



Products 2026

Simple. Safe. Upat.

Fastening Solutions for Professionals



Simple to use.

Safe to rely on.



100 years of trusted quality and proven reliability

Simple. Safe. Upat - your strong partner for decades.

The Upat brand has stood for quality and reliability in fastening technology for over 100 years. Starting with hemp cords pressed into metal sleeves, we have earned the highest level of trust from users and craftsmen alike, establishing ourselves as pioneers in fastening technology ever since.

The Upat range features a coordinated selection of products focused on the heavy-duty sector. With extensive experience, proven reliability, and high quality, customer needs are met quickly and effectively.

At the core of the Upat range are steel anchors and chemical fastening systems - proudly "Made in Germany." Our tested quality and wide range of building authority approvals eliminate the need for time-consuming in-house testing.

These approvals confirm that Upat products can safely withstand even the highest loads. To complete the product range, this catalog also includes our comprehensive selection of nylon anchors and lightweight fasteners.

By combining our broad product range - designed to meet the core needs of the trade - with lean, digital processes, we are able to offer Upat fastening technology at highly competitive prices.

Simple. Safe. Upat - your strong partner for decades.

Simple. Safe.

Upat®

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Service

Steel fixings

Chemical fixings

Frame fixings

Standard fixings

Special fixings

Anchor selection

The right anchor for every requirement ^{1) 2) 3)}

			Approvals / Certifications											
			ETA Option 1 cracked concrete	ETA Option 7 non-cracked concrete	ETA Seismic	ETA Masonry	ETA Multiple fixings in cracked concrete	ETA Multiple fixings in prestressed hollow-core slabs	ETA Multiple fixings in masonry	ETA Post-installed rebar connections	Fire test	VdS CEA compliant	RC2 resistance	
Steel fixings	MAX		■	■	■						■	■		Page 11
	IMC			■										Page 14
	IFA													Page 17
	ICI			■										Page 20
	UHS		■	■	■						■	■		Page 22
	USL													Page 25
	UCS		■	■	■						■	■		Page 27
	UNA						■				■	■		Page 30
	USA			■			■	■			■	■		Page 32
	IDA													Page 34
Chemical fixings	UPM 55		■	■	■					■	■			Page 38
	UPM 44		■	■	■	■				■	■			Page 41
	UPM 33		■	■		■					■			Page 46
	UPM 22			■		■								Page 51
	UPM 11													Page 54
	UKA3 Plus		■	■							■			Page 56
Frame fixings	URD						■		■		■			Page 66
	URDL						■		■		■			Page 69
	UFD													Page 72
Standard fixings	ISP													Page 75
	UVD II													Page 77
	UN													Page 79
	UNI													Page 81
Special fixings	UD													Page 86
	UG/UGM													Page 87
	UM													Page 89
	UGH													Page 90
	UGS													Page 91
	UK/UKH													Page 92
	UH/UHZ													Page 94
	UNH													Page 96
	UMA													Page 97
	UMD													Page 99
	URI													Page 101
	UFS												■	Page 102

¹⁾ Application recommendations may differ from the conditions specified in the respective ETA. The suitability of the anchor for the intended application must be verified before installation.

²⁾ Materials included in our standard product range. For strength properties, please refer to the respective ETA. Other material grades are available on request. For anchors supplied without screws, no material specification is provided.

³⁾ For details, please refer to the respective ETA or test report.

Anchor selection

The right anchor for every requirement ^{1) 2) 3)}

		Base material				Material			Design/Version						Upat DesignFIX dimensioning software	
		Concrete	Solid building material	Perforated building material	Panel building materials	Stainless steel	Zink plated steel	Steel hot-dip galvanized	External thread	Internal thread	Hexagon head	Countersunk head	Hook/eyelet	Nail head/flat head/lenticular head		
Steel fixings	MAX	■				■	■		■						■	Page 11
	IMC	■				■	■	■	■						■	Page 14
	IFA	■					■		■							Page 17
	ICI	■					■	■	■						■	Page 20
	UHS	■				■	■		■	■	■	■			■	Page 22
	USL	■							■				■			Page 25
	UCS	■					■				■	■			■	Page 27
	UNA	■				■	■		■				■	■		Page 30
	USA	■				■	■			■					■	Page 32
	IDA															Page 34
Chemical fixings	UPM 55	■				■	■	■	■	■					■	Page 38
	UPM 44	■	■	■		■	■	■	■	■					■	Page 41
	UPM 33	■	■	■		■	■	■	■	■					■	Page 46
	UPM 22	■	■	■		■	■	■	■	■					■	Page 51
	UPM 11	■	■	■		■	■	■	■	■						Page 54
	UKA3 Plus	■				■	■	■	■	■					■	Page 56
Frame fixings	URD	■	■	■		■	■				■	■				Page 66
	URDL	■	■	■		■	■				■	■				Page 69
	UFD	■	■											■		Page 72
Standard fixings	ISP	■	■													Page 75
	UVD II	■	■	■	■											Page 77
	UN	■	■				■					■		■		Page 79
	UNI	■	■				■					■		■		Page 81
Special fixings	UD				■											Page 86
	UG/UGM				■											Page 87
	UM	■	■							■						Page 89
	UGH	■	■													Page 90
	UGS		■										■			Page 91
	UK/UKH				■								■	■		Page 92
	UH/UHZ				■								■	■		Page 94
	UNH	■	■													Page 96
	UMA	■	■		■											Page 97
	UMD	■	■		■					■						Page 99
	URI												■			Page 101
	UFS	■	■	■			■					■		■		Page 102

¹⁾ Application recommendations may differ from the conditions specified in the respective ETA. The suitability of the anchor for the intended application must be verified before installation.

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³⁾ For details, please refer to the respective ETA or test report.

Mortar finder

The right mortar for every requirement ¹⁾

		UPM 55	UPM 44	UPM 33	UPM 33 Express	UPM 22	UPM 11	UKA3 PLUS
Application	Concrete	■	■	■	■	■	□	■
	Masonry		■	■	■		□	
	Reinforcement connection	■	■					
	Seismics	■	■					
	Fire test	■	■	■	■			■
	Hammer drilling	■	■	■	■	■	□	■
	Diamond drilling	■	■					
	Hollow drilling	■	■			■		■
	Without borehole cleaning			□	□			■
	Water-filled borehole	■	■	□	□	■		■
	Underwater	□						
System component	Anchor rod ASTA	■	■	■	■	■	□	■
	Anchor rod UPM-A	■	■	■	■	■	□	
	Internally threaded anchor IST	■	■	■	■		□	■
	Internally threaded anchor UPM-I	□	■	■	■	■	□	
	Sieve sleeve UPM-SH		■	■	■	■	□	
	Commercially available threaded rods ²⁾	■	■	■	■	■	□	
Load ranges [kN] ³⁾	Concrete Tensile load	5-150,1	3,9-150,1	3,4-150,1	3,4-150,1	3,9-86,2		3,9-61
	Concrete shear load	5,1-90,2	6-90,2	2,9-90,2	2,9-90,2	5,1-56,8		5,1-56,8
	Masonry Tensile load		0,34-3,43	0,54-3,43	0,54-3,43		0,6-1,7	
	Masonry shear load		0,26-3,28	0,43-3,29	0,43-3,29		0,6-1,7	
Durability up to [months]	Cartridge 410 ml			15		15	15	
	Cartridge 360/390 ml	36	24	24	15	24	15	
	Cartridge 150/300 ml		18	18	18	18	12	
	Cartridge glass							24
Temperature in the anchorage base and curing time t _{care} [minutes] ^{4,5)}	-15°C to -10°C				720			1800
	-10°C to -5°C				480			960
	-5°C to 0°C		1440	1440	180			600
	0°C to +5°C		180	180	180	180	360	45
	+5°C to +10°C	2400	90	90	50	90	180	30
	+10°C to +20°C	1080	60	60	30	60	120	20
	+20°C to +30°C	600	45	45		45	60	5
	+30°C to +40°C	300	35	35		35	30	3
	> +40°C							
Temperature of the mortar and processing time t _{work} [minutes]	-5°C to 0°C				5			
	0°C to +5°C		13	13	5			
	+5°C to +10°C	120	9	9	3	13	15	
	+10°C to +20°C	30	5	5	1	9	8	
	+20°C to +30°C	14	4	4		5	5	
	+30°C to +40°C	7	2	2		4	3	
	> +40°C					2		

¹⁾ The details of the entire European Technical Assessment must be observed and checked for the specific application.

²⁾ Standard threaded rods with 3.1 test certificate and material compliant with ETA.

³⁾ For details, see the respective load table.

⁴⁾ In wet concrete or water-filled drill holes, the curing times must be doubled. Observe drill hole cleaning according to ETA.

⁵⁾ The temperature in the concrete must not fall below the specified minimum value during the curing of the mortar. Minimum cartridge temperature +5°C. Minimum cartridge temperature (UKA3 PLUS) -15°C.

Legend:

■ — Approved
□ — Suitable



Anchor design Software

Design calculations made simple and safe.

The advantages of DesignFiX at a glance:

DesignFiX is the ideal solution for the professional design of various fastening systems. Whether you're a planner, structural engineer, or craftsman, DesignFiX provides reliable support for your project designs. Featuring a modular structure, the software can be used for a wide range of applications. This user-friendly program allows anchors and fastenings to be designed and dimensioned easily and flexibly. By incorporating relevant international standards, DesignFiX meets all requirements for global use.

Safe and reliable

DesignFiX detects incorrect entries related to geometric conditions and offers appropriate correction suggestions. This minimizes processing time. The verifiable printout allows you to review every calculation step in the program, giving you confidence that your design results are complete and verifiable.

Clear and flexible

You can choose between tabular data entry or direct input in the 3D display. The graphic can be easily rotated, panned, tilted, and zoomed 360° using a mouse or touch controls. DesignFiX continuously displays the status of anchorage utilization and the geometric boundary conditions.

International

DesignFiX incorporates key design standards and regulations, making it suitable for use worldwide. All loads and dimensions can be displayed and processed in either metric or imperial units.

Upat DesignFiX Software

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Bolt anchor MAX

Strong express anchor bolt for a wide range of applications. Approved for concrete, seismic, and fire protection.

Long Description

The Upat express anchor bolt MAX is the master of its class in the realm of bolt anchors. This steel anchor is particularly suitable for fastening medium to heavy loads in cracked and uncracked concrete as well as dense natural stone. The Upat express anchor bolt MAX is commonly used for fastening balcony railings, stair railings and steel beams, for example.

Characteristics

- Certification/Approval: ETA Option 1 cracked concrete, ETA Option 7 uncracked concrete, ETA seismic, fire test, VdS CEA guidelines compliant
- Load Range: Tension load 2.6-23.4 kN, shear load 7.8-60.7 kN
- Material: Stainless Steel (R), zinc plated steel (Zp)
- Variant: Standard, short (K), large washer (GS)
- Feature: Thread M8-M20, usable length 10-300mm
- Accessories: Blow-out pump UPM AB

Applications

- Balcony railings
- Stair railings
- Steel beams
- Support feet
- Bridge railings
- High racks
- Stadium seats
- Beam anchorage
- Façade construction
- Silos

Advantages

- Comprehensive approval package: ETA approval Option 1 for concrete, seismic, as well as fire resistance and sprinkler systems
- High load level: Due to the optimal interaction of expansion clip properties and cone area
- Flexible installation: Variable anchorage depths enable versatile use of the anchor bolts
- Near-edge fastening: The unit of cone and expansion clip allows for minimal edge and axial distances
- Installation-friendly: Shaft with optimized diameter for low insertion energy

Materials

Approved for:

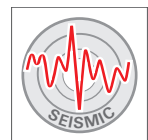
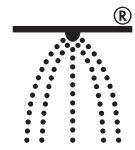
- Concrete C20/25 to C50/60, cracked and uncracked

Also suitable for:

- Concrete C80/95
- Natural stone with dense structure



Steel fixings

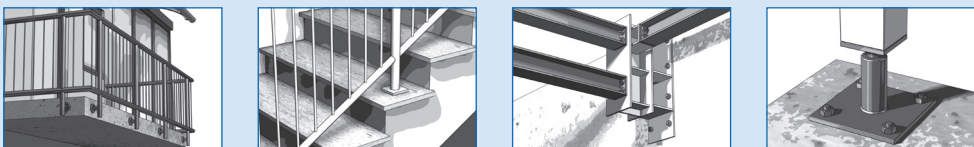


Straight to the product

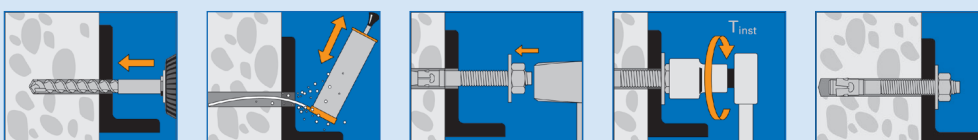


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Application examples



Assembly



Bolt anchor MAX

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Anchor length	Drill diameter	Thread	Installation torque	Max. usa- ble length $h_{ef,stand}/$ $h_{ef,min.}$	Min. drill hole depth for through fixings	Width across nut	Seismic Approval	Anchoring depth $h_{ef,stand}/$ $h_{ef,min.}$	Fire resistance	ETA approval	VDS approval	Sales unit (zp)	Sales unit (R)
MAX 8/10	509071	508992	75	8	M8	20	10 / 20	65	13	C1	45 / 35	R120	✓	Ja	100	50
MAX 8/30	509072	508993	95	8	M8	20	30 / 40	85	13	C1	45 / 35	R120	✓	Ja	100	50
MAX 8/50	509073	508994	115	8	M8	20	50 / 60	105	13	C1	45 / 35	R120	✓	Ja	100	50
MAX 10/10	508977	508995	95	10	M10	45	10 / 30	85	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 10/20	508978	508996	105	10	M10	45	20 / 40	95	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 10/30	508979	508997	115	10	M10	45	30 / 50	105	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 10/50	508980	508998	135	10	M10	45	50 / 70	125	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 10/80	521265	-	165	10	M10	45	80 / 100	155	17	C1 / C2	60 / 40	R120	✓	Ja	40	-
MAX 10/100	508981	508999	185	10	M10	45	100 / 120	175	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 12/10	508982	509000	110	12	M12	60	10 / 30	100	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/20	508983	509001	120	12	M12	60	20 / 40	110	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/30	508984	509002	130	12	M12	60	30 / 50	120	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/50	508985	509003	150	12	M12	60	50 / 70	140	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/80/180	521266	-	180	12	M12	60	80 / 100	170	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/100	508986	509004	200	12	M12	60	100 / 120	190	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/120/220	512357	-	220	12	M12	60	120 / 140	210	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/160	512358	-	260	12	M12	60	160 / 180	250	19	—	70 / 50	R120	✓	Ja	10	-
MAX 12/200	512359	-	300	12	M12	60	200 / 220	290	19	—	70 / 50	R120	✓	Ja	10	-
MAX 16/25	508987	509005	148	16	M16	110	25 / 45	135	24	C1 / C2	85 / 65	R120	✓	Ja	20	20
MAX 16/50	508988	509006	173	16	M16	110	50 / 70	160	24	C1 / C2	85 / 65	R120	✓	Ja	20	20
MAX 16/100	508989	521268	223	16	M16	110	100 / 120	210	24	C1 / C2	85 / 65	R120	✓	Ja	10	10
MAX 16/160	512361	-	283	16	M16	110	160 / 180	270	24	C1 / C2	85 / 65	R120	✓	Ja	10	-
MAX 16/200	512362	-	323	16	M16	110	200 / 220	310	24	—	85 / 65	R120	✓	Ja	10	-
MAX 16/250	512363	-	373	16	M16	110	250 / 270	360	24	—	85 / 65	R120	✓	Ja	10	-
MAX 16/300	512364	-	423	16	M16	110	300 / 320	410	24	—	85 / 65	R120	✓	Ja	10	-
MAX 20/30	508990	521269	172	20	M20	200	30	155	30	C1 / C2	100	R120	✓	Ja	10	10
MAX 20/60	521267	521270	202	20	M20	200	60	185	30	C1 / C2	100	R120	✓	Ja	10	10
MAX 8/10 GS	535283	535295	75	8	M8	20	10 / 20	65	13	C1	—	R120	✓	Ja	50	50
MAX 8/30 GS	535284	535296	95	8	M8	20	30 / 40	85	13	C1	—	R120	✓	Ja	50	50
MAX 10/10 GS	535285	535297	95	10	M10	45	10 / 30	85	17	C1 / C2	60 / 40	R120	✓	Ja	50	50
MAX 10/30 GS	535286	535298	115	10	M10	45	30 / 50	105	17	C1 / C2	60 / 40	R120	✓	Ja	25	50
MAX 12/10 GS	535287	535299	110	12	M12	60	10 / 30	100	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/10 K GS	535315	-	90	12	M12	60	10	80	19	C1	50	R120	✓	Ja	20	-
MAX 12/20 GS	535288	-	120	12	M12	60	20 / 40	110	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/30 GS	535289	535300	130	12	M12	60	30 / 50	120	19	C1 / C2	70 / 50	R120	✓	Ja	20	20
MAX 12/50 GS	535290	-	150	12	M12	60	50 / 70	140	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/100 GS	535291	-	200	12	M12	60	100 / 120	190	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/120 GS	535292	-	220	12	M12	60	120 / 140	210	19	C1 / C2	70 / 50	R120	✓	Ja	20	-
MAX 12/160 GS	-	535301	260	12	M12	60	160 / 180	250	19	—	70 / 50	R120	✓	Ja	-	20
MAX 16/160 GS	535293	535302	283	16	M16	110	160 / 180	270	24	C1 / C2	85 / 65	R120	✓	Ja	10	4
MAX 16/200 GS	535294	-	323	16	M16	110	200 / 220	310	24	—	85 / 65	R120	✓	Ja	10	-
MAX 10/10 K	535303	535307	75	10	M10	45	10	65	17	C1	40	R120	✓	Ja	50	50
MAX 10/20 K	535304	535308	85	10	M10	45	20	75	17	C1	40	R120	✓	Ja	25	50
MAX 12/10 K	535305	535309	90	12	M12	60	10	80	19	C1	50	R120	✓	Ja	20	20
MAX 12/20 K	535306	535310	100	12	M12	60	20	90	19	C1	50	R120	✓	Ja	20	20
MAX 10/10 K GS	535314*	-	75	10	M10	45	10	65	17	C1	40	R120	✓	Ja	50	-

Stainless steel (R/A4): For fastening outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastening in dry indoor areas

Short (K): The short version of the bolt anchor reduces the drill hole depth and the risk of hitting reinforcement, enabling quick installation while saving costs

Large washer (GS): The large washer protects the surface of the attachment and prevents cutting into wood.

* Note: Available upon request. Not part of the standard product range.

Bolt anchor MAX

Load table

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

For the design the complete current assessment ETA-10/0170 has to be considered.

Type	Material / surface ²⁾	Effective an- chorage depth h_{ef} [mm]	Minimum mem- ber thickness h_{min} [mm]	Installation- torque T_{inst} [Nm]	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})			
					$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
MAX 8	zp	35	80	20	2.6	7.8	35	40	4.9	7.8	40	40
	zp	45	90	20	3.8	7.8	35	40	6.7	7.8	40	40
	R	35	80	20	2.6	9.5	35	40	4.9	9.6	40	40
	R	45	90	20	3.8	9.6	35	40	6.7	9.6	40	40
MAX 10	zp	40	90	45	4.1	12.2	40	45	5.9	12.2	40	45
	zp	60	110	45	6.2	12.2	40	45	9.5	12.2	40	45
	R	40	90	45	4.1	13.3	40	45	5.9	15.1	40	45
	R	60	110	45	6.2	15.1	40	45	9.5	15.1	40	45
MAX 12	zp	50	100	60	5.8	17.5	50	55	8.3	17.5	50	55
	zp	70	120	60	9.5	17.5	50	55	10.5	17.5	50	55
	R	50	100	60	5.8	18.6	50	55	8.3	21.9	50	55
	R	70	120	60	9.5	21.9	50	55	10.5	21.9	50	55
MAX 16	zp	65	140	110	8.6	31.4	60	65	12.3	31.4	65	65
	zp	85	140	110	12.9	31.4	60	65	18.4	31.4	65	65
	R	65	140	110	8.6	25.8	60	65	12.3	36.8	65	65
	R	85	140	110	12.9	38.6	60	65	18.4	39.9	65	65
MAX 20	zp	100	170	200	16.4	42.6	95	85	23.4	46.5	95	95
	R	100	170	200	16.4	42.6	95	85	23.4	60.7	95	95

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, e.g. for dry internal conditions, galvanised steel zp; for damp interior stainless steel R and exterior conditions, e.g. material 1.4362, 1.4401.

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.

Bolt anchor IMC

Affordable express anchor bolt for a secure hold. Approved for concrete (uncracked).

Long Description

The Upat express anchor bolt IMC is a true powerhouse and a cost-effective alternative among bolt anchors. This steel anchor is particularly suitable for fastening medium to heavy loads in uncracked concrete and dense natural stone. The express anchor bolt IMC is commonly used for fastening barriers, benches and pumps, for example.

Characteristics

- Certification/Approval: ETA Option 7
Concrete uncracked
- Load Range: Tension load 2.9-25.2 kN, shear load 6.9-38.6 kN
- Material: Stainless Steel (R), zinc plated steel (zp)
- Variant: Standard, Short (K), large washer (GS)
- Feature: Thread M6-M20, usable length 5-300mm
- Accessories: Blow-out pump UPM AB

Applications

- Bike racks
- Benches
- Barrier
- Support feet
- Stadium seats
- Pumps

Advantages

- Secure anchoring: ETA approval Option 7. Versatile use for secure anchoring in uncracked concrete
- Near-edge fastening: The unit of cone and expansion clip allows for minimal edge and axial distances
- Easy installation: Shaft with optimized diameter for low insertion energy.
- Protected thread: Pronounced insertion pin protects the thread from damage during installation
- Secure post-installation inspection: The head embossing allows for post-installation inspection

Materials

Approved for:

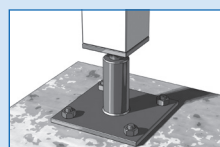
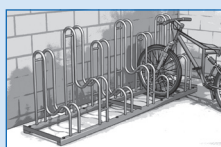
- Concrete C20/25 to C50/60, uncracked

Also suitable for:

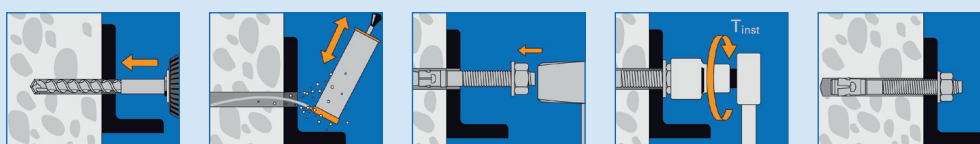
- Concrete C12/15
- Natural stone with dense structure



Application examples



Assembly



Straight to the product



upat.com/en-imc

Bolt anchor IMC

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Anchor length	Drill diameter	Thread	Installation torque	Max. usable length h _{ef,stand} /h _{ef,min.}	Min. drill hole depth for through fixings	Width across nut	Washer (outer di- ameter x thickness)	Anchoring depth h _{ef,stand} /h _{ef,min.}	ETA approval	Sales unit (zp)	Sales unit (R)
IMC 6/10	509007	509033	55	6	M6	4	10 / -	50	10	12 x 1.6	105 / 80	✓	100	100
IMC 8/5	509008	-	65	8	M8	15	5 / 15	61	13	16 x 1.6	40 / 30	✓	100	-
IMC 8/10	509009	509035	70	8	M8	15	10 / 20	66	13	16 x 1.6	40 / 30	✓	100	100
IMC 8/20	509010	-	80	8	M8	15	20 / 30	76	13	16 x 1.6	40 / 30	✓	100	-
IMC 8/30	509011	509036	90	8	M8	15	30 / 40	86	13	16 x 1.6	40 / 30	✓	100	100
IMC 8/50	509012	509037	110	8	M8	15	50 / 60	106	13	16 x 1.6	40 / 30	✓	100	100
IMC 8/100	509013	-	160	8	M8	15	100 / 110	156	13	16 x 1.6	40 / 30	✓	50	-
IMC 10/10	509014	509039	85	10	M10	30	10 / 20	78	17	20 x 2	40 / 30	✓	50	50
IMC 10/20	509015	509040	95	10	M10	30	20 / 30	88	17	20 x 2	40 / 30	✓	50	50
IMC 10/30	509016	509041	105	10	M10	30	30 / 40	98	17	20 x 2	50 / 40	✓	50	50
IMC 10/50	509017	509042	125	10	M10	30	50 / 60	118	17	20 x 2	50 / 40	✓	50	50
IMC 10/100	509018	509043	175	10	M10	30	100 / 110	168	17	20 x 2	50 / 40	✓	50	50
IMC 12/10	509019	509045	104	12	M12	50	10 / 25	95	19	18 x 2	65 / 50	✓	20	20
IMC 12/20	509020	509046	114	12	M12	50	20 / 35	105	19	18 x 2	65 / 50	✓	20	20
IMC 12/30	509021	-	124	12	M12	50	30 / 45	115	19	18 x 2	65 / 50	✓	20	-
IMC 12/50	509022	509047	144	12	M12	50	50 / 65	135	19	18 x 2	65 / 50	✓	20	20
IMC 12/100	509023	509048	194	12	M12	50	100 / 115	185	19	18 x 2	65 / 50	✓	20	20
IMC 12/120	519032	-	214	12	M12	50	120 / 135	205	19	—	65 / 50	✓	20	-
IMC 12/140	519033	-	234	12	M12	50	140 / 155	225	19	—	65 / 50	✓	20	-
IMC 12/160	519034	-	254	12	M12	50	160 / 175	245	19	—	65 / 50	✓	20	-
IMC 12/180	519035	-	274	12	M12	50	180 / 195	265	19	—	65 / 50	✓	10	-
IMC 12/200	519036	-	294	12	M12	50	200 / 215	285	19	—	65 / 50	✓	10	-
IMC 12/250	519037	-	344	12	M12	50	250 / 265	335	19	—	65 / 50	✓	10	-
IMC 16/10	-	547086*	128	16	—	80	—	—	24	—	—	—	-	10
IMC 16/25	509024	547087*	143	16	M16	100	25 / 40	129	24	30 x 3	70 / 50	✓	20	10
IMC 16/50	509025	509049	168	16	M16	100	50 / 65	154	24	30 x 3	70 / 50	✓	20	10
IMC 16/100	509026	-	218	16	M16	100	100 / 115	204	24	30 x 3	80 / 65	✓	10	-
IMC 16/140	519038	-	258	16	M16	100	140 / 155	244	24	—	80 / 65	✓	10	-
IMC 16/160	519039	-	278	16	M16	100	160 / 175	264	24	—	80 / 65	✓	10	-
IMC 16/200	519040	-	318	16	M16	100	200 / 215	304	24	—	80 / 65	✓	10	-
IMC 16/250	519041	-	368	16	M16	100	250 / 265	354	24	—	80 / 65	✓	10	-
IMC 16/300	519042	-	418	16	M16	100	300 / 315	404	24	—	80 / 65	✓	10	-
IMC 20/30	509027	-	187	20	M20	200	30 / 55	165	30	37 x 3	80 / 65	✓	10	-
IMC 20/60	509028	-	217	20	M20	200	60 / 85	195	30	37 x 3	85 / 65	✓	10	-
IMC 12/80 GS	522468	-	174	12	M12	50	80 / 95	165	19	44 x 4	65 / 50	✓	20	-
IMC 12/100 GS	522467	-	194	12	M12	50	100 / 115	185	19	44 x 4	65 / 50	✓	20	-
IMC 12/120 GS	522463	-	214	12	M12	50	120 / 135	205	19	44 x 4	65 / 50	✓	20	-
IMC 12/140 GS	522465	-	234	12	M12	50	140 / 155	225	19	44 x 4	65 / 50	✓	10	-
IMC 12/160 GS	522466	-	254	12	M12	50	160 / 175	245	19	44 x 4	65 / 50	✓	10	-
IMC 12/180 GS	522474	-	274	12	M12	50	180 / 195	265	19	44 x 4	65 / 50	✓	10	-
IMC 12/200 GS	522464	-	294	12	M12	50	200 / 215	285	19	44 x 4	65 / 50	✓	10	-
IMC 12/250 GS	522470	-	344	12	M12	50	250 / 265	335	19	44 x 4	65 / 50	✓	10	-
IMC 16/100 GS	522473	-	218	16	M16	100	100 / 115	204	24	56 x 5	80 / 65	✓	10	-
IMC 16/140 GS	522469	-	258	16	M16	100	140 / 155	244	24	56 x 5	80 / 65	✓	10	-
IMC 16/160 GS	522472	-	278	16	M16	100	160 / 175	264	24	56 x 5	80 / 65	✓	10	-
IMC 16/200 GS	522471	-	318	16	M16	100	200 / 215	304	24	56 x 5	80 / 65	✓	10	-
IMC 16/250 GS	522476	-	368	16	M16	100	250 / 265	354	24	56 x 5	80 / 65	✓	10	-
IMC 16/300 GS	522475	-	418	16	M16	100	300 / 315	404	24	56 x 5	80 / 65	✓	10	-
IMC 8/5 K	509029	509034	55	8	M8	15	5 / -	51	13	16 x 1.6	30 / -	✓	100	100
IMC 10/5 K	509030	509038	70	10	M10	30	5 / -	63	17	20 x 2	40 / -	✓	50	50
IMC 12/5 K	509031	509044	84	12	M12	50	5 / -	75	19	18 x 2	50 / -	✓	20	20
IMC 16/15 K	509032	-	118	16	M16	100	15 / -	104	24	30 x 3	65 / -	✓	20	-

Stainless steel (R/A4): For fastening outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastening in dry indoor areas

Short (K): The short version of the bolt anchor reduces the drill hole depth and the risk of hitting reinforcement, enabling quick installation while saving costs

Large washer (GS): The large washer protects the surface of the attachment and prevents cutting into wood.

* Note: Available upon request. Not part of the standard product range.

Bolt anchor IMC

Product variants

Product	Art.-No. (hdg)	Anchor length	Drill diameter	Thread	Installation torque	Max. usable length $h_{ef,stand}/h_{ef,min}$	Min. drill hole depth for through fixings	Width across nut	Washer (outer diameter x thickness)	Anchoring depth $h_{ef,stand}/h_{ef,min}$	ETA approval	Sales unit (zp)
IMC 8/10 HDG	578095	70	8	M8	15	10 / 20	66	13	16 x 1.6	40 / 30	—	50
IMC 8/30 HDG	578096	90	8	M8	15	30 / 40	86	13	16 x 1.6	40 / 30	—	50
IMC 8/50 HDG	578098	110	8	M8	15	50 / 60	106	13	16 x 1.6	40 / 30	—	50
IMC 10/10 HDG	577883	85	10	M10	30	10 / 20	78	17	20 x 2	40 / 30	—	50
IMC 10/30 HDG	577884	105	10	M10	30	30 / 40	98	17	20 x 2	40 / 30	—	50
IMC 10/50 HDG	578087	125	10	M10	30	50 / 60	118	17	20 x 2	50 / 40	—	20
IMC 12/10 HDG	578088	104	12	M12	50	10 / 25	95	19	18 x 2	65 / 50	—	20
IMC 12/30 HDG	548514	—	—	—	—	—	—	—	—	—	—	20
IMC 12/50 HDG	578089	124	12	M12	50	30 / 45	115	19	18 x 2	65 / 50	—	20
IMC 12/50 HDG	578091	144	12	M12	50	50 / 65	135	19	18 x 2	65 / 50	—	20
IMC 16/25 HDG	578093	143	16	M16	100	25 / 40	129	24	30 x 3	70 / 50	—	10
IMC 16/50 HDG	578094	168	16	M16	100	50 / 60	154	24	30 x 3	70 / 50	—	10
IMC 8/5 K HDG	578097	55	8	M8	15	- / 5	51	13	16 x 1.6	- / 30	—	50
IMC 10/5 K HDG	577885*	70	10	M10	30	- / 5	63	17	20 x 2	40	—	50
IMC 12/5 K HDG	578090	84	12	M12	35	- / 5	—	19	18 x 2	50 / -	—	20
IMC 16/5 K HDG	578092	118	16	M16	100	- / 15	104	24	30 x 3	65 / -	—	10

Stainless steel (R/A4): For fastening outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastening in dry indoor areas

Short (K): The short version of the bolt anchor reduces the drill hole depth and the risk of hitting reinforcement, enabling quick installation while saving costs

Large washer (GS): The large washer protects the surface of the attachment and prevents cutting into wood.

* Note: Available upon request. Not part of the standard product range.

Load table

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

For the design the complete current assessment ETA-10/0169 has to be considered.

Type	Material / surface ²⁾	Effective anchor- agedepth	Minimum member thickness	Installation torque	Permissible Tension (N_{perm}), Shear loads (V_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})			
		h_{ef} [mm]	h_{min} [mm]		$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
IMC 8	zp	30	100	15	2.9	6.9	40	40
	zp	40	100	15	5.9	7.6	40	40
	R	30	100	10	2.9	6.9	50	45
	R	40	100	10	5.9	7.3	40	45
IMC 10	zp	40	100	30	5.9	12	50	80
	zp	50	100	30	8.3	12	50	50
	R	40	100	20	5.9	11.6	50	80
	R	50	100	20	8.3	11.6	70	55
IMC 12	zp	50	100	50	8.3	17.9	70	100
	zp	65	120	50	12.3	17.9	70	70
	R	50	100	35	8.3	15.7	70	100
	R	65	120	35	12.3	15.7	70	70
IMC 16	zp	65	120	100	12.3	28.2	90	120
	zp	80	160	100	16.8	31.5	90	90
	R	65	120	80	12.3	28.2	90	120
	R	80	160	80	16.8	29.1	120	80
IMC 20	zp	80	160	200	16.8	38.3	120	120
	zp	105	200	200	25.2	38.3	120	120
	R	80	160	150	16.8	38.6	140	120
	R	105	200	150	25.2	19.1	120	120

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, e.g. for dry internal conditions, galvanised steel zp; for damp interior stainless steel R and exterior conditions, e.g. material 1.4362, 1.4401.

