

Welded Masonry Support Installation Instructions



KEY CONSIDERATIONS FOR CORRECT INSTALLATION

! To achieve the design capacity of the product, it must be installed in the correct manner.

SAFETY PRECAUTIONS

While IG Welded Masonry Support (WMS) units are easy to handle, the components are produced from sheared plates and may have sharp edges. Care must be taken when handling units and suitable work wear should be worn at all times.

When lifting or carrying a WMS unit undertake a personal risk assessment paying attention to the size and weight of the product.

DO NOT use or install damaged WMS units.

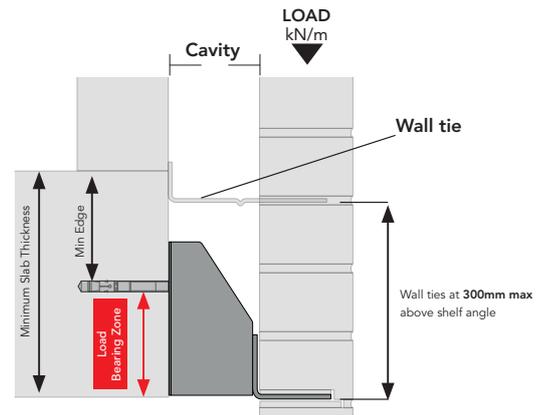
STORAGE OF FRAGILE GOODS

All factory wrapped goods received must be stored on a level and cordoned off area 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 onsite should be covered. This cover and protective wrapping should only be removed prior to installation.

DISPOSAL

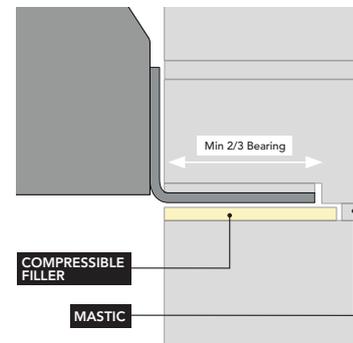
Ensure that all IG packaging and waste is disposed of responsibly. Due care must be given to the environmental impact of the disposal method.

LOAD BEARING ZONE ILLUSTRATION



(Figure 1)

Key considerations for correct installation.



COMPRESSIBLE FILLER

It is essential that all soft horizontal joints have a compressible filler installed directly underneath the shelf angle.

POSITIONING THE SHELF

The underside of the shelf angle should be set 2.5mm above the level of the compressible filler to allow for any settlement that may occur as a result of the vertical dead load imposed by the masonry and to accommodate expansion of the brickwork below.

LOAD BEARING ZONE

Please note the load bearing zone (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.

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 the shelf angle (Figure 1).

Table 1

BOLT SPECIFICATION

Bolt Type	Fixing To	Drill Hole Diameter	Torque (Nm)	Supplier Name
FBN II 12/20 A4	Concrete	12	35	Fischer
FAZ II 12/20 A4	Concrete	12	60	Fischer
RG M 12x160 A4	Concrete	14	40	Fischer
HD BOLT M12x60	Steel	12	30	Blindbolt
SET SCREW M12x60	Steel	14	73.5	Fit-Lock

MATERIALS

Stainless Steel:

Grade 304
BS EN 10028-7 : 2007

MATERIALS

Isolators & Shims:

Grade 304 Stainless Steel
Nylon 66

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.

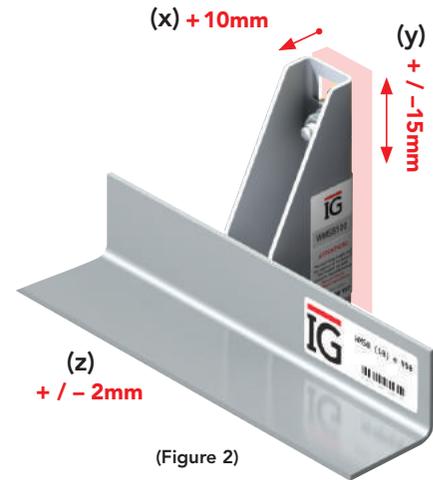
ADJUSTABILITY

IG's WMS System provides significant adjustability on three planes (Figure 2) to ensure that building tolerances can be accommodated and contact with structural Re-bar can be avoided.

