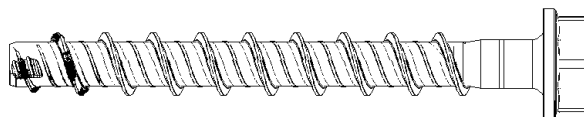
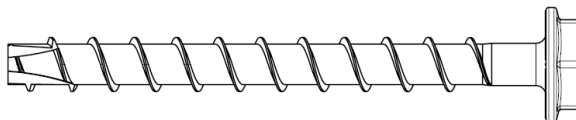


Hilti Screw anchor

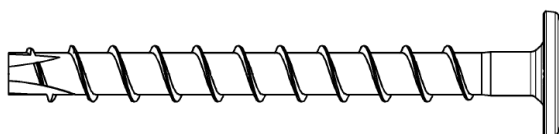
HUS-HR 6



HUS-H 6

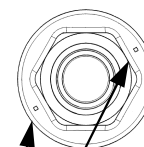
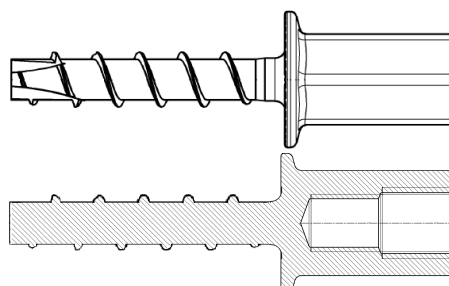


HUS-P 6



HUS-I 6

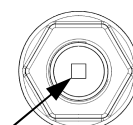
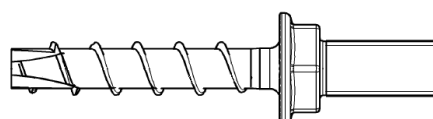
Internal threads
M8 and M10



One mark 0,5 mm x 0,5 mm for $h_{nom} = 35$ mm
Two marks 0,5 mm x 0,5 mm for $h_{nom} = 55$ mm

HUS-A 6

External thread
M8 or M10

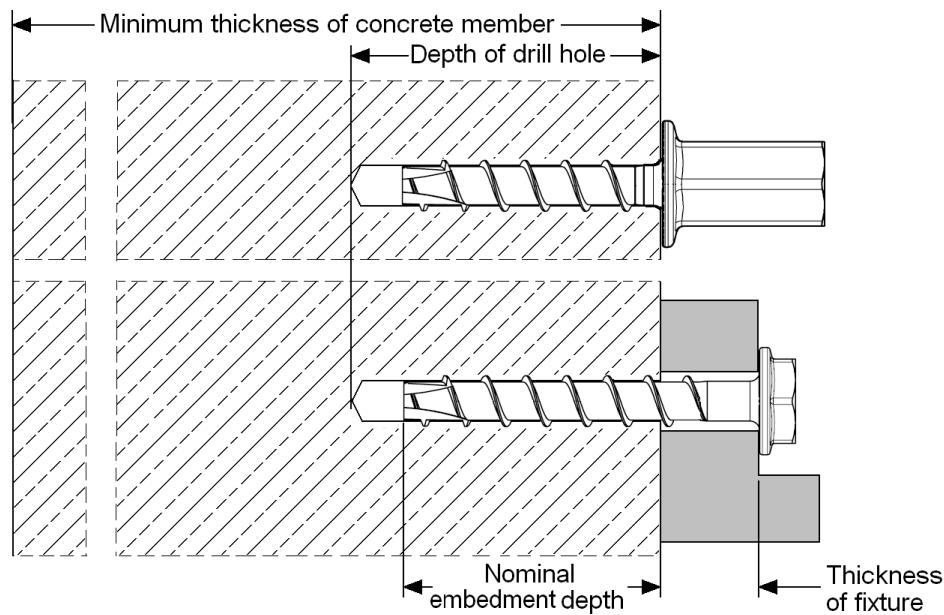


Marking 2 mm x 2 mm for $h_{nom} = 35$ mm
Marking 4 mm x 2 mm for $h_{nom} = 55$ mm