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.

Bolt anchor IFA

The efficient fastener

Long Description

The Upat IFA bolt anchor is a cost-effective solution for standard fixings. It is suitable for installing medium loads in concrete or natural stone. The IFA can be installed using either pre-positioned or through installation and is easily hammered into the prepared drill hole. When the nut is tightened, the cone is drawn into the expansion clip, which expands against the wall of the hole to ensure a secure anchoring. Typical applications include fastening cable trays, brackets, shelves, and stair railings.

Characteristics

- Material: Steel, zinc-plated (zp), for use in dry indoor applications.
- Features: Thread sizes from M6 to M20, usable lengths from 5 to 180 mm.
- Load range: Recommended tensile loads from 1.3 to 16.0 kN and recommended shear loads from 1.3 to 13.5 kN.
- Accessories: Blower UPM AB.

Applications

- Railings
- Cable trays
- Brackets
- Ladders
- Machines
- Steel structures
- Gates

Advantages

Secure anchorage is achieved through the proven expansion principle for standard fixings without approval.

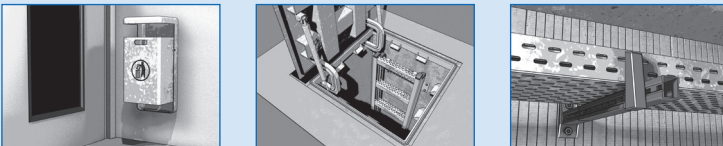
Materials

Suitable for:

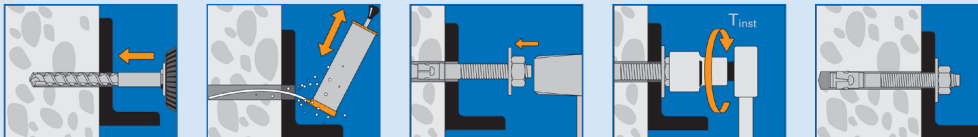
- Concrete, non-cracked
- Natural stone with dense structure.



Application examples



Assembly



Straight to the product



upat.com/en-ifa

Bolt anchor IFA

Product variants

Product	Art-No.	Anchor length	Drill diameter	Thread	Installation torque	Min. drill hole depth for through fixings	Max. fixture thickness (reduced)	Max. fixture thickness (standard)	Width across nut	Anchorage depth (reduced)	Anchorage depth (standard)	Sales unit
IFA 6x55	578277	55	6	M6	4	55	15	5	10	25	30	100
IFA 6x70	578278	70	6	M6	4	70	30	20	10	25	30	100
IFA 6x90	578259	90	6	M6	4	90	45	40	10	25	30	50
IFA 6x130	578260	130	6	M6	4	130	85	80	10	25	30	50
IFA 6x140	578261	140	6	M6	4	140	95	90	10	25	30	50
IFA 8x50	578279	50	8	M8	10	50	5	—	13	25	—	50
IFA 8x60	578280	60	8	M8	10	60	15	—	13	25	—	50
IFA 8x65	578281	65	8	M8	10	65	20	5	13	25	35	50
IFA 8x75	578262	75	8	M8	10	75	30	15	13	25	35	50
IFA 8x80	578282	80	8	M8	10	80	35	20	13	25	35	50
IFA 8x90	578263	90	8	M8	10	90	45	30	13	25	35	50
IFA 8x95	578283	95	8	M8	10	95	50	35	13	25	35	50
IFA 8x120	578284	120	8	M8	10	120	75	60	13	25	35	50
IFA 10x65	578285	65	10	M10	25	65	10	—	17	25	—	50
IFA 10x70	578264	70	10	M10	25	70	15	—	17	25	—	50
IFA 10x80	578286	80	10	M10	25	80	25	5	17	25	45	50
IFA 10x90	578265	90	10	M10	25	90	35	15	17	25	45	50
IFA 10x95	578287	95	10	M10	25	95	40	20	17	25	45	50
IFA 10x115	578288	115	10	M10	25	115	60	40	17	25	45	25
IFA 10x120	578266	120	10	M10	25	120	65	45	17	25	45	25
IFA 10x130	578289	130	10	M10	25	130	75	55	17	25	45	25
IFA 10x140	578290	140	10	M10	25	140	85	65	17	25	45	25
IFA 10x160	578291	—	10	M10	25	160	105	85	17	25	45	25
IFA 10x180	578292	—	10	M10	25	180	115	105	17	25	45	25
IFA 10x200	578293	200	10	M10	25	200	135	115	17	25	45	25
IFA 12x75	578267	75	12	M12	40	75	5	—	19	35	—	25
IFA 12x80	578294	80	12	M12	40	80	10	—	19	35	—	25
IFA 12x90	578268	90	12	M12	40	90	20	—	19	35	—	25
IFA 12x100	578295	100	12	M12	40	100	30	10	19	35	55	25
IFA 12x110	578269	110	12	M12	40	110	40	20	19	35	55	25
IFA 12x120	578296	120	12	M12	40	120	50	30	19	35	55	25
IFA 12x140	578270	140	12	M12	40	140	70	50	19	35	55	25
IFA 12x150	578297	150	12	M12	40	150	80	60	19	35	55	25
IFA 12x160	578298	160	12	M12	40	160	90	70	19	35	55	25
IFA 12x180	578299	180	12	M12	40	180	110	90	19	35	55	25
IFA 12x200	578300	200	12	M12	40	200	130	110	19	35	55	25
IFA 12x220	578301	220	12	M12	40	220	150	130	19	35	55	25
IFA 12x240	578302	240	12	M12	40	240	170	150	19	35	55	25
IFA 12x250	578271	250	12	M12	40	250	180	160	19	35	55	25
IFA 16x105	578303	105	16	M16	100	105	15	—	24	50	—	20
IFA 16x125	578304	125	16	M16	100	125	35	5	24	50	80	20
IFA 16x140	578305	140	16	M16	100	140	50	20	24	50	80	10
IFA 16x145	578272	145	16	M16	100	145	55	25	24	50	80	10
IFA 16x170	578273	170	16	M16	100	170	80	50	24	50	80	10
IFA 16x180	578306	180	16	M16	100	180	90	60	24	50	80	10
IFA 16x200	578307	200	16	M16	100	200	110	80	24	50	80	10
IFA 16x220	578274	220	16	M16	100	220	130	100	24	50	80	10
IFA 20x120	578275	120	20	M20	200	120	5	—	30	75	—	10
IFA 20x160	578308	160	20	M20	200	160	40	20	30	75	95	10
IFA 20x170	578276	170	20	M20	200	170	40	30	30	75	95	10
IFA 20x200	578309	200	20	M20	200	200	80	60	30	75	95	10
IFA 20x220	578310	220	20	M20	200	220	100	80	30	75	95	10

Bolt anchor IFA

Load table

Recommended loads of a single anchor¹⁾ in normal concrete of strengt class C20/25.

Type	Material / surface ³⁾	Effective anchor- aged depth	Minimum member thickness	Drill hole diameter	Drill hole diame- ter in fixture ²⁾	Installation torque	Recommended tension (N_{rec}), Shear loads (V_{rec}), minimum spacing (s_{min}) and edge distances (c_{min})			
		h_{ef} [mm]	h_{min} [mm]	d_0 [mm]	d_f [mm]	T_{inst} [Nm]	N_{rec} ³⁾ [kN]	V_{rec} ³⁾ [kN]	s_{min} ³⁾ [mm]	c_{min} ³⁾ [mm]
IFA 6	zp	25	100	6	8	4	1.3	1.3	80	40
	zp	30	100	6	8	4	2.1	1.7	100	50
IFA 8	zp/shrd	25	100	8	10	10	1.4	1.4	80	40
	zp/shrd	35	100	8	10	10	2.8	2.8	90	45
IFA 10	zp/shrd	25	100	10	13	25	1.8	1.8	90	45
	zp/shrd	35	100	10	13	25	2.8	2.8	120	60
	zp/shrd	45	100	10	13	25	3.8	3.8	150	75
IFA 12	zp/shrd	35	100	12	15	40	3.2	3.2	120	60
	zp/shrd	45	100	12	15	40	4.4	4.4	150	75
	zp/shrd	55	110	12	15	40	5.8	5.8	180	90
IFA 16	shrd	45	100	16	19	100	4.4	4.4	150	75
	zp	50	100	16	19	100	4.4	4.4	150	75
	shrd	60	120	16	19	100	6.2	6.2	200	100
	zp	65	130	16	19	100	6.2	6.2	200	100
	shrd	75	150	16	19	100	8.5	8.5	240	120
IFA 20	zp	80	160	16	19	100	8.5	8.5	240	120
	shrd	70	150	20	23	200	8.0	-	210	105
	zp/shrd	75	150	20	23	200	9.7	9.7	240	120
IFA 24	zp/shrd	95	190	20	23	200	13.5	13.5	300	150
	zp	95	190	24	28	260	15.0	-	300	150
	zp	120	240	24	28	260	16.0	-	360	180

¹⁾ The partial safety factors for material resistance 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 $s \geq 3 \times h$ and an edge distance $c \geq 1.5 \times h_{ef}$

²⁾ For push-through installation.

³⁾ As recommended loads are given in the table, combinations of tensile and shear loads, bending moments and reduced edge and axial spacings (anchor groups) can not be carried out.

Bolt anchor ICI

Affordable express anchor bolt for a secure hold. Approved for concrete (uncracked).

Long Description

The Upat express anchor bolt ICI is a high-performance solution and a cost-efficient option within the range of bolt anchors. This steel anchor is especially designed for fixing medium to heavy loads in uncracked concrete and dense natural stone. Typical applications of the express anchor bolt ICI include the fastening of barriers, benches and pumps, among others.

Characteristics

Certification/Approval: ETA Option 7
Concrete uncracked
Load Range: Tension load 4,5-10,3 kN,
shear load 4,1-17,9 kN
Material: Zinc plated (zp) hot dip galvanized (HDG)
Feature: Thread M8-M16, usable length 5-145mm
Accessories: Blow-out pump UPM AB

Applications

- Bike racks
- Benches
- Barrier
- Support feet
- Stadium seats
- Pumps

Materials

Approved for:

- Concrete C20/25 to C50/60, uncracked

Also suitable for:

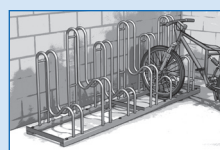
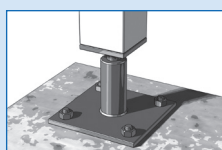
- Concrete C12/15
- Natural stone with dense structure

Advantages

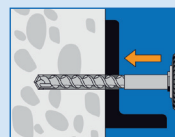
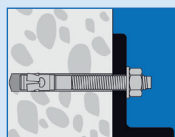
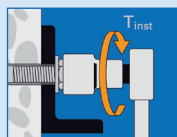
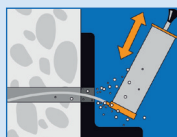
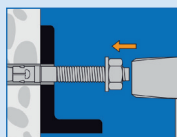
- Secure anchoring: ETA concrete approval Option 7. Flexible application for reliable anchoring in uncracked concrete.
- Fastening close to edges: The combination of cone and expansion clip allows for very small edge and centre distances.
- Easy to install: Shaft with optimised diameter for low impact energy during installation.
- Protected thread: Distinctive impact pin protects the thread from damage during the setting process.
- Reliable follow-up check: Head embossing enables post-installation checks.
- Secure hammering: The clip remains correctly positioned during hammering, even in case of contact with reinforcement or unfavourable drill holes.



Application examples



Assembly



Straight to the product



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Bolt anchor ICI

Product variants

Product	Art.No.	Anchor length	Drill diameter	Thread	Installation torque	Max. usable length $h_{ef,stand}/h_{ef,min.}$	Min. drill hole depth for through fixings	Width across nut	Anchoring depth $h_{ef,stand}/h_{ef,min.}$	Sales unit
ICI 8/10/65 K	581059	65	8	M8	25	- / 10	66	13	- / 35	100
ICI 8/5/70	581623	70	8	M8	25	5 / 15	66	13	45 / 35	100
ICI 8/15/80	581060	80	8	M8	25	15 / 25	76	13	45 / 35	100
ICI 8/25/90	581061	90	8	M8	25	25 / 35	86	13	45 / 35	100
ICI 8/50/115	581062	115	8	M8	25	50 / 60	111	13	45 / 35	100
ICI 10/15/90	581063	90	10	M10	35	15 / 25	83	17	50 / 40	50
ICI 10/20/95	581624	95	10	M10	35	20 / 30	88	17	50 / 40	50
ICI 10/30/105	581064	105	10	M10	35	30 / 40	98	17	50 / 40	50
ICI 10/45/120	581065	120	10	M10	35	45 / 55	113	17	50 / 40	50
ICI 12/20/100 K	581066	100	12	M12	60	- / 20	100	19	- / 50	20
ICI 12/10/114	581625	114	12	M12	60	10 / 30	100	19	70 / 50	20
ICI 12/20/120	581067	120	12	M12	60	20 / 40	110	19	70 / 50	20
ICI 12/40/140	581068	140	12	M12	60	40 / 60	130	19	70 / 50	20
ICI 12/80/180	586547	180	12	M12	60	80 / 100	170	19	70 / 50	20
ICI 12/100/200	581069	200	12	M12	60	100 / 120	190	19	70 / 50	20
ICI 12/120/220	581070	220	12	M12	60	120 / 140	210	19	70 / 50	20
ICI 16/25/150	581071	150	16	M16	120	25 / 45	134	24	85 / 65	20
ICI 16/50/175	581072	175	16	M16	120	50 / 70	159	24	85 / 65	20
ICI 16/95/220	581073	220	16	M16	120	95 / 115	204	24	85 / 65	10
ICI 20/75/220	581078	220	20	M20	200	75 / 95	205	30	100 / 80	10
ICI 8/5/65 K HDG	581079	65	8	M8	25	- / 5	60	13	- / 35	100
ICI 8/15/80 HDG	581080	80	8	M8	25	15 / 25	60	13	60 / 35	100
ICI 8/25/90 HDG	581081	90	8	M8	25	25 / 35	60	13	60 / 35	100
ICI 8/50/115 HDG	581082	115	8	M8	25	50 / 60	60	13	60 / 35	100
ICI 10/5/65 K HDG	581083	65	10	M10	34	- / 5	65	17	- / 40	100
ICI 10/20/90 HDG	581084	90	10	M10	34	20 / 30	65	17	65 / 40	50
ICI 10/35/105 HDG	581085	105	10	M10	34	35 / 45	65	17	65 / 40	50
ICI 10/50/120 HDG	581086	120	10	M10	34	50 / 60	65	17	65 / 40	50
ICI 12/5/80 K HDG	581087	80	12	M12	60	- / 5	90	19	- / 50	20
ICI 12/5/100 HDG	581088	100	12	M12	60	5 / 15	90	19	90 / 50	20
ICI 12/25/120 HDG	581089	120	12	M12	60	25 / 45	90	19	90 / 50	20
ICI 12/45/140 HDG	581090	140	12	M12	60	45 / 65	90	19	90 / 50	20
ICI 16/5/125 HDG	581091	125	16	M16	120	5 / 15	110	24	110 / 65	10
ICI 16/30/150 HDG	581092	150	16	M16	120	30 / 50	110	24	110 / 65	10

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 has to be considered.

Type	Material / surface ²⁾	Effective anchor- age depth	Minimum member thickness	Installation torque T _{inst} [Nm]	Permissible Tension (N _{perm}), Shear loads (V _{perm}), minimum spacing (s _{min}) and edge distances (c _{min})			
		h _{ef} [mm]	h _{min} [mm]		N _{rec3} [kN]	V _{rec3} [kN]	s _{min3} [mm]	c _{min3} [mm]
ICI 8	zp	35	100	25	4,5	4,1	35	35
	zp	45	100	25	4,5	4,1	35	35
ICI 10	zp	40	100	35	4,5	5,9	40	40
	zp	50	100	35	5,2	6,6	40	40
ICI 12	zp	50	140	60	5,7	9,6	50	50
	zp	70	140	60	9,5	9,6	50	50
ICI 16	zp	65	170	120	9,5	17,9	65	65
	zp	85	170	120	10,3	17,9	65	65
ICI 20	zp	80	200	200	13,4	28	80	80
	zp	100	200	200	19	28	80	80

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, e.g. for dry internal conditions, galvanised steel zp; for damp interior stainless steel R and exterior conditions, e.g. material 1.4362, 1.4401.

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.

Sleeve anchor UHS

Versatile heavy-duty sleeve anchor for high performance with a design appearance. Approved for concrete, seismic, and fire protection.

Long Description

The Upat sleeve anchor UHS delivers high performance with design. It is particularly suitable for installation in cracked and uncracked concrete as well as dense natural stone, both indoors and outdoors. Thanks to its high lateral load capacity, the number of fixing points is reduced, giving the installation a discreet appearance.

Characteristics

- Certification/Approval: ETA Option 1 cracked concrete, ETA Option 7 uncracked concrete, ETA seismic, fire resistance, VdS CEA guidelines compliant
- Load range: Tension load 3.6-32.7kN, shear load 4.1-65.5kN
- Material: Zinc plated steel (zp), Stainless Steel (R)
- Variant: Hexagon head (S), countersunk head (SK), threaded bolt and nut (B), internal thread (I)
- Feature: Thread M6-M20, usable length 10-100mm
- Accessory: Blow-out pump UPM AB

Applications

- Balcony railings
- Stair railings
- High racks
- Support feet
- Bike racks
- Barrier
- Silos
- Pumps
- Canopies
- Garden gates

Advantages

- Discreet appearance: Available with countersunk or hexagonal heads, threaded bolts with nuts and internal threads
- Comprehensive approval package: ETA concrete approval option 1, seismic approval, fire resistance and sprinkler system approval
- High lateral loads: The screw shaft and sleeve are optimally matched to each other and enable high lateral loads
- Flexible installation: The metric internal thread allows threaded rods, hooks or screws to be flexibly installed and removed flush with the surface

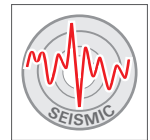
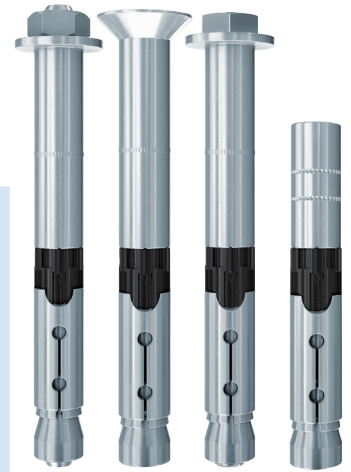
Materials

Approved for:

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

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

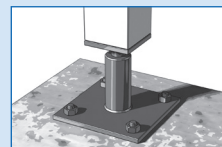
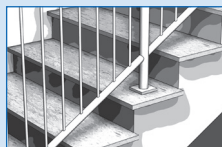
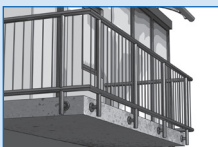


Straight to the product

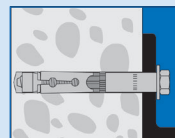
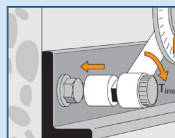
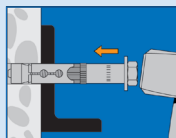
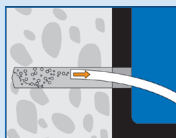
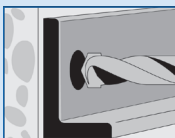


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Application examples



Assembly



Sleeve anchor UHS

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Anchor length	Drill diameter	Min. drill hole depth for through fixings	Max. fixture thickness	Fire resistance	ETA approval	Sales unit (zp)	Sales unit (R)
UHS 10/10 B	547273	-	70	10	65	10	R120	✓	50	-
UHS 10/25 B	547274	-	75	10	80	25	R120	✓	50	-
UHS 10/50 B	547275	-	110	10	105	50	R120	✓	50	-
UHS 12/10 B	547276	-	95	12	90	10	R120	✓	50	-
UHS 12/25 B	547277	-	110	12	105	25	R120	✓	50	-
UHS 12/50 B	547278	-	135	12	130	50	R120	✓	25	-
UHS 12/100 B	547279	-	185	12	180	100	R120	✓	25	-
UHS 15/10 B	547280	-	110	15	100	10	R120	✓	25	-
UHS 15/25 B	547281	-	125	15	115	25	R120	✓	25	-
UHS 15/50 B	547282	-	150	15	140	50	R120	✓	25	-
UHS 15/100 B	547283	-	200	15	190	100	R120	✓	20	-
UHS 18/25 B	547284	-	140	18	130	25	R120	✓	20	-
UHS 18/50 B	547285	-	165	18	155	50	R120	✓	20	-
UHS 18/100 B	547286	-	215	18	205	100	R120	✓	10	-
UHS 24/25 B	547287	-	167	24	150	25	R120	✓	10	-
UHS 24/50 B	547288*	-	192	24	175	50	R120	✓	10	-
UHS 24/100 B	547289	-	242	24	225	100	R120	✓	5	-
UHS 28/30 B	547290*	-	199	28	185	—	R120	✓	4	-
UHS 28/60 B	547291	-	229	28	215	60	R120	✓	4	-
UHS 12/M6 I	547265	547269*	77,5	12	85	3 - 5	R120	✓	25	25
UHS 12/M8 I	547266	547270*	77,5	12	85	3 - 5	R120	✓	25	25
UHS 15/M10 I	547267	547271	90	15	95	—	R120	✓	25	25
UHS 15/M12 I	547268	547272	90	15	95	—	R120	✓	20	20
UHS 10/10 S	547252	547261*	70	10	65	10	R120	✓	50	50
UHS 10/25 S	547253	-	75	10	80	25	R120	✓	50	-
UHS 10/50 S	547254*	-	110	10	105	50	R120	✓	50	-
UHS 12/10 S	547255	547262	90	12	90	10	R120	✓	50	50
UHS 12/25 S	547256	547263	105	12	105	25	R120	✓	50	20
UHS 12/50 S	547257	-	130	12	130	50	R120	✓	25	-
UHS 15/10 S	547258	547264	106	15	100	10	R120	✓	25	50
UHS 15/25 S	547259	-	121	15	115	25	R120	✓	25	-
UHS 15/50 S	547260*	-	146	15	140	50	R120	✓	25	-
UHS 10/15 SK	541303	-	65	10	70	15	R120	✓	50	-
UHS 10/25 SK	547241	-	75	10	80	25	R120	✓	50	-
UHS 10/50 SK	547242*	-	100	10	105	50	R120	✓	50	-
UHS 12/15 SK	541304	547248	90	12	95	15	R120	✓	25	25
UHS 12/25 SK	547243	-	100	12	105	25	R120	✓	25	-
UHS 12/30 SK	-	547249	105	12	110	30	R120	✓	-	25
UHS 12/50 SK	547244	547250	125	12	130	50	R120	✓	25	25
UHS 15/15 SK	547245	547251	100	15	105	15	R120	✓	25	25
UHS 15/25 SK	547246	-	110	15	115	25	R120	✓	25	-
UHS 15/50 SK	547247	-	135	15	140	50	R120	✓	25	-

Stainless steel (R): For fastenings outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastenings in dry indoor areas

Hexagon head (S): For secure application of torque from the outside, even in confined installation spaces

Countersunk head (SK): For a visually appealing and flush-mounted fastening

Threaded bolt and nut (B): For series mounting and precise adjustment of the attachment

Internal thread (I): For use with metric screws and flush removal

* Note: Available upon request. Not part of the standard product range.

Sleeve anchor UHS

Load table

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

For the design the complete current assessment ETA-17/0288 has to be considered.

Type	Material / surface ²⁾	Effective an- chorage depth h_{ef} [mm]	Minimum mem- ber thickness h_{min} [mm]	Installation- torque T_{inst} [Nm]	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})			
					$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]
UHS 10 S	zp	40	80	10	3.6	4.1	50	50	5.9	5.9	50	50
	R	40	80	15	3.6	4.1	50	50	5.9	5.9	50	50
UHS 12 S	zp	60	120	22.5	5.7	15.2	60	60	10.9	18.9	70	70
	R	60	120	25	5.7	15.2	60	60	9.5	17.7	70	70
UHS 15 S	zp	70	140	40	7.6	19.2	70	70	13.7	27.4	80	80
	R	70	140	40	7.6	19.2	70	70	13.7	27.4	80	80
UHS 10 SK	zp	40	80	10	3.6	4.1	50	50	5.9	5.9	50	50
UHS 12 SK	zp	60	120	22.5	5.7	15.2	60	60	10.9	18.9	70	70
	R	60	120	22.5	5.7	15.2	60	60	10.9	18.9	70	70
UHS 15 SK	zp	70	140	40	7.6	19.2	70	70	13.7	27.4	80	80
	R	70	140	40	7.6	19.2	70	70	13.7	27.4	80	80
UHS 18 SK	zp	80	160	80	11.7	23.5	80	80	16.8	33.5	90	90
UHS 12 / M 6 I	zp	60	125	15	4.3	2.9	60	60	4.7	2.9	70	70
	R	60	125	15	4.3	3.2	60	60	5.4	3.2	70	70
UHS 12 / M 8 I	zp	60	125	15	4.3	5.1	60	60	8.6	5.1	70	70
	R	60	125	15	4.3	5.9	60	60	8.6	5.9	70	70
UHS 15 / M10 I	zp	70	150	25	5.7	8.6	70	70	13.8	8.6	80	80
	R	70	150	25	5.7	9.1	70	70	14.1	9.1	80	80
UHS 15 / M12 I	zp	70	150	25	5.7	12	70	70	14.1	12	80	80
	R	70	150	25	5.7	13.7	70	70	14.1	13.7	80	80
UHS 10 B	zp	40	80	10	3.6	4.1	50	50	5.9	5.9	50	50
UHS 12 B	zp	60	120	17.5	5.7	15.2	60	60	10.9	15.5	70	70
UHS 15 B	zp	70	140	38	7.6	19.2	70	70	13.7	24.5	80	80
UHS 18 B	zp	80	160	80	11.7	23.5	80	80	16.8	33.5	90	90
UHS 24 B	zp	100	200	120	16.4	32.8	100	100	23.4	46.9	125	125
UHS 28 B	zp	125	250	180	22.9	45.8	125	150	32.7	65.5	150	150

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, e.g. for dry internal conditions, galvanised steel zp; for damp interior stainless steel R and exterior conditions, e.g. material 1.4362, 1.4401.

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.

Sleeve anchor USL

Sleeve anchor USL made of zinc-plated steel for versatile fixings in indoor applications

Long Description

The Upat USL sleeve anchor is the cost-effective solution for reliable fixings in indoor applications. It is ideally suited for installation in non-cracked concrete. The USL sleeve anchor is versatile and allows for secure standard fixings while offering easy handling. Thanks to its good shear load capacity, the number of required fixing points can be reduced. Typical applications include railings, brackets, cable trays and stairs in indoor areas.

Characteristics

- Load range: Recommended tensile loads 0.8–5.0 kN, recommended shear loads 0.8–6.3 kN
- Material: Steel, zinc-plated (zp), for fixings in dry indoor applications
- Variants: Available with different head types such as bolts, nuts, hooks and eyes
- Features: Thread sizes M6–M16, usable lengths 2–35 mm
- Accessories: Blower UPM AB

Applications

- Handles
- Consoles
- Ladders
- Cable trays
- Gates
- Temporary or structural fixings

Advantages

- Compact design: Available in different versions such as standard bolt (D), eye (EY) and hook (H) for versatile fixings in indoor applications
- High shear loads: The shank and sleeve are optimally matched and ensure reliable fixings with high shear load capacity
- Flexible installation: The variants with eye or hook provide additional options for temporary and structural fixings
- Simple drill choice: Standard drill bits enable quick and straightforward installation
- Steel, zinc-plated (zp), for use in dry indoor applications.

Materials

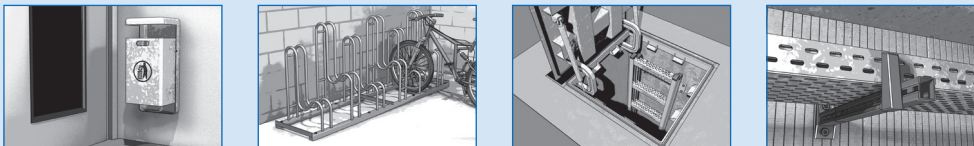
Suitable for:

- Concrete, non-cracked
- Natural stone with dense structure.



Steel fixings

Application examples



Straight to the product



upat.com/en-usl

Sleeve anchor USL

Product variants

Product	Art.No.	Anchor length	Drill diameter	Thread	Installation torque	Max. fixture thickness	Min. drill hole depth for through fixings	Min. effect. anchorage depth	Width across nut	Sales unit
USL BR M12x80 D16 zp	578323	80	16	M12	60	2	95	55	19	25
USL M6x45 D8 zp	578311	45	8	M6	10	2	55	30	10	100
USL M6x45 EY D8 zp	578312	45	8	M6	5	—	55	30	10	100
USL M6x45 H D8 zp	578313	45	8	M6	5	—	55	30	10	100
USL M6x60 D8 zp	578314	60	8	M6	10	15	70	30	10	100
USL M8x60 D10 zp	578315	60	10	M8	25	10	70	35	13	50
USL M8x60 EY D10 zp	578316	60	10	M8	15	—	70	35	13	50
USL M8x60 H D10 zp	578317	60	10	M8	15	—	70	35	13	50
USL M8x80 D10 zp	578318	80	10	M8	25	30	90	35	13	50
USL M10x70 D12 zp	578319	70	12	M10	40	8	80	45	17	50
USL M10x70 EY D12 zp	578320	70	12	M10	30	—	80	45	17	25
USL M10x70 H D12 zp	578321	70	12	M10	30	—	80	45	17	25
USL M10x100 D12 zp	578322	100	12	M10	40	35	110	45	17	50
USL M12x80 EY D16 zp	578324	80	16	M12	50	—	95	55	19	25
USL M12x110 D16 zp	578325	110	16	M12	60	25	125	65	19	25
USL M16x110 D20 zp	578326	110	20	M16	70	15	130	70	24	25

Steel, zinc-plated (zp/gvz), for use in dry indoor applications.

Standard bolt (D): For universal fixings in indoor areas

Eye (EY): For fixings with eye-bolt character, e.g. for cables or suspensions

Hook (H): For fixings and suspensions requiring quick attachment and removal

Load table

Description	Drill diameter	Min. Bore depth for through fasteners	Anchor length	Max. Useful length h_{df} , max./ h_{df} , min.	Head	Width across nut	N_{rec}	V_{rec}
	d_0 [mm]	h_2 [mm]	l [mm]	t_{fix} [mm]	$\varnothing \times$ longitude [mm]	$\varnothing$ SW [mm]	[kN]	[kN]
USL M6x45 D8	8	55	45	2	M6	10	2,0	1,5
USL M6x60 D8	8	70	60	15	M6	10	2,0	1,5
USL M8x60 D10	10	70	60	10	M8	13	2,5	2,7
USL M8x80 D10	10	90	80	30	M8	13	2,5	2,7
USL M10x70 D12	12	80	70	10	M10	17	3,0	4,3
USL M10x100 D12	12	110	100	35	M10	17	3,0	4,3
USL M12x80 D16	16	95	80	2	M12	19	5,0	6,3
USL M12x110 D16	16	125	110	35	M12	19	5,0	6,3
USL M6x45 EY D8	8	55	45	2	M6	10	0,8	0,8
USL M8x60 EY D12	10	70	60	10	M8	13	1,4	1,4
USL M10x70 EY D12	12	80	70	8	M10	17	1,8	1,8
USL M12x80 EY D16	16	95	80	8	M12	19	2,0	2,0
USL M6x45 H D8	8	55	45	2	M6	10	0,8	0,8
USL M8x60 H D10	10	70	60	10	M8	13	1,4	0,8
USL M10x70 H D12	12	80	70	8	M10	17	1,8	1,8

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 2.9-21 kN, shear load 4.1-29.4 kN
- Material: Zinc plated steel (zp)
- Variant: Hexagon head (US), countersunk head (SK), Torx drive (TX)
- Feature: Drill diameter 8-14 mm, usable length 5-205 mm
- Accessory: Blow-out pump UPM AB

Applications

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

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

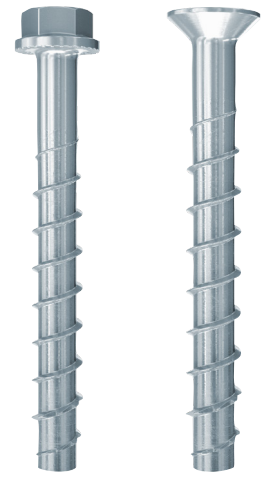
Materials

Approved for:

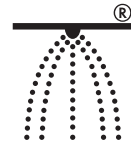
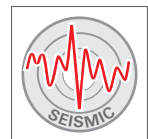
- Concrete C20/25 to C50/60, cracked and uncracked

Also suitable for:

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



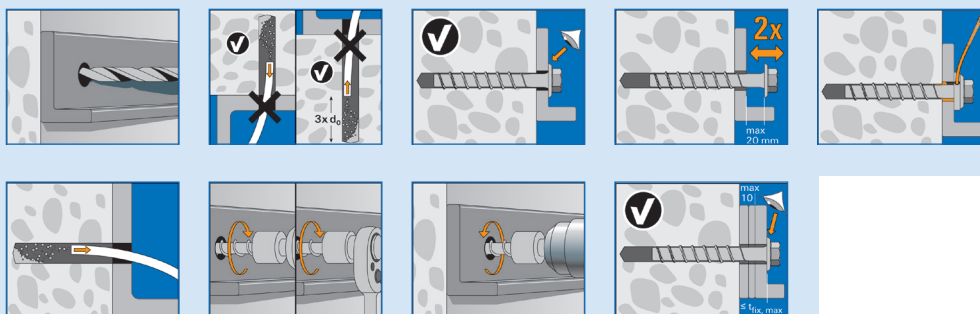
Steel fixings



Application examples



Assembly



Straight to the product



upat.com/en-ucs

Concrete screw UCS

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

Concrete screw UCS

Load table

Permissible loads of a single anchor¹⁾ 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 h_{nom} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation torque $T_{imp,max}^{2)}$ [Nm]	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})			
					$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [mm]	$N_{perm}^{3)}$ [kN]	$V_{perm}^{3)}$ [kN]	$s_{min}^{3)}$ [mm]	$c_{min}^{3)}$ [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.

