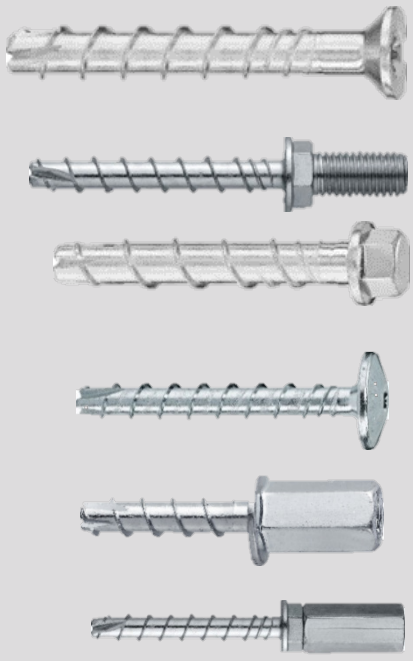
PRODUCT TECHNICAL DATASHEET

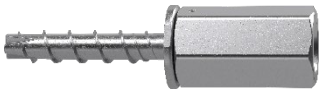
HUS3 Screw anchor

Update: Dec-25



HUS3 Screw anchors

Anchor version

	HUS3-H (6)
	HUS3-C (6)
	HUS3-A (6)
	HUS3-P (6)
	HUS3-PL (6)
	HUS3-PS (6)
	HUS3-IQ (6)
	HUS3-I (6)
	HUS3-I Flex (6)
	HUS3-IF Flex (6)

Linked to Instruction or use (IFU) and Hilti webpage

Anchor size	6				
HUS3	H	I	IQ	I(F) Flex	A
	IFU HUS3-H	IFU HUS3-I	IFU HUS3-IQ	IFU HUS3-I(F) Flex	IFU HUS3-A
	C	P	PL	PS	
	IFU HUS3-C	IFU HUS3-P	IFU HUS3-PL	IFU HUS3-PS	-

The instructions for use can be viewed using the link in the instructions for use table or the QR code/link in the Hilti webpage table.

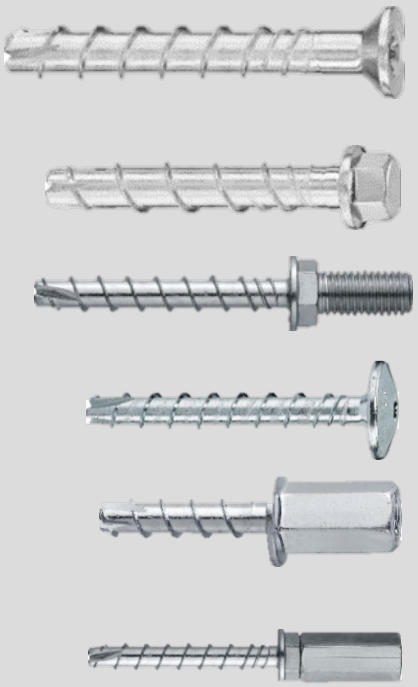
Link to Hilti Webpage

HUS3-H	HUS3-I	HUS3-IQ	HUS3-I Flex	HUS3-IF Flex	HUS3-A	HUS3-C
HUS3-P	HUS3-PL	HUS3-PS				

PRODUCT TECHNICAL DATASHEET

HUS3 Screw anchor

Steel-to-concrete
Update: Dec-25



HUS3 Screw anchor for use in concrete

High performance screw anchor for single point fastening

Anchor version		Benefits
	HUS3-H (6)	- High productivity - less drilling and fewer operations than with conventional anchors - ETA approval for cracked and uncracked concrete - ETA approval for Seismic C1 - High loads (Reliable and easy to set anchor) - Small edge and spacing distance - HUS3-IF Flex with multilayer coatings for additional corrosion protection - No cleaning required - Forged-on washer and hexagon head with no protruding thread - Through fastening
	HUS3-C (6)	
	HUS3-A (6)	
	HUS3-P (6)	
	HUS3-PL (6)	
	HUS3-PS (6)	
	HUS3-I (6)	
	HUS3-I Flex (6)	
	HUS3-IF Flex (6)	

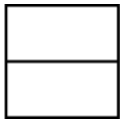
Linked Approvals/Certificates and Instructions for use

Base material

Concrete (uncracked)

Concrete (cracked)

Load conditions

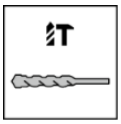


Static / quasi-static

Seismic, C1

Fire resistance

Drilling, cleaning, setting



Hammer drilled holes

Other information

PROFIS Engineering software

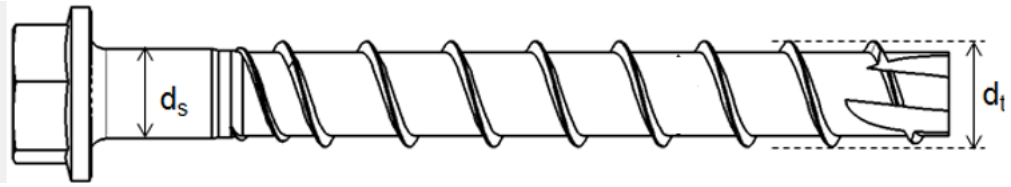
Steel to concrete connection Handbook

Approvals/certificates

Approval no	Application / loading condition	Authority / Laboratory	Date of issue
ETA-13/1038	Static and quasi-static / Seismic / Fire	DIBt, Berlin	23-09-2025

