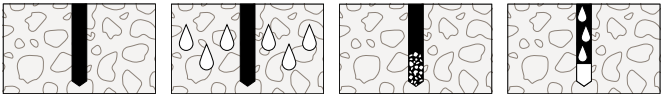
fischer

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** Installationsinstruktioner · **NO** Installasjonsveiledning · **FI** Asennusohjeet · **IS** Notkunarleiðbeiningar · **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** Қолдану нұсқаулығы · **ZH** 使用说明书 · **JA** 取扱説明書 · **KO** 사용 설명서 · **ID** Panduan Penggunaan · **AR** تعليمات الاستخدام

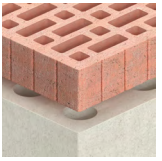


DE	Trockener Beton	Nasser Beton	Verschmutztes Bohrloch	Wassergefülltes Bohrloch
EN	Dry concrete	Water saturated concrete	Contaminated drill hole	Water filled borehole
FR	Béton sec	Béton humide	Perçage non dépoussiéré	Trou inondé
NL	Droog beton	Met water verzadigd beton	Vervuild boorgat	Met water gevuld 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 täyttynyt porareikä
IS	Þurr steinsteypa	Blaut steinsteypa	Óhrein borhola	Vatnsfyllt borhola
ET	Kuivbetoon	Märgbetoon	Mustunud puuriauk	Veega täidetud puuriauk
LV	Sauss betons	Mitrs 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 wypełnionym
CS	Suchý beton	Mokrý beton otvory vyvrtané do	Znečištěný vývrt	Naplněné vodou
SK	Suchý betón	Vodou nasýtený betón	Znečistený vývrt	Vodou naplnený otvor vyvŕtaný
HU	Száraz beton	Nedves beton	Szennyezett furat	Vízzel töltött furat
RO	Beton uscat	Beton ud	Gaură foratã contaminatã	Gaură foratã umplutã 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	Сумен 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 콘트리트	습윤 콘크리트	이물질이 삽입된 드릴 구멍	물이 찬 드릴 구멍
ID	Beton kering	Beton basah	Lubang bor terkontaminasi	Lubang bor terisi air
AR	خرسانة جافة	خرسانة رطبة	ثقب ملوث	ثقب ممتلىء بالماء

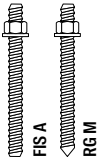


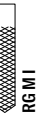



DE	Gerissener Beton	Ungerissener Beton	Bewehrungsanschluss	Vollstein
EN	Cracked concrete	Non-cracked concrete	Reinforcement connection	Solid brick
FR	Béton fissuré	Béton non fissuré	Scellement d'armatures	Maçonneries pleines
NL	Gescheurd beton	Ongescheurd beton	Wapeningsaansluiting	Volle steen
IT	Calcestruzzo 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	Armeringstilslutninger	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	Umpitiili
IS	Sprungin steypa	Óbrotin steinsteypa	Tenging við styrkingu	Gegnheill steinn
ET	Pragunenud betoon	Pragudeta betoon	Sarrusühendus	Täistellis
LV	Betons ar plaisām	Betons bez plaisām	Stiegrojuma savienojums	Masīvs ķieģelis
LT	Sutrūkinėjęs betonas	Vientisas betonas	Armatūros sujungimo elementas	Pilnavidurė plyta
PL	Beton spękany	Beton niespękany	Złącze zbrojarskie	Cegła pełna
CS	Beton s trhlinami	Beton bez trhlin	Přípojka výztuže	Plné cihly
SK	Betón s trhlinami	Betón bez trhlín	Styková výstuž	Plná tehla
HU	Repedéses beton	Repedésmentes beton	Betonvasalatcsatlakozás	Tömör kő
RO	Beton fisurat	Beton fără fisuri	Racord de armătură	Cărămidă 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	Çatlamış beton	Çatlamamış beton	Destek bağlantısı	Dolu tuğla
EL	Μπετόν με ρωγμές	Μπετόν χωρίς ρωγμές	Σύνδεση οπλισμού	Συμπαγείς πλίνθοι
BG	Напукан бетон	Ненапукан бетон	Връзка за армировка	Плътен камък
RU	Треснутый бетон	Целый 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







