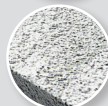
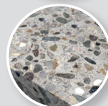


fischer FIS V Plus



ETA-20/0603, EAD 330499-01-0601,
Option 1 for cracked concrete,
Option 7 for non-cracked concrete



ETA-20/0728, EAD 330087-00-0601,
Post-installed rebar connection



ETA-20/0729, EAD 330076-00-0604,
Masonry use categories b, c or d



See ICC-ES
Evaluation Report
ESR-2786
at www.icc-es.org



aBG ✓

Z-213-1737 Z-218-1954
Z-218-1837 Z-218-2029

ÉMISSIONS DANS L'AIR INTÉRIEUR



Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

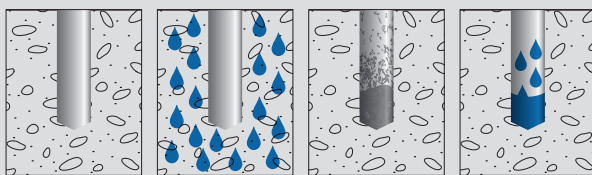


fischer

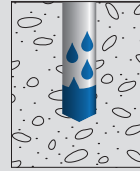
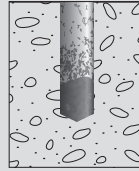
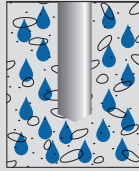
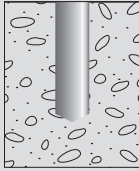
fischer FIS V Plus



DE	Gebrauchsanweisung	HR	Upute za instalaciju	DE
EN	Operating instructions	SR	Uputstvo za instalaciju	EN
FR	Mode d'emploi	TR	Kurulum talimatları	FR
NL	Montagehandleiding	EL	Οδηγίες Εγκατάστασης	NL
IT	Istruzioni per l'installazione	BG	Инструкции за инсталиране	IT
ES	Instrucciones de uso	RU	Инструкция по установке	ES
PT	Instruções de utilização	UK	Інструкція з використання	PT
DA	Installationsvejledning	KK	Қолдану нұсқаулығы	DA
SV	Installationsinstruktioner	ZH	使用说明书	SV
NO	Installasjonsveiledning	JA	取扱説明書	NO
FI	Asennusohjeet	KO	사용 설명서	FI
IS	Notkunarlíðbeiningar	HI	Panduan Penggunaan	IS
ET	Kasutusjuhend	AR	تعليمات الاستخدام	ET
LV	Lietošanas instrukcija			LV
LT	Naudojimo instrukcija			LT
PL	Instrukcja instalacji			PL
CS	Návod k instalaci			CS
SK	Návod na používanie			SK
HU	Szerelési útmutató			HU
RO	Instrucțiuni de utilizare			RO
SL	Navodila za namestitvev			SL



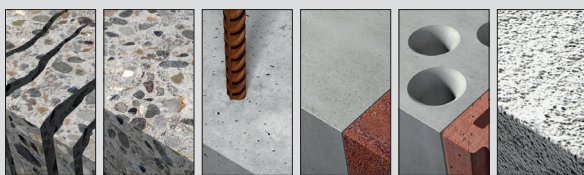
DE	Trockener Beton	Nasser Beton	Verschmutztes Bohrloch	Wassergefülltes Bohrloch
EN	Dry concrete	Water saturated concrete	Contaminated drill hole	Water filled borehole
FR	Béton sec	Béton humide	Perçage non déoussiéré	Trou inondé
NL	Droog beton	Met water verzadigd beton	Vervuild boorgat	Met water gevuld boorgat
IT	Calcestruzzo secco	Calcestruzzo saturo d'acqua	Foro sporco	Foro pieno d'acqua nel calcestruzzo
ES	Hormigón seco	Hormigón saturado de agua	Agujero de taladrado sucio	Taladro lleno de agua en hormigón
PT	Betão seco	Betão saturado de água	Furo com sujidade	Furo cheio de água
DA	Tør beton	Vandmættet beton	Tilsmudset borehul	Vandfyldt borehul
SV	Torr betong	Vattenmättad betong	Smutsigt hål	Vattenfyllt hål
NO	Tørr betong	Vannmettet betong	Tilskitnet borehull	Vannfylte borehull
FI	Kuiva betony	Veden kyllästämä betoni	Likaantunut poranreikä	Vedellä täytynyt porareikä
IS	Purr steinsteypa	Blaut steinsteypa	Óhreinn borhola	Vatnsfyllt borhola
ET	Kuivbetoon	Märgbetoon	Mustunud puuriauk	Veega täidetud puuriauk
LV	Sauss betons	Mitrš betons	Piesārņots urbums	Urbums ar ūdeni
LT	Sausas betonas	Drėgnas betonas	Užteršta išgręžta skylė	Vandens pripildyta išgręžta skylė
PL	Beton suchy wodą	Beton nasycony wodą	Zabrudzony wywiercony otwór	Wywiercony otwór wypełniony
CS	Suchý beton	Moký beton otvory vyvrtané do	Znečištěný vývrt	Naplněné vodou
SK	Suchý betón	Vodou nasýtený betón	Znečistený vývrt	Vodou naplnený otvor vyvrtaný
HU	Száraz beton	Nedves beton	Szennyezett furat	Vízzel töltött furat
RO	Beton uscat	Beton ud	Gaură forată contaminată	Gaură forată umplută cu apă
SL	Suh beton	Moker beton	Umazana izvrtina	Z vodo napolnjena izvrtina



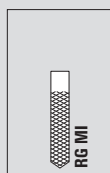
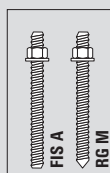
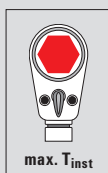
HR	Suhi beton	Mokri beton	Zaprļjani provrt	Vodom napunjen provrt	DE
SR	Suv beton	Mokar beton	Zaprļjan provrt	Provrt napunjen vodom	EN
TR	Kuru beton	Yaş beton	Kirli delik	Su dolu delik	FR
EL	Στεγνό μπετόν	Υγρό μπετόν	Βρώμικη τρύπα	Τρύπα γεμάτη νερό	NL
BG	Сух бетон	Мокър бетон	Замърсен отвор	Пълен с вода отвор	IT
RU	Сухой бетон	Водонасыщенный бетон	Загрязненное отверстие	Отверстие в бетоне, заполненное водой	ES
UK	Сухий бетон	Водонасичений бетон	Забруднений отвір	Заповнений водою отвір	PT
KK	Құрғақ бетон	Ылғалды бетон	Ластанған саңылау	Сумен толтырылған саңылау	DA
ZH	干燥混凝土	湿混凝土	受污的钻孔	注水的钻孔	SV
JA	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	NO
KO	건조 콘크리트	습윤 콘크리트	이물질이 삽입된 드릴 구멍	물이 찬 드릴 구멍	FI
HI	Beton kering	Beton basah	Lubang bor terkontaminasi	Lubang bor terisi air	IS
AR	خرسانة جافة	خرسانة رطبة	ثقب ملوث	ثقب ممتلئ بالماء	ET



