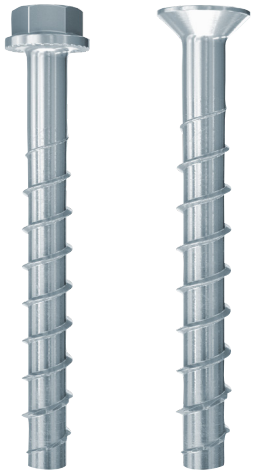
Concrete screw UCS

Powerful concrete screw for easy installation. Approved for concrete, seismic, and fire protection.



Long Description

The powerful concrete screw for easy installation. Suitable for concrete. For medium and high loads. Approved for concrete, seismic and fire protection. Available product variants: hexagon head (US), countersunk head (SK) and Torx drive (TX). Selectable product features Drill diameter 8-14 mm and effective length 5-205 mm. Used in through-hole mounting. Features a wide range of approvals, high load capacity and flexible installation. Used, for example, for fastening stair railings, formwork supports and beam anchors.

Characteristics

- Approval/Certification: ETA Option 1 cracked concrete, ETA Option 7 uncracked concrete, ETA seismic, fire resistance, VdS CEA guidelines compliant
- Load range: Tension load 2.9-21kN, shear load 4.1-29.4kN
- Material: Zinc plated steel (zp)
- Variant: Hexagon head (US), countersunk head (SK), Torx drive (TX)
- Feature: Drill diameter 8-14mm, usable length 5-205mm
- Accessory: Blow-out pump UPM AB

Advantages

- Wide range of approvals: ETA concrete approval option 1, seismic and fire resistance
- High load capacity: Thanks to the optimised design of the concrete screw thread
- Flexible installation: Thanks to up to three approved screw-in depths
- Time-saving installation: In many applications, cleaning the drill hole is not necessary
- Safe readjustment: Concrete screw can be loosened and readjusted twice in accordance with approval

Applications

- Stair railings
- Formwork supports
- Beam anchorage
- Cable ducts
- Pumps
- Stadium seats
- Lighting strips
- Electrical installation
- Pipe fastening
- Pipeline routes

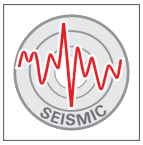
Materials

Approved for:

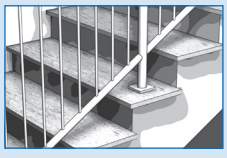
- Concrete C20/25 to C50/60, cracked and uncracked

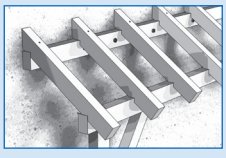
Also suitable for:

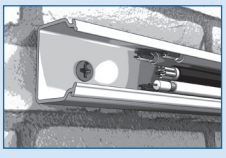
- Concrete C12/15
- Full construction materials
- Masonry with dense structure



