



DATA SHEET

Standoff adapter MR

Stainless steel



16 Jun 2026

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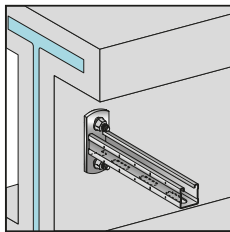
1. Product information

1.1 Product description

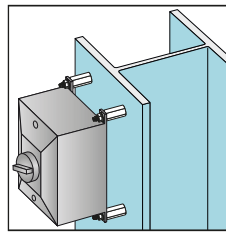
Designation	Features
Adapter MR 	• For fastenings on steel with passive fire protection (PFP) coating, bare steel members or insulated steel members • Faster and more efficient – no welding/ bracketing needed • Helps to prevent contact between fixtures and steel beams or plates – both uncoated or PFP coated beams • Versatile – threaded standoff adapters can be used as a spacer for a wide range of fastenings on PFP coated beams

2. Intended use

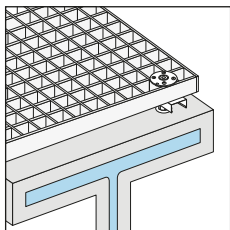
2.1 Application examples



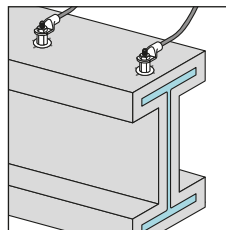
Fastening standoff adapter on
Passive Fire Protection (PFP) coated steel



Fastening on bare steel members



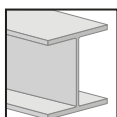
Fastening grating with standoff adapter on
Passive Fire Protection (PFP) coated steel



Fastening electrical connections on
Passive Fire Protection (PFP) coated steel

- i**
- For more details regarding grating fastening, please refer to the Product Data Sheets for grating elements
 - For more details regarding electrical connections, please refer to the corresponding Product Data Sheets for electrical connections

2.2 Base materials



Steel

2.3 Load conditions



Static/quasi-static

2.4 Environmental conditions

Dry indoor	Indoor with temporary condensation	Outdoor with low pollution	Outdoor with moderate concentration of pollutants	Coastal areas	Outdoor, areas with heavy industrial pollution	Close proximity to roads
■	■	■	■	■	■	■

■ = Suitable for corrosion prevention
□ = Suitable, requires expert evaluation



• For more details, please refer to the [Hilti Corrosion Handbook](#).

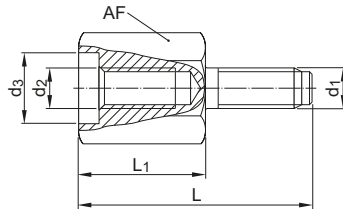
3. Approvals and reference documents

3.1 Approvals and certificates

- Information presented in this product data sheet is based on Hilti Technical Data
- Approvals/certificates available for following fastening systems: S-BT HL threaded studs, X-BT threaded studs

4. Product data

4.1 Dimensions



Adapter	Length L [mm (in)]	Length L1 [mm (in)]	Thread size d1	Thread size d2	Diameter d3 [mm (in)]	AF [mm (in)]
M8-MR 25	46 (1.811")	25 (1")	M8	M8	14 (0.551")	19 (3/4")
M8-MR 50	71 (2.795")	50 (2")	M8	M8	14 (0.551")	19 (3/4")
M8-MR 75	96 (3.780")	75 (3")	M8	M8	14 (0.551")	19 (3/4")
M8-MR 100	121 (4.764")	100 (4")	M8	M8	14 (0.551")	19 (3/4")
M10-MR 25	46 (1.811")	25 (1")	M10	M10	14 (0.551")	19 (3/4")
M10-MR 50	71 (2.795")	50 (2")	M10	M10	14 (0.551")	19 (3/4")
M10-MR 75	96 (3.780")	75 (3")	M10	M10	14 (0.551")	19 (3/4")
M10-MR 100	121 (4.764")	100 (4")	M10	M10	14 (0.551")	19 (3/4")
W10-MR 25	46 (1.811")	25 (1")	W10	W10	14 (0.551")	19 (3/4")
W10-MR 50	71 (2.795")	50 (2")	W10	W10	14 (0.551")	19 (3/4")
W10-MR 75	96 (3.780")	75 (3")	W10	W10	14 (0.551")	19 (3/4")
W10-MR 100	121 (4.764")	100 (4")	W10	W10	14 (0.551")	19 (3/4")