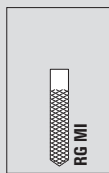
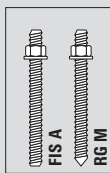
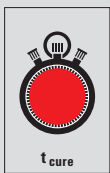
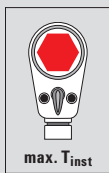
DE	Gerissener Beton	Ungerissener Beton	Bewehrungsanschluss	Vollstein	Lochstein	Porenbeton
EN	Cracked concrete	Non-cracked concrete	Reinforcement connection	Solid brick	Perforated brick	Aerated concrete
FR	Béton fissuré	Béton non fissuré	Scellement d'armatures	Maçonneries pleines	Maçonneries creuses	Béton cellulaire
NL	Gescheurd beton	Ongescheurd beton	Wapeningsaansluiting	Volle steen	Holle steen	Cellenbeton
IT	Calcestruzzo fessurato	Calcestruzzo non fessurato	Ferri di ripresa	Mattone pieno	Mattone forato	Calcestruzzo cellulare autoclavato
ES	Hormigón agrietado	Hormigón sin grietas	Conexión de refuerzo	Ladrillo macizo	Ladrillo perforado	Hormigón celular
PT	Betão fissurado	Betão não fissurado	Conetor de reforço	Pedra maciça	Pedra porosa	Betão celular
DA	Revnet beton	Ikkerevnet beton	Armerings-tilslutninger	Massiv sten	Hulsten	Porebeton
SV	Sprucken betong	Ej sprucken betong	Armeringsanslutning	Massiv sten	Hålsten	Lättbetong
NO	Betong med riss	Betong uten riss	Armeringsforbindelse	Helstein	Perforert (mur) stein	Porebetong
FI	Haljennut betoni	Halkeamaton betoni	Vahvistusliitântä	Umpitiili	Reikätiili	Solubetoni
IS	Sprungin steypa	Óbrotin steinsteypa	Tenging við styrkingu	Gegnheill steinn	Holusteinn	Loftfylltur steinn
ET	Pragunenud betoon	Pragudeta betoon	Sarrusühendus	Täistellis	Õonestellis	Poorbetoon
LV	Betons ar plaisām	Betons bez plaisām	Stiegrojuma savienojums	Masivs ķieģelis	Dobķieģelis	Gāzbetons
LT	Sutrūkinėjęs betonas	Vientisas betonas	Armatūros sujungimo elementas	Pilnavidurė plyta	Plyta su kiurymėmis	Porėtasis betonas
PL	Beton spękany	Beton niespękany	Złącze zbrojarskie	Cegła pełna	Pustak	Beton porowaty
CS	Beton s trhlinami	Beton bez trhlin	Připojka výztuže	Plně cihly	Děrované cihly	Pórobeton
SK	Betón s trhlinami	Betón bez trhlin	Styková výstuž	Plná tehla	Dierovaná tehla	Pórobetón
HU	Repedéses beton	Repedésmentes beton	Betonvasalatsatlakozás	Tömör kő	Lyukaskő	Porózus beton
RO	Beton fisurat	Beton fără fisuri	Racord de armătură	Cărămidă plină	Cărămidă cu găuri	Beton poros
SL	Razpokan beton	Nerazpokan beton	Priključek za armaturo	Polna opeka	Votla opeka	Porozni beton



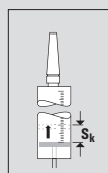
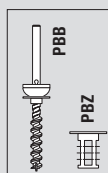
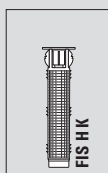
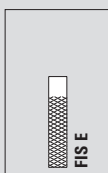
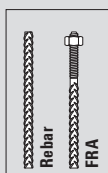
HR	Ispucani beton	Neispucani beton	Priključak armature	Puni kamen	Šupljikavi kamen	Porobeton	DE
SR	Ispucao beton	Neispucao beton	Priključak armature	Puni kamen	Šupljikavi kamen	Porobeton	EN
TR	Çatlamış beton	Çatlamamış beton	Destek bağlantısı	Dolu tuğla	Delikli tuğla	Gözenekli beton	FR
EL	Μπετόν με ρωγμές	Μπετόν χωρίς ρωγμές	Σύνδεση οπλισμού	Συμπραγείς πλίνθοι	Διάτρητοι πλίνθοι	Πορώδες μπετόν	NL
BG	Напукан бетон	Ненапукан бетон	Връзка за армировка	Плътен камък	Порест камък	Газобетон	IT
RU	Треснутый бетон	Цельный бетон	Соединитель армирования	Полнотельный кирпич	Пустотельный кирпич	Пористый бетон	ES
UK	Тріснутий бетон	Бетон у зоні стиснення	Арматурне пруття	Бетон щільної структури	Бетон порожнистої структури	Газобетон	PT
KK	Жарықтары бар бетон	Бүтін бетон	Арматуралау қосылымы	Көлемді блок	Қуыс кірпіш	Кеуек бетон	DA
ZH	有裂縫的混凝土	无裂縫的混凝土	钢筋连接件	实心砖	空心砖	多孔混凝土	SV
JA	ひび割れがあるベトン	ひび割れないベトン	強化コネクタ	全面石材	穴付き石材	気泡コンクリート	NO
KO	균열 콘크리트	비균열 콘크리트	보강재 연결	일반 벽돌	공동 벽돌	기포 콘크리트	FI
HI	Beton retak	Beton tidak licin	Sambungan penguat	Batu bata penuh	Batu bata berlubang	Batu bata berpori	IS
AR	خرسانة متصدعة	خرسانة غير متصدعة	وصلة حديد مسلح	طوبة كاملة	طوبة مخزمة	خرسانة ذات مسام	ET



DE	Drehmoment	Verarbeitungszeit	Aushärtezeit	Ankerstangen	Innengewindeanker
EN	Required torque	Open time	Hardening time	Anchor rods	Internal thread anchors
FR	Couple	Temps de manipulation	Temps de durcissement	Tiges filetées	Douilles taraudées
NL	Draaimoment	Verwerkingstijd	Uithardtijd	Ankerstangen	Binnendraadanker
IT	Coppia	Tempo di lavorazione	Tempo di indurimento	Barre di ancoraggio	Ancoraggio con filettatura interna
ES	Par	Tiempo de tratamiento	Tiempo de endurecimiento	Barras de anclaje	Anclaje de rosca interior
PT	Binário	Tempo de processamento	Tempo de endurecimento	Tirantes de ancoragem	Ancoragem de rosca interna
DA	Tilspændingsmoment	Forarbejdsningstid	Hærdetid	Gevindstænger	Anker med indvendigt gevind
SV	Vridmoment	Bearbetningstid	Hårdningstid	Förankringsstänger	Ankare med innergång
NO	Dreiemoment	Bearbeidelsestid	Herdetid	Ankerstenger	Innvendig gjengeanker
FI	Vääntömomentti	Käsittelyaika	Kovettumisaika	Harustangot	Sisäkierrreankkuri
IS	Snúningsáttak	Vinnslutími	Þornunartími	Festistangir	Festing með skrufgangi að innanverðu
ET	Pöördemoment	Töötlemisaeg	Kõvastumisaeg	Ankurvardad	Sisekeermeega ankur
LV	Griezies moments	Apstrādājāmības laiks	Sacietēšanas laiks	Enkura stienis	Iekšējās vitnes enkurs
LT	Sukimo momentas	Darbo su medžiaga laikas	Kietėjimo laikas	Inkariniai strypai	Strypas su vidiniu sriegiu
PL	Moment dokręcenia	Czas żelowania	Czas wiązania	Kotwy	Kotwy z gwintem wewnętrznym
CS	Utahovací moment	Doba zpracování	Doba vytvrzení	Kotevní tyče	Svorník s vnitřním závitem
SK	Utahovací moment	Doba spracovania	Doba vytvrdnutia	Kotviace tyče	Kotva s vnútorným závitom
HU	Forgatónyomaték	Feldolgozási idő	Kikeményedési idő	Horgonyrudak	Belsőmenetes horgony
RO	Cuplu	Timp de punere in operă	Timp de întărire	Bare de ancorare	Ancoră cu filet interior
SL	Navor	Čas obdelave	Čas strjevanja	Sidra	Sidro z notranjim navojem

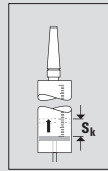
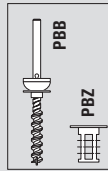
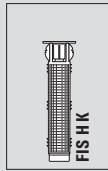
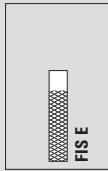
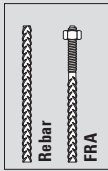


