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KEY FEATURES

- MODERN OPERATING SYSTEM
- PROFILE DESIGNS CAN BE DIRECTLY COPIED OR ADAPTED AS REQUIRED
- LOWER OPERATING FORCES THAN TRADITIONAL BOX SASH
- SPIRAL CONSTANT FORCE BALANCES
- LOWER MANUFACTURING COSTS
- LOWER MATERIAL COSTS
- TRADITIONAL & MODERN HARDWARE OPTIONS AVAILABLE
- LOW MAINTAINANCE WINDOW
- SASH RESTRICTION AVAILABLE
- SECURITY OPTIONS AVAILABLE
- TILT FACILTY FOR CLEANING
INTRODUCTION

WHAT IS TIMB-A-TILT

TIMB-A-TILT is the complete hardware system that enables you to produce a high performance timber vertical sliding window, with a tilt back facility for ease of cleaning, yet maintain the aesthetic appearance of a traditional sliding sash window (35kg max> sash weight when tilting in for cleaning).

This manual is intended to give recommendations on how to prepare and assemble tilting sash windows in timber using components provided by Caldwell Hardware (UK) Ltd.

No attempt is made to design the timber mouldings for the sashes or outer frame of the window but guidance is given where dimensions are critical to the assembly or operation of the window.

Where cutting sizes or deductions are given, these should be checked for applicability to specific window designs.

In addition to providing this manual, we are pleased to advise window manufacturers on the use of Timb-A-Tilt components within their own window designs.

FOR FURTHER INFORMATION PLEASE CONTACT:-

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The details shown on this data sheet are of a typical general arrangement for a TIMB-A-TILT window. Dimensions A, B, C and W are the dimensions required on our order form in order to calculate the correct balance lengths and weights.

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Approved Manual Ref. MAN-0001-04

ISSUE LEVEL 07
BASIC KIT COMPONENTS

UK150
GUIDE LATCH
(FOUR PER WINDOW)
AVAILABLE IN: BLACK BROWN OR WHITE

UK472 LH/RH
GUIDE LATCH
(FOUR PER WINDOW)
AVAILABLE IN: BLACK, BROWN OR WHITE

UK499
Operating Button
TOP SASH
(2 PER WINDOW)
AVAILABLE IN: SILVER ANODISED

UK545
Operating Button
LOWER SASH
(2 PER WINDOW)
AVAILABLE IN: GOLD, WHITE, CHROME OR BRUSHED STEEL FINISHES

MK3
JAMBLINER
(With Weatherstrip Grooves)
(FOUR PER WINDOW)
AVAILABLE IN: WHITE, BLACK OR BROWN

MK4
JAMBLINER
(No Weatherstrip Grooves)
(FOUR PER WINDOW)
AVAILABLE IN: WHITE, BLACK OR BROWN

TT220STOP
LOWER TRAVEL STOP
220mm LONG
(TWO PER WINDOW)
AVAILABLE IN: WHITE OR BROWN WITH BLACK OR WHITE BUNGS

UK233
UPPER TRAVEL STOP
130mm LONG
(TWO PER WINDOW)
AVAILABLE IN: WHITE OR BROWN WITH BLACK OR WHITE BUNGS

N.B LOWER TRAVEL STOPS FOR WINDOWS WITH UNEQUAL HEIGHT SASHES ARE CUT TO LENGTH ROUNDED UP TO THE NEAREST 100mm. SEE PAGE 20,

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ACCESSORIES

9600 LOCKING
9114 KEY SOLD SEPARATELY
9400 NON-LOCKING
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE

UK230 KEEPER
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

UK231 KEEPER
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

7761 SASH LIFT
AVAILABLE IN BLACK, BRONZE, GOLD, WHITE OR BRUSHED STAINLESS

8790 SASH LIFT
AVAILABLE IN BLACK, BRONZE, GOLD, WHITE OR BRUSHED STAINLESS

UK624 SASH RING
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

UK745 SASH RING
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

KL800 SASH LOCK
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

30459 KEEP
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

UK616 SASH LIFT
AVAILABLE IN BRONZE, GOLD, CHROME, WHITE OR BRUSHED STAINLESS

PE370KIT ARCH HEAD RACK BOLT KIT
WITH KEY AND BUFFER (SEE PAGE 25 OF THIS MANUAL)

ATW TENSIONING TOOL
SUPPLIED SEPARATELY

UK466 SECURITY PLATE
AVAILABLE IN WHITE

Please see DATASHEET 00457 for weather sealing accessories

For availability of products in alternative colours and finishes, consult Caldwell Customer Services Department

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Guide To Travel Stops

Travel stops are essential whenever spring balances are in use. Travel stops ensure that the spring balances do not become damaged or prematurely worn. Travel stops are required at both the top of the window & at the bottom.

Travel stops are available from most of the major window system companies and these are usually profile specific. Caldwell also offer a range of travel stops.

The principal failure mode on spring balances where travel stops are not fitted are over extension & under extension. Both of these failure modes result in the balances being damaged beyond repair and will almost certainly mean that the balances will have to be replaced.

