




MTH **MTH-AT** **MTH-A2** **MTH-A4**

CE ETA 05/0242
STRUCTURAL FIXINGS IN UNCRACKED CONCRETE

FIRE RESISTANCE

CHARACTERISTICS

- Roughness working principle; installation by controlled torque.
- Use for high loads.
- Assessed for two installation depths.
- Easy installation.
- Use in non-cracked concrete.
- Previous installation, or through the fixture.
- Use for static or quasi-static loads.
- Three versions zinc plated, stainless steel A2 and A4.
- Variety of lengths and sizes, assembly flexibility.
- DIN 440 for fixing wood structures to concrete.
- Available in INDEXcal

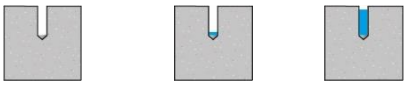
BASE MATERIAL




SIZE RANGE

M6 - M20

DRILL HOLE CONDITION

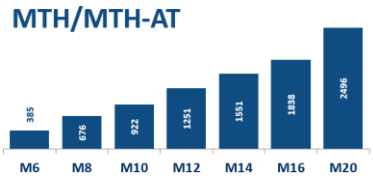


DRY **WET** **FLOODED**

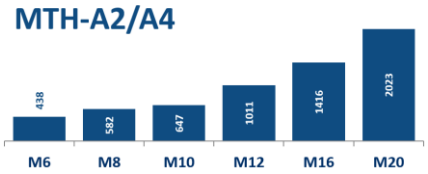
APPLICATION

- Structural applications in non-cracked concrete.
- Safety barriers.
- Billboards, machinery, boilers, signals, Steel beams, etc.
- Fixings wood structures in concrete.

MAXIMUM LOADS RECOMMENDED IN NON-CRACKED CONCRETE [kg]



*M14 only for MTH



APPLICATION EXAMPLES






1. RANGE

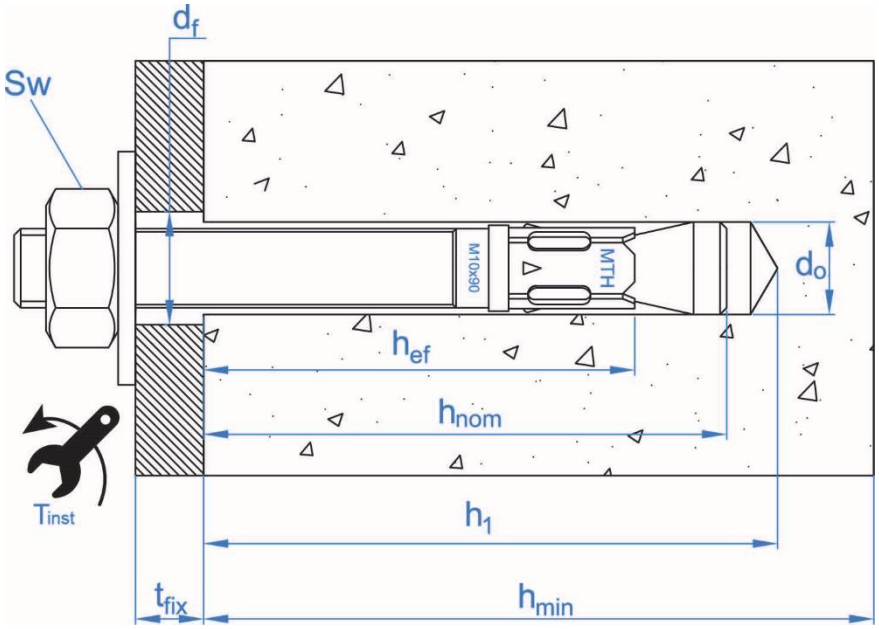
ITEM	CODE	SIZE	PHOTO	COMPONENT	MATERIAL
1	**AH**	M6 to M20		Bolt Clip Nut Washer	Carbon steel cold formed, zinc-plated ≥ 5µm Carbon steel, zinc-plated ≥ 5µm DIN 934 class 6 ISO 898-1 zinc-plated ≥ 5µm DIN 125, DIN 9021 o DIN 440 zinc-plated ≥ 5µm
2	**AHAT**	M6 to M20		Bolt Clip Nut Washer	Carbon steel cold formed, atlantis ≥ 8µm Carbon steel, atlantis ≥ 8µm DIN 934 class 6 ISO 898-1 atlantis ≥ 8µm DIN 125, DIN 9021 o DIN 440 atlantis ≥ 8µm
3	**MI**	M6 to M20		Bolt Clip Nut Washer	Stainless steel, grade A2 Stainless steel, grade A2 DIN 934 stainless steel, grade A2 DIN 125, DIN 9021 o DIN 440 stainless steel, grade A2
4	**MIA4**	M6 to M20		Bolt Clip Nut Washer	Stainless steel, grade A4 Stainless steel, grade A4 DIN 934 stainless steel, grade A4 DIN 125, DIN 9021 o DIN 440 stainless steel, grade A4

