

Technical Data Sheet

ACS Azure Bolt Ups

Brick Slip Soffit Solutions

- ✓ **BBA Certified Resin**
 - Brick Fix 3-1
- ✓ **Accelerated Weather Tested**
 - Saturated Freeze-Thaw
 - Bond Strength - Pre & Post Weathered
 - Impact Strength - Pre & Post Weathered
- ✓ **Austenitic Stainless Steel**
 - Grade 304 (1.4301) 316 (1.4404)
- ✓ **CE Marked**
 - Welding & Fabrication to BS EN 1090
- ✓ **Bespoke Soffit Designs**



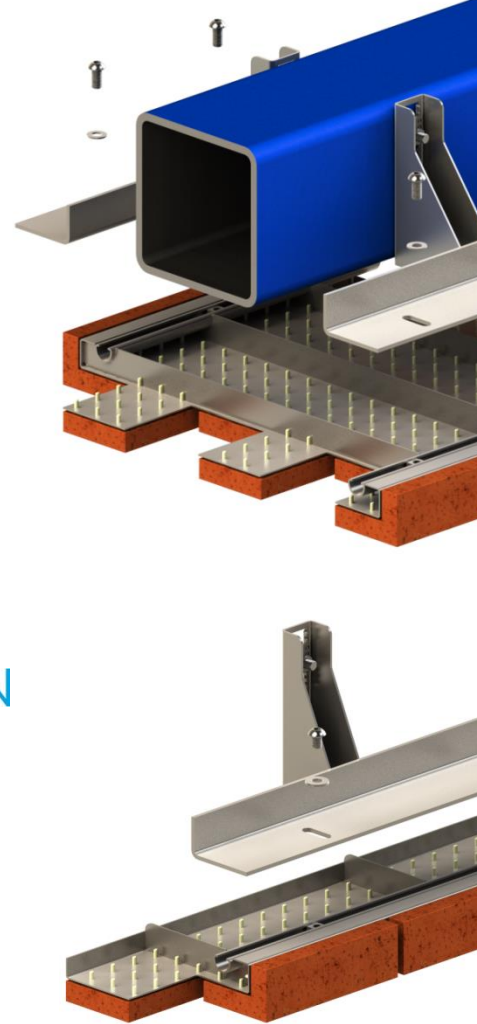
Brick Fix 3-1 Resin

LUCIDEON

Brick Slip Bond Strength & Durability
Tested by Lucideon



BS EN 1090



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ACS Azure soffit bolt ups are lightweight, brick faced, prefabricated units that are manufactured offsite and supplied to projects with brick slips resin bonded to the surface of the stainless steel carrier units. These units can be quickly and easily fixed to the slots provided in ACS masonry support systems to create various hanging brick soffit details. The bricks slips are bonded to the steel carrier units using a specifically developed two part epoxy resin which has been designed, tested and approved for use in bonding brick slips to stainless steel carrier units. The stainless steel carrier units are designed, welded and fabricated in line with BS EN 1090 and a certified Factory Production Control systems and can therefore be CE Marked under the guidance of the Construction Products Regulation.

Design & Testing

Both lintels and brick slips have been independently tested by Notified and Technical Approval Bodies to evaluate and validate the load capacity, physical performance and long term durability of all components. The brick slips are tested using the guidance of ETAG 034 to evaluate the accelerated Freeze/Thaw weather resistance both saturated and dried of the slips bonded to backing structures of various materials. The tests include the evaluation of bond strength and durability of the brick slips bonded to stainless steel where a service life of 60 years can be achieved. The bond strength and impact resistance of the brick slips was tested before and after the accelerated cyclic weather tests to validate the integrity and durability of the system. The tests included:

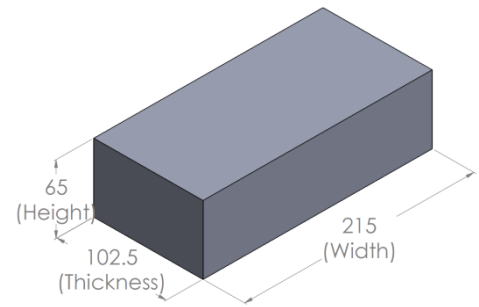
- Heat / Rain weathering to ETAG034 – Weathered samples only.
- Bond Strength testing using ETAG004 as guidance- Control and Weathered samples
- Impact testing to ISO 7892 - Control and Weathered samples

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Setting Out / Size Tolerance

Bricks are manufactured to declared dimensional tolerances which acknowledge and take into account the characteristics of both the raw material and the manufacturing process.

The table below sets out these declared dimensional tolerances.



