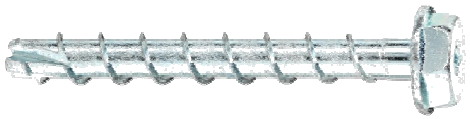
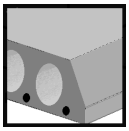
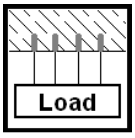
HUS-A 6 / HUS-H 6 / HUS-I 6 / HUS-P 6 Screw anchor in precast prestressed hollow core slabs

	Anchor version	Benefits
	HUS-A 6 Carbon steel Concrete Screw with hex head	- Quick and easy setting - Low expansion forces in base materials - Through fastening - Removable - Forged-on washer and hexagon head with no protruding thread
	HUS-H 6 Carbon steel Concrete Screw with hex head	
	HUS-I 6 Carbon steel Concrete Screw with hex head	
	HUS-P 6 Carbon steel Concrete Screw with pan head	



Prestressed hollow core slabs



Redundant fastening

European Technical Approval

CE conformity

Approvals / certificates

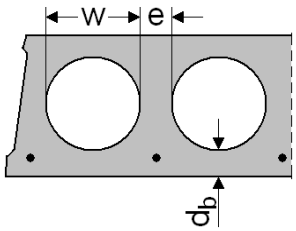
Description	Authority / Laboratory	No. / date of issue
European technical approval [a)]	DIBt, Berlin	ETA-10/0005 / 2011-05-12

a) All data given in this section according ETA-10/0005 issue 2011-05-12

Basic loading data

All data in this section applies to

- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Ratio core width / web thickness w/e ≤ 4,2
- Concrete C 30/37 to C 50/60



Characteristic resistance

Anchor version			HUS-A, -H, -I, -P 6		
Bottom flange thickness	d_b	[mm]	25	30	35
All load directions	F_{Rk}	[kN]	1,0	2,0	3,0

Design resistance

Anchor version			HUS-A, -H, -I, -P 6		
Bottom flange thickness	d_b	[mm]	25	30	35
All load directions	F_{Rd}	[kN]	0,7	1,3	2,0

Recommended loads

Anchor version			HUS-A, -H, -I, -P 6		
Bottom flange thickness	d_b	[mm]	25	30	35
All load directions [a)]	F_{rec}	[kN]	0,5	1,0	1,4

a) With overall partial safety factor for action γ = 1,4. The partial safety factors for action depend on the type of loading and shall be taken from national regulations.

Requirements for redundant fastening

The definition of redundant fastening according to Member States is given in the ETAG 001 Part six, Annex 1. In Absence of a definition by a Member State the following default values may be taken

Minimum number of fixing points	Minimum number of anchors per fixing point	Maximum design load of action N_{Sd} per fixing point [a)]
3	1	2 kN
4	1	3 kN

b) The value for maximum design load of actions per fastening point N_{Sd} is valid in general that means all fastening points are considered in the design of the redundant structural system. The value N_{Sd} may be increased if the failure of one (= most unfavourable) fixing point is taken into account in the design (serviceability and ultimate limit state) of the structural system e.g. suspended ceiling.

Materials

Mechanical properties

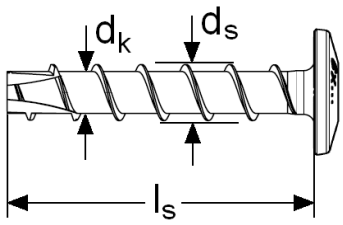
Anchor version		HUS-A, -H, -I, -P 6
Nominal tensile strength f_{uk}	[N/mm²]	930
Stressed cross-section A_s	[mm²]	26,9
Moment of resistance W	[mm³]	19,7
Design bending resistance $M_{Rd,s}$	[Nm]	14,6

Material quality

Anchor version	HUS-A, -H, -I, -P 6
Material	Carbon steel, galvanised to min. 5 µm