Vertical adjustment (y) can be achieved by means of a toothed lock washer.

Adjustment in cavity width (x) can be accommodated using shims between the support structure and the bracket.

Lateral adjustment (z) can be accommodated using the oval shaped hole in the washer.



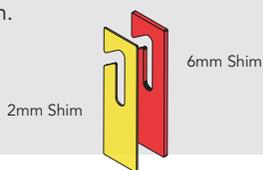
(Figure 2)

SHIMMING (x)

To accommodate a small increase in cavity width, shims can be inserted between the support structure and the brackets (Figure 3). 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.

One 2mm Nylon 66 shim should be used as standard on every bracket to reduce thermal bridging. Stainless Steel Shims are also available in a range of thicknesses. Please contact IG's technical team for more information.



EASY ONSITE "OFF PLUMB" ADJUSTMENT

IG Masonry Support can provide its patented wedged shim when the support structure is not vertical.

IG's wedged shim can be rotated 180° 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 2 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.

Each shim offers 1.5° alignment.



Shims are available in Stainless Steel and Nylon 66

VERTICAL ADJUSTMENT (y)

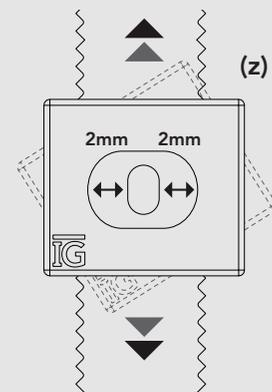
Vertical adjustment is offered by means of a toothed Lock Washer (Figure 4). This Lock Washer is inserted into the serrated slot in the support bracket. The Lock Washer can be adjusted higher or lower.

The serrated area at the back of the bracket allows up to 15mm of adjustment in either direction on the vertical plane.

LATERAL ADJUSTMENT (z)

The lock washer also provides lateral adjustment via the oval shaped hole in the washer.

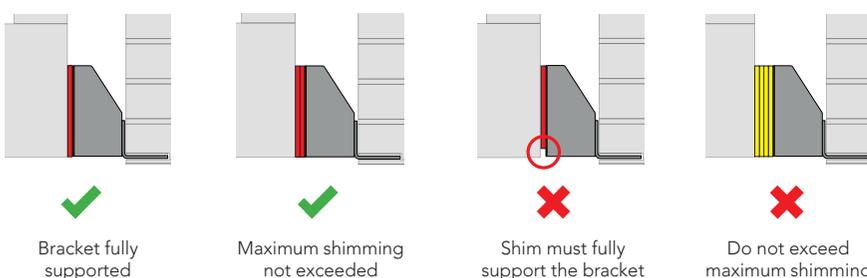
The bolt can be moved +/- 2mm laterally to allow for fine adjustment.



(Figure 4)

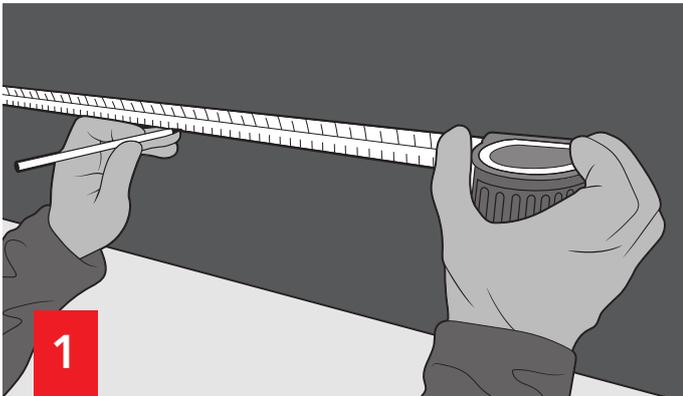
SHIMMING

(Figure 3)