HR	Okretni moment	Vrijeme obrade	Vrijeme stvrdnjavanja	Sidrene šipke	Sidro s unutrašnjim navojem
SR	Obrtni moment	Vreme obrade	Vreme otvrdnjavanja	Šipke za ankerovanje	Kotva s unutrašnjim navojem
TR	Tork	Kullanma süresi	Sertleşme süresi	Dübel çubukları	İçten dişli dübel
EL	Ροπή αόαφίξης	Χρόνος επεξεργασίας	Χρόνος σκλήρυνσης	Ντιζες αγκύρωσης	Αγκύρια εσωτερικού σπειρώματος
BG	Въртящ момент	Време за обработка	Време за втвърдяване	Анкерни пръти	Анкерен болт с вътрешна резба
RU	Крутящий момент	Время обработки	Время отверждения	Анкерные болты	Анкеры с внутренней резьбой
UK	Крутий момент	Час обробки	Час затвердіння	Анкерні шпильки	Анкер із внутрішнім різьбленням
KK	Айналдыру моменті	Өңделу уақыты	Қатаю уақыты	Анкерлік болттары	Ішкі бұрандасы бар анкерлер
ZH	扭矩	加工时间	硬化时间	系杆	内部螺纹系杆
JA	トルク	加工時間	凝固時間	アンカーロード	めねじアンカー
KO	토크	작업 시간	경화 시간	앵커 로드	내부 스레드 앵커
HI	Torsi	Waktu pemrosesan	Waktu pengerasan	Batang jangkar	Jangkar berulir dalam
AR	عزم الدوران	وقت التصنيع	وقت التصلب	قضبان تثبيت	لولبة تثبيت داخلية



DE	Bewehrungsstab Bewehrungsanker	Innengewinde- anker	Ankerhülse Kunststoff	Konusbohrer, Zentriertülle	Skalenteile
EN	Reinforcement rod Reinforcement anchor	Internal thread anchor	Plastic anchor sleeve	Cone drill, centring sleeve	Scale divisions
FR	Barres d'armatures Ancrage d'armature	Douilles taraudées	Tamis d'injection	Foret à rotule, douille de centrage	Graduations
NL	Wapeningsstaaf Wapeningsanker	Binnendraadanker	Ankerhuls kunststof	Conusboor, Centreerhuls	Schaalonderdelen
IT	Ferro di ripresa Ancoraggio di ripresa	Ancoraggio con filettatura interna	Boccola di ancoraggio in plastica	Punta conica, boccola di centra- gio	Divisioni di scala
ES	Barra de refuerzo Anclaje de refuerzo	Anclaje de rosca interior	Vaina de anclaje plástica	Broca cónica, bo- quilla para centrado	Unidades de escala
PT	Barra de armação Ancoragem de reforço	Ancoragem de rosca interna	Manga de ancoragem em plástico	Broca cónica, Manga de centra- gem	Intervalos de gradação
DA	Armeringsstav Armeringsanker	Anker med indvendigt gevind	Sihylse kunststof	Konusbor, centeringshylse	Skalatrín
SV	Armeringsjärn Armeringsankare	Ankare med inngångar	Ankarhylsa plast	Koniskt borr, centeringshylsa	Skaldelar
NO	Wapeningsstaaf Wapeningsanker	Innvendig gjenge anker	Ankerhylse kunststoff	Konusbor, senteringsstykke	Skaladeler
FI	Tartuntateräs Tartuntaankkuri	Sisäkierreankkuri	Muovinen ankkurihylsy	Kartiopora, keskitysholkki	Asteikkojaot
IS	Styrktarteinn Styrktarfesting	Festing með skruf- gangi að innanverðu	Festihulsa gerviefni	Kónískur bor, miðstýringarkápa	Mælikvarði
ET	Sarrusvarras Sarrusankur	Sisekeermega ankur	Ankurhülss plast	Koonuspuur, Tsentreerimisümbriis	Skaala jaotused
LV	Enkura stiegrojuma Stienis	Iekšējās vītnes enkurs	Plastmasas enkura uzmava	Koniskais urbis, centrēšanas uzmava	Skalas iedaļas
LT	Armatūrinis strypas, Armatūrinis inkaras	Inkaras su vidiniu sriegiu	Plastikinė inkarinė įvorė	Kūginis grąžtas, centravimo įvorė	Skalės padalos
PL	Pręt zbrojarski Kotwa zbrojarska	Kotwa z gwintem wewnętrznym	Tuleja kotwiąca syntetyczna	Wiersto stożkowe, tulejka centrująca	Podziałki skali
CS	Výztužná tyč Kotva výztuže	Svorník s vnitřním závitem	Kotevní pouzdro plast	Kuželový vrták, středící pouzdro	Dílky na stupnici
SK	Výstužný prút Vystužovacia kotva	Kotva s vnútorným závitom	Puzdro z plastu	Kuželový vrták, centrovacie hrdlo	Diely na stupnici
HU	Betonvas rúd Horgonyzó vas	Belsőmenetes horgony	Műanyag horgonyhüvely	Kúpűró, központozó persely	Skálárészértékek
RO	Tijă de armătură Ancoră de armătură	Ancoră cu filet interior	Manșon de ancoră material plastic	Găuritor conic, înveliș de centrare	Diviziuni scală





SL	Armaturna palica Sidro armature	Sidro z notranjim navojem	Plastični sidrni vložek	Konusni sveder, centrirni tulec	Razdelki na skali
HR	Armaturna šipka Armaturno sidro	Sidro s unutrašnjim navojem	Plastična košuljica sidra	Konusno svrdlo, kšuljica za centriranje	Dijelovi skale
SR	Armaturna šipka Armaturna kotva	Kotva sa unutrašnjim navojem	Plastična košuljica kotve	Konusna burgija, košuljica za centriranje	Delovi skale
TR	Takviye çubuğu Takviye demiri	İçten dişli dübel	Plastik dübel kovani	Konik matkap ucu, Merkezleme klavuzu	Kadran bölümleri
EL	Ράβδος οπλισμού Αγκύριο οπλισμού	Αγκύρια με εσωτερικό σπείρωμα	Πλαστικά βύσματα αγκύρωσης	Κωνικό τρυπάνι, περιβλήμα κεντραρισματος	Διαβαθμίσεις κλίμακας
BG	Армировъчен прът Армировъчен анкерен болт	Анкерен болт с вътрешна резба	Анкерна втулка пластмаса	Конусно свредло, центрираща приставка	Части на скалата
RU	Арматурный стержень Арматурный анкер	Анкер с внутренней резьбой	Анкерная гильза пластиковая	Конусное сверло, центрирующий футляр	Деление шкалы
UK	Арматурний стрижень Арматурний анкер	Анкер із внутрішнім різьбленням	Анкерна гільза Полімерний матеріал	Конусне свердло, Центрувальна втулка	Поділки шкали
KK	Арматуралық езек арматуралық анкері	ішкі бұрандасы бар анкерлер	Анкерлік төлке, пластмассасы	конустық бұрғысы, ортаға дәл келтіру ұшы	Шәкіл беліктері
ZH	钢筋 钢筋锚杆	型内螺纹 锚柱	型塑料 螺丝套管	锥形钻头, 定心套筒	刻度
JA	鉄筋 強化アンカー	内ねじ付きアンカー	プラスチック製アンカースリーブ	テーパードリル、センタリングスリーブ	目盛り分割
KO	보강 로드 보강 앵커	내부 스레드 앵커	앵커 슬리브 폴라스틱	원추형 드릴, 센터링 케이스	스케일의 눈금폭
HI	Batang penguat Jangkar penguat	Jangkar berulir dalam	Selongsong jangkar plastik	Bor kerucut, Nosel pusat	Bagian skala
AR	قضيب حديد مسلح تثبيت حديد مسلح	لولية تثبيت داخلية	كُم تثبيت بلاستيكي	متقب مخروطي، كُم المركزة	أجزاء المقياس



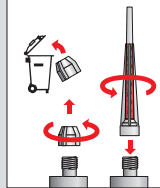
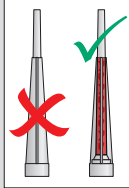
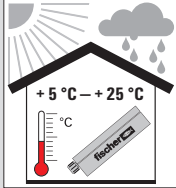


	 CE ETA-20/0603, EAD 330499-01-0601, Option 1 for cracked concrete		FIS A / RG M	13 / 16 / 17
	 CE ETA-20/0603, EAD 330499-01-0601, Option 7 for non-cracked concrete		RG MI	14 / 18
	 CE ETA-20/0603, EAD 330499-01-0601, Option 1 for cracked concrete		Rebar / FRA	15 / 16 / 17
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		FIS A / RG M	19 / 21 / 22
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		FIS E	20 / 21 / 23
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		FIS HK + FIS A / RG M	24 / 25 / 27
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		FIS HK + FIS E	26 / 27
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		FIS H 18 x 130/200 K, FIS H 22 x 130/200 K FIS A / RG M	28 / 29
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		PBB / FIS A / RG M	30 / 32
	 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		PBB / FIS E	31 / 32
	 ES See ICC-ES Evaluation Report ESR-2786 at www.icc-es.org		Rods / Rebars	33 / 34 / 35



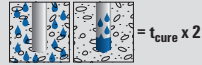
STOP 11/2024

OK?

