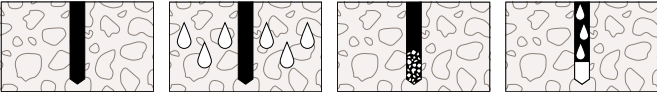


FIS V Zero



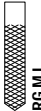
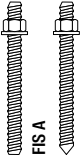
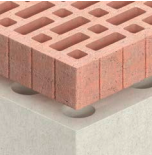
DE Gebrauchsanweisung · **EN** Operating instructions · **FR** Mode d'emploi ·
NL Montagehandleiding · **IT** Istruzioni per l'installazione · **ES** Instrucciones de uso ·
PT Instruções de utilização · **DA** Installationsvejledning · **SV** Installationsinstruk-
tioner · **NO** Installasjonsveiledning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



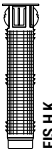
DE	Trockener Beton	Nasser Beton	Verschmutztes Bohrloch	Wassergefülltes Bohrloch
EN	Dry concrete	Water saturated concrete	Contaminated drill hole	Water filled borehole
FR	Béton sec	Béton humide	Perçage non dépoussiéré	Trou inondé
NL	Droog beton	Met water verzadigd beton	Vervuild boorgat	Met water gevuld 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	Þurr steinsteypa	Blaut steinsteypa	Óhreinn borhola	Vatnsfyllt borhola
ET	Kuivbetoon	Märgbetoon	Mustunud puuriauk	Veega täidetud puuriauk
LV	Sauss betons	Mītrs 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 wypelniony
CS	Suchý beton	Mokrý 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	Zaprljani provrt	Vodom napunjen provrt
SR	Suv beton	Mokar beton	Zaprljan provrt	Provrt napunjen vodom
TR	Kuru beton	Yaş beton	Kirli delik	Su dolu delik
EL	Στεγνό μπετόν	Υγρό μπετόν	Βρώμικη τρύπα	Τρύπα γεμάτη νερό
BG	Сух бетон	Мокър бетон	Замърсен отвор	Пълен с вода отвор
RU	Сухой бетон	Водонасыщенный бетон	Загрязненное отверстие	Отверстие в бетоне, заполненное водой
UK	Сухий бетон	Водонасичений бетон	Забруднений отвір	Заповнений водою отвір
KK	Құрғақ бетон	Ылғалды бетон	Ластанған саңылау	Сүмен толтырылған саңылау
ZH	干燥混凝土	湿混凝土	受污的钻孔	注水的钻孔
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
KO	건조 콘크리트	습윤 콘크리트	이물질이 삽입된 드릴 구멍	물이 찬 드릴 구멍
ID	Beton kering	Beton basah	Lubang bor terkontaminasi	Lubang bor berisi air
AR	خرسانة جافة	خرسانة رطبة	ثقب ملوث	ثقب ممتلئ بالماء



