAC duct construction standards). SMACNA 006-2006 does not require normalization however this was done as an extra measure to account for the variation in ultimate limit possible with wire produced according to ASTM A1023. Unlike Eurocode 3, SMACNA 006-2006 does not differentiate between the recommended load and the design load but only states an allowable load which must not be exceeded.



For the **connecters** MW-C, MW-DH and MW-EB, the **recommended load** capacity limits are calculated from the normalized yield strength with a safety factor of 1.4 according to Eurocode 3 (DIN EN 1993).



Where the **CE certification according to EN 13964 for suspended ceilings** is required, the **admissible loads** of all wire system components are calculated from the normalized ultimate strength with a safety factor of at least 2.5. EN 13964 does not differentiate between recommended load and design load but only states an admissible load which must not be exceeded.





LOCK AND WIRE KITS ACCORDING TO SMACNA 006-2006

Allowable loads for lock and wire kits according to SMACNA 006-2006

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ble load F _a	Illustration kit content
Kit MW-EB M8 L 1.5/1m	2280019	2278645			1m			
Kit MW-EB M8 L 1.5/2m	2280040	2278646			2m			
Kit MW-EB M8 L 1.5/3m	2280041	2278647	2277466	1.5	3m	0.29 kN	30 kg	
Kit MW-EB M8 L 1.5/5m	2280042	2278648			5m			
Kit MW-EB M8 L 1.5/10m	2280043	2278649			10m			T , Josef
Kit MW-EB M8 L 2.0/1m	2280044	2278690			1m			↓ F _a
Kit MW-EB M8 L 2.0/2m	2280045	2278691			2m			• •
Kit MW-EB M8 L 2.0/3m	2280046	2278692	2277467	2.0	3m	0.55 kN	56 kg	
Kit MW-EB M8 L 2.0/5m	2280047	2278693			5m			
Kit MW-EB M8 L 2.0/10m	2280048	2278694			10m			8
								$\langle \rangle$
Kit MW-EB M8 L 3.0/1m	2280049	2278703			1m			Ŭ
Kit MW-EB M8 L 3.0/2m	2280050	2278704			2m			T
Kit MW-EB M8 L 3.0/3m	2280051	2278695	2277468	3.0	3m	1.11 kN	113 kg	
Kit MW-EB M8 L 3.0/5m	2280052	2278696			5m			
Kit MW-EB M8 L 3.0/10m	2280053	2278705			10m			
Kit MW-EB M10 L 5.0/1m	2220054	0070040			4			7
KIT MIVEB MITUL 5.0/TM	2280054	2278642			1m			$\int \alpha \overline{\lambda}$
Kit MW-EB M10 L 5.0/2m	2280055	2278697			2m	-		
Kit MW-EB M10 L 5.0/3m	2280056	2278698	2277469	5.0	3m	2.65 kN	270 kg	
Kit MW-EB M10 L 5.0/5m	2280057	2278699			5m			
Kit MW-EB M10 L 5.0/10m	2280058	2278700			10m			\smile

The shown load values of allowable loads are based on a safety factor to ultimate strength of 4 as per SMACNA 006-2006 HVAC duct construction guidelines, valid for an opening angle α of up to 60°. Note: final load for a support depends on the set up of the used items! The load capacities of all connected parts must be considered.

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ble load F _a
Kit MW-LP L 1.5/1m	2280072	2277568			1m		
Kit MW-LP L 1.5/2m	2280073	2277569			2m		
Kit MW-LP L 1.5/3m	2280074	2277570	2277466	1.5	3m	0.29 kN	30 kg
Kit MW-LP L 1.5/5m	2280075	2277571			5m		
Kit MW-LP L 1.5/10m	2280076	2277572			10m		
Kit MW-LP L 2.0/1m	2280077	2277573			1m		
Kit MW-LP L 2.0/2m	2280078	2277574			2m		
Kit MW-LP L 2.0/3m	2280079	2277575	2277467	2.0	3m	0.55 kN	56 kg
Kit MW-LP L 2.0/5m	2280080	2277576			5m		
Kit MW-LP L 2.0/10m	2280081	2277577			10m		
Kit MW-LP L 3.0/1m	2280082	2277578			1m		
Kit MW-LP L 3.0/2m	2280083	2277579			2m		.11 kN 113 kg
Kit MW-LP L 3.0/3m	2280084	2277580	2277468	3.0	3m	1.11 kN	
Kit MW-LP L 3.0/5m	2280085	2277581			5m		
Kit MW-LP L 3.0/10m	2280086	2277582			10m		
Kit MW-LP L 5.0/1m	2287096	2287558			1m		
Kit MW-LP L 5.0/2m	2287097	2287559			2m		
Kit MW-LP L 5.0/3m	2287098	2287560	2277469	5.0	3m	2.65 kN	270 kg
Kit MW-LP L 5.0/5m	2287099	2287561			5m		
Kit MW-LP L 5.0/10m	2287580	2287562			10m		

The shown load values of allowable loads are based on a safety factor to ultimate strength of 4 as per SMACNA 006-2006 HVAC duct construction guidelines, valid for an opening angle α of up to 60°. Note: final load for a support depends on the set up of the used items! The load capacities of all connected parts must be considered.

LOCK AND WIRE KITS ACCORDING TO SMACNA 006-2006

Allowable loads for channel lock and wire kits according to SMACNA 006-2006

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length	Allowat +		Illustration kit content	
Kit MW-EB M8 CL 2.0/1m	2280062	2278690			1m				
Kit MW-EB M8 CL 2.0/2m	2280063	2278691			2m				
Kit MW-EB M8 CL 2.0/3m	2280064	2278692	2277562	2.0	3m	0.45 kN	46 kg		
Kit MW-EB M8 CL 2.0/5m	2280065	2278693				5m			A
Kit MW-EB M8 CL 2.0/10m	2280066	2278694			10m				
Kit MW-EB M8 CL 3.0/1m	2280067	2278703			1m				
Kit MW-EB M8 CL 3.0/2m	2280068	2278704			2m				
Kit MW-EB M8 CL 3.0/3m	2280069	2278695	2277562	3.0	3m	0.96 kN	98 kg	↓ F _a	
Kit MW-EB M8 CL 3.0/5m	2280070	2278696			5m				
Kit MW-EB M8 CL 3.0/10m	2280071	2278705			10m				

The shown load values of allowable loads are based on a safety factor to ultimate strength of 4 as per SMACNA 006-2006 HVAC duct construction guidelines. These values are only valid when the wire is aligned with the axis of the eye bolt (± 5°) and hanging vertically.

Note: final load for a support is depending on the set up of the used items! The load capacities of all connected parts must be considered.

Item number Item number ltem number Wire Allowable load Illustration Wire rope Order description **Component Wire** Component Lock Kit kit content size length +Fa Kit MW-LP CL 2.0/1m 2280087 2277573 1m Kit MW-LP CL 2.0/2m 2280088 2277574 2m Kit MW-LP CL 2.0/3m 2280089 2277575 2277562 2.0 3m 0.45 kN 46 kg Kit MW-LP CL 2.0/5m 2280090 2277576 5m Kit MW-LP CL 2.0/10m 2280091 2277577 10m Kit MW-LP CL 3.0/1m 2280092 2277578 1m Kit MW-LP CL 3.0/2m 2280093 2277579 2m Kit MW-LP CL 3.0/3m 2280094 2277580 2277562 3.0 0.96 kN 98 kg 3m Kit MW-LP CL 3.0/5m 2280095 2277581 5m Kit MW-LP CL 3.0/10m 2280096 2277582 10m

The shown load values of allowable loads are based on a safety factor to ultimate strength of 4 as per SMACNA 006-2006 HVAC duct construction guidelines. These values are only valid when the wire is aligned with the axis of the channel lock (± 5°) and hanging vertically.

Note: final load for a support is depending on the set up of the used items! The load capacities of all connected parts must be considered.



CONNECTORS ACCORDING TO EUROCODE 3

Recommended load capacity limits for connectors according to Eurocode 3

Order description	ltem number	Wire rope size	Recommended load +F _x		Illustration
MW-DH	2277567	≤ 2.0	0.55 kN	56 kg	↓ F _x

Shown load values are the recommended loads capacity limits for vertical loads only The partial safety factor for the action is 1.4 relative to the yield strength according to Eurocode 3. Note: Load capacity of interface (profiled sheet metal) needs to be validated separately.

MW-EB M8x26	2277563	≤ 3.0	7.3 kN	745 kg	
MW-EB M10x39	2277565	≤ 5.0	10.8 kN	1101 kg	
					↓ F _x

The shown load values are the recommended loads capacity limits. The partial safety factor for the action is 1.4 relative to the yield strength according to Eurocode 3. The load capacities of all connected parts must be considered. Note: These values are only valid when the applied load is aligned with the axis of the eye bolt ($\pm 5^{\circ}$)

|--|

The shown load values are the recommended loads capacity limits. The partial safety factor for the action is 1.4 relative to the yield strength according to Eurocode 3. Load values are valid for $\alpha = 0^{\circ} - 90^{\circ}$. The load capacities of all connected parts must be considered. Note: Transferred load to anchor depends on prying factor of MW-C at angle α . See table "Prying factor MW-C"

Design load capacity limits for connectors according to Eurocode 3

Order description	ltem number	Wire rope size	Design load +F _x		Illustration
MW-DH	2277567	≤ 2.0	0.77 kN	78.4 kg	F _x

The shown load values are design load capacity limits for vertical loads only. The partial safety factor for the action is 1.0. Note: Load capacity of interface (profiled sheet metal) needs to be validated separately

MW-EB M8x26	2277563	≤ 3.0	10.2 kN	1043 kg	
MW-EB M10x39	2277565	≤ 5.0	15.1 kN	1541 kg	
					↓ F _x

The shown load values are design load capacity limits. The partial safety factor for the action is 1.0. The load capacities of all connected parts must be considered. Note: These values are only valid when the load is applied at an angle of $0^{\circ} \pm 5^{\circ}$ relative to the axis of the eye bolt.

MW-C 2287563	≤ 5.0	6.83 kN	700 kg	∝ F _x
--------------	-------	---------	--------	------------------

The shown load values are design load capacity limits. The partial safety factor for the action is 1.0. Load values are valid for $\alpha = 0^{\circ} - 90^{\circ}$. The load capacities of all connected parts must be considered.

Note: Transferred load to anchor depends on prying factor of MW-C at angle α . See table "Prying factor MW-C"

SUSPENDED CEILINGS ACCORDING TO EN 13964

Admissible loads for lock and wire kits according to EN 13964

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ible load F _a	Illustrat kit cont
Kit MW-EB M8 L 1.5/1m	2280019	2278645			1m			
Kit MW-EB M8 L 1.5/2m	2280040	2278646			2m			
Kit MW-EB M8 L 1.5/3m	2280041	2278647	2277466	1.5	3m	0.29 kN	30 kg	A
Kit MW-EB M8 L 1.5/5m	2280042	2278648			5m			
Kit MW-EB M8 L 1.5/10m	2280043	2278649			10m			
Kit MW-EB M8 L 2.0/1m	2280044	2278690			1m			↓ F _a
Kit MW-EB M8 L 2.0/11	2280044	2278691			2m		56 kg	↓ a
Kit MW-EB M8 L 2.0/3m	2280046	2278692	2277467	2.0	3m	0.55 kN		
Kit MW-EB M8 L 2.0/5m	2280047	2278693	2211401 2.0		5m			
Kit MW-EB M8 L 2.0/10m	2280048	2278694			10m			
								\Box
Kit MW-EB M8 L 3.0/1m	2280049	2278703		3.0	1m		113 kg	Ĭ
Kit MW-EB M8 L 3.0/2m	2280050	2278704			2m	1.11 kN		Т
Kit MW-EB M8 L 3.0/3m	2280051	2278695	2277468		3m			
Kit MW-EB M8 L 3.0/5m	2280052	2278696			5m			l du
Kit MW-EB M8 L 3.0/10m	2280053	2278705			10m			
Kit MW-EB M10 L 5.0/1m	2280054	2278642			1m			$\left(\alpha \right)$
					2m			
Kit MW-EB M10 L 5.0/2m	2280055	2278697		5.0			270 kg	
Kit MW-EB M10 L 5.0/3m	2280056	2278698	2277469	5.0	3m	2.65 kN		
Kit MW-EB M10 L 5.0/5m	2280057	2278699			5m			
Kit MW-EB M10 L 5.0/10m	2280058	2278700			10m			

The shown load values are the "admissible loads" calculated according to EN 13964, valid for an opening angle α of up to 60°. Note: final load for a support is depending on the set up of the used items! The load capacities of all connected parts must be considered.

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ible load F _a	Illustratio kit conte
Kit MW-LP L 1.5/1m	2280072	2277568			1m			
Kit MW-LP L 1.5/2m	2280073	2277569			2m			0
Kit MW-LP L 1.5/3m	2280074	2277570	2277466	1.5	3m	0.29 kN	30 kg	
Kit MW-LP L 1.5/5m	2280075	2277571			5m			
Kit MW-LP L 1.5/10m	2280076	2277572			10m			T to another
Kit MW-LP L 2.0/1m	2280077	2277573			1m			F _a
Kit MW-LP L 2.0/2m	2280078	2277574		2.0	2m	m n 0.55 kN	56 kg	↓ a
Kit MW-LP L 2.0/3m	2280079	2277575	2277467		3m			\cap
Kit MW-LP L 2.0/5m	2280080	2277576			5m			
Kit MW-LP L 2.0/10m	2280081	2277577			10m			I
Kit MW-LP L 3.0/1m	2280082	2277578		3.0	1m		113 kg	
Kit MW-LP L 3.0/2m	2280083	2277579			2m	1.11 kN		1.
Kit MW-LP L 3.0/3m	2280084	2277580	2277468		3m			1.16
Kit MW-LP L 3.0/5m	2280085	2277581			5m			
Kit MW-LP L 3.0/10m	2280086	2277582			10m			$\int \alpha $
Kit MW-LP L 5.0/1m	2287096	2287558			1m			
Kit MW-LP L 5.0/2m	2287097	2287559			2m			
Kit MW-LP L 5.0/3m	2287098	2287560	2277469	5.0	3m	2.65 kN	270 kg	
Kit MW-LP L 5.0/5m	2287099	2287561			5m			
Kit MW-LP L 5.0/10m	2287580	2287562			10m			

The shown load values are the "admissible loads" calculated according to EN 13964, valid for an opening angle α of up to 60°. Note: final load for a support is depending on the set up of the used items! The load capacities of all connected parts must be considered.



SUSPENDED CEILINGS ACCORDING TO EN 13964

Admissible loads for channel lock and wire kits according to EN 13964

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ble load F _a	Illustration kit content
Kit MW-EB M8 CL 2.0/1m	2280062	2278690			1m			
Kit MW-EB M8 CL 2.0/2m	2280063	2278691			2m			
Kit MW-EB M8 CL 2.0/3m	2280064	2278692	2277562	2.0	3m	0.45 kN	46 kg	
Kit MW-EB M8 CL 2.0/5m	2280065	2278693			5m			RS
Kit MW-EB M8 CL 2.0/10m	2280066	2278694			10m			
Kit MW-EB M8 CL 3.0/1m	2280067	2278703			1m			C Y
Kit MW-EB M8 CL 3.0/2m	2280068	2278704			2m			
Kit MW-EB M8 CL 3.0/3m	2280069	2278695	2277562	3.0	3m	0.96 kN	98 kg	↓ F _a
Kit MW-EB M8 CL 3.0/5m	2280070	2278696			5m			
Kit MW-EB M8 CL 3.0/10m	2280071	2278705			10m			

The shown load values are the "admissible loads" calculated according to EN 13964.

These values are only valid when the wire is aligned with the axis of the eye bolt (± 5°) and hanging vertically.

Note: final load for a support is depending on the set-up of all used items! The load capacities of all connected parts must be considered.

Order description	ltem number Kit	ltem number Component Wire	ltem number Component Lock	Wire rope size	Wire length		ible load F _a
Kit MW-LP CL 2.0/1m	2280087	2277573			1m		
Kit MW-LP CL 2.0/2m	2280088	2277574			2m		
Kit MW-LP CL 2.0/3m	2280089	2277575	2277562	2.0	3m	0.45 kN	46 kg
Kit MW-LP CL 2.0/5m	2280090	2277576			5m		
Kit MW-LP CL 2.0/10m	2280091	2277577			10m		
Kit MW-LP CL 3.0/1m	2280092	2277578			1m		
Kit MW-LP CL 3.0/2m	2280093	2277579			2m		
Kit MW-LP CL 3.0/3m	2280094	2277580	2277562	3.0	3m	0.96 kN	98 kg
Kit MW-LP CL 3.0/5m	2280095	2277581			5m		
Kit MW-LP CL 3.0/10m	2280096	2277582			10m		

The shown load values are the "admissible loads" calculated according to EN 13964.

These values are only valid when the wire is aligned with the axis of the eye bolt (± 5°) and hanging vertically.

Note: final load for a support is depending on the set-up of all used items! The load capacities of all connected parts must be considered.

Admissible loads for connectors according EN 13964

Order description	ltem number	Wire rope size	Admissi +	ble load F _a	Illustration
MW-DH	2277567	≤ 2.0	0.48 kN	49 kg	Fa

The shown load values are the "admissible loads" calculated according to EN 13964. Note: Load capacity of interface (profiled sheet metal) needs to be validated separately

MW-EB M8x26	2277563	≤ 3.0	5.32 kN	542 kg	
MW-EB M10x39	2277565	≤ 5.0	9.22 kN	939 kg	
					↓ F _a

The shown load values are the "admissible loads" calculated according to EN 13964.

Note: These values are only valid when the load is applied at an angle of 0° ± 5° relative to the axis of the eye bolt.

The shown load values are the "admissible loads" calculated according to EN 13964.

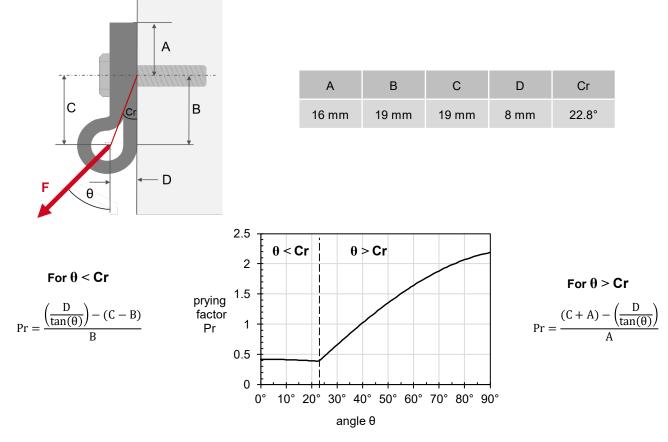
Load values are valid for $\alpha = 0^{\circ} - 90^{\circ}$.

Note: The load transferred to the anchor depends on the prying factor of MW-C at angle a. See table "Prying factor MW-C"



PRYING FACTOR OF MW-C AND THE FORCE TRANSFERRED TO THE ANCHOR

The load capacities of all connected components must be considered in combination with all MW items. In particular, the effective force transferred to the anchor must be considered and compared with the load capacity of the anchor. When a load is suspended from a MW-C clip, the effective tensile force transferred to the anchor due to leverage effects can be calculated from the prying factor **Pr** using the formulas below (according to NFPA 13-2016). For example, where the angle **0** between base material and direction of loading is 90°, the prying factor **Pr** is 2.2. Accordingly, when 1 kN is hung from the clip, the tensile force transferred to the anchor is 2.2 kN.



For example, when the MW-C clip is used at the maximum load of 500 kg (F = 4.91 kN), the prying factor and effective tensile load transferred to the anchor for different angles is shown in the table below. The higher the angle, the higher the tensile load resulting at the anchor. For certain set-ups, the load capacity of the anchor within a certain base material may be the limiting factor. This must be calculated to ensure that the load capacity of the anchor is not exceeded.