Over extension occurs when the upper sash is pulled downwards beyond the working range of the balance, this can result in internal damage within the spring balance. Travel stops prevent this from happening by limiting the travel of the sash.

Under extension occurs if the lower sash is lifted up until it hits the bottom of the balances, again this can result in internal damage within the spring balance. Travel stops prevent this by limiting the travel of the sash.

DO NOT OPERATE THE WINDOW UNTIL THE UPPER AND LOWER TRAVEL STOPS ARE FITTED.

Travel stop lengths

Caldwell recommend the minimum size of travel stops to be fitted to an equally split vertical slider are:

Upper sash travel stop = 220mm
Lower sash travel stop = 130mm

The above sizes should always be used with Caldwell spring balances, however longer stops can be used if required.

For every 25mm that the upper sash is smaller than equally split, 50mm must be added to the upper sash travel stop length.

If horns are used, reduce the calculated length of the travel stop by the length of the horn.

For further information, please contact Caldwell Technical Department.

CONVENTIONAL TIMBER SYSTEM TRAVEL STOPS

On a conventional timber system, a UK190N-Upper Sash Travel Stop and a UK191N-lower Sash Travel Stop can be used (see datasheet 00333). NOTE: If the UK190N & UK191N are used, they need to be positioned correctly to limit travel adequately (method shown below). Alternatively, a block of timber cut to length can be used. All stops should be fitted as described below.

Carefully lift the lower sash until resistance is felt i.e. the balance is fully retracted. Pencil mark one jamb in line with the top of the sash.

Fix a limit stop with its bottom edge 13mm below the mark. Raise the sash to the limit block and fix a second block to the opposite jamb.

Carefully lower the upper sash until resistance is felt i.e. the balance is fully extended. Pencil mark one jamb in line with the bottom of the meeting rail.

Fix a limit stop with its bottom edge 13mm above the mark. Lower the sash to the limit block and fix a second block to the opposite jamb.
WEATHERSEAL ACCESSORIES

Brush Pile

A high quality brush pile with a central weather fin manufactured from polypropylene giving low friction properties and offering additional weather performance and sealing characteristics. The pile can either be used in the following three ways:-

1) Fitted directly to grooves in pvc or aluminum profiles,
2) fitted to the timb-a-tilt jamb liner (timb-a-tilt only) or
3) fitted to the brush pile holder as detailed below (for both conventional or timb-a-tilt windows).

Pile base width: 4.8mm
Pile height: 7mm
Caldwell Part No: UK687

Brush Pile Holder

A brush pile holder suitable for brush piles with a 4.8mm base width. The holder is manufactured from rigid pvc and is available in both white or brown and simply pushes into a "T" slot when machined in timber profiles (see fig 2).

Caldwell Part No. UK688

Bubble Seal

A 7mm diameter rubber bubble seal for horizontal sealing of top & bottom sashes on vertical sliding windows. Seal simply pushes into a 3mm x 5mm groove when machined in timber profiles (see fig 3).

Caldwell Part No. UK689

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Caldwell’s range of brass hardware is supplied in a lacquered finish. If this is to be used externally then it should be waxed weekly to protect the lacquered finish. Over time, and subject to the environment it operates within plus the type of use it undergoes, the lacquer coating will be eroded. When the lacquer coating is no longer present then the brass surface will need to be maintained with a propriety brass cleaner on a regular basis to maintain appearance and prevent visible corrosion.

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Tilt latch Concealment Plates

Typical Assembly Example

UK545BS Operating Button

UK789 Concealment Plate

PE615- Security Tilt Latch (Left hand shown)

Dimensional References

UK789 Part number reference on back face of concealment plate

1.09.30
20.90
1.50

Applications

UK472 LH / RH TILT LATCHES
PE615 LH / RH TILT LATCHES

Designed to fit UK472 LH & RH Tilt Latches and PE615 LH & RH Security Tilt Latches

Painted Finish Options

Available in
UK789B - Brown Powder Coat Finish

Available in
UK789HIPCAWHITE - White Powder Coat Finish

Plated Finish Options

Available in
UK789BS - Brushed Stainless Finish

Available in
UK789CH - Chrome Finish

Available in
UK789DG - Dawn Gold Finish

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When designing your timber profiles, the following must be taken into consideration.

Arc interference occurs during tilt of a sash, when the bottom rail rubs against either the rebate in a jamb or in some circumstances, the inside face of the outer sash, as shown.

This can be eliminated by:

1. Ensuring the pivot bar is set low in the bottom rail.

2. Ensuring adequate clearance is maintained between the jamb rebate and between sashs.

3. Setting the pivot bars close to the member on which it would interfere.

If, in the event, arc interference still occurs, then the corner of the affecting rail should be chamfered.

It is recommended to have an upstand of at least 25mm to make the window less susceptible to failure if wet weather tested. Water will build up and spill over this area if it is too low.

The weatherseal of the windows is the responsibility of the window manufacturer. We do however recommend a brush pile 4.8mm base x 7mm high for use with the MK3 jamb liner. Bear in mind that some seals that improve weather tightness, may also increase the friction of the moving sashes.