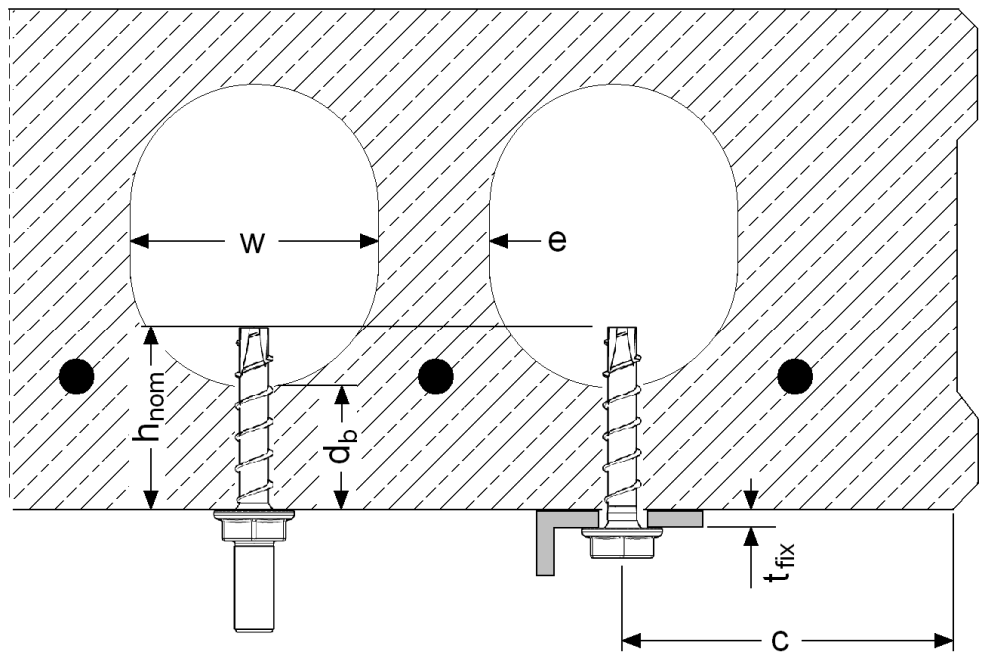
**Only for multiple use for non-structural applications,
the definition of multiple use according to the member states
is given in the informative Annex 1 of ETAG 001, Part 6**

Hilti screw anchor HUS	Annex 1 of European technical approval ETA-10/0005
Product	

Intended use in concrete



Intended use in precast prestressed hollow core slabs ($w/e \leq 4,2$)



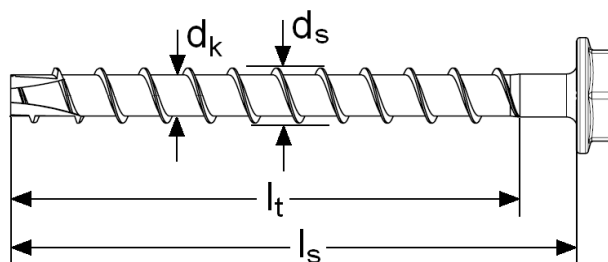
w	core width	e	web thickness
h_{nom}	nominal embedment depth	d_b	bottom flange thickness ≥ 25 mm
t_{fix}	thickness of fixture	c	edge distance

Hilti screw anchor HUS

Annex 2

Intended use

of European
technical approval
ETA-10/0005

**Table 1:** Materials

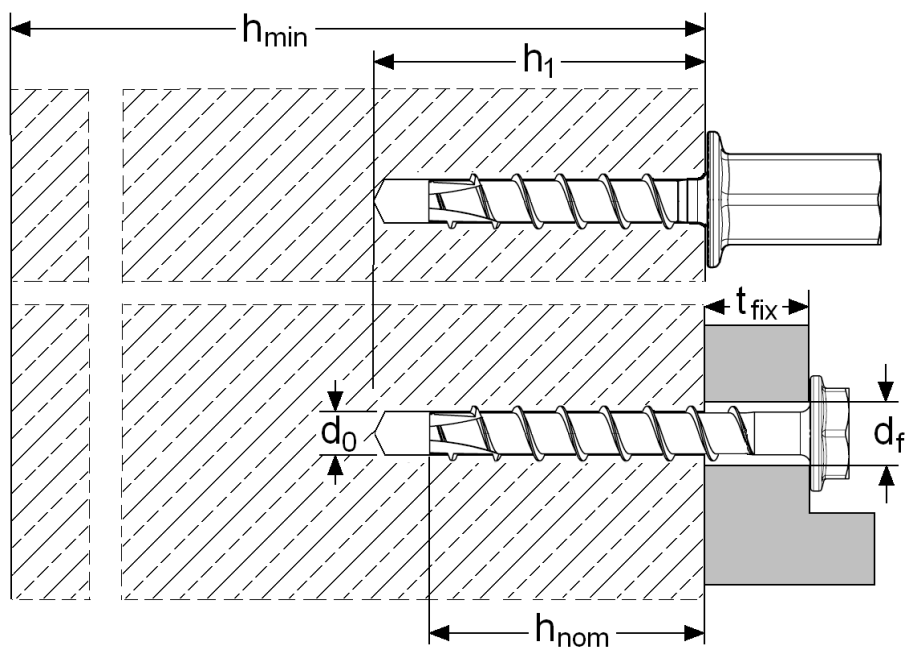
Part	Designation	Material
Screw anchor	HUS-HR 6	Stainless Steel (A4 grade)
Screw anchor	HUS-H 6, HUS-P 6, HUS-I 6, HUS-A 6	Steel acc. DIN EN 10263-4, 1.5523, galvanized ($\geq 5 \mu\text{m}$)

