

ACS Atlas Masonry Support Installation

Introduction

The ACS Atlas masonry support system is a 'clip in' masonry support system, designed to support an outer leaf of masonry cladding. The system is fixed to the retaining structure of a building to provide a horizontal ledge for the support of a vertical masonry panel. The system is designed in accordance with all relevant British and European Standards and should be installed with care following the guidelines set out by ACS. This will ensure the structural integrity and load-bearing capacity of the system is achieved and maintained during the service life of the system

Applications

ACS Atlas can be used to provide a platform from which masonry can be built where there are not sufficient footings from which to build masonry, above an opening or above a horizontal movement joint in accordance with PD 6697: 2010 & BS 5628

There are 3 main Atlas systems available to cover the major range of applications expected.

	Max. Load (KN/m)	Cavity Range (mm)	Angle Length (mm)	Bracket Centres (mm)
Atlas 10	10	60-150	990	500
Atlas 12	12	60-150	990	500
Atlas 14	14	60-150	790	400

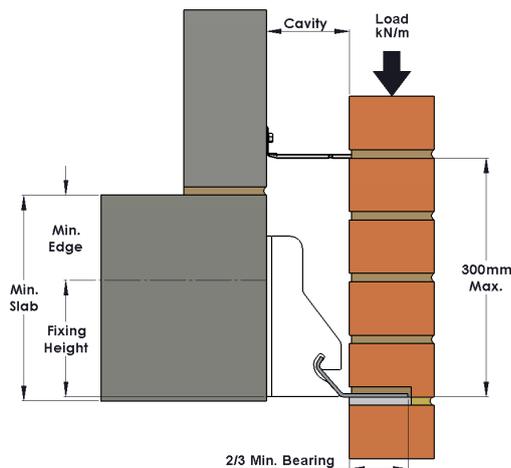
Cavity Width Adjustments

Bracket Range

For large cavity variations a range of brackets are available in increments of 10mm to suit a cavity range between 60 and 150mm.

2/3 Bearing

Minor cavity adjustments can be achieved to account for structural deviations by moving the masonry backwards on the angle.



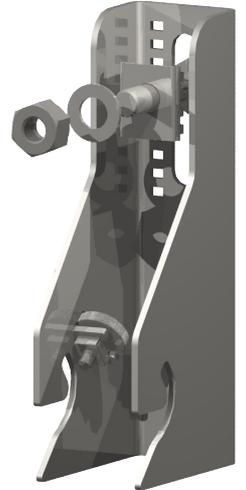
Minimum Bearing - 2/3 Masonry

Shims

The use of shims is permitted to allow the minimum bearing to be achieved (Maximum 12mm). Shims must provide full bearing for the vertical-rear face of the bracket.

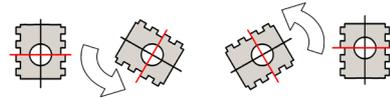
Vertical Adjustment

Vertical adjustment is achieved using the ACS Alpha System comprising of the Alpha Washer and Bracket. This system allows vertical adjustment of +/- 26.5mm. The system features a positive lock mechanism, which allows an increased load capacity when compared with a traditional serrated system.



Adjustment is achieved by engaging the alpha washer into the various slots provided in the back of the bracket until the correct level is achieved.

For finer adjustment the washer can be rotated through 180°, which halves the adjustment increment due to the offset hole in the washer



Lateral Adjustment

The Atlas angle is marked with a fixing zone allowing +/- 25mm of lateral adjustment. This adjustment allows the bracket position to be moved if a hole position clashes with reinforcing bar preventing drilling or for predrilled steel, welded plates or cleat position intolerance.



Left Hand Label

<p>1. Green Approach Green Industrial Park, Leeds LS28 9SS Tel: 0113 981 8200 Fax: 0113 981 8209 e-mail: technical@acsstainless.co.uk</p>	<p>Warranty void if tape removed or displaced from original setting.</p>	<p>BRACKET LOCATION AREA MAX LOAD 12kN/m</p>
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Right Hand Label

<p>BRACKET LOCATION AREA MAX LOAD 12kN/m</p>	<p>CAUTION SHARP EDGES GLOVES MUST BE WORN</p>
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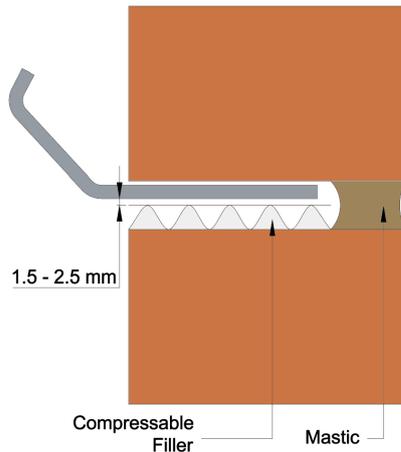
Ensure all third party installers carry the ACS Approved Installer logo