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SASH / JAMB PREPS

JAMB PREPARATION FOR MK3 & MK4 JAMB LINERS

The diagram shows the recommended machining details for the timber jambs.

FLUSH CONFIGURATION

STEPPED CONFIGURATION

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SASH PREP - SLIDE OFF PIVOT BARS

SASH PREPARATION FOR UK449 PIVOT BAR CARRIER

The diagram shows the recommended machining details for the timber sash jambs.

Jamb shown for reference

Centre of rebate in sash to be central with rebate for jamb liners.

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PREPARATION OF THE SASH TOP RAILS
FOR UK150 GUIDE LATCHES

The diagram shows the recommended machining detail to accept the guide latch.

This detail should be repeated at both ends of the top rail on each sliding sash.

Tolerances on all dimensions to be ± 0.25 unless otherwise stated
FIXING OF THE ALUMINIUM JAMB LINER ASSEMBLIES

MK3 AND MK4 LINERS

Square cut the jamb liner to the inside jamb height (sash run) less 2.5mm.
Alternatively the jamb liners can be cut to the slope of the cill. In either case provision for adequate water drainage from the liners should be made.

For best results use a power saw fitted with a suitable blade for cutting aluminium.

Drill the fixing hole for the sash balances 8mm from the top of the liners to suit a No10 screw.
Drill a fixing hole for the jamb liner 15mm from the bottom to suit a No8 screw. Intermediate fixing holes to be at 500mm centres maximum.

Fix each jamb liner to its respective jamb using No8 countersunk headed woodscrews. Check the balance fixing holes is at the top of the jamb.

Please ensure brush pile holders are not fitted too close to the edges of the sash, to prevent the timber from splitting.

INSERTION OF 16H70 / UK132 PIVOT SHOES INTO JAMB LINER

The pivot shoe should be fitted into the jamb liner before the liner is fixed into the timber outer frame.

If a bar restrictor is to be fitted, please see page 19. Please note that the restrictor must be fitted into the channel above the pivot shoe before the liner is fixed into the timber outer frame.

Slide one shoe assembly into each liner, ensuring that the black pivot moulding is lowermost and the pivot bar retaining pocket is visible. (See diagram)

16H70 SHOE
ALUMATILT REGULAR OR HEAVY DUTY BALANCES ONLY.

UK132 SHOE
ULTRALIFT/TORSO BALANCES ONLY

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1. Mount the balances into the outer frame, do not over-tighten the screws as this will distort the balance.

2. Attach the tensioning tool to the bottom pin of the balance rod.
   Make sure that the end hooks of the tensioning tool are fully engaged on the lower pin of the balance rod.
   Contact between the tensioning tool & the balance rod lower pin must be maintained at all times.
   A firm grip of the tensioning tool is required at all times when in use.
   Do not let the balance rod rotate as this will result in loss of tension.
   Connect the top pin into the centre slot on the pivot shoe & allow the balance to retract fully before releasing the tensioning tool.

   Note: to avoid damaging the balance, it is essential that it is not distorted whenever fitting, connecting or tensioning balances. No side loading should be applied as this will permanently affect the balance.

3. To engage the balance rod in the pivot shoe, the balance should be extended down by means of the tensioning tool until the upper pin of the bracket can be fully engaged in the central slot of the pivot shoe.
   The tensioning tool can now be disengaged.

4. Tensioning for REGULAR or HEAVY DUTY ALUMATILT balances.
   To tension the balance it is necessary to apply the appropriate number of turns, in a clockwise direction, shown on the job sheet or tensioning chart, DATASHT-00086.
   Always tension both balances identically.
   During tensioning, position the end of the rod approx. 50mm down from the bottom of the aluminium tube, once tensioned insert the upper pin into the central slot in the pivot shoe.

5. Tensioning ULTRALIFT & TORSO balances.
   Ultralift/Torso balances are pre-tensioned when manufactured & therefore should not normally require tensioning on the window.
   As a feature of their design the tension can be increased or decreased by a maximum which equals 1kg sash weight.
   This adjustment is a maximum & any further adjustment may damage the balance.

   If adjustment of the Ultralift/Torso balance is required, attach the tensioning tool to the bottom pin & remove the rod from the pivot shoe. Allow the bracket to retract to within approx. 50mm of the end of the tube. To release tension, rotate one turn anti-clockwise, & no further. To add tension, rotate the balance one turn clockwise, & no further. Reconnect the balance rod to the pivot shoe & check the operation of the sash. Always tension both balances identically.
# Tensioning Chart for Spiral Balances

## Regular Alumatilt & Spiralex

| Balance Length (mm) | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
|---------------------|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 3                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5                   | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 12                  | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 15                  | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 18                  | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 21                  | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 24                  | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 27                  | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 35                  | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

## Heavy Duty Alumatilt & Spiralift

| Balance Length (mm) | 432 | 453 | 478 | 503 | 559 | 584 | 610 | 635 | 668 | 717 | 746 | 787 | 813 | 838 | 864 | 889 | 914 | 940 | 965 | 991 | 1016 | 1041 | 1067 | 1092 | 1118 | 1143 | 1169 | 1194 | 1220 |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| INCHES              | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  |
| 30                  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  | 14  |
| 33                  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  | 15  |
| 36                  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  |
| 40                  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  | 18  |

**To establish spring colour and tension turns required:**
Find appropriate balance length and read down until it coincides with required sash weight. That figure is the number of tension turns and the colour is that of the coupling required.

