CONVENTIONAL TIMBER VERTICAL SLIDING WINDOWS *FABRICATORS MANUAL*

28th Edition

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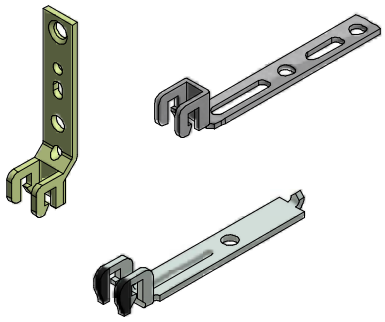

INDEX

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 MAINTENANCE WINDOW.
- SASH RESTRICTION AVAILABLE.
- SECURITY OPTIONS AVAILABLE.

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INTRODUCTION

CONVENTIONAL TIMBER MANUAL

Conventional Timber Manual is the complete manual to give you the widest choice of hardware to enable user to produce a high performance timber vertical sliding window.

This manual is intended to give recommendations on how to prepare and assemble traditional 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 components within their own window designs.

FOR FURTHER INFORMATION PLEASE CONTACT:-

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E-mail: sales@caldwell.co.uk

GENERAL DETAILS

SPIREX - For sashes up to 13.5kg
SPIRALIFT - For sashes between 13.5kg and 18kg

All of the above have a tube diameter of 13.5mm. The minimum groove size should be 18mm x 18mm.
Finish: Natural aluminium as standard.

Also available in white or brown PVC-U sleeve, please mark accordingly if required.

ULTRALIFT FACTORY TENSIONED BALANCES
For sashes between 5.5kg and 27kg.
With ±1kg on site adjustment. They have a tube diameter of 17mm.
The minimum groove size should be 21mm x 21mm.

Available in white, brown or grey PVC-U sleeve, please specify colour when ordering.

TORSO FACTORY TENSIONED BALANCES
For sashes up to 50kg. Tube diameter of 19mm.
The groove size should be 21mm x 21mm.
(Specials available up to 65kg data on request. Tube diameter 25mm.
The groove size should be 27mm x 27mm)

Available in white, brown or grey PVC-U sleeve, please specify colour when ordering.

NOTE: Torso and Ultralift are factory tensioned balances pre-set to the pre-determined sash weights. Due to the nature of the product, cancellation charges will apply should the order be changed or cancelled after we have received the official order.

SASH WEIGHT CALCULATIONS
It is preferable that accurate glazed sash weights are provided when ordering, if this is not possible then we are prepared to calculate the approximate sash weights based on the information provided. We cannot accept any responsibilty for goods supplied incorrectly if accurate sash weighs have not been provided.

NOTE: Balance lengths are calculated on the assumption that the fixed position of the balance is directly underneath the head. If other please state.

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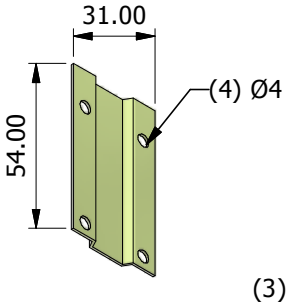
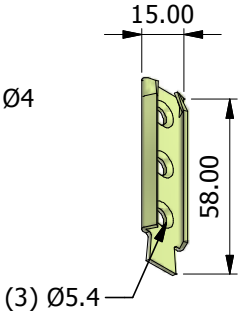
Balance Brackets

CONVENTIONAL WINDOW ACCESSORIES

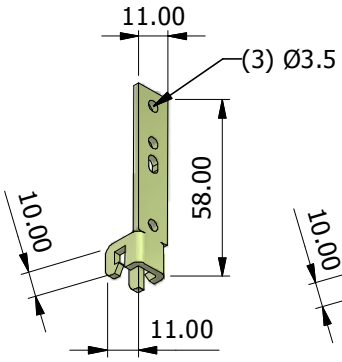
SIDE FIX BRACKETS



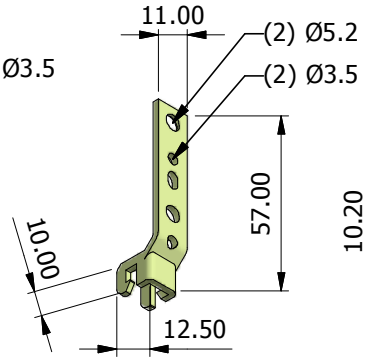
UK121



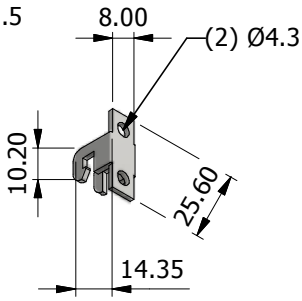
UK835



UK120
(FOR SPIRAL & TORSO BALANCES)

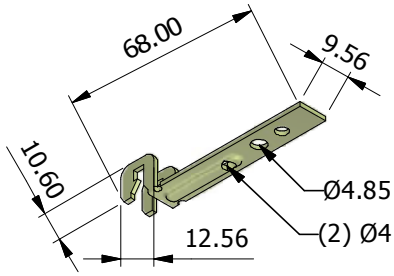


UK212
(FOR ULTRALIFT BALANCES)