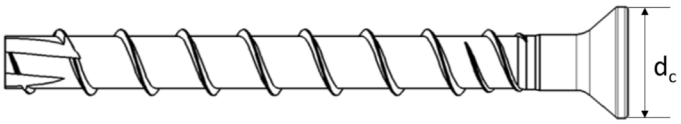
Fastener special dimensions

Type	HUS3		H	C	A	PL	P	PS	I	I(F) Flex
Diameter			**6**							
Nominal length	L	[mm]	40-120	40-70	35-55	60	40-80	40-60	35-55	35-55
Threaded outer diameter	d_t	[mm]	7,85							
Shaft diameter	d_s	[mm]	6,15							
Diameter of integrated washer	d_i	[mm]	16,5	-	-	-	-	-	-	-

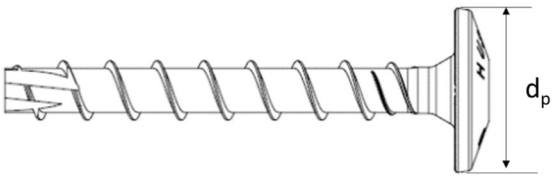


HUS3-H

Type	HUS3		C	PL	P	PS
Diameter			**6**			
Countersunk heigt	h_c	[mm]	4,0	-	-	-
Diameter of the countersunk	d_c	[mm]	11,5	-	-	-
Pan head diameter	d_p	[mm]	-	21,8	17,6	13,3

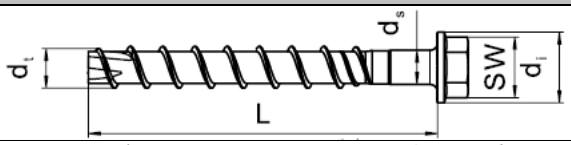
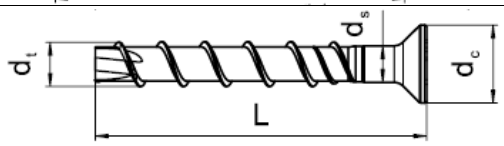
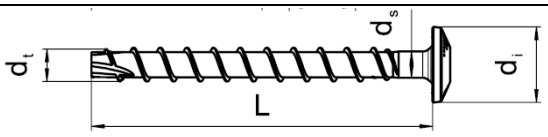
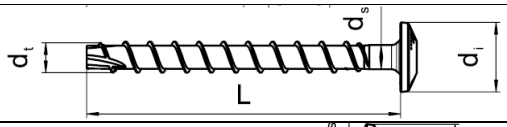
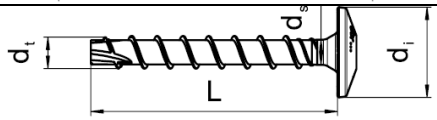
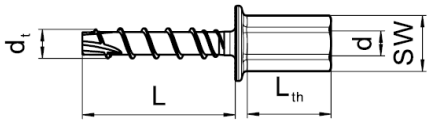
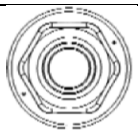
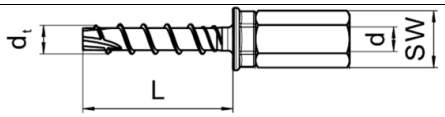
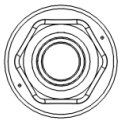


HUS3-C



HUS3-PL, HUS3-P, HUS3-PS

Head configuration

Type	Head		
HUS3-H	Hexagonal head		
HUS3-C	Countersunk head		
HUS3-P	Pan head		
HUS3-PS	Pan head (small)		
HUS3-PL	Pan head (large)		
HUS3-I	Internal thread		
HUS3-I(F) Flex	Internal thread		

Screw length and thickness of fixture for HUS3

Fastener size		**6**									
		H	**C**	**A**	**I, I(F) Flex**	**H**	**C**	**A**	**I, I(F) Flex**	**P**	**PS PL**
Nominal embedment depth [mm]		h_{nom1} 40				h_{nom2} 55					
		Thickness of fixture [mm]									
		t_{fix1}	t_{fix1}	t_{fix1}	t_{fix1}	t_{fix2}	t_{fix2}	t_{fix2}	t_{fix2}	t_{fix2}	t_{fix2}
Length of screw [mm]	40	-	-	0	0	-	-	-	-	-	-
	45	5	5	5	5	-	-	-	-	-	-
	55	-	-	15	15	-	-	0	0	-	-
	60	20	20	-	-	5	5	-	-	5	5
	70	-	30	-	-	-	15	-	-	-	-
	80	40	-	-	-	25	-	-	-	25	-
	100	60	-	-	-	45	-	-	-	-	-
	120	80	-	-	-	65	-	-	-	-	-
	135	-	-	95	-	-	-	80	-	-	-
	155	-	-	115	-	-	-	100	-	-	-
	175	-	-	135	-	-	-	120	-	-	-
	195	-	-	155	-	-	-	140	-	-	-

Static and quasi-static loading based on ETA-13/1038. Design according to EN 1992-4

All data in this section applies to:

- Correct setting (See setting instruction)
- For a single anchor
- No edge distance and spacing influence (see table with characteristic distances)
- Characteristic spacing and edge distance for splitting failure apply only for uncracked concrete
- For cracked concrete only the characteristic spacing and edge distance for concrete cone failure are decisive
- Minimum base material thickness (see table)
- Embedment depth, as specified in the table of this section
- Anchor material, as specified in the tables of this section
- Concrete C20/25
- Hammer drilled holes
- Recommended loads: With overall partial safety factor for action γ = 1,4.