For sashes over 40lbs (18kg) refer to Ultralift or Torso information sheets.

Note: Tensioning chart is for guidance purposes only.

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DATASHEET REF. 00086

ISSUE LEVEL 04
To remove top sash from the window frame, tilt sash fully to horizontal and insert a thin blade under the rivet head, lift out push in rivets UK469 and then slide sash off the pivot bars.

Refitting is the reverse of the removal.

Do not turn the pivot bars while the sash is removed as the balances are still tensioned.
Lift Out Pivot Shoe Fitting Instructions For Timb-a-Tilt

Step 1. Slide Pivot Shoes into the Jamb Profile
The Jamb profile can then be screwed in.

Step 2. Fix the UK765 Pivot bar flush to the internal face on the bottom of the sash.
Final position depends on clash when tilted

Step 3. Using an 8mm wide flat bladed screw driver, rotate the cam to the vertical position, locking the shoe into the profile.

Step 4. Using a tensioning tool extend the balance and locate the top roll pin into the shoe.
Refer to Spring Balance Man-0004 for further information

Step 5. Locate the sash horizontally into the frame, locating the hammer head profile on the pivot bar into the shoe as shown.

Step 6. Once the sash has been located into the shoe, rotate the window to the upright position.

UK765 PIVOT BAR

PE655 (when Spirals are used)
PE699 (when Ultralift or Torso are used)

NOTE: THE ROUTING DETAIL FOR THE LIFT OUT PIVOT BARS IS DIFFERENT FROM STANDARD/SLIDE IN PIVOT BARS.

RECOMMENDED ROUTING DETAIL FOR LIFT OUT PIVOT BAR

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**FITTING RESTRICTOR**

**BAR TYPE**

Recess both sash stiles as shown in fig 1 to a depth of 8mm at the position shown on page 19. (Alternatively continue the 19mm groove along the entire length).

Load the restrictor assembly into the jamb channel, ensuring that it is above the pivot shoe, see fig 2. Fix channels and balances as shown.

Gently tilt the sash and fit the sash slide plate and slide into the recess, see fig 3.

Screw the sash plate securely into position using pan head screws and check operation.

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QUICK RELEASE SASH SLIDES FOR TIMB-A-TILT

The Caldwell Quick Release Sash Slides are designed for quick and easy release of bar restrictors from the sash for cleaning or maintenance purposes. The plastic spring clip provides easy and secure fitting of the bar restrictor into the sash slide and removal is achieved by pressing the clip fully down and sliding the bar restrictor from the slide carrier.

The PE882ANSAT Caldwell Quick Release Sash Slide is designed for use with both Mk3 and Mk4 jamb liners.

EXTRA CARE SHOULD BE TAKEN WITH BAR RESTRICTORS REMOVED TO PREVENT INJURY OR DAMAGE CAUSED BY THE SASH FALLING INWARDS.

It is recommended that bar restrictors are always fitted in pairs and that the maximum sash weight is no more than 35Kg with two bar restrictors fitted. For sash weights of 35.5Kg -50.0Kg, and sash heights over 1201mm, please see DATASHEET-00673 for information on the Caldwell Heavy Duty Bar Restrictors.

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DATASHT-00783
ISSUE LEVEL 01
The Caldwell Heavy Duty Restrictor allows sashes on vertical sliding windows that weigh **35.5kg to 50kg** to be tilted inwards safely for cleaning purposes.

Unlike our standard restrictors, the heavy duty version does not come in different lengths, instead, it covers all sash heights from **900mm to 1550mm**.

The double armed restrictor supports the sash when accidently dropped, by distributing the load across the frame and the sash. The restrictor also contains a specially designed buffer to cushion the load, and ultimately increase safety levels for the user.

### EACH RESTRICTOR INCLUDES:
- 1 x Double Armed Restrictor Assembly
- 1 x 400mm Sash Slide
- 1 x 75mm Sash Slide
- 3 x Nylon Rings

### NOTE: IF HORNS ARE FITTED, DIM 'A' & 'B' SHOULD INCLUDE THE HORN LENGTH. (EXCEPT FOR THE REHAU SPRING LOADED HORN OPTION).

THE ABOVE SIZES ONLY APPLY WHEN USING STANDARD OR SLIDE IN PIVOT BARS. FOR FITTING SIZES WHEN USING LIFT-OUT PIVOT BARS, SEE DATASHEET-00690.

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FITTING TILT LATCHES
UK150 & UK472

When fitting the tilt latches, ensure that the grooves at the top of the rails are free from wood shavings and the latches are not a tight fit or this will inhibit the operation. Check that the latches do not protrude past the ends of the top rails & fix into position using No6 x 32mm countersunk head woodscrews. DO NOT OVERTIGHTEN.