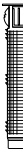


DE	Lochstein	Porenbeton	Ankerstangen	Innengewindeanker
EN	Perforated brick	Aerated concrete	Anchor rods	Internal thread anchors
FR	Maçonneries creuses	Béton cellulaire	Tiges filetées	Douilles taraudées
NL	Holle steen	Cellenbeton	Ankerstangen	Binnendraadanker
IT	Mattone forato	Calcestruzzo cellulare	Barre 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 innergänga
NO	Perforert (mur) stein	Lettbetong	Ankerstenger	Innvendig gjengeanker
FI	Reikätiili	Hiilihapotettu betoni	Harustangot	Sisäkierreankkuri
IS	Holusteinn	Loftblandað steypa	Festistangir	Festing með skrúfgangi að innanverðu
ET	Õõnestellis	Gaseeritud betoon	Ankurvardad	Sisekeermega ankur
LV	Dobķieģelis	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	Děrované cihly	Pórobeton	Kotevní tyče	Svorník s vnitřním závitem
SK	Dierovaná tehla	Pórobetón	Kotviace tyče	Kotva s vnútorným závitom
HU	Lyukaskő	Szénsavas beton	Horgonyrudak	Belsőmenetes horgony
RO	Cărămidă 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 dişli dübel
EL	Διάτρητοι πλίνθοι	Αεριωμένο σκυρόδεμα	Ντίζες 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	Қуыс кірпіш	Аэрациялық бетон	Анкерлік болттары	Ішкі бұрандасы 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	アンカーロッド	めねじアンカー
KO	공동 벽돌	폭기 콘크리트	앵커 로드	頂睡 蝶溯萄 操
ID	Batu bata berlubang	Beton aerasi	Batang jangkar	Jangkar berulir dalam
AR	طوبة مخرمة	الخرسانة الخلوية	قضبان تثبيت	لولبة تثبيت داخلية





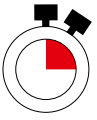




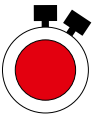
DE	Bewehrungsstab	Bewehrungsanker	Innengewindeanker	Ankerhülse Kunststoff
EN	Reinforcement rod	Reinforcement anchor	Internal thread anchor	Plastic anchor sleeve
FR	Barres d'armatures	Ancrage d'armature	Douilles taraudées	Tamis d'injection
NL	Wapeningsstaaf	Wapeningsanker	Binnendraadanker	Ankerhuls kunststof
IT	Ferro di ripresa	Ancoraggio di ripresa	Ancoraggio con fllettatura 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 innergänga	Ankarhylsa plast
NO	Wapeningsstaaf	Wapeningsanker	Innvendig gjenge anker	Ankerhylse kunststoff
FI	Tartuntateräs	Tartuntaankkuri	Sisäkierrreankkuri	Muovinen ankkurihylsy
IS	Styrktarteinn	Styrktarfesting	Festing með skrúfgangi að innanverðu	Festihulsa gerviefni
ET	Sarrusvarras	Sarrusankur	Sisekeermega ankur	Ankurhülss plast
LV	Enkura stiegrojuma	Enkura stienis	Iekšējās vītnes enkurs	Plastmasas enkura uzmava
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	Vystužovacia 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 fllet interior	Manşon de ancoră material plastic
SL	Armaturna palica	Sidro armature	Sidro z notranjim navojem	Plastični sidrni vložek
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 dişli dübel	Plastik dübel kovanı
EL	Ράβδος οπλισμού	Αγκύριο οπλισμού	Αγκύριο με εσωτερικό σπείρωμα	Πλαστικά βύσματα 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 Полі-мерний матеріал
KK	Арматуралық өзек	Арматуралық анкері	ішкі бұрандасы 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 حد مسلح	تثبيت حديد مسلح	لولبة تثبيت داخلية	كُم تثبيت بلاستيكي



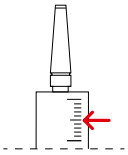
T_{inst}



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 graduação
DA	Tilspændingsmoment	Forarbejdsningstid	Hærdetid	Skalatrin
SV	Vridmoment	Bearbetningstid	Härdningstid	Skaldelar
NO	Dreiemoment	Bearbeidelsestid	Herdetid	Skaladeler
FI	Vääntömomentti	Käsittelyaika	Kovettumisaika	Asteikkojaot
IS	Snúningsátak	Vinnslutími	Þornunartími	Mælikvarði
ET	Pöördemoment	Töötlemisaeg	Kõvastumisaeg	Skaala jaotused
LV	Griezes moments	Apstrādājamības 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	Utahovací moment	Doba zpracování	Doba vytvrzení	Dílky na stupnici
SK	Uťahovací moment	Doba spracovania	Doba vytvrdnutia	Diely na stupnici
HU	Forgatónyomaték	Feldolgozási idő	Kikeményedési idő	Skálarészértékek
RO	Cuplu	Timp de punere în 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 σύσφιξης	Χρόνος επεξεργασίας	Χρόνος σκλήρυνσης	Διαβαθμίσεις 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	Өңдеу 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 눈 금폭
ID	Torsi	Waktu pemrosesan	Waktu pengerasan	Bagian skala
AR	عزم الدوران	وقت التصنيع	وقت التصلب	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

