

TECHNICAL DATA SHEET

KFX Concrete Screw Bolt - Rod Hanger M8/M10 (M6x35)

High Performance Concrete Anchor

Fast & Easy Installation

Optimised thread enables fast cutting into concrete, speeding up the installation process.

Non-Expansion

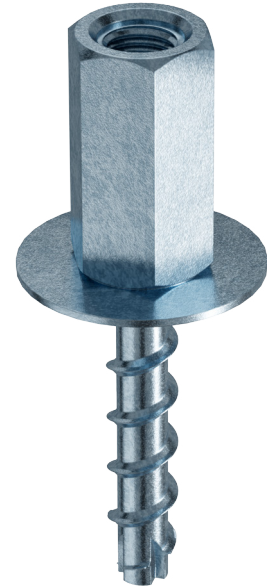
Allows for installation closer to the substrate edge, as well as closer distances between anchors.

Easily Adjusted & Removed

Can be adjusted twice during installation. Once installed can be easily removed.

Extreme Hold in Concrete

Special thread geometry offers extreme hold in concrete, for both tensile & shear loads.

**Order Code 03720**

APPROVALS

Approvals

ETA Approval ETA-23/0946:

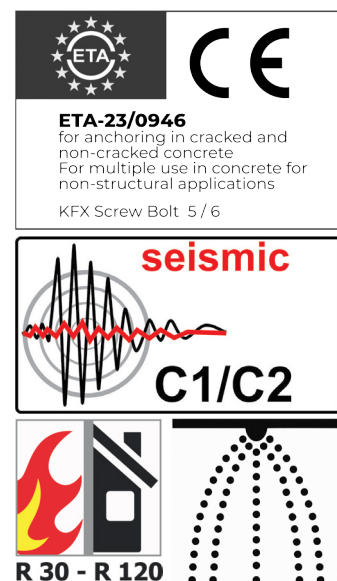
- For use in concrete for redundant non-structural systems.

Base Material

Approved for concrete strength classes from C20/25 to C50/60.

Cracked and non-cracked concrete.

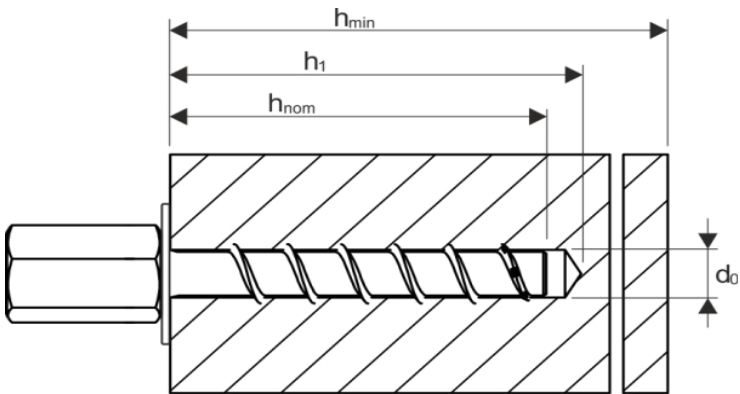
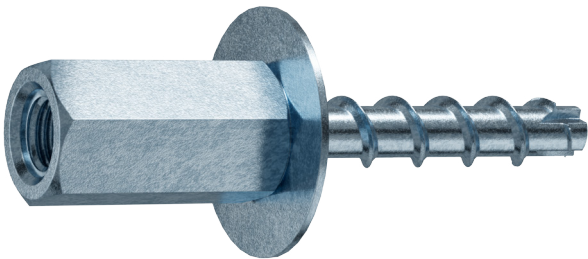
Prestressed hollow core slabs.