European Technical Support: +44(0) 844 850 0860
www.acsstainless.co.uk



Horizontal Soft Joints

The horizontal platform of the support angle should be set 1.5 - 2.5mm above the level of the soft joint to allow for any settlement that may occur as a result of the vertical dead load imposed by the masonry. A rebate or pistol in the brick may be required to allow the required depth for the mastic joint.



Installation & Construction

The preferred method of installing the Atlas system is to:

Pre-drill the holes at the centres specified in the generic layout drawing issued

Fix the Atlas bracket back to the structure using the fixings supplied along with the alpha washer, tightening the fixing bolt until finger tight

Insert the angles into the brackets ensuring that there are ALWAYS 2 BRACKETS PER ANGLE

Fix the angle into place using the Atlas Thumb Screw located on the bracket, tightening until finger tight

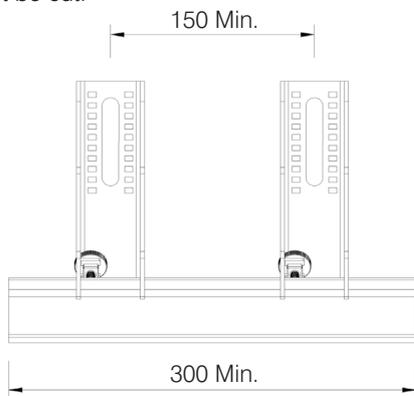
Check the line and level throughout, making any necessary adjustments (e.g. alternative bracket, shims)

Once the line and level is set correctly the fixings can be tightened to the specified torque

If the run of support does not suit the elevation the angles can be cut on site

Site Cutting

The Atlas angles can be cut on site to suit the length of an elevation. The minimum length of an individual angle section is 300mm and the minimum bracket centres is 150mm. If the minimum length and centres cannot be achieved two lengths of support must be cut.



LEEDS

Cross Green Approach
Cross Green Industrial Park
Leeds LS9 0SG

Tel: +44 (0)113 391 8200
Fax: +44(0)113 391 8209

LONDON

Crown House
Home Gardens
Dartford DA1 1DZ

Tel: +44 (0)1322 424 510
Fax: +44(0)1322 424 504

GLASGOW

Festival House
150 Brand Street
Glasgow G51 1DH

Tel: +44 (0)141 314 0048
Fax: +44(0)141 314 0026

The length of angle that is most suitable for site cutting is the segment before the final complete length or corner unit.

The corner unit should NEVER be cut on site, if you are unsure, please contact ACS Technical Department.

Wall Ties

Wall ties are critical to the performance of any masonry support system and therefore every effort must be made to ensure correct installation. Ties must be installed at a maximum of 450mm horizontal centres within 300mm above and below (where appropriate) the support angle.

Recommended Best Practice

ACS recommends that when using Atlas an initial lift of no more than 5 courses of brickwork is built and tied to the structure. This lift should then be allowed to cure to before further masonry is built in 1.2 metre lifts in accordance with PD 6697: 2010 & BS 5628-1:2005. This will allow the first lift to form a rigid composite structure between the support angle, masonry structure and the wall ties (set as specified above) ensuring any deflection and settlement is minimised.

Fixings

The Atlas system has been designed to accommodate fixing back to range of structures using approved Atlas fixings as seen in the table below.

Fixing	Structure	Torque (Nm)
M12 Axis T-Head Bolt	31/21 Channel	50
M12 Atlas Concrete Anchor	Concrete	50
M12 Atlas Set Screw	Steel Plate, Hanger or Top Cleat	50
M12 Atlas Hollow Fix	Box Beam, UB Web, Steel Plate	35

ACS warranty will become void if alternative fixings not supplied and approved by ACS are used. If an alternative fixing is required for use with the Atlas system, please contact the ACS Technical Department.

Material

The Atlas system is manufactured as standard from grade 304 - stainless steel (EN 1.4301). For applications that may be subject to a more corrosive environment, a higher grade of material should be considered.

Health & Safety

Although every effort is made to remove sharp edges from all manufactured products ACS recommend that appropriate PPE be worn when handling all components.