R 120

ÉMISSIONS DANS L'AIR INTÉRIEUR
A+
A+ A B C

THIRD-PARTY VERIFIED
EPD
ISO 14025 and EN 15804

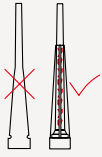
NORDIC SWAN ECOLABEL
3097 0044



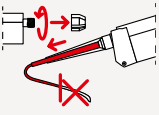


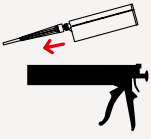
41 – 77 °F / 5 – 25 °C



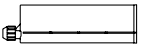
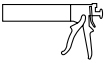


FIS MR Plus

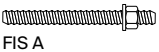




FIS V Zero		
[°C]	t_{work}	t_{cure}
−10 °C – −5 °C	6 h	72 h
−5 °C – ±0 °C	2 h	24 h
> ±0 °C – +5 °C	45 min.	12 h
> +5 °C – +10 °C	20 min.	6 h
> +10 °C – +15 °C	8 min.	3 h
> +15 °C – +20 °C	5 min.	2 h
> +20 °C – +25 °C	3 min.	1 h
> +25 °C – +30 °C	2 min.	45 min.
> +30 °C – +40 °C	1 min.	30 min.

FIS V Zero			
			
	Typ	**Art. No.**	
150 ml	FIS AM	**58000**	FIS MR Plus
	FIS DM S Pro	**563337**	
300 ml	FIS AM	**058000**	
	FIS DB S Pro	**558955 (EU)**	
	FIS DB S Pro	**562004 (UK)**	
	FIS DM S Pro	**563337**	
	KPM T Pro	**578162**	
	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
M...							
CE *		●	●	●	●	●	●
d_o	d_o [mm]	10	12	14	18	22	28
h_o	$h_{o,min}$ [mm]	60	60	70	80	90	96
	$h_{o,max}$ [mm]	160	200	240	320	400	480
d_b	fischer BS	ø 10	ø 12	ø 14	ø 16/18	ø 20/22	ø 28
	d_b [mm]	11	14	16	20	25	30
d_f	d_f [mm]	9	12	14	18	22	26
d_f	d_f [mm]	12	14	16	20	24	30
S_k	S_k ($h_{o,min}$) [–]	2	3	3	5	7	15
	S_k ($h_{o,max}$) [–]	5	7	10	19	32	69
	max T_{inst} [Nm]	10	20	40	60	120	150

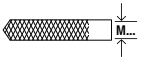
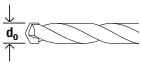
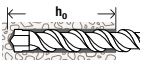
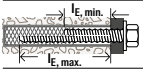
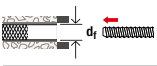
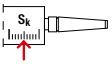
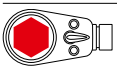
* ETA-20/0572, EAD 330499-01-0601, Option 1 for cracked concrete
ETA-20/0572, EAD 330499-01-0601, Option 7 for non-cracked concrete

RG MI



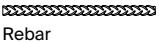
RG MI

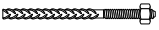


		M8	M10	M12	M16
					
CE *		●	●	●	●
	d_0 [mm]	14	18	20	24
	h_0 [mm]	90	90	125	160
	$l_{E,min}$ [mm]	8	10	12	16
	$l_{E,max}$ [mm]	18	23	26	35
	fischer BS	ø 14	ø 16/18	ø 20/22	ø 24
	d_b [mm]	16	20	25	26
	d_f [mm]	9	12	14	18
	S_k [–]	3	4	6	8
	max T_{inst} [Nm]	10	20	40	80