4.2 Material properties for carbon steel parts

Adapter	Material	Material number	EN designation	AISI/SAE	UNS	Corrosivity category
MR	Stainless steel	1.4401	X5CrNiMo17-12-2	316	S31600	CRC III

• Corrosion resistance class according to EN 1993-1-4

5. System recommendation

5.1 Fastening system recommendation

Adapter	Fastener
Adapter M8-MR 25	S-BT-GR M8/7 SN 6 HL, X-BT GR M8/7 SN 8 V3, S-BT-MR M8/7 SN 6 HL
Adapter M8-MR 50	
Adapter M8-MR 75	
Adapter M8-MR 100	
Adapter M10-MR 50	S-BT-MR M10/15 SN 6 HL, X-BT-MR M10/15 SN 8 V3
Adapter M10-MR 75	
Adapter M10-MR 100	
Adapter W10-MR 50	S-BT-MR W10/15 SN 6 HL, X-BT-MR W10/15 SN 8 V3
Adapter W10-MR 75	
Adapter W10-MR 100	

6. Requirements for intended use

6.1 Base material properties

Technical drawing	Adapter	Edge distance c [mm (in)]	Spacing s [mm (in)]
	M8-MR	≥ 15 ($\geq 5/8''$)	≥ 30 ($\geq 1 \frac{3}{16}''$)
	M10-MR	≥ 15 ($\geq 5/8''$)	≥ 30 ($\geq 1 \frac{3}{16}''$)
	W10-MR	≥ 15 ($\geq 5/8''$)	≥ 30 ($\geq 1 \frac{3}{16}''$)

- For more details about the base material, please refer to the Product Data Sheets for X-BT V3 and S-BT HL threaded studs

6.2 Fastened material thickness

Technical drawing	Adapter	Fastened material thickness t _f [mm (in)]
	M8-MR	≤ 11 (0.43")
	M10-MR	≤ 9 (0.35")
	W10-MR	≤ 9 (0.35")

- For more details about the fastened material, please refer to the Product Data Sheets for X-BT V3 and S-BT HL threaded studs

7. Performance data

7.1 Design resistances for fastening standoff adapters

Fastening system				
Adapter	Fastener (stainless steel)			
M8-MR 25, M8-MR 50, M8-MR 75, M8-MR 100	S-BT-GR M8/7 SN 6 HL, S-BT-MR M8/7 SN 6 HL			
M10-MR 50, M10-MR 75, M10-MR 100	S-BT-MR M10/15 SN 6 HL			
W10-MR 50, W10-MR 75, W10-MR 100	S-BT-MR W10/15 SN 6 HL			
Adapter	Base material grade	Base material thickness t [mm (in)]	Tension load N_{Rd} [kN (lbf)]	Shear load V_{Rd} [kN (lbf)]
M8-MR 25	S235, A36	3 (0.12")	3.3 (740)	0.77 (170)
M8-MR 50, M10-MR 50, W10-MR 50				0.43 (96)
M8-MR 75, M10-MR 75, W10-MR 75				0.34 (75)
M8-MR 100, M10-MR 100, W10-MR 100				0.26 (56)
M8-MR 25	S355, S500, S390 GD, S420GD, AH 36, DH36, EH36	3 (0.12")	4.0 (900)	0.92 (204)
M8-MR 50, M10-MR 50, W10-MR 50				0.52 (114)
M8-MR 75, M10-MR 75, W10-MR 75				0.41 (90)
M8-MR 100, M10-MR 100, W10-MR 100				0.30 (66)
M8-MR 25	S235, A36	4 (0.16")	3.3 (740)	0.96 (215)
M8-MR 50, M10-MR 50, W10-MR 50				0.53 (120)
M8-MR 75, M10-MR 75, W10-MR 75				0.39 (90)
M8-MR 100, M10-MR 100, W10-MR 100				0.27 (60)
M8-MR 25	S355, S500, S390 GD, S420GD, AH 36, DH36, EH36	4 (0.16")	4.0 (900)	1.15 (268)
M8-MR 50, M10-MR 50, W10-MR 50				0.64 (144)
M8-MR 75, M10-MR 75, W10-MR 75				0.47 (108)
M8-MR 100, M10-MR 100, W10-MR 100				0.32 (72)
M8-MR 25	S235, A36	≥ 5 (0.2")	5.1 (1145)	1.17 (260)
M8-MR 50, M10-MR 50, W10-MR 50				0.64 (140)
M8-MR 75, M10-MR 75, W10-MR 75				0.47 (105)
M8-MR 100, M10-MR 100, W10-MR 100				0.32 (70)
M8-MR 25	S355, S500, Grade 50	≥ 5 (0.2")	6.1 (1370)	141 (315)
M8-MR 50, M10-MR 50, W10-MR 50				0.76 (170)
M8-MR 75, M10-MR 75, W10-MR 75				0.55 (125)
M8-MR 100, M10-MR 100, W10-MR 100				0.39 (90)