For specific design cases refer to PROFIS Engineering.

Design resistance

Type	HUS3-		H, C, A, I, I(F) Flex	P, PS, PL	H, C, A, I, I(F) Flex	P, PS, PL
Anchor size			**6**			
Nominal embedment depth	h_{nom}	[mm]	h_{nom1}		h_{nom2}	
			40		55	
Uncracked concrete						
Tension	N_{Rd}	[kN]	3,9	3,9	5,0	4,2
Shear	V_{Rd}	[kN]	5,4	5,4	8,3	8,3
Cracked concrete						
Tension	N_{Rd}	[kN]	1,4	1,4	3,3	3,3
Shear	V_{Rd}	[kN]	3,8	3,8	8,3	8,3

Recommended loads

Type	HUS3-		H, C, A, I, I(F) Flex	P, PS, PL	H, C, A, I, I(F) Flex	P, PS, PL
Anchor size			**6**			
Nominal embedmenth depth	h_{nom}	[mm]	h_{nom1}		h_{nom2}	
			40		55	
Uncracked concrete						
Tension	N_{rec}	[kN]	2,8	2,8	3,6	3,0
Shear	V_{rec}	[kN]	3,8	3,8	6,0	6,0
Cracked concrete						
Tension	N_{rec}	[kN]	1,0	1,0	2,4	2,4
Shear	V_{rec}	[kN]	2,7	2,7	6,0	6,0

Seismic loading based on ETA-13/1038. Design according to EN 1992-4

All data in this section applies to:

- Correct setting (See setting instruction)
- For a single anchor
- No edge distance and spacing influence (see table with characteristic distances)
- Characteristic spacing and edge distance for splitting failure apply only for uncracked concrete
- For cracked concrete only the characteristic spacing and edge distance for concrete cone failure are decisive
- Minimum base material thickness (see table)
- Embedment depth, as specified in the table of this section
- Anchor material, as specified in the tables of this section
- Concrete C20/25
- Hammer drilled holes
- α_{gap} = 0,5 (without using Hilti filling set)

For specific design cases refer to PROFIS Engineering.

Design resistance in case of seismic performance category C1

Type	**HUS3**		**H, C, A, I, I(F) Flex, P, PS, PL**	
Anchor size			**6**	
Nominal embedment depth	h_{nom}	[mm]	h_{nom1}	h_{nom2}
			40	55
Effective anchorage depth	h_{ef}	[mm]	30,0	42,0
Tension	$N_{Rd,seis}$	[kN]	1,4	2,2
Shear	$V_{Rd,seis}$		1,7	1,7

Fire resistance based on ETA-13/1038. Design according to EN 1992-4

All data in this section applies to:
- Correct setting (See setting instruction)
- For a single anchor
- No edge distance and spacing influence (see table with characteristic distances)
- Characteristic spacing and edge distance for splitting failure apply only for uncracked concrete
- For cracked concrete only the characteristic spacing and edge distance for concrete cone failure are decisive
- Minimum base material thickness (see table)
- Embedment depth, as specified in the table of this section
- Anchor material, as specified in the tables of this section
- Concrete C20/25
- Hammer drilled holes
- With overall partial safety factor for resistance $\gamma_{M,fi} = 1{,}0$

For specific design cases refer to PROFIS Engineering.

Design resistance

Type	**HUS3-**		**H, C, A, I, I(F) Flex, P, PS, PL**	
Anchor size			**6**	
Nominal embedment depth	h_{nom}	[mm]	h_{nom1}	h_{nom2}
			40	55
Fire exposure R30				
Tension	$N_{Rd,fi}$	[kN]	0,5	1,5
Shear	$V_{Rd,fi}$	[kN]	0,5	1,6
Fire exposure R60				
Tension	$N_{Rd,fi}$	[kN]	0,5	1,2
Shear	$V_{Rd,fi}$	[kN]	0,5	1,2
Fire exposure R90				
Tension	$N_{Rd,fi}$	[kN]	0,5	0,8
Shear	$V_{Rd,fi}$	[kN]	0,5	0,8
Fire exposure R120				
Tension	$N_{Rd,fi}$	[kN]	0,4	0,7
Shear	$V_{Rd,fi}$	[kN]	0,4	0,7