Table 2: Dimensions

Hilti screw anchor			HUS-HR 6x60		HUS-HR 6x70		HUS-H 6x40		HUS-H 6x60		HUS-H 6x80		HUS-H 6x100		HUS-H 6x120		HUS-P 6x40		HUS-P 6x60		HUS-P 6x80		HUS-I 6x35 M8/M10		HUS-I 6x55 M8/M10		HUS-A 6x35 M8		HUS-A 6x35 M10		HUS-A 6x55 M8		HUS-A 6x55 M10	
Nominal length of screw	l_s	[mm]	60	70	40	60	80	100	120	40	60	80	35	55	35	35	55	55	55	60	80	35	55	35	35	55	55	35	35	55	55	55	55	
Thread length	l_t	[mm]	55	55	37	55	72			37	55	72	32	52	32		52		52		52		52		52		52		52		52		52	
Outer diameter of thread	d_s	[mm]	7,6		7,85																													
Core diameter	d_k	[mm]	5,4		5,85																													

Hilti screw anchor HUS**Materials and dimensions****Annex 3**

of European
technical approval
ETA-10/0005

**Table 3:** General installation data

Hilti screw anchor HUS		-HR 6	-H 6	-P 6	-I 6	-A 6
Nominal diameter of drill bit	d_0 [mm]	6				
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	6,40				
Clearance hole diameter	$d_f \leq$ [mm]	9				
Width across flats	SW [mm]	13	13	-	13	13
TORX		-	T30	T30	-	-

Hilti screw anchor HUS**Installation data****Annex 4**

of European
technical approval
ETA-10/0005

Table 4: Installation data in concrete

Hilti screw anchor HUS		-HR 6	-H 6	-P 6	-I 6	-A 6
Nominal anchorage depth	$h_{nom} \geq$ [mm]	55	35			
Effective anchorage depth	h_{ef} [mm]	45	25			
Depth of drill hole ¹⁾	$h_1 \geq$ [mm]	$h_{nom} + 10$ mm				
Thickness of fixture	$t_{fix} \leq$ [mm]	15	85	45	-	-

1) For overhead installation the required drill hole depth is given in Annex 12 and Annex 13.

Table 5: Installation data in precast prestressed hollow core slabs

Hilti screw anchor		HUS-H 6x40	HUS-H 6x60	HUS-H 6x80	HUS-H 6x100	HUS-H 6x120	HUS-P 6x40	HUS-P 6x60	HUS-P 6x80	HUS-I 6x35 M8/M10	HUS-I 6x55 M8/M10	HUS-A 6x35 M8	HUS-A 6x35 M10	HUS-A 6x55 M8	HUS-A 6x55 M10
Nominal length of screw	l_s [mm]	40	60	80	100	120	40	60	80	35	55	35	35	55	55
Thickness of fixture	$t_{fix} \geq$ [mm]	0	2	5	25	45	0	2	5	-	-	-	-	-	-
	$t_{fix} \leq$ [mm]	5	25	45	65	85	5	25	45	-	-	-	-	-	-

Hilti screw anchor HUS

Installation data

Annex 5

of European
technical approval
ETA-10/0005

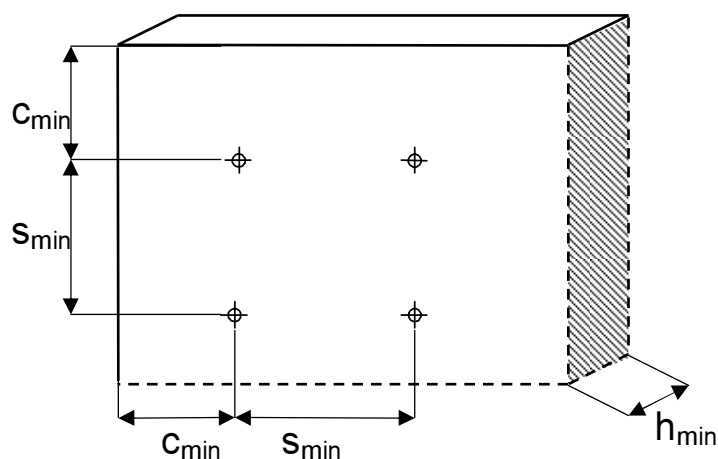


Table 6: Minimum thickness of concrete member, minimum spacing and minimum edge distances of anchors