Fastening system				
Adapter		Fastener		
M8-MR 25, M8-MR 50, M8-MR 75, M8-MR 100		X-BT GR M8/7 SN 8 V3		
M10-MR 50, M10-MR 75, M10-MR 100		X-BT-MR M10/15 SN 8 V3		
W10-MR 50, W10-MR 75, W10-MR 100		X-BT-MR W10/15 SN 8 V3		
Adapter	Base material grade	Base material thickness t [mm (in)]	Tension load N_{Rd} [kN (lbf)]	Shear load V_{Rd} [kN (lbf)]
M8-MR 25	S235, A36	8 (0.31")	7.00 (1573)	1.60 (360)
M8-MR 50, M10-MR 50, W10-MR 50				0.87 (195)
M8-MR 75, M10-MR 75, W10-MR 75				0.73 (165)
M8-MR 100, M10-MR 100, W10-MR 100				0.49 (110)
M8-MR 25	S355, S420, Grade 50	8 (0.31")	7.00 (1573)	2.00 (450)
M8-MR 50, M10-MR 50, W10-MR 50				1.09 (245)
M8-MR 75, M10-MR 75, W10-MR 75				0.91 (205)
M8-MR 100, M10-MR 100, W10-MR 100				0.61 (135)

7.2 Recommended loads for fastening standoff adapters

Fastening system				
Adapter (stainless steel)		Fastener (stainless steel)		
M8-MR 25, M8-MR 50, M8-MR 75, M8-MR 100		S-BT-GR M8/7 SN 6 HL, S-BT-MR M8/7 SN 6 HL		
M10-MR 50, M10-MR 75, M10-MR 100		S-BT-MR M10/15 SN 6 HL		
W10-MR 50, W10-MR 75, W10-MR 100		S-BT-MR W10/15 SN 6 HL		
Adapter	Base material grade	Base material thickness t [mm (in)]	Tension load N_{Rec} [kN (lbf)]	Shear load V_{Rec} [kN (lbf)]
M8-MR 25	S235, A36	3 (0.12")	2.3 (520)	0.55 (125)
M8-MR 50, M10-MR 50, W10-MR 50				0.31 (70)
M8-MR 75, M10-MR 75, W10-MR 75				0.24 (55)
M8-MR 100, M10-MR 100, W10-MR 100				0.18 (40)
M8-MR 25	S355, S500, S390 GD, S420GD, AH 36, DH36, EH36	3 (0.12")	2.8 (624)	0.66 (150)
M8-MR 50, M10-MR 50, W10-MR 50				0.37 (84)
M8-MR 75, M10-MR 75, W10-MR 75				0.29 (66)
M8-MR 100, M10-MR 100, W10-MR 100				0.22 (48)
M8-MR 25	S235, A36	4 (0.16")	3.3 (740)	0.96 (215)
M8-MR 50, M10-MR 50, W10-MR 50				0.53 (120)
M8-MR 75, M10-MR 75, W10-MR 75				0.39 (90)
M8-MR 100, M10-MR 100, W10-MR 100				0.27 (60)
M8-MR 25	S355, S500, S390 GD, S420GD, AH 36, DH36, EH36	4 (0.16")	4.0 (900)	1.15 (268)
M8-MR 50, M10-MR 50, W10-MR 50				0.64 (144)
M8-MR 75, M10-MR 75, W10-MR 75				0.47 (108)
M8-MR 100, M10-MR 100, W10-MR 100				0.32 (72)
M8-MR 25	S235, A36	≥ 5 (0.2")	3.6 (810)	0.84 (190)
M8-MR 50, M10-MR 50, W10-MR 50				0.45 (100)
M8-MR 75, M10-MR 75, W10-MR 75				0.33 (75)
M8-MR 100, M10-MR 100, W10-MR 100				0.23 (50)
M8-MR 25	S355, S500, S390 GD, S420GD, AH 36, DH36, EH36	≥ 5 (0.2")	4.3 (970)	1.00 (225)
M8-MR 50, M10-MR 50, W10-MR 50				0.54 (120)
M8-MR 75, M10-MR 75, W10-MR 75				0.40 (90)
M8-MR 100, M10-MR 100, W10-MR 100				0.28 (60)