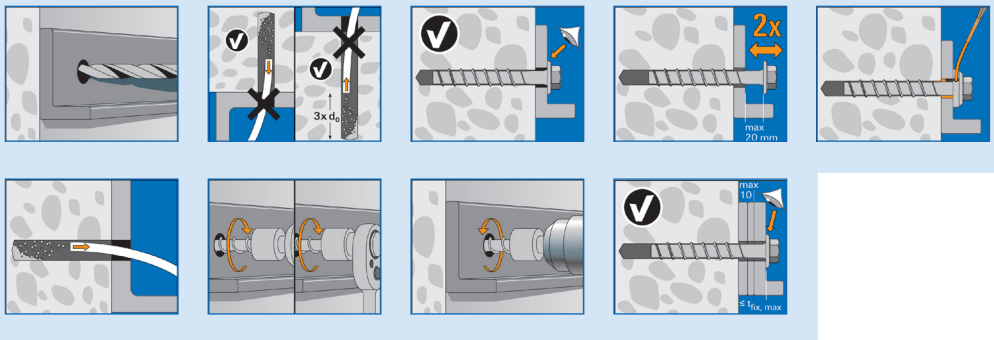
Application examples







Assembly



Straight to the product

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Product variants

Product	Art-No.	Drive	Drill diameter	Nominal embedment depth / thickness of fixture	Nominal embedment depth / thickness of fixture	Nominal embedment depth / thickness of fixture	Max. fixture thickness	Min. drill hole depth for through fixings	Length	Sales unit
UCS 8x55 US TX	547591	TX40 / SW 13	8	50 / 5	—	—	5	65	55	50
UCS 8x60 SK	547619	TX40	8	50 / 10	—	—	10	70	60	50
UCS 8x70 US TX	547592	TX40 / SW 13	8	50 / 20	65 / 5	65 / 5	20	80	70	50
UCS 8x80 SK	547620	TX40	8	50 / 30	65 / 15	65 / 15	30	90	80	50
UCS 8x80 US TX	547593	TX40 / SW 13	8	50 / 30	65 / 15	65 / 15	30	90	80	50
UCS 8x90 SK	547621	TX40	8	50 / 65	65 / 25	65 / 25	40	100	90	50
UCS 8x90 US TX	547594	TX40 / SW 13	8	50 / 40	65 / 25	65 / 25	40	100	90	50
UCS 8x100 US TX	547595	TX40 / SW 13	8	50 / 50	65 / 35	65 / 35	80	110	100	50
UCS 8x110 US TX	547596	TX40 / SW 13	8	50 / 60	65 / 45	65 / 45	60	120	110	50
UCS 8x130 US TX	547597	TX40 / SW 13	8	50 / 80	65 / 65	65 / 65	80	140	130	50
UCS 10x60 US	547598	SW 15	10	55 / 5	—	—	5	70	60	50
UCS 10x65 SK	547622	TX50	10	55 / 10	—	—	10	75	65	50
UCS 10x70 US	547599	SW 15	10	55 / 15	65 / 5	65 / 5	15	80	70	50
UCS 10x80 SK	547623	TX50	10	55 / 25	65 / 5	65 / 5	25	90	80	50
UCS 10x80 US	547600	SW 15	10	55 / 25	65 / 15	65 / 15	25	90	80	50
UCS 10x90 US	547601	SW 15	10	55 / 35	85 / 5	85 / 5	35	100	90	50
UCS 10x95 SK	547624	TX50	10	55 / 40	85 / 10	85 / 10	40	105	95	50
UCS 10x100 SK	547625	TX50	10	55 / 45	85 / 15	85 / 15	45	110	100	50
UCS 10x100 US	547602	SW 15	10	55 / 45	85 / 15	85 / 15	45	110	100	50
UCS 10x120 SK	547626	TX50	10	55 / 65	85 / 35	85 / 35	65	130	120	50
UCS 10x120 US	547603	SW 15	10	55 / 65	85 / 35	85 / 35	65	130	120	50
UCS 10x140 US	547604	SW 15	10	55 / 85	85 / 55	85 / 55	85	150	140	50
UCS 10x160 US	547605	SW 15	10	55 / 105	85 / 75	85 / 75	105	170	160	50
UCS 10x200 US	547606	SW 15	10	55 / 145	85 / 115	85 / 115	145	210	200	20
UCS 10x230 US	547607	SW 15	10	55 / 175	85 / 145	85 / 145	175	240	230	20
UCS 10x260 US	547608	SW 15	10	55 / 205	85 / 175	85 / 175	205	270	260	20
UCS 12x70 US	547609	SW 17	12	60 / 10	—	—	10	80	70	20
UCS 12x85 US	547610	SW 17	12	60 / 25	75 / 10	75 / 10	25	95	85	20
UCS 12x110 US	547611	SW 17	12	60 / 50	100 / 10	100 / 10	50	120	110	20
UCS 12x130 US	547612	SW 17	12	60 / 70	100 / 30	100 / 30	70	140	130	20
UCS 12x150 US	547613	SW 17	12	60 / 90	100 / 50	100 / 50	90	160	150	20
UCS 14x75 US	547614	SW 21	14	65 / 10	—	—	10	90	75	20
UCS 14x95 US	547615	SW 21	14	65 / 30	85 / 10	85 / 10	30	105	95	20
UCS 14x100 US	547616	SW 21	14	65 / 35	85 / 15	85 / 15	35	115	100	20
UCS 14x125 US	547617	SW 21	14	65 / 60	115 / 10	115 / 10	60	140	125	10
UCS 14x150 US	547618	SW 21	14	65 / 85	115 / 35	115 / 35	85	165	150	10

Hexagon head (US): For secure application of torque from the outside, even in small installation spaces
Countersunk head (SK): For visually appealing and flush-mounted fastening
Torx drive (TX): For secure installation. No over-tightening, no slipping out, no damage
Zinc plated steel (zp/gvz): For dry internal conditions

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Load table

Permissible loads of a single anchor[1] in normal concrete of strength class C20/25

For the design the complete current assessment ETA-18/0762 has to be considered.

Type	Material / surface	Screw in depth	Minimummember thickness	Maximum installation-torque	Cracked concrete				Non-cracked concrete			
					Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})				Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})			
		h_{nom}	h_{min}	$T_{imp,max}$[2]	N_{perm}[3]	V_{perm}[3]	s_{min}[3]	c_{min}[3]	N_{perm}[3]	V_{perm}[3]	s_{min}[3]	c_{min}[3]
		[mm]	[mm]	[Nm]	[kN]	[kN]	[mm]	[mm]	[kN]	[kN]	[mm]	[mm]
UCS 8	zp	50	100	600	2.9	4.1	35	35	5.9	5.9	35	35
	zp	65	120	600	5.7	9	35	35	8.8	9	35	35
UCS 10	zp	55	100	650	4.3	4.6	40	40	6.6	6.6	40	40
	zp	65	120	650	5.7	11.9	40	40	8.5	14	40	40
	zp	85	140	650	9.2	16.6	40	40	13.1	16.6	40	40
UCS 12	zp	60	110	650	5.3	10.6	50	50	7.5	15.1	50	50
	zp	75	130	650	7.6	15.2	50	50	10.9	15.2	50	50
	zp	100	150	650	12	20.3	50	50	17.1	20.3	50	50
UCS 14	zp	65	120	650	5.8	11.6	60	60	8.3	16.6	60	60
	zp	85	140	650	9	18	60	60	12.8	22.1	60	60
	zp	115	180	650	14.7	29.4	60	60	21	29.4	60	60

[1] Design according to EN 1992-4:2018 (for static resp. quasi-static loads). The partial safety factors for material resistance as regulated in the ETA as well as a partial safety factor for load actions of $\gamma L = 1.4$ are considered. As a single anchor counts e.g. an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1.5 \times h_{ef}$. Accurate data see ETA.

[2] Maximum allowable torque for installation with any tangential impact screw driver. Further technical data see ETA.

[3] In the case of combinations of tensile and shear loads, bending moments and reduced edge and axial spacings (anchor groups), the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018. We recommend to use our anchor design software DesignFiX.