DIMENSIONAL TOLERANCE T1		
WIDTH	THICKNESS	HEIGHT
209mm to 221mm	98mm to 107mm	62mm to 68mm
DIMENSIONAL TOLERANCE T2		
WIDTH	THICKNESS	HEIGHT
211mm to 219mm	100mm to 105mm	63mm to 67mm

Before the installation and fixing of the Azure soffits commences, it is advisable to set the units out dry in the required bond pattern. This dry lay should be set out to brickwork co-ordinating sizes. Tolerance is accommodated in the 10mm gap between the two units. This tolerance gap should be used to ensure that the units are gauged with the facing brickwork and ensure that they are seamlessly blended once the facing brickwork is completed.

Time taken to set out the units appropriately at this stage will help to avoid setting out errors as work proceeds.

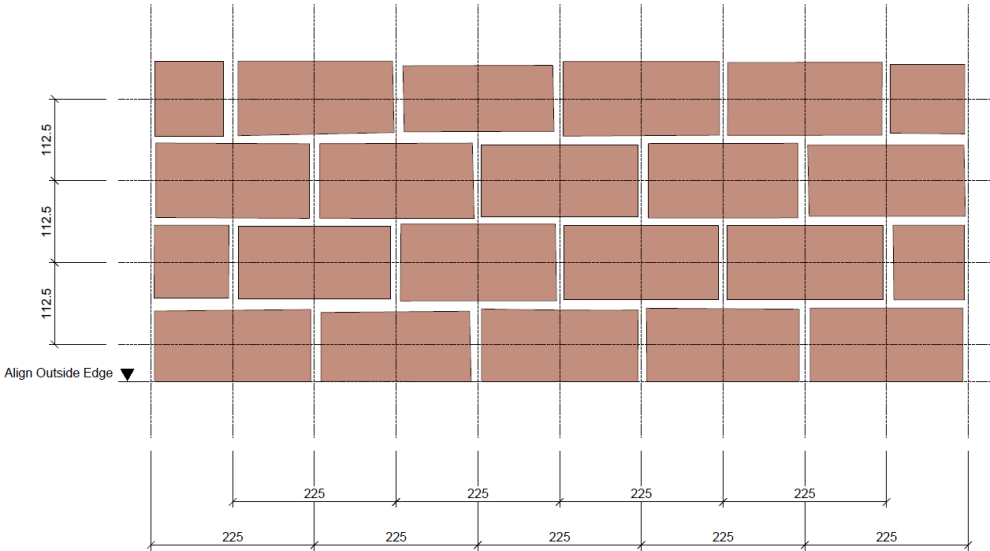
The setting out of the Azure bolt ups should be done in much the same way as the hand laid facing brickwork, in which the co-ordinating sizes should normally be 225mm for width, 75mm for height and 112.5mm for thickness. Tolerance in the bricks is accommodated within the mortar joints in bonded slips as it is in the hand laid bricks.