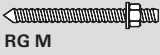
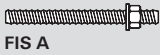


FIS MR Plus (≤ 410 ml)
FIS JMR (825 ml)






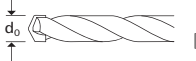
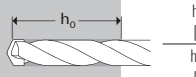
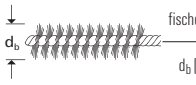
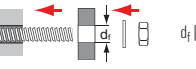
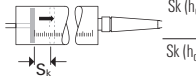
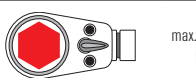
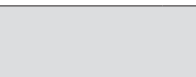
Temperature Range (°C)	t _{work}			t _{cure}		
	FIS VS Plus LOW SPEED	FIS V Plus (standard)	FIS VW Plus HIGH SPEED	FIS VS Plus LOW SPEED	FIS V Plus (standard)	FIS VW Plus HIGH SPEED
-10 °C - -5 °C	-	-	-	-	-	12 h
> -5 °C - ±0 °C	-	-	5 min.	-	24 h	3 h
> ±0 °C - +5 °C	-	13 min.	5 min.	6 h	3 h	3 h
> +5 °C - +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	Dispenser	Art. No.	Product
150 ml 300 ml	KPM 2	053117	FIS MR Plus
150 ml 300 ml 345 ml 360 ml	FIS DM S	511118	
	FIS AM	058000	
	FIS DB S Pro	558955 (EU) 564960 (UK)	
380 ml 410 ml	FIS AP	058027	FIS JMR
	FIS AC	096497	
825 ml	FIS AM S-XL	563241	
	FIS DB SL Pro	562004 (EU) 564961 (UK)	

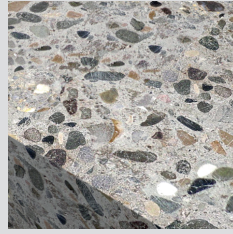


FIS A, RG M

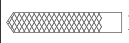

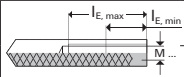
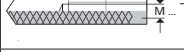
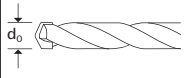
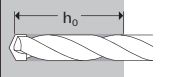


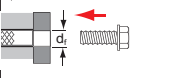
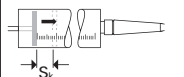
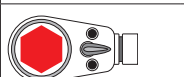
 M ...	M6	M8	M10	M12	M16	M20	M24	M27	M30
  CE ETA-20/0603, EAD 330499-01-0601, Option 1 for cracked concrete	-	✓	✓	✓	✓	✓	✓	✓	✓
  CE ETA-20/0603, EAD 330499-01-0601, Option 7 for non-cracked concrete	✓	✓	✓	✓	✓	✓	✓	✓	✓
 d_0 [mm]	8	10	12	14	18	24	28	30	35
 h_0 $h_{0,min}$ [mm] $h_{0,max}$ [mm]	50 72	60 160	60 200	70 240	80 320	90 400	96 480	108 540	120 600
 fischer BS d_b [mm]	Ø 8	Ø 10	Ø 12	Ø 14	Ø 18	Ø 24	Ø 28	Ø 35	Ø 35
 d_f [mm]	7	9	12	14	18	22	26	30	33
 d_f [mm]	9	12	14	16	20	26	30	33	40
 $Sk (h_{0,min})$ [-]	2	2	3	3	5	11	15	18	28
 $Sk (h_{0,max})$ [-]	2	5	7	10	19	48	75	80	130
 max. T_{inj} [Nm]	5	10	20	40	60	120	150	200	300



RG MI



RG MI

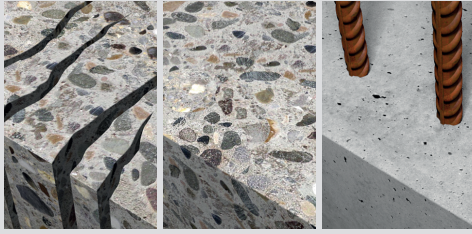
	M5	M6	M8	M10	M12	M16	M20
 ETA-20/0603, EAD 330499-01-0601, Option 7 for non-cracked concrete	-	-	✓	✓	✓	✓	✓
	8	8	8	10	12	16	20
	14	16	18	23	26	35	45
	10	12	14	18	20	24	32
	75	75	90	90	125	160	200
	fischer BS Ø 10	Ø 12	Ø 14	Ø 18	Ø 20	Ø 24	Ø 35
	11	14	16	20	25	26	40
	6	7	9	12	14	18	22
	2	3	5	7	11	17	48
	-	-	10	20	40	80	120



Rebar



FRA



Rebar, FRA

	Rebar	8	10	12	14	16	20	25	28	
	FRA	-	-	M12	-	M16	M20	M24	-	
	Rebar	-	✓	✓	✓	✓	✓	✓	✓	
	Rebar	✓	✓	✓	✓	✓	✓	✓	✓	
	FRA	-	-	✓	-	✓	✓	✓	-	
	d_o [mm]	12	14	16	18	20	25	30	35	
	h_o [mm]	Rebar	60	60	70	75	80	90	100	112
		FRA			170		180	190	196	
	h_o [mm]	Rebar	160	200	240	280	320	400	500	560
		FRA			240		320	400	480	
	fischer BS	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20	Ø 25	Ø 35	Ø 35	
	d_b [mm]	14	16	20	20	25	27	40	40	
	d_f [mm]	FRA	-	-	14	-	18	22	26	-
	d_f [mm]	FRA	-	-	18	-	22	26	32	-
	Sk (h_o ,min) [-]	Rebar	3	3	4	5	6	10	13	24
		FRA	-	-	10	-	14	22	26	-
	Sk (h_o ,max) [-]	Rebar	7	10	14	18	24	45	65	116
		FRA	-	-	14	-	24	45	63	-
	max. T_{inst} [Nm]	FRA	-	-	40	-	60	120	150	-





FIS A / RG M



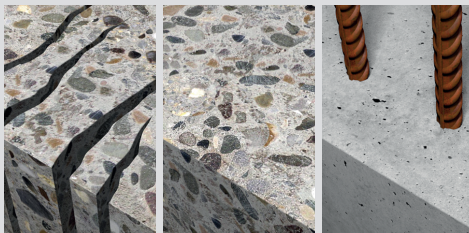
RG MI



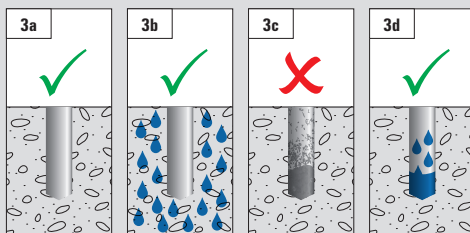
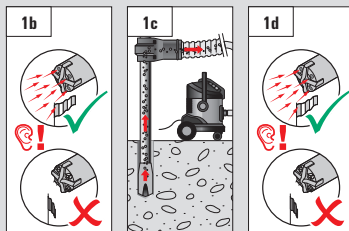
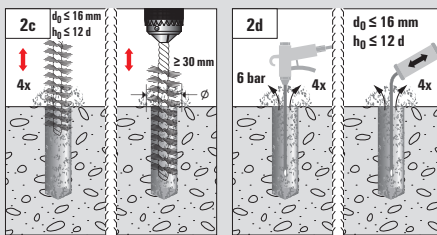
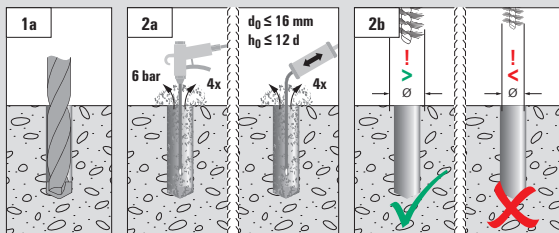
Rebar