DE	Gerissener Beton	Ungerissener Beton	Bewehrungsanschluss	Vollstein
EN	Cracked concrete	Non-cracked concrete	Reinforcement connection	Solid brick
FR	Béton fissuré	Béton non fissuré	Scellement d'armatures	Maçonneries pleines
NL	Gescheurd beton	Ongescheurd beton	Wapeningsaansluiting	Volle steen
IT	Calcestruzzo fessurato	Calcestruzzo non fessurato	Ferri di ripresa	Mattone pieno
ES	Hormigón agrietado	Hormigón sin grietas	Conexión de refuerzo	Ladrillo macizo
PT	Betão fissurado	Betão não fissurado	Conetor de reforço	Pedra maciça
DA	Revnet beton	Ikkerevnet beton	Armeringsstilslutninger	Massiv sten
SV	Sprucken betong	Ej sprucken betong	Armeringsanslutning	Massiv sten
NO	Betong med riss	Betong uten riss	Armeringsforbindelse	Helstein
FI	Haljennut betoni	Halkeamaton betoni	Vahvistusliitäntä	Umptiili
IS	Sprungin steypa	Óbrotin steinsteypa	Tenging við styrkingu	Gegnehill steinn
ET	Pragunenud betoon	Pragudeta betoon	Sarrusühendus	Täistellis
LV	Betons ar plaisām	Betons bez plaisām	Stieģrojuma savienojums	Masīvs ķieģelis
LT	Sutūkiniųjų betonas	Vientisas betonas	Armatusos sujungimo elementas	Pilnavidurė plyta
PL	Beton spekany	Beton niespekany	Złącze zbrojarskie	Cegła pełna
CS	Beton s trhlinami	Beton bez trhlín	Připojka výztuže	Plně cihly
SK	Betón s trhlinami	Betón bez trhlín	Styková výstuž	Plná tehla
HU	Repedéses beton	Repedésmentes beton	Betonvasalatsatlakozás	Tömör kő
RO	Beton fisurat	Beton fără fisuri	Racord de armătură	Căramidă plină
SL	Razpokan beton	Nerazpokan beton	Priključek za armaturo	Polna opeka
HR	Ispucani beton	Neispucani beton	Priključak armature	Puni kamen
SR	Ispucao beton	Neispucao beton	Priključak armature	Puni kamen
TR	Çatlamaş beton	Çatlamaşmş beton	Destek bağlantisı	Dolu tuğla
EL	Μπρετόν με ρωγμές	Μπρετόν χωρίς ρωγμές	Σύνδεση οπλισμού	Συμπορείς πλινθοί
BG	Напукан бетон	Ненапукан бетон	Връзка за армировка	Плътен камък
RU	Треснутый бетон	Цельый бетон	Соединитель армирования	Полнотелый кирпич
UK	Тріснутий бетон	Бетон у зоні стиснення	Арматурне пруття	Бетон щільної структури
KK	Жарықтары бар бетон	Бүтін бетон	Арматуралау қосылымы	Көлемді блок
ZH	有裂缝的混凝土	无裂缝的混凝土	钢筋连接件	实心砖
JA	ひび割れがあるベトン	ひび割れのないベトン	強化コネクタ	全面石材
KO	균열 콘크리트	비균열 콘크리트	보강재 연결	일반 벽돌
ID	Beton retak	Beton tidak licin	Sambungan penguat	Batu bata penuh
AR	خرسانة متصدعة	خرسانة غير متصدعة	وصلة حديد مسلح	طوبة كاملة



DE	Lochstein	Porenbeton	Ankerstangen	Innengewindeanker
EN	Perforated brick	Aerated concrete	Anchor rods	Internal thread anchors
FR	Maçonneries creuses	Béton cellulaire	Tiges filetées	Douilles taraudées
NL	Holle steen	Cellenbeton	Ankerstangen	Binnendraadanker
IT	Mattone forato	Calcestruzzo cellulare	Barre di ancoraggio	Ancoraggio con filettatura interna
ES	Ladrillo perforado	Hormigón celular	Barras de anclaje	Anclaje de rosca interior
PT	Pedra porosa	Concreto aerado	Tirantes de ancoragem	Ancoragem de rosca interna
DA	Hulsten	Porebeton	Gevindstænger	Anker med indvendigt gevind
SV	Hålsten	Lättad betong	Förankringsstänger	Ankare med innergånga
NO	Perforet (mur) stein	Lettbetong	Ankerstenger	Innvendig gjengeanker
FI	Reikätili	Hiilihapotettu betoni	Harustangot	Sisäkierreankkuri
IS	Holustein	Loftblandað steypa	Festistangir	Festing með skrifgangi að innanverðu
ET	Õõnestellis	Gaseeritud betoon	Ankurvardad	Sisekeermega ankur
LV	Dobļieģelis	Gāzbetons	Enkura stienis	Iekšējās vītnes enkurs
LT	Plyta su kiaurymėmis	Gazuotas betonas	Inkariniai strypai	Strypas su vidiniu sriegiu
PL	Pustak	Komórkowy	Kotwy	Kotwy z gwintem wewnętrznym
CS	Děrovaný cihly	Pórobeton	Kotevní tyče	Svorník s vnitřním závitem
SK	Dierovaná tehla	Pórobeton	Kotviace tyče	Kotva s vnútorným závitom
HU	Lyukaskő	Szénsavas beton	Horgonyrudak	Belsőmenetes horgony
RO	Căramidă cu găuri	Beton celular	Bare de ancorare	Ancoră cu filet interior
SL	Votla opeka	Gazirani beton	Sidra	Sidro z notranjim navojem
HR	Šupljikavi kamen	Gazirani beton	Sidrene šipke	Sidro s unutrašnjim navojem
SR	Šupljikavi kamen	Gazirani beton	Šipke za ankerovanje	Kotva s unutrašnjim navojem
TR	Delikli tuğla	Gaz beton	Dübel çubukları	İçten dışlı dübel
EL	Διατρήτοι πλίνθοι	Αεριομένο σκυρόδεμα	Ντιζές αγκύρωσης	Αγκύρια εσωτερικού σπειρώματος
BG	Порест камък	Газобетон	Анкерни пръти	Анкерен болт с вътрешна резба
RU	Пустотелый кирпич	Газобетон	Анкерные болты	Анкеры с внутренней резьбой
UK	Бетон порожнистої структури	Газобетон	Анкерні шпильки	Анкер із внутрішнім різьбленням
KK	Кыс кірпіш	Аэрациялық бетон	Анкерлік болттары	Ішкі бурандасы бар анкерлер
ZH	空心砖	加气混凝土	系杆	内部螺纹系杆
JA	穴付き石材	発泡コンクリート	アンカーロード	めねじアンカー
KO	공돌 벽돌	꼭기 콘크리트	앵커 로드	원뿔 나선형 조작
ID	Batu bata berlubang	Beton aerasi	Batang jangkar	Jangkar berulir dalam
AR	طوبة مخرومة	الخرسانة الخلوية	قضبان تثبيت	لولية تثبيت داخلية