Nail anchor UNA

Efficient nail anchor for streamlined installation. Approved for concrete (multiple fixings) and fire protection.

Long Description

The Upat nail anchor UNA is the pragmatic impact anchor for quick installation. With a simple setting process, it can be used for fastenings in both indoor and outdoor environments. The nail anchor UNA is commonly used, for example, for the fastening of mounting rails and substructures made of metal or wood.

Characteristics

- Certification/Approval: ETA multiple fastening in cracked concrete, fire resistance, VdS CEA guidelines compliant
- Load range: Tension load, shear load, and angle load 0.7-2.4kN
- Material: Zinc plated steel (zp), Stainless Steel (R)
- Variant: Nail head, threaded and flange nut (M), eyelet (OE)
- Feature: Drill diameter 6mm, usable length 5-75mm
- Accessory: Blow-out pump UPM AB

Applications

- Wooden substructures
- Cable support systems
- Electrical installations
- Ventilation ducts

Advantages

- Secure anchoring: ETA concrete approval option 1 for multiple fastening of non-load-bearing systems and fire resistance
- Easy installation: Setting process without torque and impact aid
- Secure impact: Prevents reinforcement hits due to reduced impact depth
- Installation-friendly: Ideal for overhead installations thanks to direct hold already when inserted
- Stainless steel (R): For fastenings outdoors or in damp rooms

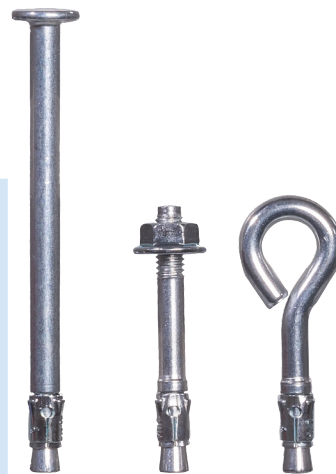
Materials

Approved for:

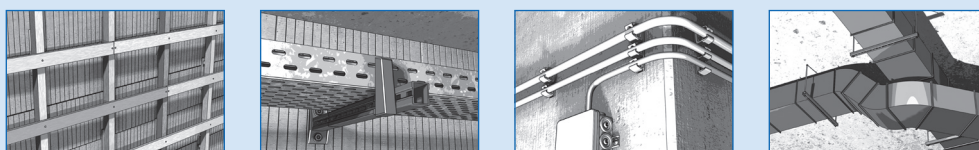
- Concrete C12/15 to C50/60, cracked, for use as multiple fixings for redundant non-structural systems

Also suitable for:

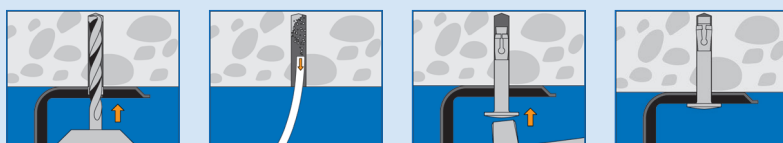
- Calcium silicate solid bricks
- Natural stone with dense structure
- Precast concrete hollow core slab decks



Application examples



Assembly



Straight to the product



upat.com/en-una

Nail anchor UNA

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Anchor length	Drill diameter	Max. fixture thickness	Min. drill hole depth for through fixings	Fire resistance	Sales unit (zp)	Sales unit (R)
UNA 6x25 OE	541305	-	54	6	—	35	R120	50	-
UNA 6x30 M6/5	541306	-	50	6	5	45	R120	100	-
UNA 6x30/5	541308	547293	40	6	5	45	R120	100	100
UNA 6x30/30	541307	547294	65	6	30	70	R120	50	50
UNA 6x30/50	541309	547295	85	6	50	90	R120	50	50
UNA 6x30/75	547292	-	110	6	75	115	R120	50	-

Stainless steel (R): For fastenings outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastenings in dry indoor areas

Thread and flange nut (M): For series installation and precise adjustment of the attachment

Eye (OE): For fastening of suspensions and hangers

Load table

Permissible loads¹⁾ for a single anchor for multiple use for non-structural applications in normal concrete C20/25 up to C50/60.

For the design the complete current assessment ETA - 17/0287 has to be considered.

Type	Material / surface ²⁾	Effective anchorage depth	Minimum member thickness	Maximum installation torque	Permissible load (F_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})		
		h_{ef} [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	F_{perm} ³⁾ [kN]	s_{min} ⁴⁾ [mm]	c_{min} ⁴⁾ [mm]
UNA II 6 x 30	zp	30	80	-	2.4	40	40
	A4	30	80	-	2.4	40	40
UNA 6 x 30 M6	zp	30	80	4	2.4	40	40
	A4	30	80	4	2.4	40	40
UNA II 6 x 25 OE	zp	25	80	-	0.7	40	40

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⁾ Maximum load for normal spacing and edge distances. Valid for tensile load, shear load and oblique load under any angle. In the case of shear loads with lever arm (bending) as well as reduced spacings or 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.

⁴⁾ Minimum possible axial spacings resp. edge distances. Smaller permissible loads acc. ETA are required.

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

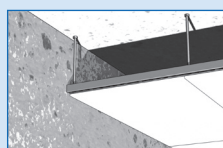


Straight to the product

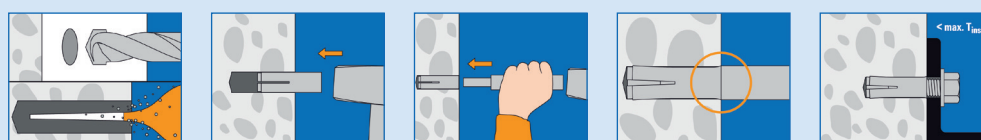


upat.com/en-usa

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 installation- torque $T_{inst,max}$ [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 installation- torque $T_{inst,max}$ [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.

Drop-in anchor IDA

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

Long Description

The Upat drop-in anchor IDA 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 IDA 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 2,0-16,0 kN, shear load 4,0-27,0 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

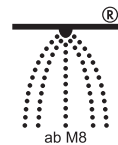
Materials

Approved for:

- Concrete C20/25 to C50/60, cracked and pre-stressed 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

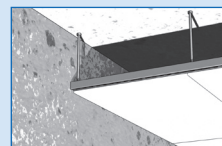
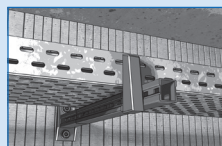


Straight to the product

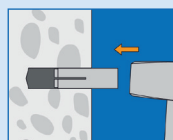
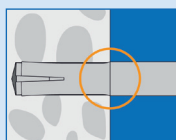
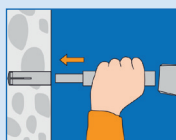
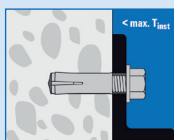
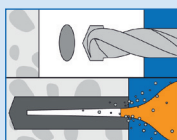


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Application examples



Assembly



Drop-in anchor IDA

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	Sales unit (zp)	Sales unit (R)
IDA M6x25	580966	580974	25	8	M6	13	32	6	100	100
IDA M8x30	580967	580975	30	10	M8	13	33	8	100	100
IDA M8x40	580968	-	40	10	M8	13	43	8	100	-
IDA M10x30	580969	-	30	12	M10	17	33	10	50	-
IDA M10x40	580970	580976	40	12	M10	17	43	10	50	50
IDA M12x50	580971	580977	50	15	M12	22	54	12	50	50
IDA M16x65	580972	-	65	20	M16	28	70	16	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-26/0294 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation- torque $T_{inst,max}$ [Nm]	Permissible load (F_{perm}), minimum spacing (s_{min}) and edge distances (c_{min})		
						F_{perm} ³⁾ [kN]	s_{min} [mm]	c_{min} [mm]
IDA M6x25	zp	5.8	25	100	4	0,8	120	90
	R	A4-70	25	100	4	0,8	120	90
IDA M8x30	zp	5.8	30	100	8	0,8	90	120
	R	A4-70	30	100	8	0,8	90	120
IDA M8x40	zp	5.8	40	100	15	0,5	120	80
	R	A4-70	40	100	15	0,5	120	80
IDA M10x30	zp	5.8	30	120	15	1	150	90
	R	A4-70	30	120	15	1	150	90
IDA M10x40	zp	5.8	40	120	15	1,4	120	140
	R	A4-70	40	120	15	1,4	120	140
IDA M12x50	zp	5.8	50	140	35	1,7	150	175
	R	A4-70	50	140	35	1,7	150	175
IDA M16x65	zp	5.8	65	160	60	2,9	200	120
	R	A4-70	65	160	60	2,9	200	120

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 $c \geq 1.5 \times h_{ef}$. Accuracy 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 non-cracked concrete of strength class C20/25

For the design the complete current assessment ETA-26/0295 has to be considered.

Type	Material / surface ²⁾	Screw Material	Effective anchor- agedepth $h_{ef,min}$ [mm]	Minimum member thickness h_{min} [mm]	Maximum installation- torque $T_{inst,max}$ [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]
IDA M6x25	zp	5.8	25	100	4	2,2	1,2	120	90
	R	A4-70	25	100	4	2,1	1,2	120	90
IDA M8x30	zp	5.8	30	100	8	1,7	2,6	90	120
	R	A4-70	30	100	8	1,7	2,6	90	120
IDA M8x40	zp	5.8	40	100	15	2,2	2,6	120	80
	R	A4-70	40	100	15	2,2	2,6	120	80
IDA M10x30	zp	5.8	30	120	15	3,6	3,1	150	90
	R	A4-70	30	120	15	3,6	3,1	150	90
IDA M10x40	zp	5.8	40	120	15	3,4	3,3	120	140
	R	A4-70	40	120	15	3,4	3,3	120	140
IDA M12x50	zp	5.8	50	140	35	5,0	3,6	150	175
	R	A4-70	50	140	35	5,0	3,6	150	175
IDA M16x65	zp	5.8	65	160	60	5,7	8,6	200	120
	R	A4-70	65	160	60	5,7	8,6	200	120

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 $c \geq 1.5 \times h_{ef}$. Accuracy 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.

Accessories steel anchors

Clever hammering aid for fast installation.

Long Description

The Upat setting tool USA-SWZ, made of metal, ensures a safe and fast expansion of the Upat impact anchor USA with its unique mechanism. The setting tool enables optimal expansion with just a few hammer blows and leaves four embossed markings at the top of the anchor when correctly installed.

Advantages

- **Secure Installation:** The ideal setting tool for easy and secure installation of the drive anchor USA
- **Easy Installation:** Optimal expansion of the drive anchor with few hammer blows
- **Safe Post-Installation Check:** Upon correct installation, the setting tool marks the edge of the drive anchor



Product variants

Product	Art-No.	Match	VDS approval	Sales unit	Content
USA-SWZ M 6	509064	USA M 6	✓	1	1 x setting tool M6
USA-SWZ M 8 x 30	509065	USA M 8	✓	1	1 x setting tool M8x30
USA-SWZ M 8 x 40	509066	USA M 8 x 40	✓	1	1 x setting tool M8x40
USA-SWZ M 10	509067	USA M 10	✓	1	1 x setting tool M10
USA-SWZ M 12	509068	USA M 12	✓	1	1 x setting tool M12
USA-SWZ M 16	509069	USA M 16	✓	1	1 x setting tool M16
USA-SWZ M 20	509070	USA M 20	✓	1	1 x setting tool M20

Straight to the product



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Chemical fixings

Injection mortar UPM 55	Page 38
Injection mortar UPM 44	Page 41
Injection mortar UPM 33	Page 46
Injection mortar UPM 22	Page 51
Injection mortar UPM 11	Page 54
Bonded anchor UKA3 Plus	Page 56
Anchor rods UPM-A/ASTA	Page 58
Internal threaded anchor UPM-I/IST	Page 60
Perforated sleeve UPM-SH	Page 62
Accessories chemical fixings	Page 64

Injection mortar UPM55

Epoxy injection mortar for challenging applications. Approved for concrete, seismic, fire protection and reinforcement connections. Suitable for underwater use.

Long Description

The epoxy injection mortar for challenging applications. Suitable for concrete. For absorbing high loads. Approved for concrete, seismic, fire protection and reinforcement connections. Suitable for underwater use. Additional system components anchor rods (UPM-A/ASTA) or internally threaded anchors (UPM-I/IST). Is used for push-in or push-through installation. Characterised by a broad approval package, long curing times and a wide range of applications. Used, for example, for fastening reinforcing steel, underwater applications and bridge railings.

Characteristics

- Certification/Approval: ETA Option 1 cracked concrete, post-installed rebar connection, seismic, fire testing, hammer drilling, diamond drilling, hollow drilling, water-filled drill hole
- Suitable for: Underwater
- Load range concrete: Tensile load 5.1-150.1kN, shear load 5.1-90.2kN
- System component: Anchor rod ASTA/UPM-A, internally threaded anchor IST, reinforcing steel, commercially available threaded rods with test certificate 3.1
- Temperature in the anchoring base: +5°C to 40°C
- Accessories: Metal dispenser gun UPM MR or professional dispenser gun UPM DM P, Blow-out pump UPM AB, Cleaning brush UP BS

Applications

- Reinforcing steel
- Underwater application
- Bridge railings
- Steel construction
- Steel girders
- Column bases
- Silos
- Pumps

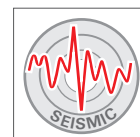
Advantages

- Broad approval package: ETA Option 1 approval, subsequent reinforcement connection, seismic and fire protection testing
- Long curing times: With extended curing time, ideally suited for deep drill holes and large diameters
- Wide range of applications: Epoxy resin makes special applications such as underwater anchoring possible and increases flexibility
- High loads: The high-quality epoxy resin mortar is one of the strongest mortar formulations
- Fixing close to the edge: The expansion pressure-free fixing enables small edge and centre distances and prevents installation damage in the edge area

Materials

Approved for:

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



Straight to the product



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Application examples



Assembly



Injection mortar UPM55

Product variants

Product	Art.No.	Content
UPM 55-390	513712	1 x cartridge 390ml, 2 x static mixer

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-11/0418 has to be considered.

Type	Material / surface ³⁾	Effective anchor- agedepth h_{ef} [mm]	Minimum- member thickness h_{min} [mm]	Maximum-in- stallation- torque $T_{inst,max}$ [Nm]	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			
					$N_{perm}^{4)}$ [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]
UPM-A/ASTA M8	5.8	60	100	10	5	5.1	40	40	9	5.1	40	40
UPM-A/ASTA M8	5.8	160	190	10	9	5.1	40	40	9	5.1	40	40
UPM-A/ASTA M8	R-70	60	100	10	5	6	40	40	9.9	6	40	40
UPM-A/ASTA M8	R-70	160	190	10	9.9	6	40	40	9.9	6	40	40
UPM-A/ASTA M10	5.8	60	100	20	6.3	8.6	45	45	11.2	8.6	45	45
UPM-A/ASTA M10	5.8	200	230	20	13.8	8.6	45	45	13.8	8.6	45	45
UPM-A/ASTA M10	R-70	60	100	20	6.3	9.2	45	45	11.2	9.2	45	45
UPM-A/ASTA M10	R-70	200	230	20	15.7	9.2	45	45	15.7	9.2	45	45
UPM-A/ASTA M12	5.8	70	100	40	8.8	12	55	55	14.1	12	55	55
UPM-A/ASTA M12	5.8	240	270	40	20.5	12	55	55	20.5	12	55	55
UPM-A/ASTA M12	R-70	70	100	40	8.8	13.7	55	55	14.1	13.7	55	55
UPM-A/ASTA M12	R-70	240	270	40	22.5	13.7	55	55	22.5	13.7	55	55
UPM-A/ASTA M16	5.8	80	116	60	10.2	22.3	65	65	14.3	23.2	65	65
UPM-A/ASTA M16	5.8	320	356	60	37.6	22.3	65	65	37.6	22.3	65	65
UPM-A/ASTA M16	R-70	80	116	60	10.2	24.5	65	65	14.3	25.2	65	65
UPM-A/ASTA M16	R-70	320	356	60	42	25.2	65	65	42	25.2	65	65
UPM-A/ASTA M20	5.8	90	138	120	12.2	29.3	85	85	17.1	34.9	85	85
UPM-A/ASTA M20	5.8	400	448	120	58.6	34.9	85	85	58.6	34.9	85	85
UPM-A/ASTA M20	R-70	90	138	120	12.2	29.3	85	85	17.1	39.4	85	85
UPM-A/ASTA M20	R-70	400	448	120	65.7	39.4	85	85	65.7	39.4	85	85
UPM-A/ASTA M24	5.8	96	152	150	13.4	32.2	105	105	18.8	45.2	105	105
UPM-A/ASTA M24	5.8	480	536	150	84.3	50.9	105	105	84.3	50.9	105	105
UPM-A/ASTA M24	R-70	96	152	150	13.4	32.2	105	105	18.8	45.2	105	105
UPM-A/ASTA M24	R-70	480	536	150	94.3	56.8	105	105	94.3	56.8	105	105
UPM-A/ASTA M30	5.8	120	190	300	18.8	45.1	140	140	26.3	63.2	140	140
UPM-A/ASTA M30	5.8	600	670	300	133.8	80.6	140	140	133.8	80.6	140	140
UPM-A/ASTA M30	R-70	120	190	300	18.8	45.1	140	140	26.3	63.2	140	140
UPM-A/ASTA M30	R-70	600	670	300	150.1	90.2	140	140	150.1	90.2	140	140

¹⁾ Design according to ETAG 001, Technical Report TR029 (for static and 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, for example, an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1.5 \times h_{ef}$. For 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 50 °C (resp. short-term up to 80 °C). Drill hole cleaning according to the specifications in the ETA.

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, as well as reduced or minimum spacings and edge distances (anchor groups), the design must be carried out in accordance with the provisions of the complete ETA and the design method ETAG 001. We recommend using our anchor design software DesignFIX.

Injection mortar UPM55

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-11/0418 has to be considered.

Type	Screw Material ³⁾	Effective anchor- aged depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation- torque $T_{inst,max}$ [Nm]	Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			
					N_{perm} ⁴⁾ [kN]	V_{perm} ⁴⁾ [kN]	s_{min} ⁴⁾ [mm]	c_{min} ⁴⁾ [mm]
IST M8	5.8	90	120	10	9.1	5.3	55	55
IST M8	R-70	90	120	10	9.93	5.9	55	55
IST M10	5.8	90	125	20	12.9	8.3	65	65
IST M10	R-70	90	125	20	12.9	9.3	65	65
IST M12	5.8	125	165	40	20.2	12	75	75
IST M12	R-70	125	165	40	20.2	13.5	75	75
IST M16	5.8	160	205	80	28.9	22.4	95	95
IST M16	R-70	160	205	80	28.9	25.1	95	95
IST M20	5.8	200	260	120	40.4	35.4	125	125
IST M20	R-70	200	260	120	40.4	35.4	125	125

¹⁾ Design according to ETAG 001, Technical Report TR029 (for static and 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, for example, an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1,5 \times h_{ef}$. For 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 50 °C (resp. short-term up to 80 °C). Drill hole cleaning according to the specifications in the ETA.

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, as well as reduced or minimum spacings and edge distances (anchor groups), the design must be carried out in accordance with the provisions of the complete ETA and the design method ETAG 001. We recommend using our anchor design software DesignFix.

Injection mortar UPM44

Universal injection mortar for a wide range of applications. Approved for concrete, masonry, seismic, fire protection, and post-installed rebar connections.

Long Description

The two-component vinylsterhybrid chemical anchor injection system UPM 44 is a professional fastening system designed for particularly high loads in all relevant building materials. When used with anchor rods UPM-A/ASTA or internal threaded anchors UPM-I/IST, UPM 44 boasts a comprehensive approval package for chemical fixings in perforated brick, solid brick, concrete, and aerated concrete. Moreover, this injection mortar stands out due to its multitude of approved system components and its approval for reinforcement connections.

Characteristics

- Certification/Approval: ETA Option 1 cracked and uncracked concrete, masonry, post-installed rebar connection, seismic, fire resistance, hammer drilling, hollow drilling, water-filled borehole
- Load range in concrete: Tension load 3.9-150.1kN, Shear load 6-90.2kN
- Load range in masonry: Tension load 0.34-3.43kN, Shear load 0.26-3.28kN
- System component: Anchor rod ASTA/UPM-A, Internal threaded anchor IST/UPM-I, perforated sleeve UPM-SH, concrete reinforcement, commercial threaded rods with 3.1 certificate of compliance
- Temperature in anchoring base: -5°C to +40°C

Applications

- Balcony railings
- Steel beams
- Fire escapes
- Beam anchorage
- Bridge railings
- High racks
- Support feet
- Stair railings
- Roof structures
- Windows

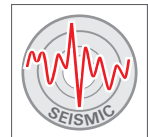
Advantages

- Comprehensive approval package: ETA concrete approval option 1, masonry, retroactive reinforcement connection, seismic and fire protection testing
- High loads: Universal hybrid mortar with high load-bearing capacity thanks to optimised mortar formula
- Carefree working: Suitable for use in water-filled drill holes
- Efficient in perforated bricks: The sieve sleeve for use in perforated brick masonry bridges the plaster and minimises mortar consumption
- Fastening close to edges: The expansion pressure-free fastening allows for small edge and centre distances and prevents installation damage in the edge area

Materials

Approved for:

- Concrete C20/25 to C50/60, cracked and uncracked
- Hollow blocks made of lightweight concrete
- Hollow blocks made of concrete
- Perforated bricks
- Calcium silicate perforated bricks
- Calcium silicate solid bricks
- Aerated concrete
- Solid bricks

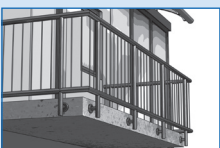


Straight to the product



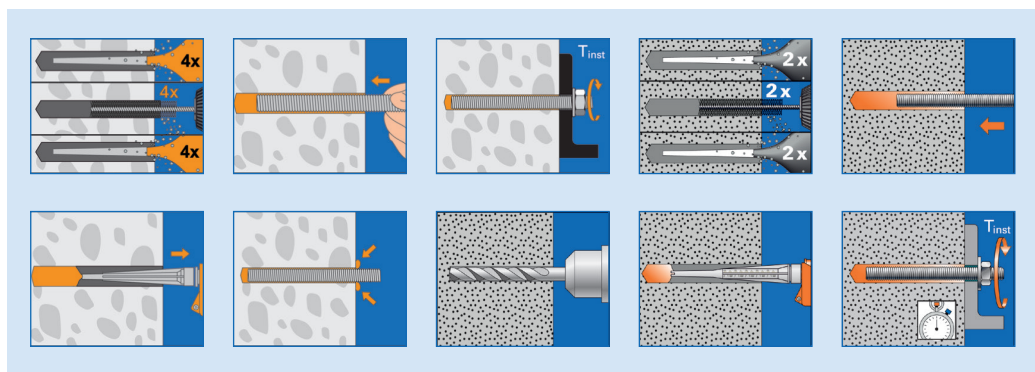
upat.com/en-upm44

Application examples



Injection mortar UPM44

Assembly



Product variants

Product	Art-No.	Contents	Content
BOX UPM 44-360*	547553	360	12 x cartridges 360 ml, 24 x static mixers, 1 x metal dispensing gun, 1 x craftsman's case
UPM 44-360 in Craftsman's box (HWK)	000710	360	20 x cartridges 360 ml, 40 x static mixers, 1 x craftsman's case
UPM 44 CX 150	000506	150	1 x cartridge 145 ml, 2 x static mixers
UPM 44 PROFI-BOX	000299	360	5 x cartridges 360 ml, 10 x static mixers, 1 x blow-out pump, 1 x brush set, 1 x professional dispensing gun, 1 x professional case
UPM 44-300	561442	300	1 x cartridge 300 ml, 2 x static mixers
UPM 44-360	000856	360	1 x cartridge 360 ml, 2 x static mixers

Cartridge Pro (360/390 ml): For long storage life and series installation

Cartridge Standard (300 ml): For use with standard caulking guns

Cartridge Compact (150 ml): For individual fastenings

Profi case (Profi Box): For practical transport and professional organisation, with removable inserts and compartments

Craftsman's box (HWK): For safe storage, robust and stackable

* Note: Available upon request. Not part of the standard product range.

Injection mortar UPM44

Load table

Permissible loads of a single anchor¹⁾ ²⁾ in normal concrete of strength class C20/25.

For the design the complete current assessment ETA-02/0022 has to be considered.

Type	Material / surface ³⁾	Effective anchor- ogedepth h_{ef} [mm]	Minimum- member thickness h_{min} [mm]	Maximum in- stallation- torque $T_{inst,max}$ [Nm]	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			
					$N_{perm}^{4)}$ [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]
UPM-A/ASTA M8	5.8	60	100	10	3.9	6.3	40	40	7.9	6.3	40	40
UPM-A/ASTA M8	5.8	80	110	10	5.3	6.3	40	40	9	6.3	40	40
UPM-A/ASTA M8	5.8	160	190	10	9	6.3	40	40	9	6.3	40	40
UPM-A/ASTA M8	R-70	60	100	10	3.9	6	40	40	7.9	6	40	40
UPM-A/ASTA M8	R-70	80	110	10	5.3	6	40	40	9.9	6	40	40
UPM-A/ASTA M8	R-70	160	190	10	9.9	6	40	40	9.9	6	40	40
UPM-A/ASTA M10	5.8	60	100	20	5.4	9.7	45	45	9.9	9.7	45	45
UPM-A/ASTA M10	5.8	90	120	20	8.1	9.7	45	45	13.8	9.7	45	45
UPM-A/ASTA M10	5.8	200	230	20	13.8	9.7	45	45	13.8	9.7	45	45
UPM-A/ASTA M10	R-70	60	100	20	5.4	9.2	45	45	9.9	9.2	45	45
UPM-A/ASTA M10	R-70	90	120	20	8.1	9.2	45	45	14.8	9.2	45	45
UPM-A/ASTA M10	R-70	200	230	20	15.7	9.2	45	45	15.7	9.2	45	45
UPM-A/ASTA M12	5.8	70	100	40	7.5	14.3	55	55	13.7	14.3	55	55
UPM-A/ASTA M12	5.8	110	140	40	11.8	14.3	55	55	20.5	14.3	55	55
UPM-A/ASTA M12	5.8	240	270	40	20.5	14.3	55	55	20.5	14.3	55	55
UPM-A/ASTA M12	R-70	70	100	40	7.5	13.7	55	55	13.7	13.7	55	55
UPM-A/ASTA M12	R-70	110	140	40	11.8	13.7	55	55	21.7	13.7	55	55
UPM-A/ASTA M12	R-70	240	270	40	22.5	13.7	55	55	22.5	13.7	55	55
UPM-A/ASTA M16	5.8	80	120	60	11.5	23	65	65	16.8	26.9	65	65
UPM-A/ASTA M16	5.8	125	170	60	18	26.9	65	65	29.9	26.9	65	65
UPM-A/ASTA M16	5.8	320	360	60	37.6	26.9	65	65	37.6	26.9	65	65
UPM-A/ASTA M16	R-70	80	120	60	11.5	23	65	65	16.8	25.2	65	65
UPM-A/ASTA M16	R-70	125	170	60	18	25.2	65	65	29.9	25.2	65	65
UPM-A/ASTA M16	R-70	320	360	60	42	25.2	65	65	42	25.2	65	65
UPM-A/ASTA M20	5.8	90	140	120	14	28	85	85	20	40	85	85
UPM-A/ASTA M20	5.8	170	220	120	28	42.3	85	85	48.3	42.3	85	85
UPM-A/ASTA M20	5.8	400	450	120	58.6	42.3	85	85	58.6	42.3	85	85
UPM-A/ASTA M20	R-70	90	140	120	14	28	85	85	20	39.4	85	85
UPM-A/ASTA M20	R-70	170	220	120	28	39.4	85	85	48.3	39.4	85	85
UPM-A/ASTA M20	R-70	400	450	120	65.7	39.4	85	85	65.7	39.4	85	85
UPM-A/ASTA M24	5.8	96	160	150	15.4	30.8	105	105	22	44.1	105	105
UPM-A/ASTA M24	5.8	210	270	150	33.9	60.6	105	105	67.9	60.9	105	105
UPM-A/ASTA M24	5.8	480	540	150	77.6	60.6	105	105	84.3	60.9	105	105
UPM-A/ASTA M24	R-70	96	160	150	15.4	30.8	105	105	22	44.1	105	105
UPM-A/ASTA M24	R-70	210	270	150	33.9	56.8	105	105	67.9	56.8	105	105
UPM-A/ASTA M24	R-70	480	540	150	77.6	56.8	105	105	94.3	56.8	105	105
UPM-A/ASTA M30	5.8	120	190	300	21.5	43.1	140	140	30.8	61.6	140	140
UPM-A/ASTA M30	5.8	280	350	300	50.3	96	140	140	106.8	96	140	140
UPM-A/ASTA M30	5.8	600	670	300	107.7	96	140	140	133.8	96	140	140
UPM-A/ASTA M30	R-70	120	190	300	21.5	43.1	140	140	30.8	61.6	140	140
UPM-A/ASTA M30	R-70	280	350	300	50.3	90.2	140	140	106.8	90.2	140	140
UPM-A/ASTA M30	R-70	600	670	300	107.7	90.2	140	140	150.1	90.2	140	140

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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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.

Injection mortar UPM44

Load table

Permissible loads of a single anchor¹⁾ ²⁾ in normal concrete of strength class C20/25.

For the design the complete current assessment ETA-02/0022 has to be considered.

Type	Screw Material ³⁾	Effective anchor- ogedepth	Minimum member thickness	Maximum installation- torque	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]
IST M8	5.8	90	120	10	9,0	5,3	55	55
IST M8	8.8	90	120	10	13,8	8,3	55	55
IST M8	R-70	90	120	10	9,9	5,9	55	55
IST M10	5.8	90	130	20	13,8	8,3	65	65
IST M10	8.8	90	130	20	19,0	13,3	65	65
IST M10	R-70	90	130	20	15,7	9,3	65	65
IST M12	5.8	125	170	40	20,5	12,1	75	75
IST M12	8.8	125	170	40	23,8	19,3	75	75
IST M12	R-70	125	170	40	22,5	13,5	75	75
IST M16	5.8	160	210	80	35,7	22,4	95	95
IST M16	8.8	160	210	80	35,7	35,8	95	95
IST M16	R-70	160	210	80	35,7	25,1	95	95
IST M20	5.8	200	260	120	54,8	35,4	125	125
IST M20	8.8	200	260	120	54,8	42,9	125	125
IST M20	R-70	200	260	120	54,8	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 $\gamma_L = 1.4$ 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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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.

Injection mortar UPM44

Load table

Permissible loads¹⁾ 2) for a single anchor in masonry for pre-positioned installation.

For the design the complete current assessment ETA-15/0555 has to be considered.