Angle relative to the base material, θ	0°	15°	30°	45°	60°	75°	90°
Prying factor, Pr	0.42	0.41	0.66	1.19	1.65	1.99	2.19
Tensile load (kN) transferred to the anchor at the maximum load capacity of the clip (F = 4.91kN)	2.07	2.00	3.26	5.86	8.08	9.75	10.76

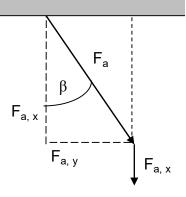
HANGING AT NON-VERTICAL ANGLES

When a load is not hung vertically, the angle, β , is the angle of the load relative to the vertical axis. The tables of allowed loads F_a for the **wire kits** are based on the load being suspended vertically $\beta = 0^\circ$. For any other angle ($\beta > 0^\circ$), the vertical component of the allowed load $F_{a, x}$ is reduced according trigonometry using the to the formula below:

$$F_{a, x} = F_a \cos(\beta)$$

The horizontal load can also be calculated:

$$F_{a, y} = F_a \sin(\beta)$$







Ventilation - Single Fastening Point Fixed On a Concrete Slab:

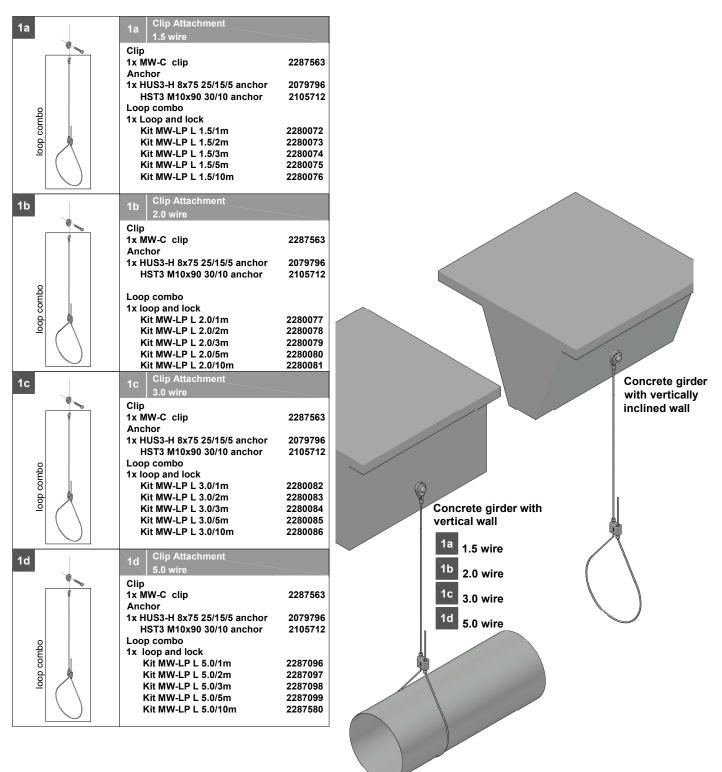
1a ekepolt compo	1aScrew anchor, M8 support1.5 wire1xscrew anchorHUS-I 6x35 M8/M10 anchorHUS-I 6x55 M8/M10 anchor1xM8 nutEyebolt combo1xeyebolt and lock(x) FW 5 F0 (x) FW 5 F0 (x)	2a 416740 423180 2184504 2280019 2280019	2a-cFlush anchor, M8 support 1.5, 2.0, 3.0 wireAnchor1xflush anchorHKD M8x25 anchor376957HKD M8x30 anchor376959HKD M8x40 anchor3769611xM8 nut2184504
G	Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	2280019 2280040 2280041 2280042 2280043	Eyebolt combo 1x the same combos as 2a - 1a $2b - 1b$ $2c - 1c$
1b	1b Screw anchor, M8 support 2.0 wire	2d	2d Flush anchor, M10 support 5.0 wire
eyebolt combo	1xscrew anchorHUS-I 6x35 M8/M10 anchorHUS-I 6x55 M8/M10 anchor1xM8 nutEyebolt combo1xeyebolt and lockKit MW-EB M8 L 2.0/1mKit MW-EB M8 L 2.0/2mKit MW-EB M8 L 2.0/3mKit MW-EB M8 L 2.0/3mKit MW-EB M8 L 2.0/5mKit MW-EB M8 L 2.0/10m	416740 423180 2184504 2280044 2280045 2280046 2280047 2280048	Anchor 1x flush anchor HKD M10x25 anchor 2037453 HKD M10x30 anchor 376965 HKD M10x40 anchor 376967 1x M10 nut 2184505 Eyebolt combo 1x the same combos as 2d - 1d
1c	1c Screw anchor, M8 support 3.0 wire		
eyebolt combo	1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m	416740 Screw ancho 423180 Screw ancho 2184504 1a 1.5 wire 2280049 1b 2280050 1c 3.0 wire	or Flush anchor 2a 1.5 wire 2b 2.0 wire 2c 3.0 wire
1d	Kit MW-EB M8 L 3.0/10m 1d Screw anchor, M10 support	2280053 1d 5.0 wire	
eyebolt combo	5.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M10 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/10m	416740 423180 2184505 2280054 2280055 2280056 2280057 2280058	

Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Concrete	1	Wire system	Concrete
 General comments Loading must always be compared with the capacity of the anchor within the chosen base material Only for vertically suspended loads. Eye-bolt not suitable for bracing. 		Anchors	

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Ventilation - Single Fastening Point Fixed On Side Of a Concrete Girder:



Ap	plication description	Application	Product lines	Base material
Wire	e system - Ventilation - Single Fastening Point On Side of a Concrete Girder		Wire system	Concrete
Ger •	heral comments Loading must always be compared with the capacity with the capacity of the		Anchors	
\.	anchor within the chosen base material. This capacity is affected by the angle of loading from the vertical and the prying factor	0	\	
•	Only one wire may be suspended on each clip			
• Hilti stro	Only one wire may be suspended on each clip	ural engineer and making	the necessary calculations	to ensure compliance with t

Hill strongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and hed the advice of a structural engineer will free Hill inbility. It is essential that the product is used strictly in accordance with the applicable hill instructions for use, within the application limits specified in the Hill technical data sheets, technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.



Ventilation - Single Fastening Point Fixed On Metal Deck:

13 10 Deck hook 227 13 10 Deck hook 2277567 14 10 yric Deck hook 2277567 15 100 g and lock 10 280076 16 15 2280072 15 17 100 g and lock 15 2280072 18 10 15 2280074 18 10 15 2280074 18 10 Deck hook 2280076 19 10 Deck hook 2280076 12 10 Deck hook 2280076 13 NW-DH deck hook 2277567 14 10 Deck hook 2277567 15 10 Deck hook 2280076 14 10 Deck hook 2280077 15 Nit W-LP L 2.0/1m 2280077 16 10 Deck hook 2280077 17 Nit W-LP L 2.0/1m 2280078 18 Nit W-LP L 2.0/2m 2280077 </th
000000000000000000000000000000000000
Ib Deck hook 2.0 wire 2280075 2280076 1b Deck hook 2.0 wire 2280076 1b Deck hook 2.0 wire 2280076 1b Deck hook 2.0 wire 2280076 1c Deck hook 2.0 wire 2280076 1c Deck hook 2.0 wire 2280076 1c Deck hook 1x MW-DH deck hook 2.0 wire 22877567 1cop combo 1x MW-DH deck hook 1x loop and lock Kit MW-LP L 2.0/1m 2280076 Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 2.0/3m 2280078 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/1m 2280081 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/1m 2280081 Through bolted V-hanger 2280061 1x MBX120 4.8 h-head screw 2280081 1x AM8x120 4.8 h-head screw 228041 1x M8 nut 2184504 1x M8 nut 2184504 1x wy-EB M8 L 1.5/2m 2280041 1x MW-EB M8 L 1.5/2m
Nit MW-LP L 1.5/fm 22800/5 1b Deck hook 2280076 200 Deck hook 2280076 1b Deck hook 2280076 1b Deck hook 228076 1c Deck hook 228076 1c Deck hook 228076 1c Deck hook 2277567 Loop combo 1x MW-DH deck hook 2277567 Loop combo 1x MW-LP L 2.0/1m 2280076 1x MW-LP L 2.0/1m 2280077 Kit MW-LP L 2.0/1m 2280078 Kit MW-LP L 2.0/1m 2280078 Kit MW-LP L 2.0/1m 2280078 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/1m 2280081 Through bolted V-hanger 2280081 1x AM8x120 4.8 h-head screw 2280081 1x AM8x120 4.8 h-head screw 208041 1x M8 nut 2184504 1x AM8 nut 2184504 1x AM8x120 4.8 h-head screw 208041 1x MW-EB M8 L 1.5/2m 2280041 1x MW-EB M8 L 1.5/2m 2
15 Job Dotting 15 2.0 wire Deck hook 2277567 Loop combo 1x loop and lock Kit MW-EB M8 L 3.0/2m 2280059 Kit MW-LP L 2.0/1m 2280079 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/1m 2280081 Through bolted V-hanger 2280080 Y-Hanger 1.5 wire 1x MB-TSH M8 V-hanger 2280061 1x MB nut 2184504 1x M8x120 4.8 h-head screw 2063165 2x M8 nut 2184504 Eyebolt and lock 1.5 wire 1x eyebolt and lock 1.5 wire 1x eyebolt and lock 1.5 wire 1x M8x120 4.8 h-head screw 2063165 2x M8 nut 2184504 Eyebolt and lock 1.5 wire 1x eyebolt and lock 1.5 wire 1x
Oggo Deck hook 2277567 1x NW-DH deck hook 2277567 Loop combo 1x loop and lock 1x loop and lock 2280077 Kit MW-LP L 2.0/1m 2280077 Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/3m 2280081 Through bolted V-hanger 2280061 1.5 wire V-Hanger 1.5 1.5 wire V-Hanger 2184504 1x< M8x1000 fixed t-rod 339793 4x< M8 nut 2184504 Through-bolt version 1 t-rod 1x AM8x1000 fixed t-rod 1x< eyebolt combo 2184504 1x wire 1x wire 1x eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/2m 2280
2a Through bolted V-hanger 1.5 wire V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Manger 21 V-Nanger 21 V-hanger 21 V-hanger 21 V-hanger 21 V-hanger 20 V-hanger
2a Through bolted V-hanger 1.5 wire V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Hanger 1.5 wire 21 V-Hanger 21 V-hanger 21 V-hanger 21 V-hanger 21 V-hanger 20 V-hanger
2a Through bolted V-hanger 1.5 wire V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Hanger 2.0 wire 21 V-Hanger 1.5 wire 21 V-Hanger 1.5 wire 21 V-Hanger 21 V-hanger 21 V-hanger 21 V-hanger 21 V-hanger 20 V-hanger
2d 1.5 wire V-Hanger 229006 1x MF-TSH M8 V-hanger 229006 1x MF-TSH M8 V-hanger 229006 1x M8 nut 2184504 Through-bolt version 1 t-rod 339793 4x M8 nut 2184504 Through-bolt version 2 long h-head screw 2063165 2x M8 nut 2184504 Through-bolt version 2 long h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x M8x120 4.8 h-head screw 1x M8x120 4.8 h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041 1b 2 0 wire
Ix MF-TSH M8 V-hanger 229006 1x MF-TSH M8 V-hanger 229006 1x M8 nut 2184504 Through-bolt version 1 t-rod 339793 4x M8 nut 2184504 Through-bolt version 2 long h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041
1x M8 nut 2184504 Through-bolt version 1 t-rod 339793 4x M8 nut 2184504 Through-bolt version 2 long h-head screw 2184504 Through-bolt version 2 long h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x M8x120 4.8 h-head screw 1x M8x120 4.8 h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041
1x AM8x1000 fixed t-rod 339793 4x M8 nut 2184504 Through-bolt version 2 long h-head screw 1x M8x120 4.8 h-head screw 1x M8x120 4.8 h-head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041
1x eyebolt and lock 1x eyebolt and lock 2280019 1a 1.5 wire 2c 3.0 wire Kit MW-EB M8 L 1.5/2m 2280040 1b 1.5 wire 1b 2.0 wire 1c 1c<
1x eyebolt and lock 1x eyebolt and lock 2280019 1a 1.5 wire 2c 3.0 wire Kit MW-EB M8 L 1.5/2m 2280040 1b 1.5 wire 1b 2.0 wire 1c 1c<
1x eyebolt and lock 1x eyebolt and lock 2280019 1a 1.5 wire 2c 3.0 wire Kit MW-EB M8 L 1.5/2m 2280040 1b 1.5 wire 1b 2.0 wire 1c 1c<
Kit MW-EB M8 L 1.5/1m 2280019 1a 1.5 wire Kit MW-EB M8 L 1.5/2m 2280040 1b 2.0 wire
Kit MW-EB M8 L 1.5/10m 2280043
2b 2b Through bolted V-hanger 2.0 wire V-Hanger
1x MF-TSH M8 V-hanger 229006 1x M8 nut 2184504
Through-bolt version 1-t-rod
org 1x AM8x1000 fixed t-rod 339793 4x M8 nut 2184504 Through-bolt ver. 2-long h-head screw
경 Through-bolt ver. 2-long h-head screw 성 1x M8x120 4.8 hex. head sc. 2063165
Column 1x M8x120 4.8 hex. head sc. 2063165 1 2x M8 nut 2184504 1 Eyebolt combo 2184504
1x eyebolt and lock Kit MW-EB M8 L 2.0/1m 2280044
Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/3m 2280046
Kit MW-EB M8 L 2.0/5m 2280047
Kit MW-EB M8 L 2.0/10m 2280048

Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Metal Deck	1	Wire system	Metal deck
 General comments Loading must always be compared with the capacity of the metal deck and where relevant the V-hanger The deck hook must hang vertically from the deck and is for vertical loads only. Only one wire may be suspended on each deck hook. 		Anchors	

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Version 2.2 from 12.2021, Page 23



Ventilation - Single Fastening Point Fixed On Metal Deck:

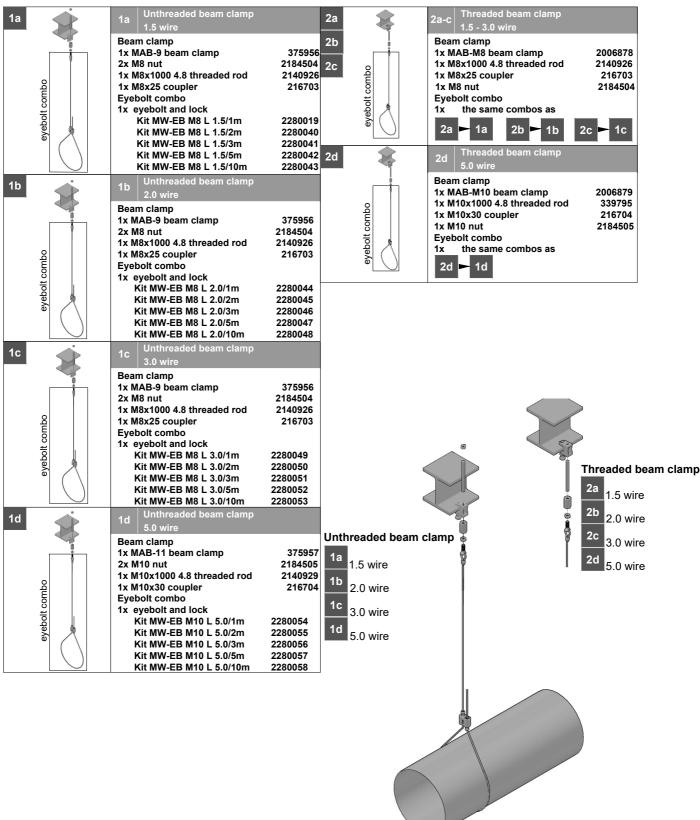
			- B		· · · · · · · · · · · · · · · · · · ·	
1a	*****	1aThrough bolted V hanger with integrated nut, 1.5 wire		2b	2b Self-tapping screws and V- with integrated hex nut, 2.0	
	odm	Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod	386558 2184504 339793 184504	odin	V-Hanger 1x MVA-MS M8 V-hanger 1x M8 nut Self-tapping screws 6x S-MS 01Z 4.0x13 S-screw Eyebolt combo	386558 2184504 406471
	eyebolt combo	Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2 Kit MW-EB M8 L 1.5/2m 2 Kit MW-EB M8 L 1.5/3m 2 Kit MW-EB M8 L 1.5/5m 2	280019 280040 280041 280042 280043	eyebolt combo	1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/5m Kit MW-EB M8 L 2.0/10m	2280044 2280045 2280046 2280047 2280048
1b		1b Through bolted V hanger with integrated nut, 2.0 wire		2c	2c Self-tapping screws and V- with integrated hex nut, 3.0	
	oq	V-Hanger 1x MVA-MS M8 V-hanger 1x M8 nut 2 Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod	386558 2184504 339793		V-Hanger 1x MVA-MS M8 V-hanger 1x M8 nut Self-tapping screws 6x S-MS 01Z 4.0x13 S-screw	386558 2184504 406471
	eyebolt combo	4x M8 nut 2 Eyebolt combo 2 1x eyebolt and lock 2 Kit MW-EB M8 L 2.0/1m 2 Kit MW-EB M8 L 2.0/2m 2 Kit MW-EB M8 L 2.0/2m 2 Kit MW-EB M8 L 2.0/3m 2	184504 280044 280045 280046	eyebolt combo	Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m	2280049 2280050 2280051 2280052
		Kit MW-EB M8 L 2.0/10m 22	280047 280048	\bigcirc	Kit MW-EB M8 L 3.0/10m	2280053
1c		integrated nut, 3.0 wire V-Hanger				
	eyebolt combo	Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod 4x M8 nut 2	386558 2184504 339793 184504			
	eyeboli	Kit MW-EB M8 L 3.0/2m 2 Kit MW-EB M8 L 3.0/3m 2 Kit MW-EB M8 L 3.0/5m 2	280049 280050 280051 280052 280053	Through bolted V-hanger 1a 1.5mm wire		Self tapping screw V-hanger 2a 1.5mm wire
2a	V×.	2a Self-tapping screws and V-Har with integrated hex nut, 1.5 with	nger	1b 2.0mm wire		^{2b} 2.0mm wire ^{2c} 3.0mm wire
	oque	V-Hanger 1x MVA-MS M8 V-hanger 1x M8 nut 2 Self-tapping screws 6x S-MS 01Z 4.0x13 S-screw Eyebolt combo	386558 2184504 406471	1c 3.0mm wire		
	eyebolt combo	Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m	2280019 2280040 2280041 2280042 2280043			
L						

Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Metal Deck		Wire system	Metal Deck
 General comments Loading must always be compared with the capacity of the metal deck and V-hanger Only for vertically suspended loads. Not suitable for bracing. 		Anchors	
Willi strangly advices sustamare to verify the respective product application for the intended use by consulting a struct			4

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Ventilation - Single Fastening Point Fixed On Structural Steel Using Beam Clamp:

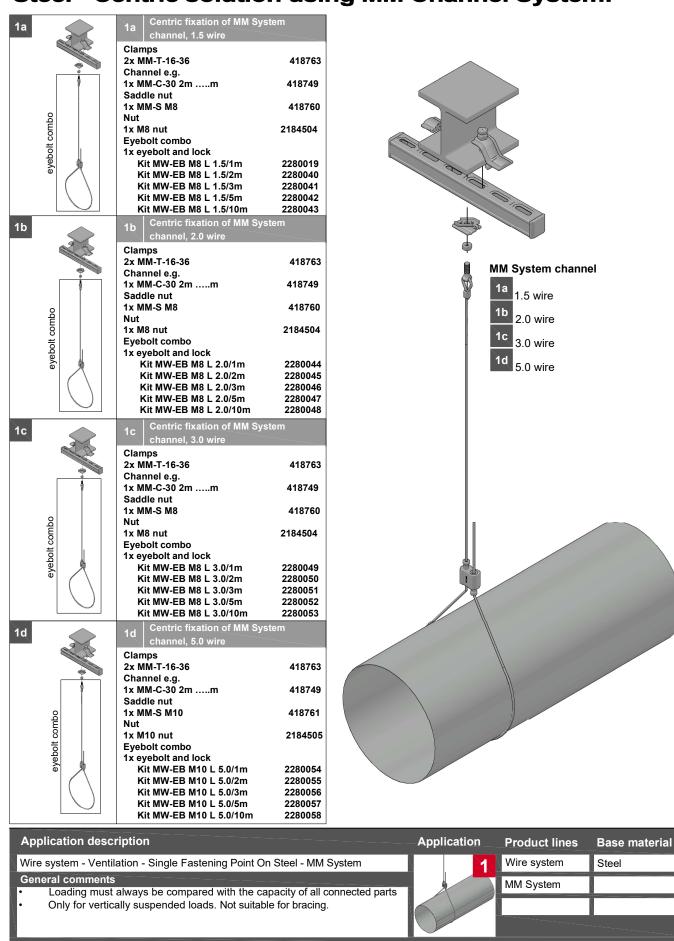


Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Structural Steel	1	Wire system	Structural steel
 General comments Loading must always be compared with the capacity of the beam clamp and structural steel Only for vertically suspended loads. Not suitable for bracing. 		Anchors	

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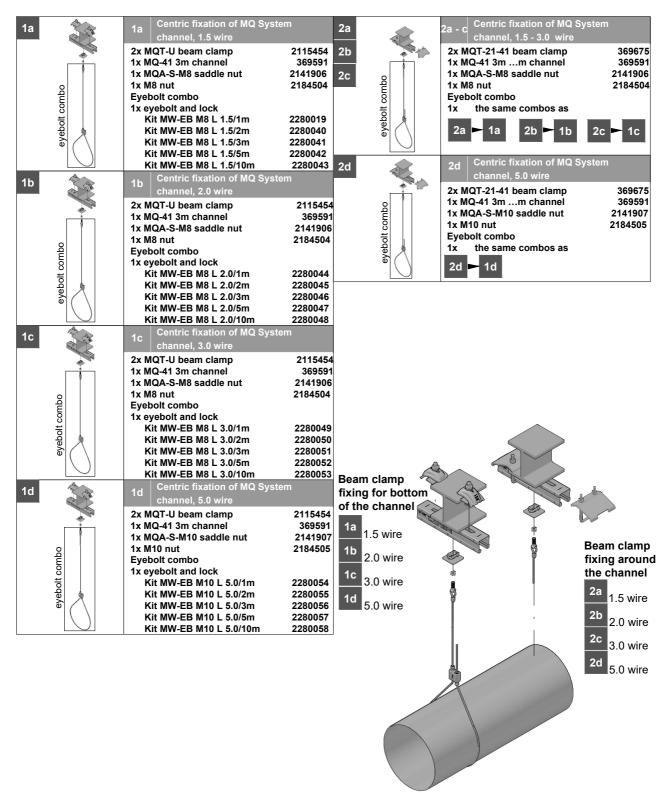
Ventilation - Single Fastening Point Fixed On Structural Steel - Centric solution using MM Channel System:



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Ventilation - Single Fastening Point Fixed On Structural Steel - Centric solution using MQ Channel System:

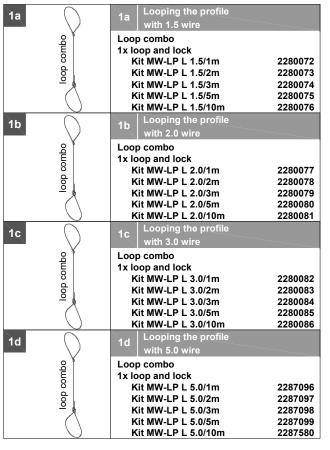


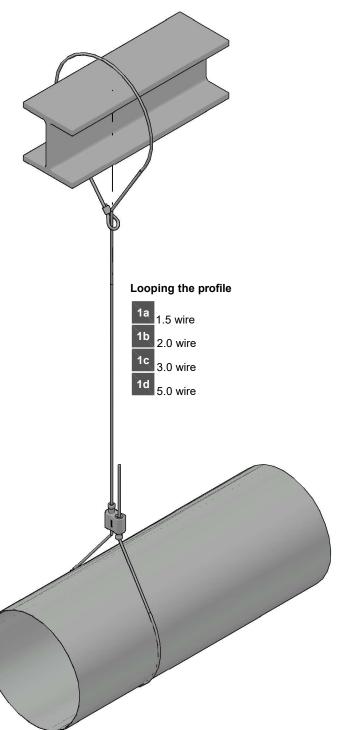
Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Steel - MQ System	1	Wire system	Steel
General comments Loading must always be compared with the capacity of all connected parts 		MM System	
Only for vertically suspended loads. Not suitable for bracing.			
Hiti strongly advises customers to varify the respective product application for the intended use by consulting a struct	ural engineer and making	the necessary calculations t	to ensure compliance with the

Hill strongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hill insufficient to the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hill insufficient to the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hill insufficient and standards. Failure to consult and heed the advice of a structural engineer will free Hill insufficient and standards. Failure to consult in the applicable here advice of a structural engineer will free Hill insufficient and standards. Failure to consult in application limits specified in the Hill instructions for use, within the application limits specified in the Hill itechnical data sheets, technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.