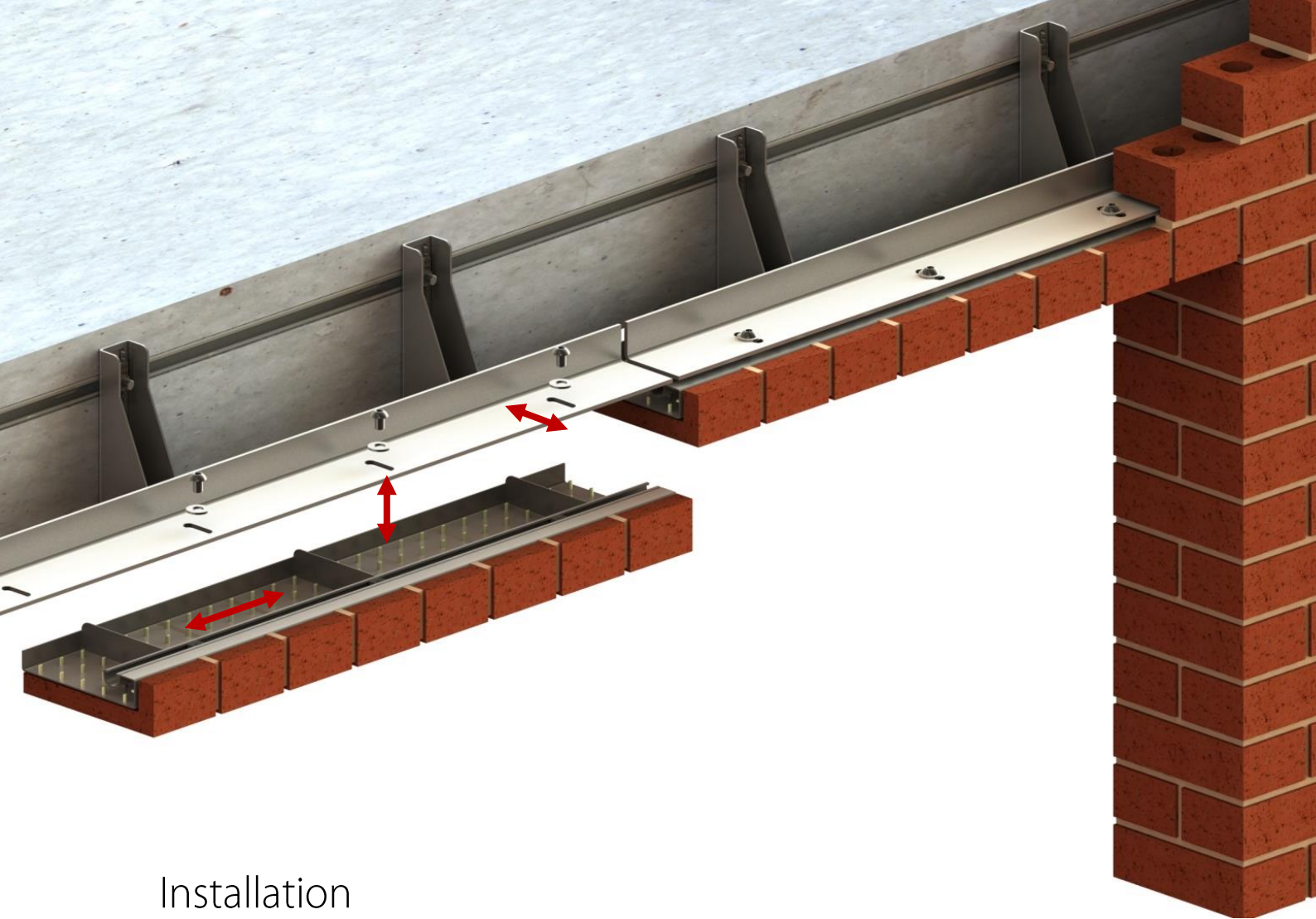
Brick slip setting out follows same principles as facing brickwork whereby the bricks are aligned to ensure that the centre lines of the units are set to gauge and any tolerance in the brick is accommodated in the mortar joints. Generally bricks should be centred on one another as per the brickwork setting out diagram on the following page.

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Brick edges should be aligned at the end of a stretch of brick work,

i.e. Face/soffit edge, column corners, junctions with glazing, balcony corners and expansion joints





Installation

ACS Azure Bolt Up Units are designed to be used in conjunction with ACS Masonry Support Systems. Slots are provided in the masonry support horizontal shelf angle to allow the fixings to be installed through the angle and into the Azure Square Nuts located within the integrated ACS Curve Channel in the Azure System.



3mm GRP
Horseshoe Shim



ACS 31/21 Curve Channel



Azure Button Head &
Square Nut

The Azure units can therefore be adjusted in three directions to accommodate for site tolerances allowing the brick line and level to be set and course in seamlessly with the facing brickwork.

It is recommended that a string line is used to ensure that the line and level of the soffit system is achieved and maintained. Vertical adjustment and the minor adjustments in discrepancies in the level

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between units is achieved by adding or removing up to 10mm of shims between the top of the soffit unit and underside of the slotted support angle.



Lateral adjustments and gauging between coursing is achieved by sliding the unit left and right. The square nut allows the unlimited finite adjustments.

Adjustments in the face line of the soffit units are accommodated by the slots in the support angle which provides up to +/- 14mm of vertical adjustment.