Type	Compressive brick strength f_b [N/mm ²]	Brick raw density ρ [kg/dm ³]	Minimum brick dimensions ³⁾ (L x B x H) [mm]	Effective anchorage depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation torque $T_{inst. max}$ [Nm]	Permissible tensile load ⁴⁾ N_{perm} [kN]	Permissible shear load ⁴⁾ V_{perm} [kN]	Minimum spacing ⁵⁾ $s_{min} \parallel / s_{min} \perp$ [mm]	Characteristic resp. minimum edge distance ⁵⁾ $c_{cr} = c_{min}$ [mm]
Solid brick Mz, NF, acc. to EN 771-1										
M6	≥ 12	³ 1,8	240 x 115 x 71	³ 50	115	4	1,14	0,71	240 / 75	100
M8	≥ 12	³ 1,8	240 x 115 x 71	³ 50	115	10	1,14	0,71	240 / 75	100
M10	≥ 12	³ 1,8	240 x 115 x 71	80	115	10	1,42	1,14	240 / 75	100
M10	≥ 12	³ 1,8	240 x 115 x 71	200	240	10	3,43	2,43	240 / 75	100
M12	≥ 12	³ 1,8	240 x 115 x 71	80	115	10	1,57	1,14	240 / 75	100
M12	≥ 12	³ 1,8	240 x 115 x 71	200	240	10	2,29	3,28	240 / 75	100
Solid sand-lime brick KS, acc. to EN 771-2										
M6	³ 12	³ 1,8	240 x 115 x 71	50	115	3	1,14	0,42	80 / 150	60
M6	³ 12	³ 1,8	240 x 115 x 71	100	115	3	1,57	0,89	80 / 300	60
M8	³ 12	³ 1,8	240 x 115 x 71	50	115	5	1,14	0,42	80 / 150	60
M8	³ 12	³ 1,8	240 x 115 x 71	100	115	5	2,29	0,89	80 / 300	60
M10	³ 12	³ 1,8	240 x 115 x 71	100	115	15	1,57	0,57	80 / 300	60
M10	³ 12	³ 1,8	240 x 115 x 71	200	240	15	3,42	0,57	80 / 600	60
M12	³ 12	³ 1,8	240 x 115 x 71	100	115	15	1,28	0,57	80 / 300	60
M12	³ 12	³ 1,8	240 x 115 x 71	200	240	15	3,42	0,57	80 / 600	60
M16	³ 12	³ 1,8	240 x 115 x 71	100	115	25	1,57	0,57	80 / 300	60
M16	³ 12	³ 1,8	240 x 115 x 71	200	240	25	3,42	0,57	80 / 600	60
Vertically perforated brick Hlz, acc. to EN 771-1³⁾										
M6 / M8 with UPM-SH 12x85 K	³ 12	³ 1,0	370 x 240 x 237	85	240	2	0,34	0,43	100 / 100	100
M8 / M10 with UPM-SH 16x130 K	³ 12	³ 1,0	370 x 240 x 237	130	240	2	0,86	0,57	100 / 100	100
M12 / M16 with UPM-SH 20x130 K	³ 12	³ 1,0	370 x 240 x 237	130	240	2	1,14	0,57	100 / 100	100
Perforated sand-lime brick KSL, acc. to EN 771-2³⁾										
M6 / M8 with UPM-SH 12x85 K	³ 12	≥ 1,4	240 x 175 x 113	85	175	2	0,71	0,71	100 / 115	60
M8 / M10 with UPM-SH 16x130 K	³ 12	≥ 1,4	240 x 175 x 113	130	175	2	1,00	1,29	100 / 115	80
M12 / M16 with UPM-SH 20x85 K	³ 12	≥ 1,4	240 x 175 x 113	85	175	2	1,00	1,14	100 / 115	80
Lightweight concrete hollow block Hbl, acc. EN 771-3³⁾										
M6 / M8 with UPM-SH 12x85 K	³ 2	³ 1,0	362 x 240 x 240	85	240	2	0,43	0,26	100 / 240	60
M6 / M8 with UPM-SH 12x85 K	³ 4	³ 1,0	362 x 240 x 240	85	240	2	0,86	0,57	100 / 240	60
M8 / M10 with UPM-SH 16x85 K	³ 2	³ 1,0	362 x 240 x 240	85	240	2	0,43	0,26	100 / 240	60
M8 / M10 with UPM-SH 16x85 K	³ 4	³ 1,0	362 x 240 x 240	85	240	2	0,86	0,57	100 / 240	60
M12 / M16 with UPM-SH 20x200 K	³ 2	³ 1,0	362 x 240 x 240	200	240	2	0,71	0,26	100 / 240	60
M12 / M16 with UPM-SH 20x200 K	³ 4	³ 1,0	362 x 240 x 240	200	240	2	1,57	0,57	100 / 240	60
Aerated concrete acc. to EN 771-4⁶⁾										
M8	³ 2	³ 0,35	-	100	130	1	0,54	0,43	250 / 250	100
M8	³ 4	³ 0,50	-	200	230	8	1,07	0,71	80 / 80	100
M10	³ 2	³ 0,35	-	100	130	2	0,54	0,43	250 / 250	100
M10	³ 4	³ 0,50	-	200	230	12	1,79	0,71	80 / 80	100
M12	³ 2	³ 0,35	-	100	130	2	0,71	0,54	250 / 250	100
M12	³ 4	³ 0,50	-	200	230	16	1,79	0,71	80 / 80	100
M16	³ 2	³ 0,35	-	100	130	2	0,71	0,43	250 / 250	100
M16	³ 4	³ 0,50	-	200	230	20	1,79	0,71	80 / 80	100

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions of $\gamma_L = 1,4$ are considered. Load values are valid for zinc-plated steel, stainless steel R and highly corrosion resistant steel HCR. In perforated bricks and hollow blocks threaded rod UPM-A/ASTA in combination with perforated sleeve UPM-SH.

²⁾ The given loads are valid for installation and use of fixations in dry masonry - use category d/d - for temperatures in the substrate up to 50 °C (resp. short term up to 80 °C) and drill hole cleaning according to assessment. The given brick types in combination with the permissible loads are an extract of the assessment.

³⁾ More information about, e.g. hole patterns, assortment of perforated sleeves UPM-SH see assessment.

⁴⁾ 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 assessment.

⁵⁾ Minimum feasible spacing resp. edge distance. Details as well as to the distances to joints see assessment.

⁶⁾ Cylindrical drill hole.

Injection mortar UPM33

Cost-effective injection system for standard fixings. Approved for concrete, masonry, and fire protection.

Long Description

The economical injection mortar for standard fastenings. Suitable for concrete, solid and perforated building materials. For medium and high loads. Approved for concrete, masonry and fire protection. Available product variants Standard and 'fast-curing' (Express). Selectable product features Cartridge size 410/360/300/150 ml. Additional system components Anchor rods (UPM-A/ASTA) or internal thread anchors (UPM-I/IST). Used in push-through or through-hole installation. Characterised by secure anchoring, fastening close to the edge and efficiency in hollow bricks. Used, for example, for fastening steel beams, roof structures and canopies.

Characteristics

- Certification/Approval: ETA Option 1 cracked and uncracked concrete, masonry, fire resistance, hammer drilling
- Suitable for: Hollow drilling, water-filled borehole
- Load range in concrete: Tension load 3.4-150.1kN, Shear load 2.9-90.2kN
- Load range in masonry: Tension load 0.54-3.43kN, Shear load 0.43-3.29kN
- System component: Anchor rod ASTA/UPM-A, internal threaded anchor IST/UPM-I, perforated sleeve UPM-SH, commercial threaded rods with 3.1 certificate of compliance
- Variant: Standard, rapid-curing (Express)
- Temperature in anchoring base: -15°C to +40°C

Applications

- Steel beams
- Roof structures
- Canopy
- Carport
- Balcony railings
- Stair railings
- Bridge railings
- Beam anchorage
- Windows
- Façade construction

Advantages

- Secure anchoring: ETA approval for cracked concrete, ETA approval for masonry and fire protection testing
- Fastening close to edges: The expansion pressure-free fastening allows for small edge and centre distances and prevents installation damage in the edge area
- Efficiency in perforated bricks: The sieve sleeve for use in perforated brick masonry bridges the plaster and minimises mortar consumption
- Flexible working: By changing the static mixer, opened cartridges can be reused
- Fast-curing (Express): For a shorter curing time and fastenings at low temperatures

Materials

Approved for:

- Concrete C20/25 to C50/60, cracked and uncracked
- Hollow blocks made of lightweight concrete
- Hollow blocks made of concrete
- Perforated bricks
- Calcium silicate perforated bricks
- Calcium silicate solid bricks
- Aerated concrete
- Solid bricks

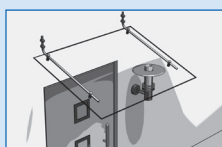
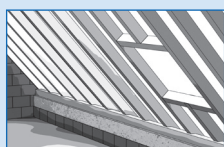


Straight to the product



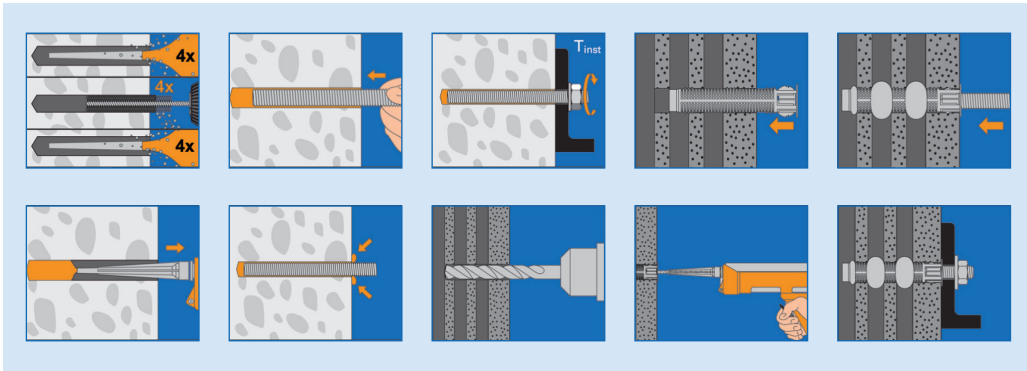
upat.com/en-upm33

Application examples



Injection mortar UPM33

Assembly



Product variants

Product	Art-No.	Shelf live [months]	Availability in countries	Content
UPM 33-360	509167	18	DE, EN, CS, SV, DA, SK	1 x cartridge 360 ml, 2 x static mixers
UPM 33-300	509168	12	DE, EN, CS, SV, DA, SK	1 x cartridge 300 ml, 2 x static mixers
UPM 33-150 CX	542403*	12	DE, EN, CS, SV, SK	1 x cartridge 145 ml, 2 x static mixers
UPM 33-410	578146	18	ES, PT, IT	1 x cartridge 410 ml, 2 x static mixers
UPM 33-300	578145	12	ES, PT, IT	1 x cartridge 300 ml, 2 x static mixers
UPM 33-360 Starter Box	572989	18		5 x 509167 injection mortar UPM 33x360, 1 x 551767 steel brush UP BS ø12, 1 x 551769 steel brush UP BS ø16/18, 1 x 001177 blow-out pump UPM AB, 1 x 512604 metal dispensing gun UPM AM
UPM 33-300 Starter Box	572990*	12		5 x 509168 injection mortar UPM 33-300, 1 x 551767 steel brush UP BS ø12, 1 x 551769 steel brush UP BS ø16/18, 1 x 001177 blow-out pump UPM AB, 1 x 512604 dispensing device metal UPM AM
BOX UPM 33-360	547535	18	DE, EN, CS, SV, DA, SK	12 x cartridges 360 ml, 24 x static mixers, 1 x professional dispensing gun, 1 x craftsman's case
BOX UPM 33-300	547524	12	DE, EN, CS, SV, DA, SK	17 x cartridges 300 ml, 34 x static mixers, 1 x professional dispensing gun, 1 x craftsman's case
UPM 33-360 HWK	512207	18	DE, EN, CS, SV, DA, SK	20 x cartridges 360 ml, 40 x static mixers, 1 x craftsman's case
UPM 33 Express 360	520257	18		1 x cartridge 360 ml, 2 x static mixers
UPM 33 Express 300	520256	12		1 x cartridge 300 ml, 2 x static mixers
UPM 33-360 Express HWK	551937*	18		20 x cartridges 360 ml, 40 x static mixers, 1 x craftsman's case

Cartridge Pro (360/410 ml): For long shelf life and series installation

Standard cartridge (300 ml): For use with standard caulking guns

Compact cartridge (150 ml): For individual fastenings

Craftsman's box (HWK): For safe storage, robust and stackable

* Note: Available upon request. Not part of the standard product range.

Injection mortar UPM33

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-10/0171 has to be considered.

Type	Material / surface ³⁾	Effective anchor-depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation-torque $T_{inst,max}$ [Nm]	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			
					$N_{perm}^{4)}$ [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]
UPM-A/ASTA M6	5.8	50	100	5	-	-	-	-	3.4	2.9	40	40
UPM-A/ASTA M6	5.8	60	100	5	-	-	-	-	4	2.9	40	40
UPM-A/ASTA M6	5.8	72	110	5	-	-	-	-	4.8	2.9	40	40
UPM-A/ASTA M6	R-70	50	100	5	-	-	-	-	3.4	3.2	40	40
UPM-A/ASTA M6	R-70	60	100	5	-	-	-	-	4	3.2	40	40
UPM-A/ASTA M6	R-70	72	110	5	-	-	-	-	4.8	3.2	40	40
UPM-A/ASTA M8	5.8	60	100	10	-	-	-	-	6.6	5.1	40	40
UPM-A/ASTA M8	5.8	80	110	10	-	-	-	-	8.8	5.1	40	40
UPM-A/ASTA M8	5.8	160	190	10	-	-	-	-	9	5.1	40	40
UPM-A/ASTA M8	R-70	60	100	10	-	-	-	-	6.6	6	40	40
UPM-A/ASTA M8	R-70	80	110	10	-	-	-	-	8.8	6	40	40
UPM-A/ASTA M8	R-70	160	190	10	-	-	-	-	9.9	6	40	40
UPM-A/ASTA M10	5.8	60	100	20	4.5	8.6	45	45	8.2	8.6	45	45
UPM-A/ASTA M10	5.8	90	120	20	6.7	8.6	45	45	12.3	8.6	45	45
UPM-A/ASTA M10	5.8	200	230	20	13.8	8.6	45	45	13.8	8.6	45	45
UPM-A/ASTA M10	R-70	60	100	20	4.5	9.2	45	45	8.2	9.2	45	45
UPM-A/ASTA M10	R-70	90	120	20	6.7	9.2	45	45	12.3	9.2	45	45
UPM-A/ASTA M10	R-70	200	230	20	15	9.2	45	45	15.7	9.2	45	45
UPM-A/ASTA M12	5.8	70	100	40	6.3	12	55	55	11.4	12	55	55
UPM-A/ASTA M12	5.8	110	140	40	9.9	12	55	55	18.1	12	55	55
UPM-A/ASTA M12	5.8	240	270	40	20.5	12	55	55	20.5	12	55	55
UPM-A/ASTA M12	R-70	70	100	40	6.3	13.7	55	55	11.4	13.7	55	55
UPM-A/ASTA M12	R-70	110	140	40	9.9	13.7	55	55	18.1	13.7	55	55
UPM-A/ASTA M12	R-70	240	270	40	21.5	13.7	55	55	22.5	13.7	55	55
UPM-A/ASTA M16	5.8	80	120	60	9.6	22.3	65	65	14	22.3	65	65
UPM-A/ASTA M16	5.8	125	170	60	15	22.3	65	65	24.9	22.3	65	65
UPM-A/ASTA M16	5.8	320	360	60	37.6	22.3	65	65	37.6	22.3	65	65
UPM-A/ASTA M16	R-70	80	120	60	9.6	23	65	65	14	25.2	65	65
UPM-A/ASTA M16	R-70	125	170	60	15	25.2	65	65	24.9	25.2	65	65
UPM-A/ASTA M16	R-70	320	360	60	38.3	25.2	65	65	42	25.2	65	65
UPM-A/ASTA M20	5.8	90	140	120	11.7	28	85	85	16.7	34.9	85	85
UPM-A/ASTA M20	5.8	170	220	120	23.3	34.9	85	85	40.3	34.9	85	85
UPM-A/ASTA M20	5.8	400	450	120	54.9	34.9	85	85	58.6	34.9	85	85
UPM-A/ASTA M20	R-70	90	140	120	11.7	28	85	85	16.7	39.4	85	85
UPM-A/ASTA M20	R-70	170	220	120	23.3	39.4	85	85	40.3	39.4	85	85
UPM-A/ASTA M20	R-70	400	450	120	54.9	39.4	85	85	65.7	39.4	85	85
UPM-A/ASTA M24	5.8	96	160	150	-	-	-	-	18.4	44.1	105	105
UPM-A/ASTA M24	5.8	210	270	150	-	-	-	-	56.5	50.9	105	105
UPM-A/ASTA M24	5.8	480	540	150	-	-	-	-	84.3	50.9	105	105
UPM-A/ASTA M24	R-70	96	160	150	-	-	-	-	18.4	44.1	105	105
UPM-A/ASTA M24	R-70	210	270	150	-	-	-	-	56.5	56.8	105	105
UPM-A/ASTA M24	R-70	480	540	150	-	-	-	-	94.3	56.8	105	105
UPM-A/ASTA M30	5.8	120	190	300	-	-	-	-	25.7	61.6	140	140
UPM-A/ASTA M30	5.8	280	350	300	-	-	-	-	89	80.6	140	140
UPM-A/ASTA M30	5.8	600	670	300	-	-	-	-	133.8	80.6	140	140
UPM-A/ASTA M30	R-70	120	190	300	-	-	-	-	25.7	61.6	140	140
UPM-A/ASTA M30	R-70	280	350	300	-	-	-	-	89	90.2	140	140
UPM-A/ASTA M30	R-70	600	670	300	-	-	-	-	150.1	90.2	140	140

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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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.

Injection mortar UPM33

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-10/0171 has to be considered.

Type	Screw Material ³⁾	Effective anchor- age depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation- torque $T_{inst,max}$ [Nm]	Permissible tension (N_{perm}) and shear loads (V_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads			
					N_{perm} ⁴⁾ [kN]	V_{perm} ⁴⁾ [kN]	s_{min} ⁴⁾ [mm]	c_{min} ⁴⁾ [mm]
IST M8	5.8	90	120	10	9.0	5.3	55	55
IST M8	8.8	90	120	10	13.8	8.3	55	55
IST M8	R-70	90	120	10	9.9	5.9	55	55
IST M10	5.8	90	130	20	13.8	8.3	65	65
IST M10	8.8	90	130	20	16.7	13.3	65	65
IST M10	R-70	90	130	20	15.7	9.3	65	65
IST M12	5.8	125	170	40	20.5	12.1	75	75
IST M12	8.8	125	170	40	26.6	19.3	75	75
IST M12	R-70	125	170	40	22.5	13.5	75	75
IST M16	5.8	160	210	80	37.6	22.4	95	95
IST M16	8.8	160	210	80	39.5	30.9	95	95
IST M16	R-70	160	210	80	39.5	25.1	95	95
IST M20	5.8	200	260	120	55.2	35.4	125	125
IST M20	8.8	200	260	120	55.2	42.9	125	125
IST M20	R-70	200	260	120	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 $\gamma_L = 1.4$ 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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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.

Injection mortar UPM33

Load table

Permissible loads¹⁾ ²⁾ for a single anchor in masonry for pre-positioned installation.

For the design the complete current assessment ETA-15/0554 has to be considered.

Type	Compressive brick strength f_b [N/mm ²]	Brick raw density ρ [kg/dm ³]	Minimum brick dimensions ³⁾ [L x B x H] [mm]	Effective anchor- age depth h_{ef} [mm]	Minimum mem- ber thickness h_{min} [mm]	Maximum instal- lation torque $T_{inst,max}$ [Nm]	Permissible tensile load ⁴⁾ N_{perm} [kN]	Permissible shear load ⁴⁾ V_{perm} [kN]	Minimum spacing ⁵⁾ $s_{min} \parallel / s_{min} \perp$ [mm]	Characteristic resp. min- imum edge distance ⁵⁾ $c_{cr} = c_{min}$ [mm]
Solid brick Mz, NF, acc. to EN 771-1										
M8	≥ 12	≥ 1,8	240 x 115 x 71	≥ 50	115	10	1.14	0.71	240 / 75	100
M10	≥ 12	≥ 1,8	240 x 115 x 71	80	115	10	1.43	1.14	240 / 75	100
M10	≥ 12	≥ 1,8	240 x 115 x 71	200	240	10	3.43	2.43	240 / 75	100
M12	≥ 12	≥ 1,8	240 x 115 x 71	80	115	10	1.57	1.14	240 / 75	100
M12	≥ 12	≥ 1,8	240 x 115 x 71	200	240	10	2.29	3.29	240 / 75	100
Solid sand-lime brick KS, acc. to EN 771-2										
M8	≥ 12	≥ 1,8	240 x 115 x 71	50	115	5	1.14	0.43	80 / 150	60
M8	≥ 12	≥ 1,8	240 x 115 x 71	100	240	5	2.29	0.86	80 / 300	60
M10	≥ 12	≥ 1,8	240 x 115 x 71	100	240	15	1.57	0.57	80 / 300	60
M10	≥ 12	≥ 1,8	240 x 115 x 71	200	240	15	3.43	0.57	80 / 600	60
M12	≥ 12	≥ 1,8	240 x 115 x 71	100	240	15	1.29	0.57	80 / 300	60
M12	≥ 12	≥ 1,8	240 x 115 x 71	200	240	15	3.43	0.57	80 / 300	60
Perforated sand-lime brick KSL, acc. to EN 771-2³⁾										
M8 with UPM-SH 12x85 K	≥ 12	≥ 1,4	240 x 175 x 113	85	175	2	0.71	0.71	100 / 115	60
M8 / M10 with UPM-SH 16x85 K	≥ 12	≥ 1,4	240 x 175 x 113	85	175	2	0.86	1.29	100 / 115	80
M12 with UPM-SH 20x85 K	≥ 12	≥ 1,4	240 x 175 x 113	85	175	2	0.86	1.29	100 / 115	80
M8 / M10 with UPM-SH 16x130 K	≥ 12	≥ 1,4	240 x 175 x 113	130	175	2	0.86	1.29	100 / 115	80
Lightweight concrete hollow block Hbl, acc. EN 771-1³⁾										
M8 with UPM-SH 12x85 K	≥ 10	≥ 0,9	240 x 175 x 113	85	175	2	1.14	1.14	240 / 115	100
M8 / M10 with UPM-SH 16x85 K	≥ 10	≥ 0,9	240 x 175 x 113	85	175	2	1	1.57	240 / 115	100
M12 with UPM-SH 20x85 K	≥ 10	≥ 0,9	240 x 175 x 113	85	175	2	1.43	1.71	240 / 115	100
M8 / M10 with UPM-SH 16x130 K	≥ 10	≥ 0,9	240 x 175 x 113	130	175	2	1.43	1.57	240 / 115	100
M12 with UPM-SH 20x130 K	≥ 10	≥ 0,9	240 x 175 x 113	130	175	2	1.43	1.71	240 / 115	100
Aerated concrete acc. to EN 7714-4⁶⁾										
M8	≥ 2	≥ 0,35	-	≥ 100	130	1	0.54	0.43	250 / 250	100
M8	≥ 4	≥ 0,50	-	200	230	8	1.07	0.71	80 / 80	100
M10	≥ 2	≥ 0,35	-	≥ 100	130	2	0.54	0.43	250 / 250	100
M10	≥ 4	≥ 0,50	-	200	230	12	1.79	0.71	80 / 80	100
M12	≥ 2	≥ 0,35	-	≥ 100	130	2	0.71	0.54	250 / 250	100
M12	≥ 4	≥ 0,50	-	200	230	16	1.79	0.71	80 / 80	100

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered. Load values are valid for zinc-plated steel, stainless steel R and highly corrosion resistant steel HCR. In perforated bricks and hollow blocks threaded rod UPM-A/ASTA in combination with perforated sleeve UPM-SH.

²⁾ The given loads are valid for installation and use of fixations in dry masonry - use category d/d - for temperatures in the substrate up to 50 °C (resp. short term up to 80 °C) and drill hole cleaning according to assessment. The given brick types in combination with the permissible loads are an extract of the assessment.

³⁾ More information about, e.g. hole patterns, assortment of perforated sleeves UPM-SH see assessment.

⁴⁾ 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 assessment.

⁵⁾ Minimum feasible spacing resp. edge distance. Details as well as to the distances to joints see assessment.

⁶⁾ Cylindrical drill hole.

Injection mortar UPM 22

The solid injection mortar for standard applications in cracked concrete and masonry



Long Description

The Upat injection mortar UPM 22 is a poly ester hybrid mortar approved for standard fastening applications in non-cracked concrete. The UPM 22 is used with the approved system components Upat anchor rod UPM-A and Upat internal threaded anchor UPM-I for both indoor and outdoor applications. The temperature resistance of the injection mortar UPM 22 from -40 °C to +120 °C ensures a solid load-bearing capacity even under high temperature demands, thereby increasing flexibility during installation.

Characteristics

- Certification/Approval: Concrete, fire test
- Suitable for: Masonry
- Load range for concrete: Tensile load 3.9-86.2 kN, transverse load 5.1-568 kN
- System components: ASTA/UPM-A anchor rod, IST/UPM-I internal thread anchor, UPM-SH sieve sleeve, standard threaded rods with 3.1 test certificate
- Temperature in anchoring base: -15°C to +40°C
- Cartridge size: 410/360/300 ml
- Accessories: Metal extrusion gun UPM MR/Profi UPM DM P, blower UPM AB, cleaning brush UP BS

Applications

- Awnings
- Canopies
- Fireplaces
- French balconies
- Fire escapes
- Gratings
- Gates
- Handrails

Advantages

- Secure anchoring: ETA approval for non-cracked concrete, ETA approval for masonry, and fire protection testing
- Edge mounting: The expansion pressure-free mounting allows for small edge and center distances and prevents installation damage in the edge area
- Flexible working: By changing the static mixer, opened cartridges can continue to be used

Materials

Approved for anchorings in:

- Concrete C20/25 to C50/60, non-cracked

Suitable for:

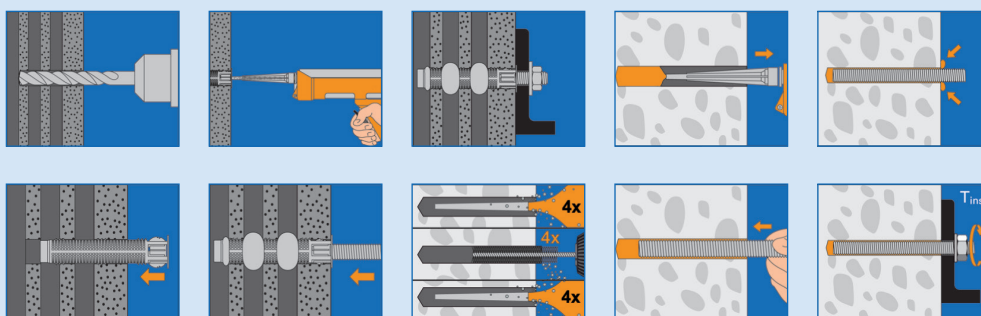
- Solid brick made from lightweight concrete
- Vertically perforated brick
- Perforated sand-lime brick
- Solid sand-lime brick
- Perforated blocks made from lightweight concrete
- Solid brick
- Aerated concrete

Straight to the product



upat.com/en-upm22

Assembly



Injection mortar UPM 22

Product variants

Product	Art.No.	Shelf life [months]	Availability in countries	Contents
UPM 22-300	578143	12	ES, PT, IT	1 x cartridge 300 ml, 2 x static mixers
UPM 22-300	581117	12	DE, FR, NL	1 x cartridge 300 ml, 2 x static mixers
UPM 22-360	581118	15	DE, FR, NL	1 x cartridge 360 ml, 2 x static mixers
UPM 22-410	578144	15	ES, PT, IT	1 x cartridge 410 ml, 2 x static mixers

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-18/0385 has to be considered.

Type	Material / surface ³⁾	Effective anchor- agedepth	Minimum member thickness	Maximum installation- torque	Recommended tension (N_{rec}) and shear loads (V_{rec}); 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]
UPM-A/ASTA M8	5.8	60	100	10	3.9	5.1	40	40
UPM-A/ASTA M8	5.8	80	110	10	5.2	5.1	40	40
UPM-A/ASTA M8	5.8	160	190	10	9	5.1	40	40
UPM-A/ASTA M8	R-70	60	100	10	3.9	6	40	40
UPM-A/ASTA M8	R-70	80	110	10	5.2	6	40	40
UPM-A/ASTA M8	R-70	160	190	10	9.9	6	40	40
UPM-A/ASTA M10	5.8	60	100	20	4.9	8.6	45	45
UPM-A/ASTA M10	5.8	90	120	20	7.3	8.6	45	45
UPM-A/ASTA M10	5.8	200	230	20	13.8	8.6	45	45
UPM-A/ASTA M10	R-70	60	100	20	4.9	9.2	45	45
UPM-A/ASTA M10	R-70	90	120	20	7.3	9.2	45	45
UPM-A/ASTA M10	R-70	200	230	20	15.7	9.2	45	45
UPM-A/ASTA M12	5.8	70	100	40	6.8	12	55	55
UPM-A/ASTA M12	5.8	110	140	40	10.7	12	55	55
UPM-A/ASTA M12	5.8	240	270	40	20.5	12	55	55
UPM-A/ASTA M12	R-70	70	100	40	6.8	13.7	55	55
UPM-A/ASTA M12	R-70	110	140	40	10.7	13.7	55	55
UPM-A/ASTA M12	R-70	240	270	40	22.5	13.7	55	55
UPM-A/ASTA M16	5.8	80	120	60	10.4	22.3	65	65
UPM-A/ASTA M16	5.8	125	170	60	16.2	22.3	65	65
UPM-A/ASTA M16	5.8	320	360	60	37.6	22.3	65	65
UPM-A/ASTA M16	R-70	80	120	60	10.4	24.9	65	65
UPM-A/ASTA M16	R-70	125	170	60	16.2	25.2	65	65
UPM-A/ASTA M16	R-70	320	360	60	41.5	25.2	65	65
UPM-A/ASTA M20	5.8	90	140	120	13.5	32.3	85	85
UPM-A/ASTA M20	5.8	170	220	120	25.4	34.9	85	85
UPM-A/ASTA M20	5.8	400	450	120	58.6	34.9	85	85
UPM-A/ASTA M20	R-70	90	140	120	13.5	32.3	85	85
UPM-A/ASTA M20	R-70	170	220	120	25.4	39.4	85	85
UPM-A/ASTA M20	R-70	400	450	120	59.8	39.4	85	85
UPM-A/ASTA M24	5.8	96	160	150	17.2	41.4	105	105
UPM-A/ASTA M24	5.8	210	270	150	37.7	50.9	105	105
UPM-A/ASTA M24	5.8	480	540	150	84.3	50.9	105	105
UPM-A/ASTA M24	R-70	96	160	150	17.2	41.4	105	105
UPM-A/ASTA M24	R-70	210	270	150	37.7	56.8	105	105
UPM-A/ASTA M24	R-70	480	540	150	86.2	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 $\gamma_L = 1.4$ 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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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.

Injection mortar UPM 22

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-18/0385 has to be considered.

Type	Screw Material ³⁾	Effective anchor- age depth	Minimum member thickness	Maximum installation- torque	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]
IST M8	5.8	90	120	10	9	5.3	55	55
IST M8	8.8	90	120	10	13.8	8.3	55	55
IST M8	R-70	90	120	10	9.9	5.9	55	55
IST M10	5.8	90	130	20	13.8	8.3	65	65
IST M10	8.8	90	130	20	16.7	13.3	65	65
IST M10	R-70	90	130	20	15.7	9.3	65	65
IST M12	5.8	125	170	40	20.5	12.1	75	75
IST M12	8.8	125	170	40	26.6	19.3	75	75
IST M12	R-70	125	170	40	22.5	13.5	75	75
IST M16	5.8	160	210	80	37.6	22.4	95	95
IST M16	8.8	160	210	80	39.5	30.9	95	95
IST M16	R-70	160	210	80	39.5	25.1	95	95
IST M20	5.8	200	260	120	55.2	35.4	125	125
IST M20	8.8	200	260	120	55.2	42.9	125	125
IST M20	R-70	200	260	120	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 $\gamma_L = 1.4$ 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⁾ The specified loads are valid for anchorages in dry and damp concrete. For temperatures in the anchoring substrate up to 50 °C (resp. short term up to 80 °C). Drill hole cleaning as per specification in the ETA. The factor Ψ_{sus} 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^{1) 2)} for a single anchor in masonry for pre-positioned installation.

For the design the complete current assessment ETA-15/0555 has to be considered.

Type	Compressive brick strength	Brick row density	Minimum brick di- mensions ³⁾	Effective anchor- age depth	Minimum mem- ber thickness	Maximum instal- lation torque	Permissible tensile load ⁴⁾	Permissible shear load ⁴⁾	Minimum spacing ⁵⁾	Characteristic resp. min- imum edge distance ⁵⁾
	f_b [N/mm ²]	r [kg/dm ²]	(L x B x H) [mm]	h_{ef} [mm]	h_{min} [mm]	$T_{inst,max}$ [Nm]	N_{perm} [kN]	V_{perm} [kN]	$s_{min} // s_{min}^{\perp}$ [mm]	$c_{cr} = c_{min}$ [mm]
Solid sand-lime brick KS, acc. to EN 771-2										
M8	≥ 12	$\geq 1,8$	240 x 115 x 71	50	115	5	1,14	0,42	80 / 150	60
M8	≥ 12	$\geq 1,8$	240 x 115 x 71	100	240	5	2,29	0,89	80 / 300	60
M10	≥ 12	$\geq 1,8$	240 x 115 x 71	100	240	15	1,57	0,57	80 / 300	60
M10	≥ 12	$\geq 1,8$	240 x 115 x 71	200	240	15	3,42	0,57	80 / 600	60
M12	≥ 12	$\geq 1,8$	240 x 115 x 71	100	240	15	1,28	0,57	80 / 300	60
M12	≥ 12	$\geq 1,8$	240 x 115 x 71	200	240	15	3,42	0,57	80 / 600	60
Vertically perforated brick Hlz, acc. to EN 771-1³⁾										
M8 with UPM-SH 12x85 K	≥ 12	$\geq 0,9$	240 x 175 x 113	85	175	2	0,34	0,43	100 / 100	100
		$\geq 0,9$	240 x 175 x 113	85	175	2				
		$\geq 0,9$	240 x 175 x 113	85	175	2				
M8 / M10 with UPM-SH 16x130 K	≥ 12	$\geq 0,9$	240 x 175 x 113	130	175	2	0,86	0,57	100 / 100	100
M12 with UPM-SH 20x130 K	≥ 12	$\geq 0,9$	240 x 175 x 113	130	175	2	1,14	0,57	100 / 100	100
Perforated sand-lime brick KSL, acc. to EN 771-2³⁾										
M8 with UPM-SH 12x85 K	≥ 12	$\geq 1,4$	240 x 175 x 113	85	175	2	0,71	0,71	100 / 115	60
		$\geq 1,4$	240 x 175 x 113	85	175	2	0,86			
M8 / M10 with UPM-SH 16x130 K	≥ 12	$\geq 1,4$	240 x 175 x 113	130	175	2	0,86	1,29	100 / 115	80
M12 with UPM-SH 20x85 K	≥ 12	$\geq 1,4$	240 x 175 x 113	85	175	2	0,86	1,14	100 / 115	80
Aerated concrete acc. to EN 7714-4⁶⁾										
M8	≥ 2	$\geq 0,35$	-	100	130	1	0,54	0,43	250 / 250	100
M8	≥ 4	$\geq 0,50$	-	200	230	8	1,07	0,71	80 / 80	100
M10	≥ 2	$\geq 0,35$	-	100	130	2	0,54	0,43	250 / 250	100
M10	≥ 4	$\geq 0,50$	-	200	230	12	1,79	0,71	80 / 80	100
M12	≥ 2	$\geq 0,35$	-	100	130	2	0,71	0,54	250 / 250	100
M12	≥ 4	$\geq 0,50$	-	200	230	16	1,79	0,71	80 / 80	100

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered. Load values are valid for zinc-plated steel, stainless steel R and highly corrosion resistant steel HCR. In perforated bricks and hollow blocks threaded rod UPM-A/ASTA in combination with perforated sleeve UPM-SH.