TECHNICAL DATA SHEET

Product Overview

Steel - Zinc plated
Metric, female dual thread M8/M10
Washer Ø - 25.0mm
Socket size - 13mm



Order Code	Product Reference	Dimensions	Depth of drill hole $h_{01} / h_{02} / h_{03}$	Embedment depth of anchor $h_{nom1} / h_{nom2} / h_{nom3}$	Max. thickness of fixture $t_{fix1} / t_{fix2} / t_{fix3}$	Packing Unit
03720	KFX BHZ-06035	M6x35	40mm / - / -	35mm / - / -	- / - / -	50

TECHNICAL DATA SHEET

Technical Characteristics

Single fastening without fire exposure (steel)

Screw size M6		M6
Nominal embedment depth	h_{nom} [mm]	h_{nom1} h_{nom2}
		40 55
Nominal diameter of drill bit	d_o [mm]	6
Depth of drill hole	h_o min [mm]	45 60
Effective anchorage depth	h_{ef} [mm]	31 44
Diameter of clearance hole in the fixture	d_f max [mm]	8
Approved tension load in cracked concrete ^{1) 2)}	N_{zul} [kN]	1,0 1,9
Approved shear load in cracked concrete ^{1) 2)}	V_{zul} [kN]	2,8 4,0
Approved tension load in non-cracked concrete ^{1) 2)}	N_{zul} [kN]	1,9 4,3
Approved shear load in non-cracked concrete ^{1) 2)}	V_{zul} [kN]	4,0 4,0
Approved bending resistance	M_{zul} [kN]	6,2
Minimum edge distance	C_{min} [mm]	40
Minimum spacing	S_{min} [mm]	40
Minimum base material thickness	h_{min} [mm]	100
Installation torque (with metric connection thread)	T_{inst} [Nm]	10
Maximum torque (with impact screw driver)	[Nm]	160
ETA Seismic C1	C1	Yes
ETA Seismic C2 ³⁾	C2	x

Single fastening under fire exposure (steel)

Screw size M6		M6			
Nominal embedment depth	h_{nom} [mm]	h_{nom1}	h_{nom2}		
		40	55		
Approved load under tensile and shear use ($F_{zul,fi} = N_{zul,fi} = V_{zul,fi}$)					
Fire resistance class					
R 30	Approved load	$F_{zul,fi\ 30}$	[kN]	0,5	0,9
R 60		$F_{zul,fi\ 60}$	[kN]	0,5	0,8
R 90		$F_{zul,fi\ 90}$	[kN]	0,5	0,6
R 120		$F_{zul,fi\ 120}$	[kN]	0,4	
R 30		$M_{zul,fi\ 30}$	[Nm]	0,7	
R 60		$M_{zul,fi\ 60}$	[Nm]	0,6	
R 90		$M_{zul,fi\ 90}$	[Nm]	0,5	
R 120		$M_{zul,fi\ 120}$	[Nm]	0,3	
Edge distance					
R 30 to R 120	$C_{cr,fi}$	[mm]	$2 \times h_{ef}$		
The edge distance must be at least 300 mm if the fire load attacks from more than one side.					
Spacing					
R 30 to R 120	$S_{cr,fi}$	[mm]	$4 \times h_{ef}$		
Concrete pry-out failure					
R 30 to R 120	k	[-]	1,0		
In wet concrete, the embedment depth must be increased by at least 30 mm.					

¹⁾ For the determination of the approved loads, the partial safety factor from the approval $\gamma_M=1,0$ was taken into account for material resistance and a partial safety factor $\gamma_F=1,4$ for load actions.

²⁾ These values apply without influence of the spacing and edge distances. ³⁾ C2 only for version zinc plated.

TECHNICAL DATA SHEET

Multiple fastening without fire exposure (steel)

Screw size M6		M6
Nominal embedment depth	h_{nom} [mm]	35 55
Nominal diameter of drill bit	d_o [mm]	6
Depth of drill hole	h_o min [mm]	40 60
Effective anchorage depth	h_{ef} [mm]	27 44
Diameter of clearance hole in the fixture	d_i max [mm]	8
Approved tension load in cracked concrete ^{1);2)}	N_{zul} [kN]	1,4 3,6
Approved shear load in cracked concrete ^{1);2)}	V_{zul} [kN]	2,3 4,8
Approved tension load in non-cracked concrete ^{1);2)}	N_{zul} [kN]	1,4 3,6
Approved shear load in non-cracked concrete ^{1);2)}	V_{zul} [kN]	3,3 4,0
Minimum edge distance	C_{min} [mm]	35 40
Minimum spacing	S_{min} [mm]	35 40
Minimum base material thickness	h_{min} [mm]	80 100
Installation torque (with metric connection thread)	T_{inst} [Nm]	10
Maximum torque (with impact screw driver)	[Nm]	160

