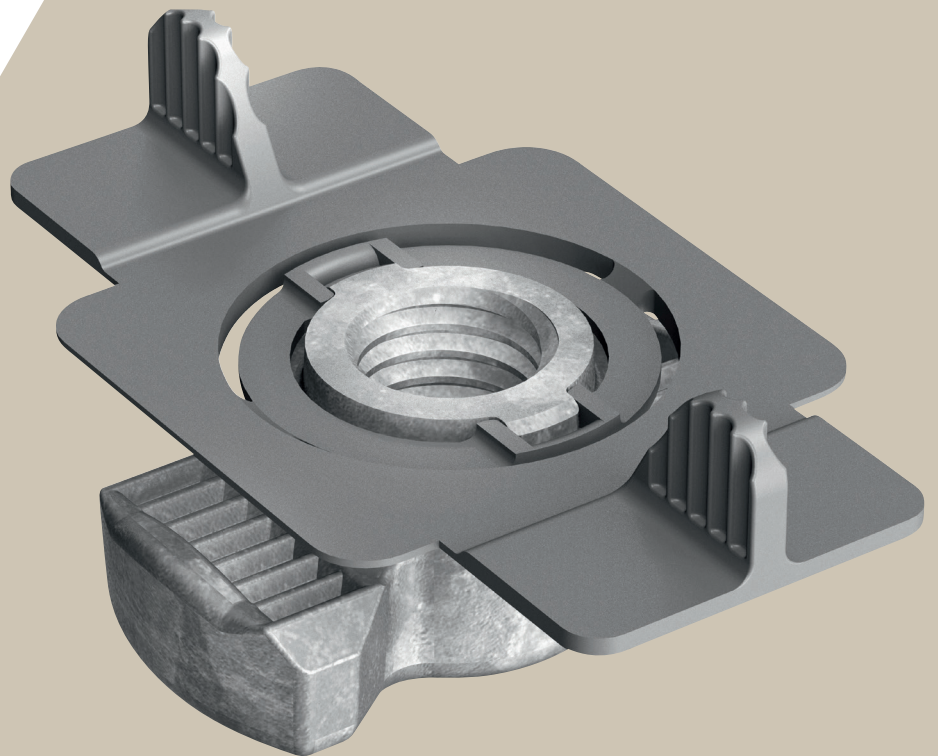




# MQM WING NUT WITH HAC-30 ANCHOR CHANNEL

Technical Datasheet  
March 2020, Version 1.0



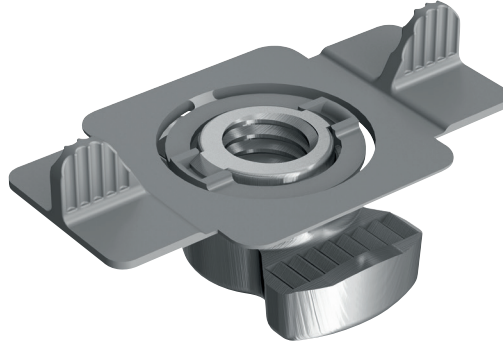
## TECHNICAL DATA

The technical data provided below are valid for the MQM wing nut in combination with the HAC-30 anchor channel. The HBC-B channel bolt is engineered to provide the maximum performance in combination with the HAC-30 anchor channel.

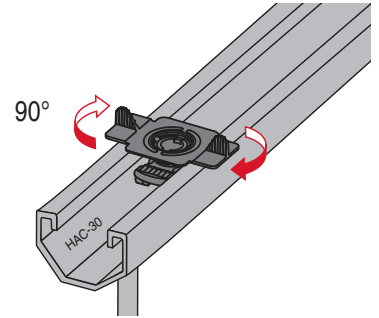
Additionally, the MQM wing nuts provide great and convenient alternatives when installing threaded rods for hanging ducts and pipes.

### Portfolio

- MQM-M6 (#369624)
- MQM-M8 (#369698)
- MQM-M10 (#369626)
- MQM-M12 (#369627)
- MQM-M12-F (#304134)



MQM Wing Nut



MQM Wing Nut in a HAC-30 channel

For all the concrete failure modes of the HAC-30 anchor channel please refer to the ETA-11/0006.

