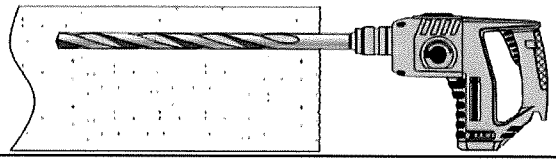
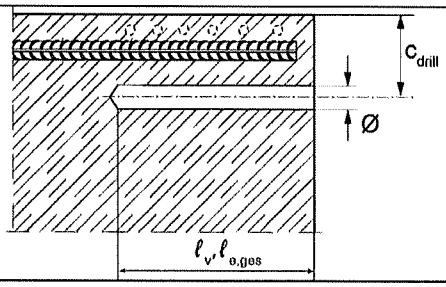
Safety regulations 	Review the Material Safety Data Sheet (MSDS) before use for proper and safe handling! Wear well-fitting protective goggles and protective gloves when working with mortar fischer FIS SB Important: Observe the instructions for use provided with each cartridge.

1. Drill hole

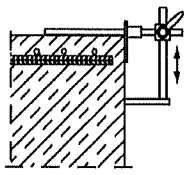
Note: Before drilling, remove carbonized concrete; clean contact areas (see Annex B 1)
In case of aborted drill hole the drill hole shall be filled with mortar.

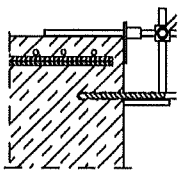


Drill hole to the required embedment depth using a hammer-drill with carbide drill bit set in rotation hammer mode or a compressed air drill.
Drill bit sizes see Table B4.



Measure and control concrete cover c
$c_{drill} = c + \phi/2$
Drill parallel to surface edge and to existing rebar
Where applicable use fischer drilling aid.



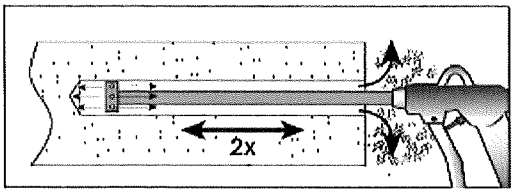


For holes ℓ_v > 20 cm use drilling aid.
Three different options can be considered:

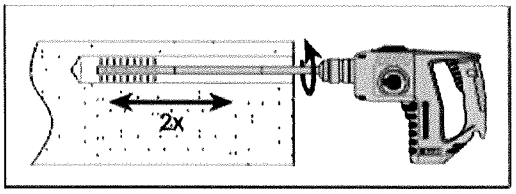
A) fischer drilling aid
B) Slat or spirit level
C) Visual check

Rebar connection with fischer Superbond	**Annex B 6**
Intended use Installation instruction part 1	

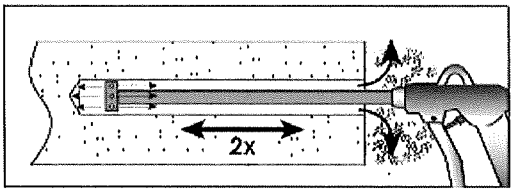
2.1 Compressed air cleaning



Blowing
two times from the back of the hole with oil-free compressed air (min. 6 bar) until return air stream is free of noticeable dust.



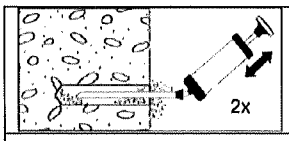
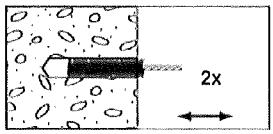
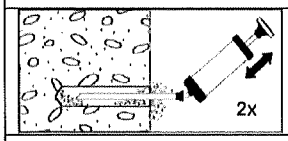
Brushing (with power drill)
two times with the specified brush size (brush diameter >: borehole diameter) by inserting the round steel brush to the back of the hole in a twisting motion. The brush shall produce natural resistance as it enters the anchor hole. If this is not the case, please use a new brush or a brush with a larger diameter.
For appropriate brushes see Table B4.



Blowing
two times from the back of the hole with oil-free compressed air (min. 6 bar) until return air stream is free of noticeable dust.

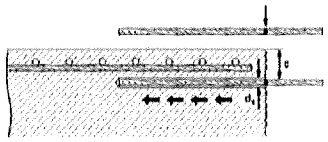
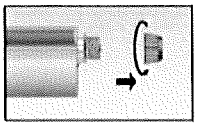
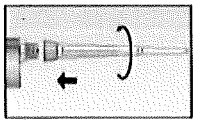
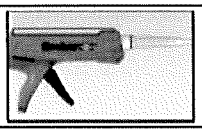
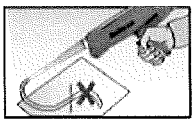
2.2 Manual Cleaning:

Manual cleaning is permitted for hammer drilled boreholes up to hole diameters $d_o \leq 18$ mm and depths l_v resp. $_{le,ges} \leq 160$ mm