FITTING TRAVEL STOPS TT220STOP & UK233
WINDOWS WITH EQUAL SASH HEIGHTS
Fit UK233 (130mm long) both sides at top of inner channel and UK232 (220mm long) both sides at the bottom of the outer channel.

WINDOWS WITH UNEQUAL SASH HEIGHTS (Smaller top Sash)
Caldwell will supply the lower travel stops cut to the nearest 100mm above the required length. They can be used as supplied or should you wish to gain maximum opening of the top sash they can be cut down as follows:-

After fitting the top sash balances, gently slide the top sash down until resistance is felt. Slide the sash back up 15mm, note the distance between the cill and the underside of the top sash and cut the stop to this length. UK233 should still be used at the head.

FITTING SASH LOCK AND KEEP (447LBPL SHOWN)
Fix the sash lock and keep using No6 countersunk head woodscrews.
Ensure that the keep is fitted central to the sash lock.
NOTE: On sashes over 800mm wide, two sash locks should be used.
The Caldwell range of vertical sliding window restrictors limit the travel of the sashes. The result of restricting sash travel is a reduced amount of clear opening on the window. Restriction may be required to enhance safety, to enhance security, or where a combination of both is required.

All Caldwell vertical sliding window restrictors are releasable as well as self engaging. The releasable feature allows sashes to still be opened fully when required i.e. for cleaning or maintenance. The self engaging feature ensures that all of the restrictors re-engage on their own when the sashes are returned to their closed position. They also have a locking feature allowing the sash to be locked in either the restricted or unrestricted position.

All Caldwell vertical slider restrictors are suitable for use on PVCu, Timer, Aluminium, Steel and Composite vertical sliding windows.

Also available is a UK646N Roller restrictor that has various benefits of restriction and ease of fitting. The UK855 threaded insert and the N70038 key are also required for this option.

Note: there is also a double stage version of this restrictor, see manual: MAN-0014, for more details).

For fitting instructions for any of our restrictors please see our Vertical Sliders Restrictor Manual (available to be sent by Caldwell - MAN-0014)
Fitting Details - PE370KIT Rack Bolt Kit
For Timber Arched Head Windows

On Arched Head windows requiring the tilt facility it is not possible to use standard Caldwell tilt latches. Caldwell recommend the Rack Bolt kit (shown below) which is suitable for most timber tilting windows. This enables the window to be retained in its normal position during operation and can be retracted by the use of a key to enable the tilt facility.

View From Above
The diagram shows the recommended hole position for the key hole. This must line up with the rack bolt.

Side View

The diagram shows the recommended hole position for the rack bolt to be fitted into the side of the sash.

Front View

TOP OF THE BALANCE TO LINE UP WITH THE SPRING LINE

All of the information shown on this data sheet was correct at the time of issue. All information however is subject to change and therefore it is advisable to check with Caldwell Hardware to ensure that you have the latest issue level.
UK793 Draught Plug & Bottom Sash Preparation

INSTALLATION

The UK793 draught plug has been designed to fit into our MK3 & MK4 channel when fitted into the Timb-A-Tilt system. In conjunction with the draught plug, the side of the bottom sash should also be prepared to suit the additional brush pile holder for maximum air flow reduction.

When fitting UK793 draught plug, ensure that the bottom sash is tilted forward. Ensure the bottom balance is disconnected from the pivot shoe. Insert UK793 into the MK3 channel below the retracted balance as shown in fig 1 & fig 2. Once UK793 is inserted into the MK3 channel, slide it up over the balance so that it is just under the tilt latch when the bottom sash is in the closed position, as shown in fig 3. The UK793 draught plug can be inserted directly over the balance without disconnecting the balance. However this may not give the best seal. When this item is installed into the window jamb, it must be taken into account that other items that run in the jamb could come into contact with the draft plug.

In some cases the top travel stop may need to be longer. This draught plug can be used on Ø14 Spiral, Ø17 Ultralift & Torso balances. If the draught plug is being used on Ø14 Spiral balances, a PVC-U balance tube is recommended to help seal.

The UK793 draught plug is sealing to its maximum potential, a piece of UK687 brush Pile & UK688 brush pile holder must be fitted. Machine the side of the bottom sash as shown above. This machining detail shows the preparation needed if the MK3 channel has brush seal fitted.

If brush seal is fitted to the sash, or MK4 channel is fitted, make the brush seal slot in the side of the bottom sash wide enough so that all the brush seals meet. The vertical machining on the side of the sash must be cut short to enable material for the horizontal slot to be added. The brush seal holder can then be inserted.

All of the information shown on this data sheet was correct at the time of issue. All information however is subject to change and therefore it is advisable to check with Caldwell Hardware to ensure that you have the latest issue level.
The Caldwell Egress Window solution allows window fabricators to produce smaller windows which will allow them to conform to the clear opening sizes as stated in "The Building Regulations 2010" document covering fire safety. Utilising this system, and fitting the egress components, the bottom sash can be lifted upward and inward so that it becomes clear of the bottom of the top sash leaving a clear opening for egress purposes.