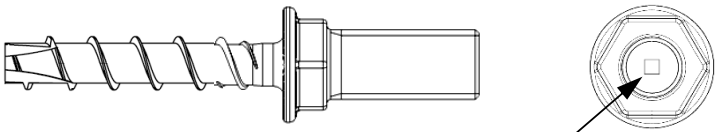
Anchor dimensions

Anchor version			HUS-A 6	HUS-H 6	HUS-I 6	HUS-P 6
Nominal length	l_S	[mm]	35	40..120	35	60..80
Outer diameter of thread	d_S	[mm]	7,85			
Core diameter	d_k	[mm]	5,85			



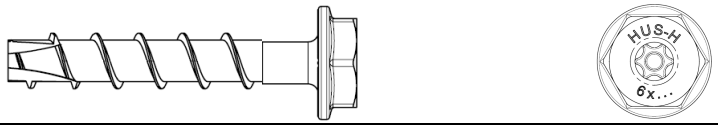
Head configuration

HUS-A 6 External thread M8 or M10

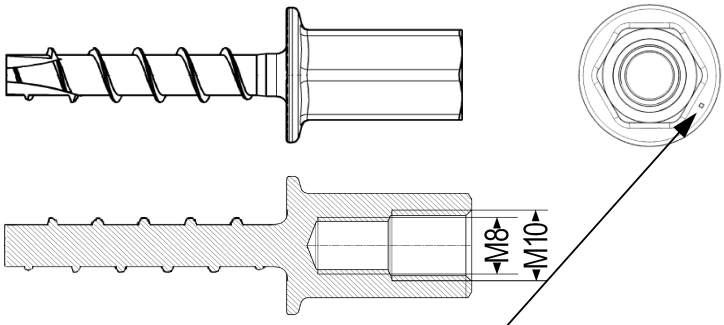


Square mark with d = 2 mm edge length for h_{nom} = 35 mm

HUS-H 6 Hex head and Torx T30

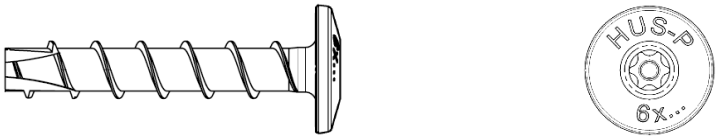


HUS-I 6 Internal threads M8 and M10



One circle mark with d = 0,8 mm for h_{nom} = 35 mm

HUS-P 6 Pan head with

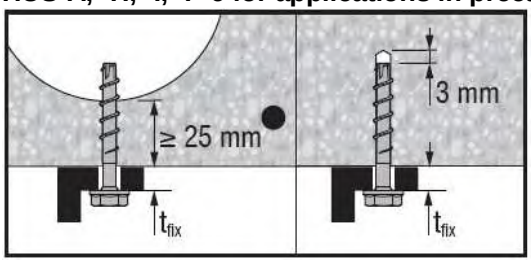


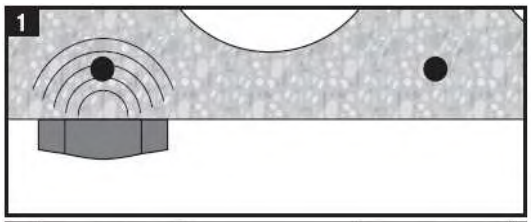
Setting

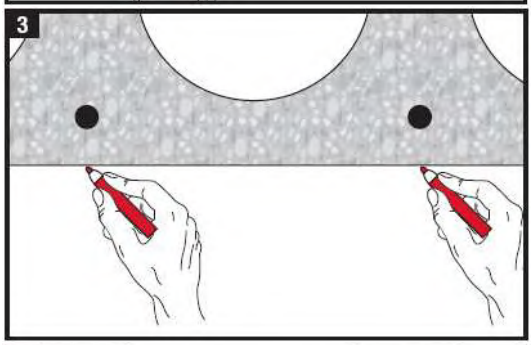
Anchor size	HUS-A 6	HUS-I 6	HUS-H 6	HUS-P 6
Rotary hammer	Hilti TE 6 / TE 7			
drill bit	TE-CX 6			
Socket wrench insert	S-NSD 13 ½ L	S-NSD 13 ½ (L)		-
Torx	-		T30	
Impact screw driver	See setting instruction			