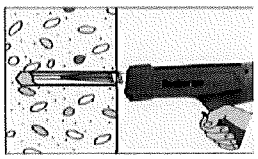
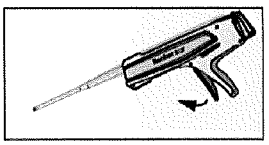
	**Blowing** two strokes with fischer blow up pump from the back of the hole until return air stream is free of noticeable dust
	**Brushing** two times with the specified brush size (brush diameter borehole diameter d_0) by inserting the round steel wire brush to the back of the hole with a twisting motion. The brush shall produce natural resistance as it enters the anchor hole. If this is not the case, please use a new brush or a brush with a larger diameter. For approbate brushes see Table B4
	**Blowing** two strokes with fischer blow-out pump from the back of the hole until return air stream is free of noticeable dust
	Manual cleaning : fischer hand pump recommended for blowing out bore holes with diameters $d_0 \leq 18$ mm and bore hole depth ℓ_v respectively $\ell_{e,ges} \leq 160$ mm

Rebar connection with fischer Superbond	**Annex B 7**
Intended use Installation instruction part 2	

3. Rebar preparation and cartridge preparation

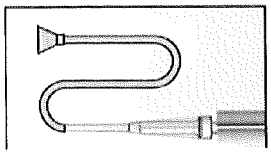
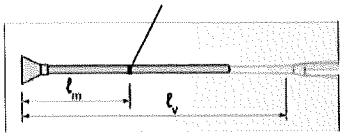
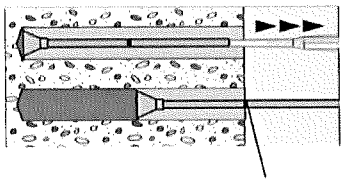
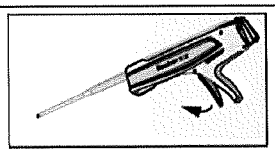
	Before use, make asure that the rebar is dry and free of oil or other residue. Mark the embedment depth on the rebar (e.g. with tape) ℓ_v Insert rebar in borehole, to verify hole and setting depth ℓ_v resp. $\ell_{e,ges}$
Injection system preparation	
	No. 1: Twist off the sealing cap
	No. 2: Twist on the static mixer (the spiral in the static mixer must be clearly visible).
	No. 3: Place the cartridge into a suitable dispenser.
	No. 4: Press approximate 10 cm of material out until the resin is evenly grey in colour. Don't use mortar that is not uniformly grey.

4. Inject mortar into borehole
4.1 borehole depth ≤ 250 mm:

	Inject the mortar from the back of the hole towards the front and slowly withdraw the mixing nozzle step by step after each trigger pull. Fill holes approximately 2/3 full, or as required to ensure that the annular gap between the rebar and the concrete is completely filled with adhesive over the embedment length.
	After injecting, depressurize the dispenser by pressing the release trigger. This will prevent further mortar discharge from the mixing nozzle.

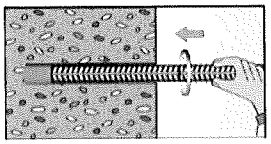
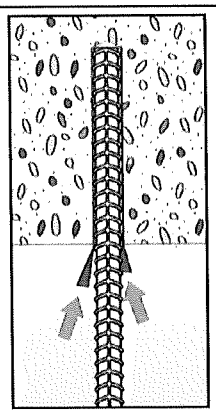
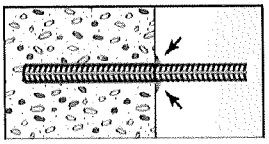
Rebar connection with fischer Superbond	**Annex B 8**
Intended use Installation instruction part 3	

4.2 borehole depth > 250 mm:

	Assemble mixing nozzle FIS MR or FIS UMR, extension tube and injection adapter (see Table B 4)
Mortar level mark 	Mark the required mortar level ℓ_m and embedment depth ℓ_v resp. $\ell_{e,ges}$ with tape or marker on the injection extension tube. a) Estimation: $l_m = \frac{1}{3} * l_v \; resp. \; l_m = \frac{1}{3} * l_{e,ges}$ b) Precise formula for optimum mortar volume: $l_m = l_v \; resp. \; l_{e,ges} \left((1{,}2 * \frac{d_S^2}{d_0^2} - 0{,}2) \right)$ [mm]
 Mortar level mark	Insert injection adapter to back of the hole. Begin injection allowing the pressure of the injected adhesive mortar to push the injection adapter towards the front of the hole. Fill holes approximately 2/3 full, or as required to ensure that the annular gap between the rebar and the concrete is completely filled with adhesive over the embedment length. When using an injection adapter continue injection until the mortar level mark ℓ_m becomes visible. Maximum embedment depth see Table B 2
	After injecting, depressurize the dispenser by pressing the release trigger. This will prevent further mortar discharge from the mixing nozzle.

Rebar connection with fischer Superbond	**Annex B 9**
Intended use Installation instruction part 4	

4.3 Insert rebar

	For each installation insert the rebar slowly twisted into the borehole until the embedment mark is at the concrete surface level.
	Support the rebar and secure it from falling till mortar started to harden, e.g. using wedges.
	After installing the rebar the annular gap must be completely filled with mortar. Proper installation • Desired anchoring embedment is reached ℓ_v: embedment mark at concrete surface. • Excess mortar flows out of the borehole after the rebar has been fully inserted until the embedment mark.
	Observe the working time "t_{work}" (see Table B3), which varies according to temperature of base material. Minor adjustments to the rebar position may be performed during the working time
	Full load may be applied only after the curing time "t_{cure}" has elapsed (see Table B 3)

Rebar connection with fischer Superbond	**Annex B 10**
Intended use Installation instruction part 5	