* 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, FRA


Rebar


FRA





	Rebar	**ø 8**	**ø 10**	**ø 12**	**ø 14**	**ø 16**	**ø 20**	**ø 22**	**ø 24**	**ø 25**
	FRA	–	–	**M12**	–	**M16**	**M20**	–	–	**M24**
CE *	Rebar	●	●	●	●	●	●	●	●	●
	FRA	–	–	●	–	●	●	–	–	●
d_0		d_0 [mm]	10/ 12	12/ 14	14/ 16	18	20	25	28	30	30
h_o	Rebar	$h_{o,min}$ [mm]	60	60	70	75	80	90	94	98	100
		$h_{o,max}$ [mm]	160	200	240	280	320	400	440	480	500
	FRA	$h_{o,min}$ [mm]	–	–	170	–	180	190	–	–	196
		$h_{o,max}$ [mm]	–	–	240	–	320	400	–	–	480
d_b	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
d_f	FRA	d_f [mm]	–	–	14	–	18	22	–	–	26
d_f	FRA	d_f [mm]	–	–	18	–	22	26	–	–	32
S_k	Rebar S_k [–]	($h_{o,min}$)	2	2	2	5	6	9	13	15	13
		($h_{o,max}$)	3	5	6	17	22	40	58	69	61
	FRA S_k [–]	($h_{o,min}$)	–	–	5	–	14	21	–	–	26
		($h_{o,max}$)	–	–	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



FIS A



RG M





			M8	M10	M12	M16
M...						
CE *			●	●	●	●
d_0	d_0 [mm]		10	12	14	18
h_0	$h_{0,min}$ [mm]		50	50	50	50
	$h_{0,max}$ [mm]		200	200	200	200
	$h_{0,min} = h_{0,max}$ [mm]		100	100	100	100
d_b	fischer BS		ø 10	ø 12	ø 14	ø 18
	d_b [mm]		11	14	16	20
d_f	d_f [mm]		9	12	14	18
d_f	d_f [mm]		11	14	16	20
S_k	S_k ($h_{o,min}$) [–]		2	2	3	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

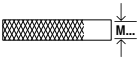
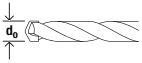
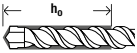
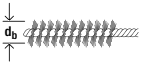
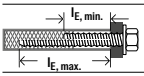
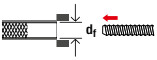
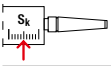
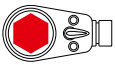
** www.fischer-international.com, www.fischer.de → ETA-21/0267

FIS E



FIS E



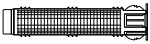
		M8	M10	M12
				
CE *		●	●	●
	d_o [mm]	14	18	18
	h_o [mm]	85	85	85
	fischer BS	ø 14	ø 18	ø 18
	d_b [mm]	16	20	20
	$l_{E,min}$	8	10	12
	$l_{E,max}$	60	60	60
	d_f [mm]	9	12	14
	S_k [–]	5	6	6
	min T_{inst} [Nm]	0	0	0
	max T_{inst} [Nm]	**	**	**

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

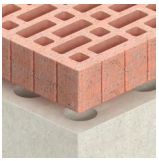
FIS A / RG M



FIS A / RG M



FIS HK



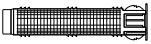
M...	FIS A / RG M	**M8**	**M8**	**M8**	**M8**	**M10**	**M10**
	FIS HK	12 x 50	12 x 85	16 x 85	16 x 130	16 x 85	16 x 130
CE *		●	●	●	●	●	●
d_o	d_o [mm]	12	12	16	16	16	16
h_o	h_o [mm]	55	90	90	135	90	135
d_b	fischer BS	ø 12	ø 12	ø 16	ø 16	ø 16	ø 16
	d_b [mm]	14	14	20	20	20	20
t_{tol}	t_{tol} [mm]	0	20	0	20	0	20
d_f	d_f [mm]	9	9	9	9	12	12
S_k	S_k [–]	6	14	14	14	18	18
	min T_{inst} [Nm]	0	0	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

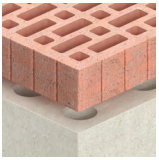
FIS A / RG M

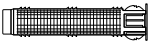
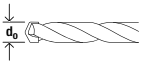
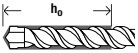
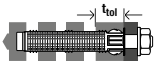
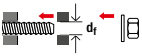
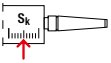
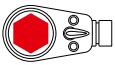


FIS A / RG M



FIS HK



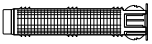
	FIS A / RG M	**M12**	**M12**	**M16**	**M16**
	FIS HK	20 x 85	20 x 130	20 x 85	20 x 130
CE *		●	●	●	●
	d_0 [mm]	20	20	20	20
	h_0 [mm]	90	135	90	135
	fischer BS	ø 20	ø 20	ø 20	ø 20
	d_b [mm]	25	25	25	25
	t_{tol} [mm]	0	20	0	20
	d_f [mm]	14	14	18	18
	S_k [–]	18	29	18	29
	min T_{inst} [Nm]	0	0	0	0
	max T_{inst} [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