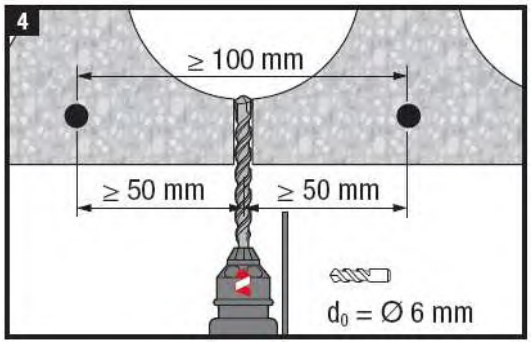
Setting instruction

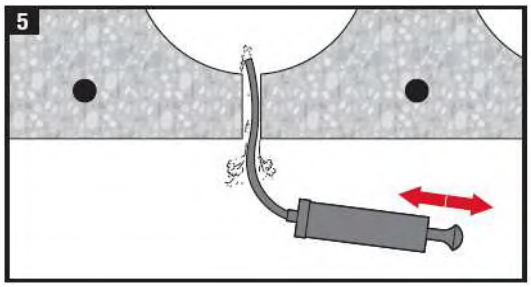
HUS-A, -H, -I, -P 6 for applications in precast prestressed hollow core slabs

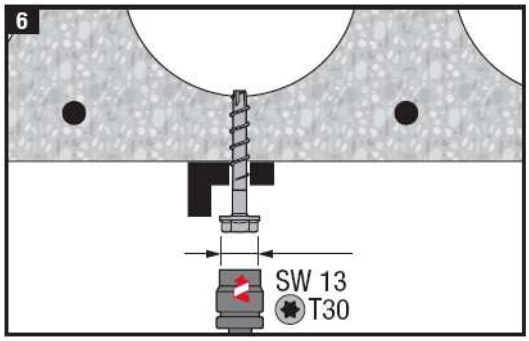


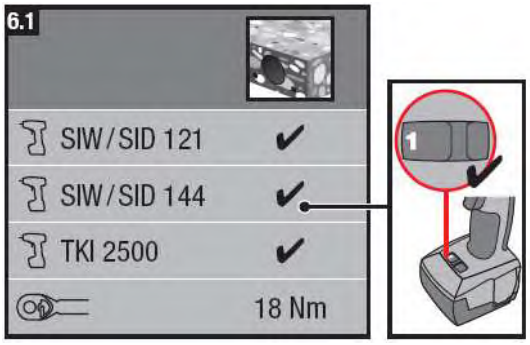


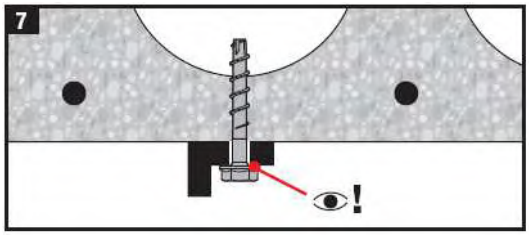










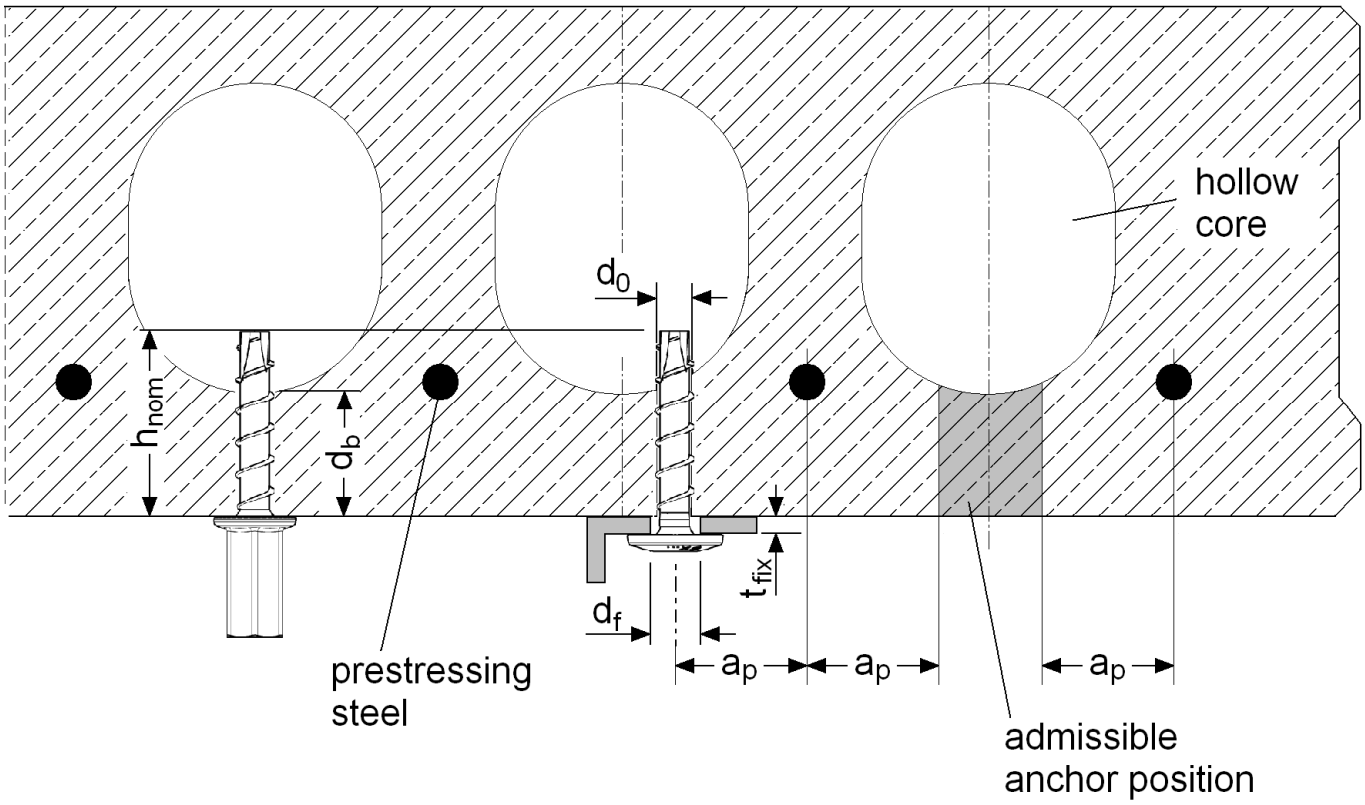


For detailed information on installation see instruction for use given with the package of the product.

Setting details

Anchor version			HUS-A, -H, -P 6					HUS-A, -I 6
Nominal embedment depth	h_{nom}	[mm]	35					
Bottom flange thickness	$d_b \geq$	[mm9	25					
Nominal diameter of drill bit	d_o	[mm]	6					
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	6,4					
Nominal depth of drill hole [a)]	$h_1 \geq$	[mm]	38					
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	9					-
Nominal effective anchorage depth	h_{ef}	[mm]	25					
Distance between anchor position and prestressing steel	$a_p \geq$	[mm]	50					
Nominal length of screw	l_s	[mm]	40	60	80	100	120	35
Thickness of fixture	$t_{fix} \geq$	[mm]	0	2	5	25	45	-
	$t_{fix} \leq$	[mm]	5	25	45	65	85	-
Max. installation torque	T_{inst}	[Nm]	18					

a) Nominal depth of drill hole may be deeper than bottom flange thickness



Anchor spacing and edge distance

Anchor version			HUS-A, -H, -I, -P 6
Minimum edge distance	$c_{min} \geq$	[mm]	100
Minimum anchor spacing	$s_{min} \geq$	[mm]	100
Minimum distance between anchor groups	$a_{min} \geq$	[mm]	100