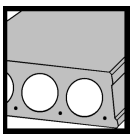
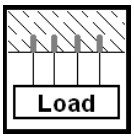
HUS-P 6 / HUS-I 6 Screw anchor for application in precast prestressed hollow core slabs

	Anchor version	Benefits
	HUS-P 6 Carbon steel Concrete Screw	- Quick and easy setting - Low expansion forces in base materials - Through fastening - Removable - Forged-on washer
	HUS-I 6 Carbon steel Concrete Screw with internal thread M8 and M10	



Prestressed hollow core slabs



Redundant fastening

European Technical Approval

CE conformity

Approvals / certificates

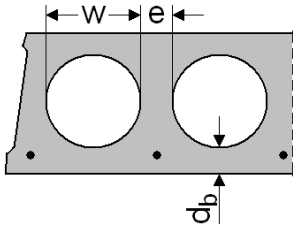
Description	Authority / Laboratory	No. / date of issue
European technical approval [a)]	DIBt, Berlin	ETA-10/0005 / 2010-04-23

a) All data given in this section according ETA-10/0005 issue 2010-04-23

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-P 6 / HUS-I 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-P 6 / HUS-I 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-P 6 / HUS-I 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. According ETAG 001, annex C, the partial safety factor is γ_G = 1,35 for permanent actions and γ_Q = 1,5 for variable actions.

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-P 6 / HUS-I 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

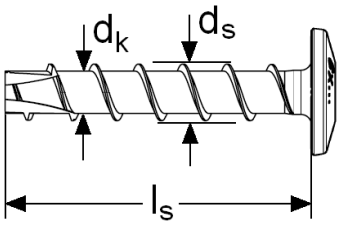
Material quality

Anchor version	HUS-P 6 / HUS-I 6
Material	Steel according DIN EN 10263-4, 1.5523, galvanised to min. 5 µm

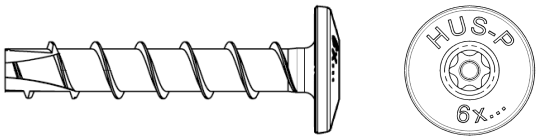
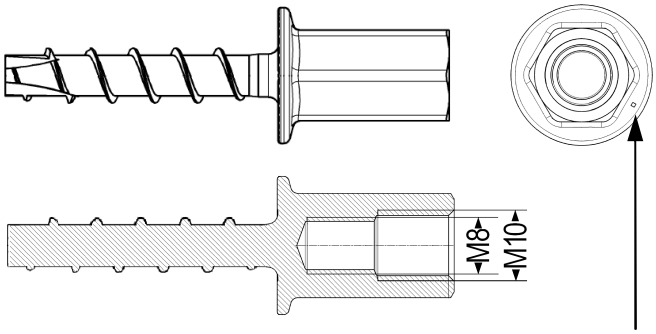
Anchor dimensions

Dimensions

Anchor version			HUS-P 6	HUS-I 6
Nominal length of screw	l_s	[mm]	40 … 80	35
Outer diameter of thread	d_s	[mm]	7,85	
Core diameter	d_k	[mm]	5,85	



Head configuration

HUS-P 6	Pan head with Torx T30	
HUS-I 6	Internal threads M8 and M10	 One mark 0,5 mm x 0,5 mm for h_{nom} = 35 mm