²⁾ The given loads are valid for installation and use of fixations in dry masonry - use category d/d - for temperatures in the substrate up to 50 °C (resp. short term up to 80 °C) and drill hole cleaning according to assessment. The given brick types in combination with the permissible loads are an extract of the assessment.

³⁾ More information about, e.g. hole patterns, assortment of perforated sleeves UPM-SH see assessment.

⁴⁾ In the case of combinations of tension 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 assessment.

⁵⁾ Minimum feasible spacing resp. edge distance. Details as well as to the distances to joints see assessment.

⁶⁾ Cylindrical drill hole.

Injection mortar UPM11

Cost-effective injection mortar for simple fixings. Without approval. Suitable for concrete and masonry.

Long Description

The affordable injection mortar for simple fastenings. Suitable for concrete, solid and perforated building materials. For medium loads. Selectable product features Cartridge size 360/300 ml. Additional system components Anchor rods (UPM-A/ASTA) or internal thread anchors (UPM-I/IST). Used in pre-insertion or push-through installation. Features inexpensive anchoring, fastening close to edges and flexible working. Used, for example, for fastening light strips, monitor brackets and handrails.

Characteristics

- Suitable for: Concrete, masonry, hammer drilling
- Load range in masonry: Tension load 0.6-1.7kN, shear load 0.6-1.7kN
- System component: Anchor rod ASTA/UPM-A, internal threaded anchor IST/UPM-I, perforated sleeve UPM-SH
- Temperature in anchoring base: 0°C to 40°C
- Accessories: Metal dispenser gun UPM MR or professional dispenser gun UPM DM P, Blow-out pump UPM AB, Cleaning brush UP BS

Applications

- Lighting strips
- Screen brackets
- Handrails
- Garden gates
- Speakers

Advantages

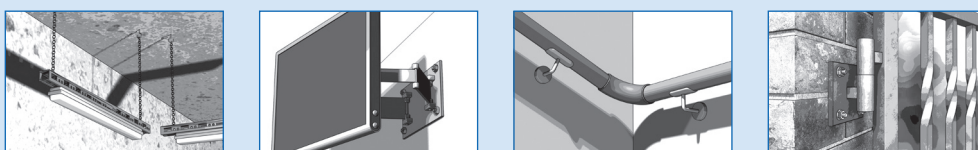
- Cost-effective anchoring: The cost-effective mortar for non-approval-relevant fastening
- Fastening close to edges: The expansion pressure-free fastening allows for small edge and centre distances and prevents installation damage in the edge area
- Flexible working: By changing the static mixer, opened cartridges can be reused

Materials

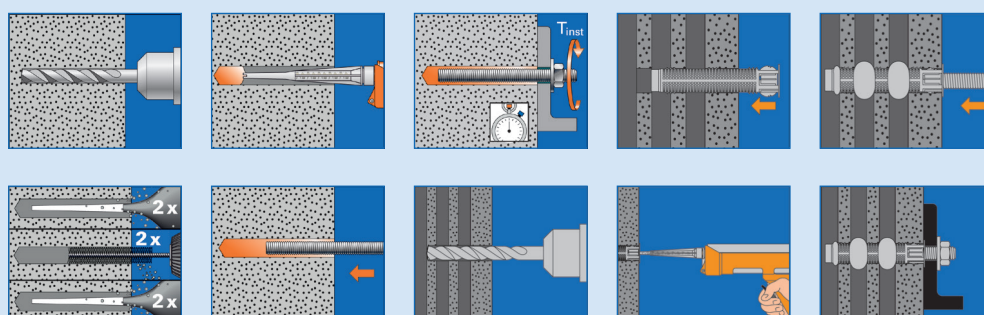
- Concrete
- Perforated bricks
- Hollow blocks
- Calcium silicate perforated bricks
- Calcium silicate solid bricks
- Aerated concrete
- Solid lightweight concrete blocks
- Solid bricks



Application examples



Assembly



Straight to the product



upat.com/en-upm11

Injection mortar UPM11

Product variants

Product	Art.No.	Shelf life [months]	Availability in countries	Content
UPM 11-300	093834	12	DE, EN, CS, SV, DA, SK	1 x cartridge 300 ml, 2 x static mixers
UPM 11-300	578141	12	ES, PT, IT	1 x cartridge 300 ml, 2 x static mixers
UPM 11-360	000640	15	DE, EN, CS, SV, DA, SK	1 x cartridge 360 ml, 2 x static mixers
UPM 11-410	578142	15	ES, PT, IT	1 x cartridge 410 ml, 2 x static mixers

Load table

Recommended loads^{1) 2)} for a single anchor in masonry for pre-positioned installation.

Type	Compressive brick strength f_b [N/mm ²]	Drill hole diameter d_0 [mm]	Minimum drill hole depth h_0 min [mm]	Effective anchorage depth h_{ef} [mm]	Content UPM 11 [scale units]	Maximum installation torque $T_{inst,max}$ [Nm]	Recommended load F_{rec} [kN]	Minimum spacing $s_{min} \parallel$ / $s_{min} \perp$ [mm]	Minimum edge distance $c_{cr} = c_{min}$ [mm]
Solid brick Mz									
M6	≥ 12	8	80	75	3	4	13)	240 / 75	100
M8	≥ 12	10	80	75	3	4	13)	240 / 75	100
M10	≥ 12	12	80	75	4	4	1.7	240 / 75	100
M12	≥ 12	14	80	75	5	4	1.7	240 / 75	100
Solid sand-lime brick KS									
M6	≥ 12	8	80	75	3	4	13)	80 / 300	60
M8	≥ 12	10	80	75	3	4	13)	80 / 300	60
M10	≥ 12	12	80	75	4	4	1.7	80 / 300	60
M12	≥ 12	14	80	75	5	4	1.7	80 / 300	60
Perforated sand-lime brick KSL									
M6 mit UPM-SH 12x50 K	≥ 12	12	55	50	5	4	0.8	100 / 115	60
M8 mit UPM-SH 12x85 K	≥ 12	12	90	85	10	4	0.8	100 / 115	60
M8 mit UPM-SH 16x130 K	≥ 12	16	135	130	15	4	0.8	100 / 115	80
M10 mit UPM-SH 16x85 K	≥ 12	16	90	85	12	4	0.8	100 / 115	80
M12 mit UPM-SH 20x85 K	≥ 12	20	90	85	15	4	0.8	100 / 115	80
Vertically perforated brick Hlz									
M6 mit UPM-SH 12x50 K	≥ 12	12	55	50	5	4	0.8	240 / 115	100
M8 mit UPM-SH 12x85 K	≥ 12	12	90	85	10	4	0.8	240 / 115	100
M8 mit UPM-SH 16x130 K	≥ 12	16	135	130	15	4	0.8	240 / 115	100
M10 mit UPM-SH 16x85 K	≥ 12	16	90	85	12	4	0.8	240 / 115	100
M12 mit UPM-SH 20x85 K	≥ 12	20	90	85	15	4	0.8	240 / 115	100
Lightweight concrete hollow block Hbl									
M6 mit UPM-SH 12x50 K	≥ 4	12	55	50	5	4	0.6	250 / 250	100
M8 mit UPM-SH 12x85 K	≥ 4	12	90	85	10	4	0.6	250 / 250	100
M8 mit UPM-SH 16x130 K	≥ 4	16	135	130	15	4	0.6	250 / 250	100
M10 mit UPM-SH 16x85 K	≥ 4	16	90	85	12	4	0.6	250 / 250	100
M12 mit UPM-SH 20x85 K	≥ 4	20	90	85	15	4	0.6	250 / 250	100
Concrete hollow block Hbn									
M6 mit UPM-SH 12x50 K	≥ 4	12	55	50	5	4	0.6	250 / 250	100
M8 mit UPM-SH 12x85 K	≥ 4	12	90	85	10	4	0.6	250 / 250	100
M8 mit UPM-SH 16x130 K	≥ 4	16	135	130	15	4	0.6	250 / 250	100
M10 mit UPM-SH 16x85 K	≥ 4	16	90	85	12	4	0.6	250 / 250	100
M12 mit UPM-SH 20x85 K	≥ 4	20	90	85	15	4	0.6	250 / 250	100

¹⁾ The application conditions of the manufacturer must be taken into account. In perforated and hollow bricks, use the ASTA/UPM-A anchor rod in combination with the UPM-SH sieve sleeve.

²⁾ Recommended anchor load capacities for tensile load, transverse load, and oblique tensile load at any angle without considering the influence of axial and edge distances.

³⁾ For masonry with superimposed load, the recommended load can be increased to 1.4 kN.

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 uncracked 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

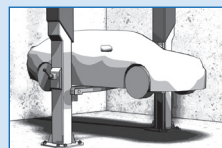
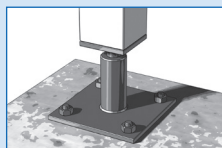
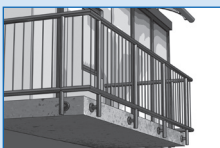


Straight to the product

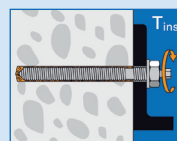
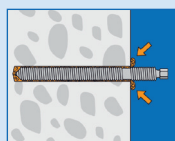
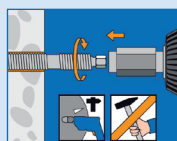
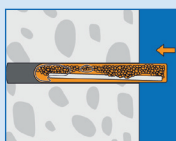
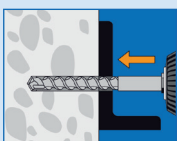


upat.com/en-uka3

Application examples



Assembly



Bonded anchor UKA3 Plus

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 anchorage depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation torque $T_{inst,max}$ [Nm]	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			
					$N_{perm}^{4)}$ [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 $\gamma_L = 1.4$ 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⁾ 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 ψ_{sus} 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.

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

Type	Material / surface ³⁾	Effective anchorage depth h_{ef} [mm]	Minimum member thickness h_{min} [mm]	Maximum installation torque $T_{inst,max}$ [Nm]	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			
					$N_{perm}^{4)}$ [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 $\gamma_L = 1.4$ 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⁾ 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 ψ_{sus} 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.

Anchor rods UPM-A/ASTA

Proven anchor rods for chemical fixings.

Long Description

The tried-and-tested anchor rods for chemical fastenings. Suitable for concrete, solid and perforated building materials. For medium and high loads. Available product variants: Cartridge system (ASTA) and cartridge system (UPM-A). Available in stainless steel (R/A4), electro-galvanised steel (zp) and hot-dip galvanised steel (hdg). Selectable product features: thread M6-M30 and total length 75-380 mm. Additional system components: injection mortar (UPM 55/UPM 44/UPM 33/UPM11) or composite anchors (UKA3 Plus). Used in pre-insertion or push-through installation. Used, for example, for fastening bridge railings, pumps and lifting platforms.

Characteristics

- System component: Injection mortars UPM 55/UPM 44/UPM 33/UPM 11, resin capsule UKA3 Plus
- Suitable for: Concrete, masonry
- Variant: Cartridge/capsule system (ASTA), Cartridge system (UPM-A)
- Feature: Thread M6-M30, Total length 75-380mm

Applications

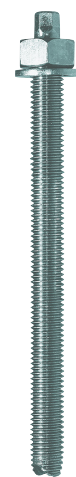
- Bridge railings
- Pumps
- Lift platforms
- Balcony railings
- Stair railings
- Steel beams
- High shelves
- Silos
- Reinforcing steel
- Underwater applications

Advantages

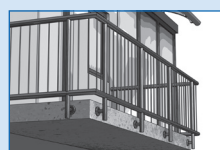
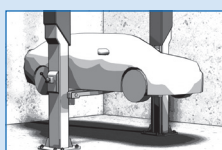
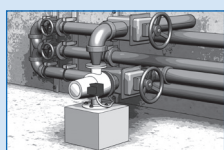
- Approved for use in cracked and non-cracked concrete, solid masonry, perforated masonry and aerated concrete, depending on the system
- The external hexagon of the ASTA anchor rod enables quick and easy installation with a power tool.
- Stainless steel (R/A4): For fastenings outdoors or in damp rooms
- Galvanised steel (zp): For fastenings in dry indoor areas
- Hot-dip galvanised steel (hdg): For fastenings in dry indoor areas and increased resistance

Materials

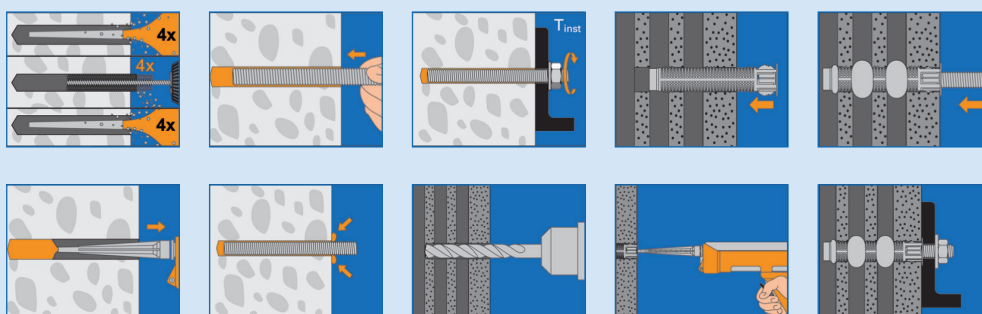
The anchor rods are approved or suitable for use with Upat injection cartridges and glass capsules for different building materials.



Application examples



Assembly



Straight to the product



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Anchor rods UPM-A/ASTA

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Art.-No. (hdg)	Thread	Sales unit (zp)	Sales unit (R)	Sales unit (hdg)
ASTA M8x110	007830	007845	008200	M8	10	10	10
ASTA M8x150	007860	-	-	M8	10	-	-
ASTA M8x170	-	007862	-	M8	-	10	-
ASTA M8x190	007861	007838	-	M8	10	10	-
ASTA M10x115 GS	-	566679*	-	M10	-	10	-
ASTA M10x130	007831	007846	008201	M10	10	10	10
ASTA M10x150	-	007864	-	M10	-	10	-
ASTA M10x165	007819	007843	-	M10	10	10	-
ASTA M10x190	007820	007865	-	M10	10	10	-
ASTA M10x220	-	573392*	-	M10	-	10	-
ASTA M10x250	-	007867	-	M10	-	10	-
ASTA M10x300	-	007868	-	M10	-	10	-
ASTA M10x350	-	551720*	-	M10	-	10	-
ASTA M12x160	007832	007847	008202	M12	10	10	10
ASTA M12x160 GS	-	566681*	-	M12	-	10	-
ASTA M12x180	007869	007844	-	M12	10	10	-
ASTA M12x190	-	007870	-	M12	-	10	-
ASTA M12x220	007821	007871	-	M12	10	10	-
ASTA M12x250	007822	007873	-	M12	10	10	-
ASTA M12x300	007823	007874	-	M12	10	10	-
ASTA M14x170	007833	007848	-	M14	10	10	-
ASTA M16x165	007824	007839	-	M16	10	10	-
ASTA M16x190	007834	007849	008204	M16	10	10	10
ASTA M16x215	-	007989	-	M16	-	10	-
ASTA M16x250	007825	007990	-	M16	10	10	-
ASTA M16x300	007826	007991	-	M16	10	10	-
ASTA M20x220	007827	-	-	M20	10	-	-
ASTA M20x260	007835	007850	008205	M20	10	10	5
ASTA M20x300	007828	-	-	M20	10	-	-
ASTA M20x350	007992	007993	-	M20	10	10	-
ASTA M22x280	007836	-	-	M22	5	-	-
ASTA M24x300	007837	007852	-	M24	5	5	-
ASTA M27x340	007855*	007857*	-	M27	5	5	-
ASTA M30x380	007856	007858*	-	M30	5	5	-

Product	Art.-No. (zp)	Art.-No. (R)	Drill diameter	Thread	Sales unit (zp)	Sales unit (R)
UPM-A M6x75	509171	-	8	M6	20	-
UPM-A M8x110	509176	509185	10	M8	20	20
UPM-A M8x130	509177	512491	10	M8	20	10
UPM-A M10x110	509178	509186	12	M10	20	20
UPM-A M10x130	509179	568876*	12	M10	20	20
UPM-A M10x170	509180	509187	12	M10	20	20
UPM-A M12x120	509181	566678	14	M12	20	20
UPM-A M12x140	509182	509188	14	M12	20	20
UPM-A M16x130	512490	512492	18	M16	10	10
UPM-A M16x175	509183	509189	18	M16	10	10
UPM-A M16x200	509184	-	18	M16	10	-

Stainless steel (R/A4): For fastenings outdoors or in damp rooms
 Galvanised steel (zp/gvz): For fastenings in dry indoor areas
 Hot-dip galvanised steel (hdg): For fastenings in dry indoor areas and increased resistance
 Cartridge system (ASTA): For use with cartridge systems & capsule system
 Cartridge system (UPM-A): For use with cartridge systems
 * Note: Available upon request. Not part of the standard product range.

Internal threaded anchor UPM-I/IST

Proven internal threaded anchors for chemical fixings.

Long Description

The Upat internal thread anchors UPM-I/IST are system components in chemical fixings that offer the highest flexibility in anchoring through screws with metric threads or threaded rods due to the possible flush disassembly. Internal thread anchors are suitable for fixings in various building materials with all injection mortar and cartridge systems. The most economical use of bonded anchors is the combination of the internal thread anchor IST and the glass capsule UKA3 Plus. When many fixing points are processed successively, the combination of internal thread anchor UPM-I and injection mortar cartridges is recommended.

Characteristics

- System component: Injection mortar UPM 55/UPM 44/UPM 33/UPM 11, Bonded anchor UKA3 Plus
- Suitable for: Concrete, masonry
- Variant: Cartridge/capsule (IST), cartridge system (UPM-I)
- Material: Zinc plated steel (zp), stainless steel (R)
- Feature: Thread M5-M20

Applications

- Pipe and ventilation ducts
- Sprinkler systems
- Cable trays and ladders
- Grids
- Steel constructions
- Machines
- Consoles
- Formwork props

Advantages

- Maximum flexibility thanks to easy removal – fastening point can be reused: undefined
- Minimal costs and complexity thanks to the option of using standard screws and threaded rods: undefined
- Approved for concrete and masonry, depending on the system: undefined
- Stainless steel (R): For fastening outdoors or in damp rooms
- Galvanised steel (zp): For fastening in dry indoor areas

Materials

- The internal threaded anchors are approved or suitable for various building materials when used with different Upat injection mortars and bonded anchor cartridges. The details (materials, loads, etc.) of the available approval apply.



Application examples

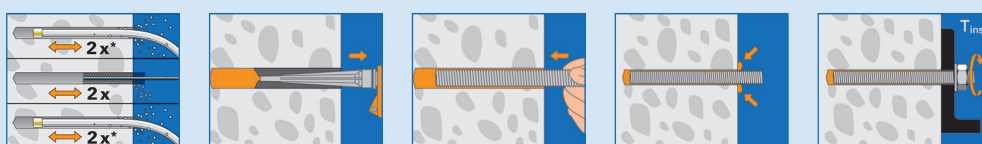


Straight to the product



upat.com/en-ist

Assembly



Internal threaded anchor UPM-I/IST

Product variants

Product	Art-No.	Drill diameter	Application	Material	Internal thread	Max. bolt penetration	Min. drill hole depth	Min. bolt penetration	Min. effect. anchorage depth	VDS approval	Sales unit
UPM-I 6	043663	14	Dry area	Galvanised steel	M6	60	90	6	85	✓	10
UPM-I 8	043664	14	Dry area	Galvanised steel	M8	60	90	8	85	✓	10
UPM-I 10	043665	18	Dry area	Galvanised steel	M10	60	90	10	85	✓	10
UPM-I 12	043666	18	Dry area	Galvanised steel	M12	60	90	12	85	✓	10

Product	Art.-No. (zp)	Art.-No. (R)	Drill diameter	Thread	Min. drill hole depth	Sales unit (zp)	Sales unit (R)
IST M5	513714	-	10	M5	75	10	-
IST M6	513717	-	12	M6	75	10	-
IST M8	513718	513724	14	M8	90	10	10
IST M10	513719	513725	18	M10	90	10	10
IST M12	513721	513726	20	M12	125	10	10
IST M16	513722	513727	24	M16	160	5	5
IST M20	513723	-	32	M20	200	5	-

Stainless steel (R): For fastening outdoors or in damp rooms

Galvanised steel (zp/gvz): For fastening in dry indoor areas

Cartridge system (IST): For use with cartridge systems

Cartridge system (UPM-I): For use with cartridge systems

Perforated sleeve UPM-SH

Cost-saving perforated sleeve for fixings in perforated brick.

Long Description

The Upat perforated sleeve UPM-SH is an innovative component designed for the optimal use of Upat injection mortars in conjunction with anchor rods UPMA-A/ASTA or internal thread anchors UPM-I/IST in perforated masonry. The perforated sleeve is inserted into the drilled hole and filled with injection mortar from the base of the perforated sleeve. When setting the anchor rod or internal thread anchor, the mortar is pushed through the lattice structure and securely connects with the perforated masonry. This allows the load to be transferred into the building material. The perforated sleeve UPM-SH can also bridge non-load-bearing layers.

Characteristics

- System component: Injection mortar UPM 44/UPM 33/UPM 11
- Suitable for: Masonry
- Material: Plastic
- Feature: Compatible with UPM-A/ASTA M6-M16/ UPM-I M6-M12, Drill diameter 12-20mm, Anchorage depth 50-200mm

Applications

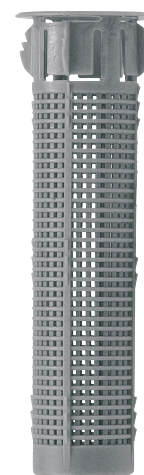
- Steel structures
- Wooden structures
- Railings
- Façades
- Stairs
- Steel brackets
- Machines
- Masts
- Awnings
- Canopies

Advantages

- Minimal Mortar Consumption: The optimized hole pattern structure of the sieve sleeve ensures the lowest possible mortar consumption, resulting in significant cost savings
- Simple and Cost-Effective: One sieve sleeve suitable for multiple anchor rod diameters. Innovative centering wings secure the anchor rods
- Special Barbs Prevent Falling Out During Overhead Installation
- Optimized Interlocking in Hollow Blocks through the Use of the Sieve Sleeve
- ETA Approval - Approved System

Materials

- Hollow block made of lightweight concrete
- Sand-lime perforated brick
- Sand-lime solid brick
- Pumice hollow core planks
- Hollow core slabs and other perforated stones
- Pumice concrete and other solid building materials
- Perforated clay brick
- Hollow block made of concrete
- Solid brick

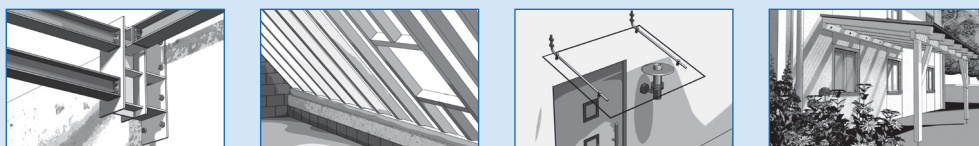


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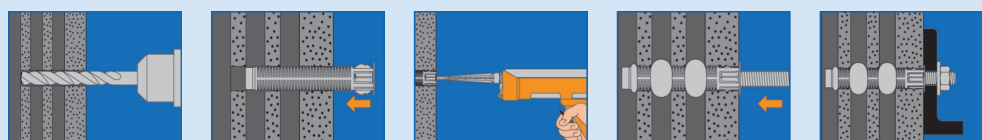


upat.com/en-upmsh

Application examples



Assembly



Perforated sleeve UPM-SH

Product variants

Product	Art.No.	Drill diameter	Fill quantity	Min. drill hole depth	Min. effect. anchorage depth	Match	Sales unit
UPM-SH 12x50 K	041912	12	5	60	50	UPM-A / ASTA M6-M8	50
UPM-SH 12x85 K	041913	12	10	95	85	UPM-A / ASTA M6-M8	50
UPM-SH 16x85 K	041914	16	12	95	85	UPM-A / ASTA M8-M10, UPM-I M6-M8	50
UPM-SH 16x130 K	041915	16	15	140	130	UPM-A / ASTA M8-M10, UPM-I M6-M8	20
UPM-SH 20x85 K	041916	20	15	95	85	UPM-A / ASTA M12-M16, UPM-I M10-M12	20
UPM-SH 20x130 K	512493	20	—	140	130	UPM-A / ASTA M12-M16, UPM-I M10-M12	20
UPM-SH 20x200 K	512494	20	—	210	200	UPM-A / ASTA M12-M16, UPM-I M10-M12	20

Accessories Chemical Fixings

Suitable accessories for every application.

Long Description

Whether it's dispenser, hole cleaning equipment, or static mixers, Upat accessories enable efficient installation of fasteners.

Advantages

- Manual Metal Dispenser gun UPM AM: The robust solution for dispensing Upat injection cartridges up to 390ml
- Professional Manual Dispenser gun UPM DM P: The professional solution for efficient dispensing of Upat injection cartridges up to 390ml
- Blow-Out Pump UPM AB: The approval-compliant blow-out pump for borehole cleaning
- Cleaning Brush UP BS: The approval-compliant steel brush for borehole cleaning
- Static Mixer UPM MR: The safe solution for homogeneously mixing the two mortar components of all Upat injection cartridges



Product variants

Product	Art-No.	Content
Blow-out tool	001177	1 x Blow-out pump
BS ø8	078177	1 x Cleaning brush ø8
BS ø10	078178	1 x Cleaning brush ø10
BS ø12	078179	1 x Cleaning brush ø12
BS ø14	078180	1 x Cleaning brush ø14
BS ø16/18	078181	1 x Cleaning brush ø16/18
BS ø20/22	052277	1 x Cleaning brush ø20/22
BS ø24	078182	1 x Cleaning brush ø24
BS ø25	097806	1 x Cleaning brush ø25
BS ø28	078183	1 x Cleaning brush ø28
BS ø35	078184	1 x Cleaning brush ø35
MW-SDS plus	004060	1 x setting tool MW-SDS plus
SDS max 1/2	001538	1 x Adapter SDS MAX 1/2" VK
SDS max 3/4	001539	1 x Adapter SDS MAX 3/4" VK
SDS plus 1/2	001537	1 x Adapter SDS PLUS 1/2" VK
SK SW 8 1/2	001536	1 x Adapter SK SW 8 1/2" VK
Static mixer	000521	10 x static mixers
UP BS ø8	551765	1 x cleaning brush ø8
UP BS ø10	551766	1 x cleaning brush ø10
UP BS ø12	551767	1 x cleaning brush ø12
UP BS ø14	551768	1 x cleaning brush ø14
UP BS ø16/18	551769	1 x cleaning brush ø16/18
UP BS ø24	551770	1 x cleaning brush ø24
Upat Cleaning brush UP B Set ø14/20	551764	1 x cleaning brush ø14/20
Upat Cleaning brush UP B Set ø20/30	551763	1 x cleaning brush ø20/30
UPM AM	512604	1 x dispensing device metal
UPM DM P	548558	1 x dispensing device professional
UPM DM P	570073	1 x dispensing device professional

Straight to the product



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Frame fixings

Frame fixing URD	Page 66
Frame fixing URDL	Page 69
Metal frame anchor UFD	Page 72

Frame fixing URD

Short all-rounder for versatile use. Approved for concrete, masonry, and fire protection.

Long Description

The short all-rounder for versatile use. Suitable for concrete, solid and perforated building materials. For medium and high loads. Approved for concrete, masonry and fire protection. Available product variants: countersunk head (T) and hexagon head (FUS). Available in stainless steel (R/A4) and electro-galvanised steel (zp) grades. Selectable product features: drill diameter 8/10 and effective length 10-210 mm. Used in through-hole mounting. Features secure anchoring, Upat nylon quality and easy installation. Used, for example, for fastening facade constructions, wooden substructures and screen brackets.

Characteristics

- Certification/Approval: ETA redundant in cracked concrete, ETA redundant in masonry, fire resistance
- Building materials: Concrete, solid construction, hollow construction
- Load Range in Concrete: Tension Load 0.99-1.79kN, Shear Load 3.93-5.98kN
- Load Range in Masonry: Tension Load, shear Load, and oblique Load 0.11-1.43kN
- Material: Zinc plated steel (zp), stainless steel (R/A4)
- Variant: Countersunk head (T), hexagon head (FUS)
- Feature: Drill Diameter 8/10mm, Usable Length 10-210mm

Applications

- Facade construction
- Wooden substructures
- Screen brackets
- Cable channels
- Beam anchorage
- Windows
- Lighting strips
- Mirror cabinet
- Door frames
- Ceiling suspension

Advantages

- Secure anchoring: ETA approval option 1 cracked concrete and masonry for redundant non-structural systems and, fire protection test
- Upat nylon quality: Robust - durable - recyclable
- Easy installation: Short expansion part with 50mm anchorage depth for quick and ergonomic installation
- Safe application: The rotation lock prevents the nylon anchor from rotating in the borehole
- Flexible application: Flexibly applicable in solid and hollow building materials

Materials

Approved for:

- Concrete $\geq$ C12/15
- Perforated & solid bricks
- Lightweight concrete hollow blocks
- Calcium silicate perforated & solid bricks
- Aerated concrete
- Full blocks made of lightweight and normal concrete
- Thermal insulation blocks

Also suitable for:

- Natural stone with dense structure
- Full gypsum boards

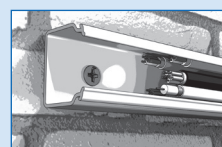
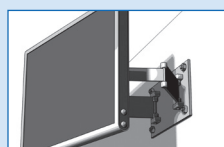
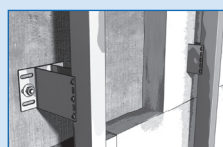


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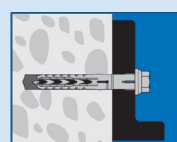
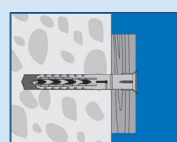
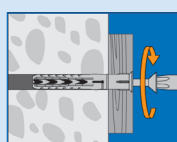
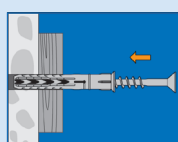
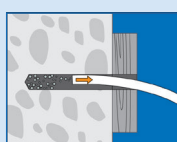
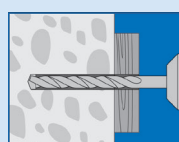


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Application examples



Assembly



Frame fixing URD

Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Drive	Drill diameter	Anchor length	Max. fixture thickness	Min. drill hole depth for through fixings	ETA approval	Sales unit (zp)	Sales unit (R)
URD 8x60 FUS	577878	577879	—	—	—	—	—	✓	50	50
URD 10x52 FUS	543354	-	TX40 / SW 13	10	52	2	62	✓	50	-
URD 10x60 FUS	543355	543365	TX40 / SW 13	10	60	10	70	✓	50	50
URD 10x80 FUS	543356	543366	TX40 / SW 13	10	80	30	90	✓	50	50
URD 10x100 FUS	543357	543367	TX40 / SW 13	10	100	50	110	✓	50	50
URD 10x120 FUS	543358	543368	TX40 / SW 13	10	120	70	130	✓	50	50
URD 10x140 FUS	543359	543369	TX40 / SW 13	10	140	90	150	✓	50	50
URD 10x160 FUS	543360	543370	TX40 / SW 13	10	160	110	170	✓	50	50
URD 10x180 FUS	543361	543371	TX40 / SW 13	10	180	130	190	✓	50	50
URD 10x200 FUS	543362	543372	TX40 / SW 13	10	200	150	210	✓	50	50
URD 10x230 FUS	543363	543373	TX40 / SW 13	10	230	180	240	✓	50	50
URD 10x260 FUS	543364	543374	TX40 / SW 13	10	260	210	270	✓	50	50
URD 8x60 T	547092	-	TX30	8	60	10	70	✓	50	50
URD 8x80 T	543375	-	TX30	8	80	30	90	✓	50	-
URD 8x100 T	543376	-	TX30	8	100	50	110	✓	50	-
URD 8x120 T	543377	-	TX30	8	120	70	130	✓	50	-
URD 10x60 T	577880	577881	—	—	—	—	—	✓	50	50
URD 10x80 T	543336	543345	TX40	10	80	30	90	✓	50	50
URD 10x100 T	543337	543346	TX40	10	100	50	110	✓	50	50
URD 10x120 T	543338	543347	TX40	10	120	70	130	✓	50	50
URD 10x140 T	543339	543348	TX40	10	140	90	150	✓	50	50
URD 10x160 T	543340	543349	TX40	10	160	110	170	✓	50	50
URD 10x180 T	543341	543350	TX40	10	180	130	190	✓	50	50
URD 10x200 T	543342	543351	TX40	10	200	150	210	✓	50	50
URD 10x230 T	543343	543352	TX40	10	230	180	240	✓	50	50
URD 10x260 T	543344	543353	TX40	10	260	210	270	✓	50	50

Stainless steel (R/A4): For external atmospheric exposure and to permanently damp internal conditions, if no particular aggressive conditions exists

Zinc plated steel (zp/gvz): For dry internal conditions. Furthermore can be used outdoors if the head is shielded from moisture and rain to prevent water from entering the anchor shaft

Countersunk Head (T): For visually appealing and flush-mounted installation

Hexagon Head (FUS): For secure application of torque from the outside even in small installation spaces

Frame fixing URD

Load table

Permissible loads¹⁾²⁾ of a single anchor as part of a multiple fixing of non-structural systems

For the design, the entire assessment ETA-17/0811 must be considered.

