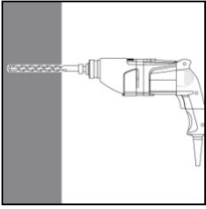
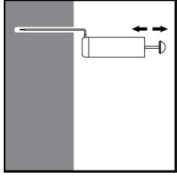
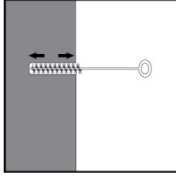
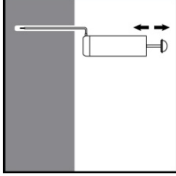
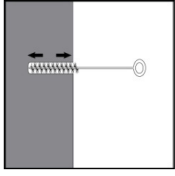
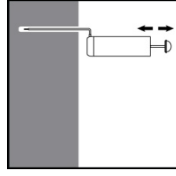
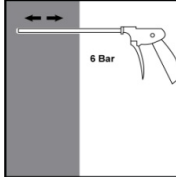
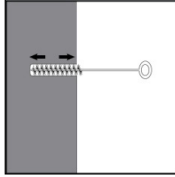
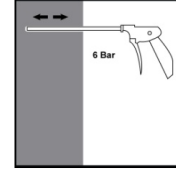


Installation instructions


Hole preparation: The hole can be prepared by : (1) hammer drilling followed by cleaning, (2) dust free drilling using a hollow drill bit or, (3) diamond drilling

(1)

Hammer drilling	Cleaning
 <p>Drill hole in the substrate to the required diameter and embedment depth using the appropriate size drill bit.</p> <p>If hammer drilling, the hole must be thoroughly cleaned to ensure it is free of dust and debris before setting an anchor.</p>	<p>A manual blow out pump can be used for blowing out drilled holes up to 24mm diameter and embedment depths up to 10 x drill hole diameter.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Blow out at least 2 times from the back of the drilled hole, (if required with an extension)</p> </div> <div style="text-align: center;">  <p>Brush 2 times with the specified brush size (see table) by inserting the steel brush to the back of the hole (if required with an extension) in a twisting motion and remove the debris.</p> </div> <div style="text-align: center;">  <p>Blow out again with pump at least 2 times.</p> </div> <div style="text-align: center;">  <p>Brush 2 times with the specified brush size (see table)</p> </div> <div style="text-align: center;">  <p>Blow out again with pump at least 2 times.</p> </div> </div> <p>OR</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Clean with compressed air, which is suitable for all bore hole diameters and depths</p>  <p>Blow twice from the back of the hole (if needed with a nozzle extension) over the whole length with oil-free compressed air (min. 6 bar at 6 m³/h).</p> </div> <div style="text-align: center;">  <p>Brush twice with the specified brush size (see table page 19) by inserting the steel brush to the back of the hole (if required with an extension) in a twisting motion and remove the debris.</p> </div> <div style="text-align: center;">  <p>Blow out again with compressed air at least twice.</p> </div> </div>

(2)

Dust free drilling using hollow drill bits



Select a suitable hollow drill bit and insert into the hammer drilling machine.


Connect the dust extraction system to the adaptor in the hollow drill bit.

Drill hole to the required embedment depth with the hammer drill set in rotation hammer mode and with the dust extraction system working permanently at full power.

Drill hole cleaning is not necessary when using the self cleaning drilling method

(3)

Wet diamond core drilling

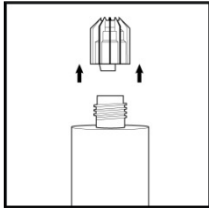


Select a suitable wet diamond coredrill and drill using diamond rig procedures Drill hole to the required embedment depth.

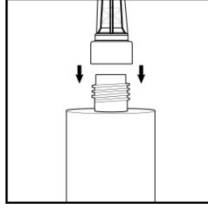
Rinse with water until clean water flows.

Inject and Install

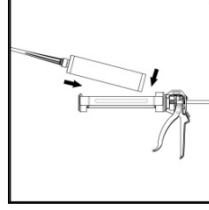
Inject



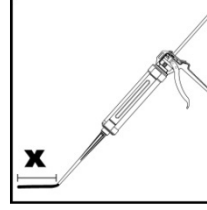
Remove the threaded cap from the cartridge.



