

# Upat UPM 33



ETA-10/0171 for cracked concrete  
ETA-15/0554 for masonry

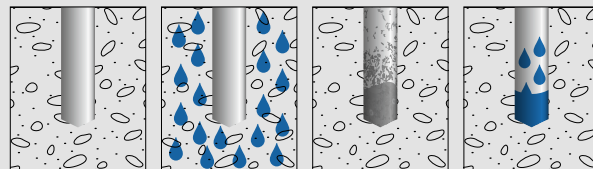


Upat®

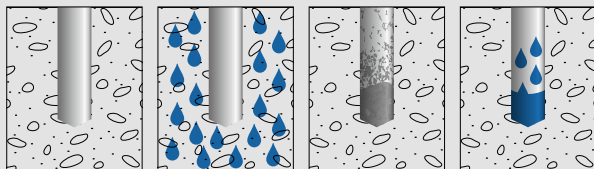
# Upat UPM 33



<b>D</b>	Gebrauchsanweisung	<b>SRB</b>	Uputstvo za instalaciju
<b>GB</b>	Operating instructions	<b>TR</b>	Kurulum talimatları
<b>F</b>	Mode d'emploi	<b>GR</b>	Οδηγίες Εγκατάστασης
<b>NL</b>	Montagehandleiding	<b>BG</b>	Инструкции за инсталиране
<b>I</b>	Istruzioni per l'installazione	<b>RUS</b>	Инструкция по установке
<b>E</b>	Instrucciones de uso	<b>UA</b>	Інструкція з використання
<b>P</b>	Instruções de utilização	<b>KZ</b>	Қолдану нұсқаулығы
<b>DK</b>	Installationsvejledning	<b>RC</b>	使用说明书
<b>S</b>	Installationsinstruktioner	<b>J</b>	取扱説明書
<b>N</b>	Installasjonsveiledning	<b>ROK</b>	사용 설명서
<b>FIN</b>	Asennusohjeet	<b>RI</b>	Panduan Penggunaan
<b>IS</b>	Notkunarleiðbeiningar	<b>UAE</b>	تعليمات الاستخدام
<b>EST</b>	Kasutusjuhend		
<b>LV</b>	Lietošanas instrukcija		
<b>LT</b>	Naudojimo instrukcija		
<b>PL</b>	Instrukcja instalacji		
<b>CZ</b>	Návod k instalaci		
<b>SK</b>	Návod na používanie		
<b>H</b>	Szerelési útmutató		
<b>RO</b>	Instrucțiuni de utilizare		
<b>SLD</b>	Navodila za namestitve		
<b>HR</b>	Upute za instalaciju		



<b>D</b>	Trockener Beton	<b>D</b>	Nasser Beton	<b>D</b>	Verschmutztes Bohrlloch	<b>D</b>	Wassergefülltes Bohrlloch
<b>GB</b>	Dry concrete	<b>GB</b>	Water saturated concrete	<b>GB</b>	Contaminated drill hole	<b>GB</b>	Water filled borehole
<b>F</b>	Béton sec	<b>F</b>	Béton humide	<b>F</b>	Perçage non dépolluéré	<b>F</b>	Trou inondé
<b>NL</b>	Droog beton	<b>NL</b>	Met water verzadigd beton	<b>NL</b>	Vervuild boorgat	<b>NL</b>	Met water gevuld boorgat
<b>I</b>	Calcestruzzo secco	<b>I</b>	Calcestruzzo saturo d'acqua	<b>I</b>	Foro sporco	<b>I</b>	Foro pieno d'acqua nel calcestruzzo
<b>E</b>	Hormigón seco	<b>E</b>	Hormigón saturado de agua	<b>E</b>	Agujero de taladrado sucio	<b>E</b>	Taladro lleno de agua en hormigón
<b>P</b>	Betão seco	<b>P</b>	Betão saturado de água	<b>P</b>	Furo com sujidade	<b>P</b>	Furo cheio de água
<b>DK</b>	Tør beton	<b>DK</b>	Vandmættet beton	<b>DK</b>	Tilsmudset borehul	<b>DK</b>	Vandfyldt borehul
<b>S</b>	Torr betong	<b>S</b>	Vattenmättad betong	<b>S</b>	Smutsigt hål	<b>S</b>	Vattenfyllt hål
<b>N</b>	Tørr betong	<b>N</b>	Vannmettet betong	<b>N</b>	Tilskitnet borehull	<b>N</b>	Vannfylte borehull
<b>FIN</b>	Kuiva betony	<b>FIN</b>	Veden kylästämä betoni	<b>FIN</b>	Likaantunut porareikä	<b>FIN</b>	Vedellä täytynyt porareikä
<b>IS</b>	Purr steinsteypa	<b>IS</b>	Blaut steinsteypa	<b>IS</b>	Óhreinn borhola	<b>IS</b>	Vatnsfyllt borhola
<b>EST</b>	Kuivbetoon	<b>EST</b>	Märgbetoon	<b>EST</b>	Mustunud puuriauk	<b>EST</b>	Veega täidetud puuriauk
<b>LV</b>	Sauss betons	<b>LV</b>	Mitrš betons	<b>LV</b>	Piesārņots urbums	<b>LV</b>	Urbums ar ūdeni
<b>LT</b>	Sausas betonas	<b>LT</b>	Drėgnas betonas	<b>LT</b>	Užteršta išgręžta skylė	<b>LT</b>	Vandens pripildyta išgręžta skylė
<b>PL</b>	Beton suchy wodą	<b>PL</b>	Beton nasycony wodą	<b>PL</b>	Zabrudzony wywiercony otwór	<b>PL</b>	Wywiercony otwór wypelnionym
<b>CZ</b>	Suchý beton	<b>CZ</b>	Mokrý beton otvory vyvrtané do	<b>CZ</b>	Znečištěný vývrt	<b>CZ</b>	Naplňené vodou
<b>SK</b>	Suchý betón	<b>SK</b>	Vodou nasýtený betón	<b>SK</b>	Znečistený vývrt	<b>SK</b>	Vodou naplnený otvor vyvrtaný
<b>H</b>	Száraz beton	<b>H</b>	Nedves beton	<b>H</b>	Szennyezett furat	<b>H</b>	Vízrel töltött furat
<b>RO</b>	Beton uscat	<b>RO</b>	Beton ud	<b>RO</b>	Gaură forată contaminată	<b>RO</b>	Gaură forată umplută cu apă
<b>SLD</b>	Suh beton	<b>SLD</b>	Moker beton	<b>SLD</b>	Umazana izvrtina	<b>SLD</b>	Z vodo napolnjena izvrtina
<b>HR</b>	Suhi beton	<b>HR</b>	Mokri beton	<b>HR</b>	Zaprljani provrt	<b>HR</b>	Vodom napunjen provrt