### Resistance values under tension load – steel failure

MQM Wing nut diameter				M6	M8	M10	M12(-F)
<b>Steel failure</b>							
Characteristic flexural resistance of channel	$M_{Rk,s,flex}$	[Nm]	Screw / Rod 4.6	755			
			Screw / Rod 8.8				
Design flexural resistance of channel	$M_{Rd,s,flex}$	[Nm]	Screw / Rod 4.6	656.5			
			Screw / Rod 8.8				

### Resistance values under tension load – steel failure of hexagon screw and threaded rods

MQM Wing nut diameter				M6	M8	M10	M12(-F)
<b>Steel failure</b>							
Characteristic resistance	$N_{Rk,s}$	[kN]	Screw / Rod 4.6	8.0	14.6	18.6	23.2
			Screw / Rod 8.8	15.1	17.0	18.6	23.2
Design resistance	$N_{Rd,s}$	[kN]	Screw / Rod 4.6	4.0	7.3	9.3	11.6
			Screw / Rod 8.8	10.1	11.3	12.4	15.5

### Resistance values under shear load acting transverse to the longitudinal axis of the channel without lever arm – steel failure of hexagon screw and threaded rods

MQM Wing nut diameter				M6	M8	M10	M12(-F)
<b>Steel failure</b>							
Characteristic resistance	$V_{Rk,s,y}$	[kN]	Screw / Rod 4.6	1.2	3.0	6.0	10.5
			Screw / Rod 8.8	2.4	6.0	12.0	21.0
Design resistance	$V_{Rd,s,y}$	[kN]	Screw / Rod 4.6	0.6	1.5	3.0	5.3
			Screw / Rod 8.8	1.6	4.0	8.0	14.0

## Resistance values under shear load in direction of the longitudinal axis of the channel – steel failure

MQM Wing nut diameter				M12(-F)
Connection between channel lips and channel bolt				
Characteristic resistance	$V_{Rk,sl,x}$	[kN]	Screw / Rod 4.6	2.4
			Screw / Rod 8.8	
Design resistance	$V_{Rd,sl,x}$	[kN]	Screw / Rod 4.6	0.9
			Screw / Rod 8.8	

## Resistance values under shear load acting transverse to the longitudinal axis of the channel with lever arm – steel failure of hexagon screw and threaded rods

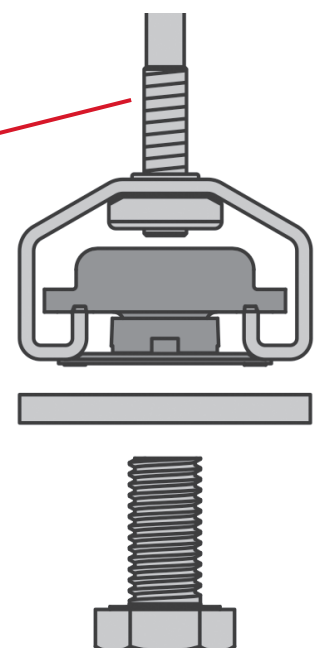
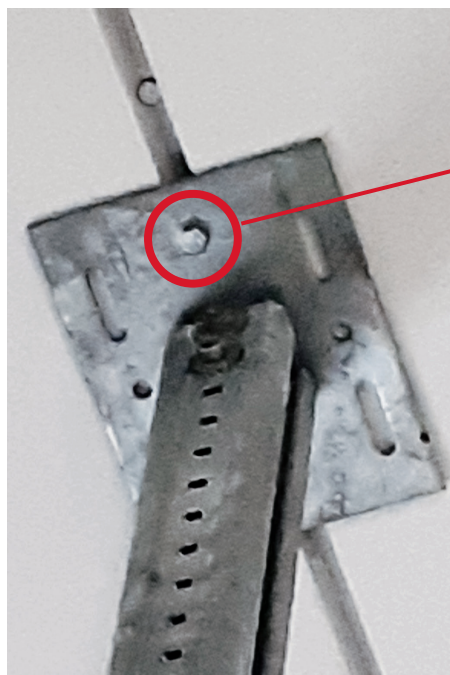
MQM Wing nut diameter				M6	M8	M10	M12(-F)
Characteristic flexural resistance	$M^0_{Rk,s}$	[Nm]	Screw / Rod 4.6	6.1	15.0	29.9	52.4
			Screw / Rod 8.8	12.2	30.0	59.8	104.8
Design flexural resistance	$M^0_{Rd,s}$	[Nm]	Screw / Rod 4.6	3.6	8.9	17.9	31.4
			Screw / Rod 8.8	9.7	24.0	47.8	83.8
Internal lever arm between the channel lips for bending resistance calculation	a	[mm]	Screw / Rod 4.6	24			
			Screw / Rod 8.8				