¹⁾ For the determination of the approved loads, the partial safety factor from the approval $\gamma_M=1,0$ was taken into account for material resistance and a partial safety factor $\gamma_F=1,4$ for load actions.

²⁾ These values apply without influence of the space and edge distancing.

Multiple fastening under fire exposure (steel)

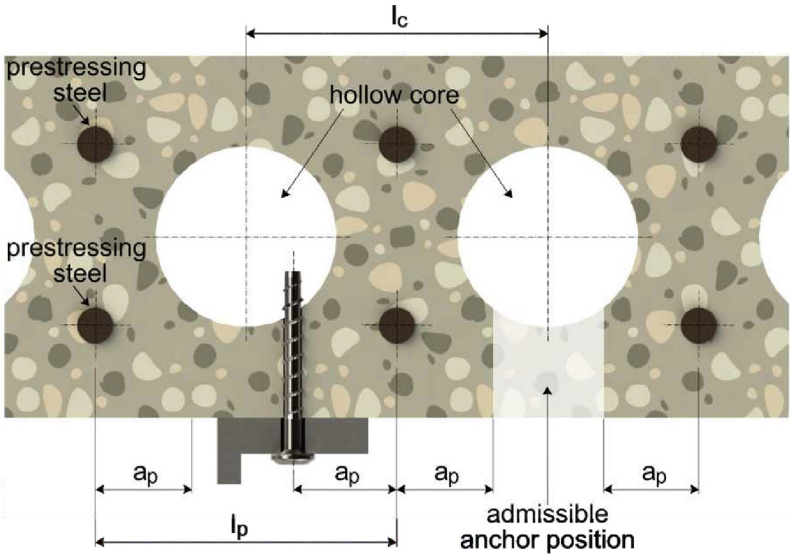
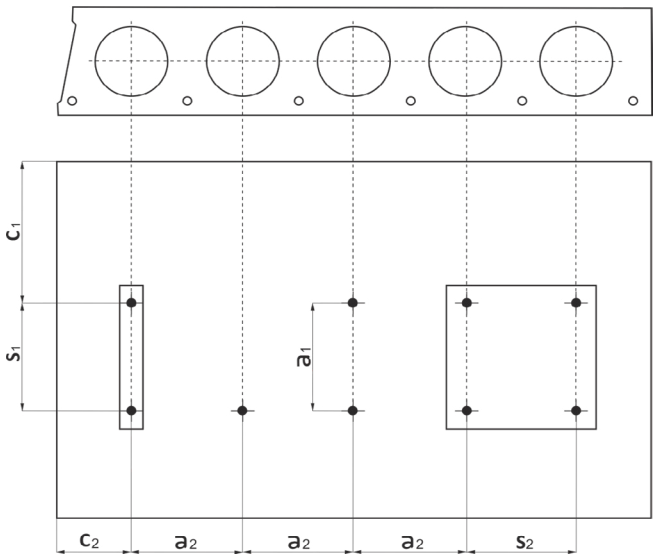
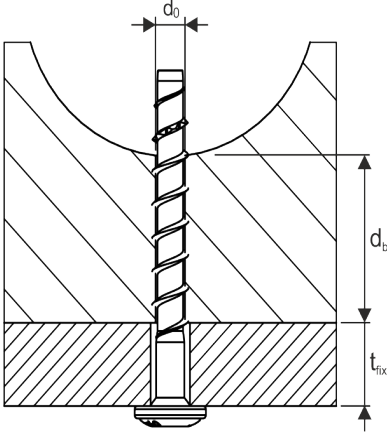
Screw size M6		M6		
Nominal embedment depth	h_{nom} [mm]	h_{nom1}	h_{nom2}	
		35	55	
Approved load under tensile and shear use ($F_{zul,fi} = N_{zul,fi} = V_{zul,fi}$)				
Fire resistance class				
R 30	Approved load	$F_{zul,fi\ 30}$ [kN]	0,8	0,9
R 60		$F_{zul,fi\ 60}$ [kN]	0,8	0,8
R 90		$F_{zul,fi\ 90}$ [kN]	0,6	
R 120		$F_{zul,fi\ 120}$ [kN]	0,4	
R 30		$M_{zul,fi\ 30}$ [Nm]	0,7	
R 60		$M_{zul,fi\ 60}$ [Nm]	0,6	
R 90		$M_{zul,fi\ 90}$ [Nm]	0,5	
R 120		$M_{zul,fi\ 120}$ [Nm]	0,3	
Edge distance				
R 30 to R 120	$C_{cr,fi}$	[mm]	$2 \times h_{ef}$	
The edge distance must be at least 300 mm if the fire load attacks from more than one side.				
Spacing				
R 30 to R 120	$S_{cr,fi}$	[mm]	$4 \times h_{ef}$	
Concrete pry-out failure				
R 30 to R 120	k	[-]	1,0	
In wet concrete, the embedment depth must be increased by at least 30 mm.				