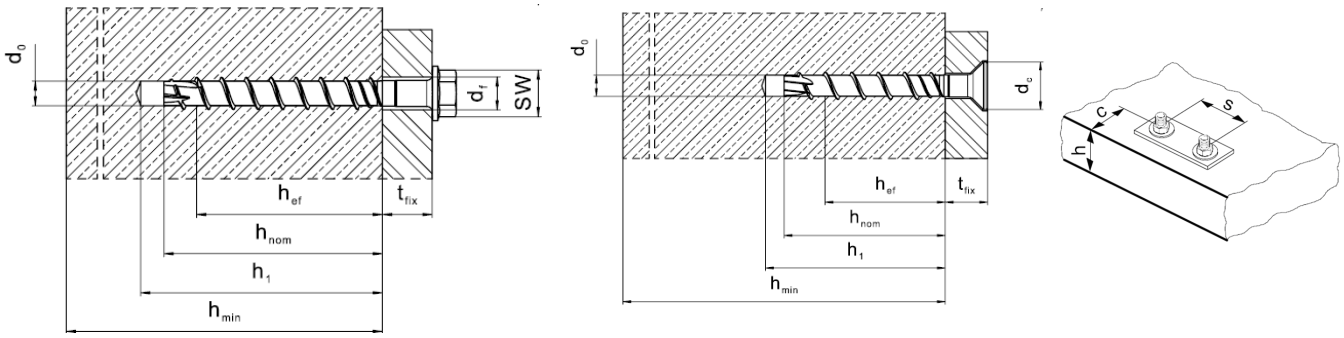
Setting information

Setting details (h_{nom1})

Type	HUS3-		H	C	A	P, PS	I, I(F) Flex	PL
Anchor size			6					
Nominal diameter of drill bit	d_0	[mm]	6					
Clearance hole diameter	d_{fmax}	[mm]	9					10
Wrench size	SW	[mm]	13	-	13	-	13	-
Countersunk head diameter	d_h	[mm]	-	11,5	-			
Torx size	TX	-	-	30	-	30	-	30
Depth of drill fole in floor/wall position	h_{1min}	[mm]	h_{nom} + 10 mm					
Depth of drill hole ceiling	h_{1min}	[mm]	h_{nom} + 3 mm					
Nominal embedment depth	h_{nom}	[mm]	40					
Maximum Installation Torque	$T_{inst, max}$	[Nm]	20					
Minimum base material thickness	h_{min}	[mm]	80					
Minimum distances								
Spacing	s_{min}	[mm]	35					
Edge distance	c_{min}	[mm]	35					
Characteristic distances								
Edge distance for splitting failure	$c_{cr,sp}$	[mm]	60					
Spacing for concrete cone failure	$s_{cr,N}$	[mm]	$3*h_{ef}$					
Edge distance for concrete cone failure	$c_{cr,N}$	[mm]	$1,5*h_{ef}$					

Setting details (h_{nom2})

Type	HUS3 -		H	C	A	P, PS	I, I(F) Flex	PL
Anchor size			6					
Nominal diameter of drill bit	d_0	[mm]	6					
Clearance hole diameter	d_{fmax}	[mm]	9					10
Wrench size	SW	[mm]	13	-	13	-	13	-
Countersunk head diameter	d_h	[mm]	-	11,5	-			
Torx size	TX	-	-	30	-	30	-	30
Depth of drill fole in floor/wall position	h_{1min}	[mm]	h_{nom} + 10 mm					
Depth of drill hole ceiling	h_{1min}	[mm]	h_{nom} + 3 mm					
Nominal embedment depth	h_{nom}	[mm]	55					
Maximum Installation Torque	$T_{inst, max}$	[Nm]	25					
Minimum base material thickness	h_{min}	[mm]	100					
Minimum distances								
Spacing	s_{min}	[mm]	35					
Edge distance	c_{min}	[mm]	35					
Characteristic distances								
Edge distance for splitting failure	$c_{cr,sp}$	[mm]	63					
Spacing for concrete cone failure	$s_{cr,N}$	[mm]	$3*h_{ef}$					
Edge distance for concrete cone failure	$c_{cr,N}$	[mm]	$1,5*h_{ef}$					



Drilling and Installation equipment

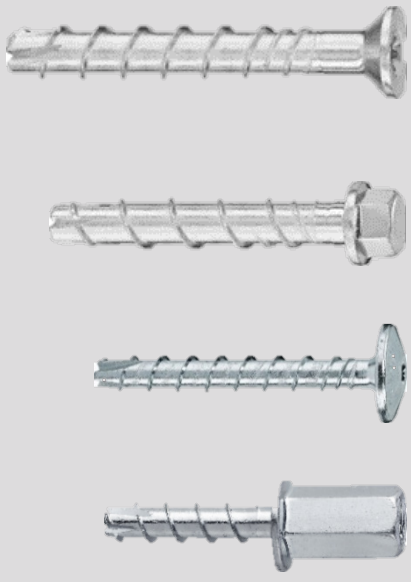
For detailed setting information on installation ,see instructions for use given with the product.