Fastening system				
Adapter	Fastener			
M8-MR 25, M8-MR 50, M8-MR 75, M8-MR 100	X-BT GR M8/7 SN 8 V3			
M10-MR 50, M10-MR 75, M10-MR 100	X-BT-MR M10/15 SN 8 V3			
W10-MR 50, W10-MR 75, W10-MR 100	X-BT-MR W10/15 SN 8 V3			
Adapter	Base material grade	Base material thickness t [mm (in)]	Tension load N_{rec} [kN (lbf)]	Shear load V_{rec} [kN (lbf)]
M8-MR 25	S235, A36	8 (0.31")	5.00 (1124)	1.14 (255)
M8-MR 50, M10-MR 50, W10-MR 50				0.62 (140)
M8-MR 75, M10-MR 75, W10-MR 75				0.52 (115)
M8-MR 100, M10-MR 100, W10-MR 100				0.35 (80)
M8-MR 25	S355, S420, Grade 50	8 (0.31")	5.00 (1124)	1.43 (3290)
M8-MR 50, M10-MR 50, W10-MR 50				0.78 (175)
M8-MR 75, M10-MR 75, W10-MR 75				0.65 (145)
M8-MR 100, M10-MR 100, W10-MR 100				0.44 (100)

7.3 Conditions

Load type	Design resistance	Recommended loads
	Partial factor of safety γ_m	Global factor of safety Ω
Static pull-out	2.00	2.80
Static shear	2.00	2.80

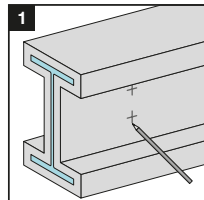
- The design resistance can be used for the design according to the partial safety concept, e.g. EN 1993-1-1 (Eurocode 3)
- Partial factor of safety γ_m and global factor of safety Ω are based on 5%-fractile ultimate test values

Technical drawing	Stand-off distance z_1 [mm (in)]	Minimum edge distance c [mm (in)]	Spacing s [mm (in)]
	30 (1.18")	≥ 15 (0.59")	≥ 18 (0.709")
	55 (2.16")		
	80 (3.15")		
	105 (4.13")		

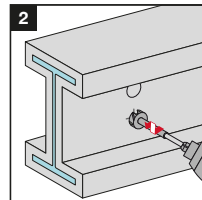
- For the shear resistance values a stand-off distance z_1 are consider
- Effect of base metal vibration and stress (e.g. areas with tensile stress) are considered.
- Redundancy (multiple fastening) must be provided.
- Maximum displacement in direction of the shear force ≤ 2.0 mm [0.08"]

8. Specification for installation

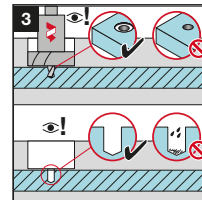
8.1 Fastening with standoff adapters on Passive Fire Protection (PFP) coated steel



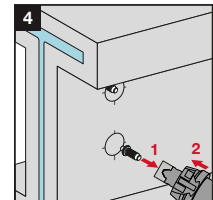
Mark location of each fastening.



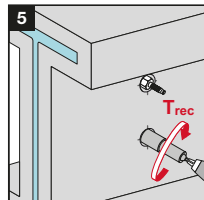
Remove PFP and pre-drill with stepped drill bit TX-BT 31-95 PFP ...