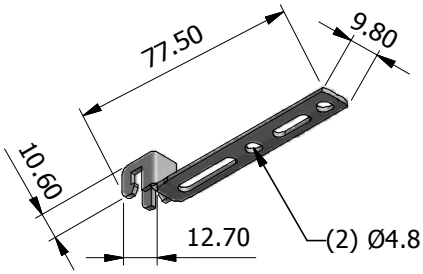


N60-62

BOTTOM FIX BRACKETS



UK136



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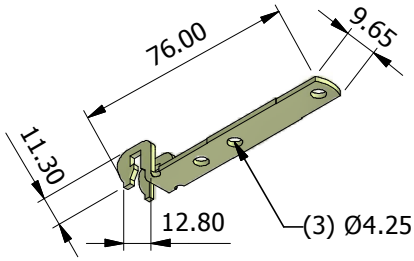
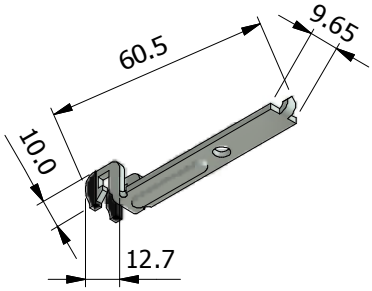


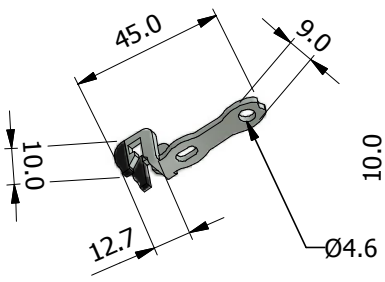
WS60-32

NYCLAD BRACKETS

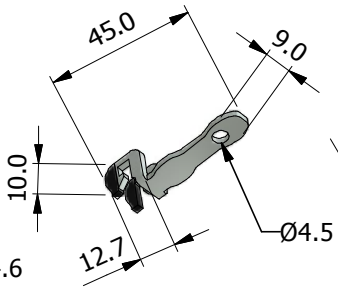
(THESE HAVE A BLACK NYLON COATING ON THE TIP OF THE HOOK END - TO RUB ON INSIDE FACE OF JAMB TO GUIDE THE SASH)



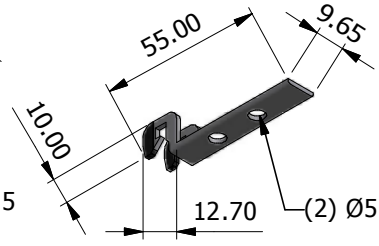
WDST75-47N



UK115N



UK114N



UK101N

DIMENSIONS SHOWN ARE FOR GUIDANCE PURPOSES ONLY.
PLEASE CONTACT CALDWELL IF FULL DETAIL DRAWINGS ARE REQUIRED.

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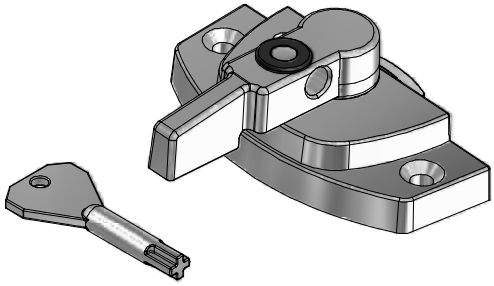
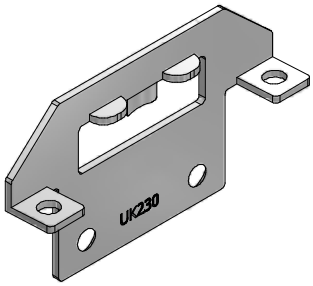
Conventional Timber VS Accessories

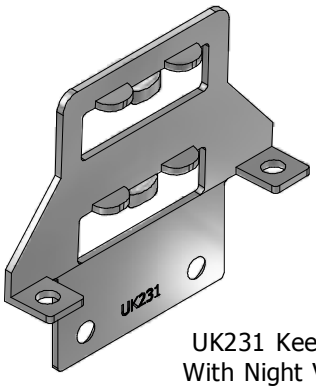


9600 Locking (9114 Key)
Key supplied separately

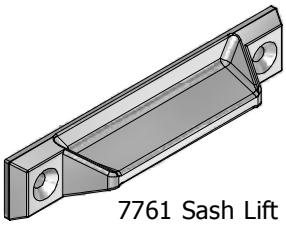
9400 Non-Locking
Available in: black, bronze, gold, white or chrome.



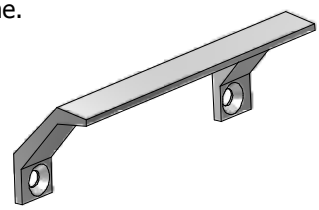
UK230 Keeper
Available in: bronze, gold, white or chrome.



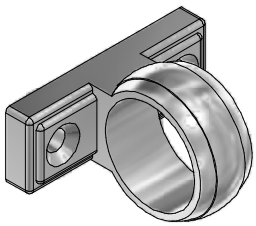
UK231 Keeper
With Night Vent
Available in: bronze, gold, white or chrome.



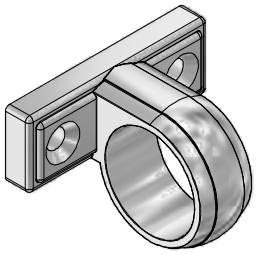
7761 Sash Lift
Available in: white, black, bronze, gold, ribco gold or chrome.



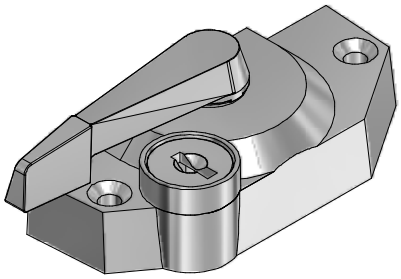
8790 Sash Lift
Available in: white, black, bronze, ribco gold or chrome.