Rotary Hammers (Corded and Cordless)		TE 2 - TE 30
Other tools		Impact wrench- SIW (use recommended socket/driver bit)
		Hammer drill bit TE-CX, TE-C
		Blow out pump

PRODUCT TECHNICAL DATASHEET

HUS3 Screw anchor

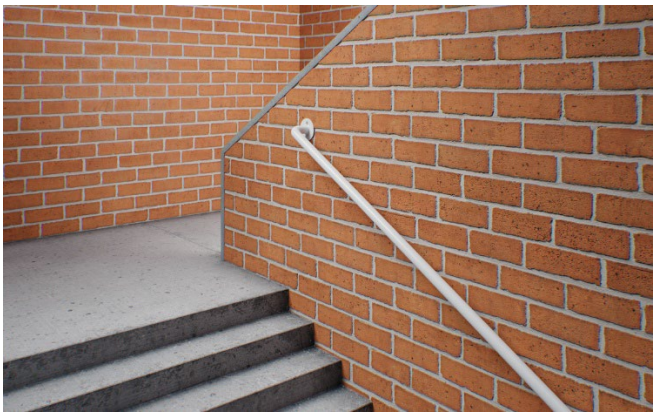
Steel-to-masonry
Update: Dec-25

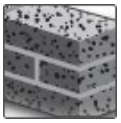
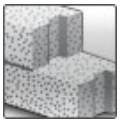
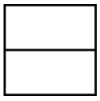


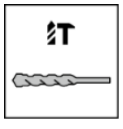
HUS3 Screw anchor for use in masonry

High performance screw anchor for single point fastening

Anchor version		Benefits
	HUS3-H (6)	- High productivity - less drilling and fewer operations than with conventional anchors - Small edge and spacing distance - No cleaning required - Forged-on washer and hexagon head with no protruding thread - Through fastening
	HUS3-C (6)	
	HUS3-A (6)	
	HUS3-P (6)	
	HUS3-PL (6)	
	HUS3-PS (6)	
	HUS3-I (6)	



Base material		Load conditions
		
Solid brick	Autoclaved aerated concrete	Static / quasi-static

Drilling, cleaning, setting	Other information
	
Hammer drilled holes	Hilti Technical data

Basic loading data and design in solid masonry units based on Hilti Technical data.

All data in this section applies to:
- Load values valid for holes drilled with TE rotary hammers in hammering mode
- Correct anchor setting (see instruction for use, setting details)
- The core/material ratio may not exceed 15 % of a bed joint area
- The brim area around holes must be at least 70mm
- Edge distances, spacing and other influences, see below
- For a single anchor

Recommended loads

Anchor size			**HUS3**	**A, H, I, C, P, PS, PL**
				6
Nominal embedmenth depth		**h_{nom}**	**[mm]**	**55**
		Compressive strength class	**[N/mm²]**	**F_{rec} Tensile and shear loads**
	Solid clay brick Mz 12/2,0 DIN 105 / EN 771-1	≥ 8		0,6
		≥ 10		0,7
		≥ 12		0,8
		≥ 16		0,9
		≥ 20		0,9
	Solid sand-lime brick Mz 12/2,0 DIN 106/EN 771-2	≥ 8		0,8
		≥ 10		0,9
		≥ 12		1,0
		≥ 16		1,1
		≥ 20		1,2
	Aerated concrete PPW 6-0,4 DIN 4165/EN 771-4	≥ 6		0,4

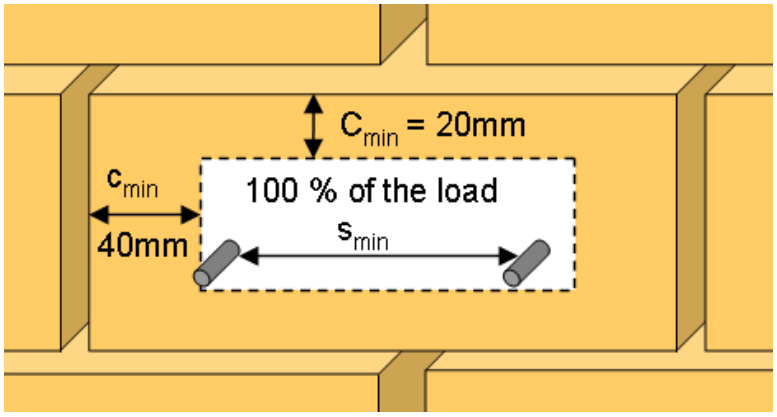
Permissible anchor location in brick and block walls

Edge distance and spacing influence

- The technical data for HUS3 anchors are reference loads for MZ 12, KS 12 and PPW 6. Due to the large variation of natural stone slid bricks, on site anchor testing is recommended to validate technical data
- The HUS3 anchor was installed and tested in center of solid bricks as shown. The HUS3 anchor was not tested in the mortar joint between solid bricks or in hollow bricks, however a load reduction is expected
- For brick walls where anchor position in brick can not be determined, 100 % anchor testing is recommended
- Distance to free edge to solid masonry (Mz and KS) units ≥ 200mm
- Distance to free edge to solid masonry (autoclaved aerated gas concrete) units ≥ 170mm
- The minimum distance to horizontal and vertical mortar joint (c_{min}) is started in drawing below
- Minimum anchor spacing (s_{min}) in one brick/block is ≥ 80 mm

