



Caldwell Ultralift Installation Manual

***Please read all pages carefully**
before you start installation.

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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.

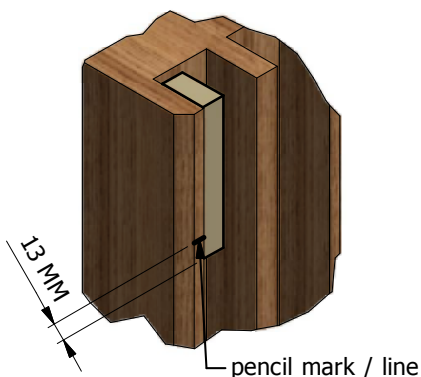
For further information, please contact Caldwell Technical Department.

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.

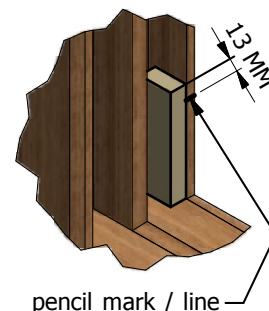
Carefully lift the lower sash until resistance is felt i.e. the balance is fully retracted. Pencil mark one jamb in line with the top of the sash.

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.



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.

FRAME AND SASH PREPARATION FOR TIMBER WINDOWS

ULTRALIFT BALANCES

(i) MACHINED SASH METHOD

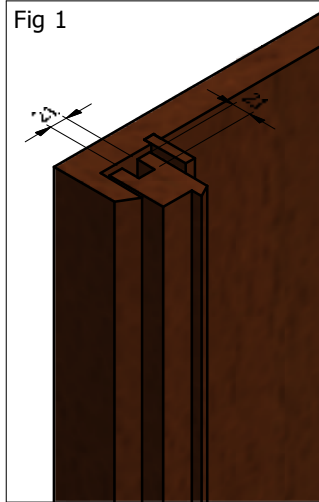


Fig 1: Sash groove dimensions.

LOWER SASH

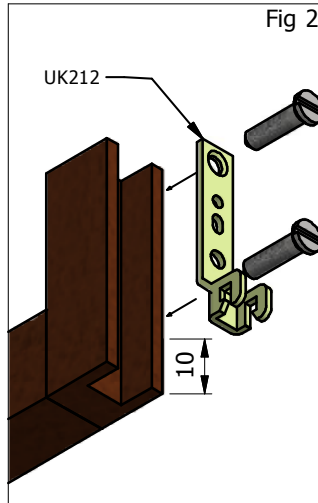


Fig 2: The bottom edge of the UK212 bracket must be 10mm up from the bottom of the sash.

UPPER SASH

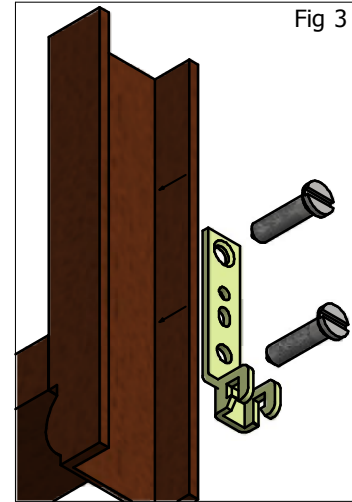


Fig 3: The bottom edge of the UK212 bracket must be level with the bottom of the sash or horn depending on which is applicable.

(ii) MACHINED FRAME METHOD

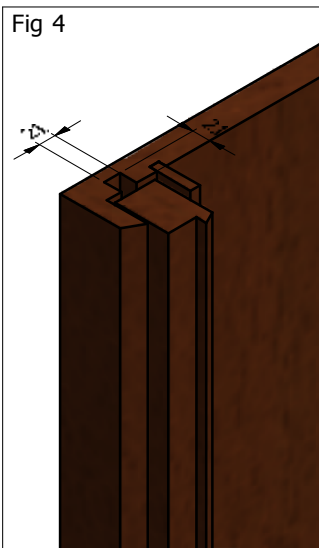


Fig 4: Frame groove dimensions.

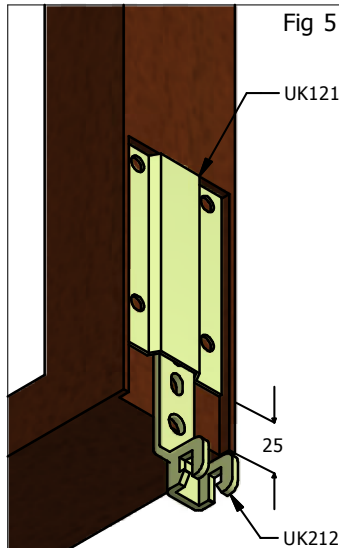


Fig 5: The bottom edge of the UK121 bracket must be 25mm up from the bottom of the sash. Always fix through all four fixing holes.