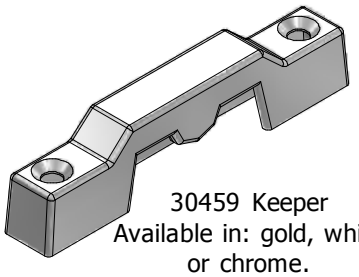
UK624 Sash Ring
Available in: white, chrome or gold



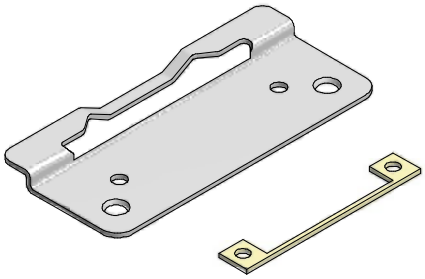
UK745 Offset Sash Ring
Available in: white, chrome or gold



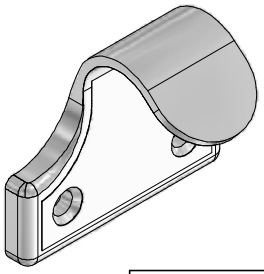
KL800 Sash Lock
Key supplied with lock
Available in: gold, white or chrome.



30459 Keeper
Available in: gold, white or chrome.

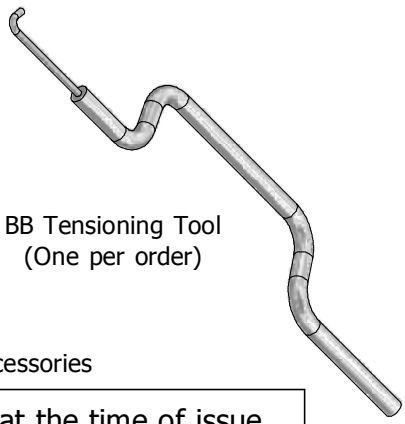


UK466 (for KL800 / NL800)
UK465 (for 9600 / 9400)
Sash Lock Plate
Available in white



UK616 Sash Hook
Available in: white, chrome or gold

Tensioning Tool
WIRE-TEN



BB Tensioning Tool
(One per order)

Please see DATASHEET 00457 for weather sealing accessories

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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

