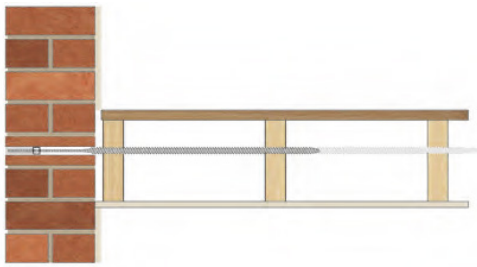
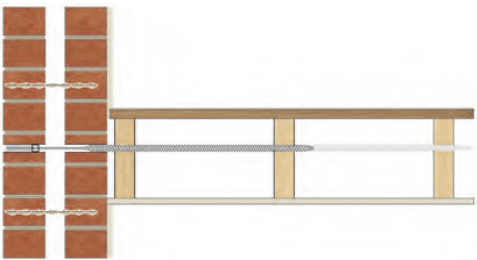


# BowTie HD

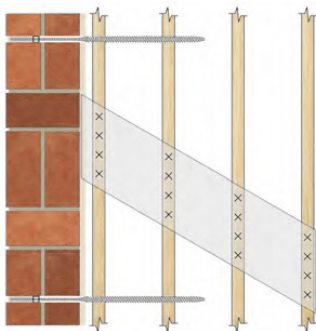
## Remedial ties for restraining bowed walls



BowTie HD into parallel joists through a solid wall



BowTie HD into parallel joists through a cavity wall



BowTie HDs into roof space joists through a solid wall

Over 100 standard repair specifications are available online, covering all common structural faults.

**Relevant Repair Details: RDs RB02, RB05, RB08**



### APPLICATIONS

- For stabilising bowed external building walls by securing them to internal floor and ceiling joists
- BowTie HDs are recommended when installing into joist ends

### FEATURES

- Quick, easy, non-disruptive external installation
- Self-tapping design – no splitting of timbers
- Effective in all common wall materials
- Suitable for hardwood use
- Easily tested for security of fixing
- Fully concealed – no unsightly external plates



BowTie HDs installed through parallel floor joists



## INSTALLATION PROCEDURES

1. Mark the positions of the joists on the external wall.
2. Drill clearance holes normally 16mm **through the masonry** only, in line with the centre of the joists.
3. Clean out the hole to clear any dust or debris.
4. Fit the power support tool into an SDS rotary hammer drill and insert the BowTie HD.
5. Install the BowTie HD (with hammer off) into and through the first and second joists (and third joist, if specified). When the BowTie HD is between joists, take care to avoid 'whip'.
6. Fit the sleeve over the tie and push it to the back of the hole in the masonry with the BowTie Injection Tube.
7. Inject Helifix PolyPlus resin into the hole to fill it completely.
8. Allow the resin to gel (normally 15 to 20 minutes).
9. Make good all holes at the surface with brick dust or matching mortar or leave ready for any decoration.

**NB** With a cavity wall, install 4 additional cavity wall ties in a 300mm square around the BowTie HD.

## TECHNICAL SPECIFICATIONS

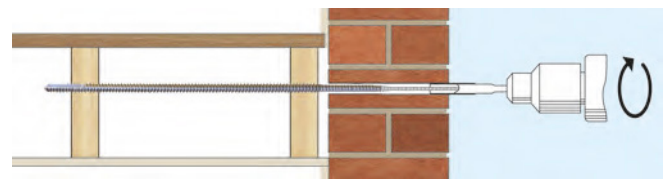
BOWTIE	
Material	Austenitic stainless steel Grade 304 (1.4301)
Diameter	12mm
Length	Thickness of the wall + any cavity + sufficient to drive into the second parallel joist (or third where specified)
Standard Lengths	1m and 1.5m – in packs of 5
Diameter of masonry clearance hole	16mm
Fixing density	Maximum horizontal spacing of 600mm between BowTies
Bonding agent (near leaf only)	PolyPlus polyester resin

## RECOMMENDED TOOLING

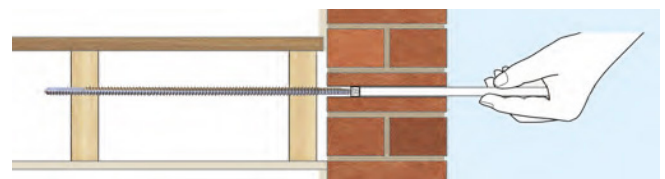
For drilling clearance holes and insertion of BowTie HDs	SDS rotary hammer drill 650/700w with hammer-stop
For installation of BowTie HDs	BowTie HD driver
For injection of PolyPlus resin	Applicator gun



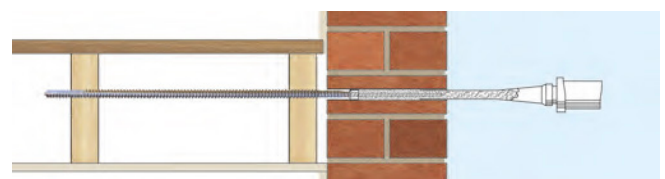
1. Mark the position of the joist centre on the external wall and then drill a clearance hole (normally 16mm) through the wall. Clean out the hole.



2. Fit the BowTie HD Support Tool to an SDS rotary hammer drill, insert the BowTie HD and drive it (off hammer) into, and through, the first and second joists.



3. Fit the plastic sleeve over the BowTie HD and use the support tool to push it to the back of the hole in the wall (outer leaf in a cavity wall).



4. Inject PolyPlus resin to fill the hole and bond the BowTie HD to the masonry, allow the resin to gel and then make good.