Limits

- All data is for multiple use for non-structural applications
- Plaster, graveling, lining or levelling courses are regarded as non-bearing and may not be taken into account for the calculation of embedment depth
- The decisive resistance to tension loads is the lower value of N_{rec} (brick breakout, pull out) and $N_{max,pb}$ (pull out of one brick)



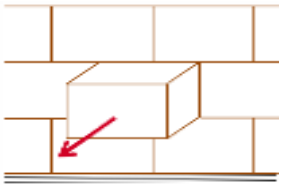
Design tension and shear resistance – Pull out / Pushing out of one brick failure modes

Pull out of one brick (tension):

$$N_{Rd,pb} = 2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) / (2{,}5 \cdot 1000) \quad [kN]$$

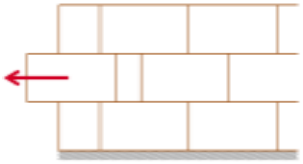
$$N_{Rd,pb} = (2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) + b \cdot h \cdot f_{vko} / (2{,}5 \cdot 1000) \quad [kN]$$

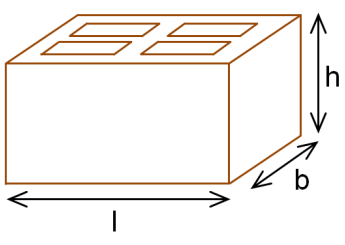
* this equation is applicable if the vertical joints are filled



Pushing out of one brick (shear):

$$V_{Rd,pb} = 2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) / (2{,}5 \cdot 1000) \quad [kN]$$





σ_d = design compressive stress perpendicular to the shear (N/mm^2)

f_{vko} = initial shear strength according to EN 1996-1-1, Table 3.4

Brick type	Mortar strength	f_{vko} [N/mm^2]
Clay brick	M2,5 to M9	0,20
	M10 to M20	0,30
All other types	M2,5 to M9	0,15
	M10 to M20	0,20

Drilling and Installation equipment

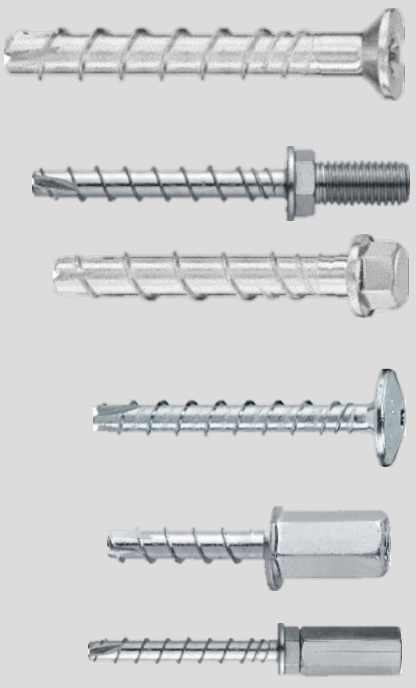
For detailed setting information on installation ,see instructions for use given with the product.

Rotary Hammers (Corded and Cordless)		TE 2 - TE 30
Other tools		Impact wrench- SIW 4AT-22 (use recommended socket/driver bit)
		Hammer drill bit TE-CX, TE-C
		Blow out pump

PRODUCT TECHNICAL DATASHEET

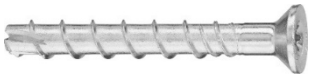
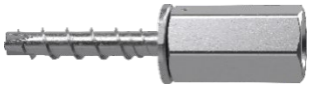
HUS3 Screw anchor

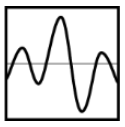
Metal deck
Steel-to-concrete
Update: Dec-25

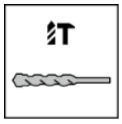


HUS3 Screw anchor for use in concrete

High performance screw anchor for metal deck fastening

Anchor version		Benefits
	HUS3-H(6)	- Faster installation with less drilling and fewer operations than with convetional anchors - Simpler installation with a 2 steps installation: drill and drive in - Smaller edge and spacing than traditional expansion anchors - Removable - Through-fastening and pre-setting (based on the head configuration),
	HUS3-C (6)	
	HUS3-A (6)	
	HUS3-PL (6)	
	HUS3-P (6)	
	HUS3-PS (6)	
	HUS3-IQ (6)	
	HUS3-I (6)	
	HUS3-I Flex (6)	
	HUS3-IF Flex (6)	

Base material		Load conditions	
			
Concrete (uncracked)	Concrete (cracked)	Static / quasi-static	Seismic, C1

Drilling, cleaning, setting	Other information	
		
Hammer drilled holes	Hilti Technical data	Steel to concrete connection

Static and quasi-static loading based on Hilti technical data. Design according to EN 1992-4

All data in this section applies to:

- Correct setting (See setting instruction)
- For a single anchor
- Hammer drilled holes
- No edge distance and spacing influence (see setting detail tables with characteristic distances). Only one anchor can be used in the lower flute at a time with the min.spacing between anchors along the length of the flute to be at least s = 3 hef. This datasheet does not give information for the design of fasteners in a group.
- Minimum base material thickness (see setting detail table)
- Embedment depth, as specified in the table of this section
- Concrete from C30/37 without steel fibre. For higher compressive strengths, the tension resistance may be increased by $(f'c / 30)^{0,5}$
- for HUS3 size 8 and 10 resistance is calculated as a minimum value based on the Hilti technical data and ETA-13/1038
- Recommended loads: With overall partial safety factor for action γ = 1,4.