NOTE: The tilting function is purely for fire escape purposes, so should not be used as an everyday function (i.e. it should not be used for increasing ventilation purposes). The arms will need be reset when fully locked out, please refer to DATASHEET-00665 for more information (or see www.caldwell.co.uk/pdf.1817.pdf). Extra care should be taken if cleaning takes place, ensuring the sash is fully supported at all times.

As the system is a safety feature, it should be routinely tested by the user. The maximum lower sash weight to use this system is 20kg.

To achieve a 0.33m² clear opening, it must be at least 450mm in one axis. Therefore the opening dimensions must be at least:
- 734mm wide / 450mm high
- 450mm wide / 734mm high

NOTE: If horns are on the window, this should be included in the clear opening calculation.

EACH KIT CONTAINS:
- 1 x RIGHT HAND EGRESS RESTRICTOR SLIDE
- 1 x LEFT HAND EGRESS RESTRICTOR SLIDE
- 2 x RESTRICTOR ARMS
- 2 x PIVOT SHOES
- 2 x PIVOT BARS
- 2 x LEFT HAND AND RIGHT HAND TILT LATCHES
- 2 x NYLON TILT LATCH BUTTONS
- 4 x SASH SPACER KITS
- 2 x NYLON RINGS

Note: Spring Balances sold separately. The relevant window system order form must be used to calculate (The correct order form must be used - OF364).

For fitting instructions, please see DATASHEET-00658 & DATASHEET-00666. For user information see DATASHEET-00665 (or see www.caldwell.co.uk/pdf.1817.pdf)
### TIMBER EGRESS FIXING DIMENSIONS

**NOTE:**
- Dimension "A" is from the bottom of the travel stop to the top of the jamb slide.
- Dimension "B" is from the top of the lower sash meeting rail (including top cover) to the first fixing hole of the sash slide.

The upper sash can operate as normal.

The maximum sash lock height should be 36mm, in order that it does not clash with glazing when tilting the sash inwards. Larger sash locks can be trialled by the customer (at their own risk).

**IMPORTANT:** Take care when using & installing the restrictor arms to not trap fingers in the assembly. Other than when the window is the full locked out position (tilted at 90°), there is no friction holding the sash up.

---

### Dimensions

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>WINDOW SYSTEM</th>
<th>DIM &quot;A&quot;</th>
<th>DIM &quot;B&quot;</th>
<th>MINIMUM LOWER SASH SIZE</th>
<th>MINIMUM UPPER SASH SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP2592</td>
<td>TIMB-A-TILT</td>
<td>149.5*</td>
<td>152*</td>
<td>530mm*</td>
<td>439mm*</td>
</tr>
</tbody>
</table>

*NOTE:* The minimum sizes and fixing dimensions that are shown assume that a 50mm square profile has been used. The minimum sizes shown are to fit the egress system into the profile, not the minimum to achieve clear opening. In order to estimate the clear opening please forward the TIMB-A-TILT EGRESS ORDER FORM to Caldwell (OF364). Due to the varying nature of timber profiles (profile thickness, up-stand height, bead size etc.), Caldwell can take no responsibility for the clear opening confirmation (this is the customer’s responsibility). When the window has horns, this also affects the clear opening achieved.

For installation of the balances and pivot bars, see DATASHEET-00666. For more detailed operation instructions see DATASHEET-00657.

---

All of the information shown on this data sheet was correct at the time of issue. All information however is subject to change and therefore it is advisable to check with Caldwell Hardware to ensure that you have the latest issue level.
**TIMB-A-TILT VS BALANCE ORDER FORM**

### CUSTOMER DETAILS

<table>
<thead>
<tr>
<th>ORDER No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTACT:</td>
</tr>
<tr>
<td>DELIVERY DATE:</td>
</tr>
<tr>
<td>TEL No.</td>
</tr>
<tr>
<td>FAX No.</td>
</tr>
</tbody>
</table>

### WINDOW DETAILS

**DIMENSIONS REQUIRED**

**DEFINITIONS:**
- A - Under the head onto sill (sash run)
- B - Height of upper sash excluding horns
  (if fitted)
- C - Height of lower sash
- D - From top of sash to balance fixing position
  (arch top only)
- W - Width of sashess

**NOTE:** Sash weights are based on 50mm square profile in softwood unless otherwise stated. For accuracy it is preferable that you provide a fully glazed sash weight. **We cannot accept responsibility for goods supplied incorrectly if accurate sash weights have not been provided.**

**GEORGIAN BARS (PLANT ON TYPE)**

(IF YES, SPECIFY NO. OF HORIZONTAL & NO. OF VERTICAL BARS)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPPER SASH</td>
<td>VERT</td>
</tr>
<tr>
<td>LOWER SASH</td>
<td>VERT</td>
</tr>
</tbody>
</table>

**PRE-TENSIONED BALANCES ONLY**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>TORSO BALANCES ONLY</td>
<td></td>
</tr>
</tbody>
</table>