FRA



FIS A / RG M, RG MI, Rebar, FRA





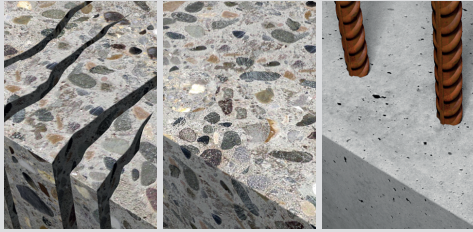
FIS A / RG M



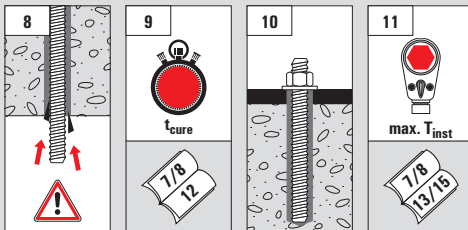
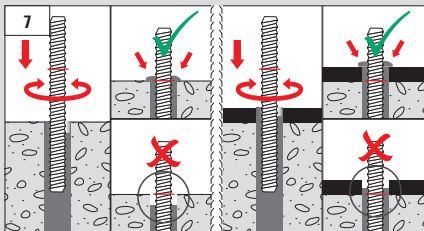
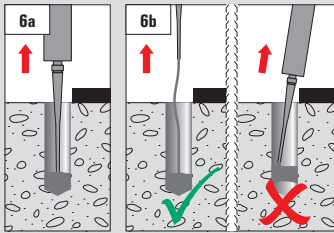
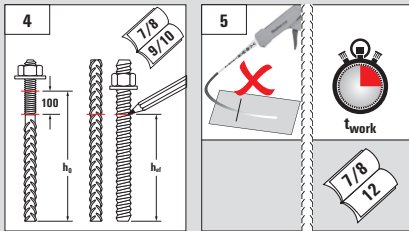
Rebar



FRA

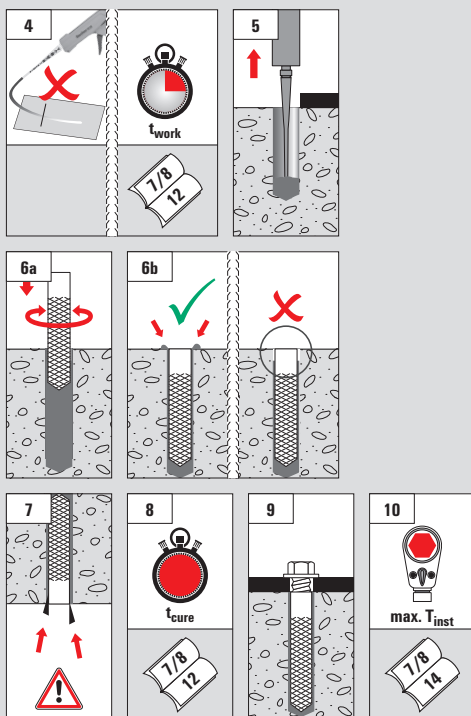


FIS A / RG M, Rebar, FRA





RG MI





FIS A / RG M



FIS A / RG M



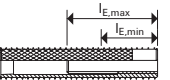
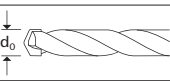
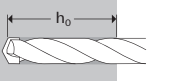
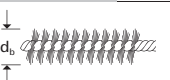
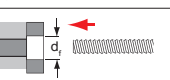
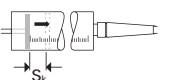
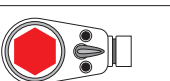


 FIS A / RG M	M6	M8	M10	M12	M16	
	✓	✓	✓	✓	✓	
 d_0 [mm]	8	10	12	14	18	
 h_0	$h_{0,min}$ [mm]	50	50	50	50	
	$h_{0,max}$ [mm]	100	100	100	100	
 fischer BS d_b [mm]	∅ 8	∅ 10	∅ 12	∅ 14	∅ 18	
	d_b [mm]	9	11	14	16	20
 d_f [mm]	7	9	12	14	18	
 d_f [mm]	9	11	14	16	20	
 S_k	$S_k (h_{0,min})$ [-]	2	2	2	3	3
	$S_k (h_{0,max})$ [-]	3	3	4	5	6
 max. T_{inst} [Nm]	 www.fischer-international.com www.fischer.de → ETA-20/0729					



FIS E

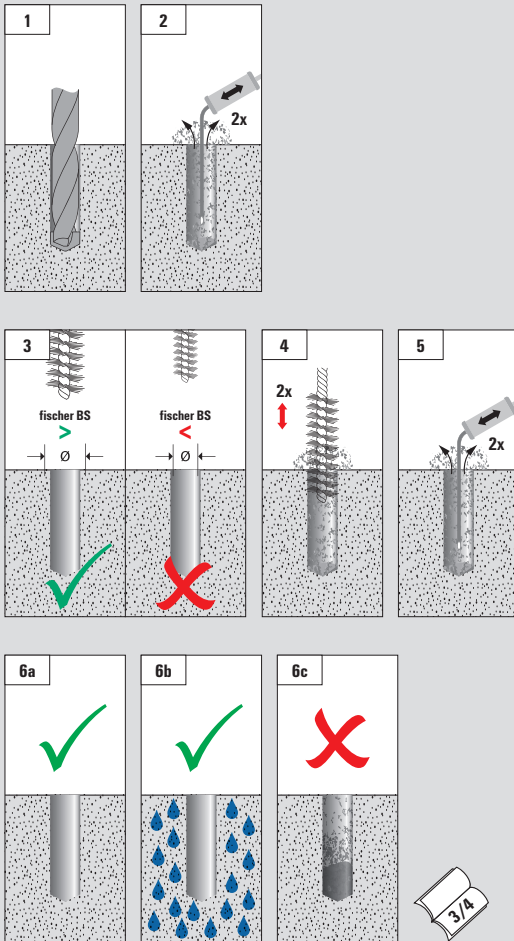


FIS E

 FIS E	M6	M8	M10	M12
 CE ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d	✓	✓	✓	✓
 $l_{E,min}$	6	8	10	12
$l_{E,max}$	60	60	60	60
 d_0 [mm]	14	14	18	18
 h_0 [mm]	85	85	85	85
 fischer BS	Ø 14	Ø 14	Ø 18	Ø 18
d_b [mm]	16	16	20	20
 d_f [mm]	7	9	12	14
 S_k [-]	4	4	5	5
 max. T_{inst} [Nm]	 www.fischer-international.com www.fischer.de → ETA-20/0729			
	 CE <small>ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d</small>			



FIS A / RG M, FIS E

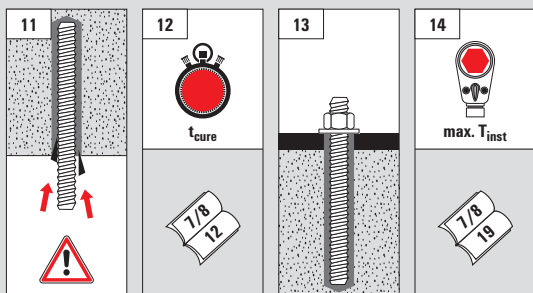
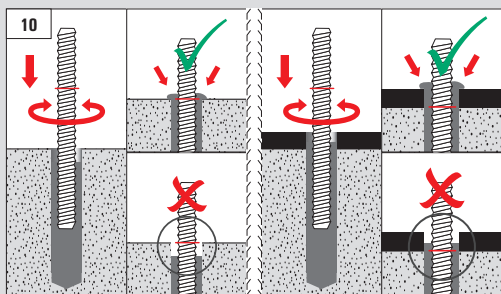
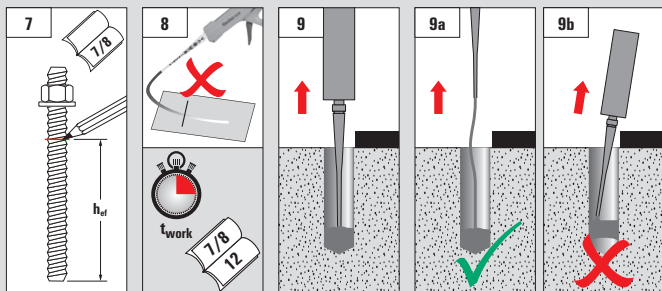