For anchoring into the upper flute, either use data below conservatively or refer to ETA-10/0005 and ETA-13/1038. In this case the minimum required slab thickness h_{min} must be larger than the deck thickness $h_{min,deck}$.

Design resistance for all loads directions

Type	**HUS3**		**H, PL, P, PS, I, I(F) Flex, IQ, A, C**	
Fastener size			**6**	
Fastening			Redundant	Single Point
Nominal embedment depth	h_{nom}	[mm]	35 [1)]	40
Uncracked concrete				
Resistance in all load directions	F^0_{Rd}	[kN]	1,3 [1)]	-
Tension	N_{Rd}	[kN]	-	3,9
Shear	V_{Rd}	[kN]	-	5,4
Cracked concrete				
Resistance in all load directions	F^0_{Rd}	[kN]	1,3 [1)]	-
Tension	N_{Rd}	[kN]	-	1,4
Shear	V_{Rd}	[kN]	-	2,9

[1]. Please refer “Requirements for redundant fastening “ section

Recommended loads for all loads directions

Type	**HUS3**		**H, PL, P, PS, I, I(F) Flex, IQ, A, C**	
Fastener size			**6**	
Fastening			Redundant	Single Point
Nominal embedment depth	h_{nom}	[mm]	35 [1)]	40
Uncracked concrete				
Resistance in all load directions	F^0_{rec}	[kN]	1,0 [1)]	-
Tension	N_{rec}	[kN]	-	2,8
Shear	V_{rec}	[kN]	-	3,9
Cracked concrete				
Resistance in all load directions	F^0_{rec}	[kN]	1,0 [1)]	-
Tension	N_{rec}	[kN]	-	1,0
Shear	V_{rec}	[kN]	-	2,0

[1)]. Please refer “Requirements for redundant fastening “ section

Requirements for redundant fastening

The definition of redundant fastening is given in EN 1992-4 and CEN/TR 17079. In Absence of a definition by a Member State the following parameters must be considered.		
Minimum number of fixing points	**Minimum number of anchors per fixing point**	**Maximum design load of action F_{Sd} per fixing point**
3	1	2 kN
4	1	3 kN

The value for maximum design load of actions per fastening point F_{Sd} is valid in general that means all fastening points are considered in the design of the redundant structural system. F_{Sd} can be a tension, shear or inclined load.

Seismic loading based on Hilti technical data. Design according to EN 1992-4

All data in this section applies to:
- Correct setting (See setting instruction)
- For a single anchor
- Hammer drilled holes
- No edge distance and spacing influence (see setting detail tables with characteristic distances).Only one anchor can be used in the lower flute at a time with the min.spacing between anchors along the length of the flute to be at least s = 3 hef. This datasheet does not give information for the design of fasteners in a group.
- Minimum base material thickness (see setting details table)
- Embedment depth, as specified in the table of this section
- Concrete with f'c = 30 MPa without steel fibre. For higher compressive strengths, the tension resistance may be increased by $(f'c / 30)^{0,5}$
- HUS3 size 8 and 10 resistance is calculated as a minimum value based on the Hilti technical data and ETA-13/1038
- α_{gap} = 0,5 (without using Hilti filling set)

For anchoring into the upper flute, either use data below conservatively or refer to ETA-10/0005 and ETA-13/1038. In this case the minimum required slab thickness h_{min} must be larger than the deck thickness $h_{min,deck}$.

Design resistance

Type	**HUS3**		**H, PL, P, PS, I, I(F) Flex, IQ, A, C**
Fastener size			**6**
Nominal embedment depth	h_{nom}	[mm]	40
Tension	$N_{Rd,C1}$	[kN]	1,4
Shear	$V_{Rd,C1}$	[kN]	1,6

