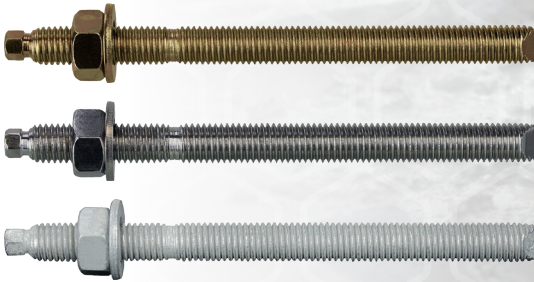




## Grout Filled Masonry Blockwork BIS-P Gen2 & BIS-V



### Limit State Design Loads in Grout Filled Masonry Blockwork

| Rod Size | Hole Size (mm) | Embedment Depth (mm) | Grout Filled Blockwork<br>$\phi_{N_A}$ Tension (kN) | Grout Filled Blockwork<br>$\phi_{V_A}$ Shear (kN) |
|----------|----------------|----------------------|---|---|
| M8       | 10             | 80                   | 6.2   | 7.2   |
| M10      | 12             | 90                   | 11.8  | 9.0   |
| M12      | 14             | 110                  | 16.5  | 14.1  |
| M16      | 18             | 125                  | 17.6  | 16.0  |

### Recommended Loads in Grout Filled Masonry Blockwork

| Rod Size | Hole Size (Mm) | Sleeve Size | Grout Filled Blockwork<br>$N_{rec}$ Tension (kN) | Grout Filled Blockwork<br>$V_{rec}$ Shear (kN) |
|----------|----------------|-------------|--|--|
| M8       | 10             | 80          | 3.4  | 4.0  |
| M10      | 12             | 90          | 6.6  | 5.0  |
| M12      | 14             | 110         | 9.2  | 7.8  |
| M16      | 18             | 125         | 9.8  | 8.9  |

**Notes:** Block: 400 x 200 x 200mm  
Block compressive strength  $\geq$  10MPa, Grout Compressive strength  $\geq$  20MPa



## Edge Distance and Spacing Parameters for Grout Filled Masonry Blockwork

| Rod Size             | M8    | M10   | M12   | M16   |
|----------------------|-------|-------|-------|-------|
| Edge Distance (min.) | 120mm | 135mm | 150mm | 150mm |
| Spacing (min.)       | 240mm | 270mm | 300mm | 300mm |

## Design Guidelines - Grout Filled Masonry Blockwork

The performance of anchoring systems into masonry may vary greatly depending on the masonry base material, job site testing is recommended to verify actual performance. The above data is intended for guidance only and based on installation in accordance with ICCONS® installation instructions, refer to the adhesive product tube for details or go to [www.iccons.com.au](http://www.iccons.com.au).

- When fixing into grout filled masonry blockwork, position anchors a minimum edge distance from wall end or wall opening as per table guidelines above.
- Minimum recommended spacing between anchors should be as per table guidelines above.
- Embedment should be limited to within 30 to 40 mm of the remote face of the block/ brick.
- Anchors should be positioned 2 block courses down from the top of an unrestrained wall.
- Avoid fixing into mortar joints unless site testing has been conducted to verify performance.

## Combined Tension & Shear Loading

For Combined tension and shear load applications the following equations shall be satisfied

$$N_{\text{applied}} / N_{\text{rec}} \leq 1 \quad V_{\text{applied}} / V_{\text{rec}} \leq 1 \quad (N_{\text{applied}} / N_{\text{rec}}) + (V_{\text{applied}} / V_{\text{rec}}) \leq 1.2$$

Where:

|                      |   |                          |                      |   |                        |
|----------------------|---|--------------------------|----------------------|---|------------------------|
| $N_{\text{applied}}$ | = | Applied Tension Load     | $V_{\text{applied}}$ | = | Applied Shear Load     |
| $N_{\text{rec}}$     | = | Recommended Tension Load | $V_{\text{rec}}$     | = | Recommended Shear Load |

## Specification Example

Adhesive : BIS-P Gen2 Injection System

Adhesive : BIS-V Injection System

Rod Size : M12 (Drill size 16mm)

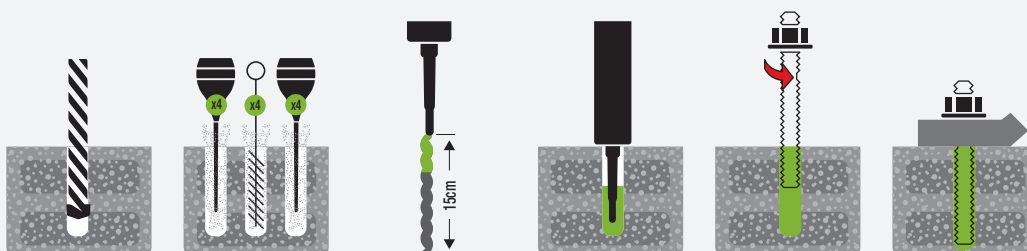
Rod Size : M12 (Drill size 16mm)

Installation to be done in accordance with ICCONS Grout Filled Masonry Blockwork Installation Instructions

Note: For full range and sizes available refer to ICCONS® IPG Product Guide or visit [www.iccons.com.au](http://www.iccons.com.au)

## Installation instructions

### Grout Filled Masonry Blockwork



For new cartridges dispense a bead of adhesive until even and consistent colour is present to ensure correct mix of adhesive.