FIS A / RG M



FIS A / RG M

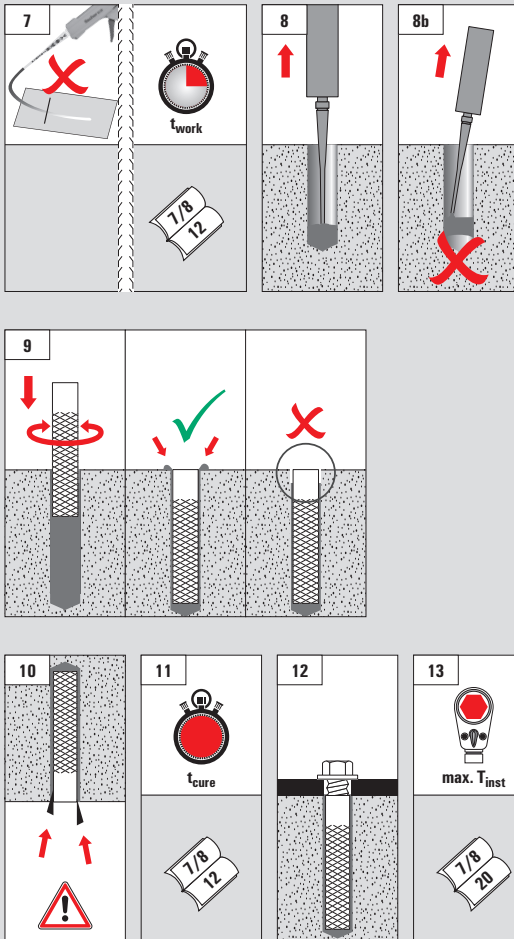




FIS E



FIS E

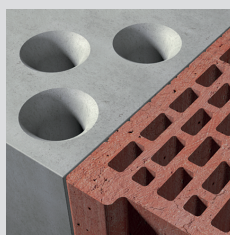








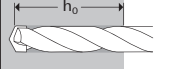
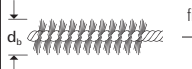
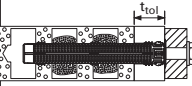
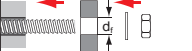
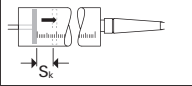



FIS A / RG M

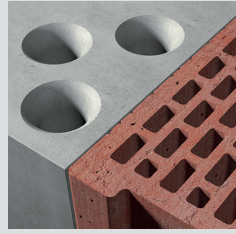


FIS HK


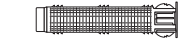


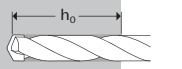
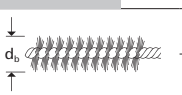
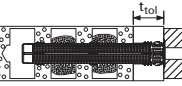
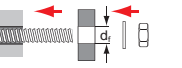
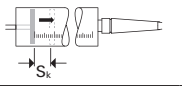
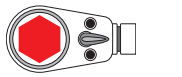




FIS A / RG M

 FIS A / RG M  FIS HK	M6		M8				M10	
		12x50	12x85	12x50	12x85	16x85	16x130	16x85
 ETA-20/0729, EAD 330076-00-0604, Masonry size categories h, c and d	✓	✓	✓	✓	✓	✓	✓	✓
 d_0 [mm]	12	12	12	12	16	16	16	16
 h_0 [mm]	55	90	55	90	90	135	90	135
 fischer BS d_b [mm]	Ø 12	Ø 12	Ø 12	Ø 12	Ø 16	Ø 16	Ø 16	Ø 16
 t_{tol} [mm]	0	20	0	20	0	20	0	20
 d_f [mm]	7	7	9	9	9	9	12	12
 Sk [-]	5	10	5	10	12	15	12	15
 max. T_{inst} [Nm]	 www.fischer-international.com www.fischer.de → ETA-20/0729							
	 ETA-20/0729, EAD 330076-00-0604, Masonry size categories h, c and d							



FIS A / RG M

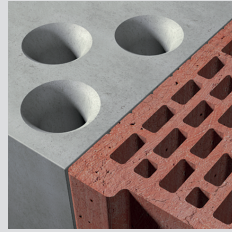
 FIS A / RG M	M12			M16		
	 FIS HK	20x85	20x130	20x200	20x85	20x130
 ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d	✓	✓	✓	✓	✓	✓
 d_0 [mm]	20	20	20	20	20	20
 h_0 [mm]	90	135	205	90	135	205
 fischer BS d_b [mm]	∅ 20	∅ 20	∅ 20	∅ 20	∅ 20	∅ 20
 t_{tol} [mm]	0	20	20	0	20	20
 d_f [mm]	14	14	14	18	18	18
 Sk [-]	15	25	40	15	25	40
 max. T_{inst} [Nm]	 www.fischer-international.com www.fischer.de → ETA-20/0729			 ETA-20/0729, EAD 330076-00-0604, Masonry use categories b, c or d		






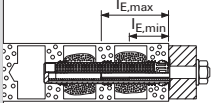

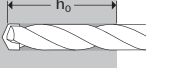
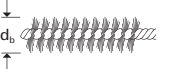
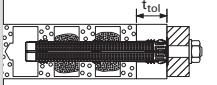
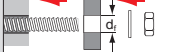
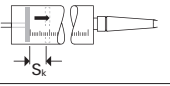
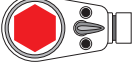


FIS E

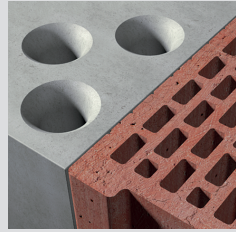


FIS HK

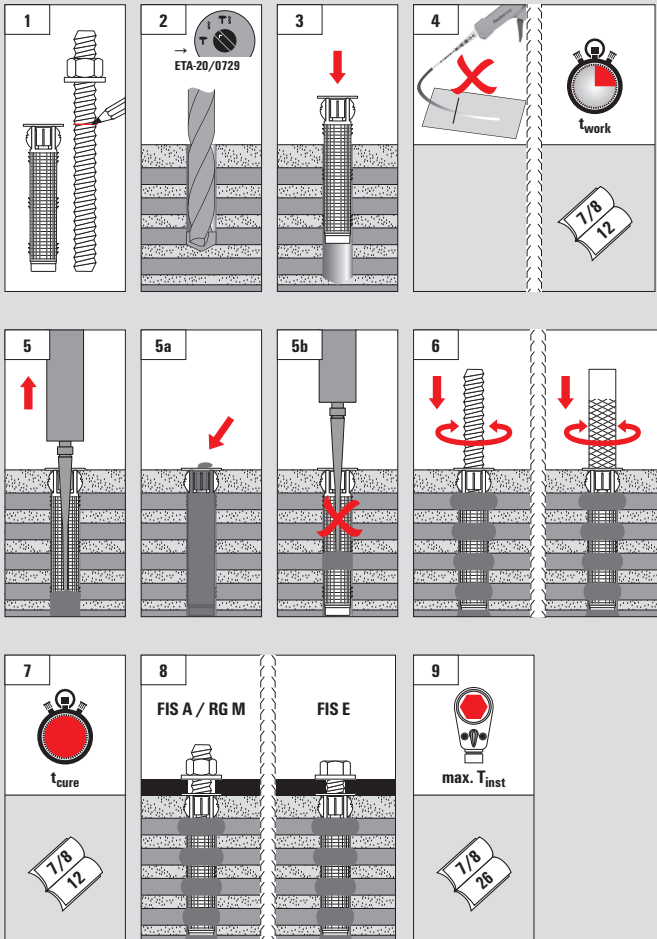


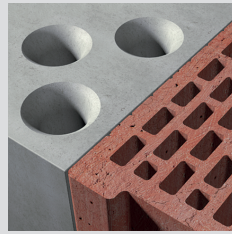
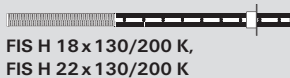
FIS E