Type			URD 8	URD 10
Anchor diameter	d_0	[mm]	8	10
Anchoring depth	h_{ef}	[mm]	50	50
Anchoring in concrete $\geq$ C12/15				
Permissible tensile load N_{perm}		[kN]	0.99	1.79
Permissible shear load V_{perm}	z_p	[kN]	4.2	5.98
Permissible shear load V_{perm}	R	[kN]	3.93	5.98
Minimum member thickness	h_{min}	[mm]	100	100
Characteristic edge distance	$c_{cr,N}$	[mm]	85	140
Characteristic spacing distance	a resp. $s_{cr,N}$	[mm]	100	100
Minimum spacing distance	s_{min}	[mm]	100	70
At an edge distance	$c \geq$	[mm]	85	210
Minimum edge distance	c_{min}	[mm]	85	85
At a spacing distance	$s \geq$	[mm]	100	100
Anchoring in masonry				
Permissible load in solid brick	Mz	[kN]	0,86	1,43
Permissible load $F_{perm}^{3)}$ in solid sand-lime brick	KS	[kN]	0.86	1,43
Permissible load $F_{perm}^{3)}$ in lightweight concrete solid brick	Vbl	[kN]	0.71	0,86
Permissible load $F_{perm}^{3)}$ in normal concrete solid brick	Vbn	[kN]	0,71	1,29
Permissible load $F_{perm}^{3)4)}$ in perforated brick	HLz	[kN]	0,34	0,86
Permissible load $F_{perm}^{3)}$ in perforated sand-lime brick	KSL	[kN]	0,11	0,43
Permissible load $F_{perm}^{3)4)}$ in hollow light-weight concrete block	Hbl	[kN]	0,71	0,71
Permissible load $F_{perm}^{3)}$ in hollow block lightweight concrete Hbn	Hbn	[kN]		0,71
Permissible load $F_{perm}^{3)}$ in thermal insulation block WDB	WDB	[kN]		0,43
Minimum member thickness	h_{min}	[mm]	100	100
Minimum spacing distance (single anchor)	a_{min}	[mm]	250	250
Minimum edge distance (single anchor)	c_{min}	[mm]	100	100
Minimum spacing distance (anchor group)	s_{min}	[mm]	100	100
Minimum edge distance (anchor group)	c_{min}	[mm]	100	100
Anchoring in aerated concrete				
Permissible load $F_{perm}^{3)}$ in aerated concrete	$PB \geq 2 \text{ N/mm}^2$	[kN]		0.3
Minimum component thickness	h_{min}	[mm]		100
Minimum spacing distance (single anchor)	a_{min}	[mm]		250
Minimum edge distance (single anchor)	c_{min}	[mm]		100
Minimum spacing distance (anchor group)	s_{min}	[mm]		400
Minimum edge distance (anchor group)	c_{min}	[mm]		100

¹⁾ The partial safety factors of resistance regulated in the assessment, as well as a partial safety factor for action of $\gamma_L = 1.4$, are taken into account. For example, a single anchor is defined as an anchor with a minimum spacing distance "a" according to the ETA.

²⁾ Valid for temperatures in the anchoring base up to +50 °C (or temporarily up to +80 °C). For long-term temperatures up to +30 °C, higher permissible loads are possible.

³⁾ Valid for tensile load, shear load, and oblique pull at any angle. For combinations of tensile and shear loads as well as bending moments, see the assessment.

⁴⁾ Drilling method: rotary drilling.

Frame fixing URDL

Universal frame fixing for secure hold even in unstable building materials. Approved for concrete, masonry, and fire protection.



Long Description

The universal long-shaft dowel for secure fastening even in unstable building materials. Suitable for concrete, solid and perforated building materials. For medium and high loads. Approved for concrete, masonry and fire protection. Available product variants: countersunk head (T) and hexagon head (FUS). Available in stainless steel (R/A4) and electro-galvanized steel (zp). Selectable product features: drill diameter 8/10 and effective length 10-160 mm. Set in through-hole mounting. Features secure anchoring, Upat nylon quality and universal use. Used, for example, for fastening facade constructions, wooden substructures and screen brackets.

Characteristics

- Certification/Approval: ETA redundant in cracked concrete, ETA redundant in masonry, fire resistance
- Building materials: Concrete, solid construction, hollow construction
- Load range in concrete: Tension load 1.39-1.79kN, shear load 3.2-6.17kN
- Load range in masonry: Tension load, shear load, and oblique load 0.09-1.71kN
- Material: Zinc plated steel (zp), stainless steel (R/A4)
- Variant: Countersunk head (T), hexagon head (FUS)
- Feature: Drill diameter 8/10, usable length 10-160mm

Applications

- Façade construction
- Wooden substructures
- Screen brackets
- Cable channels
- Beam anchorage
- Windows
- Lighting strips
- Mirror cabinet
- Door frames
- Ceiling suspension

Advantages

- Secure anchoring: ETA approval option 1 cracked concrete and masonry for redundant non-structural systems and, fire protection test
- Upat nylon quality: Robust - durable - recyclable
- Universal application: When the building material is unknown, the frame anchor URDL is a good choice due to its expansion and knotting function
- Firm hold: The anchorage depth of 70mm ensures a firm hold even in unstable building materials, making the URDL versatile

Materials

Approved for:

- Perforated & Solid bricks
- Aerated concrete
- Lightweight concrete hollow blocks
- Calcium silicate perforated & Solid bricks
- Thermal insulation blocks
- Full blocks made of lightweight and normal concrete
- Concrete $\geq$ C12/15

Also suitable for:

- Natural stone with dense structure
- Full gypsum boards

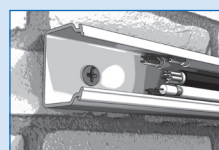
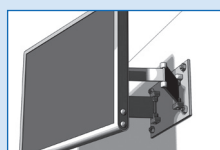


Straight to the product



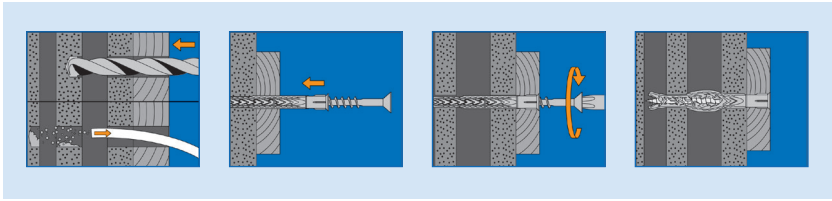
upat.com/en-urdll

Application examples



Frame fixing URDL

Assembly



Product variants

Product	Art.-No. (zp)	Art.-No. (R)	Drive	Drill diameter	Anchor length	Material	Max. fixture thickness	Min. drill hole depth for through fixings	Sales unit (zp)	Sales unit (R)
URDL 8x80 FUS	546767	546771*	TX30 / SW 10	8	80	Galvanised steel	10	90	100	100
URDL 8x100 FUS	546768	546772*	TX30 / SW 10	8	100	Galvanised steel	30	100	50	50
URDL 8x120 FUS	546769*	546773*	TX30 / SW 10	8	120	Galvanised steel	50	120	50	50
URDL 8x140 FUS	546770*	546774*	TX30 / SW 10	8	140	Galvanised steel	70	150	50	50
URDL 10x80 FUS	546789	546796	TX40 / SW 13	10	80	Galvanised steel	10	90	50	50
URDL 10x100 FUS	546790	546797	TX40 / SW 13	10	100	Galvanised steel	30	110	50	50
URDL 10x120 FUS	546791	546798*	TX40 / SW 13	10	120	Galvanised steel	50	130	50	50
URDL 10x140 FUS	546792	546799	TX40 / SW 13	10	140	Galvanised steel	70	150	25	25
URDL 10x160 FUS	546793	546800*	TX40 / SW 13	10	160	Galvanised steel	90	170	25	25
URDL 10x200 FUS	546794	546801*	TX40 / SW 13	10	200	Galvanised steel	130	210	25	25
URDL 10x230 FUS	546795	546802	TX40 / SW 13	10	230	Galvanised steel	160	240	25	25
URDL 8x80 T	546759	546763	TX30	8	80	Galvanised steel	10	90	100	100
URDL 8x100 T	546760	546764	TX30	8	100	Galvanised steel	30	100	50	50
URDL 8x120 T	546761	546765	TX30	8	120	Galvanised steel	50	120	50	50
URDL 8x140 T	546762	546766*	TX30	8	140	Galvanised steel	70	150	50	50
URDL 10x80 T	546775	546782	TX40	10	80	Galvanised steel	10	90	50	50
URDL 10x100 T	546776	546783	TX40	10	100	Galvanised steel	30	110	50	50
URDL 10x120 T	546777	546784	TX40	10	120	Galvanised steel	50	130	50	50
URDL 10x140 T	546778	546785	TX40	10	140	Galvanised steel	70	150	50	50
URDL 10x160 T	546779	546786	TX40	10	160	Galvanised steel	90	170	50	50
URDL 10x200 T	546780	546787	TX40	10	200	Galvanised steel	130	210	25	25
URDL 10x230 T	546781	546788*	TX40	10	230	Galvanised steel	160	240	25	25

Stainless steel (R/A4): For external atmospheric exposure and to permanently damp internal conditions, if no particular aggressive conditions exists

Zinc plated steel (zp/gvz): For dry internal conditions. Furthermore can be used outdoors if the head is shielded from moisture and rain to prevent water from entering the anchor shaft

Countersunk head (T): For visually appealing and flush-mounted installation

Hexagon head (FUS): For secure application of torque from the outside even in small installation spaces

* Note: Available upon request. Not part of the standard product range.

Frame fixing URDL

Load table

Permissible loads¹⁾²⁾ of a single anchor as part of a multiple fixing of non-structural systems

For the design, the entire assessment ETA-17/0811 must be considered.

Type			URDL 8	URDL10
Anchor diameter	d_0	[mm]	8	10
Anchoring depth	h_{ef}	[mm]	70	70
Anchoring in concrete $\geq$ C16/20				
Permissible tensile load N_{perm}		[kN]	1.39	1.79
Permissible shear load V_{perm}	zp	[kN]	3.2	4.4
Permissible shear load V_{perm}	R	[kN]	4.51	6.17
Minimum member thickness	h_{min}	[mm]	140	140
Characteristic edge distance	$c_{cr,N}$	[mm]	105	105
Characteristic spacing distance	a bzw. $s_{cr,N}$	[mm]	75	90
Minimum spacing distance	s_{min}	[mm]	90	100
Minimum edge distance	c_{min}	[mm]	90	100
Anchoring in masonry				
Permissible load in solid brick	Mz	[kN]	0,86 - 1,14	0,57 - 1,43
Permissible load $F_{perm}^{3)}$ in solid sand-lime brick	KS	[kN]	1.57	1.71
Permissible load $F_{perm}^{3)4)}$ in perforated brick	HLz	[kN]	0,09 - 0,26	0.09
Permissible load $F_{perm}^{3)}$ in perforated sand-lime brick	KSL	[kN]	1.43	1.57
Minimum member thickness	h_{min}	[mm]	110 - 370	110 - 370
Minimum edge distance (single anchor)	c_{min}	[mm]	120 - 185	120 - 185
Minimum spacing distance (anchor group) vertical to the edge	$s1_{min}$	[mm]	240 - 370	240 - 370
Minimum spacing distance (anchor group) parallel to the edge	$s2_{min}$	[mm]	480 - 740	480 - 740
Minimum edge distance (anchor group)	c_{min}	[mm]	75 - 125	75 - 125
Anchoring in aerated concrete				
Permissible load $F_{perm}^{3)}$ in aerated concrete	ACC	[kN]	0.1	0.17
Minimum member thickness	h_{min}	[mm]	240	240
Minimum edge distance (single anchor)	c_{min}	[mm]	120	120
Minimum spacing distance (anchor group) vertical to the edge	$s1_{min}$	[mm]	240	240
Minimum spacing distance (anchor group) parallel to the edge	$s2_{min}$	[mm]	480	480
Minimum edge distance (anchor group)	c_{min}	[mm]	120	120

¹⁾ The partial safety factors for resistance regulated in the assessment, as well as a partial safety factor for action of $\gamma_L = 1.4$, are taken into account.

²⁾ Valid for temperatures in the anchoring base up to +50 °C (or temporarily up to +80 °C). For long-term temperatures up to +30 °C, higher permissible loads are possible.

³⁾ Valid for tensile, shear, and oblique pull at any angle. For combinations of tensile and shear loads as well as bending moments, see the assessment.

⁴⁾ Refers to the stones of the respective category regulated in the approval, the highest permissible load, and the installation instructions, which must be evaluated depending on the stone properties.

Metal frame anchor UFD

Solid metal frame anchor for tension-free spaced installation.

Long Description

The Upat metal frame anchor UFD is the optimal anchor for tension-free standoff installation. The UFD, consisting of a metal sleeve and a countersunk head screw made of zinc plated steel, allows for time-saving through-hole installation in solid and hollow building materials. By tightening the screw, the anchor expands and wedges against the borehole wall. The functional principle enables tension-free installation, allowing for precise positioning and long-lasting attachment of window and door frames.

Characteristics

- Building materials: Concrete, solid construction, hollow construction
- Load range: Tensile load, shear load, and oblique load 0.5-1.4 kN
- Material: Zinc plated steel (zp)
- Feature: Drill diameter 10mm, anchor length 112-182 mm

Applications

- Windows
- Wooden substructures
- Door frames
- Garden gates

Materials

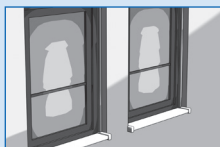
- Concrete
- Perforated clay bricks
- Hollow block made of lightweight concrete
- Calcium silicate perforated bricks
- Calcium silicate solid bricks
- Aerated concrete
- Solid block made of lightweight concrete
- Full bricks

Advantages

- Stress-free spacing installation: Clever functional principle enables a stress-free spacing installation
- Precise positioning: Stress-free installation allows for precise positioning of door and window frames
- Flexible application: Can be flexibly used in solid and hollow building materials
- Secure grip: The pressure- and tension-resistant dowel geometry ensures a secure grip in the building material



Application examples

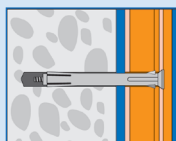
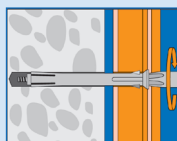
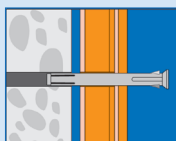


Straight to the product



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Assembly



Metal frame anchor UFD

Product variants

Product	Art.No.	Drill diameter	Anchor length	Max. fixture thickness	Min. drill hole depth for through fixings	Sales unit
UFD 10/112	541737	10	112	82	130	100
UFD 10/132	541738	10	132	102	150	100
UFD 10/152	541739	10	152	122	170	100
UFD 10/182	541740	10	182	152	200	50

Load table

Highest recommended loads¹⁾ of a single anchor as part of a multiple fixation of non-load-bearing systems.

Type	Concrete $\geq$ C20/25 $F_{rec}^{2)}$ [kN]	Solid Brick $\geq$ Mz 12 $F_{rec}^{2)}$ [kN]	Solid Sand-lime Brick $\geq$ KS 12 $F_{rec}^{2)}$ [kN]	Solid Light Concrete Brick $\geq$ V 2 $F_{rec}^{2)}$ [kN]	Perforated Sand-lime Brick $\geq$ KSL 12 $F_{rec}^{2)}$ [kN]
UFD 10	1.4	1.3	1.3	0.5	0.6

¹⁾ Includes the necessary safety factor.

²⁾ Valid for tensile, shear, and oblique pull under any angle.

Standard fixings

Extension dowel ISP	Page 75
Universal plug UVD II	Page 77
Nail plug UN	Page 79
Nail plug UNI	Page 81
Assortment boxes UB	Page 83

Expansion plug ISP

Affordable expansion plug for secure hold.

Long Description

The Upat Expansion plug ISP is a pure nylon expansion plug and is excellent for securing light to medium loads in both solid and hollow building materials. When a screw is inserted and tightened, the plug expands within the drilled hole, providing secure anchoring in the building material. This expansion plug is commonly used for securing lamps, pictures, electrical installations and wall cabinets.

Characteristics

- Building material: Concrete, solid construction
- Load range: Tension load, shear load, and oblique load 0,24-1,85kN
- Material: Nylon
- Feature: Drill diameter 5-14mm

Applications

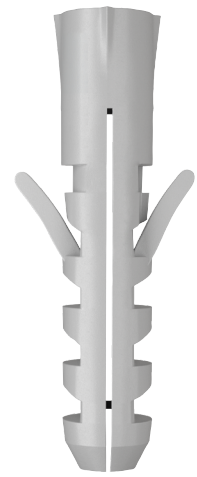
- Towel holder
- Mirror cabinet
- Wall shelves
- Screen brackets

Advantages

- Upat nylon quality: Robust - durable - recyclable
- Edge mounting: Dual expansion allows for targeted force transmission parallel to the edge of the building material
- Secure application: The anti-rotation lock prevents the nylon expansion plug from rotating in the borehole
- Flexible installation: Suitable for pre- and through-hole mounting
- Secure screw guidance: Due to the internal serration of the nylon expansion plug

Materials

- Sand-lime solid brick
- Dense natural stone
- Concrete
- Solid lightweight concrete block
- Solid brick

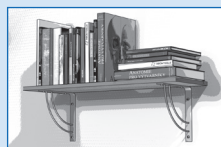


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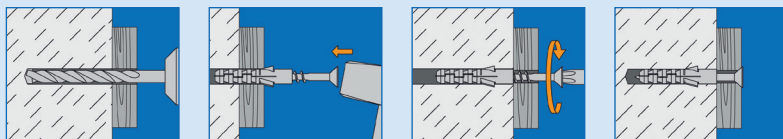


upat.com/en-isp

Application examples



Assembly



Product variants

Product	Art.No.	Drill diameter	Anchor length	Min. drill hole depth	Wood and chipboard screws	Sales unit
ISP 5	577086	5	25	35	3.0 - 4.0	100
ISP 6	577087	6	30	40	4.0 - 5.0	100
ISP 8	577088	8	40	55	5.0 - 6.0	100
ISP 10	577089	10	50	65	6.0 - 8.0	50
ISP 12	577090	12	60	75	8.0 - 10.0	25
ISP 14	577091	14	70	90	10.0 - 12.0	20

Expansion plug ISP

Load table

Highest recommended loads¹⁾²⁾³⁾ of a single anchor.

Type	Concrete $\geq$ C20/25 $F_{rec}^{4)}$ [kN]	Solid brick $\geq$ Mz 12 $F_{rec}^{4)}$ [kN]	Solid sand-lime brick $\geq$ KS 12 $F_{rec}^{4)}$ [kN]
ISP 5	0,28	0,24	0,24
ISP 6	0,40	0,28	0,28
ISP 8	0,60	0,50	0,55
ISP 10	1,10	5)	5)
ISP 12	1,50	5)	5)
ISP 14	1,85	5)	5)

¹⁾ Safety factor requirement considered.

²⁾ Load values apply to the largest screw diameter.

³⁾ For anchorages close to the edge, it is recommended to orient the anchor with the expansion direction parallel to the edge of the component.

⁴⁾ Valid for tension, shear, and oblique loads at any angle.

⁵⁾ Due to failure of the substrate varies too much no reproducible values can be given.

Universal plug UVD II

Secure universal plug for unknown building materials.

Long Description

The Upat Universal plug UVD II is a high-quality pure nylon universal plug suitable for securing light to medium loads in almost all building materials. This clever plug provides secure fastening by expanding against the wall in solid materials or by knotting itself in voids and behind panel building materials. The plug can be installed in both pre-positioned and push-through installations. In the version with a rim, the anchor prevents slipping during installation.

Characteristics

- Building material: Concrete, solid construction, hollow construction
- Load range: Tension load, shear load, and oblique load 0.05-1.2kN
- Material: Nylon
- Variant: Standard, with edge (R)
- Feature: Drill diameter 5-12mm

Materials

- Concrete
- Plasterboard and gypsum fiber boards
- Perforated clay brick
- Hollow block made of lightweight concrete
- Ribbed slabs made of brick and concrete
- Perforated sand-lime brick
- Full sand-lime brick
- Natural stone
- Aerated concrete
- Particle boards
- Full gypsum boards
- Full lightweight concrete block
- Full brick

Advantages

- Upat nylon quality: Robust - durable - recyclable
- Peace of mind: When dealing with an unknown building material, the nylon universal plug is a good choice due to its expansion and knotting function
- Secure application: The anti-rotation lock prevents the nylon universal plug from rotating in the borehole
- Versatile use: The nylon universal plug can be used in combination with chipboard screws, wood screws, eye screws, angle screws, or hook screws
- Flexible installation: Suitable for pre-positioned and push-through installation

Applications

- Towel holder
- Mirror cabinet
- Wall shelves
- Screen brackets

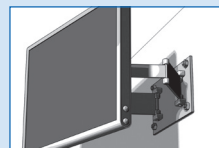
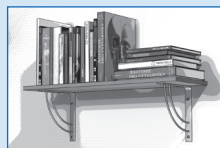


Straight to the product

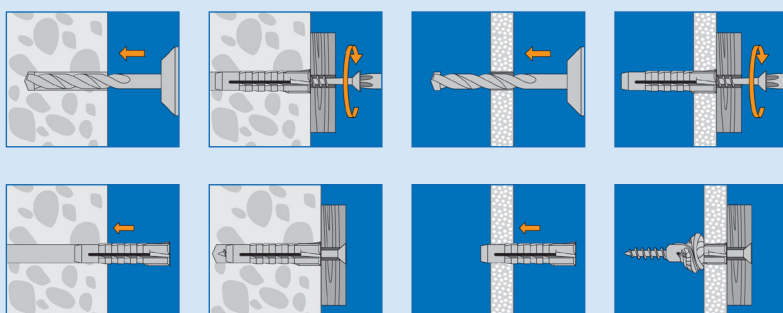


upat.com/en-uvd

Application examples



Assembly



Universal plug UVD II

Product variants

Product	Art-No.	Drill diameter	Anchor length	Min. drill hole depth	Wood and chipboard screws	Sales unit
UVD II 5x25 R	538436	5	25	35	3.0 - 4.0	100
UVD II 6x30 R	538435	6	30	40	4.0 - 5.0	100
UVD II 6x50 R	538437	6	50	60	4.0 - 5.0	100
UVD II 8x40 R	538439	8	40	50	5.0 - 6.0	100
UVD II 10x50 R	538441	10	50	60	6.0 - 8.0	50
UVD II 12x60	538442	12	60	70	8.0 - 10.0	25

With rim (R): For flush mounting and to prevent the dowel from slipping into the drill hole

Load table

Highest recommended loads¹⁾²⁾ of a single anchor.

Type	Concrete	Solid sand-lime brick	Perforated clay brick	Aerated concrete	Gypsum Plasterboard
	≥ C20/25	≥ KS 12	≥ Hlz 12	≥ AAC 4 (G4)	12,5 mm
	F _{rec} ³⁾	F _{rec} ³⁾	F _{rec} ³⁾	F _{rec} ³⁾	F _{rec} ³⁾
	[kN]	[kN]	[kN]	[kN]	[kN]
UVD II 5 x 25 R	0.25	0.25	0.1	0.05	0.05
UVD II 6 x 30 R	0.35	0.35	0.15	0.1	0.05
UVD II 6 x 50 R	0.4	0.4	0.15	0.1	0.05
UVD II 8 x 40 R	0.5	0.5	0.2	0.1	0.1
UVD II 10 x 50 R	1	1	0.2	0.15	0.1
UVD II 12 x 60	1.2	1.2	0.25	0.2	0.1

¹⁾ Safety factor requirement considered.

²⁾ Load values apply to the largest screw diameter.

³⁾ Valid for tension, shear, and oblique loads at any angle.

Nail plug UN

Impact-resistant hammer-in anchor for quick installation.

Long Description

The quick-impact dowel for fast installation. Suitable for concrete and solid building materials. For light loads. Available product variants: flat head (F) and countersunk head (S). Selectable product features: drill diameter 5–8 mm, dowel length 30–120 mm and effective length 5–80 mm. Set in through-hole installation. Features Upat nylon quality, quick installation and safe use. Used, for example, for fastening wooden substructures, cable ducts and letterboxes.

Characteristics

- Building material: Concrete, solid construction
- Load range: Tension load, shear load, and oblique load 0.16-0.27kN
- Material of anchor: Nylon
- Material of nail screw: Zinc plated steel (zp)
- Variant: Countersunk head (S), flat head (F)
- Feature: Drill diameter 5-8mm, anchor length 30-120mm, usable length 5-80mm

Applications

- Wooden substructures
- Cable channels
- Mailbox
- Wall light

Advantages

- Upat nylon quality: Robust - durable - recyclable
- Quick installation: Tapered nail anchor shaft, serrated thread, and pre-assembled nail screw enable efficient processing
- Secure application: Impact lock, reinforced rim, and compensating ribs ensure safe use of the nail anchor
- Easy adjustment: Cross-slotted drive nail screw for adjusting and dismantling the component
- Firm grip: The precisely matched expansion zone provides high expansion and firm grip

Materials

- Concrete
- Calcium silicate solid bricks
- Clay bricks
- Natural stone
- Lightweight concrete solid bricks
- Aerated concrete
- Full gypsum boards
- Perforated bricks
- Calcium silicate perforated bricks
- Lightweight concrete hollow blocks

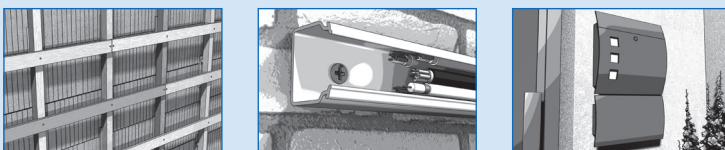


Straight to the product

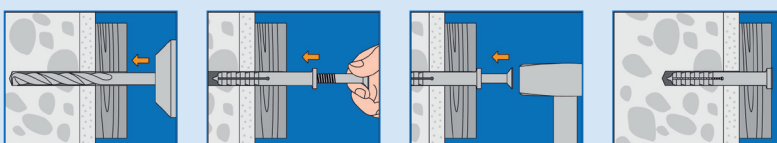


upat.com/en-un

Application examples



Assembly



Nail plug UN

Product variants

Product	Art-No.	Drive	Drill diameter	Anchor length	Max. fixture thickness	Min. drill hole depth	Min. effect. anchorage depth	Sales unit
UN 5x30/5 F	518868	PZ2	5	30	5	55	25	200
UN 5x40/15 F	518869	PZ2	5	40	15	65	25	200
UN 5x50/25 F	518870	PZ2	5	50	25	65	25	200
UN 6x40/10 F	518874	PZ2	6	40	10	75	30	100
UN 6x60/30 F	518875	PZ2	6	60	30	95	30	100
UN 6x80/50 F	518876	PZ2	6	80	50	95	30	100
UN 8x60/20 F	518881	PZ3	8	60	20	115	40	100
UN 8x80/40 F	518882	PZ3	8	80	40	115	40	100
UN 8x100/60 F	518883	—	8	100	60	135	40	100
UN 8x120/80 F	518884	—	8	120	80	135	40	100
UN 5x30/5 S	518865	PZ2	5	30	5	45	25	200
UN 5x40/15 S	518866	PZ2	5	40	15	45	25	200
UN 5x50/25 S	518867	PZ2	5	50	25	55	25	200
UN 6x40/10 S	518871	PZ2	6	40	10	55	30	100
UN 6x60/30 S	518872	PZ2	6	60	30	55	30	100
UN 6x80/50 S	518873	—	6	80	50	75	30	100
UN 8x60/20 S	518877	PZ3	8	60	20	75	40	100
UN 8x80/40 S	518878	PZ3	8	80	40	75	40	100
UN 8x100/60 S	518879	PZ3	8	100	60	95	40	100
UN 8x120/80 S	518880	PZ3	8	120	80	95	40	100

Flat head (F): For fastening thin materials and impact resistance

Countersunk head (S): For a visually appealing and flush fastening

Load table

Highest recommended loads¹⁾²⁾ of a single anchor.

Type	Diameter nail screw $F_{rec}^{3)}$ [mm]	Concrete ≥ C20/25 $F_{rec}^{3)}$ [kN]	Solid brick ≥ Mz 12 $F_{rec}^{3)}$ [kN]	Solid sand-lime brick ≥ KS 12 $F_{rec}^{3)}$ [kN]	Solid lightweight concrete block ≥ V4 $F_{rec}^{3)}$ [kN]	Aerated concrete ≥ AAC 2 (G2) $F_{rec}^{3)}$ [kN]	Aerated concrete ≥ AAC 4 (G4) $F_{rec}^{3)}$ [kN]
UN 5	3.5	0.16	0.1	0.1	0.05	0.03	0.1
UN 6	4	0.2	0.17	0.17	0.11	0.04	0.09
UN 8	5	0.27	0.24	0.25	0.13	0.1	0.11

¹⁾ Safety factor requirement considered.

²⁾ Load values apply to the largest screw diameter.

³⁾ Valid for tension, shear, and oblique loads at any angle.

Nail plug UNI

Impact-resistant hammer-in anchor for quick installation.

Long Description

The quick-impact dowel for fast installation. Suitable for concrete and solid building materials. For light loads. Available product variants: flat head (F) and coUNItersUNIk head (S). Selectable product features: drill diameter 5–8 mm, dowel length 25–120 mm and effective length 1–80 mm. Set in through-hole installation. Features Upat nylon quality, quick installation and safe use. Used, for example, for fastening wooden substructures, cable ducts and letterboxes.

Characteristics

- Building material: Concrete, solid construction
- Load range: Tension load, shear load, and oblique load 0.16-0.27kN
- Material of anchor: Nylon
- Material of nail screw: Zinc plated steel (zp)
- Variant: Countersunk head (S), flat head (F)
- Feature: Drill diameter 5-8mm, anchor length 25-120mm, usable length 1-80mm

Applications

- Wooden substructures
- Cable channels
- Mailbox
- Wall light

Advantages

- Upat nylon quality: Robust - durable - recyclable
- Quick installation: Tapered nail anchor shaft, serrated thread, and pre-assembled nail screw enable efficient processing
- Secure application: Impact lock, reinforced rim, and compensating ribs ensure safe use of the nail anchor
- Easy adjustment: Cross-slotted drive nail screw for adjusting and dismantling the component
- Firm grip: The precisely matched expansion zone provides high expansion and firm grip

Materials

- Concrete
- Calcium silicate solid & perforated bricks
- Clay bricks
- Natural stone
- Lightweight concrete solid bricks & hollow blocks
- Aerated concrete
- Full gypsum boards
- Solid & perforated bricks



Straight to the product

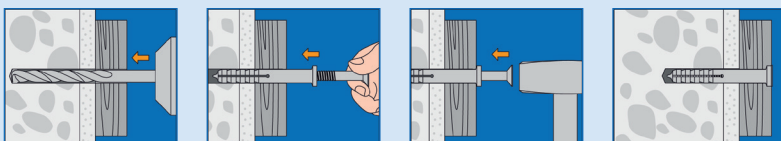


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Application examples



Assembly



Nail plug UNI

Product variants

Product	Art.No.	Drill diameter	Anchor length	Material	Max. fixture thickness	Min. drill hole depth	Min. effect. anchorage depth	Sales unit
UNI 5x25 F	581176	5	50	Plastic	25	65	25	100
UNI 5x30 F	581177	5	30	Plastic	5	55	25	100
UNI 6x40/10 F	581110	6	40	Plastic	10	75	30	100
UNI 6x60/30 F	581111	6	60	Plastic	30	95	30	100
UNI 6x80/50 F	581112	6	80	Plastic	50	95	30	100
UNI 8x60/20 F	581113	8	60	Plastic	20	115	40	100
UNI 8x80/40 F	581114	8	80	Plastic	40	115	40	100
UNI 8x100/60 F	581115	8	100	Plastic	60	135	40	100
UNI 8x120/80 F	581116	8	120	Plastic	80	135	40	100
UNI 8x80/40 S	581107	8	80	Plastic	40	75	40	100
UNI 6x40/10 S	581103	6	40	Plastic	10	55	30	100
UNI 6x60/30 S	581104	6	60	Plastic	30	55	30	100
UNI 6x80/50 S	581105	6	80	Plastic	50	75	30	100
UNI 8x60/20 S	581106	8	60	Plastic	20	75	40	100
UNI 8x100/60 S	581108	8	100	Plastic	60	95	40	100
UNI 8x120/80 S	581109	8	120	Plastic	80	95	40	100

Assortment boxes UB

Versatile plug assortment box.

Long Description

The Upat plug assortment box UB provides the appropriate assortment of plugs for fixing light to medium loads in almost all building materials. The practical box with a transparent lid contains high-quality Upat plugs in nylon quality as well as the matching screws. The assortment box is commonly used for fixing lamps, pictures, electrical installations, and wall cabinets.