Hilti screw anchor HUS		-HR 6	-H 6	-P 6	-I 6	-A 6
For minimum spacing and minimum edge distances						
Minimum member thickness	h_{min}	[mm]	100			
Minimum edge distance	c_{min}	[mm]	40			
Minimum spacing	s_{min}	[mm]	40			
For minimum thickness of concrete member						
Minimum member thickness	h_{min}	[mm]	80			
Minimum edge distance	c_{min}	[mm]	50	40		
Minimum spacing	s_{min}	[mm]	50	40		

Hilti screw anchor HUS	Annex 6 of European technical approval ETA-10/0005
Minimum thickness of concrete, minimum spacing and edge distances of anchors	

Table 7: Design method B – Characteristic values of resistance in concrete C20/25 to C50/60

Hilti screw anchor HUS			-HR 6	-H 6	-P 6	-I 6	-A 6
All load directions							
Characteristic resistance in C20/25	F_{Rk}^0	[kN]	5	3			
Partial safety factor	γ_M	¹⁾	2,1	²⁾ 1,5			
Increasing factors for F_{Rk}^0	Ψ_c	C30/37	1,22				
		C40/50	1,41				
		C50/60	1,55				
Characteristic edge distance	c_{cr}	[mm]	1,5 h_{ef}				
Characteristic spacing	s_{cr}	[mm]	3 h_{ef}				
Shear load with lever arm							
Characteristic resistance	$M_{Rk,s}^0$	⁴⁾ [Nm]	19	22			
Partial safety factor	γ_{Ms}		1,5	1,5			

1) In absence of other national regulations.

2) The installation factor $\gamma_2 = 1,4$ is included.

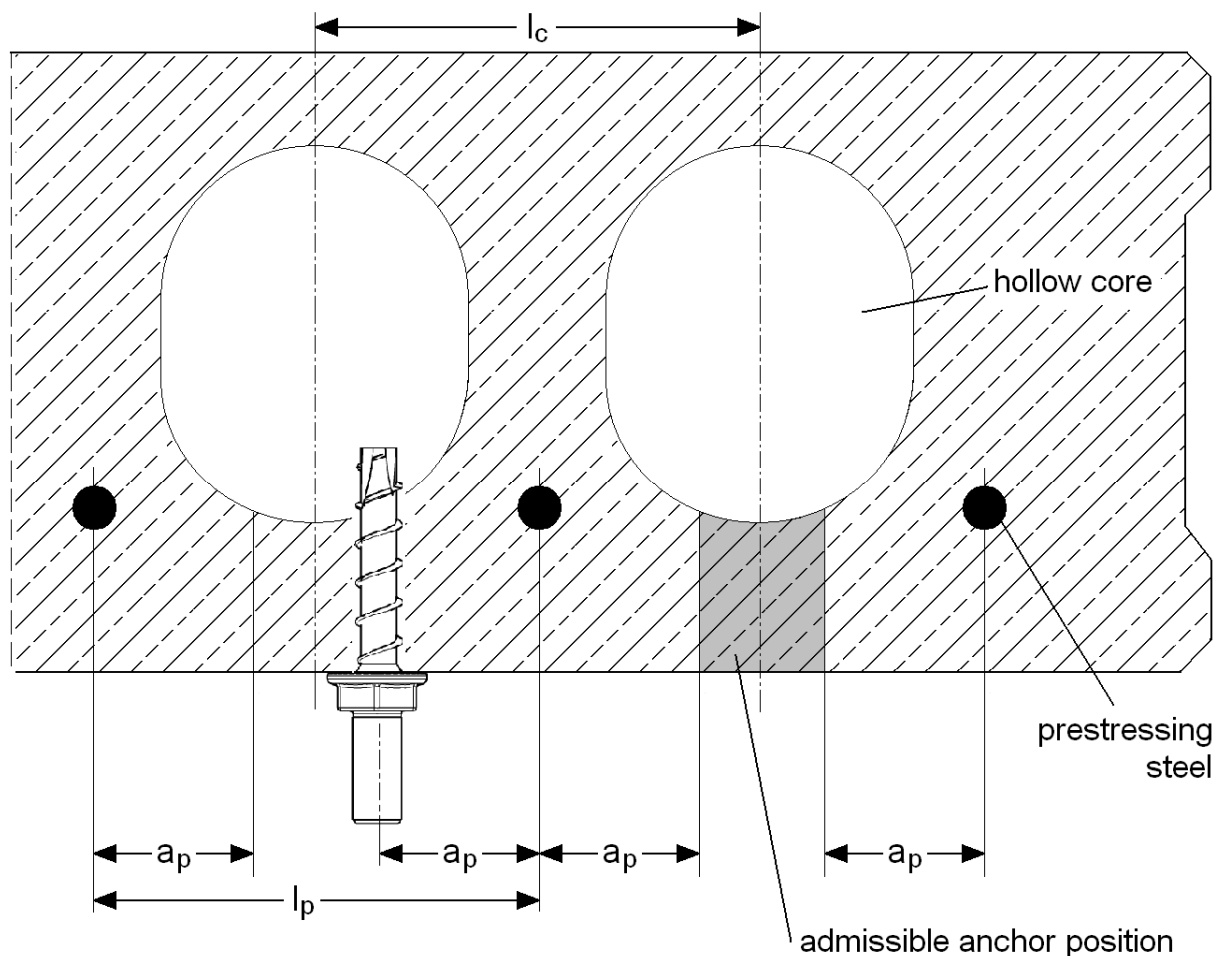
3) The installation factor $\gamma_2 = 1,0$ is included.