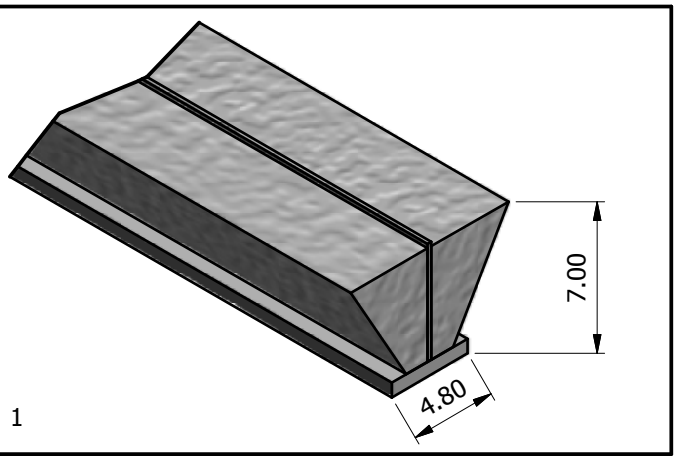

Fig 1

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

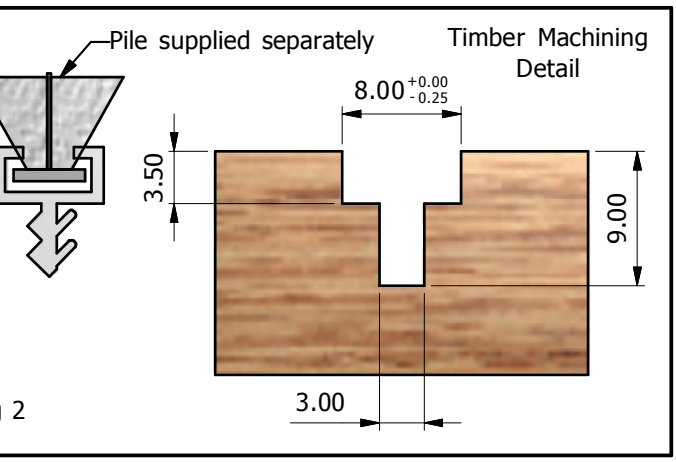

Fig 2

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

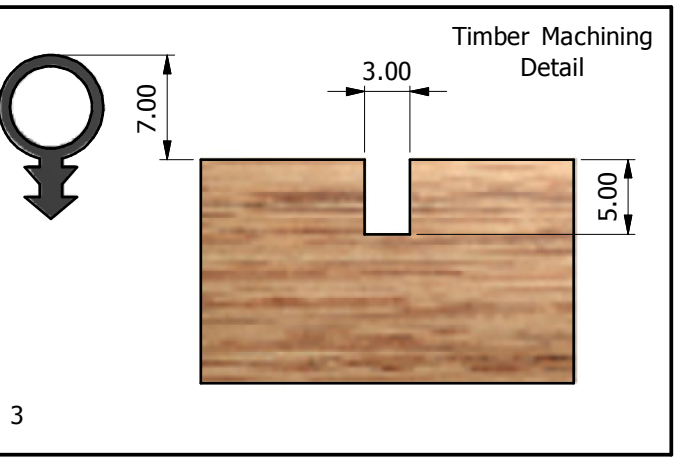

Fig 3

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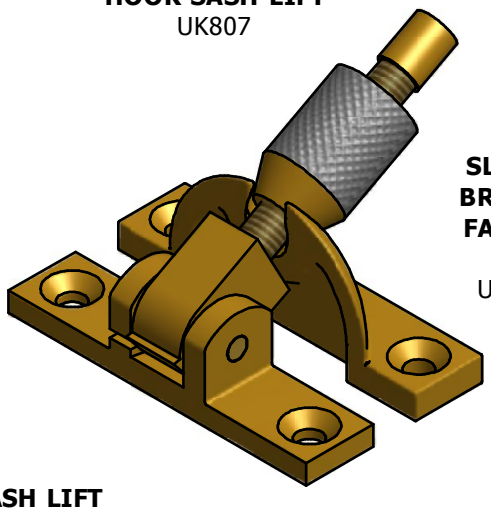
BRASS ACCESSORIES

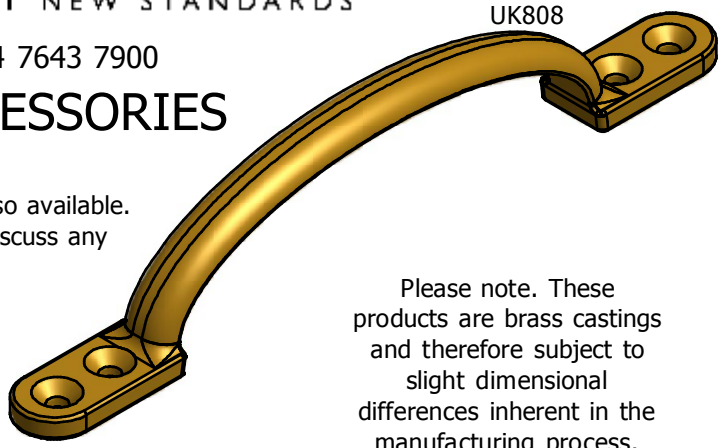
Other brass accessories are also available. Please contact Caldwell to discuss any requirements.

HOOK SASH LIFT
UK807



SLIMLINE BRIGHTON FASTENER
UK685
UK690CH

5" 'D' SASH HANDLE
UK808

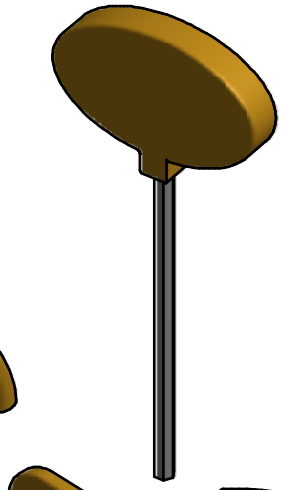


Please note. These products are brass castings and therefore subject to slight dimensional differences inherent in the manufacturing process.

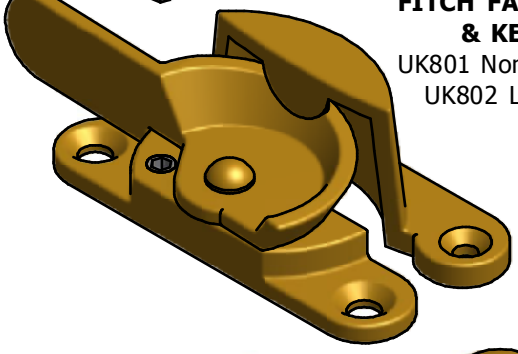
PART NUMBER SUFFIXES FOR FINISHES

LB = Lacquered Brass Suffix
CH = Chrome Suffix
BN = Brushed Nickel Suffix

RING SASH LIFT
UK806

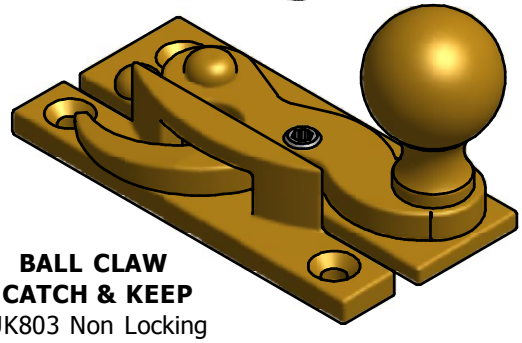


FITCH FASTENER & KEEP
UK801 Non Locking
UK802 Locking



WEEKES CATCH
UK810

POLE HOOK
UK809



BALL CLAW CATCH & KEEP
UK803 Non Locking
UK804 Locking

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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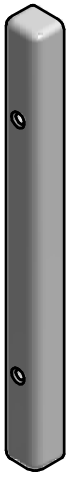
Caldwell Vertical Sliding Window Travel Stops

Vertical sliding window travel stops are required whenever Caldwell spring balances are used.