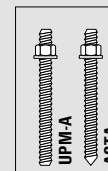
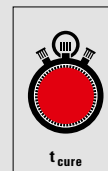
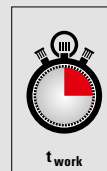
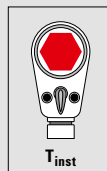
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<b>TR</b>	Kuru beton	Yaş beton	Kirli delik	Su dolu delik
<b>GR</b>	Στεγνό μπετόν	Υγρό μπετόν	Βρώμικη τρύπα	Τρύπα γεμάτη νερό
<b>BG</b>	Сух бетон	Мокър бетон	Замърсен отвор	Пълен с вода отвор
<b>RUS</b>	Сухой бетон	Водонасыщенный бетон	Загрязненное отверстие	Отверстие в бетоне, заполненное водой
<b>UA</b>	Сухий бетон	Водонасичений бетон	Забруднений отвір	Заповнений водою отвір
<b>KZ</b>	Құрғақ бетон	Ылғалды бетон	Ластанған саңылау	Сумен толтырылған саңылау
<b>RC</b>	干燥混凝土	湿混凝土	受污的钻孔	注水的钻孔
<b>J</b>	いたベトン	湿ったベトン	汚れた掘削孔	水がたまった掘削孔
<b>ROK</b>	건조 콘크리트	습윤 콘크리트	이물질이 삽입된 드릴 구멍	물이 찬 드릴 구멍
<b>RI</b>	Beton kering	Beton basah	Lubang bor terkontaminasi	Lubang bor terisi air
<b>UAE</b>	خرسانة جافة	خرسانة رطبة	ثقب ملوث	ثقب ممتلئ بالماء



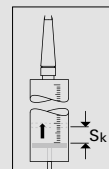
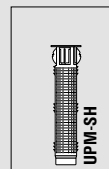
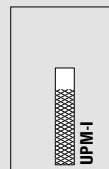
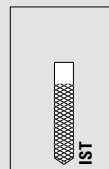
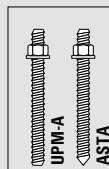
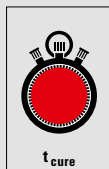
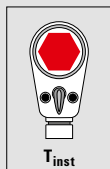
<b>D</b>	Gerissener Beton	Ungerissener Beton	Vollstein	Lochstein	Porenbeton
<b>GB</b>	Cracked concrete	Non-cracked concrete	Solid brick	Perforated brick	Aerated concrete
<b>F</b>	Béton fissuré	Béton non fissuré	Maçonneries pleines	Maçonneries creuses	Béton cellulaire
<b>NL</b>	Gescheurd beton	Ongescheurd beton	Volle steen	Holle steen	Cellenbeton
<b>I</b>	Calcestruzzo fessurato	Calcestruzzo non fessurato	Mattone pieno	Mattone forato	Calcestruzzo cellulare autoclavato
<b>E</b>	Hormigón agrietado	Hormigón sin grietas	Ladrillo macizo	Ladrillo perforado	Hormigón celular
<b>P</b>	Betão fissurado	Betão não fissurado	Pedra maciça	Pedra porosa	Betão celular
<b>DK</b>	Revnet beton	Ikkerevnet beton	Massiv sten	Hulsten	Porebeton
<b>S</b>	Sprucken betong	Ej sprucken betong	Massiv sten	Hålsten	Lättbetong
<b>N</b>	Betong med riss	Betong uten riss	Helstein	Perforert (mur) stein	Porebetong
<b>FIN</b>	Haljennut betoni	Halkeamaton betoni	Umpitiili	Reikätiili	Solubetoni
<b>IS</b>	Sprungin steypa	Óbrotin steinsteypa	Gegnheill steinn	Holusteinn	Loftfylltur steinn
<b>EST</b>	Pragunenud betoon	Pragudeta betoon	Täistellis	Õõnestellis	Poorbetoon
<b>LV</b>	Betons ar plaisām	Betons bez plaisām	Masīvs ķieģelis	Dobķieģelis	Gāzbetons
<b>LT</b>	Sutrūkinėjęs betonas	Vientisas betonas	Pilnavidurė plyta	Plyta su kiaurymėmis	Porėtasis betonas
<b>PL</b>	Beton spękany	Beton niespękany	Cegła pełna	Pustak	Beton porowaty
<b>CZ</b>	Beton s trhlinami	Beton bez trhlin	Plně cihly	Děrované cihly	Pórobeton
<b>SK</b>	Betón s trhlinami	Betón bez trhlin	Plná tehla	Dierovaná tehla	Pórobetón
<b>H</b>	Repedésés beton	Repedésmentes beton	Tömör kő	Lyukaskő	Porózus beton
<b>RO</b>	Beton fisurat	Beton fără fisuri	Cărămidă plină	Cărămidă cu găuri	Beton poros
<b>SL0</b>	Razpokan beton	Nerazpokan beton	Polna opeka	Votla opeka	Porozni beton
<b>HR</b>	Ispucani beton	Neispucani beton	Puni kamen	Šupljikavi kamen	Porobeton