4) Characteristic bending moment $M_{Rk,s}^0$ for equation (5.5) in ETAG 001, Annex C.

**Only for multiple use for non-structural applications,
the definition of multiple use according to the member states
is given in the informative Annex 1 of ETAG 001, Part 6**

Hilti screw anchor HUS	Annex 7 of European technical approval ETA-10/0005
Characteristic values of resistance according design method B	

Admissible anchor positions in precast prestressed hollow core slabs

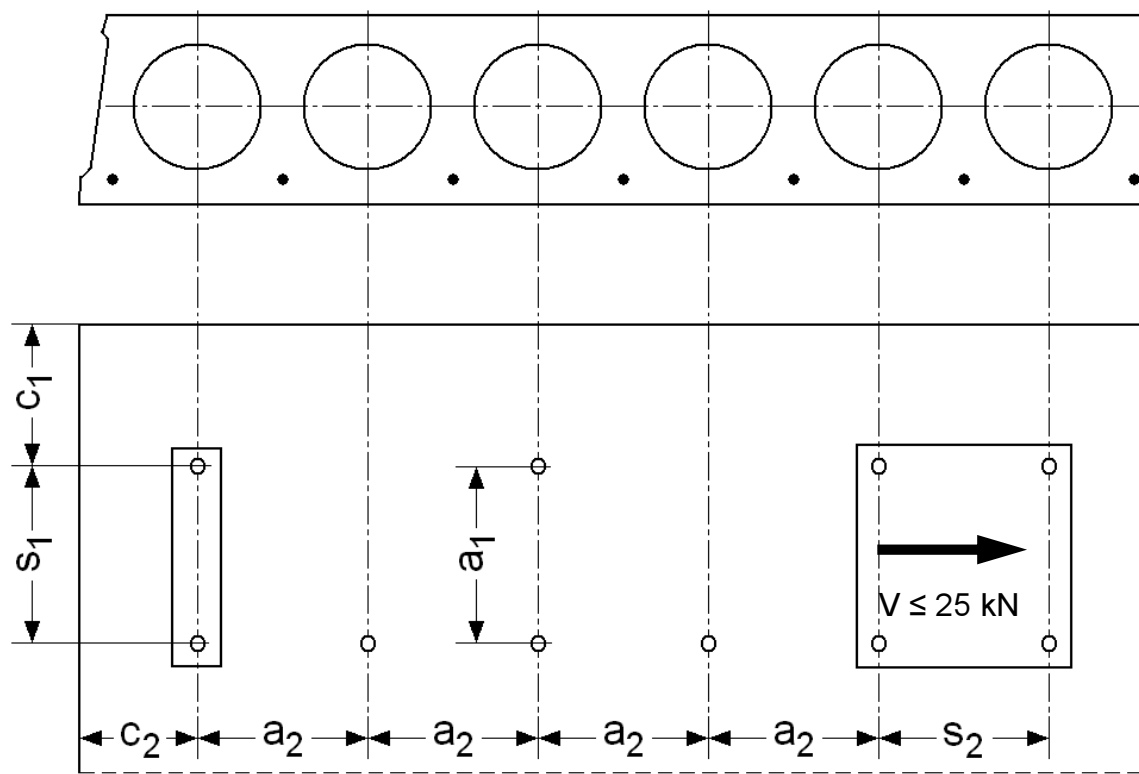


core distance	$l_c \geq 100 \text{ mm}$
prestressing steel distance	$l_p \geq 100 \text{ mm}$
distance between anchor position and prestressing steel	$a_p \geq 50 \text{ mm}$

Only for multiple use for non-structural applications, the definition of multiple use according to the member states is given in the informative Annex 1 of ETAG 001, Part 6

Hilti screw anchor HUS	Annex 8 of European technical approval ETA-10/0005
Admissible anchor positions in precast prestressed hollow core slabs	

Minimum spacing and edge distance of anchors and distance between anchor groups in precast prestressed hollow core slabs



c_1, c_2 edge distances
 s_1, s_2 anchor spacings
 a_1, a_2 distances between anchor groups

Minimum edge distance $c_{\min} \geq 100 \text{ mm}$

Minimum anchor spacing $s_{\min} \geq 100 \text{ mm}$

Minimum distance between anchor groups $a_{\min} \geq 100 \text{ mm}$

The maximum shear load of an anchor group is restricted to max. $V = 25 \text{ kN}$.

