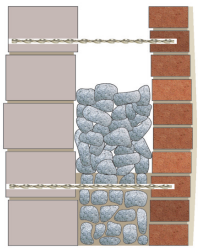
CemTie

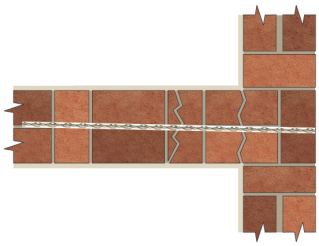
A fully grouted remedial tie for stabilising solid masonry

APPLICATIONS

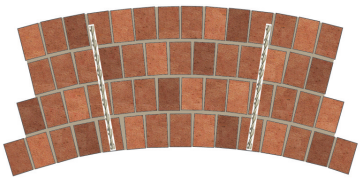
- Stabilising solid or rubble filled walls
- Reinstating failed lintels (when combined with Helibeam techniques)
- Securing multi-layer brick rings in bridges, tunnels and arches
- Reconnecting separated internal and external building walls
- Securing delaminated masonry
- Repairing and securing cornices and decorative fascias
- Securing parapet walls and copings



Stabilising bulging rubble-filled wall



Reconnecting cracked party wall to external solid wall



Re-pinning separated brick arch rings

Standard repair specifications are available online, covering common structural faults.

Relevant Repair Details: CS08, CS10, CS12, CS13, LR10, MA01, RF01 to RF03, RW02, RW04, RW05. Refer also to BPIR Helifix HeliBar and HeliBond Product Information Sheet.

FEATURES

- Grade 316 stainless steel tie up to 1m long as standard
- Quick, easy, non-disruptive installation
- Tie and grout installed simultaneously
- Ideal for overhead installations
- Highly cost-effective masonry stabilisation technique
- Much quicker and simpler than alternative methods
- Fully concealed for sympathetic repairs
- CemTie plus HeliBond grout produces great tensile strength
- Flexible to allow normal structural movements

Inserting the grout-filled pinning nozzle, containing the CemTie, into the clearance hole

TECHNICAL SPECIFICATIONS

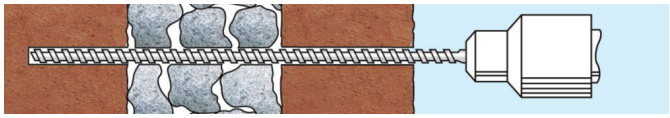
CemTie		
Material	Austenitic stainless steel Grade 316 (as standard)	
Diameter	8mm and 10mm	
Length to be used	50mm less than the materials being tied	
Standard lengths	400mm, 500mm, 600mm, 700mm, 800mm, 900mm and 1000mm	
Diameter of clearance hole	8mm tie	length up to 600mm – 16mm; length 600mm to 1m – 18mm
	10mm tie	18mm
	For CemTies over 1m long call Helifix	
Depth of clearance hole	Length of CemTie + 25mm	
Bonding agent	HeliBond Cementitious Grout	
HeliBond consumption	In a 16mm diameter hole; 10 linear metres from one 3ltr HeliBond tub (subject to voiding)	
	In a 18mm diameter hole; 7 linear metres from one 3ltr HeliBond tub (subject to voiding)	

RECOMMENDED TOOLING	
For drilling	SDS rotary hammer drill 650/700w
For mixing HeliBond	3-jaw-chuck drill with mixing paddle
For insertion of the CemTies	Helifix Pointing Gun Kit HD with pinning nozzle

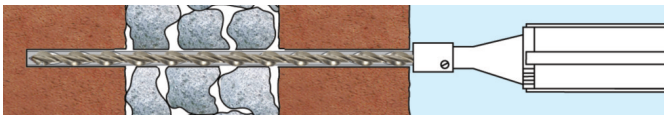
INSTALLATION PROCEDURES

1. Drill clearance hole to required diameter and depth and thoroughly clean and wet down with water.
2. Attach the required length of CemTie pinning nozzle to the gun (see diagrams A and B opposite).
3. Mix HeliBond cementitious grout using a power mixer and load into the Helifix Pointing Gun HD.
4. Pump grout to fill the nozzle.
5. Wind the CemTie into the nozzle and ensure that it is fully covered in grout.
6. Insert the nozzle to the end of the drilled hole and pump the grout until the CemTie is fully embedded.

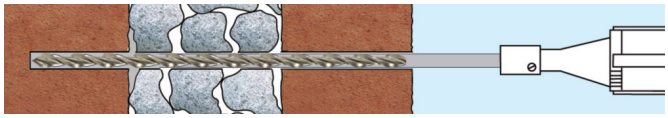
NOTE: CemTie pinning nozzles are available in 12.7mm and 15.0mm diameters and the length is made to suit the CemTie. The 12.7mm pinning nozzle fits the cone nozzle. The cone nozzle must be drilled out to accept the 15mm pinning nozzle.



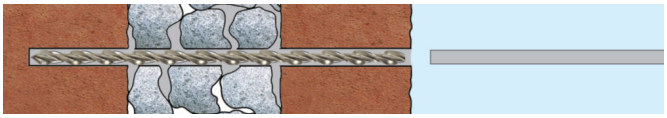
1. Drill clearance hole to required diameter and depth and flush clean.



2. Push CemTie fully into grout-filled pinning nozzle of grout gun and insert nozzle to the back of the hole



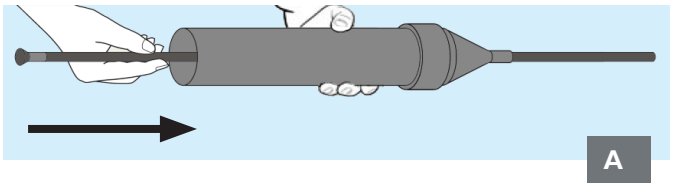
3. As grout is injected the CemTie is carried with it

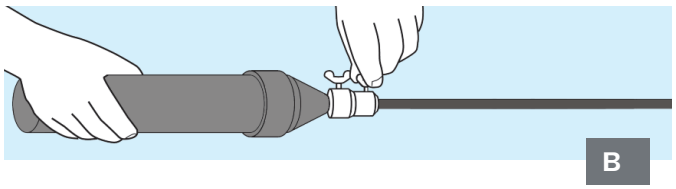


4. Back pressure pushes nozzle out of hole to leave fully grouted tie

FITTING THE CEMTIE PINNING NOZZLE

1. Loosen the locking screws device and slide off the far end of the pinning nozzle.
2. Insert the pinning nozzle tube through the cone (as in A) and secure the flared end into position at the bottom of the cone.
3. Replace the locking screws device and secure to both the pinning nozzle tube and the cone (as in B).





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