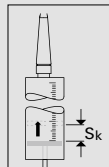
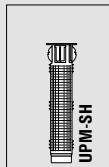
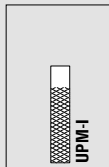
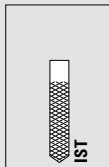
<b>SRB</b>	Ispucao beton	Neispucao beton	Puni kamen	Šupljikavi kamen	Porobeton
<b>TR</b>	Çatlamış beton	Çatlamamış beton	Dolu tuğla	Delikli tuğla	Gözenekli beton
<b>GR</b>	Μπετόν με ρωγμές	Μπετόν χωρίς ρωγμές	Συμπαγείς πλίνθοι	Διάτρητοι πλίνθοι	Πορώδες μπετόν
<b>BG</b>	Напукан бетон	Ненапукан бетон	Плътен камък	Порест камък	Газобетон
<b>RUS</b>	Треснутый бетон	Цельный бетон	Повнотіла цегла	Повнотіла цегла	Ніздрюватий бетон
<b>UA</b>	Тріснутий бетон	Бетон у зоні стиснення	Бетон щільної структури	Бетон порожнистої структури	Газобетон
<b>KZ</b>	Жарықтары бар бетон	Бүтін бетон	Көлемді блок	Қуыс кірпіш	Кеуек бетон
<b>RC</b>	有裂縫的混凝土	无裂縫的混凝土	实心砖	空心砖	多孔混凝土
<b>J</b>	ひび割れがあるベトン	ひび割れのないベトン	全面石材	穴付き石材	気泡コンクリート
<b>ROK</b>	균열 콘크리트	비균열 콘크리트	일반 벽돌	공동 벽돌	기포 콘크리트
<b>RI</b>	Beton retak	Beton tidak licin	Batu bata penuh	Batu bata berlubang	Batu bata berpori
<b>UAE</b>	خرسانة متصدعة	خرسانة غير متصدعة	طوبة كاملة	طوبة مخرمة	خرسانة ذات مسام



<b>D</b>	Drehmoment	Verarbeitungszeit	Aushärtezeit	Ankerstangen
<b>GB</b>	Required torque	Open time	Hardening time	Anchor rods
<b>F</b>	Couple	Temps de manipulation	Temps de durcissement	Tiges filetées
<b>NL</b>	Draaimoment	Verwerkingstijd	Uithardtijd	Ankerstangen
<b>I</b>	Coppia	Tempo di lavorazione	Tempo di indurimento	Barre di ancoraggio
<b>E</b>	Par	Tiempo de tratamiento	Tiempo de endurecimiento	Barras de anclaje
<b>P</b>	Binário	Tempo de processamento	Tempo de endurecimento	Tirantes de ancoragem
<b>DK</b>	Tilspændingsmoment	Forarbejdsningstid	Hærdetid	Gevindstænger
<b>S</b>	Vridmoment	Bearbetningstid	Hårdningstid	Förankringsstänger
<b>N</b>	Dreimoment	Bearbejdsesetid	Herdetid	Ankerstenger
<b>FIN</b>	Vääntömomentti	Käsittelyaika	Kovettumisaika	Harustangot
<b>IS</b>	Snúningsáttak	Vinnslutími	Pornunartími	Festistangir
<b>EST</b>	Pöördemoment	Töötlemisaeg	Kõvastumisaeg	Ankurvardad
<b>LV</b>	Griezies moments	Apstrādājamības laiks	Sacietēšanas laiks	Enkura stienis
<b>LT</b>	Sukimo momentas	Darbo su medžiaga laikas	Kietėjimo laikas	Inkariniai strypai
<b>PL</b>	Moment dokręcenia	Czas żelowania	Czas wiązania	Kotwy
<b>CZ</b>	Utahovací moment	Doba zpracování	Doba vytvrzení	Kotevní tyče
<b>SK</b>	Utahovací moment	Doba spracovania	Doba vytvrdnutia	Kotviace tyče
<b>H</b>	Forgatónyomaték	Feldolgozási idő	Kikeményedési idő	Horgonyrudak
<b>RO</b>	Cuplu	Timp de punere în operă	Timp de întărire	Bare de ancorare
<b>SLO</b>	Navor	Čas obdelave	Čas strjevanja	Sidra
<b>HR</b>	Okretni moment	Vrijeme obrade	Vrijeme stvrđnjavanja	Sidrene šipke