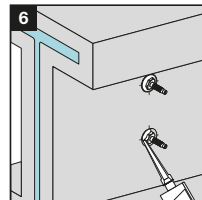
... until shoulder grinds a shiny ring. The drilled hole and the area around drilled hole must be clean and free from liquids and debris.



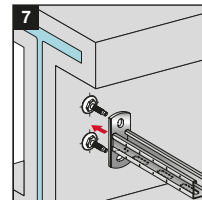
Set studs into drilled hole with direct fastening tool.



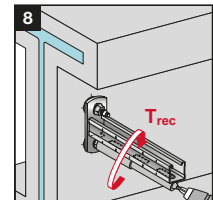
Screw-on the Hilti standoff adapter on the stud and tighten it with the recommended installation torque T_{rec} of 8 Nm.



Close the opening within 4 hours. The opening is being closed in accordance with the patching instructions by the PFP-manufacturer.

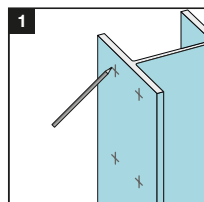


Position accessory on standoff adapter and hold in place. Use of MQZ bore plate as needed for strut applications.

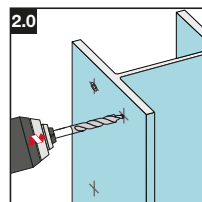


Fasten the accessory on the standoff adapter with the recommended installation torque T_{rec} of 20 Nm.

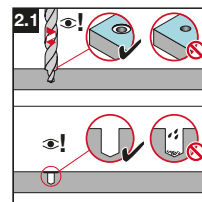
8.2 Fastening with standoff adapters on bare steel members



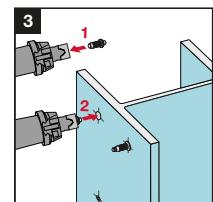
Mark location of each fastening.



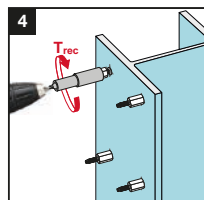
Pre-drill with stepped drill bit TX-BT 4.7/7 V3...



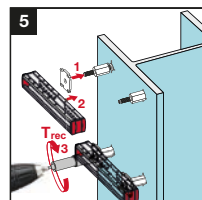
... until shoulder grinds a shiny ring. The drilled hole and the area around drilled hole must be clean and free from liquids and debris.



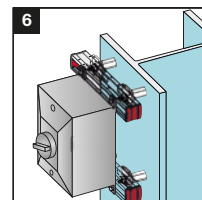
Set studs into drilled hole with direct fastening tool.



Screw-on the Hilti standoff adapter on the stud and tighten it with the recommended installation torque T_{rec} of 8 Nm.



Position channel on standoff adapter and hold in place. Tighten the nuts with a tightening torque T_{rec} of 20 Nm.



Fasten the accessory on the channel with the suited installation torque.

- These are abbreviated instructions which may vary by application.
- ALWAYS review/follow the instructions for use (IFU) accompanying the product.
- In case of a drill through hole, rework of the coating on the back side of the plate/profile may be needed.

8.3 Tightening torque recommendation

Technical drawing	Adapter	Tightening torque T_{nst} [Nm] ()
	Adapter to base material	8
	Nut to adapter: Hold the standoff with a spanner while tightening the upper nut	8–16

- For grating fastening with standoff adapters, please refer to the corresponding Product Data Sheets for grating elements
- The tightening torques for grating elements can differ from 5 to 20 Nm

9. Ordering information

9.1 Item number and description

Designation	Item number	Description
Adapter M8-MR 25	2268522	Standoff adapter (stainless steel)
Adapter M8-MR 50	2268523	
Adapter M8-MR 75	2268524	
Adapter M8-MR 100	2268525	
Adapter M10-MR 50	2281193	
Adapter M10-MR 75	2394867	
Adapter M10-MR 100	2394868	
Adapter W10-MR 50	2281191	
Adapter W10-MR 75	2394869	
Adapter W10-MR 100	2395330	



Hilti Aktiengesellschaft
9494 Schaan, Liechtenstein
P +423-234 2965

www.facebook.com/hiltigroup
www.hilti.group