DE	Bewehrungsstab	Bewehrungsanker	Innengewindeanker	Ankerhülse Kunststoff
EN	Reinforcement rod	Reinforcement anchor	Internal thread anchor	Plastic anchor sleeve
FR	Barres d'armatures	Ancrage d'armature	Douilles taraudées	Tamis d'injection
NL	Wapeningsstaaf	Wapeningsanker	Binnendraadanker	Ankerhuls kunststof
IT	Ferro di ripresa	Ancoraggio di ripresa	Ancoraggio con filettatura interna	Boccola di ancoraggio in plastica
ES	Barra de refuerzo	Anclaje de refuerzo	Anclaje de rosca interior	Vaina de anclaje plástica
PT	Barra de armação	Ancoragem de reforço	Ancoragem de rosca interna	Manga de ancoragem em plástico
DA	Armeringsstav	Armeringsanker	Anker med indvendigt gevind	Sihylse kunststof
SV	Armeringsjärn	Armeringsankare	Ankare med innergånga	Ankarhylsa plast
NO	Wapeningsstaaf	Wapeningsanker	Innvendig gjenge anker	Ankerhylse kunststoff
FI	Tartuntateräs	Tartuntaankkuri	Sisäkierreankkuri	Muovinen ankkurihylsy
IS	Styrkartein	Styrkartesting	Festing með skrifgangi að innanverðu	Festihulsa gerviefni
ET	Sarrusvarras	Sarrusankur	Sisekeermega ankur	Ankurhüüls plast
LV	Enkura stiegrojuma	Enkura stienis	Iekšējās vītnes enkurs	Plastmasas enkura uzmaiva
LT	Armatūrinis strypas	Armatūrinis inkaras	Inkaras su vidiniu sriegiu	Plastikinė inkarinė įvorė
PL	Pręt zbrojarski	Kotwa zbrojarska	Kotwa z gwintem wewnętrznym	Tuleja kotwiąca syntetyczna
CS	Výztužná tyč	Kotva výztuže	Svorník s vnitřním závitem	Kotevní pouzdro plast
SK	Výstužný prút	Vysužovacia kotva	Kotva s vnútorným závitom	Puzdro z plastu
HU	Betonvas rúd	Horgonyzó vas	Belsőmenetes horgony	Műanyag horgonyhüvely
RO	Tijă de armătură	Ancoră de armătură	Ancoră cu filet interior	Manșon de ancoră material plastic
SL	Armaturna palica	Sidro armature	Sidro z notranjim navojem	Plastični sidrni vložec
HR	Armaturna šipka	Armaturno sidro	Sidro s unutrašnjim navojem	Plastična košuljica sidra
SR	Armaturna šipka	Armaturna kotva	Kotva sa unutrašnjim navojem	Plastična košuljica kotve
TR	Takviye çubuğu	Takviye demiri	İçten dışlı dübel	Plastik dübel kovanı
EL	Ράβδος οπλισμού	Αγκύριο οπλισμού	Αγκύρια με εσωτερικό σπειρώμα	Πλαστικό βύσμα αγκύρωσης
BG	Армировъчен прът	Армировъчен анкерен болт	Анкерен болт с вътрешна резба	Анкерна втулка пластмаса
RU	Арматурный стержень	Арматурный анкер	Анкер с внутренней резьбой	Анкерная гильза пластиковая
UK	Арматурний стрижень	Арматурний анкер	Анкер із внутрішнім різьбленням	Анкерна гільза Полімерний матеріал
KK	Арматуралық өзеке	Арматуралық анкері	ішкі бурандасы бар анкерлер	Анкерлік төлке, пластмассасы
ZH	钢筋	钢筋锚杆	型内螺纹锚栓	型塑料 螺丝套管
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
KO	보강 로드	보강 앵커	내부 스레드 앵커	앵커 슬리브 플 라스틱
ID	Batang penguat	Jangkar penguat	Jangkar berulir dalam	Selongsong jangkar plastik
AR	قضيب حديد مسلح	تثبيت حديد مسلح	لولية تثبيت داخلية	كُم تثبيت بلاستيكي