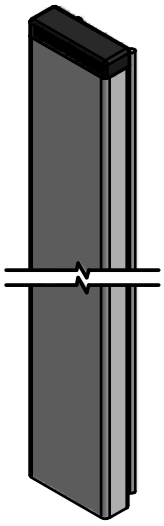


UK190N
Upper Sash Travel Stop
- 120mm Long
- Locates on Cill

Suitable for Conventional Timber Windows

- Available in white or brown

UK191N
Lower Sash Travel Stop
- 38mm Long
- Locates at Head



TT220STOP
Upper Sash Travel Stop
- 220mm Long
- Locates on Cill

Suitable for Caldwells Timb A Tilt Profile

- Available in white or brown
-Also available in alternative lengths

UK233
Lower Sash Travel Stop
- 130mm Long
- Locates at Head

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

For further information on travel stops, please request a copy of DATASHT-00332 guide to travel stops

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Guide To Travel Stops

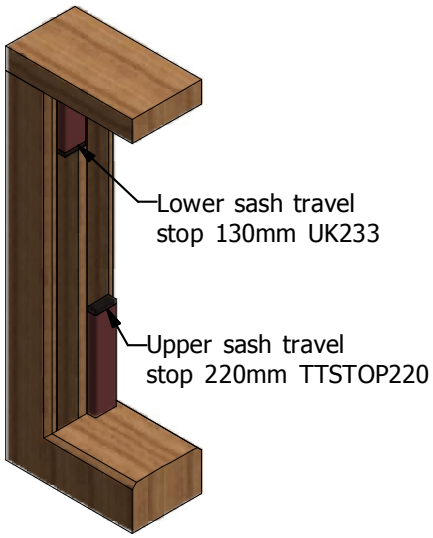
Travel stops are essential whenever spring balances are in use. Travel stops ensure that the spring balances do not become damaged or prematurely worn. Travel stops are required at both the top of the window & at the bottom.

Travel stops are available from most of the major window system companies and these are usually profile specifiic. 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.

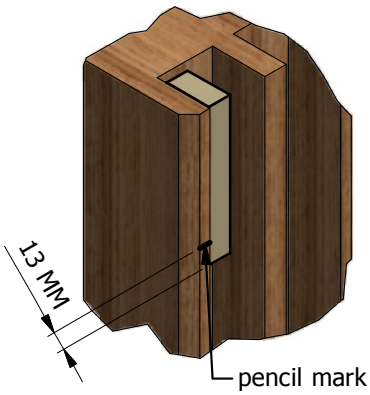
For further information, please contact Caldwell Technical Department.

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.

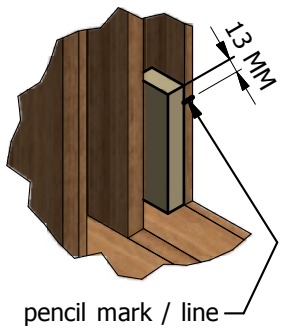
Carefully lift the lower sash until resistance is felt i.e. the balance is fully retracted. Pencil mark one jamb in line with the top of the sash.

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

SPIREX & SPIRALIFT BALANCES

(i) MACHINED SASH METHOD

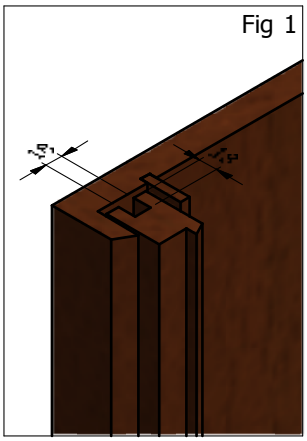


Fig 1: Sash groove dimensions

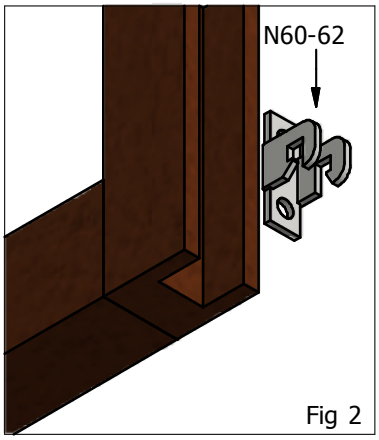


Fig 2: Side fix options

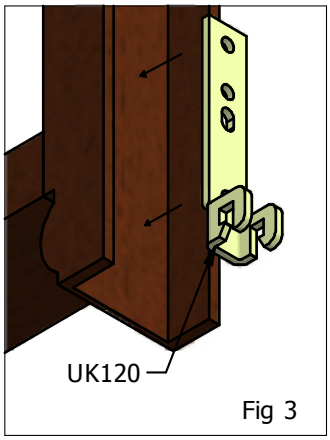


Fig 3: Side fix to horn. When fixing ALWAYS put screws through at least the top and bottom holes.

(ii) MACHINED FRAME METHOD

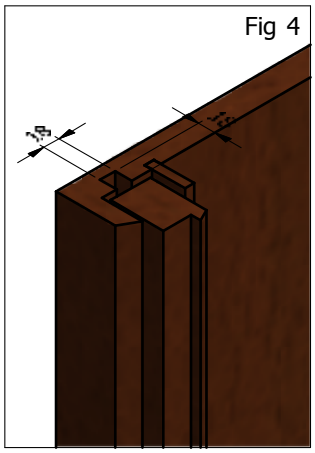


Fig 4: Frame groove dimensions

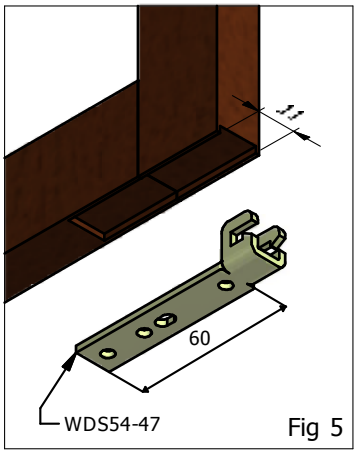


Fig 5: Bottom fix.