TECHNICAL DATA SHEET

Multiple fastening in pre-stressed hollow core slabs without fire exposure (steel)

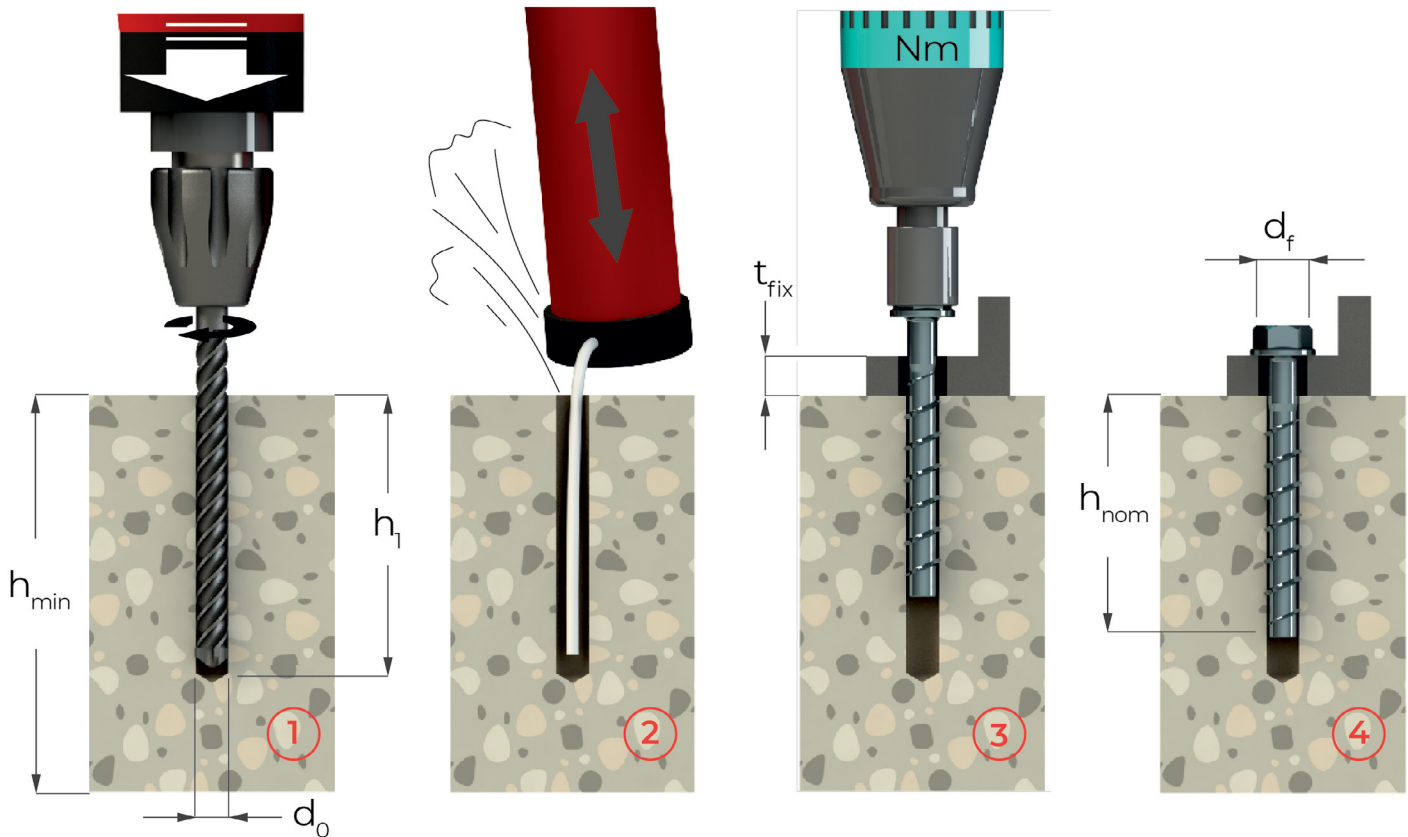
Screw size M6			M6		
Bottom flange thickness	d _b	[mm]	≥ 25	≥ 30	≥ 35
Nominal diameter of drill bit	d ₀	[mm]	6		
Depth of drill hole	h ₀ min	[mm]	30	35	40
Clearance hole diameter	d _f max	[mm]	8		
Approved tension load ¹⁾	F _{zul}	[kN]	0,5	1,0	1,4
Minimum egde distance	C _{min}	[mm]	100		
Minimum spacing	S _{min}	[mm]	100		
Minimum distance between anchor groups	a _{min}	[mm]	100		
Core distance	l _c min	[mm]	100		
Prestressing steel distance	l _p min	[mm]	100		
Distance between anchor position & prestressing steel	a _p min	[mm]	50		
Hollow core width (w)	(w/e) max [mm]		4,2		
Bridge width (e)					
Installation torque	T _{inst}	[Nm]	10		