<b>SRB</b>	Obrotni moment	Vreme obrade	Vreme otvrdnjavanja	Šipke za ankerovanje	<b>D</b>	Innengewindeanker	Innengewindeanker	Ankerhülse Kunststoff	Skalenteile
<b>TR</b>	Tork	Kullanma süresi	Sertleşme süresi	Dübel çubukları	<b>GB</b>	Internal thread anchor	Internal thread anchor	Plastic anchor sleeve	Scale divisions
<b>GR</b>	Ροπή σύσφιξης	Χρόνος επεξεργασίας	Χρόνος σκλήρυνσης	Ντιζες αγκύρωσης	<b>F</b>	Douilles taraudées	Douilles taraudées	Tamis d'injection	Graduations
<b>BG</b>	Въртящ момент	Време за обработка	Време за втвърдяване	Анкерни пръти	<b>NL</b>	Binnendraadanker	Binnendraadanker	Ankerhuls kunststof	Schaalonderdelen
<b>RUS</b>	Крутящий момент	Время обработки	Время отверждения	Анкерные болты	<b>I</b>	Ancoraggio con filettatura interna	Ancoraggio con filettatura interna	Boccola di ancoraggio in plastica	Divisioni di scala
<b>UA</b>	Круглий момент	Час обробки	Час затвердіння	Анкерні шпильки	<b>E</b>	Anclaje de rosca interior	Anclaje de rosca interior	Vaina de anclaje plástica	Unidades de escala
<b>KZ</b>	Айналдыру моменті	Өңделу уақыты	Қатаю уақыты	анкерлік болттары	<b>P</b>	Ancoragem de rosca interna	Ancoragem de rosca interna	Manga de ancoragem em plástico	Intervalos de gradação
<b>RC</b>	扭矩	加工时间	硬化时间	系杆	<b>DK</b>	Anker med indvendigt gevind	Anker med indvendigt gevind	Sihylse kunststof	Skalatrín
<b>J</b>	トルク	加工時間	凝固時間	アンカーロード	<b>S</b>	Ankare med innergånga	Ankare med innergånga	Ankarhylsa plast	Skaldelar
<b>ROK</b>	토크	작업 시간	경화 시간	앵커 로드	<b>N</b>	Innvendig gjenge-anker	Innvendig gjenge anker	Ankerhylse kunststoff	Skaladeler
<b>RI</b>	Torsi	Waktu pemrosesan	Waktu pengerasan	Batang jangkar	<b>FIN</b>	Sisäkierreankuri	Sisäkierreankuri	Muovinen ankkurihylsy	Asteikkojaot
<b>UAE</b>	عزم الدوران	وقت التصنيع	وقت التصلب	قضبان تثبيت	<b>IS</b>	Festing með skrufgangi að innanverðu	Festing með skrufgangi að innanverðu	Festihúlsa Gerviefni	Melikkvarði
					<b>EST</b>	Sisekeermega ankur	Sisekeermega ankur	Ankurhülss Plast	Skaala jaotused
					<b>LV</b>	Iekšējās vītnes enkurs	Iekšējās vītnes enkurs	Plastmasas enkura uzdeva	Skalas iedaļas
					<b>LT</b>	Strypas su vidiniu sriegiu	Inkaras su vidiniu sriegiu	Plastikinė inkarinė įvorė	Skalės padalos
					<b>PL</b>	Kotwy z gwintem wewnętrznym	Kotwa z gwintem wewnętrznym	Tuleja kotwiąca syntetyczna	Podziałki skali
					<b>GZ</b>	Svorník s vnitřním závitem	Svorník s vnitřním závitem	Kotevní pouzdro plast	Dílky na stupnici
					<b>SK</b>	Kotva s vnútorným závitom	Kotva s vnútorným závitom	Puzdro z plastu	Diely na stupnici
					<b>H</b>	Belsőmenetes horgony	Belsőmenetes horgony	Műanyag horgonyhüvely	Skálarészérték
					<b>RO</b>	Ancoră cu filet interior	Ancoră cu filet interior	Manșon de ancoră material plastic	Diviziuni scală
					<b>SLD</b>	Sidro z notranjim navojem	Sidro z notranjim navojem	Plastični sidrni vložek	Razdelki na skali
					<b>HR</b>	Sidro s unutrašnjim navojem	Sidro s unutrašnjim navojem	Plastična košuljica sidra	Dijelovi skale



<b>SRB</b>	Kotva s unutrašnjim navojem	Kotva sa unutrašnjim navojem	Plastična košuljica kotve	Delovi skale
<b>TR</b>	İçten dişli dübel	İçten dişli dübel	Plastik dübel kovani	Kadran bölümleri
<b>GR</b>	Αγκύρια εσωτερικού σπειρώματος	Αγκύρια με εσωτερικό σπειρώμα	Πλαστικά βύσματα αγκύρωσης	Διαβαθμίσεις κλίμακας
<b>BG</b>	Анкерен болт с вътрешна резба	Анкерен болт с вътрешна резба	Анкерна втулка пластмаса	Части на скалата
<b>RUS</b>	Анкер с внутренней резьбой	Анкер с внутренней резьбой	Анкерная гильза пластиковая	Деление шкалы
<b>UA</b>	Анкер із внутрішнім різьбленням	Анкер із внутрішнім різьбленням	Анкерна гільза Полімерний матеріал	Поділки шкали
<b>KZ</b>	ішкі бұрандасы бар анкерлер	ішкі бұрандасы бар анкерлер	Анкерлік төлке, пластмассасы	Шәкіл бөліктері
<b>RC</b>	内部螺纹系杆	型内螺纹锚栓	型塑料螺丝套管	刻度
<b>J</b>	めねじアンカー	内ねじ付きアンカー	プラスチック製アンカースリーブ	目盛り分割
<b>ROK</b>	내부 스레드 앵커	내부 스레드 앵커	앵커 슬리브 플라스틱	스케일의 눈금폭
<b>RI</b>	Jangkar berulir dalam	Jangkar berulir dalam	Selongsong jangkar Plastik	Bagian skala
<b>UAE</b>	لولبة تثبيت داخلية	لولبة تثبيت داخلية	كُم تثبيت بلاستيكي	أجزاء المقياس

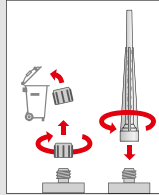
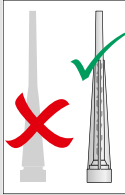
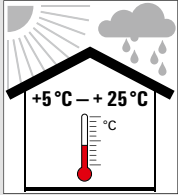


	 ETA-10/0171 EAD 330076-00-0601 Option 1 for cracked concrete	<b>CE</b>		UPM-A / ASTA	<b>13 / 15 / 16</b>
	 ETA-10/0171 EAD 330076-00-0601 Option 1 for cracked concrete	<b>CE</b>		IST	<b>14 / 15 / 17</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-A	<b>18 / 20 / 21</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-I	<b>19 / 20 / 22</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-SH + UPM-A	<b>23 / 24 / 26</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-SH + UPM-I	<b>25 / 26</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-A	<b>27 / 29 / 30</b>
	 ETA-10/0554 EAD 330076-00-0604 Massary use categories b, c, d, d/4, w/w	<b>CE</b>		UPM-I	<b>28 / 29 / 31</b>



**STOP** 12/25

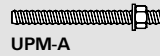
**OK?**



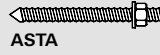
UPM MR Plus

Temperature Range (°C)	t <sub>work</sub>			t <sub>cure</sub>		
	UPM 33 Relax	UPM 33 (standard)	UPM 33 Express	UPM 33 Relax	UPM 33 (standard)	UPM 33 Express
-10 °C - -5 °C	-	-	-	-	-	12 h
> -5 °C - ±0 °C	-	-	5 min.	-	24 h	3 h
> ±0 °C - +5 °C	-	13 min.	5 min.	6 h	3 h	3 h
> +5 °C - +10 °C	20 min.	9 min.	3 min.	3 h	90 min.	50 min.
> +10 °C - +20 °C	10 min.	5 min.	1 min.	2 h	60 min.	30 min.
> +20 °C - +30 °C	6 min.	4 min.	-	60 min.	45 min.	-
> +30 °C - +40 °C	4 min.	2 min.	-	30 min.	35 min.	-