Characteristics

- Building materials: Concrete, solid building material, hollow building material
- Load range: Tensile load, shear load, and oblique load 0,24-1,85kN
- Variant: ISP-Dowel (ISP BOX), ISP-Dowel with screw (ISP S BOX), Universal Dowel UVD II (UVD II BOX), Universal Dowel UVD II with screw/angle hook/round hook (UVD II S BOX)
- Material plug: Nylon
- Material Screw: Zinc plated steel (zp)
- Feature: Drill diameter 5-10mm

Applications

- Towel holder
- Mirror cabinet
- Wall shelves
- Screen brackets

Advantages

- Always have the right plug ready: With the assortment box, the fastening can be optimally matched to the application and building material on-site
- No search times: Thanks to the organizing system, plugs and, depending on the choice, suitable screws, round and angle hooks are pre-sorted and readily available
- Practical storage system: The assortment box is compact, easy to transport, and refillable
- Upat nylon quality: Robust - durable - recyclable
- ISP-Dowel (ISP BOX): For the right choice of anchor for solid building materials

Materials

- Concrete
- Plasterboard and gypsum fiberboards
- Porous concrete blocks
- Lightweight concrete solid & hollow blocks
- Hollow core slabs made of brick and concrete
- Calcium silicate solid & perforated bricks
- Natural stone
- Aerated concrete
- Particle boards
- Full gypsum boards
- Solid bricks

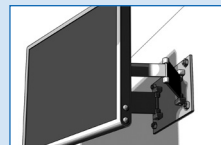
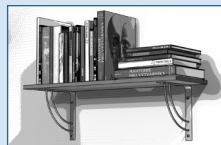


Straight to the product



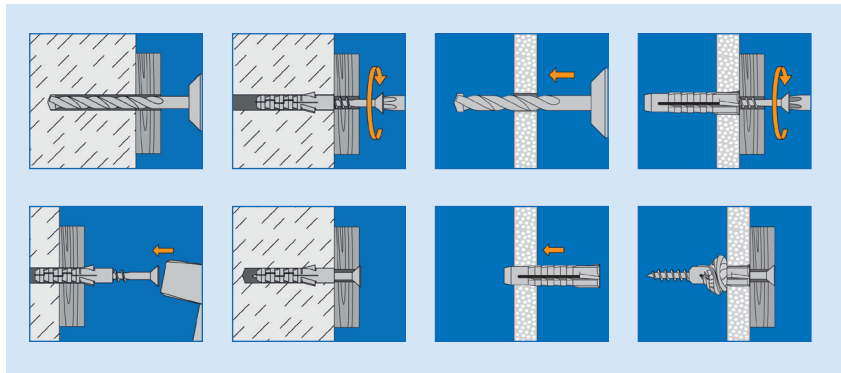
upat.com/en-ub

Application examples



Assortment boxes UB

Assembly



Product variants

Product	Art-No.	Content
UB ISP Box	577092	60 x Expansion plug ISP 6x3060 x Expansion plug ISP 8x4012 x Expansion plug ISP 10x50
UB ISP S Box	577093	50 x Expansion plug ISP 6x3030 x Expansion plug ISP 8x4050 x Screws S 4.5x4030 x Screws S 5x55
UB UVD II Box	542958	50 x universal plug UVD II 6x30 R, 50 x universal plug UVD II 8x40 R, 10 x universal plug UVD II 10x50 R
UB UVD II S Box	542959	50 x universal plug UVD II 6x30 R, 25 x universal plug UVD II 8x40 R, 20 x screw 4.5x50, 15 x screw 5x70, 4 x angle hook WH 5.5x70, 4 x round hook RH 5.5x87

ISP-Dowel (ISP BOX): For the right choice of anchor for solid building materials
ISP-Dowel with screw (ISP S BOX): For worry-free fastening in solid building materials
Universal-Dowel UVD II (UVD II BOX): For the right choice of anchor for solid, perforated and panel building materials
Universal anchor UVD II with screw/angle bracket/round hook (UVD II S BOX): For worry-free fastening in solid, perforated and panel building materials

Special fixings

Insulation plug UD	Page 86
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Ring nut URI	Page 101
Window frame screws UFS	Page 102

Insulation plug UD

Clever insulation plug for thermal bridge-free fastening.

Long Description

The Upat insulation plug UD is the specialist for fixing light loads in insulation materials. The special thread design allows for easy and flush screwing by hand, allowing the insulation plug to interlock securely with the building material. The insulation plug is commonly used for fixing mailboxes, lamps or motion detectors.

Characteristics

- Substrate: Panel building material
- Load range: Tensile load, shear load, and oblique load 0.04-0.1kN
- Feature: Plug length 50/95mm

Applications

- Wall light
- Speakers
- Metal brackets
- Mailbox

Materials

- Unplastered pressure-resistant insulation boards
- Plastered pressure-resistant insulation boards
- External thermal insulation composite system (ETICS) insulation boards

Advantages

- Thermal-bridge-free fastening: Direct fastening in the insulation material prevents thermal bridges
- Quick installation: With a thin layer of plaster, the UD can be directly inserted without pre-drilling
- Easy screwing: The special thread design allows the insulation anchor to be easily screwed in with a cordless screwdriver or screwdriver
- Versatile use: With the flush-mounting of the insulation plug, various types of screws such as chipboard, wood, eye, angle, or hook screws can be used for fastening



Straight to the product

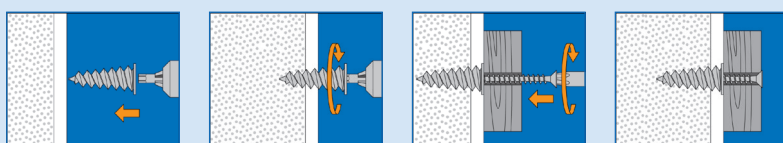


upat.com/en-ud

Application examples



Assembly



Product variants

Product	Art-No.	Anchor length	Min. bolt penetration	Wood and chipboard screws	Sales unit
UD50	541731	50	50	4.5 - 5.0	50
UD95	541732	95	95	8.0	25

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Diameter screw Ø [mm]	Styropor N _{rec} ²⁾ [kN]
UD 50	4,5 - 5,0	0.04
UD 95	8	0.1

¹⁾ Safety factor requirement considered.

²⁾ Load values apply to the largest screw diameter.

³⁾ Valid for tension loads.

Plasterboard plug UG/UGM

Universal plasterboard dowel for secure fastening in gypsum fibre and plasterboard.

Long Description

These are excellent for fastening light to medium loads in plasterboard. They are commonly used for securing pictures, lights, and electrical installations. The plasterboard plugs UG and UGM allow for fastening in gypsum fiberboards. They can accommodate various hooks and eyelets. Suitable for wood, metal, and chipboard screws with diameters ranging from 4 to 5 mm.

Characteristics

- Building material: Plate construction
- Load range: Tensile load, shear load, and oblique load 0.07-0.11 kN
- Variant: Metal (UGM), nylon (UG)
- Feature: Chipboard screw Ø 4-5mm

Applications

- Paintings
- Lights
- Electrical installations
- Interior accessories
- Series assemblies

Materials

- Gypsum plasterboards, single and double-layered
- Gypsum fiberboards

Advantages

- Upat nylon quality: Robust - durable - recyclable
- Perfect grip: The specially developed thread securely cuts into the plasterboard
- High safety: The compact form of the plasterboard anchor allows for installation even with shallow cavity depth
- Easy installation: The metal plasterboard anchor (UGM) can be easily screwed in with a cordless screwdriver or screwdriver. For the nylon plasterboard anchor (UM), the included setting tool handles drilling and setting of the anchor with a cordless screwdriver
- Versatile use: Due to flush mounting in the plasterboard, various types of screws such as chipboard, wood, eye, angle, or hook screws can be used for fastening



Straight to the product

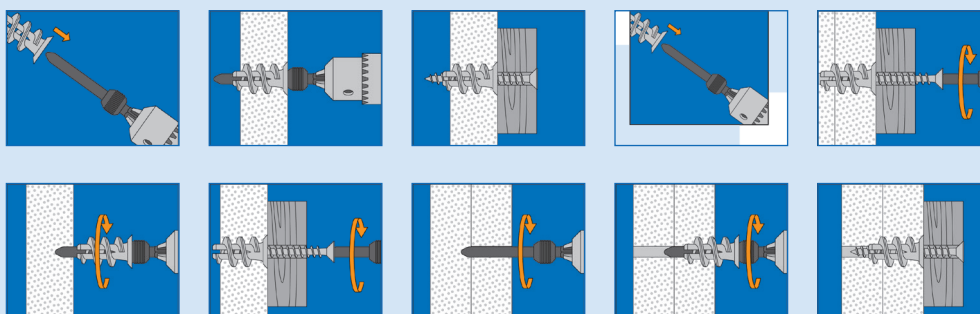


upat.com/en-ug

Application examples



Assembly



Plasterboard plug UG/UGM

Product variants

Product	Art.No.	Anchor length	Max. fixture thickness	Wood and chipboard screws	Sales unit
UG	542947	22	25	4.0 - 5.0	100
UGM	542948	31	35	4.0 - 5.0	100

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Chipboard screw Ø [mm]	Gypsum plasterboard 9,5 mm N _{rec} ²⁾ [kN]	Gypsum plasterboard 12,5 mm N _{rec} ²⁾ [kN]	Gypsum plasterboard 2 x 12,5 mm N _{rec} ²⁾ [kN]
UG/ UGM	4,0 - 5,0	0.1	0.08	0.11

¹⁾ Safety factor requirement considered.

²⁾ Load values apply to the largest screw diameter.

³⁾ Valid for tension load, shear load, and oblique load at any angle.

Brass anchor UM

Strong brass anchor with metric internal thread for fixings in concrete and solid building materials.



Long Description

The Upat brass anchor UM is an expansion anchor designed to accommodate metric threads. The brass anchor is ideally suited for fastening shelves, wooden substructures, and metal in solid building materials.

Characteristics

- Building material: Concrete, solid construction
- Load range: Tensile load, shear load, and oblique load 0.55-2.2 kN
- Material: Brass
- Feature: Thread M6-M12

Advantages

- Strong hold: The strong hold with minimal anchoring depth reduces drilling effort and allows for fastenings in thin walls and floors
- Flexible application: Made of corrosion-resistant brass, suitable for indoor and outdoor use
- Installation security: The unique surface structure of the brass anchor prevents it from rotating in the drill hole
- Flexible mounting: The metric internal thread allows for flexible mounting and flush disassembly of threaded rods, hooks, or screws

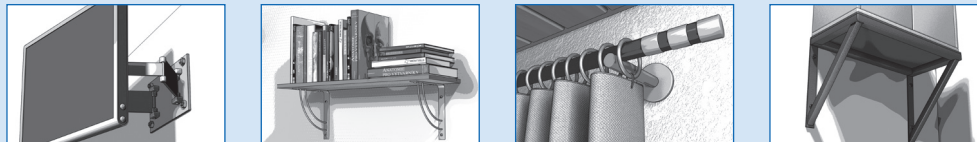
Applications

- Screen brackets
- Wall shelves
- Curtain rod
- Metal brackets

Materials

- Concrete
- Calcium silicate solid bricks
- Natural stone with dense structure
- Full bricks

Application examples

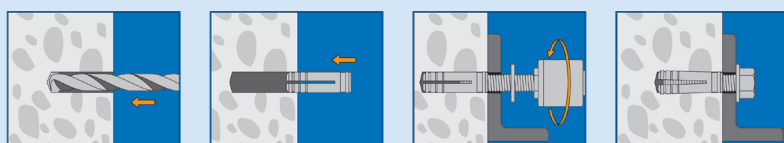


Straight to the product



upat.com/en-um

Assembly



Product variants

Product	Art-No.	Drill diameter	Anchor length	Bolt penetration	Thread	Min. drill hole depth	Sales unit
UM 6x22	542772	8	22	22	M6	27	100
UM 8x28	542773	10	28	28	M8	35	50
UM 10x32	542774	12	32	32	M10	39	25
UM 12x37	542775	15	37	37	M12	46	10

Load table

Highest recommended loads¹⁾²⁾ of a single anchor.

Type	Thread size	Concrete $\geq$ C20/25 $N_{rec}^{3)}$ [kN]	Solid brick $\geq$ Mz 12 $N_{rec}^{3)}$ [kN]
UM 6 x 22	M6	0.65	0.6
UM 8 x 28	M8	1.1	0.9
UM 10 x 32	M10	1.6	1.3
UM 12 x 37	M12	2.2	1.6

¹⁾ Safety factor requirement considered.

²⁾ Load values apply with specified metric screw threads.

³⁾ Valid for tension load, shear load, and oblique load at any angle.

Scaffold sleeve UGH

Expansion plug with long shaft for scaffold fixings.

Long Description

The Upat scaffold sleeve UGH is an expansion plug with a long shaft designed for heavy loads. This high-quality nylon plug is ideal for fastenings in concrete and solid masonry and achieves high holding values when used with the UGS eye screw. Its slim expansion geometry allows for mounting close to the edge, ensuring a secure grip in scaffolding applications.

Characteristics

- Building Material: Concrete, solid construction
- Load Range: Tension load, shear load, and oblique load 0.4-1.8kN
- Material: Nylon
- Feature: Drill diameter 14mm, anchor length 70-135mm

Applications

- Scaffolding anchorage

Materials

- Concrete
- Calcium silicate solid brick
- Natural stone with dense structure
- Solid brick

Advantages

- Near-edge fastening: Dual expansion allows for targeted force introduction parallel to the edge of the building material
- Secure hold: The scaffold sleeve with a long shaft bridges plaster and insulation layers and provides a secure hold in the load-bearing substrate – DIN 4420-1
- Coordinated system: Optimally coordinated system with high holding values, through the combination with the eye screw UGS. Ideal for scaffold anchoring
- Safe application: The expansion wings of the scaffold sleeve prevent rotation in the drill hole



Straight to the product

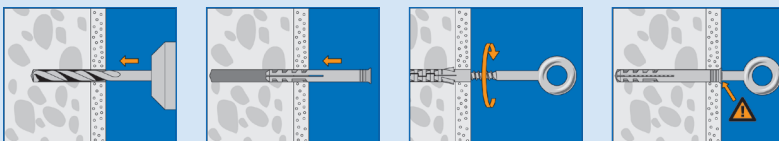


upat.com/en-ugh

Application examples



Assembly



Product variants

Product	Art-No.	Drill diameter	Anchor length	Min. drill hole depth for through fixings	Min. effect. anchorage depth	Sales unit
UGH 14/70	542568	14	70	80	70	25
UGH 14/100	542569	14	100	110	70	25
UGH 14/135	542570	14	135	145	70	25

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Concrete ≥ C20/25 N _{rec} ³⁾ [kN]	Solid brick ≥ Mz12 N _{rec} ³⁾ [kN]	Calcium silicate solid brick ≥ KS12 N _{rec} ³⁾ [kN]	Solid stone from lightweight concrete ≥ V2 N _{rec} ³⁾ [kN]	Calcium silicate hollow brick ≥ KSL12 N _{rec} ³⁾ [kN]	Perforated brick ≥ Hlz12 N _{rec} ³⁾ [kN]	Aerated concrete ≥ PB4/PP4 N _{rec} ³⁾ [kN]
UGS 12 + UGH 14	1.8	1.3	1.8	1.3	0.4	0.4	0.4

¹⁾ Safety factor requirement considered.

²⁾ Load values apply when using the scaffold screw UGS with the specified Upat anchor.

³⁾ Valid for tension loads.

Eye screw UGS

Universal eye screw for use in wood or as a anchor system.

Long Description

The Upat eye screw UGS is a versatile screw eye for use in wood or as an anchor system in concrete and masonry. With its high load capacity, it is an optimal fastening solution for scaffolding, chains, ropes, trellises and clotheslines. The high-quality weld prevents the eye from bending and provides maximum security.

Characteristics

- Building material: Solid construction material
- Load range: Tensile load, shear load, and oblique load 0.4-1.8 kN
- Material: Zinc plated steel (zp)
- Feature: Shank diameter 8/12mm, shank length 90-190mm

Applications

- Scaffolding anchoring
- Flower pot

Advantages

- Reusable fastening solution: The fastening screw can be easily disassembled and reused
- Coordinated system: Optimally coordinated system with high holding values, through the combination with the scaffold sleeve UGH. Ideal for scaffold anchoring
- Versatile application: The eye screw can be screwed directly into wood. By using it in the nylon anchor system, the eye screw can be used on almost all substrates

Materials

- Concrete
- Calcium silicate solid bricks
- Natural stone with dense structure
- Full brick
- Full lightweight concrete block



Application examples

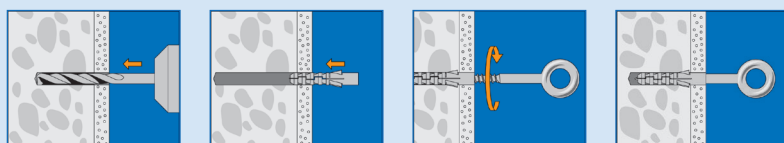


Straight to the product



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Assembly



Product variants

Product	Art-No.	Eye-ø	Shaft diameter	Shaft length	Sales unit
UGS 8x100	542580	22	8	100	20
UGS 12x90	542581*	23	12	90	25
UGS 12x120	541733	23	12	120	25
UGS 12x160	541734	23	12	160	25
UGS 12x190	542582*	23	12	190	25

* Note: Available upon request. Not part of the standard product range.

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Concrete ≥ C20/25 N _{rec} ³⁾ [kN]	Solid brick ≥ Mz12 N _{rec} ³⁾ [kN]	Solid sand-lime brick ≥ KS12 N _{rec} ³⁾ [kN]	Solid block made of lightweight concrete ≥ V2 N _{rec} ³⁾ [kN]	Sand-lime perforated brick ≥ KSL12 N _{rec} ³⁾ [kN]	Vertically perforated brick ≥ Hlz12 N _{rec} ³⁾ [kN]	Aerated concrete ≥ 4/PP4 N _{rec} ³⁾ [kN]
UGS 8 + U 10	1.1	1.1	1.1	-	-	-	-
UGS 12 + UGH 14	1.8	1.3	1.8	1.3	0.4	0.4	0.4

¹⁾ Safety factor requirement considered.

Toggle anchor UK/UKH

²⁾ Load values apply when using the scaffold screw UGS with the specified Upat anchor.

³⁾ Valid for tension loads.

Flexible cavity anchor for strong hold in panel building materials.

Long Description

The Upat toggle anchor UK with thread and UKH with hook is particularly suitable for fastening light to medium loads in installation and cavity walls. The anchor is inserted into the drilled hole, causing the toggle element to flip in the cavity and securely position itself on the panel material. The Upat Toggle Anchor UK/UKH is commonly used for mounting speakers, towel holders or mirrored cabinets.

Characteristics

- Building material: Plate construction
- Load range: Tensile load, shear load, and oblique load 0.07-4.3 kN
- Material: Zin plated steel (zp)
- Variant: External thread (UK), hook (UKH)
- Feature: Thread M3-M10

Applications

- Speakers
- Towel holders
- Mirror cabinet
- Metal brackets

Advantages

- High load capacity: The wide tilting element allows for high load-bearing capacities in panel materials or cavities
- Flexible fixing: The long thread of the toggle anchor provides flexibility in panel thickness and attachment thickness
- Easy installation: The toggle anchor is suitable for pre-positioned installation and does not require special installation tools
- External thread (UK): For precise adjustment of clamping thickness
- Hook (UKH): For fixing suspensions and hangers

Materials

- Gypsum plasterboard and gypsum fiberboard
- Hollow decks made of brick and concrete
- Particle boards
- Plywood



Straight to the product

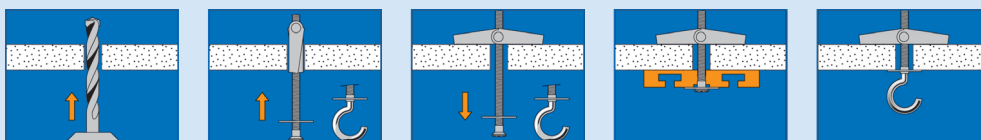


upat.com/en-uk

Application examples



Assembly



Toggle anchor UK/UKH

Product variants

Product	Art.No.	Drill diameter	Anchor length	Thread	Max. panel thickness	Min. cavity depth	Sales unit
UK M3	542776	12	95	M3 x 90	65	27	50
UK M4	542777	14	105	M4 x 100	69	34	25
UK M5	542778	16	100	M5 x 100	63	70	25
UK M6	542779	16	100	M6 x 100	63	70	25
UK M8	542780	20	100	M8	55	75	20
UK M10	542781	30	180	M10	90	140	25
UKH M3	542782*	12	105	M3 x 80	51	27	25
UKH M4	542783*	16	130	M4 x 70	60	70	25
UKH M5	542784*	14	95	M5 x 90	35	34	20

External thread (UK): For precise adjustment of clamping thickness

Hook (UKH): For fixing suspensions and hangers

* Note: Available upon request. Not part of the standard product range.

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Thread size	Recommended loads in the respective base material ²⁾ F _{rec} ¹⁾	Gypsum plasterboard ³⁾ 12,5 mm F _{rec} ¹⁾	OSB board ³⁾ ≥ 15 mm F _{rec} ¹⁾	Mean ultimate loads F _{u4)5)6)}
	[M]	[kN]	[kN]	[kN]	[kN]
UK 3	M4	0.45	0.15	0.34	-
UK 4	M4	0.9	0.15	0.6	-
UK 5	M5	2.2	0.15	0.85	-
UK 6	M6	2.8	0.15	0.85	-
UK 8	M8	4.3	0.18	0.89	-
UK 10	M10	-	-	-	13
UKH 3	M3	0.1	0.1	0.1	-
UKH 4	M4	0.13	0.13	0.13	-
UKH 5	M5	0.3	0.15	0.3	-

¹⁾ Valid for axial tensile load.

²⁾ Required safety factors are considered.

³⁾ Bending of the hook is decisive. Only for tension load.

⁴⁾ Upon these failure loads an appropriate safety factor has to be considered.

⁵⁾ Valid for tensile load, shear load and oblique load under any angle.

⁶⁾ If the failure of the base material is not possible.

Hollow wall anchor UH/UHZ

Robust hollow wall plug made of metal with metric internal thread and screw for multiple loosening and fastening of the attachment. 1

Long Description

The Upat hollow wall anchor UH, with its metric internal thread and screw, is an ideal solution for multiple uses in all panel construction materials. When mounted with the Upat hollow cavity pliers UHZ, the hollow wall anchor expands in the cavity and presses tightly against the back of the panel. The Upat hollow wall metal anchor UH is commonly used for fastening lightweight wall shelves or lights.

Characteristics

- Building material: Panel construction
- Load range: Tension load, shear load, and oblique load 0.05-0.5kN
- Material: Zinc plated steel (zp)
- Variant: Screw (S), hook (H)
- Feature: Thread M4-M8, anchor length 32-65mm
- Accessory: Setting tool UHZ

Applications

- Wall lights
- Wall shelves
- Curtain rods
- Wall cabinets

Materials

- Wood wool lightweight panels
- Hollow decks
- Plywood panels
- Chipboard panels
- Gypsum plasterboards and gypsum fiberboards

Advantages

- Flexible mounting: Screws can be flexibly mounted and flush dismantled using the metric internal thread
- High load capacity: The four-fold expansion in the cavity achieves high load-bearing capacities in panel building materials or cavities
- Versatile use: The cavity anchor can be used versatilely with the supplied pan head or angle screw
- Optimized installation: Ideal for pre-installation. The installation pliers UHZ enable quick and efficient installation
- Safe application: The metal claws on the anchor's edge prevent the cavity anchor from rotating in the drill hole

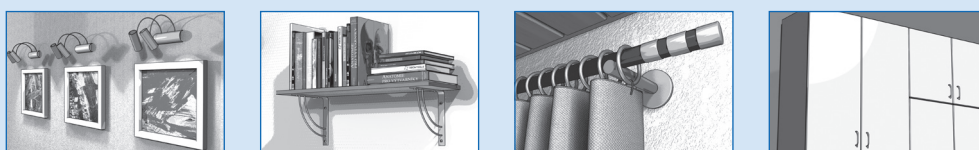


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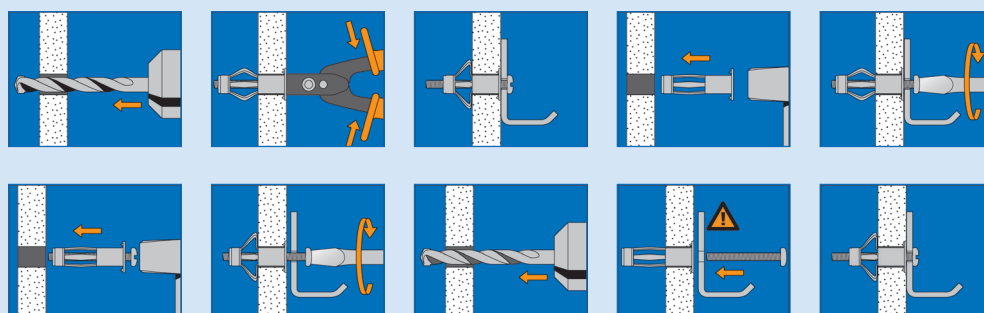


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Application examples



Assembly



Hollow wall anchor UH/UHZ

Product variants

Product	Art.No.	Drive	Drill diameter	Anchor length	Min. drill hole depth	Panel thickness	Screw dimension	Sales unit	Content
UH 4x32 H	542945	—	8	32	45	3 - 13	—	50	50 x hollow wall anchor, 50 x hooks
UH 4x32 S	542785	PH2	8	32	40	3 - 13	M4x40	50	50 x hollow wall anchor, 50 x screws
UH 4x45 S	542786	PH2	8	45	52	16 - 23	M4x52	50	50 x hollow wall anchor, 50 x screws
UH 5x37 S	542787	PH2	10	37	45	6 - 15	M5x45	50	50 x hollow wall anchor, 50 x screws
UH 5x52 S	542788	PH2	10	52	58	7 - 21	M5x58	50	50 x hollow wall anchor, 50 x screws
UH 5x65 H	542946	—	10	65	71	20 - 34	—	50	50 x hollow wall anchor, 50 x hooks
UH 5x65 S	542789	PH2	10	65	71	20 - 34	M5x71	50	50 x hollow wall anchor, 50 x screws
UH 6x37 S	542790	PH3	12	37	45	6 - 15	M6x45	50	50 x hollow wall anchor, 50 x screws
UH 6x52 S	542791	PH3	12	52	58	7 - 21	M6x58	50	50 x hollow wall anchor, 50 x screws
UH 6x65 S	542792	PH3	12	65	71	17 - 34	M6x71	50	50 x hollow wall anchor, 50 x screws
UH 8x54 S	542944	SW 13	12	54	60	7 - 21	M8x60	50	50 x hollow wall anchor, 50 x screws
UHZ	542793	—	—	—	—	—	—	1	1 x setting tool

Load table

Highest recommended loads¹⁾²⁾ of a single plug.

Type	Thread size [M]	Gypsum plasterboard 9,5 mm $F_{rec}^{2)}$ [kN]	Gypsum plasterboard 12,5 mm $F_{rec}^{2)}$ [kN]	Gypsum plasterboard 19 mm (2x9,5 mm) $F_{rec}^{2)}$ [kN]	Gypsum plasterboard 15 mm (2x12,5 mm) $F_{rec}^{2)}$ [kN]	Chipboard 10 mm $F_{rec}^{2)}$ [kN]	Chipboard 13 mm $F_{rec}^{2)}$ [kN]	Chipboard 28 mm $F_{rec}^{2)}$ [kN]
UH 4x32 S	M4	0.15	0.2	-	-	0.25	0.25	-
UH 4x45 S	M4	0.15	0.2	-	-	0.25	0.25	-
UH 5x37 S	M5	0.15	0.2	-	-	0.25	0.25	-
UH 5x52 S	M5	0.15	0.2	0.25	-	0.25	0.25	-
UH 5x65 S	M5	-	-	-	0.3	-	-	0.5
UH 6x37 S	M6	0.15	0.2	-	-	0.25	0.25	-
UH 6x52 S	M6	-	0.2	0.25	-	0.25	0.25	-
UH 6x65 S	M6	-	-	-	0.3	-	-	0.5
UH 8x54 S	M8	-	0.2	0.25	-	0.25	0.25	-

Load table

Type	Thread size [M]	Plywood 4 mm $F_{rec}^{2)}$ [kN]	Hardboard 3 mm $F_{rec}^{2)}$ [kN]	Wood wool slab 16 mm $F_{rec}^{2)}$ [kN]	Wood wool slab 25 mm $F_{rec}^{2)}$ [kN]	Fibre cement board 8 mm $F_{rec}^{2)}$ [kN]	Gypsum fibreboard 10 mm $F_{rec}^{2)}$ [kN]	Gypsum fibreboard 15 mm $F_{rec}^{2)}$ [kN]
UH 4x32 S	M4	0.1	0.1	-	-	0.25	0.25	-
UH 4x45 S	M4	-	-	0.05	-	0.25	0.25	0.25
UH 5x37 S	M5	-	-	-	-	0.25	0.25	0.25
UH 5x52 S	M5	-	-	0.05	-	0.25	0.25	0.25
UH 5x65 S	M5	-	-	-	0.05	-	-	-
UH 6x37 S	M6	-	-	-	-	0.25	0.25	0.25
UH 6x52 S	M6	-	-	0.05	-	-	0.25	0.25
UH 6x65 S	M6	-	-	-	0.05	-	-	-
UH 8x54 S	M8	-	-	0.05	-	-	0.25	0.25

¹⁾ Required safety factors are considered.

²⁾ Valid for tensile load, shear load and oblique load under any angle.

Nail sleeve UNH

Time-saving spring toggle sleeve for quick installation.

Long Description

The Upat nail sleeve UNH is a user-friendly expansion sleeve for light-duty fastenings. Made of corrosion-coated spring steel, the UNH is quickly driven into solid building materials through its geometry, saving time in through-hole installations. Its simple installation requires neither plugs nor screws. This makes it easy and cost-effective to attach wooden and metal substructures as well as metal profiles in solid building materials, both indoors and temporarily outdoors.

Characteristics

- Building material: Concrete, solid construction
- Load range: Tensile load 0.5-0.7 kN, shear load 1.4-2 kN
- Material: Corrosion-coated spring steel
- Feature: Drill diameter 6/8mm, Anchor length 60-110mm, Effective length 30-70mm

Applications

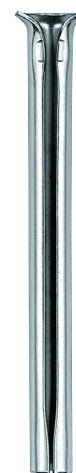
- Wooden substructures
- Lighting strips
- Speakers
- Metal brackets

Advantages

- Easy installation: The one-piece nail sleeve requires no additional screws or plugs
- Time-saving assembly: The nail sleeve can be set directly through the fixture in through-hole installation
- Flexible application range: Due to the corrosion-coated spring steel, it can be used indoors and temporarily outdoors
- Secure grip: Through the tensioning of the entire sleeve length in solid building material

Materials

- Concrete
- Calcium silicate solid bricks
- Natural stone with dense structure
- Solid bricks



Straight to the product



upat.com/en-unh

Application examples



Assembly



Product variants

Product	Art.No.	Drill diameter	Anchor length	Effect. anchorage depth	Max. fixture thickness	Min. drill hole depth for through fixings	Sales unit
UNH 6x60	542583	6	60	30	30	70	100
UNH 6x80	542584	6	80	30	50	90	100
UNH 8x70	547150	8	70	40	30	80	100
UNH 8x90	542585	8	90	40	50	100	50
UNH 8x110	542586	8	110	40	70	120	50

Load table

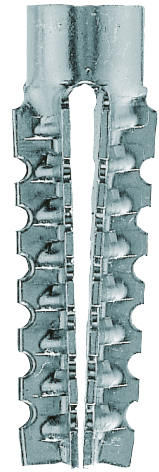
Recommended loads¹⁾ of a single anchor as part of a multiple fixing of non-structural systems

Type	Anchorage in concrete $\geq$ C20/25		
	Minimum member thickness [mm]	Recommended tension load N_{rec} [kN]	Recommended shear load V_{rec} [kN]
UNH 6	60	0.5	1.4
UNH 8	70	0.7	2

¹⁾ Required safety factors are considered.

Metal expansion anchor UMA

Installation-friendly metal expansion anchor for wood and chipboard screws.



Long Description

The Upat metal expansion anchor UMA is a user-friendly expansion plug. The plug is suitable for fastenings in concrete, aerated concrete, solid and hollow building materials, as well as in solid plasterboard. This special plug can be flexibly installed in pre-set and aerated concrete without pre-drilling. The metal teeth securely anchor into the building material when screwed in, enabling high load-bearing capacity. The ribbed internal geometry of the UMA ensures secure screw guidance for wood and chipboard screws. The metal expansion anchor UMA is a specialist in installation technology and finds its application in the fastening of, for example, gas and water pipes, cable and pipe clamps.