## Installation torque

MQM Wing nut diameter				M6	M8	M10	M12(-F)
Installation torque	$T_{inst}$	[Nm]	Screw / Rod 4.6	3.0	8.0	15.0	25.0
			Screw / Rod 8.8				

The minimum spacing between channel bolts  $s_{cnb,min} = 5d > 50$  mm.

## Field application with wing nut



Fixing of installation system with MQM wing nut and hexagon bolt

# INSTALLATION INSTRUCTIONS

## Installation instructions for MQM wing nut with HAC-30 anchor channel

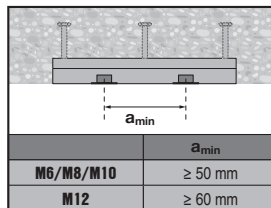
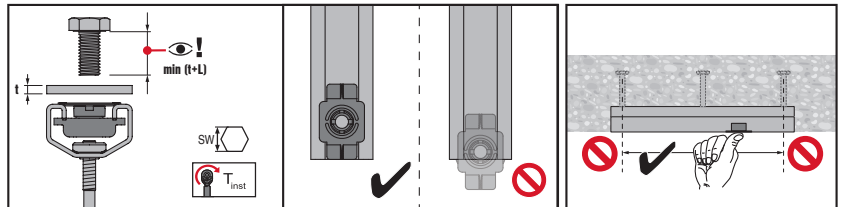
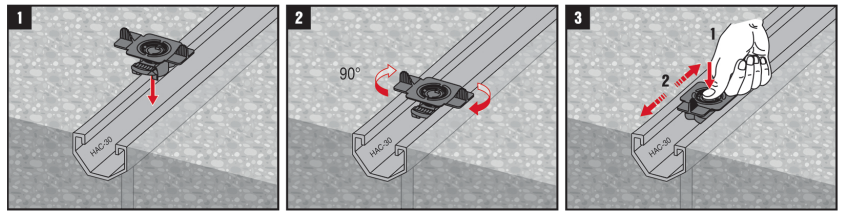
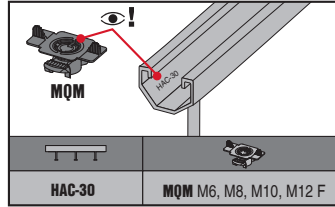
Select the Hilti MQM wing nut in accordance with the design specifications

1) Place the wing nut in the channel

2) Lock the wing nut in the channel by turning it 90 degrees.

3) To slide the wing nut simply push it slightly into the channel profile and move to desired direction

- Ensure that the screw threaded length complies with the (t) & (l) value illustrated in the table
- Verify that the channel bolt is not located outside the part of the channel bounded by the outermost anchors
- Maintain a minimum distance ( $a_{min}$ ) between the wing nuts as mentioned in the table
- Apply the installation torque  $T_{inst}$  to the screw with a calibrated torque wrench and do not exceed the value  $T_{inst}$ .
- Select the correct installation torque  $T_{inst}$  according to material & wing nut/ screw diameter



	SW (4.8)	SW (8.8)	$T_{inst}$	L
M6	10 mm	3 Nm	11 mm	
M8	13 mm	8 Nm	11 mm	
M10	17 mm	15 Nm	11 mm	
M12	19 mm	25 Nm	16 mm	



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