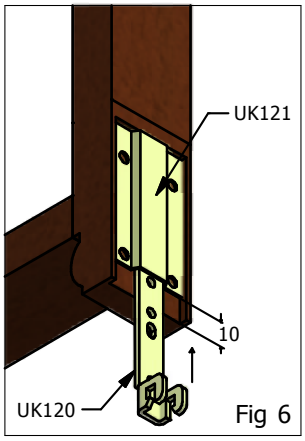


Fig 6: Side fix to horn with sliding bracket facility sink UK121 in unitl it is flush.

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.

INSTALLATION PROCEDURE

SPIREX & SPIRALIFT BALANCES

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

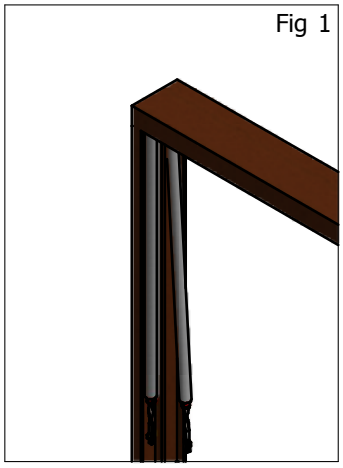


Fig 1: Load balances into outer frame before installing sashes, then load the sash into the frame. If window is already installed see Fig 1A.

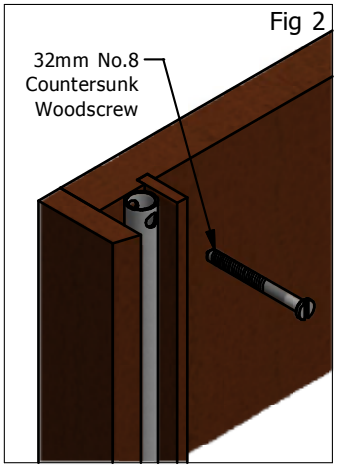


Fig 2: Do not over tighten the top screw as this will distort the balance tube and reduce it's efficiency.

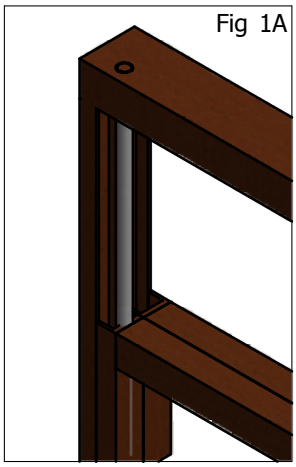


Fig 1A: If window is already installed. Fully lower the sash before attempting to insert the balance into the machined groove in the sash or frame.

Fig 3: Raise the sash and support it's weight on a suitable strut. Unhook and clear the spiral rod of its fixing bracket. Lower the rod by up to a maximum of 50mm.
Should the rod extend out of the balance by more than 50mm, gently push the rod back into the balance, allowing it to rotate freely.

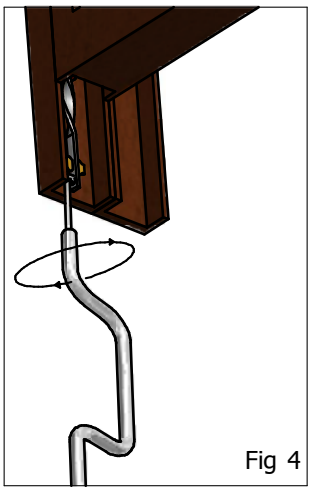


Fig 4: Apply tension clockwise, using a hook tensioning tool. Check the Balance Tensioning Chart on page 9 for the correct number of turns.
WARNING: do not move the sashes fully up or down until limit stops have been fitted as below.

Limit stops must be fitted for both upper and lower sashes. They should be of adequate length to prevent over extending of the balance spiral rod

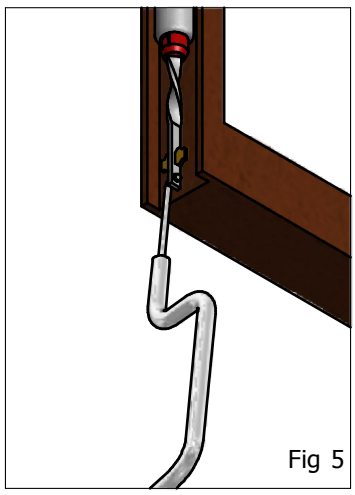


Fig 5: Latch the cross pin into the bracket seat and remove the tension tool.
Finally check for a smooth operation of the sash.