	FIS E	M6	M8	M10	M12
	FIS HK	16x85	16x85	20x85	20x85
		✓	✓	✓	✓
	$l_{E,min}$	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
	fisher BS d_b [mm]	Ø 16	Ø 16	Ø 20	Ø 20
	t_{tol} [mm]	0	0	0	0
	d_f [mm]	7	9	12	14
	Sk [-]	12	12	15	15
	$\max. T_{inst}$ [Nm]			www.fischer-international.com www.fischer.de → ETA-20/0729	
					





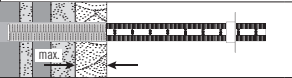

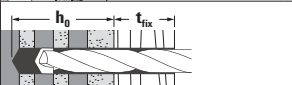
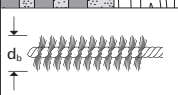
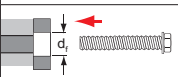
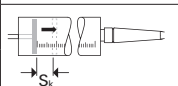
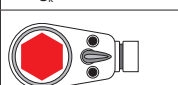




FIS A / RG M, FIS E, FIS HK





FIS A / RG M, FIS H 18 x 130/200 K, FIS H 22 x 130/200 K

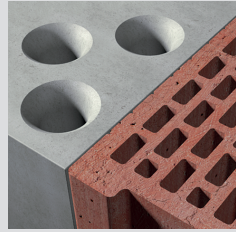
	FIS A / RG M	M10	M12	M16
	FIS HK	18x130/200	18x130/200	22x130/200
		✓	✓	✓
	d_0 [mm]	18	18	22
	t_{tot} [mm]	0	0	0
	$t_{fix, max}$ [mm]	200	200	200
	h_0 [mm]	$135 + t_{fix}$	$135 + t_{fix}$	$135 + t_{fix}$
	fischer BS	Ø 18	Ø 18	Ø 20
	d_b [mm]	20	20	25
	d_f [mm]	20	20	24
	Sk ($h_{0, min}$) [-]	15	15	25
	Sk ($h_{0, max}$) [-]	35	35	45
	max. T_{inst} [Nm]	 www.fischer-international.com www.fischer.de → ETA-20/0729		



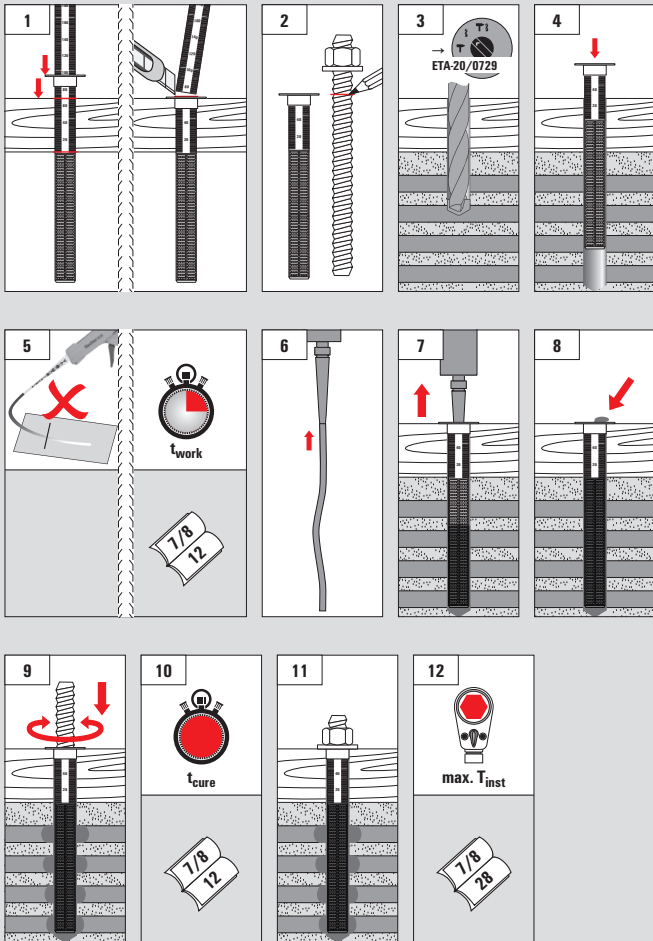
FIS A / RG M



FIS H 18 x 130/200 K,
FIS H 22 x 130/200 K

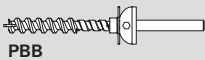


FIS A / RG M, FIS H 18 x 130/200 K, FIS H 22 x 130/200 K





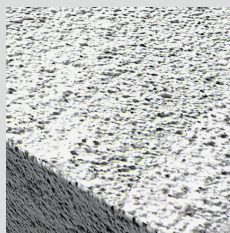
FIS A / RG M



PBB



PBZ



FIS A / RG M, PBB, PBZ

	FIS A / RG M	M8	M10	M12
	PBB	✓	✓	✓
	PBZ	✓	✓	✓
		✓	✓	✓
	$h_{0,1}$ [mm]	80	80	80
	$h_{0,2}$ [mm]	100	100	100
	d_f [mm]	9	12	14
	$S_k(h_{0,1})$ [-]	15	15	15
	$S_k(h_{0,2})$ [-]	20	20	20
	max. T_{inst} [Nm]	2	2	2



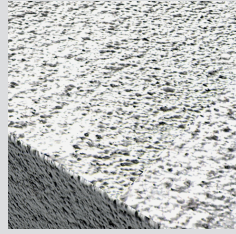
FIS E



PBB



PBZ



FIS E, PBB, PBZ

	FIS E	M6	M8
	PBB	✓	✓
	PBZ	✓	✓
		✓	✓
	$l_{E,min}$ [mm]	6	8
	$l_{E,max}$ [mm]	60	60
	$h_{0,1}$ [mm]	100	100
	d_f [mm]	7	9
	Sk [-]	20	20
	max. T_{inst} [Nm]	2	2



FIS A / RG M



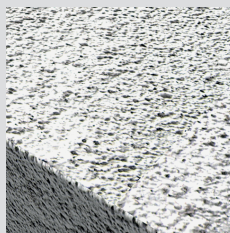
FIS E



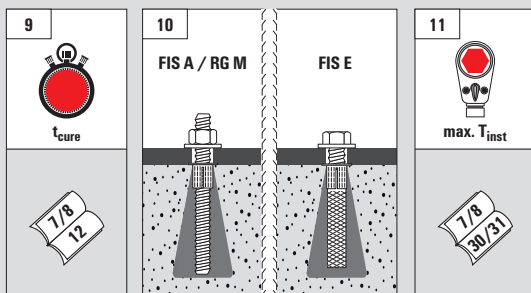
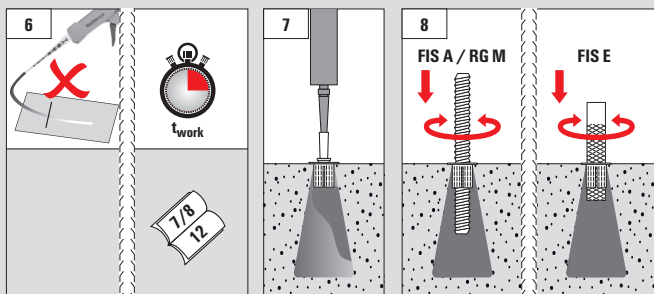
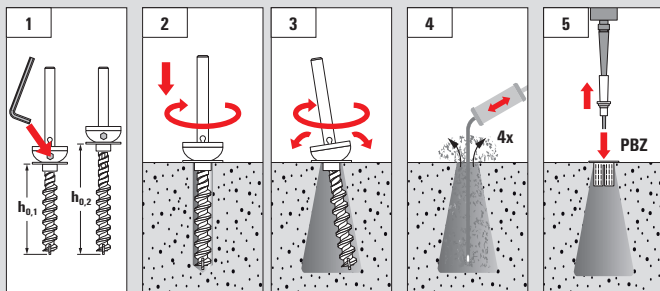
PBB



PBZ



FIS A / RG M, FIS E, PBB, PBZ



fischer Injection Mortar FIS V Plus

A Preparing the cartridge

1. Remove the cap by turning it to left and pulling it off.
2. Insert the static mixer and lock it in place (turn to the right). **The spiral mixer in the static mixer must be clearly visible.** Never use without the static mixer!
3. Place the cartridge in the dispenser.
4. Press approx 10 cm of material out **until the resin mortar comes out evenly grey in colour.** Mortar which is not grey colour will not cure and must be disposed of.
5. The temperature of the concrete must be at least 23 °F (5 °C) and at most 104 °F (40 °C) (see Table III). The temperature of the cartridge must be at least 41 °F (5 °C).
6. After finishing work, leave the static mixer attached to the cartridge.

