Bonded anchor UKA3 Plus

Cartridge system - As simple as it is secure. Approved for concrete, fire protection, and water-filled drill holes.

Long Description

The Upat bonded anchor UKA3 Plus is a proven, highly efficient fastening system consisting of a mortar glass capsule and the anchor rod ASTA or the internal threaded anchor IST. The system has ETA approval for both cracked and un-cracked concrete and is also suitable for use in dense natural stone. Common applications include heavy steel structures, railings, stairs, support feet and silos.

Characteristics

- Certification/Approval: Concrete, Fire resistance, Hammer drilling, Hollow drilling, Drill hole cleaning without blowing out and brushing, Water-filled borehole
- Load range in concrete: Tension load 3.9-61kN, Shear load 5.1-56.8kN
- System component: Anchor rod ASTA, Internal threaded anchor IST
- Temperature in anchoring base: -15°C to +40°C
- Feature: Compatible with ASTA M8-M24/IST M8-M20

Applications

- Balcony railings
- Support feet
- Steel beams
- Lifts
- Stair railings
- High racks
- Beam anchorage
- Silos
- Pumps
- Cable support systems

Advantages

- Approved Fastening: According to European Technical Assessment for cracked and uncracked concrete (ETA Option 1) and fire protection testing
- No Hole Cleaning Required: The glass cartridge clings to the borehole wall, eliminating the need for borehole cleaning
- Highly efficient: Not too much, not too less- one borehole, one capsule, always the right amount of mortar - no waste
- Work Without Worries: Approved for use in water-filled boreholes
- Long Shelf Life: Up to 36 months

Materials

Approved for:

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

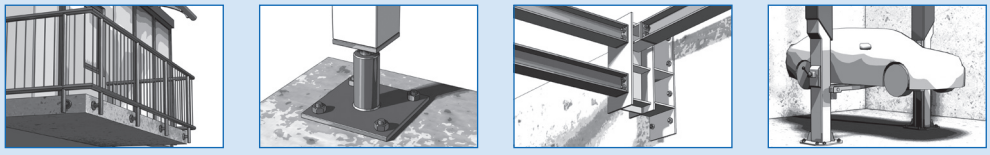
R 120

ETA CE

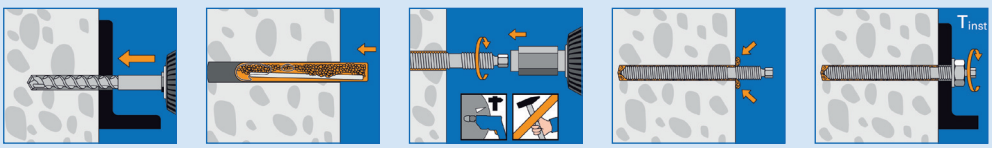
Straight to the product

upat.com/en-uka3

Application examples



Assembly



Upat

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Product variants

Product	Art-No.	Drill diameter	Min. drill hole depth	Min. effect. anchorage depth	Match	Sales unit
UKA3 Plus M 8	539948	10	80	80	ASTA M8	10
UKA3 Plus M 10	539949	12	90	90	ASTA M10 / IST M8	10
UKA3 Plus M 12	539950	14	110	110	ASTA M12 / IST M10	10
UKA3 Plus M 14	539951	16	120	120	ASTA M14	10
UKA3 Plus M 16	539952	18	125	125	ASTA M16 / IST M12	10
UKA3 Plus M 20/22	539954	24	170	170	ASTA M20/22	10
UKA3 Plus M 24	539955	28	210	210	ASTA M24 / IST M20	5

Load table

Permissible loads of a single anchor[1] [2] in normal concrete of strength class C20/25.

For the design the complete current assessment ETA-17/0197 has to be considered.

Type	Material / surface[3]	Effective anchoragedepth	Minimummember thickness	MaximumInstallationtorque	Cracked concrete				Non-cracked concrete			
					Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads				Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			
		h_{ef} [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	N_{perm}[4] [kN]	V_{perm}[4] [kN]	s_{min}[4] [mm]	c_{min}[4] [mm]	N_{perm}[4] [kN]	V_{perm}[4] [kN]	s_{min}[4] [mm]	c_{min}[4] [mm]
ASTA M8	5.8	80	110	10	-	-	-	-	9	6.3	40	40
ASTA M8	R-70	80	110	10	-	-	-	-	9.6	6	40	40
ASTA M10	5.8	90	120	20	5.05	9.7	45	45	13.8	9.7	45	45
ASTA M10	R-70	90	120	20	5.05	9.2	45	45	14.0	9.2	45	45
ASTA M12	5.8	110	140	40	7.4	14.3	55	55	20.5	14.3	55	55
ASTA M12	R-70	110	140	40	7.4	13.7	55	55	20.6	13.7	55	55
ASTA M16	5.8	125	170	60	11.2	26.9	65	65	27.3	26.9	65	65
ASTA M16	R-70	125	170	60	11.2	25.2	65	65	27.3	25.2	65	65
ASTA M20/22	5.8	170	220	120	19.1	42.3	85	85	43.3	42.3	85	85
ASTA M20/22	R-70	170	220	120	19.1	39.4	85	85	43.3	39.4	85	85
ASTA M24	5.8	210	270	150	28.3	60.5	105	105	59.4	60.5	105	105
ASTA M24	R-70	210	270	150	28.3	56.8	105	105	59.4	56.8	105	105

[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 γL = 1.4 are considered. As a single anchor counts e.g. an anchor with a spacing s ≥ 3 x h_{ef} and an edge distance c ≥ 1.5 x h_{ef}. Accurate data see ETA.

[2] The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 24 °C (resp. short term up to 40 °C). Drill hole cleaning as per specification in the ETA. The factor ψsus for sustained load was taken into account with 1.0.

[3] Further steel grades, versions and technical data see ETA, e.g. for dry internal conditions, galvanised steel (zp/gvz); for damp interiors and for outdoor use, stainless steel (R).

[4] In the case of combinations of tension and shear loads, bending moments with reduced or minimum spacing and edge distances (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 using our anchor design software DesignFiX.

Load table

Permissible loads of a single anchor[1] [2] in normal concrete of strength class C20/25.

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		h_{ef} [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	N_{perm}[4] [kN]	V_{perm}[4] [kN]	s_{min}[4] [mm]	c_{min}[4] [mm]	N_{perm}[4] [kN]	V_{perm}[4] [kN]	s_{min}[4] [mm]	c_{min}[4] [mm]
IST M8	5.8	90	120	10	5,4	5.3	55	55	9	5.3	55	55
IST M8	R-70	90	120	10	5,4	5.9	55	55	9.9	5.9	55	55
IST M10	5.8	90	126	20	7,2	8.3	65	65	13.8	8.3	65	65
IST M10	R-70	90	126	20	7,2	9.3	65	65	15.7	9.3	65	65
IST M12	5.8	125	165	40	11,2	12.1	75	75	20.5	12.1	75	75
IST M12	R-70	125	165	40	11,2	13.5	75	75	22.5	13.5	75	75
IST M20	5.8	200	264	120	27,9	35.4	125	125	55,2	35.4	125	125
IST M20	R-70	200	264	120	27,9	39.4	125	125	55,2	39,4	125	125

[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 γL = 1.4 are considered. As a single anchor counts e.g. an anchor with a spacing s ≥ 3 x h_{ef} and an edge distance c ≥ 1.5 x h_{ef}. Accurate data see ETA.

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