¹⁾ For the determination of the approved loads, the partial safety factor from the approval $\gamma_M=1,0$ was taken into account for material resistance and a partial safety factor $\gamma_F=1,4$ for load actions.



C1, C2 = Edge distance
S1, S2 = Spacing
a1, a2 = Distance between anchor groups

l_c = Core distance
 l_p = Prestressing steel distance
 a_p = Distance between anchor position & prestressing steel

TECHNICAL DATA SHEET**Installation Instructions****Installation instructions for concrete**

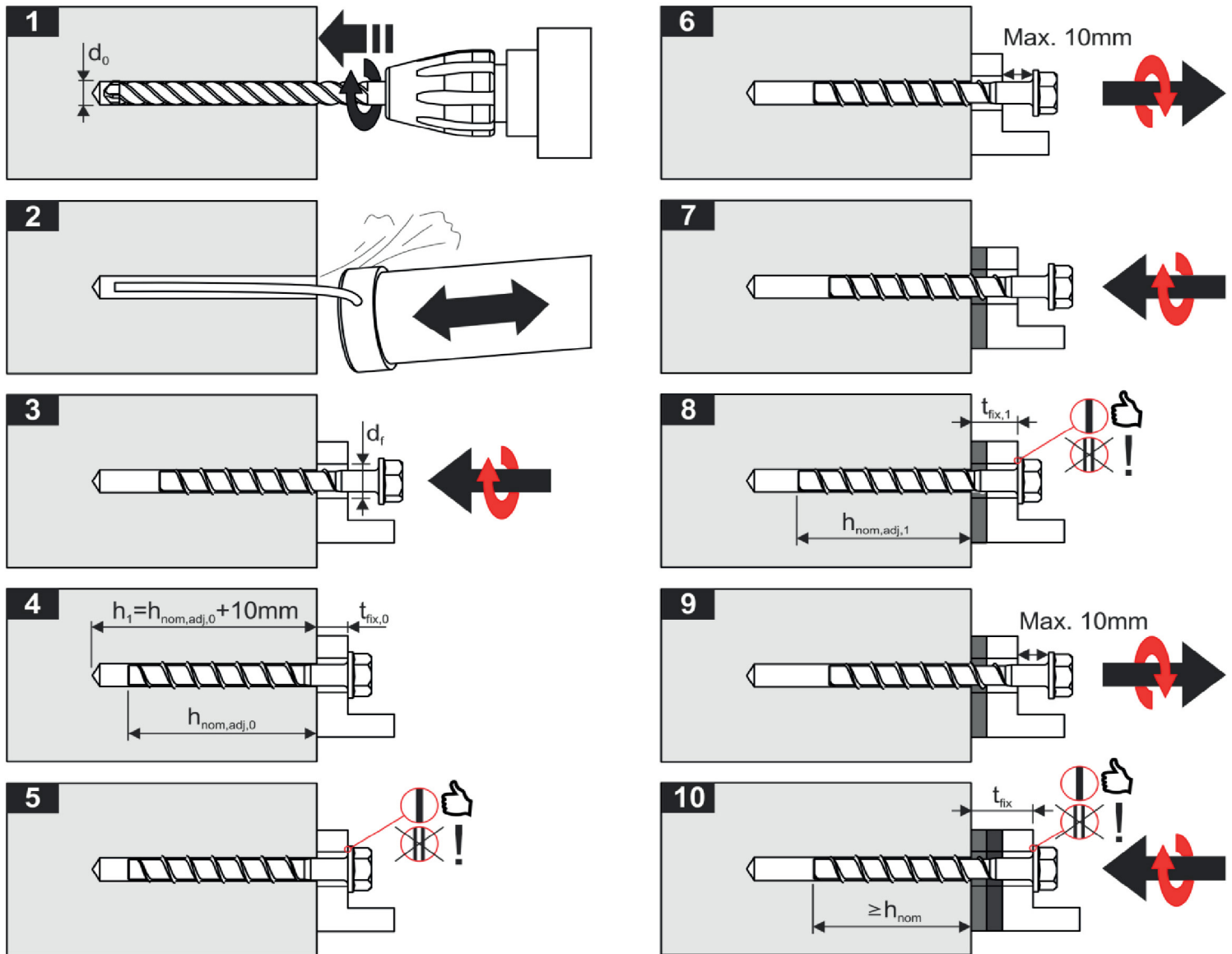
1. Drill the hole to required depth using with rotary hammer drill.
2. Thoroughly clean the hole using blow out hand pump (min 4 pumps).
3. Screw in the KFX Concrete Screw Bolt and tighten to the correct torque using a calibrated torque wrench.
4. Once installed, the screwhead must be secure and completely flush with the undamaged substrate surface.

Tools Required:

- SDS drill with 6mm drill bit
- Blow out pump
- Torque controlled impact driver
- 13mm socket (impact socket required if installing with impact driver)
- Torque wrench