Hilti screw anchor HUS	Annex 9
Minimum spacing and edge distances of anchors and distance between anchor groups in precast prestressed hollow core slabs	of European technical approval ETA-10/0005

Table 8: Characteristic values of resistance in precast prestressed hollow core slabs C30/37 to C50/60

Hilti screw anchor HUS-H 6 / HUS-P 6 / HUS-I 6 / HUS-A 6			
All load directions			
Bottom flange thickness [mm]	≥ 25	≥ 30	≥ 35
Characteristic resistance F_{Rk}^0 [kN]	1	2	3
Partial safety factor $\gamma_M^{1)}$	1,5 ²⁾		

¹⁾ In absence of other national regulations.

²⁾ The installation factor $\gamma_2 = 1,0$ is included.

Table 9: Characteristic values of resistance in concrete C20/25 to C50/60 under fire exposure

Hilti screw anchor HUS				-HR 6	-H 6	-P 6	-I 6	-A 6
All load directions								
Characteristic resistance	R30...R90	$F_{Rk,s,fi}$	[kN]	1,3	0,5			
	R120	$F_{Rk,s,fi}$	[kN]	0,4	0,4			
Edge distance	R30...R120	c_{cr}	[mm]	90	50			
Anchor spacing	R30...R120	s_{cr}	[mm]	180	100			

In absence of other national regulations the partial safety factor for resistance under fire exposure $\gamma_{M,fi} = 1,0$ is recommended.

The fire resistance data is only valid for concrete C20/25 to C50/60 with a minimum slab thickness of 80 mm. The data is not valid for precast prestressed hollow core slabs.

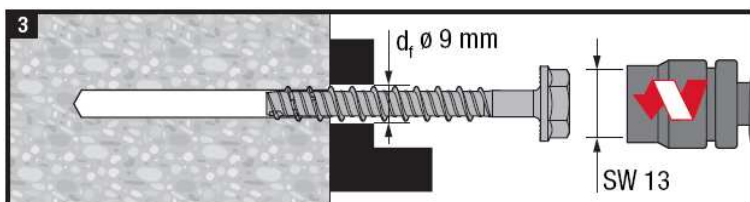
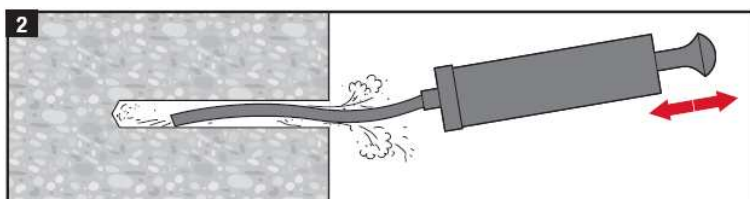
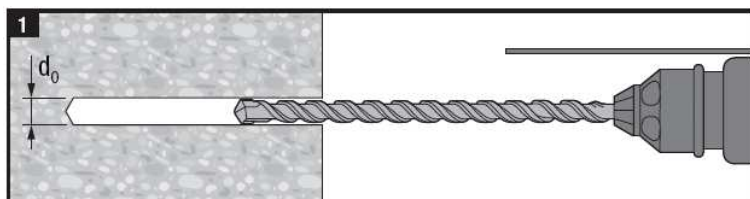
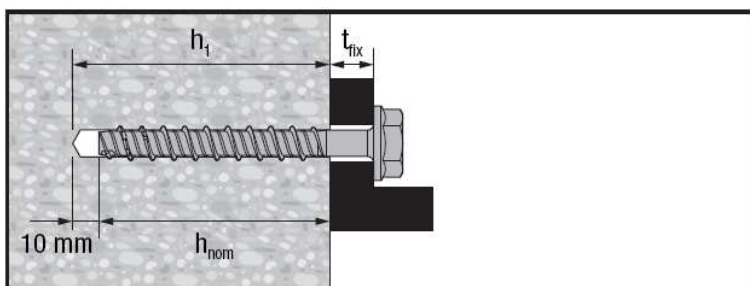
The edge distance of the anchor must be $c \geq 300$ mm and $\geq 2 h_{ef}$ if the fire attack is from more than one side.

The embedment depth has to be increased for wet concrete by at least 30 mm compared to the minimum embedment depth.

