LOAD BEARING ZONE

Please note the load bearing zone in (Figure 1). The bracket load bearing zone (ie. the distance between the bolt and the bottom heel of the bracket) must have full contact with the support structure and shims. Reduction of the load bearing zone will reduce the design capacity of the system and may result in excessive deflection and bolt failure.

Never allow the heel of the bracket to project below the support structure. NB: If you require the bracket to drop below the support structure please contact the IG technical team.

SAFETY PRECAUTIONS

- While IG Brick Slip Masonry Supports are easy to handle the components are produced from sheared plates and may have sharp edges. Care must be taken when handling Brick Slip Masonry Support and suitable equipment should be worn at all times.

- When lifting or carrying a BSMS undertake a personal risk assessment paying attention to the size and weight of the product. To avoid lifting strains and product damage all BSMS products must be lifted by at least two people or alternatively by mechanical means.

- **DO NOT** use or install damaged Brick Slip Masonry Supports.

STORAGE FRAGILE GOODS

- IG Brick Slip Masonry Supports are fragile and finished product must be stored in the correct manner. All factory wrapped goods received must be stored on a level and cordoned off so that they are clearly visible. Care must be taken when opening the wrapping on the delivered product. All goods must be opened and inspected immediately after delivery. Any irregularities must be reported in writing, within 5 days of delivery to IG Masonry Support Systems. It is the manufacturers recommendation that the goods on-site should be covered. This cover and protective wrapping should only be removed prior to installation.

DISPOSAL

- Ensure that all IG packaging and waste are disposed of responsibly. Due care must be given to the environmental impact of the disposal method

**LOAD BEARING ZONE ILLUSTRATION**

Key considerations for correct installation.

(Figure 1)

LOAD BEARING ZONE

Please note the load bearing zone in (Figure 1). The bracket load bearing zone (ie. the distance between the bolt and the bottom heel of the bracket) must have full contact with the support structure and shims. Reduction of the load bearing zone will reduce the design capacity of the system and may result in excessive deflection and bolt failure.

**NEVER ALLOW THE HEEL OF THE BRACKET TO PROJECT BELOW THE SUPPORT STRUCTURE.** NB: IF YOU REQUIRE THE BRACKET TO DROP BELOW THE SUPPORT STRUCTURE PLEASE CONTACT THE IG TECHNICAL TEAM.

**BRICKWORK OVERHANG**

Brickwork overhang must not exceed 1/3 of the brick width. A minimum masonry bearing of 2/3 on the shelf must be maintained unless otherwise stated by the manufacturer. It is therefore recommended that the bricks are positioned close to the back edge of the shelf angle (Figure 1).

**WALL TIES**

Stainless steel wall ties are crucial to the performance of all masonry support systems. Wall ties should be positioned at a maximum horizontal spacing of 450mm and should be placed within 300mm above and below the shelf angle (Figure 1).

**MATERIALS**

**Stainless Steel:**
- Grade 304 or 316
- BS EN 10028-7 : 2007

**Brick**
- As specified by site

**IMPORTANT**

POSITIONING THE BRACKET

Brackets must be installed at the correct level making sure the back of the bracket (load bearing zone) is in full contact with the support structure.
ADJUSTABILITY
IG Brick Slip Masonry Supports provide adjustability across all three planes (Figure 2) to ensure that building tolerances can be accommodated and contact with reinforcing bar can be avoided.

LATERAL ADJUSTMENT (z)
Each Masonry Support System is designed to have two brackets per shelf angle (the only variation from this is on a corner where three brackets will be introduced). To achieve the correct bracket spacing, add 10mm to the shelf angle length and then space ¼-½-¼ along this measurement. The maximum adjustment from these positions is +/- 25mm (Figure 3). This allows the bracket position to be moved if the drill hole position clashes with reinforcing bar preventing drilling, or for pre drilled steel that is slightly offset from its required position.

SHIMMING (x)
To accommodate a small increase in cavity width, shims can be inserted between the support structure and the bracket (Figures 5). Shims are available in 2mm and 6mm thicknesses. The combined thickness of shims used per bracket should never exceed the outside diameter of the bolt or 12mm, whichever is less. The collective number of shims that can be used should never exceed three number shims. Shims must support, and come into contact with the full load bearing zone of the bracket. 2mm Shims are provided as standard, 6mm Shims are available upon request.

EASY ON-SITE “OFF PLUMB” ADJUSTMENT
IG Masonry Support can provide their patented wedge shim to accommodate for the following scenario; when the support structure is not vertical. IG’s wedged shim can be rotated 180 degrees to accommodate for tilt in either direction. The wedged shim can also be packed one on top of the other to create a larger wedge. A maximum number of 3 wedges can be placed behind one bracket. The wedged shim must fully support the load bearing zone of the bracket at all times. At its largest point maximum shimming must not exceed 12mm or the outside diameter of the bolt, whichever is less.

VERTICAL ADJUSTMENT (y)
Vertical adjustment is offered by means of a toothed Lock Washer (Figure 4). This Lock Washer is inserted into the serrated slot in the support bracket. The Lock Washer can be adjusted vertically to move the bracket higher or lower. The serrated area at the back of the bracket allows up to 22mm of adjustment in either direction on the vertical plane. The Lock Washer also gives fine adjustment by rotating it through 180°; this is achieved by the offset hole in the lock washer.
1. Mark bolt hole centres on the support structure as per the technical drawings.

2. Ensure distance from the bottom of the support structure is per technical drawings. If unsure please consult IG Masonry technical team.

3. Drill bolt hole in support structure at the marked heights and widths.

4. Clean bolt hole and ensure it is free from debris. Insert bolt as indicated in technical drawings.

5. Locate serrated lock washer onto bracket at the preferred height and place bracket onto bolt.

6. Locate nut and washer over bolt.
7 If adjustment and shimming is required only use IG shims. A maximum of three shims or 12mm can be used. IG supply yellow 2mm and red 6mm shims (see shimming). The design of the IG shim allows the installer to hook the shim into position even when the bolt and lock washer are located.

8 Ensure bracket is installed vertically.

9 Ensure both brackets are level.

10 Use a torque wrench to torque bolts to the specified value. Ensure torque setting on wrench is set at the specified value.

11 Tighten bolts.
12 Once the brackets are fully installed and level, lift and slot the B.S.M.S into place.

13 B.S.M.S is a front fit system. The shelf angle should slot into the brackets perfectly, fully supporting the shelf. The B.S.M.S is installed at an angle and adjusted to drop into place.

14 The shelf angle should drop into place.

15 Ensure the B.S.M.S is centred correctly on the brackets.

16 Locate neighbouring units ensuring to leave the specified mortar gap between bricks on face and soffit.
17 Ensure the front edge of neighbouring units line up. Ensure the soffit is horizontal and level with neighbouring units.

18 Place a mortar bed directly onto the shelf angle of the B.S.M.S. Locate the next course of masonry onto the mortar bed maintaining the mortar joint specified. The first row of Masonry can be applied as soon as the bolts are torqued and the B.S.M.S is installed. Please follow the architects and engineers guidance on DPC and wall ties.
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