Characteristics

- Building material: Concrete, solid construction, panel construction
- Load range: Tensile load, shear load, and oblique load 0.2-0.6 kN
- Material: Zin plated steel (zp)
- Feature: Drill diameter 6-10mm

Materials

- Concrete
- Perforated clay bricks
- Hollow block made of lightweight concrete
- Hollow decks made of brick and concrete
- Calcium silicate perforated bricks
- Calcium silicate solid bricks
- Natural stone with dense structure
- Aerated concrete
- Solid block made of lightweight concrete
- Full gypsum boards

Advantages

- Wide range of applications: Suitable for a variety of building materials. Proven for fixing gas and water pipes as well as cable and pipe clamps
- Versatile use: Due to the flush-mounted installation in the building material, various types of screws such as chipboard screws, wood screws, eye screws, angle screws, or hook screws can be used for fixing
- Safe application: Thanks to the special internal geometry for screw guidance
- Time saving in aerated concrete: Pre-drilling is not necessary. The metal expansion anchor can be directly hammered into the aerated concrete

Applications

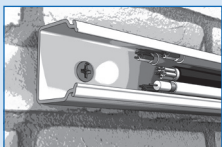
- Cable channels
- Wall lights
- Speakers
- Electrical installations
- Pipeline routes

Straight to the product

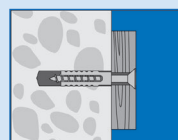
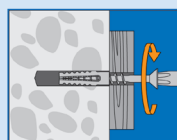
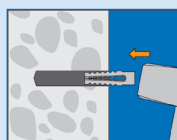


upat.com/en-uma

Application examples



Assembly



Metal expansion anchor UMA

Product variants

Product	Art-No.	Drill diameter	Anchor length	Min. drill hole depth	Screw diameter	Sales unit
UMA 6x32	542949	6	32	38	5.0 - 6.0	100
UMA 8x38	542950	10	38	46	6.0 - 8.0	100
UMA 10x60	542951	12	60	68	8.0 - 10.0	50

Load table

Highest recommended loads¹⁾²⁾ of a single anchor.

Type	Wood screw diameter Ø [mm]	Aerated concrete ≥ AAC 2 F _{rec} ³⁾ [kN]	Aerated concrete ≥ AAC 4 F _{rec} ³⁾ [kN]
UMA 8x38	8	0.2	0.3
UMA 10x60	10	0.4	0.6

¹⁾ Required safety factors are considered.

²⁾ The given loads are valid for wood screws with maximum diameter

³⁾ Recommended loads in the respective base material.

Brass plug UMD

Compact brass anchor with metric internal thread for minimal anchorage depths.



Long Description

The Upat brass plug UMD is a compact special anchor with a metric internal thread. Particularly due to its low required anchorage depth, the UMD is the solution for fastening in thin panels as well as in solid building materials. It is used for fastening handles, support brackets, or lamps, for example.

Characteristics

- Building material: Concrete, solid construction, panel construction
- Load range: Tensile load, shear load, and oblique load 0.2-1.95 kN
- Material: Brass
- Feature: Internal thread M6/M8, anchor length 7.5-25mm

Materials

- Wood panel materials
- Plastic panels
- Concrete
- Full bricks
- Calcium silicate solid bricks
- Natural stone with dense structure

Advantages

- Minimal anchoring depth: The compact brass anchor allows for fastenings in particularly thin building materials
- Flexible mounting: The metric internal thread allows screws to be flexibly mounted and flush disassembled
- Wide range of applications: The corrosion-resistant brass enables indoor and outdoor use
- Secure application: The unique surface structure of the brass anchor prevents it from rotating in the drill hole

Applications

- Cable channels
- Wall lights
- Speakers
- Wall cabinet

Straight to the product

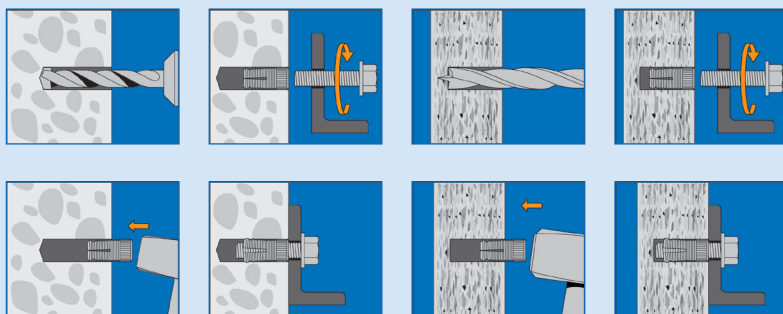


upat.com/en-umd

Application examples



Assembly



Brass plug UMD

Product variants

Product	Art-No.	Drill diameter	Anchor length	Bolt penetration	Thread	Min. drill hole depth	Min. effect. anchorage depth	Sales unit
UMD M6/7,5	542952	8	7,5	7,5	M6	7,5	7,5	200
UMD M6/10,5	542953	8	10,5	10,5	M6	10,5	10,5	100
UMD M8/25	542954	10	25	25	M8	25	25	50

Load table

Highest recommended loads¹⁾²⁾ of a single anchor.

Type	Thread size [M]	Chipboard F _{rec} ³⁾ [kN]	Fir wood F _{rec} ³⁾ [kN]	Beech wood F _{rec} ³⁾ [kN]	Plastic material F _{rec} ³⁾ [kN]	Solid brick F _{rec} ³⁾ [kN]
UMD M6/7,5	M6	0.2	0.18	0.5	0.75	-
UMD M6/10,5	M6	0.3	0.25	0.75	1.5	-
UMD M8/25	M8	-	-	-	-	1.95

¹⁾ Required safety factors are considered.

²⁾ The given loads are valid for metric screws with the specified thread size.

³⁾ Valid for tensile load, shear load and oblique load under any angle.

Ring nut URI

Eyelet fastening for all dowels with threaded bolts.



Long Description

The Upat eye nut URI is a fastening solution for all anchors with threaded bolts. Thanks to its metric internal thread, the eye nut can be combined with a variety of steel anchors and threaded rods, making it reusable. Depending on the anchor used, the URI can be used in concrete, solid, and hollow building materials.

Characteristics

- Load range: Tensile load, shear load, and oblique load 0.7-2.3 kN
- Material: Galvanized steel (zp)
- Feature: Thread M8/M10

Applications

- Concrete, cracked and uncracked
- Full and perforated stone

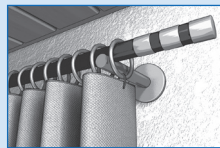
Advantages

- Flexible use: The metric internal thread allows the ring nut URI to be used flexibly with a variety of steel anchors and threaded rods
- Reusable fastening solution: The ring nut can be easily dismantled and reused

Materials

- Wall light
- Speakers
- Curtain rod
- Flower pot

Application examples

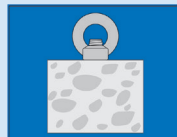
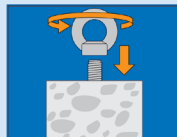
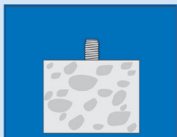


Straight to the product



upat.com/en-uri

Assembly



Product variants

Product	Art-No.	Eye- ϕ	Total height	Thread	Sales unit
URI M8	541741*	20	—	M8	20
URI M10	541742*	25	45	M10	10

* Note: Available upon request. Not part of the standard product range.

Load table

Recommended loads¹⁾ for ring nuts.

Type	Thread size [M]	Axial tension on single ring nut F_{rec} [kN]	Axial or oblique tension up to 45° on a group of two ring nuts F_{rec} [kN]	Shear or oblique tension up to 45° on a group of two ring nuts for lateral arrangement F_{rec} [kN]
URI M8	M8	1.4	1	0.7
URI M10	M10	2.3	1.7	1.1

¹⁾ Required safety factors are considered.

²⁾ The given loads apply for the use of ring nuts as permanent anchorage. For varying use of different components to be lifted ring nuts with next larger thread diameter has to be used (see DIN582).

Window frame screws UFS

The economical special screw for window installation

Long Description

The Upat UFS window frame fixing screw is a special screw designed for the installation of window frames. After drilling, the screw can be inserted directly into both solid and hollow construction materials. The continuous special thread prevents the window frames from being pulled tight against the substrate. As a result, they are permanently secured without stress.

Applications

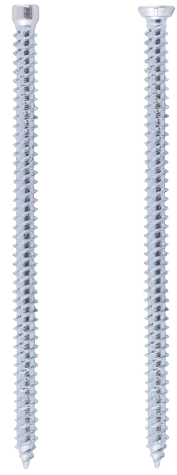
- Window frames made of wood, plastic and aluminium
- Door frames
- Squared timbers

Materials

- Concrete
- Vertically perforated brick
- Hollow blocks made from lightweight concrete
- Perforated sand-lime brick
- Solid sand-lime brick
- Solid brick made from lightweight concrete
- Solid brick
- Aerated concrete

Advantages

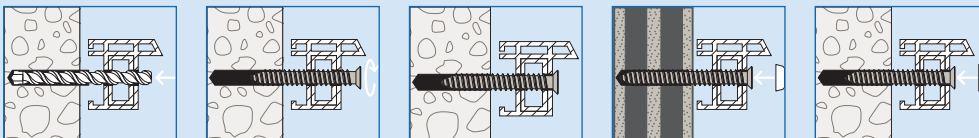
- Screw installation without plug for economical processing.
- The small drill bit diameter of 6 mm allows for efficient series installation.
- The continuous thread ensures a stress-free fixing of the frame in the substrate.
- The high-low-thread at the screw tip as well as several cutting notches reduce the amount of force required for screwing in the screws. The installation process can be completed without excessive effort.
- According to the ift Rosenheim suitable for the fixation of a plastic window in brick masonry.



Application examples



Assembly



Straight to the product



upat.com/en-ufs

Window frame screws UFS

Product variants

Product	Art.No.	Drive	Drill diameter	Diameter	Head	Screw length	Sales unit
UFS CS 7,5x42 TX30	581007	TX30	6	7,5	11.5	42	100
UFS CS 7,5x52 TX30	581008	TX30	6	7,5	11.5	52	100
UFS CS 7,5x62 TX30	581009	TX30	6	7,5	11.5	62	100
UFS CS 7,5x72 TX30	581010*	TX30	6	7,5	11.5	72	100
UFS CS 7,5x82 TX30	581011	TX30	6	7,5	11.5	82	100
UFS CS 7,5x92 TX30	581012*	TX30	6	7,5	11.5	92	100
UFS CS 7,5x102 TX30	581013	TX30	6	7,5	11.5	102	100
UFS CS 7,5x112 TX30	581015	TX30	6	7,5	11.5	112	100
UFS CS 7,5x122 TX30	581019*	TX30	6	7,5	11.5	122	100
UFS CS 7,5x132 TX30	581020	TX30	6	7,5	11.5	132	100
UFS CS 7,5x152 TX30	581021	TX30	6	7,5	11.5	152	100
UFS CS 7,5x182 TX30	581022	TX30	6	7,5	11.5	182	100
UFS CS 7,5x202 TX30	581023	TX30	6	7,5	11.5	202	100
UFS CS 7,5x212 TX30	581024	TX30	6	7,5	11.5	212	100
UFS CS 7,5x252 TX30	581025	TX30	6	7,5	11.5	252	100
UFS CS 7,5x302 TX30	581026	TX30	6	7,5	11.5	302	100
UFS FH 7,5x52 TX30	580992	TX30	6	7,5	8	52	100
UFS FH 7,5x62 TX30	580993	TX30	6	7,5	8	62	100
UFS FH 7,5x72 TX30	580994	TX30	6	7,5	8	72	100
UFS FH 7,5x82 TX30	580995*	TX30	6	7,5	8	82	100
UFS FH 7,5x92 TX30	580996	TX30	6	7,5	8	92	100
UFS FH 7,5x102 TX30	580997*	TX30	6	7,5	8	102	100
UFS FH 7,5x112 TX30	580998	TX30	6	7,5	8	112	100
UFS FH 7,5x122 TX30	580999	TX30	6	7,5	8	122	100
UFS FH 7,5x132 TX30	581000	TX30	6	7,5	8	132	100
UFS FH 7,5x152 TX30	581001	TX30	6	7,5	8	152	100
UFS FH 7,5x182 TX30	581002*	TX30	6	7,5	8	182	100
UFS FH 7,5x202 TX30	581003	TX30	6	7,5	8	202	100
UFS FH 7,5x212 TX30	581004	TX30	6	7,5	8	212	100
UFS FH 7,5x252 TX30	581005	TX30	6	7,5	8	252	100
UFS FH 7,5x302 TX30	581006	TX30	6	7,5	8	302	100
UFS PH 7,5x72 TX30	581027	TX30	6	7,5	8	72	100
UFS PH 7,5x82 TX30	581028	TX30	6	7,5	8	82	100
UFS PH 7,5x92 TX30	581029	TX30	6	7,5	8	92	100
UFS PH 7,5x102 TX30	581030	TX30	6	7,5	8	102	100
UFS PH 7,5x112 TX30	581031	TX30	6	7,5	8	112	100
UFS PH 7,5x122 TX30	581032	TX30	6	7,5	8	122	100
UFS PH 7,5x132 TX30	581033	TX30	6	7,5	8	132	100
UFS PH 7,5x152 TX30	581034	TX30	6	7,5	8	152	100
UFS PH 7,5x182 TX30	581035	TX30	6	7,5	8	182	100
UFS PH 7,5x212 TX30	581036	TX30	6	7,5	8	212	100
UFS PH 7,5x252 TX30	581037	TX30	6	7,5	8	252	100

* Note: Available upon request. Not part of the standard product range.

Window frame screws UFS

Load table

Recommended loads¹⁾ of a single screw.

Type		UCF CS			UCF FH			UCF PH		
Screw diameter	d_0 [mm]	7,5			7,5			7,5		
Anchorage depth	h_{ef} [mm]	30	40	50	30	40	50	30	40	50
Recommended loads in concrete $\geq$ C20/25										
Tension load N_{rec}	[kN]	1.00	-	-	1.00	-	-	1.00	-	-
Shear load V_{rec}	[kN]	0.70	-	-	0.70	-	-	0.70	-	-
Minimum edge distance ²⁾	c_{min} [mm]	30	-	-	30	-	-	30	-	-
Recommended loads in masonry										
Tension load N_{rec} in solid brick	$\geq Mz 12$ [kN]	-	0.40 ³⁾	0.80	-	0.40 ³⁾	0.80	-	0.40 ³⁾	0.80
Shear load V_{rec} in solid brick	$\geq Mz 12$ [kN]	-	0.30 ³⁾	0.70	-	0.30 ³⁾	0.70	-	0.30 ³⁾	0.70
Tension load N_{rec} in solid sand-lime brick	$\geq KS 12$ [kN]	-	1.00	-	-	1.00	-	-	1.00	-
Shear load V_{rec} in solid sand-lime brick	$\geq KS 12$ [kN]	-	0.60	-	-	0.60	-	-	0.60	-
Tension load N_{rec} in vertically perforated brick	$\geq Hlz 12$ [kN]	-	-	0.25 ³⁾	-	-	0.25 ³⁾	-	-	0.25 ³⁾
Shear load V_{rec} in vertically perforated brick	$\geq Hlz 12$ [kN]	-	-	0.40 ³⁾	-	-	0.40 ³⁾	-	-	0.40 ³⁾
Minimum edge distance ²⁾	c_{min} [mm]	-	40	40	-	40	40	-	40	40
Recommended loads in aerated concrete										
Load ⁴⁾ F_{rec} in aerated concrete	$\geq AAC 2$ [kN]	-	-	0.10 ⁵⁾	-	-	0.10 ⁵⁾	-	-	0.10 ⁵⁾
	$\geq AAC 4$	-	-	0.25 ⁵⁾	-	-	0.25 ⁵⁾	-	-	0.25 ⁵⁾
Minimum edge distance ²⁾	c_{min} [mm]	-	-	40	-	-	40	-	-	40

¹⁾ Required safety factors are considered. As a single screw counts e.g. a screw with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1.5 \times h_{ef}$.

²⁾ Minimal possible edge distance while reducing the recommended loads.

³⁾ Drilling method: rotary drilling.

⁴⁾ Valid for tensile load, shear load, and oblique pull at any angle.

⁵⁾ Without pre-drilling.

Terms and Conditions

Upat Vertriebs GmbH

I. Scope of Application

1. All our deliveries, services and offers are made exclusively on the basis of these General Terms and Conditions (GTC). These GTC form an integral part of all contracts that we conclude with our contractual partners (hereinafter also referred to as the "Customer") concerning the deliveries or services offered by us. They shall also apply to all future deliveries, services or offers made to the Customer, even if they are not agreed separately again.
2. Terms and conditions of the Customer or of third parties shall not apply, even if we do not separately object to their validity in individual cases. Even if we refer to a letter containing or referring to terms and conditions of the Customer or a third party, this shall not constitute an agreement to the validity of such terms and conditions.
3. We sell exclusively to commercial customers (businesses as defined in Section 14 of the German Civil Code (BGB)).

II. Offer, Order Confirmation and Conclusion of Contract, Call-Off Orders

1. All our offers are subject to change and non-binding unless they are expressly designated as binding or contain a specific acceptance period. Unless the Customer offers us a longer period for acceptance, we may accept orders or purchase orders within 4 weeks of receipt.
2. A contract based on the Customer's order shall be formed upon our written order confirmation or upon delivery of the goods. For the purposes of these General Terms and Conditions, "written" includes text form, such as e-mail, fax, computer-generated letters and telegrams.
3. Unless otherwise agreed between the parties in at least text form, the following shall apply: the contract referred to above, including these GTC, shall constitute the sole basis of the legal relationship between us and the Customer. It fully reflects all agreements between the contracting parties concerning the subject matter of the contract. Oral commitments made by us prior to the conclusion of this contract are legally non-binding, and oral agreements between the contracting parties are superseded by the contract referred to above.
4. Where the parties have agreed a written-form requirement, any amendment to or modification of the agreements concluded between them, including these General Terms and Conditions, shall be effective only if made in writing. In all other cases, amendments and additions shall require at least text form.
5. Information relating to the subject matter of the delivery or service (such as weights, dimensions, utility values, load capacities, tolerances and technical data), as well as representations thereof (such as drawings and illustrations), shall be deemed approximate only unless exact conformity is required for the intended contractual purpose. Such information does not constitute guaranteed characteristics or specifications but merely descriptions or identifications of the delivery or service. Customary trade deviations, deviations resulting from legal requirements or technical improvements, and the replacement of components with equivalent parts shall be permissible, provided that they do not impair the suitability of the delivery or service for the intended contractual purpose.
6. We reserve all ownership rights and copyrights in all offers and quotations submitted by us, as well as in all drawings, illustrations, calculations, brochures, catalogues, models, tools and other documents and materials made available to the Customer. Without our express consent, the Customer may neither make these items, as such or in terms of their content, accessible to third parties, disclose them, use or reproduce them itself or through third parties. At our request, the Customer must return these items to us in full and destroy any copies made if they are no longer required by it in the ordinary course of business or if negotiations do not result in the conclusion of a contract. This does not apply to the storage of electronically provided data for customary data-backup purposes.
7. In the case of call-off orders, the goods must be called off no later than within 6 months after the order is placed. If the goods are not called off within this period, we shall be entitled to invoice the purchase price. From the date on which the goods are invoiced, we shall be entitled to charge storage costs for making them available, at the rate then applicable in the freight-forwarding industry.

III. Terms of Payment

1. Our invoices are due for payment 30 days after the invoice date without any deduction, unless otherwise agreed in writing. If payment is made within 10 days after the invoice date, we grant a 2% cash discount. The date on which payment is received by us shall be decisive for the date of payment. Payments shall always be credited against the oldest invoice due.
2. If the payment period is exceeded, we shall be entitled, from that time and without a reminder, to charge interest at the statutory rate. This interest rate shall be increased if we prove that we are charged a higher interest rate. The right to claim further damages in the event of default remains unaffected.
3. If, after the order has been placed, the Customer's financial circumstances materially deteriorate, or if a deterioration in the Customer's financial circumstances that occurred previously only becomes known to us after the order has been placed, we shall be entitled, at our discretion, to demand either advance payment or the provision of security.
4. Payments by bill of exchange require prior written agreement. No cash discount shall be granted for payments made by bill of exchange.
5. The Customer may set off only claims that are undisputed or have been finally adjudicated. The same applies to rights of retention. The assignment of claims of the Customer against us is excluded.

IV. Delivery and Delivery Time / Place of Delivery

1. DAP shall apply to deliveries within the Federal Republic of Germany.
2. As a general rule, we deliver our goods only to addresses within the Federal Republic of Germany.
3. Periods and dates for deliveries and services indicated by us shall always be approximate only, unless a fixed period or fixed date has expressly been promised or agreed. If shipment has been agreed, delivery periods and delivery dates, unless expressly stated otherwise by us, refer to the time of handover to the freight forwarder, carrier or other third party commissioned with transport.
4. Without prejudice to our rights arising from default by the Customer, we may require the Customer to agree to an extension of delivery and performance periods or a postponement of delivery and performance dates by the period during which the Customer fails to comply with its contractual obligations towards us.
5. We shall not be liable where delivery becomes impossible, nor for delays in delivery, to the extent that such impossibility or delay is caused by force majeure or other events that were not foreseeable at the time the contract was concluded (e.g. operational disruptions of any kind, difficulties in procuring materials or energy, transport delays, strikes, lawful lockouts, shortages of labour, energy or raw materials, difficulties in obtaining necessary official approvals, pandemics or epidemics, official measures, or failure to receive supplies, or receipt of incorrect or untimely supplies, from suppliers despite a congruent covering transaction concluded by the seller) for which we are not responsible. If such events materially impede or render impossible our delivery or performance and the impediment is not merely temporary, we shall be entitled to withdraw from the contract. In the event of impediments of a temporary nature, the delivery or performance periods shall be extended, or the delivery or performance dates postponed, by the duration of

the impediment plus a reasonable start-up period. If, as a result of the delay, the Customer cannot reasonably be expected to accept the delivery or service, the Customer may withdraw from the contract by giving us written notice without undue delay.

6. We are entitled to make partial deliveries provided that:
7. the partial delivery can be used by the Customer for the contractually intended purpose,
8. delivery of the remaining goods ordered is assured, and
9. this does not result in substantial additional expenditure or additional costs for the Customer (unless we agree to bear such costs).
10. If we are in default with a delivery or service, or if a delivery or service becomes impossible for us, irrespective of the reason, our liability for damages shall be limited in accordance with Section X. of these GTC.

V. Shipment, Packaging, Acceptance

1. The method of shipment and packaging shall be at our reasonable discretion exercised in accordance with our obligations. Special requests of the Customer (e.g. expedited shipping, special packaging, engagement of a specific freight forwarder) shall be considered provided that any additional costs incurred are borne by the Customer.
2. Storage costs after the passing of risk shall be borne by the Customer. Where storage is provided by us, the storage costs shall amount to (0.25)% of the invoice value of goods to be stored per completed week. The right to claim and prove higher or lower storage costs remains reserved.
3. We shall insure the shipment against theft, breakage, transport, fire and water damage or other insurable risks only at the express request and expense of the Customer.
4. Where acceptance is required, the purchased item shall be deemed accepted if
 - delivery has been completed,
 - we have notified the Customer thereof, drawing attention to the deemed acceptance under this Section V., and have requested the Customer to accept the item,
 - 12 working days have elapsed since delivery, or the Customer has begun using the purchased item (e.g. has put the delivered installation into operation) and, in that case, 6 working days have elapsed since delivery, and
 - the Customer has failed to declare acceptance within such period for any reason other than a defect notified to us that renders the use of the goods impossible or materially impairs such use.

VI. Warranty

1. The Customer may not derive any rights from a defect in our delivery or service insofar as there is merely an insignificant reduction in the contractually agreed quality.
2. The warranty period is one year from delivery or, where acceptance is required, from acceptance. This period does not apply to claims for damages by the Customer arising from injury to life, body or health or from intentional or grossly negligent breaches of duty by us or our vicarious agents, each of which shall become time-barred in accordance with the statutory provisions.
3. Goods bearing a use-by date may be used only until that date expires.
4. The delivered items must be carefully inspected without undue delay after delivery to the Customer or to the third party designated by it. With regard to obvious defects or other defects that would have been detectable upon an immediate, careful inspection, they shall be deemed approved by the Customer unless we receive written notice of defect within (seven) working days after delivery. With regard to other defects, the delivery items shall be deemed approved by the Customer unless we receive notice of defect within (seven) working days after the time at which the defect became apparent; however, if the defect was already apparent at an earlier time during normal use, that earlier time shall be decisive for the commencement of the notification period. At our request, a delivery item complained of must be returned to us carriage paid. In the event of a justified notice of defect, we shall reimburse the costs of the least expensive method of shipment; however, this shall not apply to the extent that such costs increase because the goods are located at a place other than their intended place of use.
5. In the event of material defects in the delivered items, we shall initially be obliged and entitled, at our discretion to be exercised within a reasonable period, to remedy the defect or make a replacement delivery. In the event of failure, i.e. impossibility, unreasonableness, refusal or unreasonable delay in remedying the defect or making a replacement delivery, the Customer may withdraw from the contract or reasonably reduce the purchase price.
6. If a defect is attributable to fault on our part, the Customer may claim damages subject to the conditions set out in Section X.
7. In the case of defects in components of other manufacturers that we are unable to remedy for licensing or factual reasons, we shall, at our discretion, assert our warranty claims against the manufacturers and suppliers for the account of the Customer or assign such claims to the Customer. Warranty claims against us in respect of such defects shall exist, subject to the other requirements and in accordance with these GTC, only if judicial enforcement of the aforementioned claims against the manufacturer and supplier has been unsuccessful or is futile, for example due to insolvency. For the duration of the legal proceedings, the limitation period for the relevant warranty claims of the Customer against us shall be suspended.
8. The warranty shall cease to apply if, without our consent, the Customer modifies the delivery item or has it modified by third parties and this makes remedying the defect impossible or unreasonably difficult. In all cases, the Customer shall bear the additional costs of remedying the defect resulting from the modification.
9. Any delivery of used items agreed with the Customer in an individual case shall be made with all warranty for material defects excluded.

VII. Withdrawal in the Event of Breach of Duty

1. The Customer shall have no statutory right of withdrawal due to non-performance or performance not in accordance with the contract if we are not responsible for the breach of duty.
2. The preceding Clause 1 shall not apply where special agreements give the Customer a right of withdrawal irrespective of fault. Furthermore, the preceding Clause 1 shall not apply in the event of a defect in the goods. In such case, the statutory rules governing sales law shall apply unless otherwise provided in these GTC.

VIII. Intellectual Property Rights

1. In accordance with this Section, we warrant that the delivery item is free from third-party industrial property rights or copyrights. Each contracting party shall notify the other contracting party in writing without undue delay if claims are asserted against it due to infringement of such rights.
2. If the delivery item infringes an industrial property right or copyright of a third party, we shall, at our discretion and expense, modify or replace the delivery item so that third-party rights are no longer infringed while the delivery item continues to fulfil the contractually agreed functions, or procure for the Customer a right of use by concluding a licence agreement with the third party. If we fail to do so within a reasonable period, the Customer shall be entitled to withdraw from the contract or reasonably reduce the purchase price. Any claims for damages by the Customer shall be subject to the limitations of Section X. of these GTC.

3. In the event of infringements by products of other manufacturers supplied by us, we shall, at our discretion, assert our claims against the manufacturers and upstream suppliers for the account of the Customer or assign such claims to the Customer. Claims against us shall exist in such cases in accordance with this Section only if judicial enforcement of the aforementioned claims against the manufacturers and upstream suppliers has been unsuccessful or is futile, for example as a result of insolvency.

IX. Retention of Title

1. The goods delivered by us to the Customer shall remain our property until all secured claims have been paid in full. The goods and the goods replacing them in accordance with the provisions set out below and covered by the retention of title, are hereinafter referred to as "Retained Goods".
2. The Customer shall hold the Retained Goods in custody for us free of charge.
3. The Customer shall be entitled to process and sell the Retained Goods in the ordinary course of business until the enforcement event occurs. Pledges and transfers by way of security are not permitted.
4. If the Retained Goods are processed by the Customer, it is agreed that such processing shall be carried out in our name, on our behalf and for our account as manufacturer, and that we shall acquire immediate ownership of the newly created item or — if the processing involves materials belonging to several owners or the value of the processed item is higher than the value of the Retained Goods — co-ownership (fractional ownership) of the newly created item in the ratio of the value of the Retained Goods to the value of the newly created item. Should no such acquisition of ownership by us occur, the Customer hereby transfers to us by way of security its future ownership interest or — in the above proportion — its future co-ownership interest in the newly created item. If the Retained Goods are combined with other items to form a single item or are inseparably mixed with other items, and one of the items is to be regarded as the principal item, with the result that either we or the Customer acquires sole ownership, the party owning the principal item shall transfer to the other party a proportionate co-ownership interest in the single item in the ratio specified in sentence 1.
5. In the event of resale of the Retained Goods, the Customer hereby assigns to us by way of security the resulting claim against the purchaser — in the case of co-ownership of the Retained Goods, proportionately in accordance with the co-ownership share. The same shall apply to other claims that take the place of the Retained Goods or otherwise arise in respect of the Retained Goods, such as insurance claims or claims in tort in the event of loss or destruction. We revocably authorise the Customer to collect in its own name the claims assigned to us. We may revoke this collection authorisation only upon the occurrence of the enforcement event.
6. If third parties seize or otherwise take action against the Retained Goods, in particular by attachment, the Customer shall immediately inform them of our ownership and notify us thereof in order to enable us to enforce our ownership rights. Insofar as the third party is unable to reimburse us for the judicial or extrajudicial costs incurred in this connection, the Customer shall be liable to us for such costs.
7. We shall release the Retained Goods and any items or claims replacing them insofar as their value exceeds the amount of the secured claims by more than 50%. We shall determine which items are to be released.
8. If, due to a breach of contract by the Customer—in particular, default in payment—we withdraw from the contract (enforcement event), we shall be entitled to demand the return of the Retained Goods.

X. Liability for Damages Based on Fault

1. Liability for damages, irrespective of the legal basis, in particular arising from impossibility, delay, defective or incorrect delivery, breach of contract, breach of duties in contractual negotiations and tort, shall, insofar as fault is relevant in each case, be limited in accordance with this Section X.
2. We shall not be liable in the event of ordinary negligence on the part of our corporate bodies, legal representatives, employees or other vicarious agents, unless material contractual obligations are breached. Material contractual obligations are the obligation to deliver and install the delivery item on time, its freedom from defects in title and from such material defects as impair its functionality or fitness for use to more than an insignificant extent, as well as advisory, protective and custodial duties intended to enable the Customer to use the delivery item in accordance with the contract or intended to protect the life or physical integrity of the Customer's personnel or to protect the Customer's property against substantial damage.
3. Insofar as we are liable in principle for damages pursuant to Section X Clause 2, such liability shall be limited to damage that we foresaw at the time the contract was concluded as a possible consequence of a breach of contract or that we should have foreseen had we exercised the degree of care customary in business. Indirect damage and consequential damage resulting from defects in the delivery item shall, moreover, be recoverable only insofar as such damage is typically to be expected when the delivery item is used for its intended purpose. The foregoing provisions of this Section X Clause 3 shall not apply in the event of intentional or grossly negligent conduct by members of our governing bodies or senior executives.
4. The foregoing exclusions and limitations of liability shall apply to the same extent for the benefit of our corporate bodies, legal representatives, employees and other vicarious agents.
5. Insofar as we provide technical information or advice and such information or advice does not form part of the contractually agreed scope of services owed by us, it shall be provided free of charge and with all liability excluded.
6. The limitations of this Section X shall not apply to liability for intentional conduct, for guaranteed characteristics, for injury to life, body or health, or under the German Product Liability Act (Produkthaftungsgesetz).

XI. Returns of Goods

Goods shall be taken back or exchanged only if, before the Customer returns the goods, we have expressly agreed to the return or exchange. Return shipment shall be at the Customer's expense.

XII. Compliance and Russia Sanctions

1. The Customer undertakes to adhere to the principle of strict legality in all actions, measures, contracts and other transactions.
2. The Customer shall not sell, export or re-export, directly or indirectly, to the Russian Federation or for use in the Russian Federation any goods supplied under or in connection with the contract that fall within the scope of Article 12g of Council Regulation (EU) No 833/2014.
3. The Customer shall use its best efforts to ensure that the purpose of Clause 2 above is not frustrated by any third parties further down the commercial chain, including by possible resellers.
4. The Customer shall set up and maintain an adequate monitoring mechanism to detect conduct by any third parties further down the commercial chain, including by possible resellers, that would frustrate the purpose of Clause 2 above.
5. Any violation of Clauses 2, 3 or 4 above shall constitute a material breach of an essential element of the individual supply contracts, and we shall be entitled to seek appropriate remedies, including, but not limited to:
6. the immediate cessation of further deliveries; and
7. termination, at any time and without prior notice, of supply contracts and all other contracts insofar as they have not yet been fully performed.
8. requiring the Customer to pay a contractual penalty, the amount of which shall be determined by a court in the individual case.
9. The Customer shall immediately inform us about any problems in applying Clauses 2, 3 or 4 above, including any relevant activities by third parties that could frustrate the purpose of Clause

2 above. The Customer shall make available to us information concerning compliance with the obligations under Clauses 2, 3 and 4 above within two weeks of our request for such information.

XIII. Compliance and Russia Sanctions

1. If the Customer is a merchant (Kaufmann), a legal person under public law, a special fund under public law, or does not have a general place of jurisdiction in the Federal Republic of Germany, the place of jurisdiction for all disputes arising out of the business relationship between us and the Customer shall, at our option, be either our registered office or the Customer's registered office. However, in such cases, our registered office shall be the exclusive place of jurisdiction for actions brought against us. Mandatory statutory provisions concerning exclusive places of jurisdiction shall remain unaffected by this provision.
2. The relationship between us and the Customer shall be governed exclusively by the law of the Federal Republic of Germany. The Convention on Contracts for the International Sale of Goods (UN Sales Convention) of 11 April 1980 (CISG) shall not apply.
3. Insofar as the contract or these GTC contain gaps in their provisions, those legally effective provisions shall be deemed agreed for the purpose of filling such gaps which the contracting parties would have agreed in accordance with the economic objectives of the contract and the purpose of these GTC had they been aware of the gap.

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