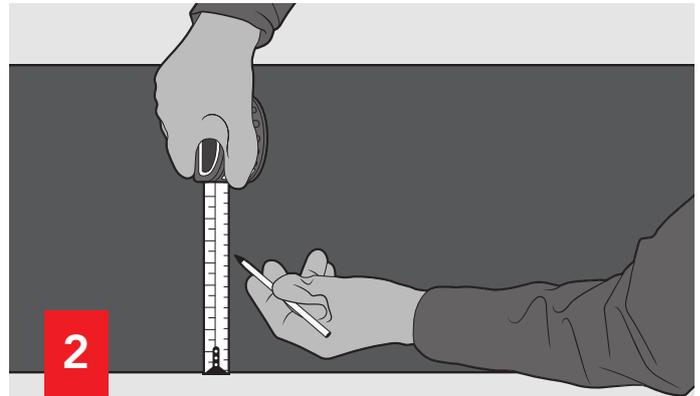


WMS INSTALLATION INSTRUCTIONS

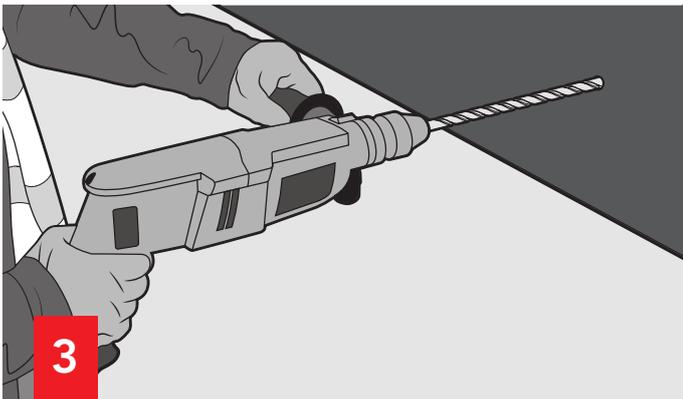
IG | **WMS**
SYSTEM



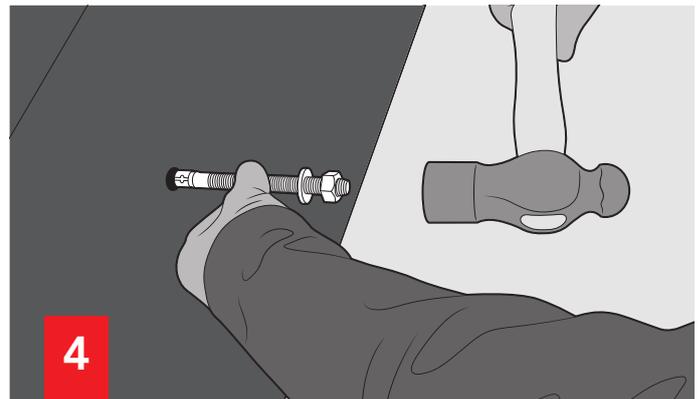
Mark bolt hole centres on the support structure as per the welded masonry support unit requirements.



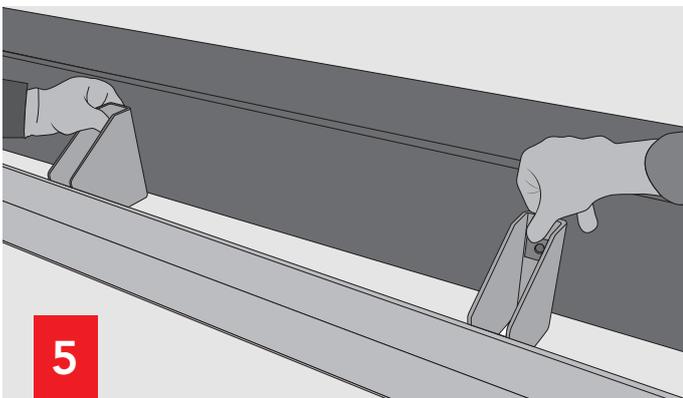
Ensure distance from the bottom of the support structure is as per technical drawings. If unsure please consult IG technical team. This is critical.