Ventilation - Single Fastening Point Fixed On Structural Steel - Looping The Profile:



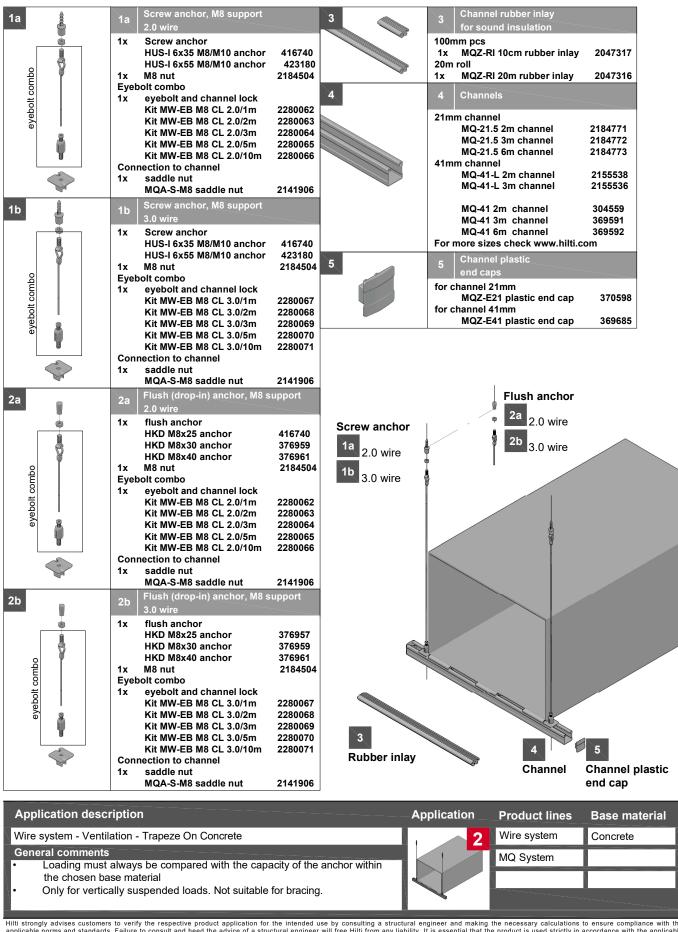


Application description	Application	Product lines	Base material
Wire system - Ventilation - Single Fastening Point On Steel - Looping the profile		Wire system	Steel
 General comments Loading must always be compared with the capacity of the structural steel Sharp edges must be avoided to prevent damage to the wire 			

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Ventilation - Trapeze Fixed On Concrete Slab - MQ System:



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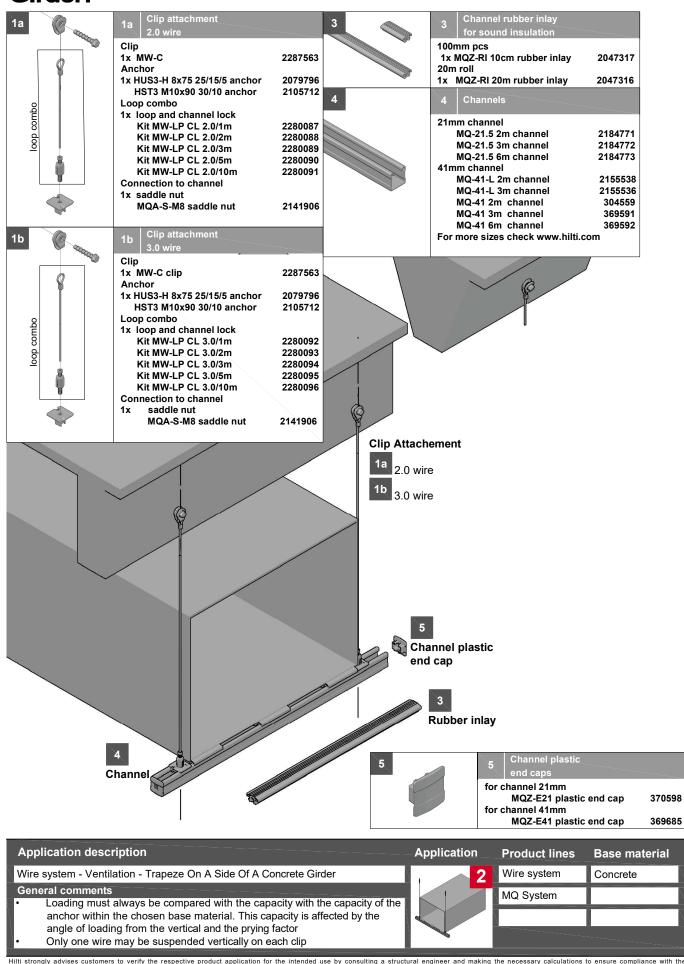
Ventilation - Trapeze Fixed On Concrete Slab - MM System:

	Loading must the chosen ba	always be compared with the cap se material ally suspended loads. Not suitable			MM System	
Nire s	ication descr system - Ventil ral comments	iption ation Trapeze On Concrete - MM \$	System	Ap	plication Product lines 2 Wire system	Base materia
nnl	ication descr	MM-S-M8 saddle nut	418760		nlication Broduct lines	end cap
eyeb		Kit MW-EB M8 CL 3.0/1m Kit MW-EB M8 CL 3.0/2m Kit MW-EB M8 CL 3.0/3m Kit MW-EB M8 CL 3.0/5m Kit MW-EB M8 CL 3.0/10m Connection to channel 1x saddle nut	2280067 2280068 2280069 2280070 2280071	3 Rubber inlay	4 Channel	5 Channel plast
eyebolt combo		HKD M8x25 anchor HKD M8x30 anchor HKD M8x40 anchor 1x M8 nut Eyebolt combo 1x eyebolt and channel lock	376957 376959 376961 2184504			
P		MM-S-M8 saddle nut 2b Flush Anchor, M8 Support 3.0 wire 1x flush anchor	418760			
eyebo		Kit MW-EB M8 CL 2.0/2m Kit MW-EB M8 CL 2.0/3m Kit MW-EB M8 CL 2.0/5m Kit MW-EB M8 CL 2.0/10m Connection to channel 1x saddle nut	2280063 2280064 2280065 2280066			
eyebolt combo		HKD M8x40 anchor 1x M8 nut Eyebolt combo 1x eyebolt and channel lock Kit MW-EB M8 CL 2.0/1m	376961 2184504 2280062	1a 2.0 wire 1b 3.0 wire	0.0 wire	
		2a Flush Anchor, M8 Support 2.0 wire 1x flush anchor HKD M8x25 anchor HKD M8x30 anchor	416740 376959	Screw anchor	Flush anchor 2a 2.0 wire 2b 3.0 wire	
		Kit MW-EB M8 CL 3.0/10m Connection to channel 1x saddle nut MM-S-M8 saddle nut	2280070 2280071 418760			
eyebolt combo	8	1x eyebolt and channel lock Kit MW-EB M8 CL 3.0/1m Kit MW-EB M8 CL 3.0/2m Kit MW-EB M8 CL 3.0/3m Kit MW-EB M8 CL 3.0/5m	2280067 2280068 2280069 2280070		MM-E-36 plastic end cap	418775
po	8	1x Screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo	416740 423180 2184504		MM-E-16 plastic end cap for 30mm channel MM-E-30 plastic end cap for 36mm channel	418773 418774
	() ()	1b Screw Anchor, M8 Support 3.0 wire	410100	5	5 MM System Channel Plastic End Caps for 16mm channel	>
Ð		Kit MW-EB M8 CL 2.0/3m Kit MW-EB M8 CL 2.0/5m Kit MW-EB M8 CL 2.0/10m Connection to channel 1x saddle nut MM-S-M8 saddle nut	2280064 2280065 2280066 418760		MM-C-16 channel 30mm channel MM-C-30 36mm channel MM-C-36 For more sizes check www.hilti.c	418748 418749 418750 om
eyebolt combo		Eyebolt combo 1x eyebolt and channel lock Kit MW-EB M8 CL 2.0/1m Kit MW-EB M8 CL 2.0/2m	2280062 2280063	4	4 MM System Channels	
oqu		1x Screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut	416740 423180 2184504		100mm pcs 1x MM-RI 10cm rubber inlay 20m roll 1x MM-RI 20m rubber inlay	418768 418767
l		1aScrew Anchor, M8 Support2.0 wire		3	3 MM System Channel Rubbe For Sound Insulation	

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Ventilation - Trapeze Fixed On A Side Of A Concrete Girder:



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Ventilation - Trapeze Fixed On Metal Deck:

1a opupo doo 2a	1a Deck hook 2.0 wire Deck hook 1x 1x MW-DH deck hook Loop combo 1x 1x loop and channel lock Kit MW-LP CL 2.0/1m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/3m Kit MW-LP CL 2.0/3m Kit MW-LP CL 2.0/10m Connection to channel 1x saddle nut MQA-S-M8 saddle nut 2a Through bolted V-hanger 2.0 wire V-Hanger 1x 1x MF-TSH M8 V-hanger 1x M8 nut Through-bolt version 1-t-rod	2277567 2280087 2280088 2280089 2280090 2280091 2141906 2141906 2184504	5	4 MQ System channel 21mm channel MQ-21.5 2m channel MQ-21.5 3m channel MQ-21.5 6m channel MQ-21.5 6m channel MQ-21.5 6m channel 41mm channel MQ-41.2 m channel MQ-41.2 m channel MQ-41.2 m channel MQ-41.4 3m channel MQ-41 3m channel MQ-41 6m channel MQ-41 6m channel For more sizes check www.hilti. 5 Channel plastic end caps for channel 21mm MQZ-E21 plastic end cap for channel 41mm MQZ-E41 plastic end cap	2184771 2184772 2184773 2155538 2155536 304559 369591 369592 com
evebolt combo	1x AM8x1000 fixed t-rod 4x M8 nut Through-bolt ver. 2-long h-head s 1x M8x120 4.8 hex. head sc. 2x M8 nut Eyebolt combo 1x eyebolt and channel lock Kit MW-EB M8 CL 2.0/1m Kit MW-EB M8 CL 2.0/2m Kit MW-EB M8 CL 2.0/3m Kit MW-EB M8 CL 2.0/3m Kit MW-EB M8 CL 2.0/10m Connection to channel 1x saddle nut MQA-S-M8 saddle nut 2h Through bolted V-hanger	339793 2184504 crew 2063165 2184504 2280062 2280063 2280063 2280064 2280065 2280066 2141906		2a 2.0	jh bolted V-ha) wire) wire
even of the second of the seco	2b Inrough bolted v-hanger 3.0 wire V-Hanger 1x MF-TSH M8 V-hanger 1x M8 nut Through-bolt version 1 t-rod 1x AM8x1000 fixed t-rod 4x M8 nut Through-bolt version 2 long h-head 1x M8x120 4.8 h-head screw 2x M8 nut Eyebolt combo 1x eyebolt and channel lock Kit MW-EB M8 CL 3.0/1m Kit MW-EB M8 CL 3.0/2m Kit MW-EB M8 CL 3.0/3m Kit MW-EB M8 CL 3.0/1m Kit MQA-S-M8 saddle nut	229006 2184504 339793 2184504 ad screw 2063165 2184504 2280067 2280068 2280069 2280070 2280071 2280071 2141906	Deck hook 1a 2.0 wire		
3	3 Channel rubber inlay for sound insulation 100mm pcs 1x 1x MQZ-RI 10cm rubber inlay 20m roll 1x 1x MQZ-RI 20m rubber inlay	2047317 2047316	3		5
			Rubber inlay	Channel	Channel plas

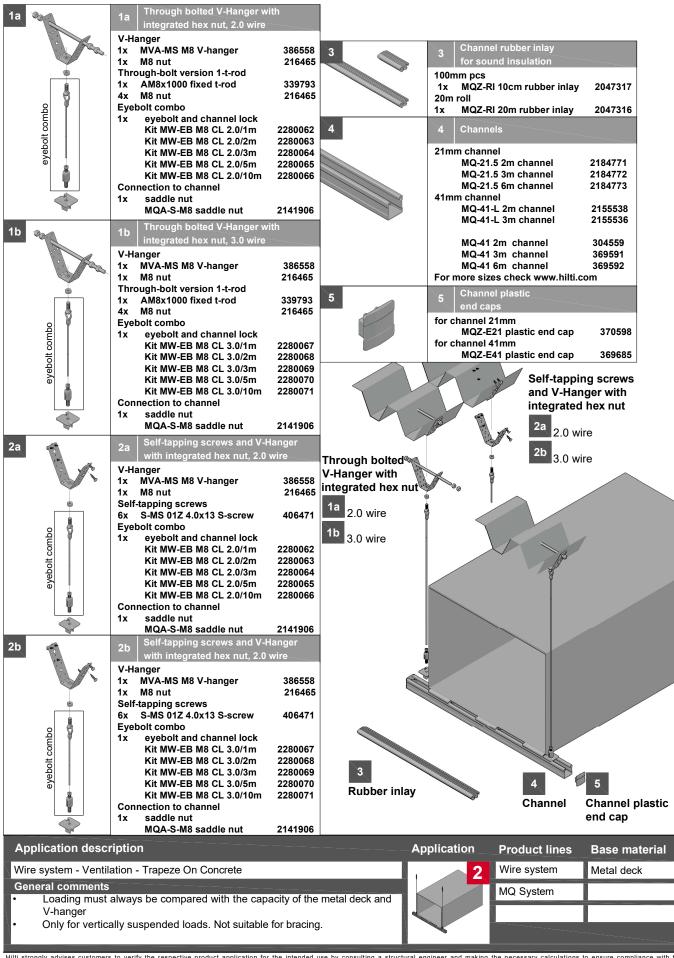
end cap

Application description	Application	Product lines	Base material
Wire system - Ventilation - Trapeze On Concrete	1 2	Wire system	Metal deck
 General comments Loading must always be compared with the capacity of the metal deck and where relevant the V-hanger. The deck hook or eyebolt must hang vertically from the deck. Only one wire may be suspended on each deck hook. 		MQ System	

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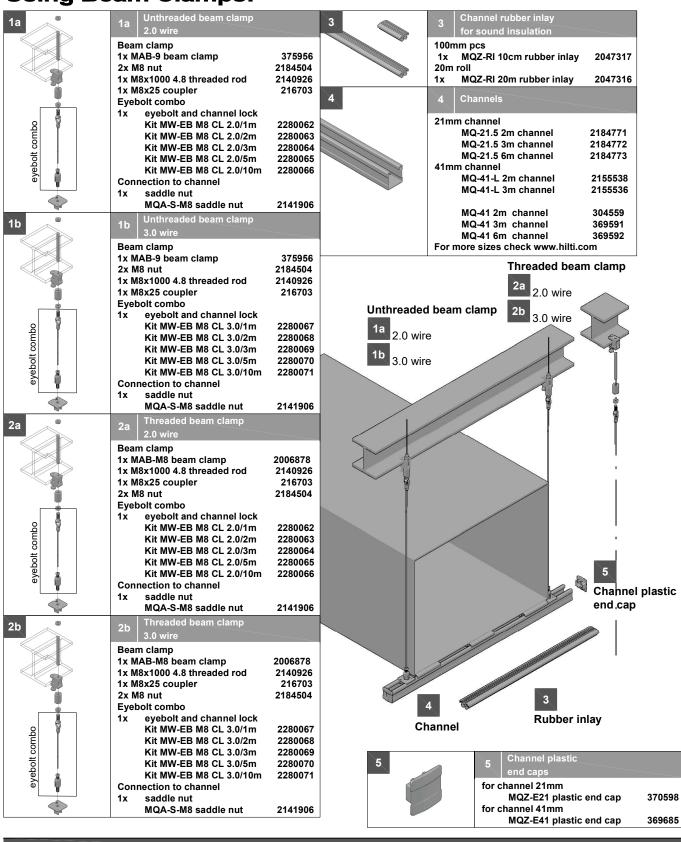
Ventilation - Trapeze Fixed On Metal Deck:



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Ventilation - Trapeze Fixed On A Structural Steel Profiles Using Beam Clamps:



Application description		Application	Product lines	Base material
Wire system - Ventilation - Trapeze On Structural Steel F	rofiles - Beam Clamps	, 2	Wire system	Steel
General comments Loading must always be compared with the capacity 	ty of the beam clamp and		MQ System	
structural steel Only for vertically suspended loads. Not suitable fo	· ·			
Hill standy advises sustance to unify the consective and at application for the		~		·

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Ventilation - Trapeze Fixed On A Structural Steel Profiles - Centric solution using MM Channel System:

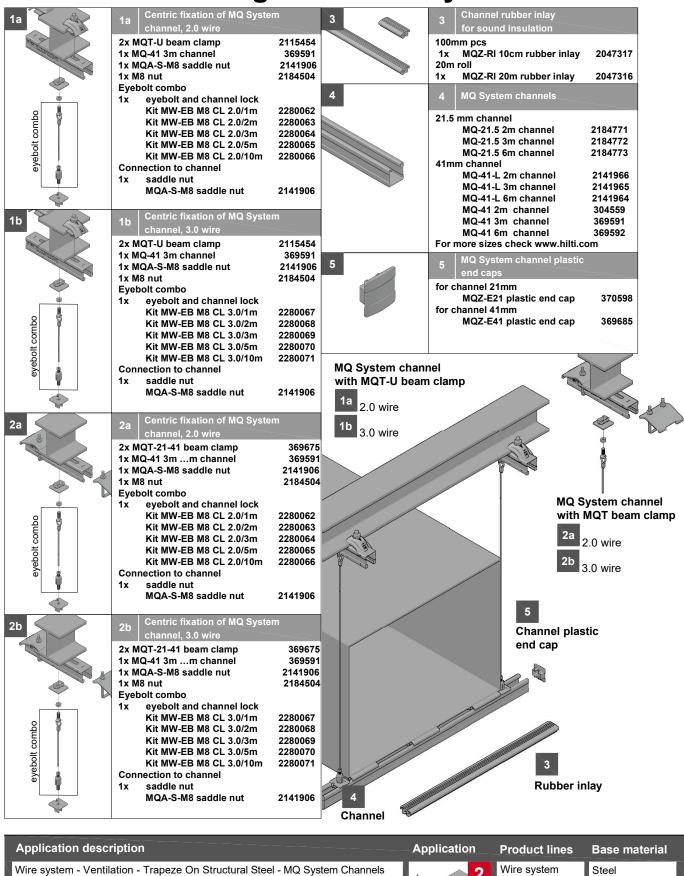
- Centric	solution usir	ng MN	I Channe	el System:
1a	1a Centric fixation of MM Systems channel, 2.0 wire	stem	3	3 Channel rubber inlay for sound insulation
	Clamps 2x MM-T-16-36 Channel e.g.	418763		100mm pcs 1x MM-RI 10cm rubber inlay 418766 20m roll
	1x MM-C-30 2mm Saddle nut	418749		1x MM-RI 20m rubber inlay 418767
	1x MM-S M8 Nut	418760	4	4 MM System channels
eyebolt combo	1x M8 nut Eyebolt combo	216465		16mm channelMM-C-16 2m channel418748
ebolt o	1x eyebolt and channel lock Kit MW-EB M8 CL 2.0/1m	2280062		30mm channel MM-C-30 2m channel 418749
e	Kit MW-EB M8 CL 2.0/2m Kit MW-EB M8 CL 2.0/3m	2280063 2280064		36mm channel MM-C-36 2m M10 channel 418750
	Kit MW-EB M8 CL 2.0/5m Kit MW-EB M8 CL 2.0/10m	2280065 2280066	*	MM-C-36 3m M10 channel 418751 For more sizes check www.hilti.com
	Connection to channel 1x saddle nut			
0	MM-S M8	418760 stem		
A St A	Clamps		5	5 MM System channel plastic end caps
	2x MM-T-16-36 Channel e.g.	418763		for channel 16mm MM-E-16 plastic end cap 418773
	1x MM-C-30 2mm Saddle nut	418749		for channel 30mm MM-E-30 plastic end cap 418774
	1x MM-S M8 Nut	418760		for channel 36mm MM-E-36 plastic end cap 418775
eyebolt combo	1x M8 nut Eyebolt combo	216465		
ebolt	1x eyebolt and channel lock Kit MW-EB M8 CL 3.0/1m	2280067		
ey	Kit MW-EB M8 CL 3.0/2m Kit MW-EB M8 CL 3.0/3m	2280068 2280069		
	Kit MW-EB M8 CL 3.0/5m Kit MW-EB M8 CL 3.0/10m Connection to channel	2280070 2280071		MM System channel with beam clamp
	1x saddle nut MM-S M8	418760		1a 2.0 wire
				1b 3.0 wire
				5 Channel plastic end cap
				4 3 Rubber inlay
		A CAR		
Application desc	ription		—————A	pplication Product lines Base m
	ation Trapeze On Structural Ste	el - MM Syste	m Channels	2 Wire system Steel
	always be compared with the ca			MQ System
Only for vertic	ally suspended loads. Not suital	ole for bracing		

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Ventilation Trapeze Fixed On A Structural Steel Profiles -Centric solution using MQ Channel System:



Genera	l comn	nents

Loading must always be compared with the capacity of all connected parts Only for vertically suspended loads. Not suitable for bracing.

	hpprication_	i roudet intes	Buse material	
5	. 2	Wire system	Steel	
ts		MQ System		
	V			

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Ventilation - Trapeze Fixed Looped Around Structural Steel Profiles

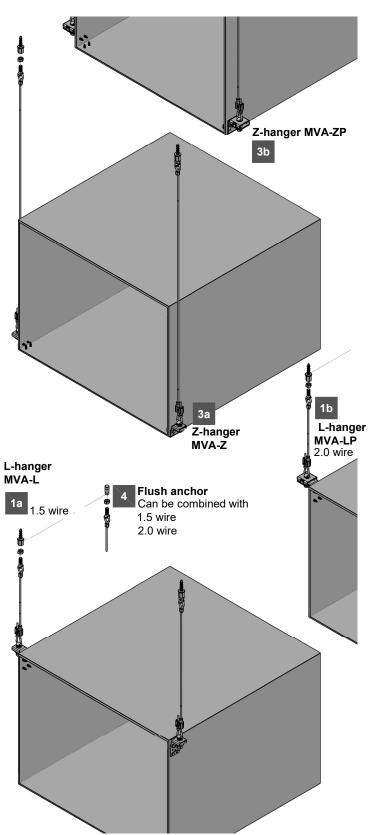
end cap	1a opb combo opb	1a Looping the profile with 2.0 Loop combo 1x loop and channel lock Kit MW-LP CL 2.0/1m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/2m Kit MW-LP CL 2.0/1m Kit MW-LP CL 2.0/1m Connection to channel 1x saddle nut MQA-S-M8 saddle nut 1b Looping the profile with 3.0 Loop combo 1x 1x loop and channel lock Kit MW-LP CL 3.0/1m Kit MW-LP CL 3.0/2m Kit MW-LP CL 3.0/2m Kit MW-LP CL 3.0/2m Kit MW-LP CL 3.0/1m Kit MW-LP CL 3.0/1m Kit MW-LP CL 3.0/1m Kit	2280087 2280088 2280099 2280091 2280091 2141906	3 Channel rubber inlay for sound insulation 100mm pcs 1x MQZ-RI 10cm rubber inlay 20m roll 1x MQZ-RI 20m rubber inlay 1x MQZ-RI 20m rubber inlay 4 MQ System channels 21.5mm channel MQ-21.5 2m channel MQ-21.5 3m channel MQ-21.5 6m channel MQ-21.5 6m channel MQ-41-L 2m channel MQ-41-L 2m channel MQ-41-L 3m channel MQ-41-L 6m channel MQ-41 am channel MQ-41-L 6m channel MQ-41 am channel MQ-41 am channel MQ-41 am channel MQZ-E21 plastic end cap for channel 41mm	
Channel Application description Base materia				wire	Channel plastic end cap

Application description	Application	Product lines	Base material
Wire system - Ventilation Trapeze Looped Around Structural Steel Profiles	2	Wire system	Steel
General comments Loading must always be compared with the capacity of the structural steel. 		MQ System	
Sharp edges must be avoided to prevent damage to the wire.			N
Only for vertical suspended loads.Not suitable for bracing.			
Hill strangly advises sustamers to varify the respective product application for the intended use by consulting a struct	tural angineer and making	the passagery coloulations	to opeuro compliance with the



Ventilation - L, Z-hangers Fixed On Concrete Slab:

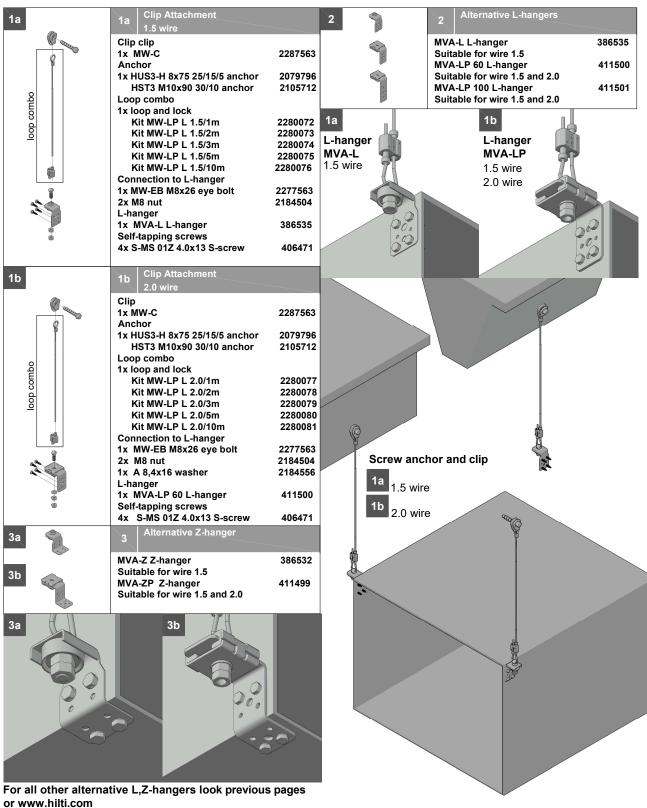
1a 🛔	Screw anchor, basic L-Hange	
	1a 1.5 wire	•r
eyebolt combo	1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock	416740 423180 2184504
eyebolt	Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	2280019 2280040 2280041 2280042 2280043
	Connection to L-hanger 1x MW-EB M8x26 eye bolt 2x M8 nut L-hanger	2277563 2184524
	1x MVA-L L-hanger Self-tapping screws 4xS-MS 01Z 4.0x13 S-screw	386535 406471
1b 🛔	1b Screw anchor, premium L-Ha	
eyebolt combo	2.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m	416740 423180 2184504 2280044 2280045
	Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/10m Connection to L-hanger 1x MW-EB M8x26 eye bolt 2x M8 nut 1x A 8,4x16 washer L-hanger 1x MVA-LP 60 L-hanger Self-tapping screws 4xS-MS 01Z 4.0x13 S-screw	2280046 2280047 2280048 2277563 2184504 2184556 411500 406471
2	2 Alternative L-hangers	
	MVA-L L-hanger Suitable for wire 1.5 MVA-LP 60 L-hanger Suitable for wire 1.5 and 2.0	386535 411500
	MVA-LP 100 L-hanger Suitable for wire 1.5 and 2.0	411501
3a	3 Alternative Z-hangers	
3a 3b	MVA-Z Z-hanger Suitable for wire 1.5 MVA-ZP Z-hanger Suitable for wire 1.5 and 2.0	386532 411499
4	4 Alternative HKD flush anchor Anchor 1x flush anchor HKD M8x25 anchor	376957



Application description	Application	Product lines	Base material
Wire system - Ventilation L, Z-hangers On Concrete	3	Wire system	Concrete
 General comments Loading must always be compared with the capacity of the anchor within the chosen base material and L/Z-hanger. Only for vertically suspended loads. Eye-bolt not suitable for bracing. 		L, Z angles	



Ventilation - L, Z-hangers Fixed On A Side Of A Concrete Girder:



	Product lines	Base material
3	Wire system	Concrete
	L, Z-hangers	
	3	3 Wire system L, Z-hangers



Ventilation - L, Z-hangers Fixed On Metal Deck:

V CITUIALIN	511 - Ľ, ∠-nang	0.0.		Metal Deck.	
1a 7	1a Deck hook 1.5 wire		2c	2c Through bolted V-hanger, p L-hanger, 2.0 wire	remium
	Deck hook 1x MW-DH deck hook Loop combo	2277567		V-Hanger 1x MF-TSH M8 V-hanger 1x M8 nut	229006 2184504
oop compo	1x loop and lock Kit MW-LP L 1.5/1m Kit MW-LP L 1.5/2m Kit MW-LP L 1.5/3m	2280072 2280073 2280074	100 m	Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod 4x M8 nut Through-bolt ver. 2-long h-head s	339793 2184504 crew
	Kit MW-LP L 1.5/5m Kit MW-LP L 1.5/10m L-hanger and connection 1x MW-EB M8x26 eye bolt	2280075 2280076 2277563		1xM8x120 4.8 hex. head sc.2xM8 nutEyebolt combo1xeyebolt and lock	2063165 2184504
×	2x M8 nut 1x A 8,4x16 washer 1x MVA-L L-hanger	2184504 2184556 386535	eyebolt combo	Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m	2280044 2280045 2280046
	Self-tapping screws 4x S-MS 01Z 4.0x13 S-screw	406471	eye	Kit MW-EB M8 L 2.0/5m Kit MW-EB M8 L 2.0/10m L-hanger and connection	2280047 2280048
b 7	1b Deck hook, premium L-Han 2.0 wire	ger		1x MW-EB M8x26 eye bolt 2x M8 nut	2277563 2184504
8	Deck hook 1x MW-DH deck hook	2277567		1x A 8,4x16 washer 1x MVA-LP 60 L-hanger	2184556 411500
oqu	Loop combo 1x loop and lock	2220077	6	Self-tapping screws 4x S-MS 01Z 4.0x13 S-screw	406471
oquoo loop	Kit MW-LP L 2.0/1m Kit MW-LP L 2.0/2m Kit MW-LP L 2.0/3m Kit MW-LP L 2.0/5m	2280077 2280078 2280079 2280080			
l d	Kit MW-LP L 2.0/10m L-hanger and connection	2280081			B
	1x MW-EB M8x26 eye bolt 2x M8 nut	2277563 2184504			
	1xA 8,4x16 washer1xMVA-LP 60 L-hangerSelf-tapping screws4xS-MS 01Z 4.0x13 S-screw	2184556 411500 406471			400
a	2a Through bolted V-hanger 1.5 wire				V-hang
	V-Hanger 1x MF-TSH M8 V-hanger 1x M8 nut Through-bolt version 1-t-rod	229006 2184504			2 V-nang 1.5 wire 2.0 wire
	1x AM8x1000 fixed t-rod 4x M8 nut Through-bolt ver. 2-long h-head		Deck Hook		
eyebolt combo	1xM8x120 4.8 hex. head sc.2xM8 nutEyebolt combo1xeyebolt and lock	2063165 2184504	10 1.5 wire 10 2.0 wire		3
yebolt	Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m	2280019 2280040			
Φ	Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	2280041 2280042 2280043			
	Connection to L-hanger 1x MW-EB M8x26 eye bolt 2x M8 nut	2277563 2184504			
	L-hanger 1x MVA-L L-hanger Self-tapping screws	386535			
or all other eltern	4x S-MS 01Z 4.0x13 S-screw 4x Albert S-MS 01Z 4.0x13 S-screw ative L,Z-hangers look previou	406471			\checkmark
or all other alterna or www.hilti.com	auve L,Z-mangers look previol	is pages			
		B			
600		0.			

Application description	Application	Product lines	Base material
Wire system - Ventilation - L, Z-hangers On Metal Deck	3	Wire system	Metal Deck
 General comments Loading must always be compared with the capacity of the metal deck and where relevant the V-hanger The deck hook must hang vertically from the deck. Only one wire may be suspended on each deck hook. 		L, Z-hangers	

B



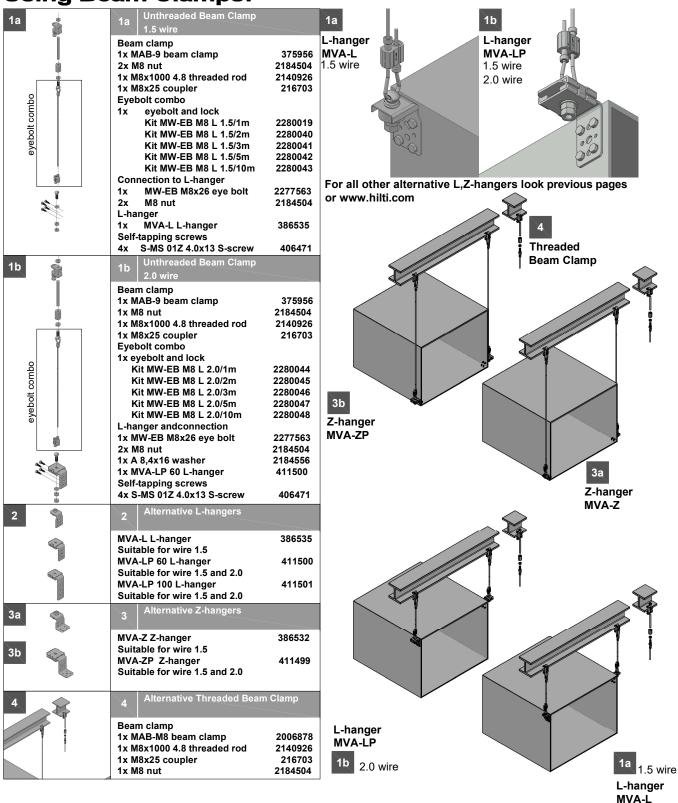
Ventilation - L, Z-hangers Fixed On Metal Deck:

	· · ·		
1a 🐂	1a V-hanger With Self-tapping screws 1.5 wire	2b ®®	2b Through bolted V-hanger 2.0 wire
eyebolt combo	V-Hanger 1x MVA-MS M8 V-hanger 38655 1x M8 nut 218450 6x S-MS 01Z 4.0x13 S-screw 40647 Eyebolt combo 40647 1x eyebolt and lock 228001 Kit MW-EB M8 L 1.5/1m 228004 Kit MW-EB M8 L 1.5/2m 228004 Kit MW-EB M8 L 1.5/5m 228004 Kit MW-EB M8 L 1.5/10m 228004 Connection to L-hanger 1x 1x MV-EB M8x26 eye bolt 227756 2x M8 nut 218450 1x MVA-L L-hanger 38653 4x S-MS 01Z 4.0x13 S-screw 40647	4 9 0 1 2 3 4 5 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7	2.0 Wife V-Hanger 1x MVA-MS M8 V-hanger 386558 1x M8 nut 2184504 Through-bolt version 1 t-rod 1x AM8x1000 fixed t-rod 339793 4x M8 nut 2184504 Through-bolt ver. 2 long h-head screw 1x M8x120 4.8 h-head screw 1x M8x120 4.8 h-head screw 2x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/5m 2280047 Kit MW-EB M8 L 2.0/10m 2280048 L-hanger and connection 2280048
	V-hanger with self-tapping screws 2.0 wire V-hanger 1x MVA-MS M8 V-hanger 38655 1x M8 nut 218450 6x S-MS 01Z 4.0x13 S-screw Eyebolt combo	4	1x MW-EB M8x26 eye bolt 2277563 2x M8 nut 2184504 1x A 8,4x16 washer 2184556 1x MVA-LP 60 L-hanger 411500 Self-tapping screws 4x S-MS 01Z 4.0x13 S-screw 406471
eyebolt combo	1x eyebolt and lock Kit MW-EB M8 L 2.0/1m 228004 Kit MW-EB M8 L 2.0/2m 228004 Kit MW-EB M8 L 2.0/3m 228004 Kit MW-EB M8 L 2.0/3m 228004 Kit MW-EB M8 L 2.0/5m 228004 Kit MW-EB M8 L 2.0/10m 228004 Connection to L-hanger 228004 1x MW-EB M8 L 2.0/10m 228004 Connection to L-hanger 1x 248450 1x MW-EB M8x26 eye bolt 227756 2x M8 nut 218455 1x A 8,4x16 washer 218455 1x MVA-LP 60 L-hanger 411500 4x S-MS 01Z 4.0x13 S-screw 40647		
2a	2a Through bolted V-hanger 40047 1.5 wire 1.5 wire V-Hanger 38655 1x MVA-MS M8 V-hanger 38655 1x M8 nut 2184504 Through-bolt version 1 t-rod 1.5 wire	3 V-hanger	V-hanger with through-bolt 2a 1.5 wire 2b
eyebolt combo	1x AM8x1000 fixed t-rod 339793 4x M8 nut 2184504 Through-bolt ver. 2 long h-head screw 1x M8x120 4.8 hex. head screw 2063165 1x M8x120 4.8 hex. head screw 2184504 2184504 1x M8x120 4.8 hex. head screw 2063165 2x M8 nut 2184504 Eyebolt combo 1x 2184504 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280041 Kit MW-EB M8 L 1.5/2m 2280044 Kit MW-EB M8 L 1.5/5m 2280042 Kit MW-EB M8 L 1.5/10m 2280043 Xit MW-EB M8 L 1.5/10m 2280043 Kit MW-EB M8 L 1.5/10m 2280043 Xit MW-EB M8 L 1.5/10m 2280043	1a 1.5 wire 1b 2.0 wire	20 2.0 wire
	1x MW-EB M8x26 eye bolt 227756 2x M8 nut 2184504 1x MVA-L L-hanger 38653 Self-tapping screws 4x S-MS 01Z 4.0x13 S-screw 40647 ative L,Z-hangers look previous pages 227565 277565	5	
or www.hilti.com			
Application desc	ription	——————————————————————————————————————	pplication Product lines Base ma

Application description	Application	Product lines	Base material
Wire system - Ventilation - L, Z-hangers On Metal Deck	3	Wire system	Metal deck
 General comments Loading must always be compared with the capacity of the metal deck and all connecting components Only for vertically suspended loads. Not suitable for bracing. 		L, Z-hangers	



Ventilation - L, Z-hangers Fixed On Structural Steel Using Beam Clamps:



Application description	Application	Product lines	Base material
Wire system - Ventilation L, Z-hangers On Structural Steel	3	Wire system	Structural Steel
 General comments Loading must always be compared with the capacity of the beam clamp and structural steel and all connecting parts. Only for vertically suspended loads. Not suitable for bracing. 		Beam Clamps	
Hilti strongly advises customers to verify the respective product application for the intended use by consulting a structu	ural engineer and making	the necessary calculations	to ensure compliance with the



Ventilation - L, Z-hangers Fixed On Structural Steel -Centric solution using MM Channel System:

Ix MM-C-30 2mm 418749 Saddle nut 1x MM-C-30 2mm 1x MM-C-30 2mm 418749 Saddle nut 1x MM-S M8 1x MM-S M8 418760 Nut 1x M8 nut 1x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/3m 2280046 Kit MW-EB M8 L 2.0/5m 2280047 Kit MW-EB M8 L 2.0/10m 2280048 L-hanger and connection to L-hanger 1x MW-EB M8226 eye bolt 2277563 W Re mut 2484524 L-ha			
Clamps 2 M.M.T-16-36 418763 Channel e.g. 1 M.M.C-30 2mm 418749 Saddle nut 1 1 M.M.S.M8 418760 Nut 1284504 1 M.W.S.M8 418760 Nut 1.8 M.F.M8 1 M.W.EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/2m 2280041 Kit MW-EB M8 L 1.5/3m 2280042 Kit MW-EB M8 L 1.5/3m 2280043 Connection to L-hanger 1 1 M.WA-EL M8 L 1.5/3m 2280043 Connection to L-hanger 386535 Self-tapping screws 4 4x S-MS 012 4.0x13 S-screw 406471 1 M.W-EB M8 L 2.0'Im 2280044 Kit MW-EB M8 L 2.0'Im	1a		em
2x Min T-16-36 418763 Channel e.g. 1x MM-C-30 2mm 418749 Saddle nut 2184504 1x MM-S MS 418760 Nut 2184504 Eyebolt combo 1x 1x MW-EB MS L 1.5/1m 2280041 Kit MW-EB MS L 1.5/1m 2280042 Kit MW-EB MS L 1.5/1m 2280043 Kit MW-EB MS L 1.5/1m 2280043 Connection to L-hanger 1284504 L-hanger 386535 Self-tapping screws 406471 1x MV-EB MS L 2.0x13 S-screw 406471 1x MW-EB MS L 2.0x13 S-screw 406471 1x MW-C30 2mm 418749 3addle nut 118749 3addle nut 2184504 1x MW-EB MS L 2.0x13 S-screw 406471 1x MW-EB MS L 2.0/1m 2280044 Kit MW-EB MS L 2.0/2m 2280045 Kit MW-EB MS L 2.0/2m 2280046 Kit MW-EB MS L 2.0/2m <td></td> <td></td> <td></td>			
Channel e.g. 1x MM-C 30 2mm 418749 Saddle nut 1x MM-S M8 418760 Nut 1x M9 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 2280049 Kit MW-EB M8 L 1.5/2m 2280043 Connection to L-hanger 1x MVA-L L-hanger 386535 Self-tapping screws 4x S-MS 012 4.0x13 S-screw 406471 1m Channel e.g. 1x MV-SB M8 L 2.0/1m 2184504 Lymps 2x MM-T-16-36 418763 Channel e.g. 1x MV-SB M8 L 2.0/1m 2180044 Kit MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/1m 2280045 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 228046 Kit MW-EB M8 L 2.0/1m			119763
1x MM-C30 2mm 418749 Saddle nut 1x MM-S M8 1x MM-S M8 418760 Nut 2184504 1x MW-EB M8 L 1.5/1m 2280043 Kit MW-EB M8 L 1.5/2m 2280044 Kit MW-EB M8 L 1.5/2m 2280043 Kit MW-EB M8 L 1.5/2m 2280043 Connection to L-hanger 1x MW-LE M8226 eye bolt 2277563 1x MW-LE M8226 eye bolt 2277563 2x M8 nut 2184504 L-hanger 386535 Self-tapping screws 4x S-MS 012 4.0x13 S-screw 406471 1b Centric fixation of MM System Channel e.g. 1x MW-C3 02 mm 418749 Saddle nut 1x MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/1m 2280044 1x MM-S M8 418760 Nut 1x M8-S M8 418760 1x MM-S M8 12.0/1m 2280044 Kit MW-EB M8 L 2.0/1m 2280047 1x MM-KB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/1m 2280047 MVA-L 1x A & A Katf6 washer 2184504 X & A & A Katf6 washer 2184504 1x A & A & Katf6 washer 2184504 X & A & A & C & A & A & C & A & A & A	A BEAN	Channel e.g.	410/03
1x MM-S M8 418760 Nut 2184504 1x M8 nut 2184504 Eyebolt combo 1x 1x MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/3m 2280040 Kit MW-EB M8 L 1.5/3m 2280042 Connection to L-hanger 2184504 L-hanger 386535 Self-tapping screws 406471 X MVA-L L-hanger 386535 Clamps 20 wire Clamps 418760 X MV-CS 02mm 418749 Saddle nut 2184504 1x MW-CS 02mm 418760 Nut 2184504 1x MW-SB M8 L 2.0/m 2280045 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/2m <t< td=""><td></td><td></td><td>418749</td></t<>			418749
Nut 2184504 1x M8 nut 2184504 Eyebolt combo 1x 1x MW-EB M8 L 1.5/1m 2280049 Kit MW-EB M8 L 1.5/1m 2280040 Kit MW-EB M8 L 1.5/1m 2280043 Connection to L-hanger 1x 1x MVA-EB M8.L 1.5/1m 2x M8 nut 2184504 2184504 L-hanger 386535 2x M8 nut 2184504 2184504 L-hanger 386535 2x MM-T-16-36 Channel 2.0 wire 2 Clamps 2x 2x M8 nut 2184504 1x MM-C-30 2mm 418769 1x MM-SM8 418760 Nt 1x MM-C-30 2mm 1x MM-SM8 418760 1x MM-SM8 418760 1x MM-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/1m 2280045 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280047 Kit MW-EB M8 L 2.0		Saddle nut	
1 x M8 nut 2184504 Eyebolt combo kit MW-EB M8 L 1.5/1m 2280049 Kit MW-EB M8 L 1.5/2m 2280042 Kit MW-EB M8 L 1.5/2m 2280043 Connection to L-hanger 1x 1x MK-EB M8 L 1.5/10m 2280043 Connection to L-hanger 386535 Self-tapping screws 406471 x MVA-L L-hanger 386535 Self-tapping screws 406471 10 Centric fixation of MM System channel e.g. 2184504 1x MW-C30 2mm 418769 1x MW-C30 2mm 418769 1x MW-EB M8 L 2.0/fm 2280046 Kit MW-EB M8 L 2.0/fm 2280047 Kit MW-EB M8 L 2.0/fm 2280047 Kit MW-EB M8 L 2.0/fm 2280046 Kit MW-EB M8 L 2.0/fm 2280047 Kit MW-EB M8 L 2.0/fm 2280046			418760
Image: System of the system			
1x eyebolt and lock Kit MW-EB M8 L 1.5/m 2280040 Kit MW-EB M8 L 1.5/m 2280041 Kit MW-EB M8 L 1.5/m 2280041 Kit MW-EB M8 L 1.5/10m 2280043 Connection to L-hanger 1x 1x MV-EB M82 6 eye bolt 2277563 2x M8 nut 2184504 L-hanger 386535 Self-tapping screws 4x xt SN S012 4.0x13 S-screw 406471 1b Centric fixation of MM System channel e.g. 1x MW-C-S0 2m 280044 1x MM-S M8 418760 Nut 1x MM-S M8 418760 Nut 1x MM-S M8 280044 Kit MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L	đ		2184504
Kit MW-EB M8 L 1.5/1m 2280019 Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041 Kit MW-EB M8 L 1.5/3m 2280042 Kit MW-EB M8 L 1.5/1m 2280043 L-hanger 11 Clamps 418769 X MVA-L L-hanger 386535 Self-tapping screws 4x 4x S-MS 012 4.0x13 S-screw 406471 Clamps 2 X MM-T-16-36 418760 NMM-T-16-36 418760 N MM-T-16-36 280044 Kit MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 </td <td>od </td> <td>-</td> <td></td>	od	-	
Kit MW-EB M8 L 1.5/2m 2280040 Kit MW-EB M8 L 1.5/3m 2280041 Kit MW-EB M8 L 1.5/10m 2280043 Connection to L-hanger 1x 1x MW-EB M8 L 1.5/10m 2280043 Connection to L-hanger 1x 1x MW-EB M8.256 eye bolt 2277563 2x M8 nut 2184504 L-hanger 1x MVA-L L-hanger 1x Centric fixation of MM System Channel .2.0 wire Clamps 2x MM-T-16-36 418763 Channel .2.0 wire Channel .2.0 wire Z-hanger 1x MW-S M8 418760 Nut 1x MM-S M8 418760 Nut 1x MM-S M8 418760 Nut 1x MM-S M8 2.0/1m 2280045 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280047 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280047 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280047 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 228004	eyebolt combo		2280019
Kit MW-EB M8 L 1.5/5m 2280042 Kit MW-EB M8 L 1.5/10m 2280043 Z80043 Connection to L-hanger 12 MW-EB M8226 eye bolt 2277563 Z7 M8 nut 2184504 Z184504 L-hanger 386535 366743pping screws 4x S-MS 01Z 4.0x13 S-screw 406471 10 Centric fixation of MM System channel. 2.0 wire 2-hanger Z-hanger Clamps 2x MM.7-16-36 418763 418763 11 Centric fixation of MM System channel. 2.0 wire 2-hanger WA-ZP 3b 2x MM.7-16-36 418763 418760 WA-ZP 3b 3 Alternative L-hanger 2280044 Kit MW-EB M8 L 2.0/7m 2280045 Kit MW-EB M8 L 2.0/7m 2280044 Kit MW-EB M8 L 2.0/7m 2280045 Kit MW-EB M8 L 2.0/7m 2280045 Kit MW-EB M8 L 2.0/7m 2280046 Kit MW-EB M8 L 2.0/7m 2280046 Kit MW-EB M8 S L 2.0/7m 2280046 Kit MW-EB M8 L 2.0/7m 2280047 Kit MW-EB M8 S L 2.0/7m 2280046 Kit MW-EB M8 L 2.0/7m 2280046 Kit MW-EB M8 L 2.0/7m 2280046 Kit MW-EB M8 L 2.0/7m 2280046 Kit MW-L L hanger 386535 Suitable for wir	bit o		
Kit MW-EB M8 L 1.5/10m 2280043 Connection to L-hanger 1x 1x MW-EB M82/S eye bolt 2277563 2x M8 nut 2184504 L-hanger 386535 Self-tapping screws 4x S-MS 012 4.0x13 S-screw 406471 10 Contric fixation of MM System Channel .2.0 wire Channel .2.0 wire Clamps 2x MM-T-16-36 418763 Channel .2.0 wire Channel .2.0 wire Saddle nut 1x MM-G-30 2mm 418749 Saddle nut 1x MM S M8 418760 Nut 1x MM S M8 418760 Nut 280044 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280047 Nut 280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280047 Kit MW-EB M8 L 2.0/3m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-ALP 60 L-hanger 411500 Self-tapping screws 4x S-4x16 washer 2184556 MVA-LP 60 L-hanger 386535 MVA-L P 60 L-hanger 386535 Suitable for wire 1.5 and 2.0 386535		Kit MW-EB M8 L 1.5/3m	2280041
Connection to L-hanger 1 x MW-EB M8226 eye bol 2277563 2 x M8 nut 2184504 L-hanger 1 x MVA-L L-hanger 386535 Self-tapping screws 4 x S-MS 012.4.0x13 S-screw 406471 10 Centric fixation of MM System Channel, 2.0 wire Clamps 2 x MM-T-16-36 418763 Channel, 2.0 wire Clamps 2 x MM-C-30 2mm 418749 Saddle nut 1 x MM-S M8 418760 Nut 1 x MM-S M8 418760 Nut 1 x MM-S M8 418760 Nut 1 x MW-EB M8 L 2.0/1m 2280044 Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/3m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/3m 2280046 Kit MW-EB M8 L 2.0/1m 2280045 Kit MW-EB M8 L 2.0/1m 2280045 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW	e e		
1x MW-EB M8x26 eye bolt 2277563 2x M8 nut 2184504 L-hanger 386535 Self-tapping screws 4x 4x S-MS 012 4.0x13 S-screw 406471 1b Centric fixation of MM System channel e.g. 7 1x MM-T-16-36 418763 Clamps 2x 4x 2x MM-T-16-36 418763 1x MM-C-30 2mm 418749 Saddle nut 1x 1x MM-C-30 2mm 418760 Nut 1x MM-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/2m 2280046 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/3m 2280047 Kit MW-EB M8 L 2.0/1m 2280046 Kit MW-EB M8 L 2.0/1m 2280047 Kit MW-EB M8 L 2.0/2m 220047 X M8 nut 2184556 X MVA-LP 60 L-hanger 411500 Suitable for w	6		2280043
2x M8 nut 2184504 L-hanger 386535 Self-tapping screws 4x 4x S-MS 012 4.0x13 S-screw 406471 1b Centric fixation of MM System channel, 2.0 wire Z-hanger 1b Centric fixation of MM System channel, 2.0 wire Z-hanger 1x MM-C-30 2mm 418763 1x <mm-c-30 2mm<="" td=""> 418760 Nut 1x MM-S M8 1x<mm-s m8<="" td=""> 418760 Nut 1x MM-S M8 1x<mm-b 1m<="" 2.0="" l="" m8="" td=""> 2280044 Kit MW-EB M8 L 2.0/2m 2280045 Kit MW-EB M8 L 2.0/3m 2280046 Kit MW-EB M8 L 2.0/3m 2280046 L-hanger and connection to L-hanger 1x MW-EB M8 L 2.0/3m 1x MW-EB M8 L 2.0/3m 2280046 L-hanger and connection to L-hanger 1x MW-EB M8 L 2.0/3m 1x MW-EB M8 L 2.0/3m 2280047 L-hanger and connection to L-hanger 1x MW-LP 60 L-hanger 1x A staft washer 2184556 1x MVA-LP 60 L-hanger 411500 Suitable for wire 1.5 MVA-LP 60 L-hanger MVA-LP 100 L-hanger 411500 Suitable for wire 1.5 and 2.0 MVA-LP 100 L-hanger 386532 Suitable for wire 1</mm-b></mm-s></mm-c-30>			
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Application description	Application	Product lines	Base material
Wire system - Ventilation L, Z-hangers On Structural Stee Using MM Channels	3	Wire system	Structural Steel
 General comments Loading must always be compared with the capacity of all connected parts Only for vertically suspended loads. Not suitable for bracing. 		MM System	



Ventilation - L, Z-hangers Fixed On Structural Steel -Centric solution using MQ Channel System:

1 Centric fixed on of MO System 2 NGL-1 basin clamp 2115661 1 NGA-5 M6 saddio nut 214996 1 NGA-5 M6 saddio nut 214996 1 New Em M L 1.6 //m 220001 1 New Em M L 2.0 //m 245661 1 No.4 1 am channel 245661				
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1 Nover Washes 2 1 MVA-LP 60 L-hanger 4 S-MS 01Z 4.0x13 S-screw 4 S-MS 01Z 4.0x13 S-screw 4 S-MS 01Z 4.0x13 S-screw 4 Alternative L-hanger 3a MVA-L P 60 L-hanger 4 MVA-LP 60 L-hanger 4 Alternative Z-hanger 4 Alternative Z-hanger 3a 3 3b Alternative Z-hanger 3a 3 4 Alternative Z-hanger 9 NVA-Z Z-hanger 9 Suitable for wire 1.5 MVA-Z Z-hanger 386532 MVA-Z Z-hanger 386535 MVA-Z Z-hanger 386532 MVA-Z Z-hanger 386535 MVA-Z Z-hanger 386532 MVA-Z Z-hanger 386535 MVA-Z Z-hanger 386535 MVA-Z Z-hanger 386535 MVA-Z Z-hanger 386535 MVA-Z Z-Manger 386535 MUA-S-MS saddle nut </td <td></td> <td></td> <td></td> <td>Alternative Beam</td>				Alternative Beam
1 Mixed is contained in the second secon				
2 2 Atternative L-hanger 31 Atternative L-hanger 386535 Suitable for wire 1.5 MVA-L P 60 L-hanger 411500 MVA-LP 60 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP MVA-ZP 7-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-ZP 7-hanger MVA-ZP Z-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-ZP 7-hanger MVA-ZP Z-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-L MVA-ZP Z-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-L MVA-ZP Z-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-L MVA-ZP Z-hanger 386532 Suitable for wire 1.5 and 2.0 MVA-L MUA-S-M8 saddle nut 2141906			411500	MQT-21-41
2 2 Alternative L-hangers MVA-L L-hanger 386535 Suitable for wire 1.5 411500 Suitable for wire 1.5 and 2.0 MVA-LP MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP MVA-Z Z-hanger 386532 Suitable for wire 1.5 MVA-Z Suitable for wire 1.5 MVA-Z MVA-Z Z-hanger 386532 Suitable for wire 1.5 and 2.0 L-hanger MVA-Z Z-hanger 411499 Suitable for wire 1.5 and 2.0 L-hanger MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 MVA-L 10 2.0 wire 110 1.5 wire 2x MQT-21-41 beam clamp 369675 1x MQA-3-M8 saddle nut 2141906	8		406474	
Alternative Beam Clamp MVA-L MVA-L MVA-L MVA-L WA-L Suitable for wire 1.5 MVA-LP 100 L-hanger MVA-Z MVA-Z Suitable for wire 1.5 MVA-ZP Z-hanger Suitable for wire 1.5 and 2.0 Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQA-S-M8 saddle nut 2141906			406471	
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Suitable for wire 1.5 MVA-LP 60 L-hanger 411500 Suitable for wire 1.5 and 2.0 MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 MVA-LP 100 L-hanger Suitable for wire 1.5 and 2.0 MVA-Z Z-hanger Suitable for wire 1.5 MVA-ZP Z-hanger Suitable for wire 1.5 and 2.0 MQT Zx MQT-21-41 beam clamp 369675 1x MQA-S-M8 saddle nut 2141906		MVA-L L-hanger	386535	
Suitable for wire 1.5 and 2.0 MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 Alternative Z-hangers MVA-Z Z-hanger 386532 Suitable for wire 1.5 MVA-Z Z-hanger MVA-Z Z-hanger 411499 Suitable for wire 1.5 and 2.0 L-hanger MVA-Z Z-hanger 411499 Suitable for wire 1.5 and 2.0 L-hanger MVA-Z Z-hanger 411499 Alternative Beam Clamp MVA-L MQT 2x MQT-21-41 beam clamp X MQA-S-M8 saddle nut 2141906	and the second sec			
MVA-LP 100 L-hanger 411501 Suitable for wire 1.5 and 2.0 Alternative Z-hangers MVA-Z Z-hanger Suitable for wire 1.5 MVA-ZP Z-hanger Suitable for wire 1.5 and 2.0 Alternative Beam Clamp MOT Alternative Beam Clamp MOT 2x MQT-21-41 beam clamp MQA-S-M8 saddle nut 2141906 1b 2.0 wire 1b 2.0 wire 1a 1.5 wire		MVA-LP 60 L-hanger	411500	MVA-LP
3a 3 Alternative Z-hangers 3b 3 Alternative Z-hanger 3b WVA-Z Z-hanger 386532 Suitable for wire 1.5 MVA-ZP Z-hanger MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 WVA-L 4 Alternative Beam Clamp MOT 2x MQT-21-41 beam clamp 1x MQA+3-M8 saddle nut 2141906				
3a 3 Alternative Z-hangers 3b 3 Alternative Z-hanger 3b MVA-Z Z-hanger 386532 Suitable for wire 1.5 MVA-ZP Z-hanger MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 MVA-L 1a 1.5 wire 2x MQT-21-41 beam clamp 369591 1x MQA-S-M8 saddle nut 2141906			411501	10 2 0 wire
3b 3b MVA-Z Z-hanger Suitable for wire 1.5 MVA-ZP Z-hanger Suitable for wire 1.5 and 2.0 4 Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp MQT 2x MQT-21-41 beam clamp 1.5 wire 1.5 wire		Suitable for wire 1.5 and 2.0		
3b MVA-Z Z-hanger 386532 Suitable for wire 1.5 MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 L-hanger 4 Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQA-S-M8 saddle nut 2141906	3a	Alternative Z-hangers		
3b Suitable for wire 1.5 MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 A Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906				
3b Suitable for wire 1.5 MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 A Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906		MVA-Z Z-hanger	386532	9
MVA-ZP Z-hanger 411499 Suitable for wire 1.5 and 2.0 4 Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906			COUL	
A Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906	3D 😪		411499	
4 Alternative Beam Clamp MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906	100			
4 MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906				
4 MQT 2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906		Alternative Beam Clamp		1.5 wire
2x MQT-21-41 beam clamp 369675 1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906	4	4		A
1x MQ-41 3mm channel 369591 1x MQA-S-M8 saddle nut 2141906				
1x MQA-S-M8 saddle nut 2141906				
1x M8 nut 2184504				
		1x M8 nut	2184504	
	8			

Application description	Application	Product lines	Base material
Wire system - Ventilation - L, Z-hangers On Structural Steel - MQ System	3	Wire system	Structural Steel
General comments Loading must always be compared with the capacity of all connected parts 		MQ System	
Only for vertically suspended loads. Not suitable for bracing.		L,Z Hangers	
Hilti strongly advises customers to verify the respective product application for the intended use by consulting a struct	tural engineer and making	the necessary calculations	to ensure compliance with the



Ventilation - L, Z-hangers Fixed On Structural Steel -Looping The Profile:

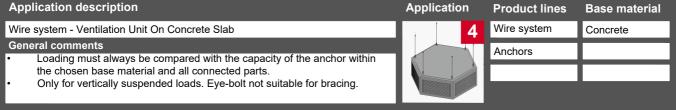
1a oqueo doop	Looping the profile with 1.5 wire Loop combo 1x loop and lock Kit MW-LP L 1.5/1m 22800 Kit MW-LP L 1.5/2m 22800 Kit MW-LP L 1.5/3m 22800 Kit MW-LP L 1.5/5m 22800 Kit MW-LP L 1.5/10m 22800 Connection to L-hanger 1x 1x MW-EB M8x26 eye bolt 22775 2x M8 nut 21845 L-hanger 1x 1x MVA-L L-hanger 3865 Self-tapping screws 4x 4x S-MS 01Z 4.0x13 S-screw 4064	
1b oquoo dool	Looping the profile with 2.0 wire Loop combo 1x loop and lock Kit MW-LP L 2.0/1m 228007 Kit MW-LP L 2.0/2m 228007 Kit MW-LP L 2.0/3m 228007 Kit MW-LP L 2.0/3m 228007 Kit MW-LP L 2.0/10m 228008 Kit MW-LP L 2.0/10m 228008 Connection to L-hanger 1x MW-EB M8x26 eye bolt 1x MW-EB M8x26 eye bolt 227756 1x AS,4x16 washer 218453 L-hanger 1x MVA-LP 60 L-hanger 1x MVA-LP 60 L-hanger 41150 Self-tapping screws 4x 4x S-MS 01Z 4.0x13 S-screw 40647	B B B D D D D D D D D D D D D D D D D D
2 7 3a 3b	2 Alternative L-hangers MVA-L L-hanger 38653 Suitable for wire 1.5 41150 Suitable for wire 1.5 and 2.0 41150 MVA-LP 100 L-hanger 41150 Suitable for wire 1.5 and 2.0 41150 3 Alternative Z-hangers MVA-Z Z-hanger 38653 Suitable for wire 1.5 41149 Suitable for wire 1.5 and 2.0 41149	2 9
		L-hanger MVA-L 1a 1.5 wire

Application description	Application	Product lines	Base material
Wire system - Ventilation - L, Z-hangers On Structural Steel - Looped	3	Wire system	Structural Steel
General comments Loading must always be compared with the capacity of the structural steel 		MQ System	
and all connected parts.		L,Z Hangers	
Sharp edges must be avoided to prevent damage to the wire.			
Hill strangly advises sustainers to varify the respective product application for the intended use by consulting a struct	usel engineer and making	the passagery colouistics	to ansure compliance with the



Ventilation Unit On a Concrete Slab:

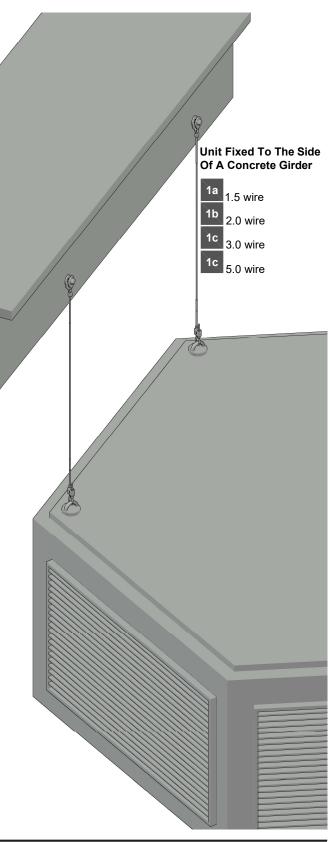
1a eyebolt combo eyebolt combo		1a Screw anchor, M8 support 1.5 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/3m 1b Screw anchor, M8 support 2.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x screw anchor Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/1m	416740 423180 2184504 2280019 2280040 2280042 2280042 2280043 416740 423180 2184504 2280044 2280044 2280044 2280048	2a 2b 2c odupot exception a b b a b a b a b a b a b a b a b a b a b a b	2a-c Flush anchor, M8 sur 1.5, 2.0, 3.0 wire Anchor 1x flush anchor HKD M8x25 anchor HKD M8x40 anchor HKD M8x40 anchor 1x M8 nut Eyebolt combo 1x the same combos as 2a 1a 2b 2d Flush anchor, M10 st 5.0 wire Anchor 1x flush anchor, M10 st 5.0 wire Anchor 1x flush anchor HKD M10x25 anchor HKD M10x30 anchor HKD M10x40 anchor 1x M10 nut Eyebolt combo 1x the same combos as 2d 1d	376957 376959 376961 2184504 2 ← 1c 2037453 376965 376965 376965 376965
1c eyebolt combo		Screw anchor, M8 support 3.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/5m Kit MW-EB M8 L 3.0/10m	416740 423180 2184504 2280049 2280050 2280051 2280052 2280052	Screw anch 1a 1.5 wird 1b 2.0 wir 1c 3.0 wir 1d 5.0 wir	e e	Flush anchor 2a 1.5 wire 2b 2.0 wire 2c 3.0 wire 2d 5.0 wire
eyebolt combo		1d Screw anchor, M10 support 5.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M10 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/5m Kit MW-EB M10 L 5.0/10m	416740 423180 2184505 2280054 2280055 2280056 2280057 2280058			
_	ication descr					





Ventilation Unit, On Concrete Girder:

1a 👔	1a Clip attachement 1.5 wire	
	Anchor	
	1x HUS3-H 8x75 25/15/5 anchor	2079796
o	HST3 M10x90 30/10 anchor Clip	2105712
loop combo	1x MW-C clip	2287563
d	Loop combo	
	1x Kit MW-LP L 1.5/1m	2280072
	Kit MW-LP L 1.5/2m	2280073
	Kit MW-LP L 1.5/3m	2280074
•	Kit MW-LP L 1.5/5m	2280075
1b %	Kit MW-LP L 1.5/10m 1b Clip attachement	2280076
	2.0 wire	
	Anchor	
	1x HUS3-H 8x75 25/15/5 anchor	2079796
	HST3 M10x90 30/10 anchor	2105712
de	Clip	
oop combo	1x MW-C clip	2287563
0 d	Loop combo	
8	1x Kit MW-LP L 2.0/1m	2280077
	Kit MW-LP L 2.0/2m	2280078
	Kit MW-LP L 2.0/3m	2280079
<u> </u>	Kit MW-LP L 2.0/5m	2280080
	Kit MW-LP L 2.0/10m	2280081
1c	1c Clip attachement 3.0 wire	
	Anchor	
	1x HUS3-H 8x75 25/15/5 anchor	2079796
	HST3 M10x90 30/10 anchor	2105712
loop combo	Clip	
	1x MW-C clip	2287563
<u>a</u>	Loop combo	
	1x Kit MW-LP L 3.0/1m	2280082
	Kit MW-LP L 3.0/2m	2280083
	Kit MW-LP L 3.0/3m	2280084
	Kit MW-LP L 3.0/5m	2280085
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m	
1d	Kit MW-LP L 3.0/5m	2280085
1d 🍡	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m	2280085
1d •	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1d Clip attachement 5.0 wire	2280085
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1d Clip attachement 5.0 wire Anchor	2280085 2280086
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1d Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor	2280085 2280086 2079796
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip	2280085 2280086 2079796
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1 Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo	2280085 2280086 2079796 2105712 2287563
1d oquuo dool	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1 Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x Kit MW-LP L 5.0/1m	2280085 2280086 2079796 2105712 2287563 2287096
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1 Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x Kit MW-LP L 5.0/1m Kit MW-LP L 5.0/2m	2280085 2280086 2079796 2105712 2287563 2287096 2287097
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x Kit MW-LP L 5.0/1m Kit MW-LP L 5.0/2m Kit MW-LP L 5.0/3m	2280085 2280086 2079796 2105712 2287563 2287096 2287097 2287098
	Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m 1 Clip attachement 5.0 wire Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x Kit MW-LP L 5.0/1m Kit MW-LP L 5.0/2m	2280085 2280086 2079796 2105712 2287563 2287096 2287097



Application description	Application	Product lines	Base material
Wire system - Ventilation Unit On Concrete Girder	. 4	Wire system	Concrete
 General comments Loading must always be compared with the capacity with the capacity of all connected parts and the anchor within the chosen base material. This capacity is affected by the angle of loading from the vertical and the prying factor Only one wire may be suspended on each clip 		Anchors	



Ventilation Unit Fixed On Metal Deck - Hook and V-hanger:

v-nange				
1a	1a Deck hook 1.5 wire		2c	2c Through bolted V-hanger 3.0 wire
	Loop combo 1x loop and lock	2277567	· · · · · · · · · · · · · · · · · · ·	V-Hanger 1x MF-TSH M8 V-hanger 229006 1x M8 nut 216465 Through-bolt version 1-t-rod
loop combo	Kit MW-LP L 1.5/2m Kit MW-LP L 1.5/3m Kit MW-LP L 1.5/5m	2280072 2280073 2280074 2280075 2280076	eyebolt combo	1x AM8x1000 fixed t-rod 339793 4x M8 nut 216465 Through-bolt ver. 2-long h-head screw 1x M8x120 4.8 hex. head sc. 2063165 2x M8 nut 216465 5000000000000000000000000000000000000
1b 7	1b Deck hook 2.0 wire Deck hook		eyebo	Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m 2280049 Kit MW-EB M8 L 3.0/2m 2280050 Kit MW-EB M8 L 3.0/3m 2280051
oqu		2277567	1	Kit MW-EB M8 L 3.0/5m 2280052 Kit MW-EB M8 L 3.0/10m 2280053 Through bolted V-hanger 2280053
loop combo	Kit MW-LP L 2.0/1m Kit MW-LP L 2.0/2m	2280077 2280078 2280079	2d	20 5.0 wire V-Hanger
6	Kit MW-LP L 2.0/5m	2280079 2280080 2280081		1x MF-TSH M10 V-hanger 229007 1x M10 nut 2184505 Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod 1x AM8x1000 fixed t-rod 339793 4x M8 nut 216465
2a	2a Through bolted V-hanger 1.5 wire AV-Hanger		eyebolt combo	Through-bolt ver. 2-long h-head screw 1x M8x120 4.8 hex. head sc. 2063165 2x M8 nut 216465
· · · · ·	1x MF-TSH M8 V-hanger 1x M8 nut Through-bolt version 1 t-rod 1x AM8x1000 fixed t-rod	229006 216465 339793	eyebol	Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m 2280054 Kit MW-EB M10 L 5.0/2m 2280055 Kit MW-EB M10 L 5.0/2m 2280055
eyebolt combo	2x M8 nut	216465 w 2063165 216465	- -	Kit MW-EB M10 L 5.0/3m 2280056 Kit MW-EB M10 L 5.0/5m 2280057 Kit MW-EB M10 L 5.0/10m 2280058
eyebol	Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m	2280019 2280040 2280041 2280042 2280043		
2b	2b Through bolted V-hanger 2.0 wire V-Hanger		Deck Hook	
	1x MF-TSH M8 V-hanger 1x M8 nut Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod	229006 216465 339793	1b 2.0 wire	
eyebolt combo	4x M8 nut Through-bolt ver. 2-long h-head scr 1x M8x120 4.8 hex. head sc. 2x M8 nut Eyebolt combo	216465 ew 2063165 216465		V-Hanger 2a 1.5 wire
eyeb	1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/5m	2280044 2280045 2280046 2280047		2b 2.0 wire 2c 3.0 wire 2d 5.0 wire
	Kit MW-EB M8 L 2.0/10m	2280048		

Application description	Application	Product lines	Base material
Wire system - Ventilation Unit Fixed On Metal Deck	. 4	Wire system	Metal Deck
General comments Loading must always be compared with the capacity of the metal deck and 		V-Hangers	
all connected parts.			
 The deck hook must hang vertically from the deck. Only one wire may be suspended on each deck hook. 			
Hilti strongly advises customers to verify the respective product application for the intended use by consulting a struct	ural engineer and making	the necessary calculations	to ensure compliance with the



Ventilation Unit Fixed On Metal Deck - V-hanger with Integrated Nut:

	egrate			
1a		1a Through bolted V-Hanger 1.5 wire	1d	1d Through bolted V-Hanger 5.0 wire
eyebolt combo		V-Hanger 1x MVA-MS M8 V-hanger 38655 1x M8 nut 218450 Through-bolt version 1 t-rod 1x AM8x1000 fixed t-rod 33979 4x M8 nut 218450 Through-bolt ver. 2 long h-head screw 1x M8x120 4.8 h-head screw 206316 2x M8 nut 218450 Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m 228004 Kit MW-EB M8 L 1.5/3m 228004 Kit MW-EB M8 L 1.5/5m 228004 Kit MW-EB M8 L 1.5/10m 228004	4 9 3 4 5 5 4 9 9 9 9 9 9 9	V-Hanger 1x MVA-MS M10 V-hanger 386559 1x M10 nut 2184505 Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod 339793 4x M8 nut 2184504 Through-bolt ver. 2-long h-head screw 1x M8x120 4.8 hex. head sc. 2063165 2x M8 nut 2184504 Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m 2280054 Kit MW-EB M10 L 5.0/3m 2280056 Kit MW-EB M10 L 5.0/5m 2280057 Kit MW-EB M10 L 5.0/10m 2280058
1b		1bThrough bolted V-Hanger 2.0 wireV-Hanger 1xMVA-MS M8 V-hanger 2184501xM8 nut 218450Through-bolt version 1-t-rod	4	
eyebolt combo		1xAM8x1000 fixed t-rod339794xM8 nut218450Through-bolt ver. 2-long h-head screw1x1xM8x120 4.8 h-head screw2063162xM8 nut218450Eyebolt combo1x1xeyebolt and lock	4	15
		Kit MW-EB M8 L 2.0/1m 228004 Kit MW-EB M8 L 2.0/2m 228004 Kit MW-EB M8 L 2.0/3m 228004 Kit MW-EB M8 L 2.0/5m 228004 Kit MW-EB M8 L 2.0/10m 228004 Kit MW-EB M8 L 2.0/10m 228004	5 6 7 8 V-Hanger	
1c		Through bolted V-Hanger 3.0 wire V-Hanger 1x MVA-MS M8 V-hanger 38655	1a 1.5 wire 1b 2.0 wire	•
oqu		1xM8 nut218450Through-bolt version 1-t-rod1xAM8x1000 fixed t-rod339794xM8 nut218450Through-bolt ver. 2-long h-head screw1xM8x120 4.8 hex. head sc.206316	3 3.0 wire 3 1d 5.0 wire	V-Hanger with self-tapping screws
eyebolt combo		1x High 120 4.0 Hext field 3c. 200010 2x M8 nut 218450 Eyebolt combo 1x eyebolt and lock 1x Kit MW-EB M8 L 3.0/1m 22800. Kit MW-EB M8 L 3.0/2m 22800. Kit MW-EB M8 L 3.0/3m 22800.	4 19 50	2 1.5 wire 2.0 wire 3.0 wire 5.0 wire
		Kit MW-EB M8 L 3.0/5m 22800 Kit MW-EB M8 L 3.0/10m 22800	52	
		2 1.5, 2.0, 3.0 and 5.0 wire V-Hanger 1x MVA-MS M8 V-hanger 38655 MVA-MS M10 V-hanger 38655		
		Self-tapping screws6xS-MS 01Z 4.0x13 S-screw40647Securing nut1xM8 nut218450M10 nut218450	4	
L		1		

Application description	Application	Product lines	Base material
Wire system - Ventilation Unit On Metal Deck	4	Wire system	Metal Deck
 General comments Loading must always be compared with the capacity of the metal deck and all connected parts. 		V-Hangers	
Only for vertically suspended loads. Not suitable for bracing.			



Ventilation Unit Fixed On Structural Steel Profiles - Beam Clamps:

Clamps:						
1a 🗿	1a Unthreaded Beam Clamp 1.5 wire					
eyebolt combo	Beam clamp 1x MAB-9 beam clamp 2x M8 nut 1x M8x1000 4.8 threaded rod 1x M8x25 coupler Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	375956 2184504 2140926 216703 2280019 2280040 2280040 2280041 2280042 2280043				
1b	1b Unthreaded Beam Clamp 2.0 wire					
eyebolt combo	Beam clamp 1x MAB-9 beam clamp 2x M8 nut 1x M8x1000 4.8 threaded rod 1x M8x25 coupler Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/5m Kit MW-EB M8 L 2.0/10m	375956 2184504 2140926 216703 2280044 2280045 2280046 2280047 2280048				
1c	1c Unthreaded Beam Clamp 3.0 wire Beam clamp 1x MAB-9 beam clamp 2x M8 nut	375956 2184504	Unthreaded			
eyebolt combo	1x M8x1000 4.8 threaded rod 1x M8x25 coupler Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m Kit MW-EB M8 L 3.0/10m	2140926 216703 2280049 2280050 2280051 2280052 2280053	Beam Clamp 1a 1.5 wire 2.0 wire 1c 3.0 wire		Threaded Beam Clamp	1
1d	1d Unthreaded Beam Clamp 5.0 wire V-Hanger		5.0 wire		2.0 wire 3.0 wire 5.0 wire	
eyebolt combo	1x MAB-11 2x M10 nut 1x M10x1000 4.8 threaded rod 1x M10x30 coupler Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/5m Kit MW-EB M10 L 5.0/10m	375957 2184505 339795 216704 2280054 2280055 2280056 2280056 2280057 2280058		8		
2	2 Threaded Beam Clamp					
	Threaded Beam Clamp 1x MAB-M8 MAB-M10 MAB-M12	2006878 2006879 2007210				
Application descr	iption			Application	Product lines	Base material
Wire system - Ventila	ation Unit Fixed On Structural Stee	el-Beam Cl	amps	. 4	Wire system	Structural steel
General comments	always be compared with the capa	oity of the	structural staal		Beam Clamps	
and all connec		•				

Only for vertically suspended loads. Not suitable for bracing.



Ventilation UnitFixed On Structural Steel Profiles - MM Channel:

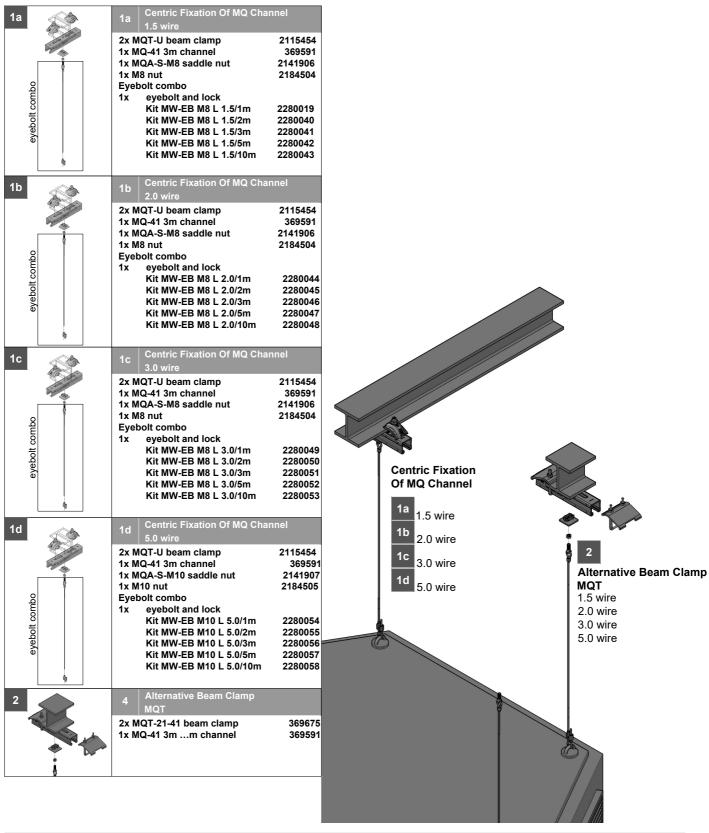
Unamiei.	1			
1a	1a Centric Fixation Of MM Char 1.5 wire	nnel		
eyebolt combo	2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M8 saddle nut 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	418763 418749 418760 2184504 2280049 2280040 2280041 2280042 2280043		
1b	1b Centric Fixation Of MM Char 2.0 wire	nnel		
eyebolt combo	2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M8 saddle nut 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/10m	418763 418749 418760 2184504 2280044 2280045 2280046 2280047 2280048		
1c	1c Centric Fixation Of MM Char 3.0 wire	nnel	8	
eyebolt combo	2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M8 saddle nut 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m Kit MW-EB M8 L 3.0/10m	418763 418749 418760 216465 2280049 2280050 2280051 2280052 2280053	Centric Fixation Of MM Channel 1a 1.5 wire 1b 2.0 wire 1c 3.0 wire	9
eyebolt combo	1dCentric Fixation Of MM Char 5.0 wire2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M10 saddle nut 1x M10 nut Eyebolt combo 1x eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/10m	418763 418749 418761 2184505 2280054 2280055 2280056 2280057 2280058	1d 5.0 wire	

Application description	Application	Product lines	Base material
Wire system - Ventilation Unit Fixed On Structural Steel - MM Cahnnel	4	Wire system	Structural steel
General comments Loading must always be compared with the capacity of the steel beam and 		Beam Clamps	
all connected parts.		MM System	
Only for vertically suspended loads. Not suitable for bracing.			
Hilli strandy advises customers to varify the respective product application for the intended use by consulting a struc-	tural angineer and making	the passagery coloulations	to anours compliance with the

Hilti strongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the application functions for use, within the application initis specified in the Hilti technical absets, technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.