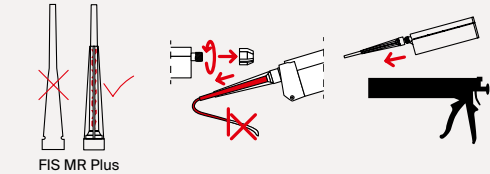
T_{inst}	t_{work}	t_{cure}	
DE Drehmoment	Verarbeitungszeit	Aushärtezeit	Skalenteile
EN Required torque	Open time	Hardening time	Scale divisions
FR Couple	Temps de manipulation	Temps de durcissement	Graduations
NL Draaimoment	Verwerkingstijd	Uithardtijd	Schaalonderdelen
IT Coppia	Tempo di lavorazione	Tempo di indurimento	Divisioni di scala
ES Par	Tiempo de tratamiento	Tiempo de endurecimiento	Unidades de escala
PT Binário	Tempo de processamento	Tempo de endurecimento	Intervalos de gradação
DA Tlspændingsmoment	Forarbejdningstid	Hærdetid	Skalatrin
SV Vridmoment	Bearbetningstid	Härningstid	Skaldelar
NO Dreiemoment	Bearbeidelsestid	Herdetid	Skaladeler
FI Vääntömomentti	Käsittelyaika	Kovettumisaika	Asteikkojaot
IS Snúningsáttak	Vinnslutími	Pornunartími	Mælikvæði
ET Pöördmoment	Töötlemisaeg	Kõvastumisaeg	Skaala jaotused
LV Griezmes moments	Apstrādājāmības laiks	Sacietēšanas laiks	Skalas iedaļas
LT Sukimo momentas	Darbo su medžiaga laikas	Kietėjimo laikas	Skalės padalos
PL Moment dokręcenia	Czas żelowania	Czas wiązania	Podziałki skali
CS Úťahovací moment	Doba zpracování	Doba vytvrzení	Díly na stupnici
SK Úťahovací moment	Doba spracovania	Doba vytvrdnutia	Diely na stupnici
HU Forgatónyomaték	Feldolgozási idő	Kikeményedési idő	Skálaráosztérékek
RO Cuplu	Timp de punere in operă	Timp de întărire	Diviziuni scală
SL Navor	Čas obdelave	Čas strjevanja	Razdelki na skali
HR Okretni moment	Vrijeme obrade	Vrijeme stvrdnjavanja	Dijelovi skale
SR Obrtni moment	Vreme obrade	Vreme otvrdnjavanja	Delovi skale
TR Tork	Kullanma süresi	Sertleşme süresi	Kadran bölümleri
EL Ροπή σφίξης	Χρόνος επεξεργασίας	Χρόνος σκλήρυνσης	Διαβημίσεις κλίμακας
BG Въртящ момент	Време за обработка	Време за втвърдяване	Части на скалата
RU Крутящий момент	Время обработки	Время отверждения	Деление шкалы
UK Крутний момент	Час обробки	Час затвердіння	Поділки шкали
KK Айналдыру моменті	Өңделу уақыты	Қатаю уақыты	Шәкіл бөліктері
ZH 扭矩	加工时间	硬化时间	刻度
JA トルク	加工時間	凝固時間	目盛り分割
KO 토크	작업 시간	경화 시간	스케일의 눈금폭
ID Torsi	Waktu pemrosesan	Waktu pengerasan	Bagian skala
AR عزج الدوران	وقت التصنيع	وقت التصليب	أجزاء المقياس



ETA-20/0572
EAD 330499-01-0601
Option 1 for cracked concrete

ETA-20/0574
EAD 330087-00-0601
Post-installed rebar connection

ETA-21/0267
EAD 330076-01-0604
Masonry use categories b, c or d

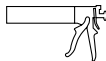




FIS V Zero

[°C]	t _{work}	t _{cure}
-10 °C – -5 °C	6 h	72 h
-5 °C – ±0 °C	2 h	24 h
> ±0 °C – +5 °C	45 min.	12 h
> +5 °C – +10 °C	20 min.	6 h
> +10 °C – +15 °C	8 min.	3 h
> +15 °C – +20 °C	5 min.	2 h
> +20 °C – +25 °C	3 min.	1 h
> +25 °C – +30 °C	2 min.	45 min.
> +30 °C – +40 °C	1 min.	30 min.