**ARCHED TOP SASH**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**TAMBER TYPE**

<table>
<thead>
<tr>
<th>SOFTWOOD</th>
<th>HARDWOOD</th>
</tr>
</thead>
</table>

**MK3 JAMB LINER**

<table>
<thead>
<tr>
<th>CUT TO LENGTH</th>
<th>WHITE</th>
<th>BROWN</th>
<th>BLACK</th>
<th>NOT REQ'D</th>
</tr>
</thead>
</table>

**MK4 JAMB LINER**

<table>
<thead>
<tr>
<th>CUT TO LENGTH</th>
<th>WHITE</th>
<th>BROWN</th>
<th>BLACK</th>
<th>NOT REQ'D</th>
</tr>
</thead>
</table>

### REF.

<table>
<thead>
<tr>
<th>QTY OF WINDOWS</th>
<th>DIM &quot;W&quot; (mm)</th>
<th>DIM &quot;A&quot; (mm)</th>
<th>DIM &quot;B&quot; (mm)</th>
<th>DIM &quot;C&quot; (mm)</th>
<th>SIZE OF HORN</th>
<th>GEORGIAN BARS (TICK)</th>
<th>GLAZING CONFIG E.G. 4-16-4</th>
<th>GLAZED SASH WEIGHT (kg) (F = Fixed)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

### STANDARD OPERATIONAL KIT ACCESSORIES

**PIVOT BAR KITS - PIVOT SHOES ARE AUTOMATICALLY ORDERED WITH THIS KIT.**

<table>
<thead>
<tr>
<th>STANDARD PIVOT BAR KIT</th>
<th>SLIDE IN PIVOT BAR KIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**BALANCE TUBES**

<table>
<thead>
<tr>
<th>WHITE</th>
<th>BROWN</th>
<th>CREAM (ULTRALIFT ONLY)</th>
<th>GREY (NOT SPIRALS)</th>
</tr>
</thead>
</table>

**BASIC KIT ACCESSORIES - TRAVEL STOPS & TILT LATCHES**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**BAR RESTRICTORS | BOTH UPPER & LOWER SASH**

<table>
<thead>
<tr>
<th>LOWER SASH ONLY</th>
<th>NOT REQUIRED</th>
</tr>
</thead>
</table>

**QUICK RELEASE OPTION FOR BAR RESTRICTORS**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**HEAVY DUTY BAR RESTRICTORS IF REQUIRED?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

**ALL OTHER ACCESSORIES CAN BE FOUND ON THE ACCESSORIES ORDER FORM (IE. SASH LOCKS, SASH LOCK KEEPS & SASH Lifts) PLEASE CONTACT CALDWELL TECHNICAL FOR MORE INFORMATION.**

**PLEASE REFER TO DATASHEET 00363 FOR STANDARD WINDOW DIMENSION TERMINOLOGY**

**THIS ORDER IS ACCEPTED UNDER OUR CURRENT 'TERMS & CONDITIONS OF SALE' COPIES AVAILABLE UPON REQUEST."**

---

K:\Technical Services\Order Forms\Systems\Timb-A-Tilt\OF154\Timb-A-Tilt VS Balance Order Form

08.10.15

ISSUE 12
TIMB-A-TILT ACCESSORIES ORDER FORM

CUSTOMER:                      ORDER No:
Please enter quantity required in boxes:

<table>
<thead>
<tr>
<th>BALANCE TENSIONING TOOLS</th>
<th>Delux Tensioning Tool</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>SASH LOCKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
</tr>
<tr>
<td>9600</td>
</tr>
<tr>
<td>KL800</td>
</tr>
<tr>
<td>NL800</td>
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</table>

<table>
<thead>
<tr>
<th>KEEPERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
</tr>
<tr>
<td>UK230</td>
</tr>
<tr>
<td>UK231</td>
</tr>
<tr>
<td>30459</td>
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</table>

<table>
<thead>
<tr>
<th>SASH LOCK PLATE</th>
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</thead>
<tbody>
<tr>
<td>UK465</td>
</tr>
<tr>
<td>UK466</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SASH LIFTS &amp; POLE RINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
</tr>
<tr>
<td>7761</td>
</tr>
<tr>
<td>8790</td>
</tr>
<tr>
<td>UK616</td>
</tr>
<tr>
<td>UK624</td>
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<tr>
<td>UK745</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>BRASS HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK807</td>
</tr>
</tbody>
</table>

Lacquered Brass (LB)
Chrome (CH)
Brushed Nickel (BN)

<table>
<thead>
<tr>
<th>TRAVEL RESTRICTORS</th>
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</thead>
<tbody>
<tr>
<td>White</td>
</tr>
<tr>
<td>PE401</td>
</tr>
<tr>
<td>PE633</td>
</tr>
<tr>
<td>202R</td>
</tr>
<tr>
<td>202L</td>
</tr>
<tr>
<td>20232</td>
</tr>
<tr>
<td>UK646N single stage kit</td>
</tr>
<tr>
<td>UK646N double stage kit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRUSH PILE – UK687</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 METRES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRUSH PILE HOLDER – UK688</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 x 1 METRE STRIPS (WHITE)</td>
</tr>
<tr>
<td>10 x 1 METRE STRIPS (BROWN)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUBBLE SEAL – UK689</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 METRES</td>
</tr>
</tbody>
</table>