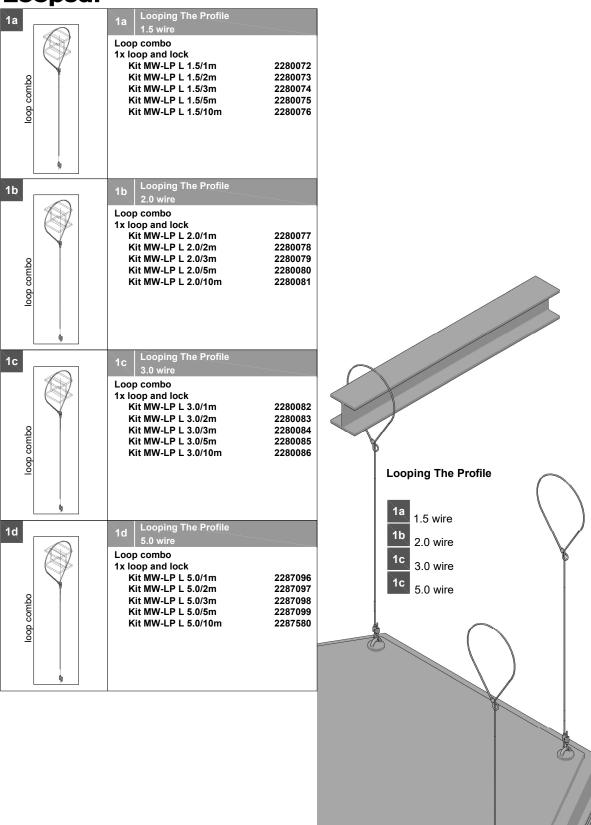
Ventilation Unit Fixed On Structural Steel Profiles - MQ Channel:

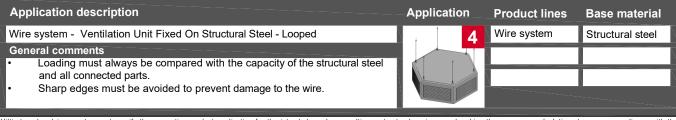


Application description	Application	Product lines	Base material
Wire system - Ventilation Unit Fixed On Structural Steel - MQ Cahnnel	4	Wire system	Structural steel
General comments Loading must always be compared with the capacity of the steel beam and 		Beam Clamps	
all connected parts.		MQ Channel	
Only for vertically suspended loads. Not suitable for bracing.			



Ventilation Unit Fixed On Structural Steel Profiles -Looped:





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Version 2.2 from 12.2021, Page 53



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On a Concrete Slab:

evebolt combo	1a Screw anchor, M8 support 1.5 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/10m 1b Screw anchor, M8 support 2.0 wire 1x screw anchor HUS-E 1.5/25 M8/M10 anchor	376959 423180 2184504 2280019 2280040 2280041 2280042 2280043	22 20 20 export composition experimentation ex	Anchor 1x flush an HKD Mi HKD Mi HKD Mi 1x M8 nut Eyebolt comb	8x25 anchor 8x30 anchor 8x40 anchor	376957 376959 376961 2184504
eyebolt combo	1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m 1b Screw anchor, M8 support 2.0 wire 1x screw anchor	423180 2184504 2280019 2280040 2280041 2280042	2C compo ékepott compo ékepott	Anchor 1x flush au HKD Ma HKD Ma HKD Ma 1x M8 nut Eyebolt comb 1x the san	nchor 8x25 anchor 8x30 anchor 8x40 anchor 90	376959 376961
	Screw anchor, M8 support2.0 wire1xscrew anchor			20 - 10	2b ► 1b	2c ► 1c
	1x screw anchor		2d	2d Flush a 5.0 wire	nchor, M10 suppo	rt
0 •	HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/5m Kit MW-EB M8 L 2.0/10m	376959 423180 2184504 2280044 2280045 2280046 2280047 2280047 2280048	eyebolt combo	Anchor 1x flush au HKD M HKD M HKD M 1x M10 nu Eyebolt comb	nchor 10x25 anchor 10x30 anchor 10x40 anchor t 50 ne combos as	2037453 376965 376967 2184505
c 🛔	1c Screw anchor, M8 support 3.0 wire			 •]
	3.0 Wife 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m Kit MW-EB M8 L 3.0/5m	376959 423180 2184504 2280049 2280050 2280051 2280052 2280053	Ceiling Panel	8	Busbar	
d 🛔	1d Screw anchor, M10 support		-			
t compo	5.0 wire 1x screw anchor HUS-I 6x35 M8/M10 anchor HUS-I 6x55 M8/M10 anchor 1x M10 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m Kit MW-EB M10 L 5.0/3m Kit MW-EB M10 L 5.0/5m Kit MW-EB M10 L 5.0/10m	376959 423180 2184505 2280054 2280055 2280056 2280057 2280058	1a 1 1b 2 1c 3	y anchor .5 wire 2.0 wire 6.0 wire 6.0 wire		Flush ancho 2a 1.5 wire 2b 2.0 wire 2c 3.0 wire 5.0 wire
			Cable Tray			1
Application descrip	otion			Application	Product lines	Base mate
Wire system - Electrica	al - Cable Tray, Ceiling Panel and	1 Busbar O	n Concrete Slab	5	Wire system	Concrete

the chosen base material and all connected parts.

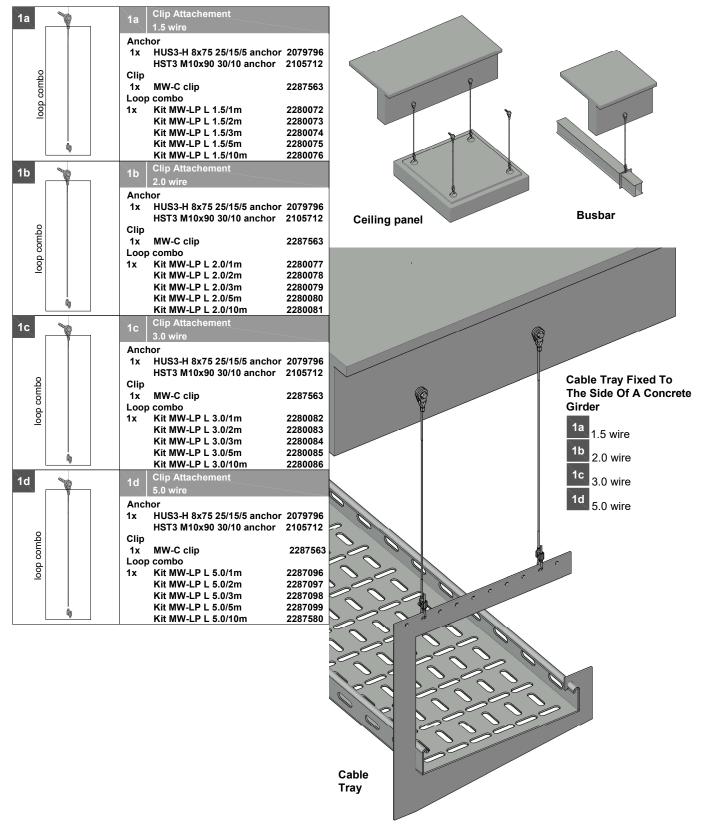
Only for vertically suspended loads. Eye-bolt not suitable for bracing.

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erial



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On a Concrete Girder:



Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling Panel and Busbar On Concr. Girder	5	Wire system	Concrete
 General comments Loading must always be compared with the capacity of all connected parts and the anchor within the chosen base material. This capacity is affected by 		Anchors	
the angle of loading from the vertical and the prying factor. Only one wire may be suspended on each clip.			

Hilti strongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the application finits specified in the Hilti technical absects. Technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Metal Deck:

1a	1a Deck hook 1.5 wire		2c	2c Through bolted V-hanger 3.0 wire	
1 7	Deck hook		X	V-Hanger	
	1x MW-DH deck hook	2277567	V ~00	1x MF-TSH M8 V-hanger	229006
- P	Loop combo			1x M8 nut	216465
	1x loop and lock		9	Through-bolt version 1-t-rod	
0	Kit MW-LP L 1.5/1m	2280072		1x AM8x1000 fixed t-rod	339793
윤	Kit MW-LP L 1.5/2m	2280073		4x M8 nut	216465
loop combo	Kit MW-LP L 1.5/3m	2280074		Through-bolt ver. 2-long h-head	
9	Kit MW-LP L 1.5/5m	2280075	eyebolt combo	1x M8x120 4.8 hex. head sc.	2063165
<u>8</u>				2x M8 nut	216465
	Kit MW-LP L 1.5/10m	2280076			210400
6				Eyebolt combo	
			A A	1x eyebolt and lock	
1b 7	1b Deck hook		Φ	Kit MW-EB M8 L 3.0/1m	2280049
	2.0 wire			Kit MW-EB M8 L 3.0/2m	2280050
8	Deck hook			Kit MW-EB M8 L 3.0/3m	2280051
		0077507	6	Kit MW-EB M8 L 3.0/5m	2280052
	1x MW-DH deck hook	2277567		Kit MW-EB M8 L 3.0/10m	2280053
loop combo	Loop combo			Through bolted V-hanger	
<u> </u>	1x loop and lock		2d	20	
ŏ	Kit MW-LP L 2.0/1m	2280077		5.0 wire	
8	Kit MW-LP L 2.0/2m	2280078		V-Hanger	
<u> </u>	Kit MW-LP L 2.0/3m	2280079		1x MF-TSH M10 V-hanger	229007
	Kit MW-LP L 2.0/5m	2280080		1x M10 nut	2184505
*	Kit MW-LP L 2.0/10m	2280081	8	Through-bolt version 1-t-rod	
			u 1 1	1x AM8x1000 fixed t-rod	339793
				4x M8 nut	216465
	2. Through bolted V-hanger				
2a	20		<u> 4</u>	Through-bolt ver. 2-long h-head	
	1.5 wire		eyebolt combo	1x M8x120 4.8 hex. head sc.	2063165
XX	AV-Hanger			2x M8 nut	216465
	1x MF-TSH M8 V-hanger	229006		Eyebolt combo	
9	1x M8 nut	216465		1x eyebolt and lock	
ė	Through-bolt version 1-t-rod	210400	ω.	Kit MW-EB M10 L 5.0/1m	2280054
e e	1x AM8x1000 fixed t-rod	339793		Kit MW-EB M10 L 5.0/2m	2280055
				Kit MW-EB M10 L 5.0/3m	2280056
	4x M8 nut	216465		Kit MW-EB M10 L 5.0/5m	2280057
<u>q</u>	Through-bolt ver. 2-long h-head		aų.	Kit MW-EB M10 L 5.0/10m	2280058
5	1x M8x120 4.8 hex. head sc.	2063165			
eyebolt combo	2x M8 nut	216465			
8	Eyebolt combo				
	1x eyebolt and lock				.
ΰ	Kit MW-EB M8 L 1.5/1m	2280019			Ceiling panel
	Kit MW-EB M8 L 1.5/2m	2280040			5/1
	Kit MW-EB M8 L 1.5/3m	2280041			A D
4	Kit MW-EB M8 L 1.5/5m	2280042		V-Hanger	A 4
	Kit MW-EB M8 L 1.5/10m	2280043			X A
	Through bolted V-hanger			2a 15 wire	MAR I
2b	20		Baals Haals	1.5 wire	
	2.0 wire		Deck Hook 🗸		
X	V-Hanger		10	^{2b} 2.0 wire	
V ~0.	1x MF-TSH M8 V-hanger	229006	1a 1.5 wire		
	1x M8 nut	216465		^{2c} 3.0 wire	<0
8	Through-bolt version 1-t-rod	210400			
l f		339793	1b 2.0 wire	2d 5.0 wire	
				5.0 wire	
	4x M8 nut	216465			
eyebolt combo	Through-bolt ver. 2-long h-head s			.	Busbar
6	1x M8x120 4.8 hex. head sc.	2063165		. *	
	2x M8 nut	216465			AT CA
	Eyebolt combo			A	A B
jet l	1x eyebolt and lock			×' <	
ê	Kit MW-EB M8 L 2.0/1m	2280044			TOP 1
	Kit MW-EB M8 L 2.0/2m	2280045			
	Kit MW-EB M8 L 2.0/3m	2280046			
-	Kit MW-EB M8 L 2.0/5m	2280040		1	
ų.					
·	Kit MW-EB M8 L 2.0/10m	2280048			
			e e		1 An
			-	0	
			Cable Tray	L.	

Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling Panel and Busbar On Metal Deck	5	Wire system	Metal Deck
General comments Loading must always be compared with the capacity of the metal deck and 		V-Hangers	
 all connected parts. The deck hook must hang vertically from the deck. 			
Only one wire may be suspended on each deck hook.			
Hilti strongly advises customers to verify the respective product application for the intended use by consulting a struct			to ensure compliance with the



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Metal Deck - V-hanger with Integrated Nut:

			3	3		
1a		1aThrough bolted V-Hanger1.5 wire		1d	1d Through bolted V-Hai 5.0 wire	nger
		V-Hanger 1x MVA-MS M8 V-hanger 1x M8 nut	386558 2184504		V-Hanger 1x MVA-MS M10 V-hanger 1x M10 nut	386559 2184505
	8	Through-bolt version 1-t-rod	2104504		Through-bolt version 1-t-ro	
		1x AM8x1000 fixed t-rod 4x M8 nut	339793 2184504		1x AM8x1000 fixed t-rod 4x M8 nut	339793 2184504
) e		Through-bolt ver. 2-long h-head		g	Through-bolt ver. 2-long h-	
evebolt combo		1x M8x120 4.8 hex. head sc.	2063165		1x M8x120 4.8 hex. head sc	. 2063165
bolt		2x M8 nut Eyebolt combo	2184504	otto	2x M8 nut Eyebolt combo	2184504
eve		1x eyebolt and lock		eyebolt combo	1x eyebolt and lock	
		Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m	2280019 2280040	Φ	Kit MW-EB M10 L 5.0/1m Kit MW-EB M10 L 5.0/2m	
		Kit MW-EB M8 L 1.5/2m	2280040		Kit MW-EB M10 L 5.0/2m	
		Kit MW-EB M8 L 1.5/5m	2280042		Kit MW-EB M10 L 5.0/5m	
		Kit MW-EB M8 L 1.5/10m	2280043		Kit MW-EB M10 L 5.0/10	m 2280058
1b		1b Through bolted V-Hanger 2.0 wire				
		V-Hanger 1x MVA-MS M8 V-hanger	386558	-		V-Hanger with
	9	1x M8 nut	2184504	Through bolted <		self-tapping screws
		Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod	339793		•	2 1 5 wine
		4x M8 nut	2184504			1.5 wire 2.0 wire
evebolt combo		Through-bolt ver. 2-long h-head starts 1x M8x120 4.8 hex. head sc.	screw 2063165			3.0 wire
lt co		2x M8 nut	2063165			5.0 wire
(ebc		Eyebolt combo				
e l		1x eyebolt and lock Kit MW-EB M8 L 2.0/1m	2280044		13190	
		Kit MW-EB M8 L 2.0/2m	2280045	1a 1.5 wire		
		Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/5m	2280046 2280047			
	- the second sec	Kit MW-EB M8 L 2.0/10m	2280048	1b 2.0 wire		Ceiling panel
1c		1c Through bolted V-Hanger		1c 3.0 wire		· · ·
		3.0 wire V-Hanger		1d 5.0 wire		
		1x MVA-MS M8 V-hanger	386558	5.0 wire		
	1 P	1x M8 nut	2184504		4	
		Through-bolt version 1-t-rod 1x AM8x1000 fixed t-rod	339793		· · ·	
		4x M8 nut	2184504			A
l du		Through-bolt ver. 2-long h-head start 1x M8x120 4.8 hex. head sc.	screw 2063165			
tco		2x M8 nut	2184504			
evebolt combo		Eyebolt combo 1x eyebolt and lock				Busbar
e ve		Kit MW-EB M8 L 3.0/1m	2280049			
		Kit MW-EB M8 L 3.0/2m	2280050			· · · ·
		Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m	2280051 2280052		1 ~ 1	
	P	Kit MW-EB M8 L 3.0/10m	2280053			
2	•	2 V-Hanger With Self-Tapping 1.5, 2.0, 3.0 and 5.0 wire	g Screws	~	C'	
		V-Hanger 1x MVA-MS M8 V-hanger	386558	Cable Tray		
		1X MVA-MS M8 V-nanger MVA-MS M10 V-hanger	386558			
		Self-tapping screws				
		6x S-MS 01Z 4.0x13 S-screw Securing nut	406471			
	and Ex	1x M8 nut	2184504			
		M10 nut	2184505			
	U			J		

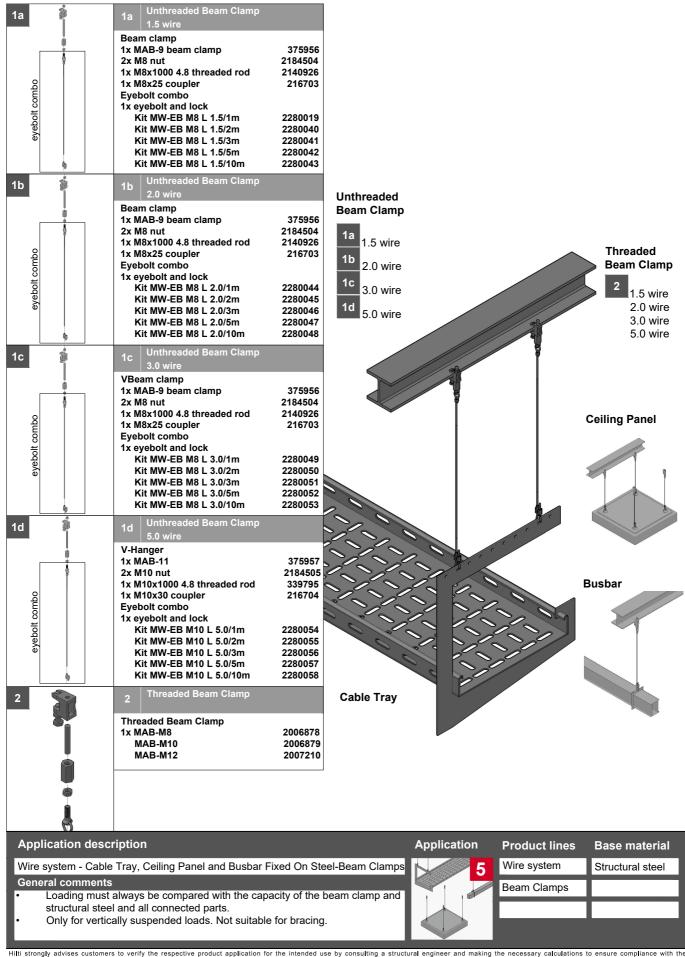
Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling Panel and Busbar On Metal Deck	5	Wire system	Metal Deck
 General comments Loading must always be compared with the capacity of the metal deck and all connected parts. Only for vertically suspended loads. Not suitable for bracing. 		V-Hangers	
Hilli strongly advises customers to verify the respective product application for the intended use by consulting a struc			

Hilti strongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the applicable hilti instructions for use, within the application limits specified in the Hilti technical asheets, technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.