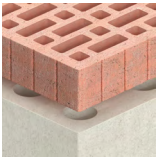
FIS E

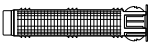
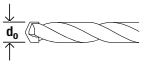
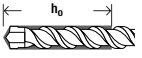
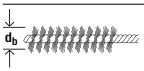
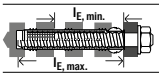
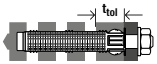
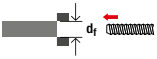
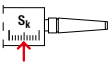
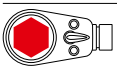


FIS E



FIS HK



		M8	M10	M12
	FIS E			
	FIS HK	16 x 85	20 x 85	20 x 85
CE *		●	●	●
	d_o [mm]	16	20	20
	h_o [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 [–]	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

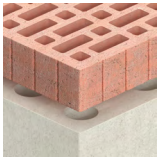
FIS A / RG M, FIS H 18 x 130/200 K, FIS H 22 x 130/200 K

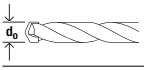
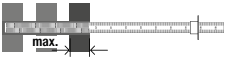
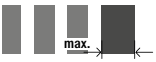
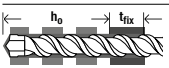
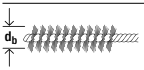
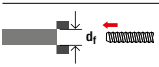
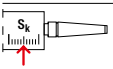
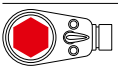


FIS A / RG M



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



		M10	M12	M16
	FIS A / RG M			
	FIS HK	18 x 130/200	18 x 130/200	22 x 130/200
CE *		●	●	●
	d_o [mm]	18	18	22
	t_{tol} [mm]	0	0	0
	$t_{fix, max}$ [mm]	200	200	200
	h_o [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 ($h_{o,min}$) [–]	23	22	34
	S_k ($h_{o,max}$) [–]	42	41	52
	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