2. ACCESSORIES

ITEM	CODE	PHOTO	DESCRIPTION
1	**DOMTA**		Accessory for anchor installation with hammer drill

3. INSTALLATION DATA

3.1. INSTALLATION DRAWING

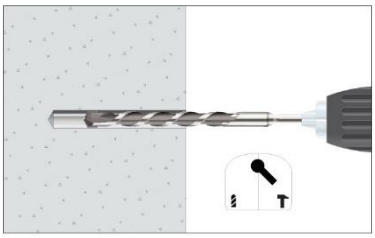


3.2. INSTALLATION PARAMETERS

General installation parameters									Standard installation depth									Reduced installation depth								
Family	Code	Size / Bolt Letter	Assessed	Drill bit diameter	Fixture clearance hole	Torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete thickness	Depth of drill hole ≥	Installation depth	Effective anchorage depth	Thickness of fixture ≤	Critical spacing (concrete cono)	Critical edge distance(concrete cone)	Critical spacing (splitting)	Critical edge distance(splitting)	Minimum concrete thickness	Depth of drill hole ≥	Installation depth	Effective anchorage depth	Thickness of fixture ≤	Critical spacing (concrete cono)	Critical edge distance(concrete cone)	Critical spacing (splitting)	Critical edge distance(splitting)
[--]	[--]	[--]	ETA	d_0	d_f	T_{inst}	S_{min}	C_{min}	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$
				[mm]	[mm]	[Nm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
MTH	AH06060	M6 x 60 (B)	✓	6	7	7	35	35	100	55	49,5	40	2	120	60	160	80	--	--	--	--	--	--	--	--	--
	AH06070	M6 x 70 (C)	✓										12									--				
	AH06080	M6 x 80 (D)	✓										22									--				
	AH06090	M6 x 90 (E)	✓										32									--				
	AH06100	M6 x 100 (E)	✓										42									--				
	AH06110	M6 x 110 (F)	✓										52									--				
	AH06120	M6 x 120 (G)	✓										62									--				
	AH06130	M6 x 130 (H)	✓										72									--				
	AH06140	M6 x 140 (I)	✓										82									--				
	AH06150	M6 x 150 (I)	✓										92									--				
	AH06160	M6 x 160 (J)	✓										102									--				
	AH06170	M6 x 170 (K)	✓										112									--				
	AH06180	M6 x 180 (L)	✓										122									--				
	AH08060	M8 x 60 (B)	✓	8	9	20	40	40	--	--	--	--	--	--	--	--	--	100	50	46,5	35	3	105	53	140	70
	AH08075	M8 x 75 (C)	✓						100	65	59,5	48	5	144	72	192	96					18				
	AH08090	M8 x 90 (E)	✓										20									33				
	AH08100	M8 x 100 (E)	✓										30									43				
	AH08115	M8 x 115 (G)	✓										45									58				
	AH08120	M8 x 120 (G)	✓										50									63				
	AH08130	M8 x 130 (H)	✓										60									73				
	AH08155	M8 x 155 (J)	✓										85									98				
	AH10070	M10 x 70 (C)	✓	10	12	35	50	50	--	--	--	--	--	--	--	--	--	100	60	53,5	42	3	126	63	168	84
	AH10080	M10 x 80 (D)	✓						--	--	--	--	--	--	--	--	--					13				
	AH10090	M10 x 90 (E)	✓						110	75	66,5	55	10	165	83	220	110					23				
	AH10100	M10 x 100 (E)	✓										20									33				
	AH10120	M10 x 120 (G)	✓										40									53				

4. INSTALLATION PROCEDURE

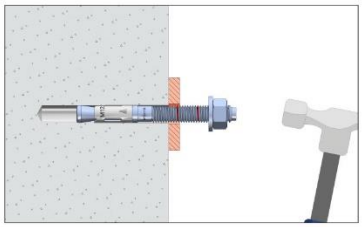
4.1 CONCRETE INSTALLATION



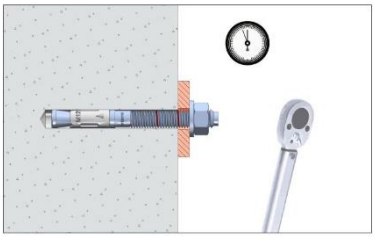
1. DRILLING
Check the concrete is well compacted and without significant porosity.
Suitable for dry, wet and flooded holes.
Use drill in hammer mode.
Drill according to specified depths in previous tables.