FIS V Zero

			
	Typ	Art. No.	
150 ml	FIS AM FIS DM S Pro	58000 563337	FIS MR Plus
300 ml	FIS AM	058000	
	FIS AP	058027	
	FIS DB S Pro	558955 (EU)	
	FIS DB S Pro	562004 (UK)	
	FIS DM S Pro	563337	
	KPM 2 Plus	53117	
	KPM 3	541441	
360 ml	FIS AM	058000	
	FIS AP	058027	
	FIS DB S Pro	558955 (EU)	
	FIS DB S Pro	562004 (UK)	
	FIS DM S Pro	563337	

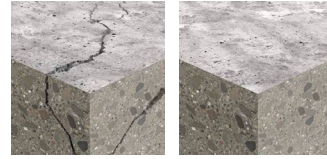
FIS A, RG M

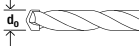
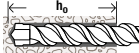
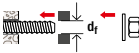
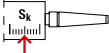
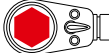


FIS A

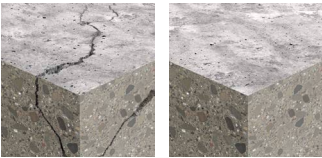


RG M



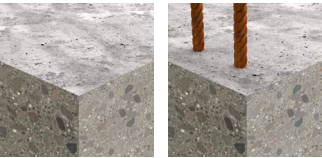
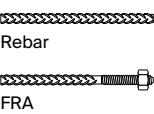
	M8	M10	M12	M16	M20	M24
 *	●	●	●	●	●	●
 d ₀ [mm]	10	12	14	18	22	28
 h _{0,min} [mm] h _{0,max} [mm]	60 160	60 200	70 240	80 320	90 400	96 480
 fischer BS d _b [mm]	ø 10 11	ø 12 14	ø 14 16	ø 16/18 20	ø 20/22 25	ø 28 30
 d _f [mm]	9	12	14	18	22	26
 d _f [mm]	12	14	16	20	24	30
 S _k (h _{0,min}) [-] S _k (h _{0,max}) [-]	2 5	3 7	3 10	5 19	7 32	15 69
 max T _{inst} [Nm]	10	20	40	60	120	150

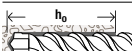
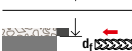
* ETA-20/0572, EAD 330499-01-0601, Option 1 for cracked concrete
ETA-20/0572, EAD 330499-01-0601, Option 7 for non-cracked concrete



	M8	M10	M12	M16	
	●	●	●	●	
	d ₀ [mm]	14	18	20	24
	h ₀ [mm]	90	90	125	160
	l _{E,min} [mm] l _{E,max} [mm]	8 18	10 23	12 26	16 35
	fischer BS d ₀ [mm]	ø 14	ø 16/18	ø 20/22	ø 24
	d ₀ [mm]	16	20	25	26
	d ₀ [mm]	9	12	14	18
	S _k [-]	3	4	6	8
	max T _{inst} [Nm]	10	20	40	80

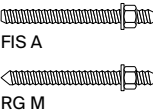
* ETA-20/0572, EAD 330499-01-0601, Option 1 for cracked concrete
ETA-20/0572, EAD 330499-01-0601, Option 7 for non-cracked concrete

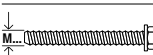
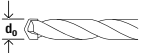
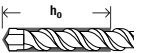
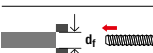
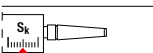