PLEASE REQUEST DATASHEET 00363 & 00480 FOR WINDOW DIMENSION TERMINOLOGY

THIS ORDER IS ACCEPTED UNDER OUR CURRENT 'TERMS & CONDITIONS OF SALE' COPIES AVAILABLE UPON REQUEST.
PLEASE SEND VIA EMAIL: SALES@Caldwell.co.uk OR FAX: 024 7643 7969
TIMB-A-TILT FIRE EGRESS HARDWARE KIT ORDER FORM

CUSTOMER DETAILS

<table>
<thead>
<tr>
<th>ORDER No.</th>
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<tbody>
<tr>
<td>CONTACT:</td>
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<tr>
<td>DELIVERY DATE:</td>
</tr>
<tr>
<td>TEL No.</td>
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<tr>
<td>FAX No.</td>
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</table>

NOTE: Sash weights are based on 50mm square profile in softwood unless otherwise stated.
For accuracy it is preferable that you provide a fully glazed sash weight. Please provide all dimensions in millimetres.

We cannot accept responsibility for goods supplied incorrectly if accurate sash weights have not been provided.

BALANCE & TIMBER DETAILS

TORSO BALANCES WILL BE SUPPLIED AS STANDARD (TELESCOPIC TORSO’S FOR THE LOWER SASH, STANDARD TORSO’S FOR THE UPPER SASH)

<table>
<thead>
<tr>
<th>TORSO BALANCES ONLY</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALANCE TUBE COLOUR</td>
<td>WHITE</td>
<td>BROWN</td>
</tr>
<tr>
<td>TIMBER TYPE</td>
<td>SOFTWOOD</td>
<td>HARDWOOD</td>
</tr>
</tbody>
</table>

WINDOW DETAILS – Please complete in full

<table>
<thead>
<tr>
<th>Ref</th>
<th>Window Quantity</th>
<th>UPPER 'W'</th>
<th>LOWER 'W'</th>
<th>'A'</th>
<th>'B'</th>
<th>'C'</th>
<th>'D' (IF ARCH)</th>
<th>'X' (UP-STAND)</th>
<th>'Y' (BEAD)</th>
<th>HORN LENGTH</th>
<th>HORN WIDTH</th>
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DIMENSIONS

A – Under the head onto cill (sash run).
B – Height of the upper sash excluding horns (if fitted).
C – Height of the lower sash.
D – From the top of the sash to the balance fixing position (arch top only).
W – Width of sashes. (Upper & Lower)

GLAZING CONFIG

E.G. 4-16-4

GLAZED SASH WEIGHT

( 千克)

KIT ACCESSORIES

BASIC KIT ACCESSORIES – TRAVEL STOPS & TILT LATCHES

<table>
<thead>
<tr>
<th>WHITE</th>
<th>BROWN</th>
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MK3 JAMB LINER

<table>
<thead>
<tr>
<th>WHITE</th>
<th>BROWN</th>
</tr>
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<td></td>
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MK4 JAMB LINER

<table>
<thead>
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<th>WHITE</th>
<th>BROWN</th>
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</table>

UK842 PIVOT BAR COVERS

<table>
<thead>
<tr>
<th>CHROME</th>
<th>DAWN</th>
<th>WHITE</th>
<th>BROWN</th>
</tr>
</thead>
<tbody>
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<td></td>
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</table>

DIMENSIONS REQUIRED DEFINITIONS

X – Up-stand height. Distance required from the edge of the UPPER sash to the edge of the external opening.
Y – Bead. Distance required from the bottom of the lower sash to the top of the up-stand.

Note: THE MINIMUM LOWER SASH HEIGHT IS ALWAYS 530MM DUE TO THE VARYING NATURE OF TIMBER PROFILES (PROFILE THICKNESS, UP-STAND HEIGHT, BEAD SIZE ETC.), CALDWELL CAN TAKE NO RESPONSIBILITY FOR THE CLEAR OPENING CONFIRMATION – THIS SHOULD BE 0.33M² (THIS IS THE CUSTOMERS RESPONSIBILITY).

ALL OTHER ACCESSORIES CAN BE FOUND ON THE STANDARD TIMB-A-TILT ACCESSORIES ORDER FORM (i.e. SASH LOCKS, SASH LOCK KEEPS & SASH PLEASE CONTACT CALDWELL TECHNICAL FOR MORE INFORMATION.

PLEASE REFER TO DATASHEET 0066# FOR EGRESS WINDOW DIMENSION TERMINOLOGY

THIS ORDER IS ACCEPTED UNDER OUR CURRENT 'TERMS & CONDITIONS OF SALE' COPIES AVAILABLE UPON REQUEST.
All Caldwell products are manufactured according to BS EN ISO 9001:2008 certified Quality Management Systems.

Where product standards do not exist Caldwell have set in house procedures.

Further information on specific testing is often available from our technical department.

Caldwell are also members of The Council for Aluminium in Building (CAB) which brings together three existing trade associations, the Architectural Aluminium Association, The Patent Glazing Contractors Association and the Aluminium Window Association, into a unified voice.