Volume	UPM DM P	Art. No.	UPM MR Plus
150 ml		570073	
300 ml			
345 ml	UPM AM	512604	
360 ml			



UPM-A



ASTA



## UPM-A, ASTA

	M6	M8	M10	M12	M16	M20	M24	M27	M30
			✓	✓	✓	✓			
	✓	✓	✓	✓	✓	✓	✓	✓	✓
	8	10	12	14	18	24	28	30	35
	50	60	60	70	80	90	96	108	120
	72	160	200	240	320	400	480	540	600
	Ø 8	Ø 10	Ø 12	Ø 14	Ø 18	Ø 24	Ø 28	Ø 35	Ø 35
	9	11	14	16	20	26	30	40	40
	7	9	12	14	18	22	26	30	33
	9	11	14	16	20	26	30	33	40
	2	2	3	3	5	11	15	18	28
	2	5	7	10	19	48	75	80	130
	5	10	20	40	60	120	150	200	300



IST





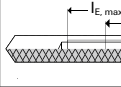
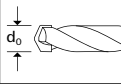
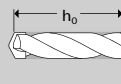
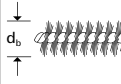
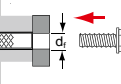
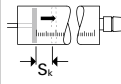
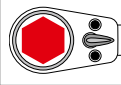
UPM-A



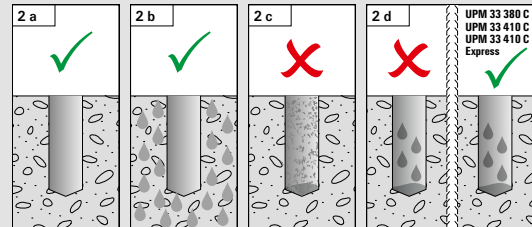
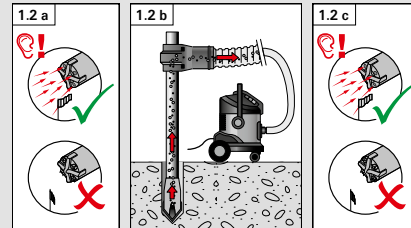
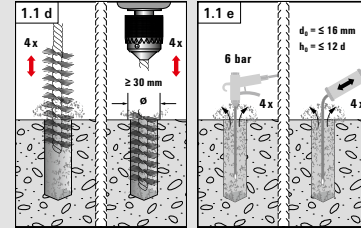
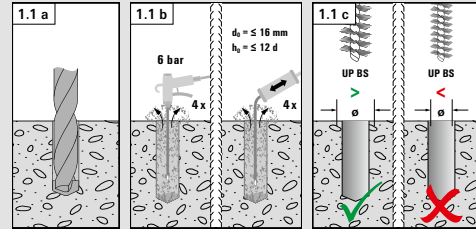
IST



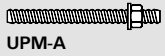
## IST

	M5	M6	M8	M10	M12	M16	M20	
			✓	✓	✓	✓	✓	
	$l_E, \min$ [mm]	8	8	8	10	12	16	20
	$l_E, \max$ [mm]	14	16	18	23	26	35	45
	$d_0$ [mm]	10	12	14	18	20	24	32
	$h_0$ [mm]	75	75	90	90	125	160	200
	UP BS $d_b$ [mm]	Ø 10	Ø 12	Ø 14	Ø 18	Ø 20	Ø 24	Ø 35
	$d_b$ [mm]	11	14	16	20	25	26	40
	$d_r$ [mm]	6	7	9	12	14	18	22
	Sk [-]	2	3	5	7	11	17	48
	$T_{inst}$ [Nm]	-	-	10	20	40	80	120

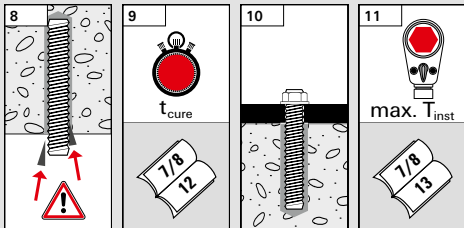
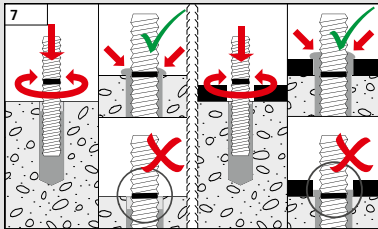
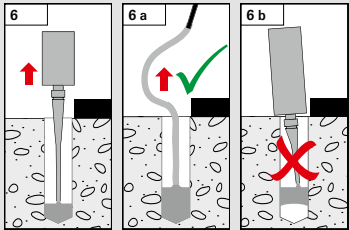
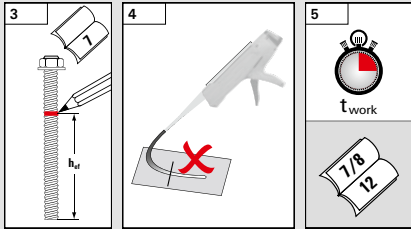
## UPM-A, IST



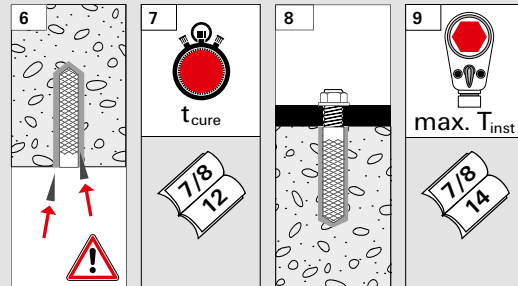
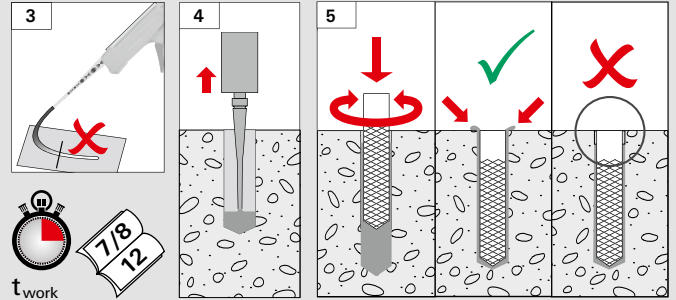