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

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CALDWELL

SOLUTIONS THAT SET NEW STANDARDS

Telephone 024 7643 7900

Tensioning Chart for Spiral Balances

REGULAR ALUMATILT & SPIREX

BALANCE LENGTH mm	203	228	254	279	305	330	356	381	406	432	457	483	508	533	559	584	610	635	660	686	711	737	762	787	813	838	864	889	914	940	965	991	1016	1041	1067	1092	1118	1143	1169	1194	1220
INCHES	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																																							
6	2	1	1	1	1	1½	1½	2	2	2	2½	3	3	3	3	2½	2½	2½	2½	2½	3	3	3	3	2	2	2														
9	3	2	2	2	2	2½	2½	3	3	3½	4	4½	5	5	5½	3½	3½	3½	3½	3½	4	4	4	4	4	3	3	3½	3½												
12	4	2	2½	3	3	3½	4	4	4½	4½	5	5	5½	6	6½	4½	4½	4½	4½	5	5	5	5½	6	6½	6½	7	7½	7½	4½	5	6	6	6½	6½	7	7	7	7½	7½	8	8	8½	9
15	5	3	3½	4	4	4½	5	5	5½	5½	6	6	6½	7	7½	5½	5½	5½	6	6	6	6½	7	7½	7½	7½	8	8½	8½	5½	6	7	7	7½	8	8½	8½	8½	9	9	9	9½	9½	9½	10
18	6	2	2½	3	3	3	3½	3½	3½	3½	4	4½	5	5	5½	6	6½	6½	7	7	7½	7½	8	8	8½	8½																	
21	7	3	3½	4	4	4½	5	5	5	5	5½	6	6	6½	7	5	5	5½	5½	6	6	6½	6½	7	7	7	7	7	7	6	7	8	8	8½	9	8	9½	9	9½	9½	10	10	10	10½	11
24	8	2	2½	3	3	3	3½	3½	3½	3½	4	4½	5	5	5½	6	6½	6½	7	7	7½	7½	8	8	8½	8½																	
27	9	2½	3	3½	3½	4	4½	4½	4½	4½	5	5½	5½	6	7	7	7½	7½	8	8	8½	8½	8½	9	9	9	9	9½	10	10½	10½	11	11	11½	11½	11½	12	12	12	12½	12½	12½	13
30	10	3½	4	4½	4½	4½	5	5	5	5	5½	5½	6	6½	8	8½	9	9	9	9	9½	9½	9½	9½	10	10	8	8	8	8	8½	8½	9	9	9	9½	9½	9½	10	10	10½	11
33	11	4	4½	5	5	5	5½	5½	5½	5½	6	6	6½	7	8½	9½	10	10	10½	10½	11	11	11	11½	11½	11½	8½	8½	8½	8½	9	9	9½	9½	10	10	10½	10½	11	11	11	11½	12
36	12	4½	5	5½	6	6	6	6	6	6½	6½	7	7	9½	10½	6½	6½	7	7	7½	7½	8	8	8½	8½	9	9	9	9	9½	10	10½	11	11½	11½	12	12	12	12	12½	12½	13	13
40	13	5½	6	6	6½	6½	6½	6½	6½	6½	7	7½	8	9½	10	11	7½	7½	8	8	8	8½	9	9	9½	9½	10	10	10	10½	10½	11	11	11½	12	12	12	12½	12½	13	13	13	13½	13½
45	13.5	6	6	6½	7	7	7	7	7	7	7½	8	8½	10	10	11½	8	8	8½	8½	9	9	9½	9½	10	10	10	10½	11	11½	11½	12	12½	13	13	13½	13½	14	14	14	14½	14½	14½
SASH WEIGHT lbs	WEIGHT kg	BLUE COUPLING																								RED COUPLING																	

WHITE COUPLING

HEAVY DUTY ALUMATILT & SPIRALIFT

BALANCE LENGTH mm	432	457	483	508	533	559	584	610	635	660	686	711	737	762	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	2	2½	3	3½	4	4½	5	5½	5½	6	6	6½	7	7½	8	8	8½	8½	9	9	9½	9½	10	10	10½	11	11	12	12½	13	13½	14
33	15	2	2½	3	3½	4½	5	5½	6	6	7	7½	7½	8	8½	9	9	9½	10	10	10½	11	11½	11½	12	12	12½	13	13½	14	14½	14½	15
36	16	3	3½	4	4½	5	5½	6	6	6½	7	8	8½	9	9½	10	10½	11	11	11	11½	12	12½	12½	13	13	13	13½	13½	14	14½	15	15½
40	17	4	4½	5	5½	6	6½	7	7	7½	8	8½	9	9½	10	11	11½	12	12	12½	12½	13	13	13½	13½	14	14	14½	15	15	15½	16	16
45	18	5	5½	6	6½	7	7½	8	8	8½	9	9	9½	10	10½	11	11½	12	12½	13	13½	14	14½	15	15	15	15½	15½	16	16	16½	17	17
SASH WEIGHT lbs	WEIGHT kg	BLACK COUPLING																														

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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FRAME AND SASH PREPARATION FOR TIMBER WINDOWS

ULTRALIFT BALANCES

(i) MACHINED SASH METHOD

Fig 1

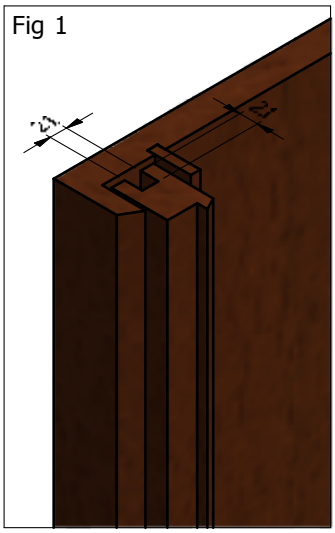

Fig 1: Sash groove dimensions.

LOWER SASH

Fig 2

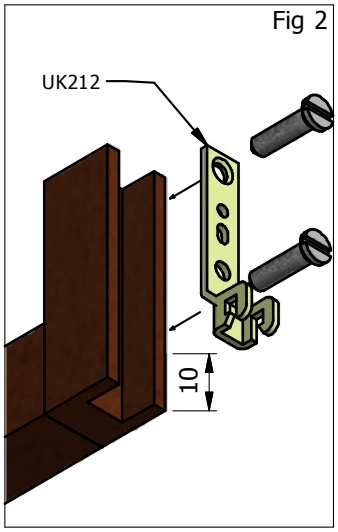

Fig 2: The bottom edge of the UK212 bracket must be 10mm up from the bottom of the sash.