2. BLOW AND CLEAN
Clean the hole from dust and concrete remains.
Use blow pump and brush.



3. INSTALL
Insert the anchor until the red depth mark is at the same level with the surface of the base material.
Use a hammer in case of need. DOMTA tool could be used alternatively.
Installation could be performed through the fixture or before setting the fixture.



4. APPLY THE TORQUE
Apply the nominal torque specified in previous tables.
Use torque wrench in order to ensure correct installation.

5. RESISTANCES

Resistances in concrete class C20/25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

5.1 CHARACTERISTIC RESISTANCE [kN]

General Parameter				Standard installation depth		Reduced installation depth	
Family	Code	Size	Assessed	Tension N_{Rk}	Shear V_{Rk}	Tension N_{Rk}	Shear V_{Rk}
MTH	AH06060	M6 x 60	✓	*7,40*	*5,10*	--	--
	AH06070	M6 x 70	✓				
	AH06080	M6 x 80	✓				
	AH06090	M6 x 90	✓				
	AH06100	M6 x 100	✓				
	AH06110	M6 x 110	✓				
	AH06120	M6 x 120	✓				
	AH06130	M6 x 130	✓				
	AH06140	M6 x 140	✓				
	AH06150	M6 x 150	✓				
	AH06160	M6 x 160	✓				
	AH06170	M6 x 170	✓				
	AH06180	M6 x 180	✓				
	AH08060	M8 x 60	✓	--	--	10,00	**10,19**
	AH08075	M8 x 75	✓	*13,00*	*9,30*	10,00	**10,19**
	AH08090	M8 x 90	✓				
	AH08100	M8 x 100	✓				
	AH08115	M8 x 115	✓				
	AH08120	M8 x 120	✓				
	AH08130	M8 x 130	✓				
	AH08155	M8 x 155	✓				
	AH10070	M10 x 70	✓	--	--	**13,39**	**13,39**
	AH10080	M10 x 80	✓				
	AH10090	M10 x 90	✓	19,00	*14,70*	**13,39**	**13,39**
	AH10100	M10 x 100	✓				
	AH10120	M10 x 120	✓				
	AH10140	M10 x 140	✓				
	AH10150	M10 x 150	✓				
	AH10160	M10 x 160	✓				
	AH10170	M10 x 170	✓				
	AH10210	M10 x 210	✓				
	AH10230	M10 x 230	✓				
	AH12090	M12 x 90	✓	--	--	**17,39**	**17,39**
	AH12100	M12 x 100	✓	**25,78**	*20,60*	**17,39**	**17,39**
	AH12110	M12 x 110	✓				
	AH12120	M12 x 120	✓				
	AH12130	M12 x 130	✓				
	AH12140	M12 x 140	✓				
	AH12160	M12 x 160	✓				
	AH12180	M12 x 180	✓				
	AH12200	M12 x 200	✓				
	AH12220	M12 x 220	✓				
	AH12250	M12 x 250	✓				
	AH14120	M14 x 120	✓	**31,95**	*28,10*	--	--
	AH14145	M14 x 145	✓				
	AH14170	M14 x 170	✓				
	AH14220	M14 x 220	✓				
	AH14250	M14 x 250	✓				

PULL OUT INCREASINF FACTOR FOR TENSION LOADS IN HIGH RESISTANCE CONCRETE			
CONCRETE FACTOR	**C30/37**	**C40/50**	**C50/60**
Ψ_c (Non-cracked)	1,22	1,41	1,55

7. OFFICIAL DOCUMENTATION

The following documents are available through our Sales Department or on our official website: www.indexfix.com:

- European assessment ETA 05/0242 for installation in non-cracked concrete according to guideline EAD 330232-00-0601, option 7, from M6 of M20.
- Declaration of performance DoP MTH.
- Available for the anchor design software INDEXcal.