	Rebar	ø 8	ø 10	ø 12	ø 14	ø 16	ø 20	ø 22	ø 24	ø 25	
	FRA	–	–	M12	–	M16	M20	–	–	M24	
	Rebar	●	●	●	●	●	●	●	●	●	
	FRA	–	–	●	–	●	●	–	–	●	
	d ₀ [mm]	10/ 12	12/ 14	14/ 16	18	20	25	28	30	30	
	Rebar	h _{0,min} [mm]	60	60	70	75	80	90	94	98	100
		h _{0,max} [mm]	160	200	240	280	320	400	440	480	500
	FRA	h _{0,min} [mm]	–	–	170	–	180	190	–	–	196
		h _{0,max} [mm]	–	–	240	–	320	400	–	–	480
	fischer BS	ø 10/ 12	ø 12/ 14	ø 14/ 16/18	ø 16/ 18	ø 20/ 22	ø 25	ø 28	ø 35	ø 35	
		d _b [mm]	11/14	14/16	16/20	20	25	27	30	40	40
	FRA	d _f [mm]	–	–	14	–	18	22	–	–	26
	FRA	d _f [mm]	–	–	18	–	22	26	–	–	32
	Rebar S _k [–]	(h _{0,min})	2	2	2	5	6	9	13	15	13
		(h _{0,max})	3	5	6	17	22	40	58	69	61
	FRA S _k [–]	(h _{0,min})	–	–	5	–	14	21	–	–	26
		(h _{0,max})	–	–	7	–	24	43	–	–	63
	FRA	max T _{inst} [Nm]	–	–	40	–	60	120	–	–	150

* ETA-20/0572, EAD 330499-01-0601, Option 7 for non-cracked concrete

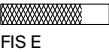
FIS A, RG M

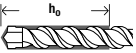
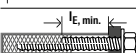
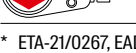
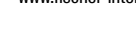


	M8	M10	M12	M16
 *	●	●	●	●
 d_o [mm]	10	12	14	18
 h_o [mm]	 $h_{o,min}$ [mm]	50	50	50
 $h_{o,max}$ [mm]	200	200	200	200
 $h_{o,min} = h_{o,max}$ [mm]	100	100	100	100
 fischer BS	Ø 10	Ø 12	Ø 14	Ø 18
 d_b [mm]	11	14	16	20
 d_f [mm]	9	12	14	18
 d_f [mm]	11	14	16	20
 S_k [mm]	$S_k (h_{o,min})$ [-]	2	2	3
 $S_k (h_{o,max})$ [-]	6	7	9	12
min T_{inst} [Nm]	0	0	0	0
max T_{inst} [Nm]	**	**	**	**

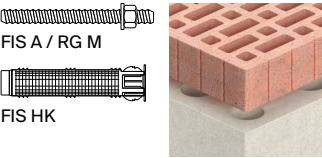
* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267

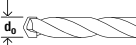
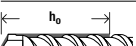
FIS E



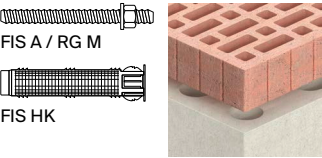
	M8	M10	M12
 *	●	●	●
 d_o [mm]	14	18	18
 h_o [mm]	85	85	85
 fischer BS	Ø 14	Ø 18	Ø 18
 d_b [mm]	16	20	20
 $l_{E,min}$	8	10	12
 $l_{E,max}$	60	60	60
 d_f [mm]	9	12	14
 S_k [-]	5	6	6
 min T_{inst} [Nm]	0	0	0
 max T_{inst} [Nm]	**	**	**

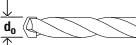
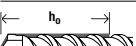
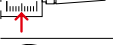
* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267



	FIS A / RG M	M8	M8	M8	M8	M10	M10
	FIS HK	12 x 50	12 x 85	16 x 85	16 x 130	16 x 85	16 x 130
		●	●	●	●	●	●
	d ₀ [mm]	12	12	16	16	16	16
	h ₀ [mm]	55	90	90	135	90	135
	fischer BS d _b [mm]	ø 12	ø 12	ø 16	ø 16	ø 16	ø 16
	t _{tol} [mm]	0	20	0	20	0	20
	d _f [mm]	9	9	9	9	12	12
	S _k [-]	6	14	14	14	18	18
	min T _{inst} [Nm] max T _{inst} [Nm]	0 **	0 **	0 **	0 **	0 **	0 **

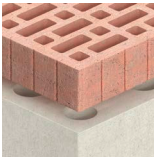
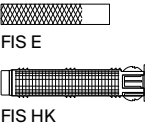
* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267



	FIS A / RG M	M12	M12	M16	M16
	FIS HK	20 x 85	20 x 130	20 x 85	20 x 130
		●	●	●	●
	d ₀ [mm]	20	20	20	20
	h ₀ [mm]	90	135	90	135
	fischer BS d _b [mm]	ø 20	ø 20	ø 20	ø 20
	t _{tol} [mm]	0	20	0	20
	d _f [mm]	14	14	18	18
	S _k [-]	18	29	18	29
	min T _{inst} [Nm] max T _{inst} [Nm]	0 **	0 **	0 **	0 **

* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267

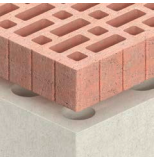
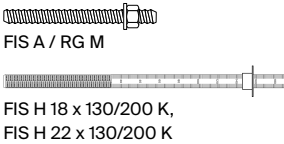
FIS E



	FIS E	M8	M10	M12
	FIS HK	16 x 85	20 x 85	20 x 85
		●	●	●
	d ₀ [mm]	16	20	20
	h ₀ [mm]	90	90	90
	fischer BS	ø 16	ø 20	ø 20
	d _b [mm]	20	25	25
	l _{E, min}	8	10	12
	l _{E, max}	60	60	60
	t _{tol} [mm]	0	0	0
	d _f [mm]	9	12	14
	S _k [mm]	14	18	18
	min T _{inst} [Nm]	0	0	0
	max T _{inst} [Nm]	**	**	**

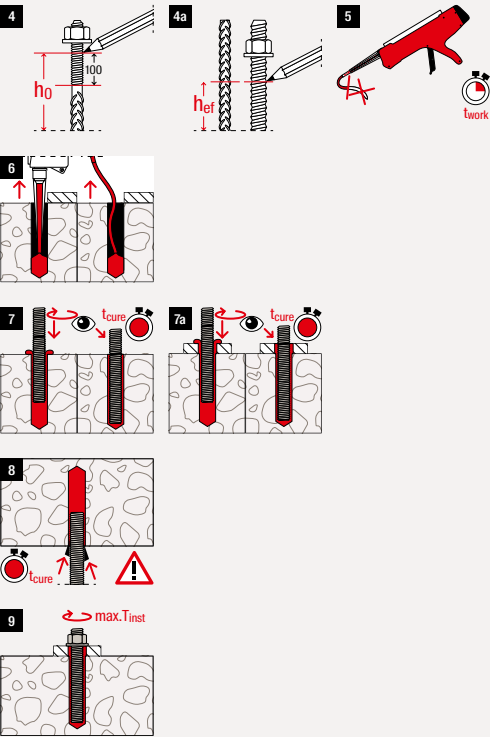
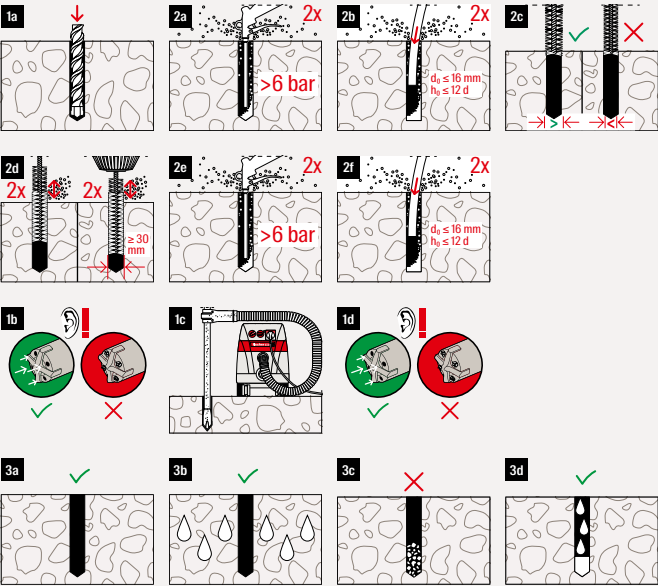
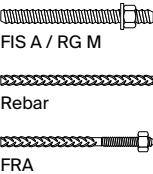
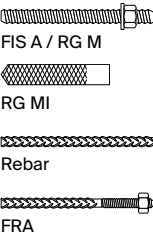
* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267

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	18 x 130/200	18 x 130/200	22 x 130/200
		●	●	●
	d ₀ [mm]	18	18	22
	t _{tol} [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]	18	18	22
	S _k [mm]	23	22	34
	min T _{inst} [Nm]	0	0	0
	max T _{inst} [Nm]	**	**	**

* ETA-21/0267, EAD 330076-01-0604, Masonry use categories b, c or d
** www.fischer-international.com, www.fischer.de → ETA-21/0267





