

Drop-in anchor USA

Time-saving drop-in anchor for quick installation with internal thread. Approved for concrete and fire protection.

Long Description

The Upat drop-in anchor USA is the time-saving solution for fastening through screws with metric threads and threaded rods. This internal thread anchor is particularly suitable for fastening in concrete and natural stone with a dense structure. The drop-in anchor USA is commonly used for overhead installation and in cases of low concrete thickness for the approved fastening of non-load-bearing systems such as pipe runs and ventilation ducts.

Characteristics

- Approval: ETA Option 7 uncracked concrete, ETA multiple fastening cracked concrete, ETA multiple fastening in prestressed hollow-core slab, fire test, VdS CEA guidelines compliant
- Load range: Tension load 5.9-16.8 kN, shear load 4.9-33.5 kN
- Material: Stainless steel (R), zinc plated steel (zp)
- Feature: Thread M6-M12
- Accessories: Blow-out pump UPM AB, setting tool USA-SWZ

Applications

- Benches
- Ceiling suspension
- Pipe fastening
- Cable support systems
- Trash bins
- Stadium seats
- Ventilation ducts

Advantages

- Tested safety: ETA approval option 1 cracked concrete for redundant non-structural systems, ETA approval option 7 uncracked concrete, as well as fire resistance and sprinkler systems.
- Easy impact installation: The rim secures the drop-in anchor against slipping into the drill hole and allows for flush mounting
- No torque required: No torque is required for the metric screws due to the impact installation
- High loads: The drop-in anchor sleeve with internal expansion cone enables high load capacities in concrete
- Robust anchoring: The drop-in anchor sleeve is pressed from one piece without cutting and is particularly resistant

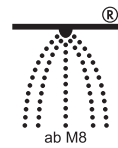
Materials

Approved for

- Concrete C20/25 to C50/60, cracked and prestressed concrete hollow slabs C30/37 to C50/60 for multiple fastening of non-load-bearing systems
- Concrete C20/25 to C50/60, uncracked

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

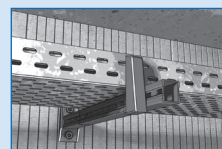
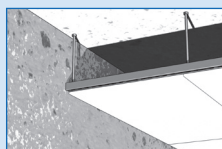


Straight to the product

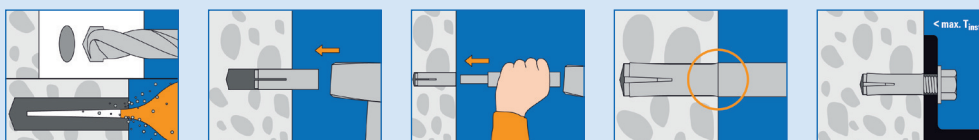


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Application examples



Assembly



Drop-in anchor USA

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Anchor length	Drill diameter	Internal thread	Max. bolt penetration	Min. drill hole depth	Min. bolt penetration	Fire resistance	ETA approval	Sales unit (zp)	Sales unit (R)
USA M 6	509052	509059	30	8	M6	13	32	6	R120	✓	100	100
USA M 8	509053	509060	30	10	M8	13	33	8	R120	✓	100	100
USA M 8 x 40	509054	-	40	10	M8	13	43	8	R120	✓	100	-
USA M 10	509055	509061	40	12	M10	17	43	10	R120	✓	50	50
USA M 12	509056	509063	50	15	M12	22	54	12	R120	✓	50	50
USA M 16	509057	-	65	20	M16	28	70	16	R120	✓	20	-
USA M 20	509058	-	80	25	M20	34	85	20	R120	✓	20	-

Load table

Permissible loads for a single anchor¹⁾ for multiple use for non-structural applications in cracked and non-cracked concrete C20/25 up to C50/60.

For the design the complete current assessment ETA-10/0168 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth h_{ef} [mm]	Minimummember thickness h_{min} [mm]	Maximum installa- tiontorque $T_{inst,max}$ [Nm]	Permissible load (F_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})		
						$F_{perm}^{3)}$ [kN]	s_{min} [mm]	c_{min} [mm]
USA M6	zp	4.6	25	80	4	1	30	60
	zp	4.6	30	80	4	1.2	65	115
USA M8	zp	4.6	25	80	8	1.4	50	100
	zp	4.6	30	80	8	2	70	115
	zp	4.6	40	80	8	2	70	115
	zp	4.6	25	80	15	1.9	60	100
USA M10	zp	4.6	30	80	15	2	85	140
	zp	4.6	40	80	15	3	95	150
USA M12	zp	4.6	25	80	35	1.9	100	110
	zp	4.6	50	100	35	3	145	200

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⁾ Further steel grades, versions and technical data see ETA.

³⁾ Valid for tensile load, shear load and oblique load under any angle. In the case of combinations of tensile, shear loads and bending moments, the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018.

Load table

Permissible loads of a single anchor¹⁾ in normal concrete of strength class C20/25

For the design the complete current assessment ETA-10/0172 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth $h_{ef,min}$ [mm]	Minimummember thickness h_{min} [mm]	Maximum installa- tiontorque $T_{inst,max}$ [Nm]	Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})			
						$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
USA M8x40	zp	5.8	40	100	8	5.9	4.9	70	115
	zp	8.8	40	100	8	5.9	4.9	70	115
	R	A4-70	40	100	8	5.9	5.6	70	115
USA M10x40	zp	5.8	40	120	15	5.9	6.2	95	150
	zp	8.8	40	120	15	5.9	6.2	95	150
	R	A4-70	40	120	15	5.9	7.1	95	150
USA M12x50	zp	5.8	50	120	35	8.3	11.3	145	200
	zp	8.8	50	120	35	8.3	11.3	145	200
	R	A4-70	50	120	35	8.3	12.9	145	200
USA M16x65	zp	5.8	65	160	60	12.3	18.3	180	240
	zp	8.8	65	160	60	12.3	18.3	180	240
	R	A4-70	65	160	60	12.3	21.1	180	240
USA M20x80	zp	5.8	80	200	120	16.8	29.1	190	280
	zp	8.8	80	200	120	16.8	29.1	190	280
	R	A4-70	80	200	120	16.8	33.5	190	280

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⁾ Further steel grades, versions and 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.