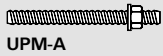


## UPM-A



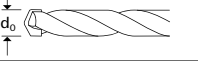
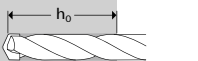

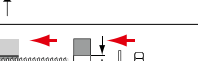
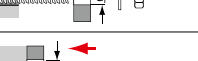
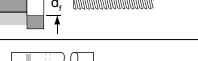
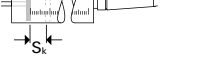


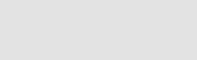






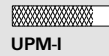
## IST



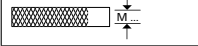

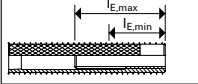

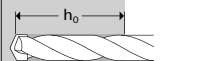


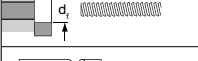



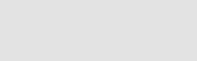







## UPM-A

 UPM-A	M8	M10	M12
	✓	✓	✓
 $d_o$ [mm]	10	12	14
 $h_o$	$h_{o,min}$ [mm] 50	50	50
	$h_{o,max}$ [mm] 100	100	100
 UP BS	Ø 10	Ø 12	Ø 14
 $d_o$	$d_b$ [mm] 11	14	16
 $d_f$ [mm]	9	12	14
 $d_f$ [mm]	11	14	16
 $Sk$ ( $h_o,min$ ) [-]	2	2	3
 $Sk$ ( $h_o,max$ ) [-]	3	4	5
 min. $T_{inst}$ [Nm]	0	0	0
 max. $T_{inst}$ [Nm]			
	<a href="http://www.upat.com">www.upat.com</a> → ETA-15/0554		
			



## UPM-I

 UPM-I	M6	M8	M10	M12
	✓	✓	✓	✓
 $l_{E,min}$	6	8	10	12
 $l_{E,max}$	60	60	60	60
 $d_o$ [mm]	14	14	18	18
 $h_o$ [mm]	90	90	90	90
 UP BS	Ø 16	Ø 16	Ø 18	Ø 18
 $d_o$	$d_b$ [mm] 16	16	20	20
 $d_f$ [mm]	7	9	12	14
 $Sk$ [-]	4	4	5	5
 min. $T_{inst}$ [Nm]	0	0	0	0
 max. $T_{inst}$ [Nm]				
	<a href="http://www.upat.com">www.upat.com</a> → ETA-15/0554			
				