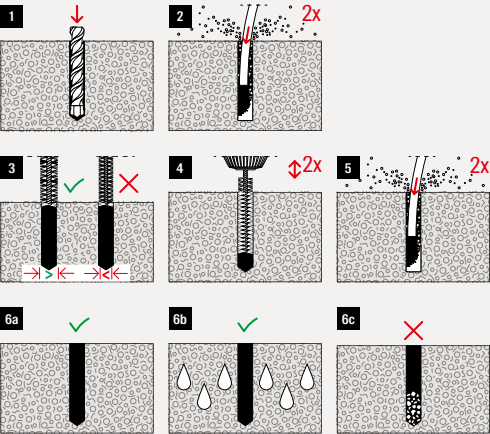
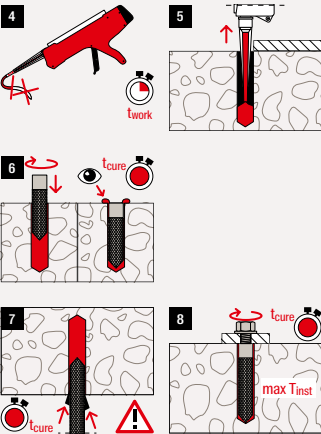
RG MI



FIS A / RG M



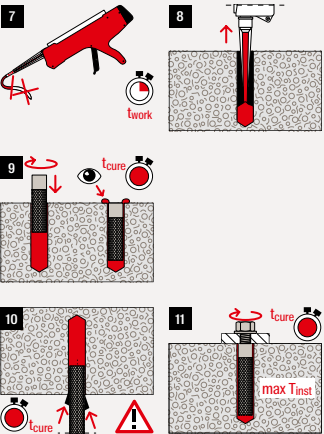
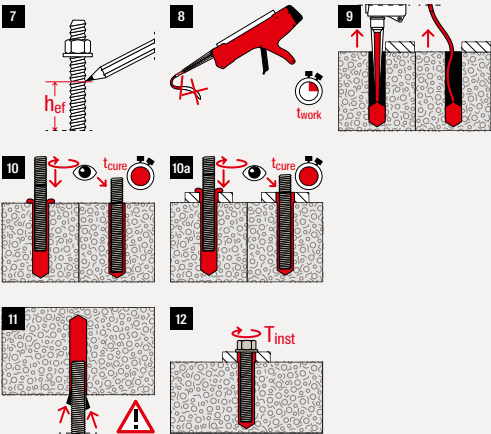
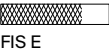
FIS E



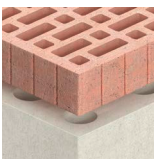
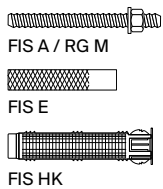
FIS A / RG M



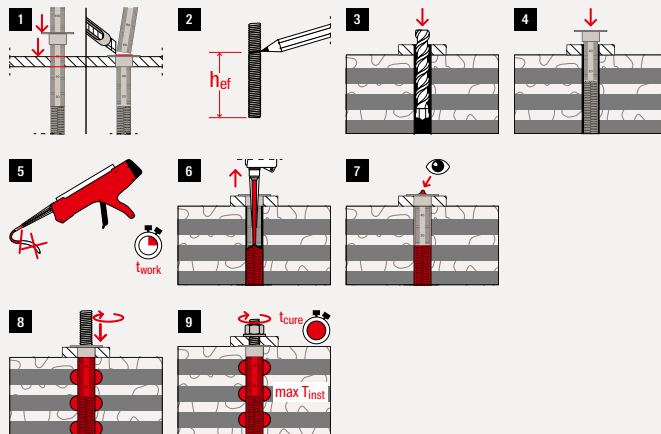
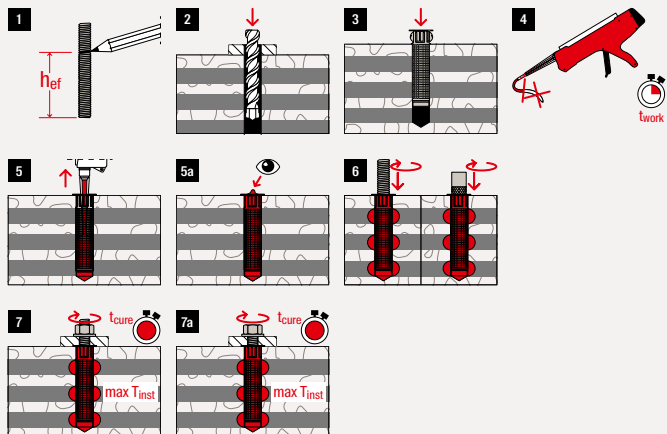
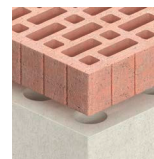
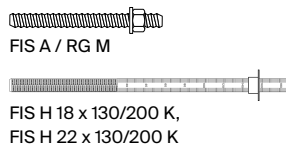
FIS E



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



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