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Installation Procedure

1. Using the ACS soffit layout drawings provided, carefully dry lay the soffit units to check the setting out. Avoid laying the soffit units directly onto the scaffold boards or ground. Where possible use the foam or styrene board packaging supplied on the the pallet when delivered or similar. Check the units are free from any significant damage which should be rectified before fixing the units wherever possible.
2. Set a string line that corresponds to the transition edge between the face and soffit checking the line and level against a known datum or to the facing brickwork adjacent to the soffit opening.
3. Install the square nuts into the ends of the channel and position them generally corresponding to the slots in the masonry support angle. Always ensure at least two fixings are installed in each length of channel.
4. Lift the soffit unit into position to the underside of the masonry support angle. It is often helpful to use hand clamps to locate and hold the soffit unit whilst installing the screws. Care should be taken not to damage the brick slips whilst handling and clamping the units into place.
5. Once positioned use the M12 x 20mm Button Head Screws with a Form B Washer to fix down through the slots in the angle into the square nuts that are located in the channel. At this stage only hand-tighten the screws.
6. Release the hand clamps and then adjust the line level and gauging of the soffit unit to the string line and required coursing. Use a spirit level to continually check the level. Shims should be used to ensure that any gaps between the underside of the shelf angle and top of the soffit system are sufficiently packed before tightening.
7. Finally check the soffit front to back using the spirit level. Use packing shims where necessary to level the soffit front to back.
8. Once the units are set and shimmed as appropriate, a calibrated torque wrench with an 8.00mm hexagon socket should be used to torque the screw up to a minimum of 15 and a maximum of 25Nm. Once the brickwork is installed above the screw cannot rotate or lift and the square nut cannot turn in the channel so the torque setting is mainly just to ensure that the soffit unit is firmly clamped to the underside of the shelf angle.
9. Continue to install the subsequent units following steps 1 to 7, always referring to the layout drawings provided and checking the line, level, gauge and coursing.
10. Any issues identified with the soffit units should be rectified at this stage prior to building the masonry support off the shelf angle above.

Required Tools



Hand Clamp



Calibrated Torque Wrench



Spirit Level



String Line

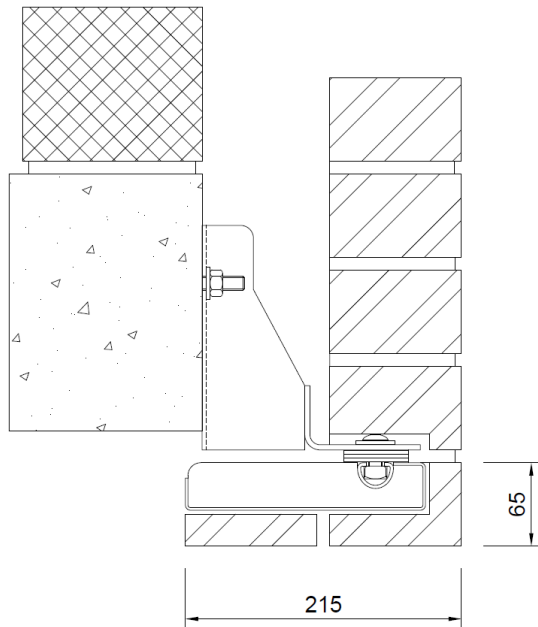


8.00mm Hex Bit

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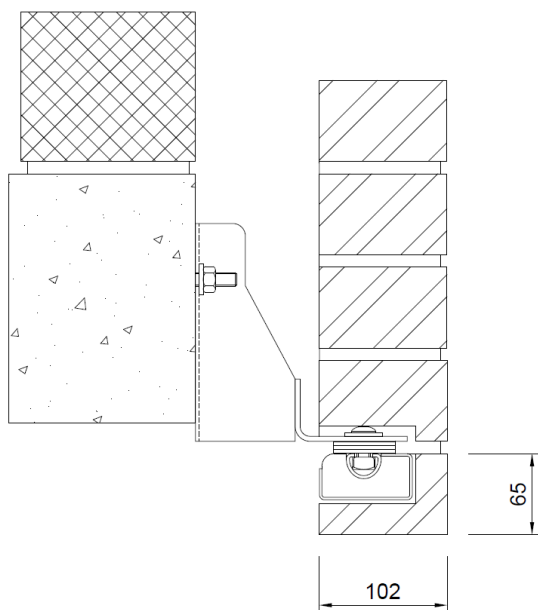
215 x 65mm Stretcher Bond Soffit Bolt Up Unit

Courses in with facing brickwork and provides continuity with the stretcher/running bond pattern as it returns to the soffit on the underside of the reveal or return. Adjacent soffit units are designed to interlock together, providing seamless continuity of the brick bond once pointed.



102.5 x 65mm Stretcher Bond Soffit Bolt Up Unit

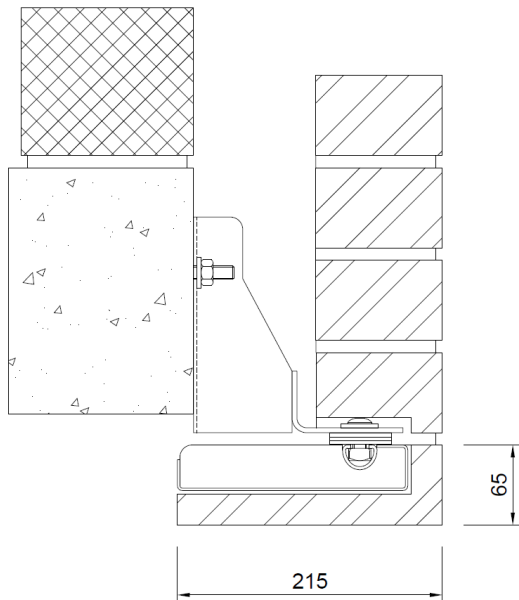
Courses in with facing brickwork and providing continuity with the stretcher/running bond pattern as it returns to the soffit on the underside of the reveal or return. Adjacent soffit units are designed to abut with a nominal 10mm joint providing seamless continuity between the face/soffit once pointed.