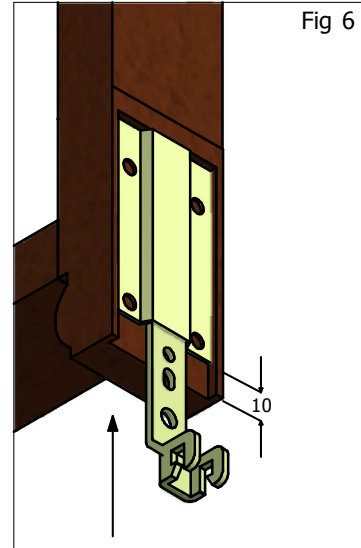


Fig 6: The bottom edge of the UK121 bracket must be 10mm up from the sash or horn depending on which is applicable.

NOTE: If using the UK835 bracket instead of the UK121, the same guidelines apply apart from the routing width, which can be reduced (to 16mm).

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INSTALLATION PROCEDURE

ULTRALIFT BALANCES

IMPORTANT PLEASE REFER TO PAGES 8 & 9 OF THIS MANUAL FOR TRAVEL STOP INFORMATION. PLEASE READ BEFORE INSTALLING BALANCES.



Fig 1: Load balances into outer frame before installing sashes, then load the sash into the frame. If window is already installed, see Fig 1A.

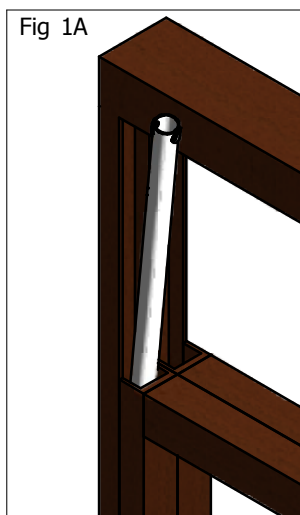


Fig 1A: Fully lower the sash before inserting the balance into the machined groove in the sash or frame.

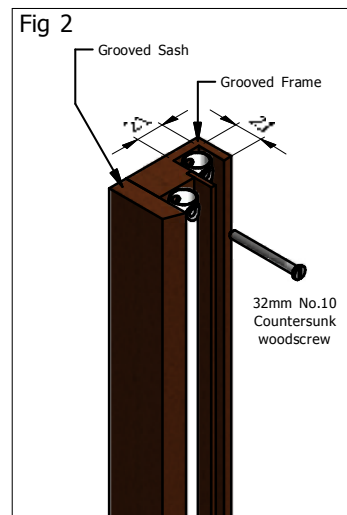
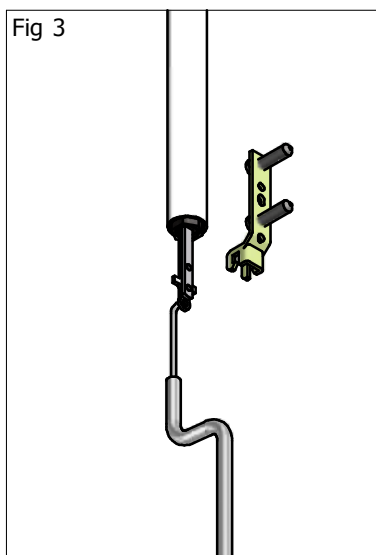


Fig 2: The balance should be fixed directly under the head. Do not overtighten the fixing screw.

Fig 3: ATTACHING TO SASH
When both the upper and lower balances are installed the UK201 can be located within the UK212 bracket as follows:-

UPPER SASH
With the sash in the closed position, supported on a suitable strut. Locate the tensioning tool into the eye at the bottom of the balance. Pul down and locate into the UK212 bracket.
Do not allow the rod to rotate as this will result in loss of tension.



LOWER SASH
Raise the sash into the open position without the upper stops fitted and support on a suitable strut. The UK201 should now be below the sash.

Attach the tensioning tool, locate the UK201 into the UK212 bracket. Do not allow the rod to rotate as this will result in loss of tension.

THE SPIRAL ROD OR BALANCE TUBE SHOULD NOT BE DISTORTED IN ANYWAY DURING INSTALLATION.