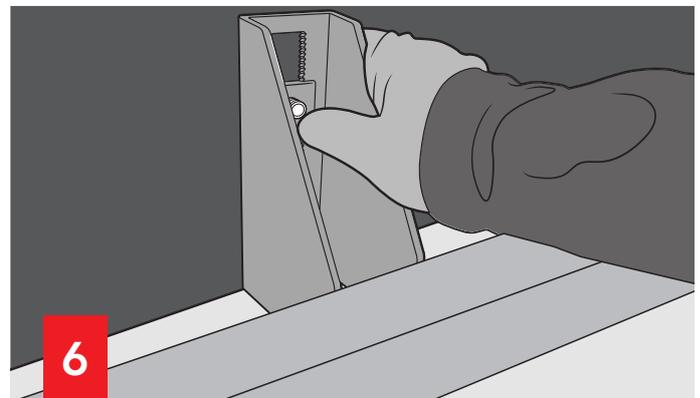
Drill bolt hole in support structure at the marked heights and widths.



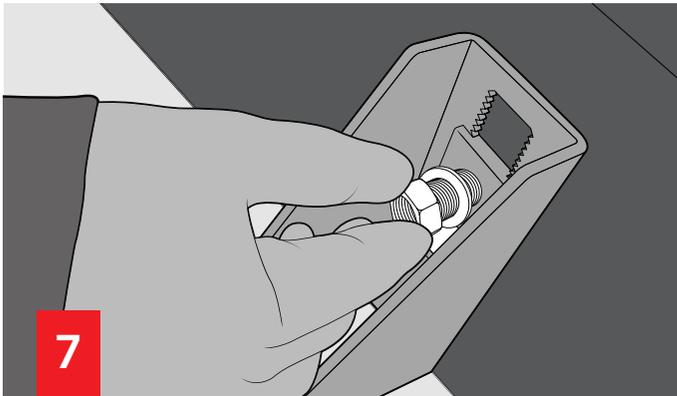
Clean bolt hole and ensure it is free from debris. Insert bolt as indicated in technical drawings.



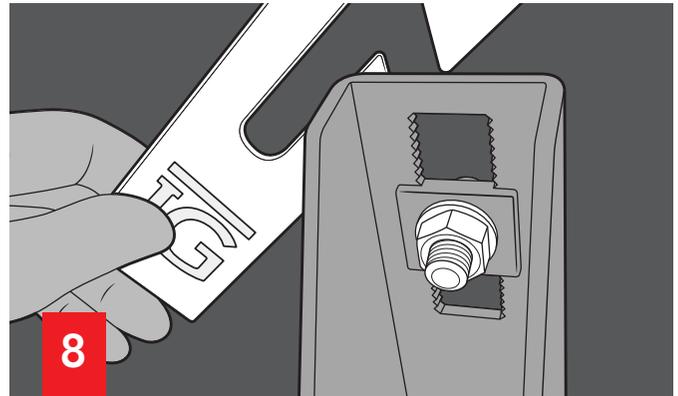
Offer up WMS unit and locate the bolts within the serrated gap at the back of the bracket.



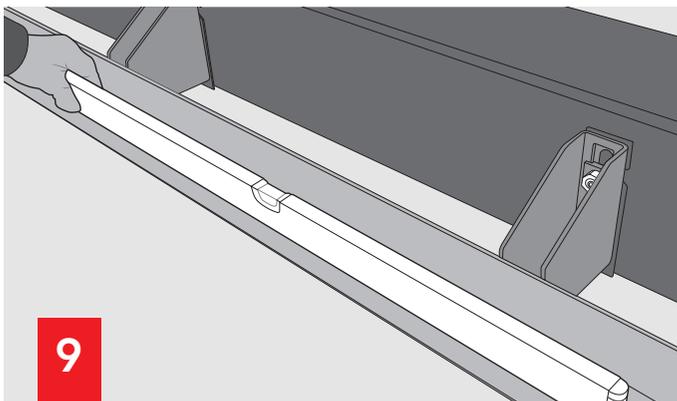
Locate serrated lock washer onto bracket at the preferred height and place bracket onto bolt.