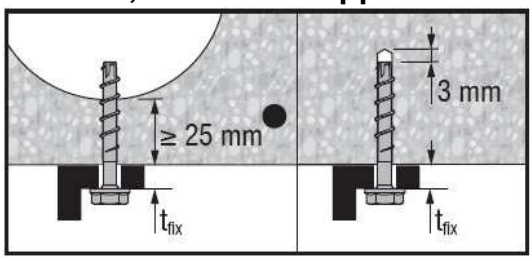
Setting

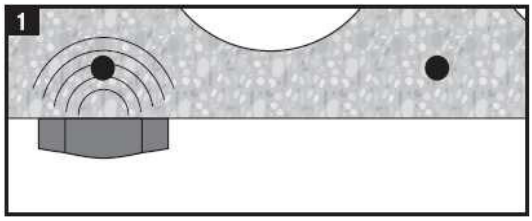
Recommended installation equipment

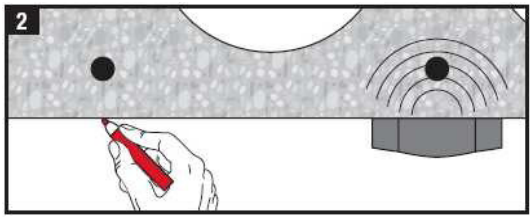
Anchor size	HUS-P 6	HUS-I 6
Rotary hammer	Hilti TE 6 / TE 7	
drill bit	TE-C3X 6/17	
Socket wrench insert	-	S-NSD 13 ½ (L)
Torx	T30	-
Impact screw driver	See setting instruction	

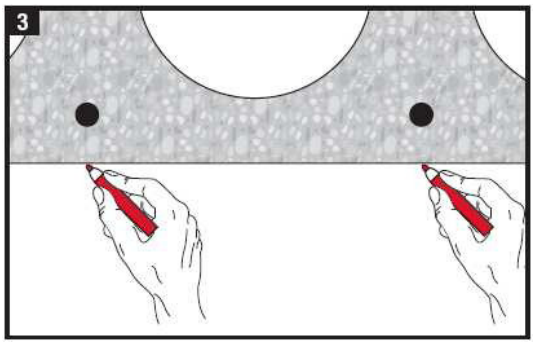
Setting instruction

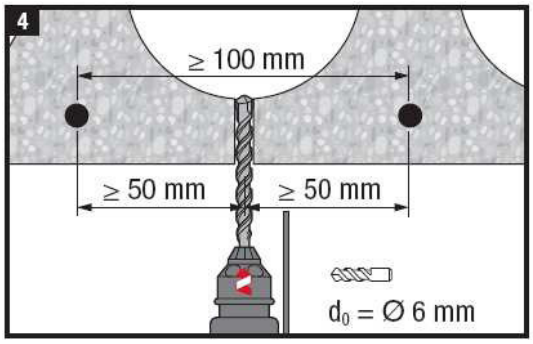
HUS-P 6, HUS-I 6 for applications in precast prestressed hoolw core slabs