Version 2.2 from 12.2021, Page 57



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Structural Steel Profiles - Beam Clamps:



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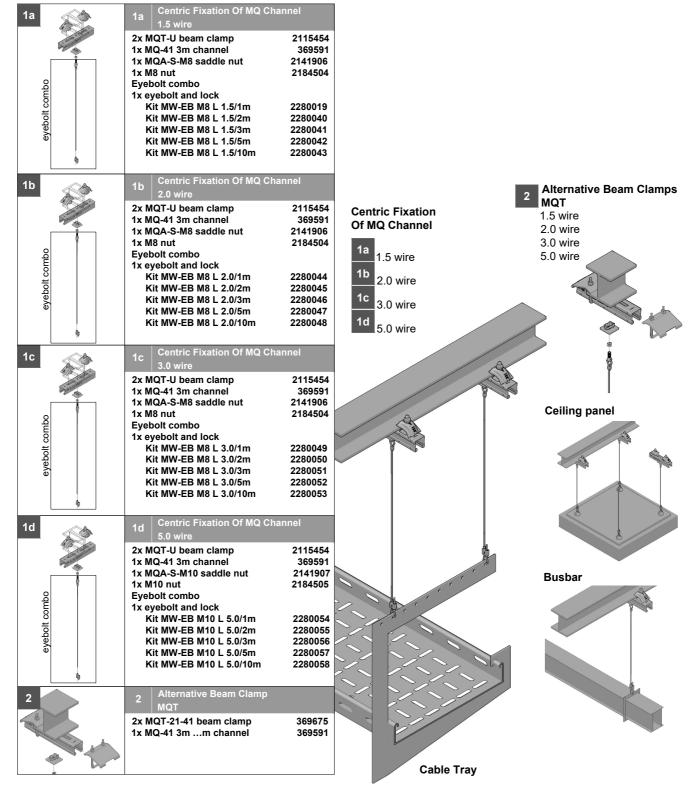
Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Structural Steel Profiles - MM Channel:

1a	1a Centric Fixation Of MM Char 1.5 wire	nel	Ceiling panel	Busbar	
eyebolt combo	2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M8 saddle nut 1x M8 nut Eyebolt combo 1x eyebolt and lock Kit MW-EB M8 L 1.5/1m Kit MW-EB M8 L 1.5/2m Kit MW-EB M8 L 1.5/3m Kit MW-EB M8 L 1.5/5m Kit MW-EB M8 L 1.5/10m	418763 418749 418760 216465 2280019 2280040 2280041 2280042 2280043			
1b	Centric Fixation Of MM Char 2.0 wire 2x MM-T-16-36 beam clamps 1x MM-C-30 2mm channel 1x MM-S M8 saddle nut 1x M8 nut Eyebolt combo	nnel 418763 418749 418760 216465			
eyebolt combo	1x eyebolt and lock Kit MW-EB M8 L 2.0/1m Kit MW-EB M8 L 2.0/2m Kit MW-EB M8 L 2.0/3m Kit MW-EB M8 L 2.0/5m Kit MW-EB M8 L 2.0/10m	2280044 2280045 2280046 2280047 2280048	Centric Fixation Of MM Channel		
1c	1cCentric Fixation Of MM Char 3.0 wire2x MM-T-16-36 beam clamps1x MM-C-30 2mm channel1x MM-S M8 saddle nut1x M8 nutEyebolt combo1x eyebolt and lock	418763 418763 418749 418760 216465	1b 2.0 wire 1c 3.0 wire 1d 5.0 wire		
eyebolt combo	Kit MW-EB M8 L 3.0/1m Kit MW-EB M8 L 3.0/2m Kit MW-EB M8 L 3.0/3m Kit MW-EB M8 L 3.0/5m Kit MW-EB M8 L 3.0/10m	2280049 2280050 2280051 2280052 2280053			4
eyebolt combo	1dCentric Fixation Of MM Char5.0 wire2x MM-T-16-36 beam clamps1x MM-C-30 2mm channel1x MM-S M10 saddle nut1x M10 nutEyebolt combo1x eyebolt and lockKit MW-EB M10 L 5.0/1mKit MW-EB M10 L 5.0/2mKit MW-EB M10 L 5.0/3mKit MW-EB M10 L 5.0/5mKit MW-EB M10 L 5.0/10m	418763 418749 418761 2184505 2280054 2280055 2280056 2280057 2280058			
			Cable Tray		

Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling P. and Busbar On Steel MM Cahnnel	5	Wire system	Structural steel
General comments Loading must always be compared with the capacity of structural steel and 		Beam Clamps	
all connected parts		MM System	
Only for vertically suspended loads. Not suitable for bracing.			
Hilti strongly advises customers to verify the respective product application for the intended use by consulting a struct	tural engineer and making	the necessary calculations	to ensure compliance with the



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Structural Steel Profiles - MQ Channel:



Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling P. and Busbar On Steel-MQ Cahnnel	5	Wire system	Structural steel
 General comments Loading must always be compared with the capacity of the structural steel and all connected parts. Only for vertically suspended loads. Not suitable for bracing. 		Beam Clamps MQ Channel	



Electrical - Cable Tray, Ceiling Panel and Busbar Fixed On Structural Steel Profiles - Looped:

1a	1a Looping The Profile 1.5 wire	- Ceiling panel	Busbar
loop combo	Kit MW-LP L 1.5/2m 22 Kit MW-LP L 1.5/3m 22 Kit MW-LP L 1.5/5m 22	880072 880073 880074 880076	
1b oqueo dog	Kit MW-LP L 2.0/2m 22 Kit MW-LP L 2.0/3m 22 Kit MW-LP L 2.0/5m 22	80077 880078 880079 880080 880081	
1c oqueo dool	Kit MW-LP L 3.0/2m 22 Kit MW-LP L 3.0/3m 22 Kit MW-LP L 3.0/5m 22	80082 80083 80084 80085 80086	Looping The Profile 1a 1.5 wire 1b 2.0 wire 1c 3.0 wire 5.0 wire
1d oppo combo	Kit MW-LP L 5.0/2m 22 Kit MW-LP L 5.0/3m 22 Kit MW-LP L 5.0/5m 22	87096 87097 87098 87580	

Application description	Application	Product lines	Base material
Wire system - Electrical - Cable Tray, Ceiling Panel and Busbar On Steel - Looped	5	Wire system	Structural steel
 General comments Loading must always be compared with the capacity of the structural steel and all connected parts. Sharp edges must be avoided to prevent damage to the wire 			
Hilli strongly advises customers to verify the respective product application for the intended use by consulting a struct	hand a pine of a seliment		

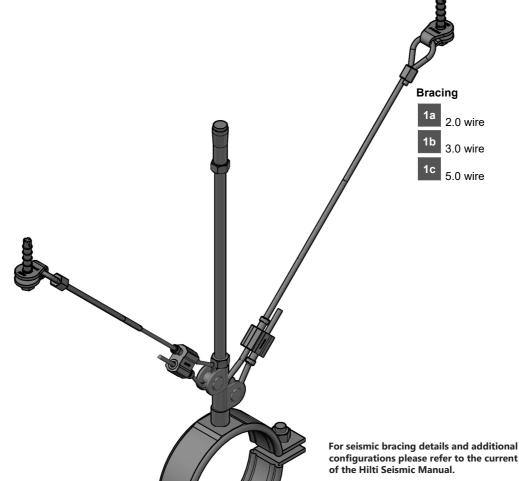
Hilt istrongly advises customers to verify the respective product application for the intended use by consulting a structural engineer and making the necessary calculations to ensure compliance with the applicable norms and standards. Failure to consult and heed the advice of a structural engineer will free Hilti from any liability. It is essential that the product is used strictly in accordance with the applicable hilti instructions for use, within the application limits specified in the Hilti technical data sheets, technical specifications and supporting product literature, and that the relevant application limits are not exceeded at any time. All rights reserved by Hilti Corporation. Duplication, utilization and/or publication of drawings contained in this manual are not permitted unless expressly agreed by Hilti Corporation.

Version 2.2 from 12.2021, Page 61



Bracing - Single Fastening Point on Concrete Slab:

Anchor Anchor Anchor Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 1x HUS3-H 8x75 25/15/5 anchor LOST 2079796 2105712 1x HUS3-H 8x75 25/15/5 anchor LOST 2079796 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 anchor 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 anchor 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 anchor 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 anchor 2105712 1x HUS3-H 8x75 25/1 HST3 M10x90 30/10 2105712 1x MW-C clip Loop combo 1x ST3 M10x90 30/10 Loop combo 1x MW-C clip Loop combo 1x loop and lock Kit MW-LP L 5.0/1 Kit MW-LP L 5.0/2 Kit MW-LP L 5.0/2 Kit MW-LP L 5.0/2 Kit MW-LP L 5.0/2 Kit MW-LP L 5.0/3 Kit MW-LP L 5.0/3 Kit MW-LP L 5.0/1 Kit MW-LP L 5.0/1 Kit MW-LP L 5.0/1 Seismic hinge 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-10		1a-c
HST3 M10x90 30/10 anchor 2105712 HST3 M10x90 30/10 anchor 2105712 HST3 M10x90 30/10 anchor Clip Cl		
Clip Clip Clip Clip 1x MW-C clip 2287563 1x MW-C clip 2287563 1x MW-C clip Loop combo 1x loop and lock 1x loop and lock 1x loop and lock 1x loop and lock Kit MW-LP L 2.0/1m 2280077 Kit MW-LP L 3.0/1m 2280082 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 3.0/2m 2280084 Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 3.0/3m 2280085 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5 Kit MW-LP L 2.0/1m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge Seismic hinge Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 1x MQS-HR-10 1x MQS-HR-10		
1x MW-C clip 2287563 1x MW-C clip 2287563 1x MW-C clip Loop combo 1x loop and lock Loop combo Loop combo 1x loop and lock 1x loop and	2103712	
1x loop and lock Kit MW-LP L 2.0/1m 1x loop and lock 2280077 1x loop and lock Kit MW-LP L 3.0/1m 1x loop and lock Kit MW-LP L 3.0/1m 1x loop and lock Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x loop and lock Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 1x MW-LP L 5.0/2 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/2m 1x MW-LP L 5.0/3 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/10m 1x MQS-HR Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 1x MQS-HR-10 1x MQS-HR-10	2287563	1
Kit MW-LP L 2.0/1m 2280077 Kit MW-LP L 3.0/1m 2280082 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 3.0/2m 2280083 Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 3.0/2m 2280084 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 3.0/3m 2280085 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5 Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge 1x MQS-HR-8 Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 2330878 1x MQS-HR-10		A C
Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 3.0/2m 2280083 Kit MW-LP L 5.0/2 Kit MW-LP L 2.0/3m 2280078 Kit MW-LP L 3.0/3m 2280084 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5 Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 2330878 1x MQS-HR-10		
Kit MW-LP L 2.0/2m 2280078 Kit MW-LP L 3.0/3m 2280084 Kit MW-LP L 5.0/3 Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5 Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge Seismic hinge Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-10	2287096	
Kit MW-LP L 2.0/3m 2280079 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5 Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge Seismic hinge Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-10	2287097	
Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/10m 2280086 Kit MW-LP L 5.0/1 Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge Seismic hinge Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-10	2287098	
Kit MW-LP L 2.0/10m 2280081 Seismic hinge Seismic hinge Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 2330878	2287099	절
Seismic hinge 1x MQS-HR-8 2330877 1x MQS-HR-8 1x MQS-HR-8 2330877 1x MQS-HR-10 2330878 1x MQS-HR-10	2287580	combo
1x MQS-HR-8 2330877 1x MQS-HR-10 2330878 1x MQS-HR-10		a
	2330877	dool
1X MQS-HR-10 2330878	2330878	
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configurations please refer to the current version

Application description	Application	Product lines	Base material
Wire system - Bracing Single Fastening Point On Concrete Slab	6	Wire system	Concrete
 General comments Loading must always be compared with the capacity of all connected parts and the anchor within the chosen base material. This capacity is affected by the angle of loading from the vertical and the prying factor. Only one wire may be suspended on each clip. 	To of	MQS System	



Bracing - Single Fastening Point on Concrete Slab -Double Connection:

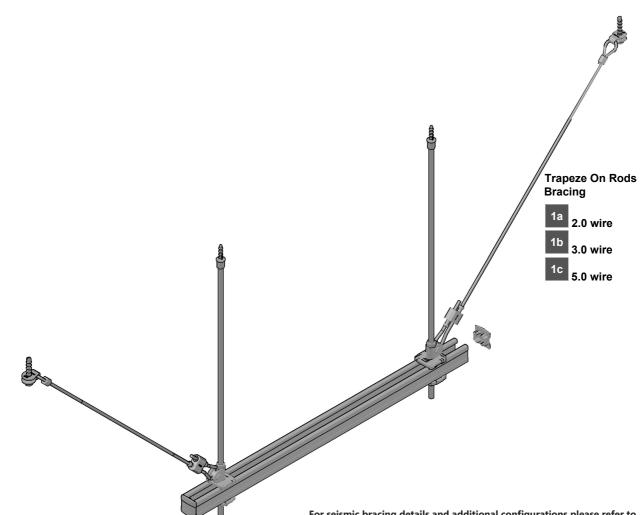
1a Bracing 2.0 wire	00010	on:				
		1b Bracing 3.0 wire		1c	Bracing 5.0 wire	1a-c
Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x loop and lock Kit MW-LP L 2.0/1m Kit MW-LP L 2.0/2m Kit MW-LP L 2.0/3m Kit MW-LP L 2.0/3m Kit MW-LP L 2.0/10m Seismic hinge 1x MQS-A 9.4 MQS-A 11.5 MQS-A 16.3	2079796 2105712 2287563 2280077 2280078 2280079 2280080 2280080 2280081 2083721 2083722 2083723 2083724	Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip 1x MW-C clip Loop combo 1x loop and lock Kit MW-LP L 3.0/1m Kit MW-LP L 3.0/2m Kit MW-LP L 3.0/3m Kit MW-LP L 3.0/3m Kit MW-LP L 3.0/10m Seismic hinge 1x MQS-A 9.4 MQS-A 11.5 MQS-A 13.6 MQS-A 16.3	2079796 2105712 2287563 2280082 2280084 2280084 2280085 2280086 2083721 2083722 2083723 2083724	H Clip 1x M Loop 1x H H H 2287 Seis 1x M	IUS3-H 8x75 25/15/5 anchor IST3 M10x90 30/10 anchor IW-C clip o combo oop and lock (it MW-LP L 5.0/1m (it MW-LP L 5.0/2m (it MW-LP L 5.0/3m (it MW-LP L 5.0/5m (it MW-LP L 5.0/10m	20797996 2105712 2287563 2287096 2287097 2287098 2287099 2287099 2083721 2083722 2083722 2083723 2083724
						Bracing 1a 2.0 wire 1b 3.0 wire

Application description	Application Product	lines Base material
Wire system - Bracing Single Fastening Point On Concrete Slab - Double	6 Wire syste	em Concrete
General comments Loading must always be compared with the capacity of all connect 	MQS Syst	tem
and the anchor within the chosen base material. This capacity is af		
 the angle of loading from the vertical and the prying factor. Only one wire may be suspended on each clip. 		
Life strangly advises sustainers to varify the respective product application for the intended use by each	ting a structural appinger and making the personally a	alculations to onsure compliance with the



Bracing - Trapeze On Rods Fixed On Concrete Slab:

1a Bracing 2.0 wire		1b Bracing 3.0 wire		1c Bracing 5.0 wire		1a-c
Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip	2079796 2105712	Anchor 1x HUS3-H 8x75 25/15/5 ancho HST3 M10x90 30/10 anchor Clip	2079796 2105712	Anchor 1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor Clip	2079796 2105712	
1x MW-C clip Loop combo 1x Loop and lock	2287563	1x MW-C clip Loop combo 1x Loop and lock	2287563	1x MW-C clip Loop combo 1x Loop and lock	2287563	l o
Kit MW-LP L 2.0/1m Kit MW-LP L 2.0/2m	2280077 2280078	Kit MW-LP L 3.0/1m Kit MW-LP L 3.0/2m	2280082 2280083	Kit MW-LP L 5.0/1m Kit MW-LP L 5.0/2m	2287096 2287097	p combo
Kit MW-LP L 2.0/3m Kit MW-LP L 2.0/5m Kit MW-LP L 2.0/10m	2280079 2280080 2280081	Kit MW-LP L 3.0/3m Kit MW-LP L 3.0/5m Kit MW-LP L 3.0/10m	2280084 2280085 2280086	Kit MW-LP L 5.0/3m Kit MW-LP L 5.0/5m Kit MW-LP L 5.0/10m	2287098 2287099 2287580	dool
1x Seismic hinge MQS-HR-8	2330877	1x Seismic hinge MQS-HR-8	2330877	1x Seismic hinge MQS-HR-8	2330877	
MQS-HR-10	2330878	MQS-HR-10	2330878	MQS-HR-10	2330878	



For seismic bracing details and additional configurations please refer to the current version of the Hilti Seismic Manual.

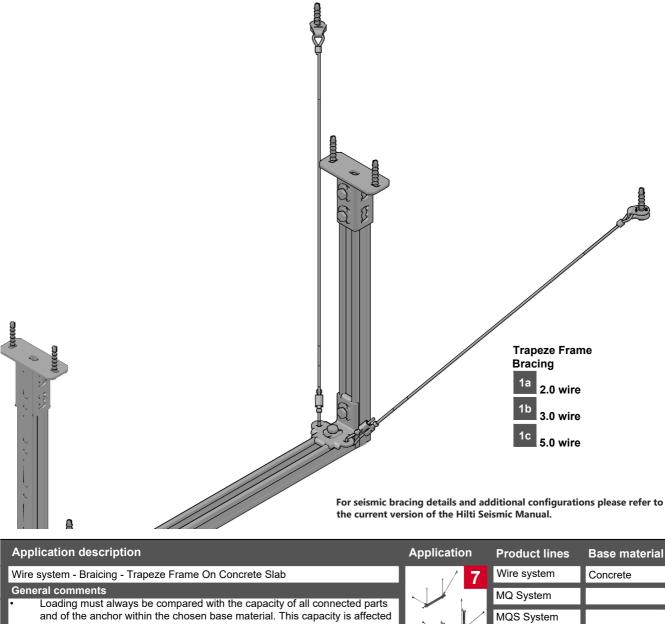
Application description	Application	Product lines	Base material
Wire system - Bracing - Trapeze On Rods On Concrete Slab	7	Wire system	Concrete
 General comments Loading must always be compared with the capacity of all connected parts and anchor within the chosen base material. This capacity is affected by the angle of loading from the vertical and the prying factor. Only one wire may be suspended on each clip. 		MQ System MQS System	

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Bracing - Trapeze Frame Fixed On Concrete Slab:

Anchor Anchor Anchor Anchor 1x HUS3-H 8x75 25/15/5 anchor 2079796 1x HUS3-H 8x75 25/15/5 anchor 2079796 1x HUS3-H 8x75 25/15/5 anchor 2079796 HST3 M10x90 30/10 anchor 2105712 HST3 M10x90 30/10 anchor 2105712 HST3 M10x90 30/10 anchor 2105712 1x HUS3-H 8x75 25/15/5 anchor 2079796 Clip Clip Clip Clip 2105712 Loop combo 2105712 2105712 1x MW-C clip 2287563 1x MW-C clip 2287563 Loop combo 1x Loop and lock 1x MW-LP L 5.0/1m 2287096 0	1a Bracing 2.0 wire	1b Bracing 3.0 wire	1c Bracing 5.0 wire	1a-c
Kit MW-LP L 2.0/5m 2280080 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 5.0/5m 2287089 8 Kit MW-LP L 2.0/10m 2280081 Kit MW-LP L 3.0/10m 2280085 Kit MW-LP L 5.0/10m 2287580 8 1x Seismic trapeze angle 1x Seismic trapeze angle <t< th=""><th>1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 Clip 2105712 1x MW-C clip 2287563 Loop combo 1 1x Loop and lock 2280077 Kit MW-LP L 2.0/1m 2280078 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/10m 2280081 1x Seismic trapeze angle 1</th><th>1x HUS3-H 8x75 25/15/5 anchor 2079796 HST3 M10x90 30/10 anchor 2105712 Clip 2287563 1x MW-C clip 2287563 Loop combo 1x Loop and lock Kit MW-LP L 3.0/1m 2280082 Kit MW-LP L 3.0/2m 2280083 Kit MW-LP L 3.0/3m 2280084 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 3.0/10m 2280086 1x Seismic trapeze angle 1x Seismic trapeze</th><th>1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 Clip 2105712 1x MW-C clip 2287563 Loop combo 2287563 1x Loop and lock 2287096 Kit MW-LP L 5.0/1m 2287097 Kit MW-LP L 5.0/2m 2287098 Kit MW-LP L 5.0/5m 2287098 Kit MW-LP L 5.0/10m 2287580 1x Seismic trapeze angle 1x Seismic trapeze</th><th>loop combo</th></t<>	1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 Clip 2105712 1x MW-C clip 2287563 Loop combo 1 1x Loop and lock 2280077 Kit MW-LP L 2.0/1m 2280078 Kit MW-LP L 2.0/2m 2280079 Kit MW-LP L 2.0/3m 2280080 Kit MW-LP L 2.0/10m 2280081 1x Seismic trapeze angle 1	1x HUS3-H 8x75 25/15/5 anchor 2079796 HST3 M10x90 30/10 anchor 2105712 Clip 2287563 1x MW-C clip 2287563 Loop combo 1x Loop and lock Kit MW-LP L 3.0/1m 2280082 Kit MW-LP L 3.0/2m 2280083 Kit MW-LP L 3.0/3m 2280084 Kit MW-LP L 3.0/5m 2280085 Kit MW-LP L 3.0/10m 2280086 1x Seismic trapeze angle 1x Seismic trapeze	1x HUS3-H 8x75 25/15/5 anchor HST3 M10x90 30/10 anchor 2079796 2105712 Clip 2105712 1x MW-C clip 2287563 Loop combo 2287563 1x Loop and lock 2287096 Kit MW-LP L 5.0/1m 2287097 Kit MW-LP L 5.0/2m 2287098 Kit MW-LP L 5.0/5m 2287098 Kit MW-LP L 5.0/10m 2287580 1x Seismic trapeze angle 1x Seismic trapeze	loop combo



and of the anchor within the chosen base material. This capacity is affected by the angle of loading from the vertical and the prying factor. Only one wire may be suspended on each clip.



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