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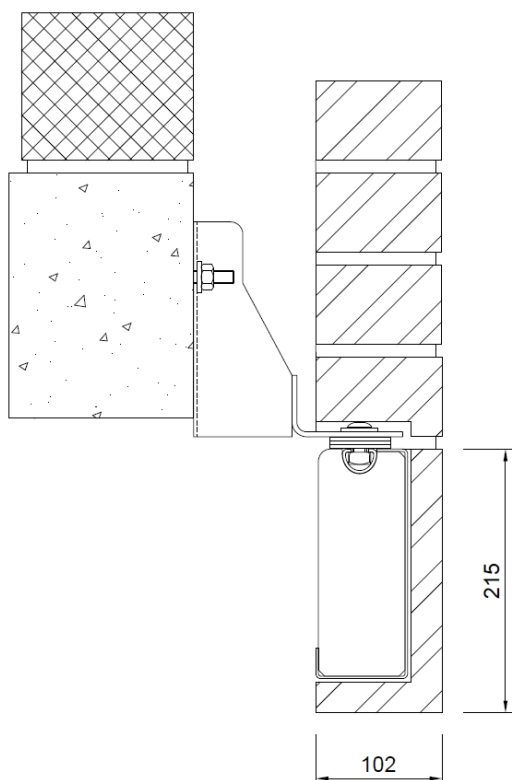
215 x 65mm Header Bond Soffit Bolt Up Unit

Provides a header detail at openings, returns and reveals to create a feature or detail to differentiate between the facing brickwork which is most commonly a stretcher/running bond pattern. Adjacent soffit units are designed to abut with a nominal 10mm joint providing a seamless face/soffit effect once pointed.



102.5 x 215mm Soldier Bond Soffit Bolt Up Unit

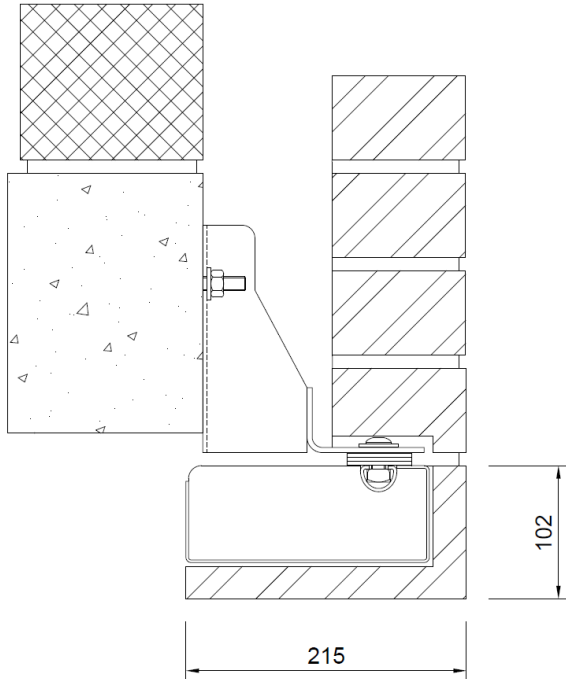
Provides a soldier course detail at openings, returns and reveals to create a feature or detail to differentiate between the facing brickwork which is most commonly a stretcher/running bond pattern. Adjacent soffit units are designed to abut with a nominal 10mm joint providing a seamless face/soffit effect once pointed.



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215 x 102.5mm Rowlock Soffit Bolt Up Unit

Provides a header/rowlock course detail at openings, returns and reveals to create a feature or detail to differentiate between the facing brickwork which is most commonly a stretcher/running bond pattern. Adjacent soffit units are designed to abut with a nominal 10mm joint providing a seamless face/soffit effect once pointed.



665 x 65mm Stretcher Bond Special Soffit Bolt Up Unit

Courses in with facing brickwork and provides continuity with the stretcher/running bond pattern as it returns into the soffit on the underside of a masonry down-stand or beam. Adjacent soffit units are designed to interlock together, providing seamless continuity between the face/soffit once pointed. Special soffit units can be designed and fabricated to achieve almost any brick bond pattern to create soffits features and details of any size and layout.