Important: If the processing time is exceeded, use a new static mixer and if necessary remove encrusted material in the cartridge mouth.

B Installation

Important: Installation instructions - follow the pictograms 1-7 for the sequence of operating and refer to Tables I-III for setting details. The construction drawings must be adhered. For any applications not covered by this document or by any problems with installation contact fischer.

1. Drill hole with a hammer drill set. Observe the correct hole diameter and depth according to **Table I and Table II.**
- 2.1/2.2/2.3. Standing water in bore holes must be completely removed by blowing out before cleaning the bore hole. The drill hole must blown out four times with compressed air (oil-free ≥ 87 psi (6 bar)), brushed four times (minimal by hand) starting from the bottom of the hole and then again blown out four times with compressed air (oil-free ≥ 87 psi (6 bar)). For drill holes $d_0 < 18$ mm it is allowed to use hand pump. The diameters of the brushes are given in **Table I.** Clean dirty brushes. Check brushes for wear with brush gauge (brush $\varnothing \geq$ drill hole \varnothing). If required use brush extension.
3. Fill approx. $\frac{2}{3}$ of the hole with mortar starting from the bottom of the hole. For drill hole depth > 150 mm use an extension tube. Observe processing time.
4. Anchoring element must be straight and free of oil and other contaminants. Mark the anchor with correct embedment depth. Press the anchoring element down to the bottom of the hole, turning it slightly while so doing. After insert the anchoring element, excess mortar must emerge from the mouth of the hole.
5. For overhead installations and applications between horizontal and overhead use the appropriate injection adapter and wedges to support the anchor during curing time. Also use an injection adapter for all applications with a drill hole depth > 250 mm or a drill hole diameter $d_0 \geq 30$ mm. Use appropriate accessories to capture excess adhesive during installation of the anchor element in order to protect the unbonded portion of the anchor element from adhesive.
6. Do not disturb the anchoring element until cure time has elapsed. Do not apply load or installation torque moment to the anchor until the prescribed curing times are elapsed. The allowable working time and the minimum curing time are given in **Table III.**
7. The installation torque moments are given in **Table II.**

Table III Processing and curing times

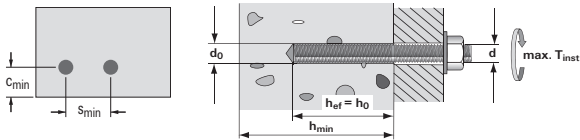
Temperature range		Working time/ processing time	Curing time
°C	°F		
- 5 to ± 0	+23 to + 32	-	24 h
> ± 0 to + 5	> +32 to + 41	13 min	180 min
> + 5 to +10	> +41 to + 50	9 min	90 min
> +10 to +20	> +50 to + 68	5 min	60 min
> +20 to +30	> +68 to + 86	4 min	45 min
> +30 to +40	> +86 to +104	2 min	36 min

Storage temperature: + 5 °C - + 25 °C / + 41 °F - + 77 °F



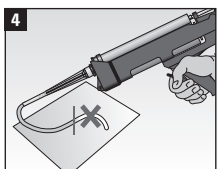
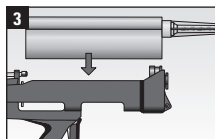
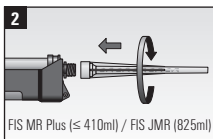
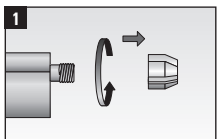
Table I Drill hole diameter / Accessories



Drill bit		Rods		Brush		Injection adapter	
\emptyset [mm]	\emptyset [inch]	\emptyset [mm]	\emptyset [inch]	\emptyset [mm]	item No.	size	colour
10	3/8	M 8	-	11	78178	-	-
12	7/16	M10	3/8"	14	78179	12	nature
14	9/16	M12	1/2"	16	78180	14	blue
18	3/4	M16	5/8"	20	78181	18	yellow
24	1	M20	7/8"	26	78182	24	brown
28	1 1/8	M24	1"	30	78183	30	grey
30	1 1/4	M27	-	40	78184	30	grey
35	1 3/8	M30	1 1/4"	40	78184	35	brown

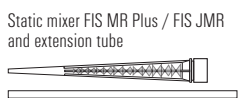
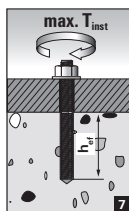
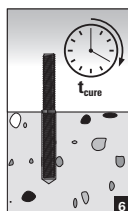
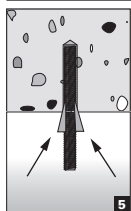
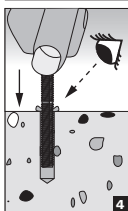
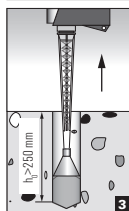
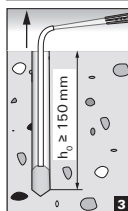
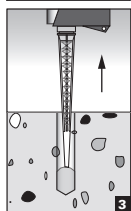
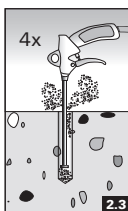
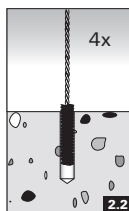
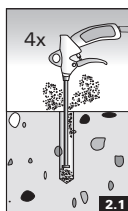
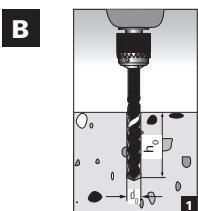

Table II Threaded rod, metric

d [mm]	d ₀ [mm]	h _{ef,min}		h _{ef,max}		h _{min}		S _{min} = C _{min}		T _{inst}		
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[Nm]	[ft-lb]	
M 8	10	3/8	60	2,36	96	3,78		40	1,57	10	7,37	
M10	12	7/16	60	2,36	120	4,72	h _{ef} + 30	h _{ef} + 1,25	45	1,77	20	14,75
M12	14	9/16	72	2,83	144	5,67			55	2,17	40	29,50
M16	18	3/4	96	3,78	192	7,56			65	2,56	60	44,25
M20	24	1	120	4,72	240	9,45			85	3,35	120	88,50
M24	28	1 1/8	144	5,67	288	11,34	h _{ef} + 2d ₀	h _{ef} + 2d ₀	105	4,13	150	110,62
M27	30	1 1/4	162	6,38	324	12,76			120	4,72	200	147,49
M30	35	1 3/8	180	7,09	360	14,17			140	5,51	300	221,24

A FIS V Plus 360 S / FIS V Plus 380 C / FIS V Plus 410 C / FIS V Plus 825 S



Cartridge	Dispenser	Item No.	Static mixer
360 ml	FIS DM S	511118	FIS MR Plus 
	FIS AM	058000	
	FIS DB S Pro	558955	
	FIS AP	058027	
380 ml 410 ml	FIS AC	096497	FIS JMR 
825 ml	FIS AM S-XL	563241	
	FIS DB SL Pro	562004	



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