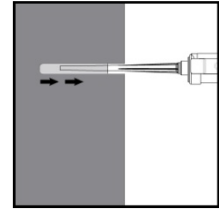
Tightly attach the mixing nozzle. Do not modify the mixer in any way. Make sure the mixing element is inside the mixer. Use only the supplied mixer.



Insert the cartridge into the dispenser gun.

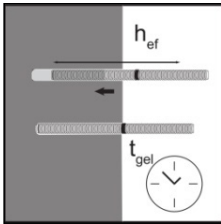


Discard the initial trigger pulls (12ml) of resin, until resin appears uniformly mixed. After every subsequent mixer nozzle change, 12ml of resin should be extruded to waste to continue with even mixing.

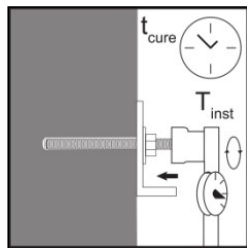


Inject the adhesive starting at the back of the hole, slowly withdrawing the mixer with each trigger pull. Fill holes approximately 2/3 full, to ensure that the annular gap between the anchor and the concrete is completely filled with resin along the embedment depth.

Install



Before use, verify that the threaded rod is dry and free of contaminants. Install the threaded rod to the required embedment depth before the **gel working time** has elapsed. (see minimum curing times in table opposite)



The anchor can be loaded after the required **curing time** (see minimum curing times in table above).

The applied torque should not exceed the maximum value given in the table below.

Minimum curing time

Concrete Temperature	Gel Working Time	Minimum curing time in dry concrete	Minimum curing time in wet concrete
5°C	70 min	60 hr	x2
10°C	32 min	40 hr	x2
15°C	28 min	30 hr	x2
20°C	25 min	18 hr	x2
25°C	22 min	17 hr	x2
30°C	20 min	16 hr	x2
35°C	19 min	14 hr	x2
40°C	18 min	12 hr	x2

All specifications based on supplied mixer

Installation parameters for threaded rods

Anchor Size		M8	M10	M12	M16	M20	M24	M27	M30
Nominal drill hole	d_0 [mm] =	10	12	14	18	22	28	32	35
Diameter steel brush	[mm] ≥	10	12	14	18	22	28	32	35
Torque moment	T_{inst} [Nm] ≤	10	20	40	60	120	160	250	300
Minimum spacing	s_{min} [mm]	40	40	60	75	95	115	125	140
Min edge distance	c_{min} [mm]	35	40	45	50	60	65	75	80

Hole cleaning - required brush sizes

If hammer drilling, the hole must be thoroughly cleaned to ensure it is free of dust and debris before setting an anchor. The table below specifies brush size required for each drill hole diameter:

Drill hole diameter (mm)	Brush diameter (mm)	Description	Length (mm)	Item code
8	9	9 x 120mm hole cleaning brush (for 8mm hole)	120	HC8
10	11	11 x 120mm hole cleaning brush (for 10mm hole)	120	HC10
12	13	13 x 150mm hole cleaning brush (for 12mm hole)	150	HC12
14	16	16 x 250mm hole cleaning brush (for 14mm hole)	250	HC14
16 / 18	20	20 x 250mm hole cleaning brush (for 16/18mm hole)	250	HC16
20 / 22	25	25 x 180mm hole cleaning brush (for 20/22mm hole)	180	HC20
24	26	26 x 300mm hole cleaning brush (for 24mm hole)	300	HC24
25	27	27 x 300mm hole cleaning brush (for 25mm hole)	300	HC25
28	30	30 x 350mm hole cleaning brush (for 28mm hole)	350	HC28
30 / 32 / 35	40	40 x 400mm hole cleaning brush (for 30/32/35mm hole)	400	HC30
40 *	42	42 x 170mm hole cleaning brush (for 40mm hole)	170	HC40
45 *	47	47 x 170mm hole cleaning brush (for 45mm hole)	170	HC45
55 *	58	58 x 170mm hole cleaning brush (for 55mm hole)	170	HC55
		M8 x 420mm brush extension	420	HCEXT420
		90mm SDS adapter for brush (40mm hole and over)	90	HCEXT90SDS

* 90mm SDS adapter must be used with hole diameters 40mm and over.