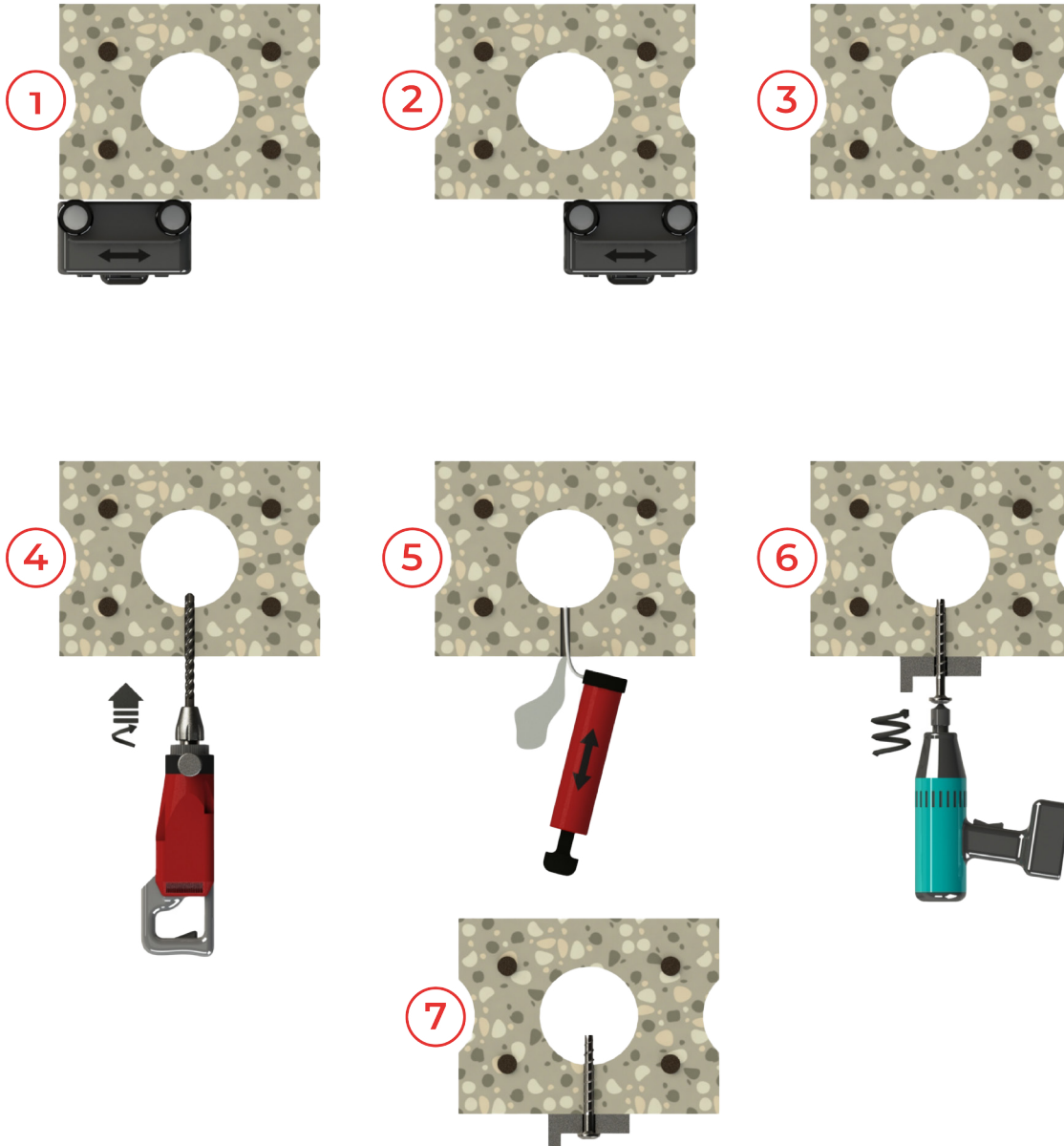
TECHNICAL DATA SHEET

Installation instructions with adjustment for M6 screws



Important - please note during adjustment:

- The anchor may be adjusted no more than twice, whilst the anchor may be unscrewed a maximum of 10mm.
- The total allowed thickness of shims added during the adjustment process is 10mm.
- The final embedment depth after adjustment process must be equal or longer than h_{nom} .

TECHNICAL DATA SHEET**Installation instructions for prestressed hollow core slabs**

- 1) - 3) Locate prestressed steel with a reinforcement bar detector and mark the location.
- 4) Create a hole in the permissible anchoring area.
- 5) Clean hole using blow out hand pump (min 4 pumps).
- 6) Screw in the KFX Concrete Screw Bolt Rod Hanger and tighten to the correct torque using a calibrated torque wrench.
- 7) Once installed, the screwhead must be secure and completely flush with the undamaged substrate surface.