UPM-A



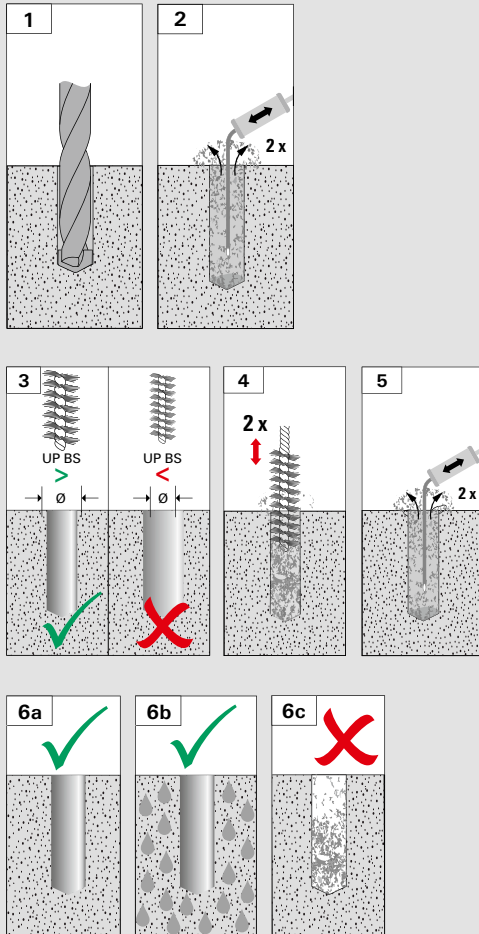
UPM-I



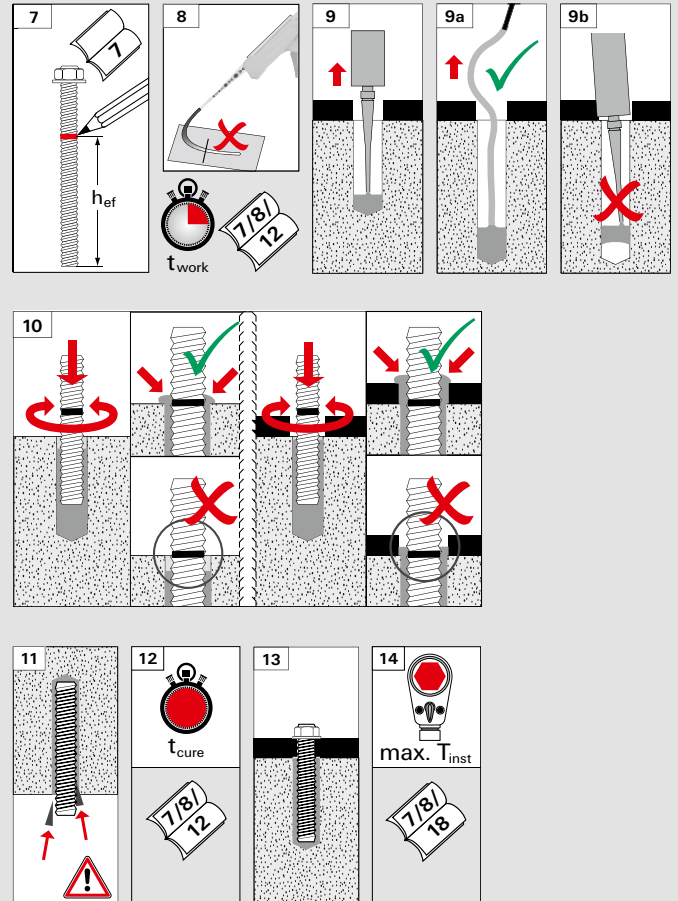
UPM-A



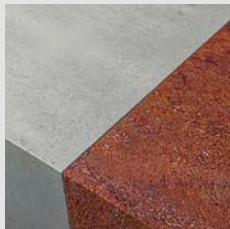
## UPM-A, UPM-I



## UPM-A



UPM-I



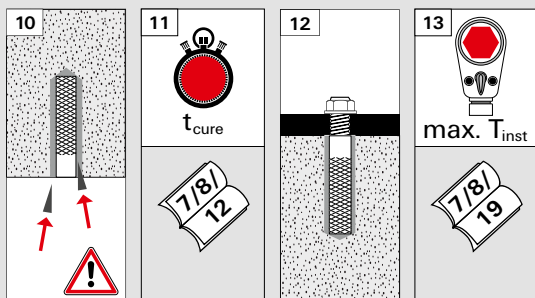
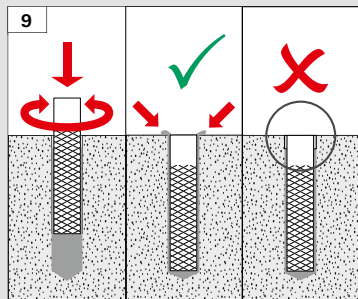
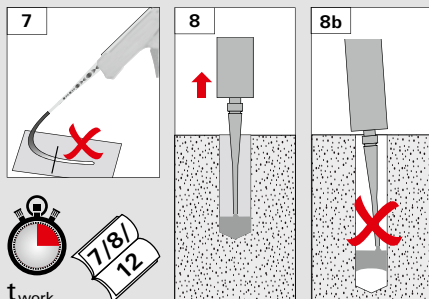
UPM-A






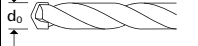
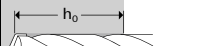









UPM-SH



## UPM-I

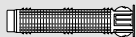


## UPM-A, UPM-SH

	UPM-A	M8			M10	
 UPM-A						
 UPM-SH	12x85	16x85	16x130	16x85	16x130	
 CE		✓	✓	✓	✓	✓
 $d_b$ [mm]		12	16	16	16	16
 $h_0$ [mm]		90	90	135	90	135
 UP BS	Ø 12	Ø 16	Ø 16	Ø 16	Ø 16	
 $d_b$ [mm]		13	18	18	18	18
 $t_{tot}$ [mm]		0	0	20	0	20
 $d_t$ [mm]		9	9	9	12	12
 Sk [-]		10	12	15	12	15
 min. $T_{inst}$ [Nm]		0	0	0	0	0
 max. $T_{inst}$ [Nm]				<a href="http://www.upat.com">www.upat.com</a> → ETA-15/0554		 CE <small>ETA-15/0554                      SAS 220719-05-0554                      Brevetto per il sistema U.P.A.T.                      © I.C.E. s.p.a.</small>



UPM-A



UPM-SH

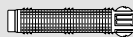


## UPM-A, UPM-SH

	M12		
UPM-A UPM-SH	20 x 85	20 x 130	20 x 200
CE	✓	✓	✓
$d_0$ [mm]	20	20	20
$h_0$ [mm]	90	135	205
UP BS	Ø 20	Ø 20	Ø 20
$d_b$ [mm]	24	24	24
$t_{tol}$ [mm]	0	20	20
$d_f$ [mm]	14	14	14
Sk [-]	15	25	40
min. $T_{inst}$ [Nm]	0	0	0
max. $T_{inst}$ [Nm]			
	<a href="http://www.upat.com">www.upat.com</a> → ETA-15/0554		
	CE <small>ETA-15/0554            CEN 12618-1 de 2004            Materiali per ancoraggio h. s. c. d.            h. s. c. d.</small>		



UPM-I



UPM-SH



## UPM-I, UPM-SH

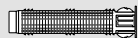
	UPM-I	M6	M8	M10	M12
UPM-I UPM-SH	16 x 85	16 x 85	16 x 85	20 x 85	20 x 85
CE	✓	✓	✓	✓	✓
$l_{E,min}$	6	8	10	12	
$l_{E,max}$	60	60	60	60	
$d_0$ [mm]	16	16	20	20	
$h_0$ [mm]	90	90	90	90	
UP BS	Ø 16	Ø 16	Ø 20	Ø 20	
$d_b$ [mm]	18	18	24	24	
$t_{tol}$ [mm]	0	0	0	0	
$d_f$ [mm]	7	9	12	14	
Sk [-]	12	12	15	15	
min. $T_{inst}$ [Nm]	0	0	0	0	
max. $T_{inst}$ [Nm]					
	<a href="http://www.upat.com">www.upat.com</a> → ETA-15/0554				
	CE <small>ETA-15/0554            CEN 12618-1 de 2004            Materiali per ancoraggio h. s. c. d.            h. s. c. d.</small>				



UPM-A



UPM-I



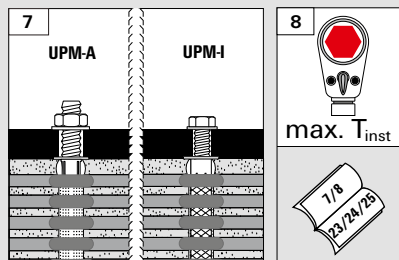
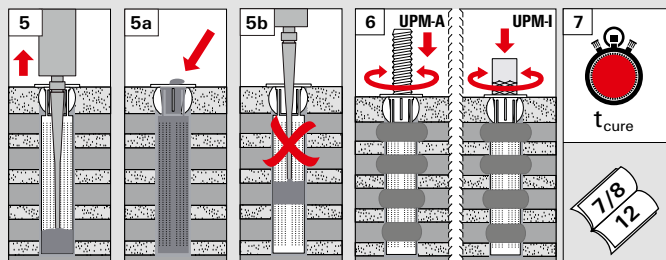
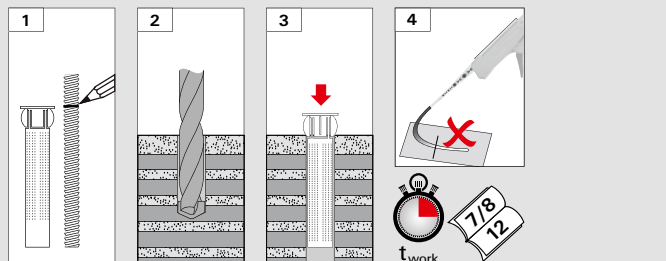
UPM-SH