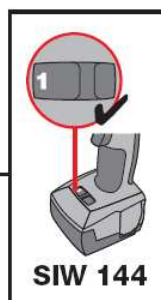
**Only for multiple use for non-structural applications,
the definition of multiple use according to the member states
is given in the informative Annex 1 of ETAG 001, Part 6**

Hilti screw anchor HUS	Annex 10
Characteristic values of resistance in precast prestressed hollow core slabs and characteristic values of resistance under fire exposure	of European technical approval ETA-10/0005

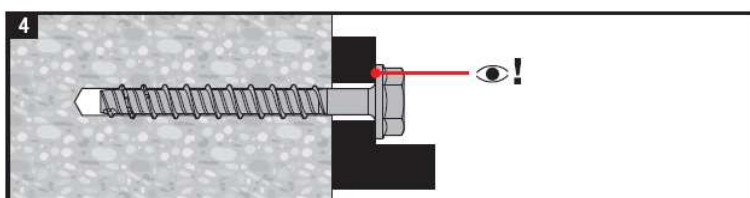
Setting instruction for HUS-HR 6 for applications in concrete



3.1		
	SIW 121	✓
	SIW 144	✓
	TKI 2500	✓



Hand setting of HUS-HR in concrete base material not allowed (machine setting only)



Installation with other electrical impact screw drivers of equivalent force and performance is possible.

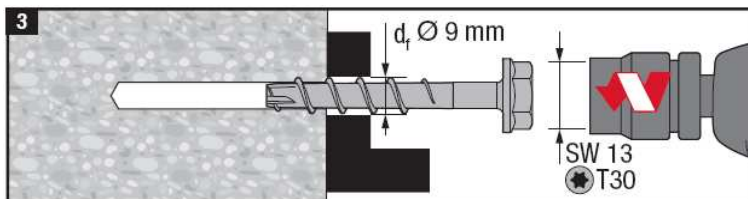
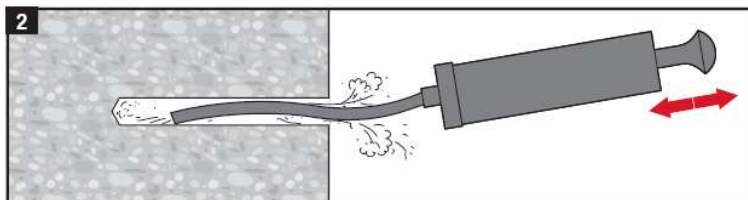
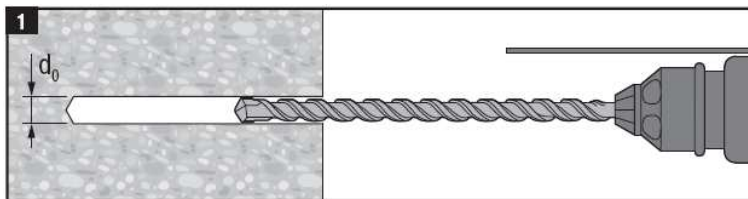
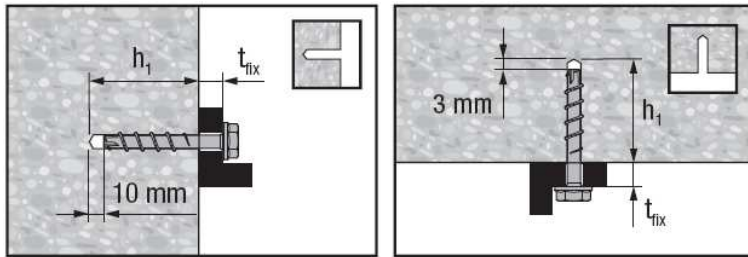
Hilti screw anchor HUS

Setting instruction for HUS-HR 6 for applications in concrete

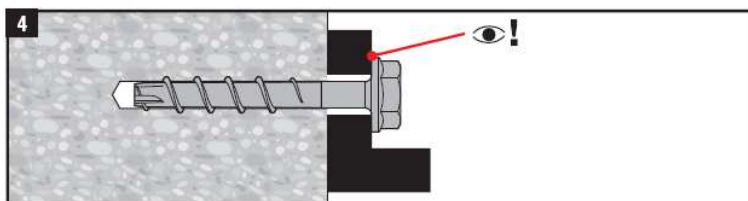
Annex 11

of European
technical approval
ETA-10/0005

Setting instruction for HUS-H 6, HUS-P 6, HUS-A 6 and HUS-I 6 for applications in concrete



3.1	
	SIW / SID 121 ✓
	SIW / SID 144 ✓
	TKI 2500 ✓
	18 Nm



Installation with other electrical impact screw drivers of equivalent force and performance is possible.