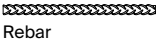
FIS A / RG M, RG MI, Rebar, FRA



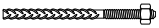
FIS A / RG M



RG MI



Rebar

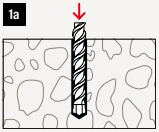


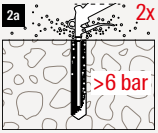
FRA

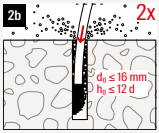


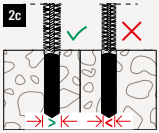


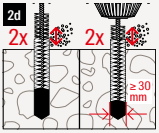


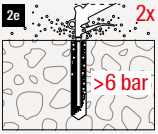


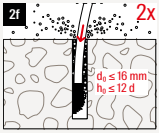


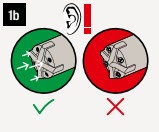


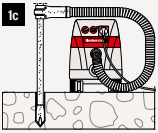


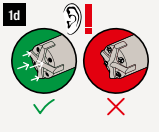


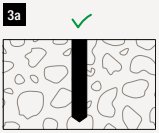


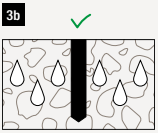


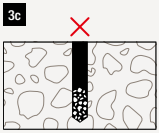


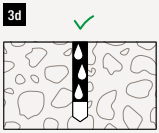




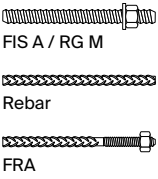








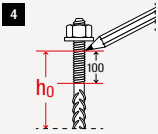
FIS A / RG M, Rebar, FRA

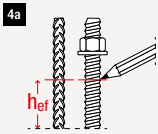


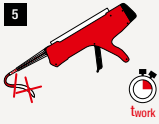


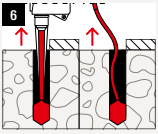


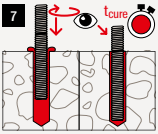


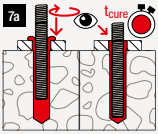


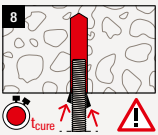


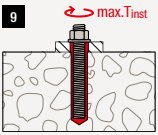










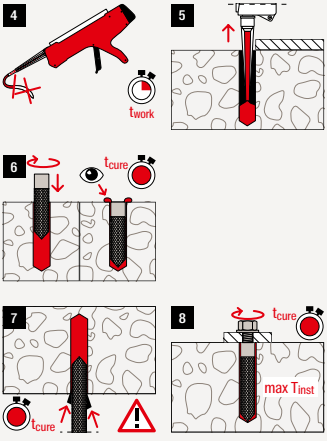


RG MI



RG MI





FIS A / RG M, FIS E



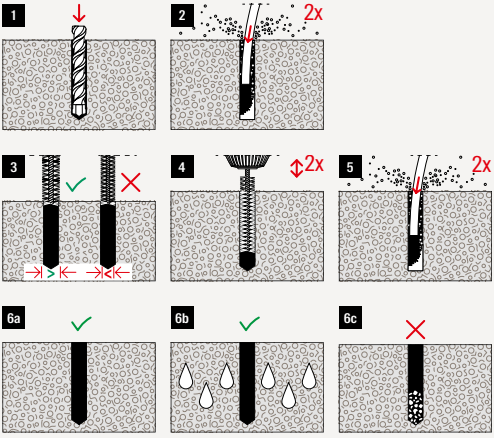
FIS A / RG M



FIS E







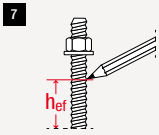
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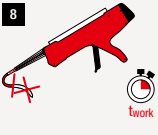


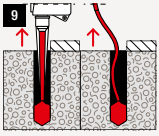
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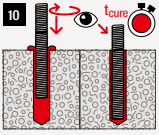


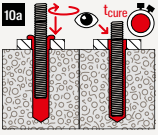


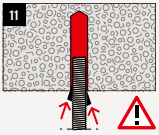


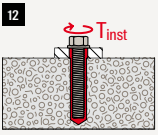








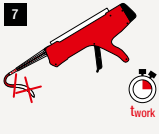


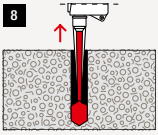


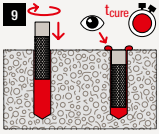
FIS E

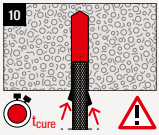


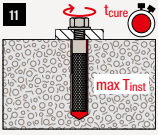












FIS A / RG M, FIS E, FIS HK



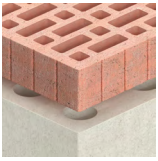
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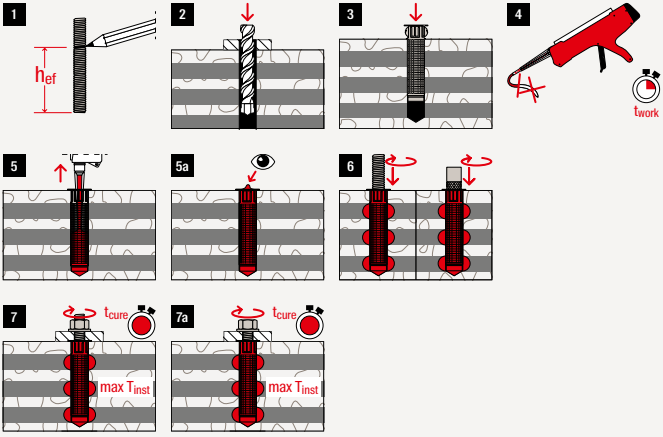


FIS E



FIS HK





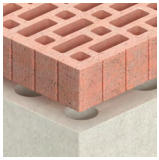
FIS A / RG M, FIS H 18 x 130/200 K, FIS H 22 x 130/200 K

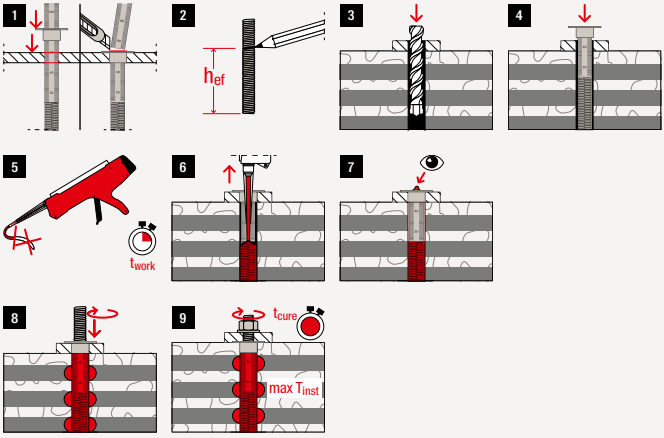


FIS A / RG M



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





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