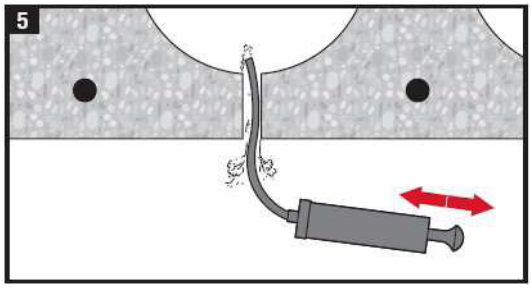


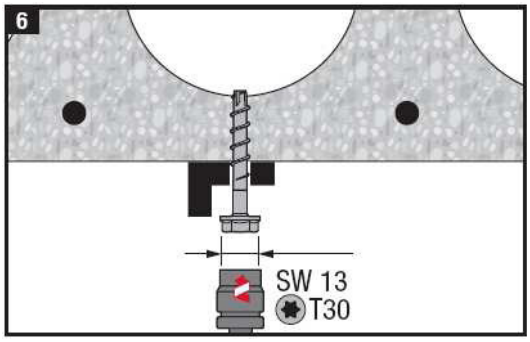


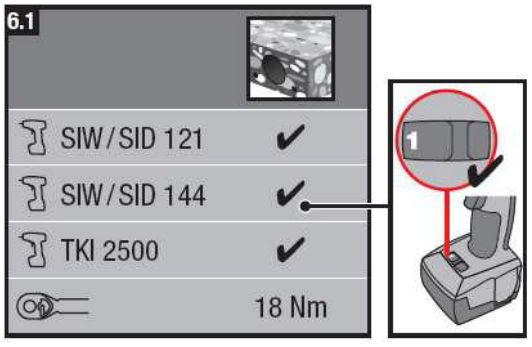


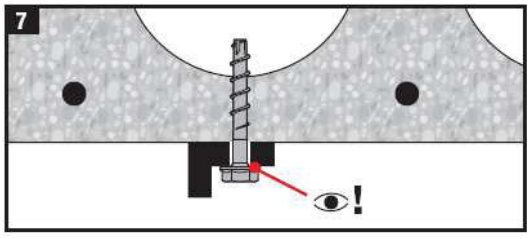










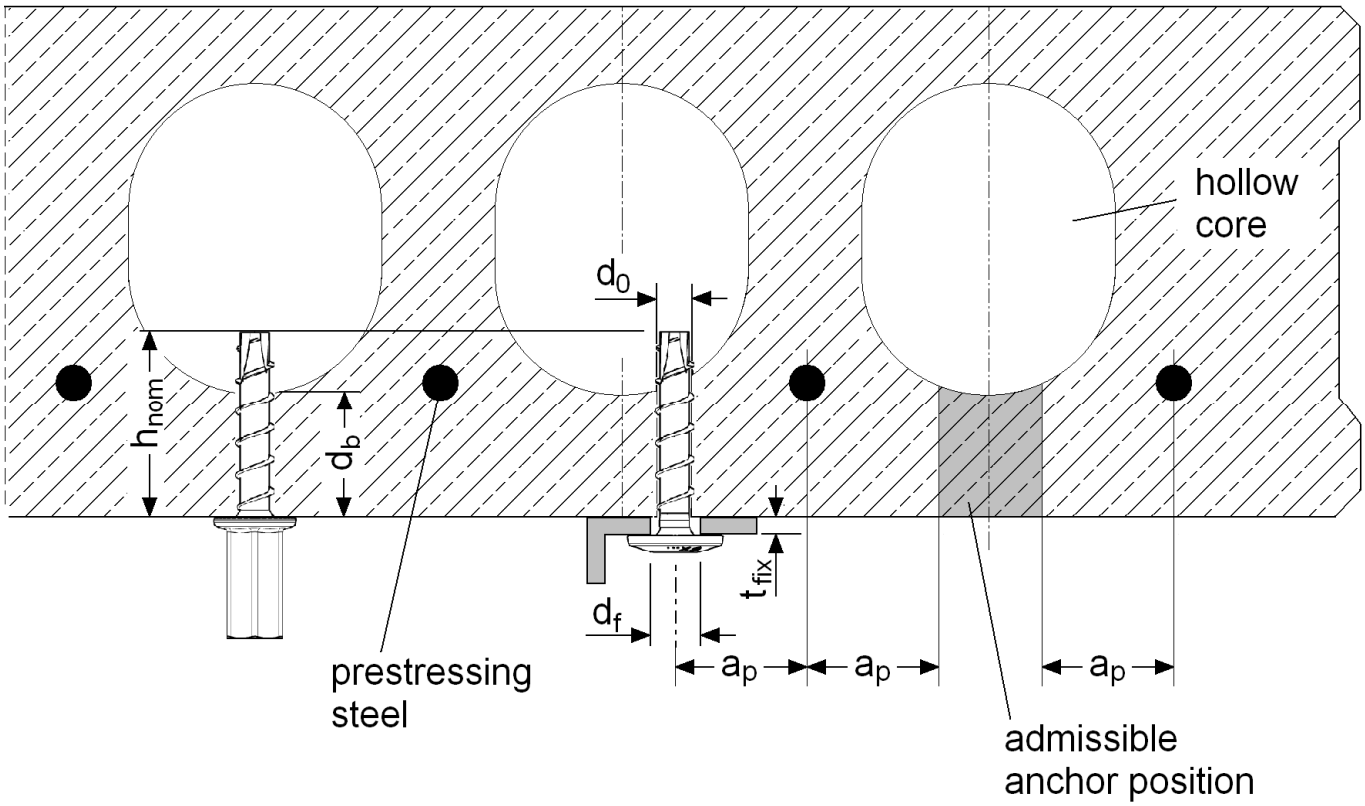


For detailed information on installation see instruction for use given with the package of the product.

Setting details

Anchor version			HUS-P 6			HUS-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	35
Thickness of fixture	$t_{fix} \geq$	[mm]	0	2	5	-
	$t_{fix} \leq$	[mm]	5	25	45	-
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-P 6 / HUS-I 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