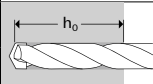
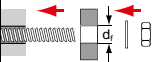
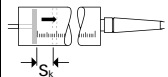
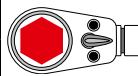
UPM-A



## UPM-A, UPM-I, UPM-SH



## UPM-A

 M...	UPM-A	M8	M10	M12
		✓	✓	✓
 $h_o$	$h_{o,min}$ [mm]	100	100	100
	$h_{o,max}$ [mm]	120	120	120
	$d_f$ [mm]	9	12	14
	Sk [-]	4	6	8
	min. $T_{inst}$ [Nm]	0	0	0
	max. $T_{inst}$ [Nm]	1	2	2

UPM-I




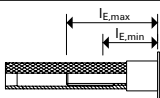
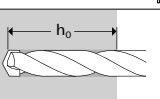
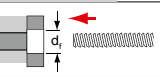
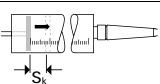


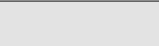
UPM-A



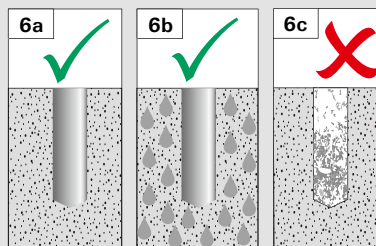
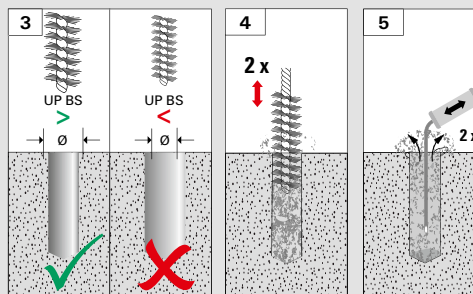
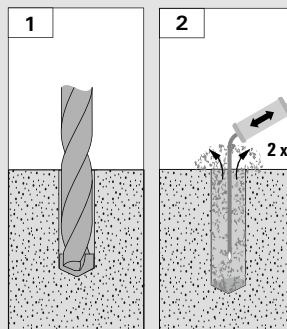
UPM-I

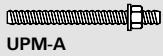


## UPM-I

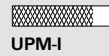
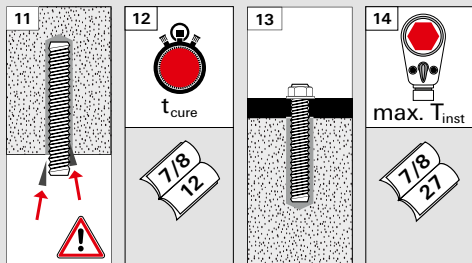
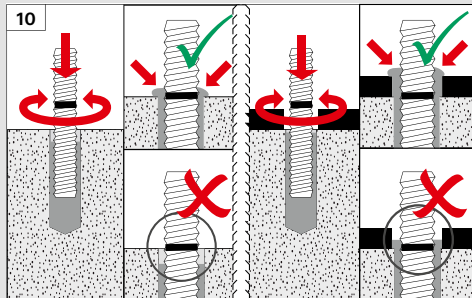
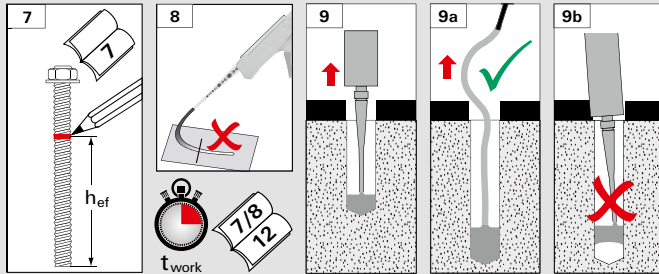
UPM-I	M6	M8	M10	M12
	✓	✓	✓	✓
	6	8	10	12
	60	60	60	60
	85	85	85	85
	7	9	12	14
	4	4	5	5
	0	0	0	0
	1	1	2	2

## UPM-A, UPM-I

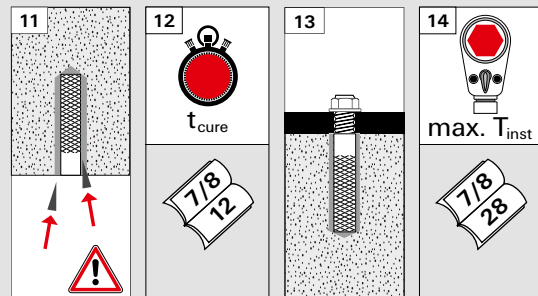
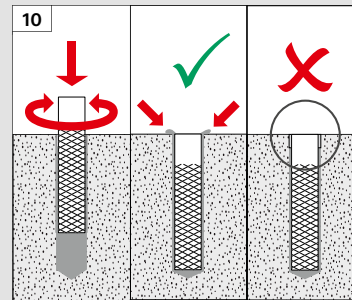
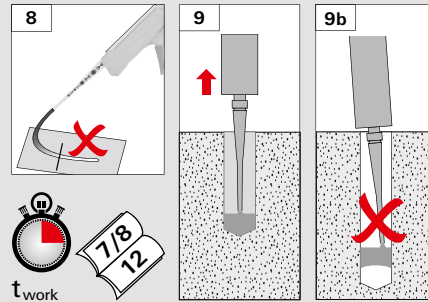




## UPM-A



## UPM-I





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