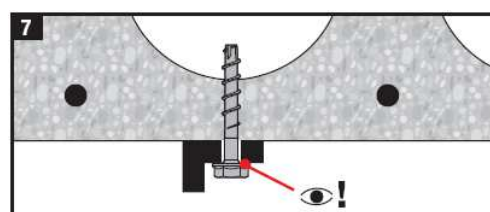
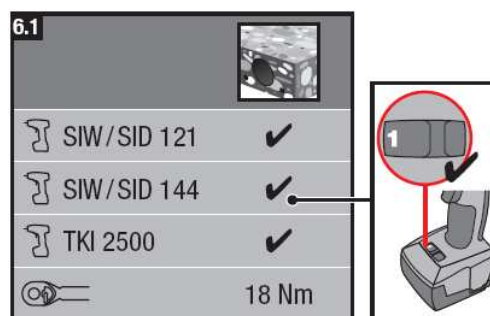
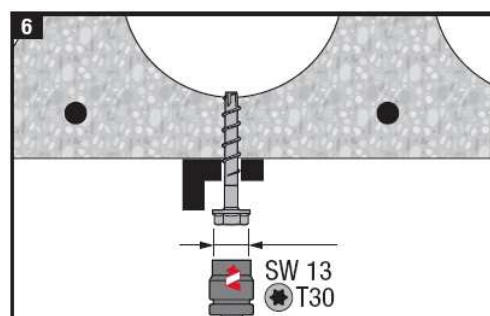
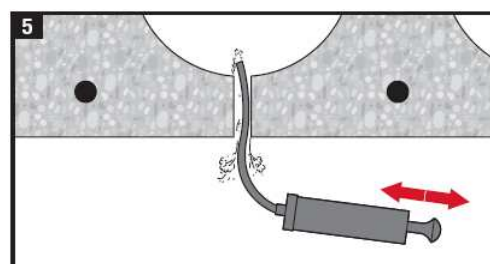
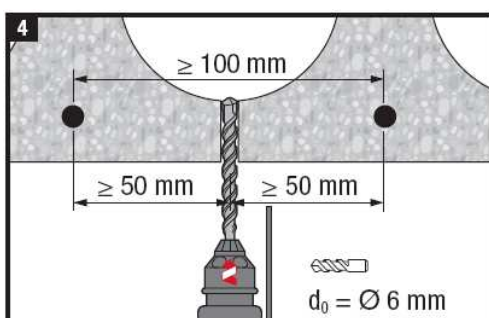
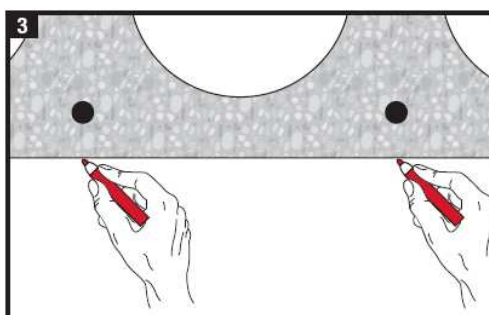
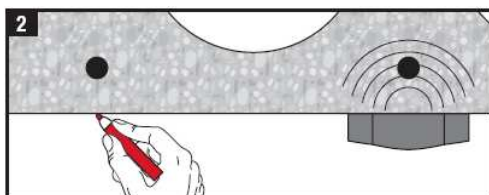
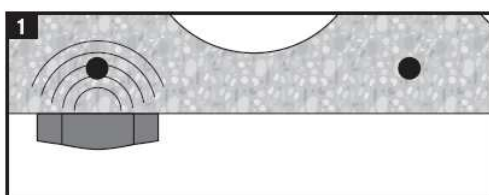
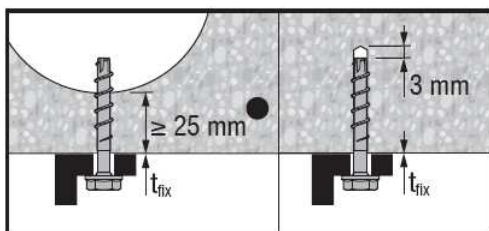
Hilti screw anchor HUS

Setting instruction for HUS-H 6, HUS-P 6,
HUS-A 6 and HUS-I 6 for applications in
concrete

Annex 12

of European
technical approval
ETA-10/0005

Setting instruction for HUS-H 6, HUS-P 6, HUS-A 6 and HUS-I 6 for applications in precast prestressed hollow core slabs



Installation with other electrical impact screw drivers of equivalent force and performance is possible.

Hilti screw anchor HUS

Setting instruction for HUS-H 6, HUS-P 6, HUS-A 6 and HUS-I 6 for applications in precast prestressed hollow core slabs

Annex 13

of European technical approval
ETA-10/0005