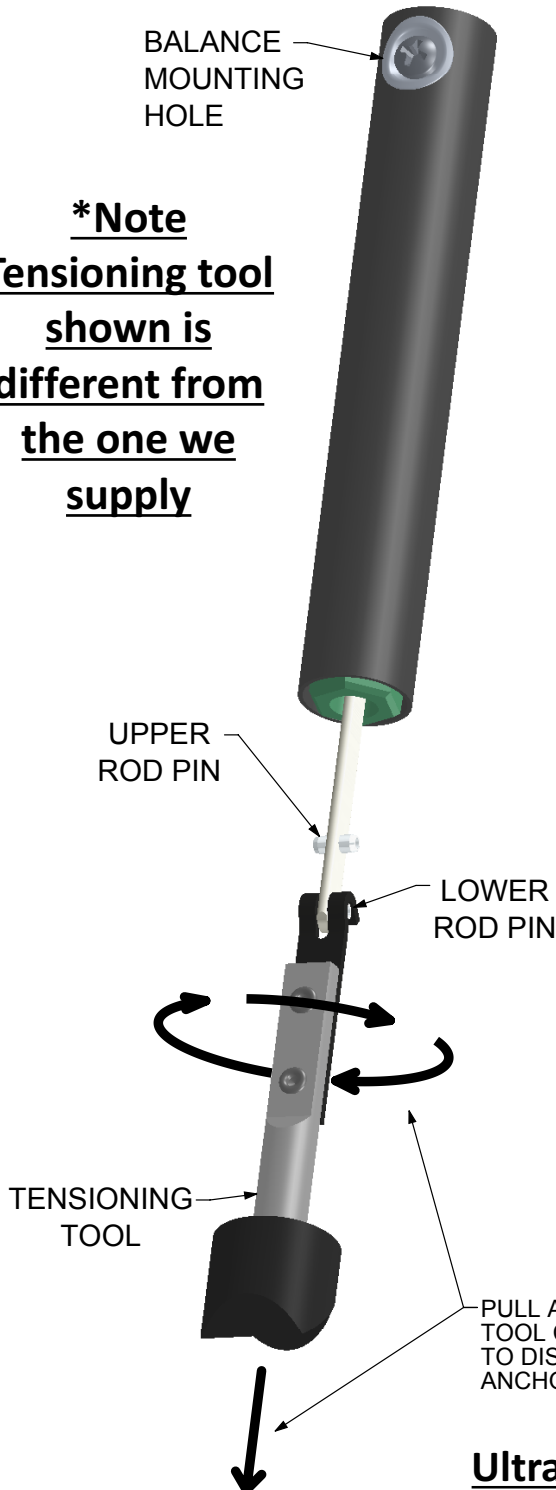
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ULTRA-LIFT
ROD DISENGAGEMENT
FROM BALANCE
PRETENSION ANCHOR

BALANCE
MOUNTING
HOLE

***Note**

Tensioning tool
shown is
different from
the one we
supply



COMPLETELY REVIEW DOCUMENT PRIOR TO WORKING WITH BALANCE.

ROD DISENGAGEMENT PROCEDURES:

1. AFTER BALANCE HAS BEEN MOUNTED IN JAMB CHANNEL, ENGAGE TENSIONING TOOL WITH THE LOWER ROLL PIN ON THE ROD.
2. DISENGAGE ROD FROM PRETENSION ANCHOR BY SIMULTANEOUSLY PULLING AND SLIGHTLY ROTATING THE TENSIONING TOOL CLOCKWISE (WHEN VIEWED FROM THE ROD ROLL PIN TOWARDS THE BALANCE MOUNTING HOLE).
3. EXTEND ROD.

CAUTION:

1. AFTER ROD DISENGAGEMENT, TOOL WILL WANT TO ROTATE IN A COUNTER CLOCKWISE DIRECTION (WHEN VIEWED FROM THE ROD ROLL PIN TOWARDS THE BALANCE MOUNTING HOLE). ***DO NOT ALLOW TURNS TO BE LOST.***
2. MAKE SURE NOT TO BEND SPIRAL ROD DURING INSTALLATION OR REMOVAL.

Ultralift fine adjustment

Each balance is delivered with a pre set weight, this can be adjusted a maximum of +/- 1kg. Using the Tensioning tool disengage the rod and hold firm (ref: CAUTION # 1) 1 turn clockwise = +0.25kg and 1 turn anti clockwise = -0.25kg. Maximum of 4 turns in any one direction – DO NOT EXCEED.