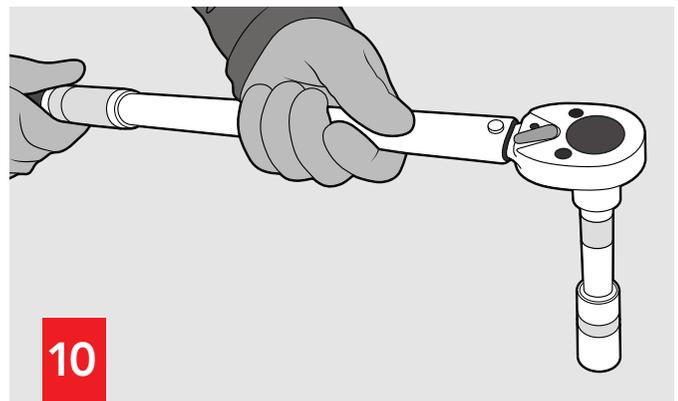
Locate nut and washer over bolt.



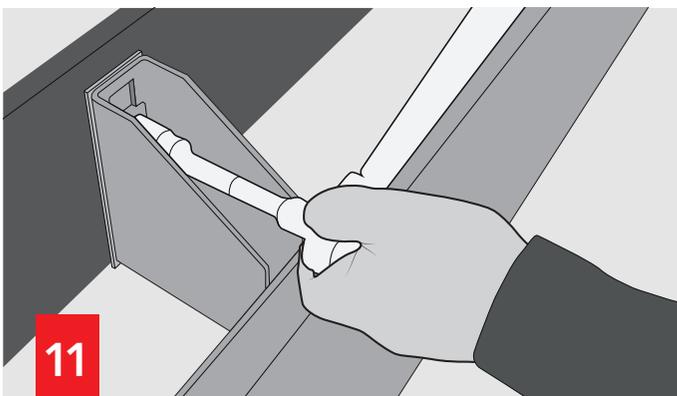
If adjustment and shimming is required only use IG shims. The design of the IG shim allows the installer to hook the shim into position even when the bolt and lock washer are located.



Ensure WMS angle is level.



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



Tighten bolts.

BI-METALLIC CORROSION

Bi-metallic corrosion can occur when stainless steel and carbon steel are in direct contact with each other in a damp environment. This can be avoided by isolating the two metals. IG Masonry Support supplies a thermal isolator shim as standard, that must be located between the back of the bracket and support beam. Top hat and neoprene washers are also available upon request.

REQUIRED BUILDING METHOD

One course of brick should be built on the masonry support shelf angle and given adequate time to cure. A further five courses of brickwork should then be built (which includes a DPC) and tied to the structure of the building, again given adequate time to cure. This will allow the masonry to form a rigid structure above the shelf angle.

The maximum height of masonry constructed each day above this rigid structure should not exceed 1500mm giving 1-2 days curing time before any future building.



IG - SWADLINCOTE

Ryder Close, Cadley Hill Industrial Estate
Swadlincote, South Derbyshire DE11 9EU

T: +44 (0)1283 200 157
F: +44 (0)1283 226 616



IG - IRELAND

Ballyreagh Industrial Estate,
Cookstown, Co. Tyrone BT80 9DG

T: +44 (0)28 8676 0334
F: +44 (0)28 8676 1011



IG - CWMBRAN

Avondale Road, Cwmbran,
Gwent, NP44 1XY

T: +44 (0)1633 486 486
F: +44 (0)1633 486 465



MASONRY SUPPORT HOTLINE
01283 200 157

Email: support@igmss.co.uk
igmasonrystsupport.com