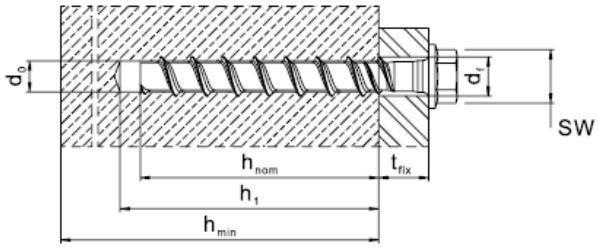
Setting information

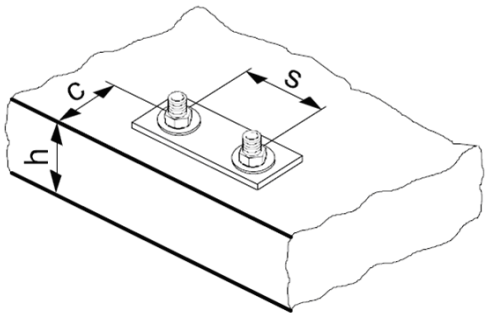
Setting details

Type	HUS3		H	C	A, I, I(F) Flex	P, PL PS	IQ	H	C	A,I I(F)Flex	P PL PS	IQ
Fastener size			**6 all lengths**									
Nominal embedment depth	h_{nom}	[mm]	35					40				
Effective embedment depth	h_{ef}	[mm]	25					30				
Nominal diameter of drill bit	d_0	[mm]	6									
Maximum diameter of clearance hole in the fixture	$d_{f,max}$	[mm]	9									
Wrench size	SW	[mm]	13	-	13	-	17	13	-	13	-	17
Countersunk diameter	d_h	[mm]	-	11,5	-	-	-	-	11,5	-	-	-
Torx size	TX	[-]	T30	T30	-	T30	-	T30	T30	-	T30	-
Depth of drill hole for cleaned or uncleand hole overhead	$h_{1,min}$	[mm]	38					43				
Minimum base material thickness	h_{min}	[mm]	80									
Minimum concrete thickness over upper flute	$h_{min,deck}$	[mm]	70									
Minimum distances												
Spacing	s_{min}	[mm]	35									
Edge distance	c_{min}	[mm]	35									
Minimum distance to edge of lower flute	$c_{min,deck}$	[mm]	45									
Characteristic distances												
Spacing	s_{cr}	[mm]	$3*h_{ef}$									
Edge distance	c_{cr}	[mm]	$1,5*h_{ef}$									

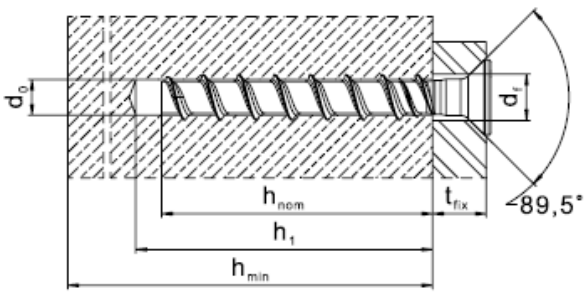
For spacing (edge distance) smaller than characteristic spacing (characteristic edge distance) the design loads have to be reduced.

HUS3-H

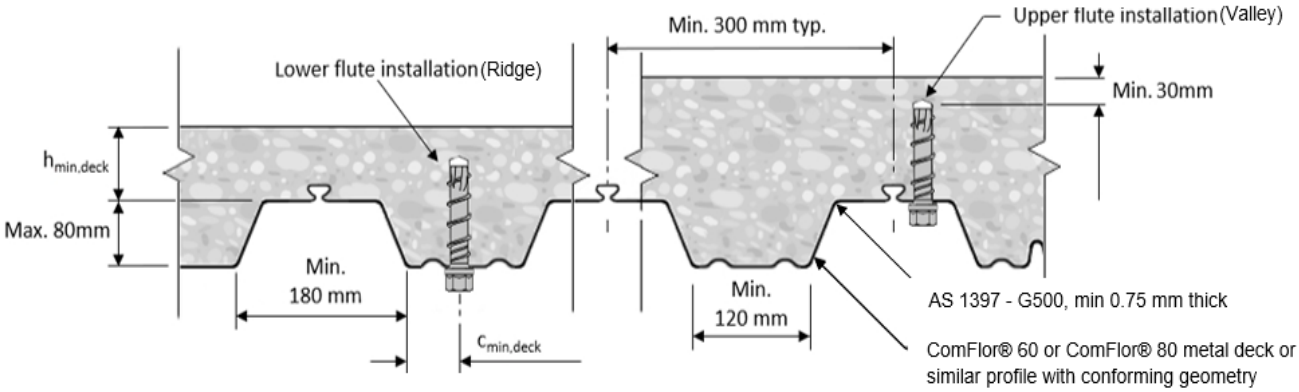


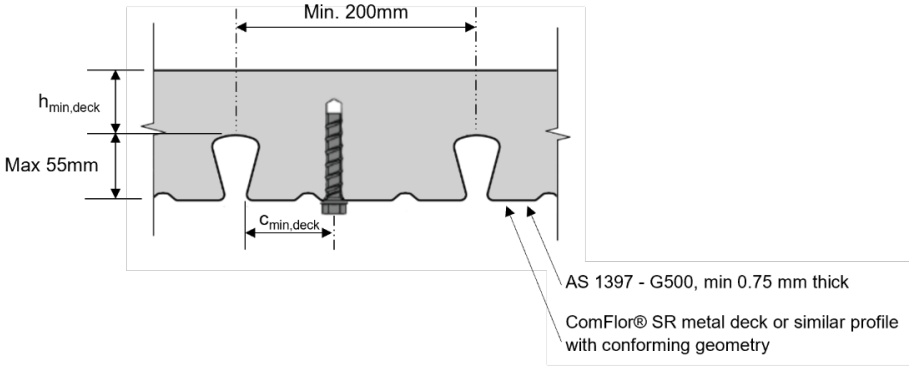


HUS3-



Installation position for HUS3 anchor in metal decks :





Drilling and Installation equipment

For detailed setting information on installation ,see instructions for use given with the product.

Rotary Hammers (Corded and Cordless)		TE 2 - TE 30
Other tools		Impact wrench- SIW (use recommended socket/driver bit)
		Hammer drill bit TE-CX, TE-C
		Blow out pump