UPPER SASH

Fig 3

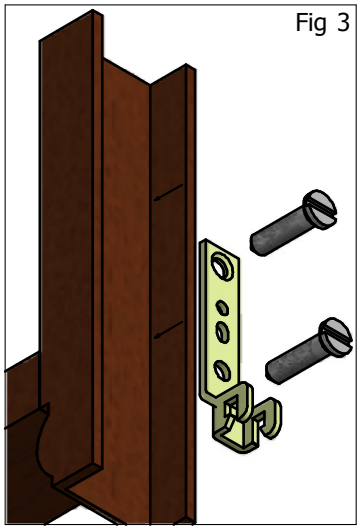

Fig 3: The bottom edge of the UK212 bracket must be level with the bottom of the sash or horn depending on which is applicable.

(ii) MACHINED FRAME METHOD

Fig 4

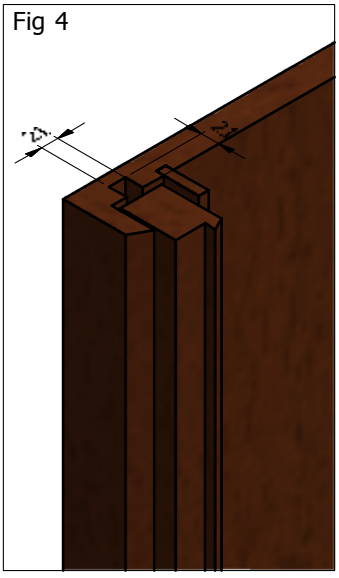

Fig 4: Frame groove dimensions.

Fig 5

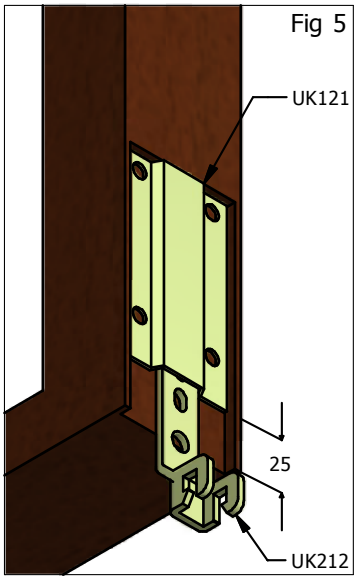

Fig 5: The bottom edge of the UK121 bracket must ne 25mm up from the bottom of the sash. Always fix through all four fixing holes.

Fig 6

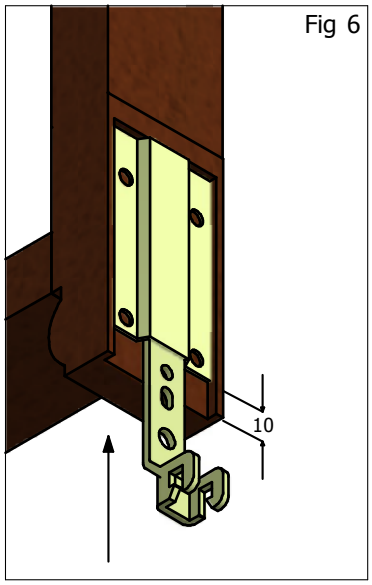

Fig 6: The bottom edge of the Uk121 bracket must be 10mm up from the sash or horn depending on which is applicable.

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

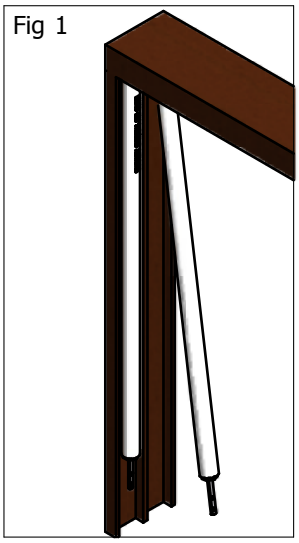


Fig 1: Load balances into outer frame before installing sashes, then load the sash into the frame. If window is already installed, see Fig 1A.

Fig 1A

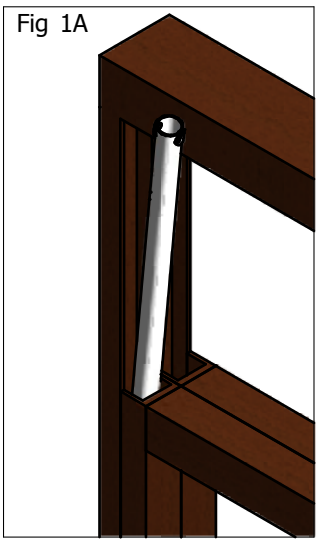


Fig 1A: Fully lower the sash before inserting the balance into the machined groove in the sash or frame.

Fig 2

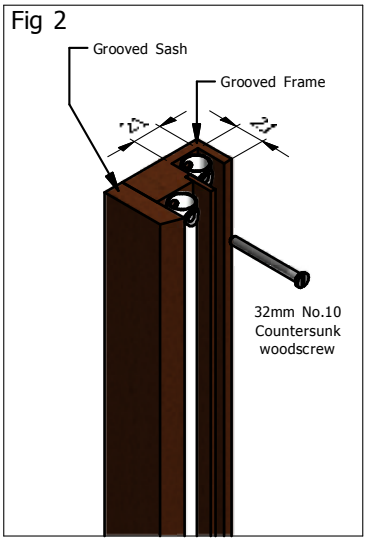
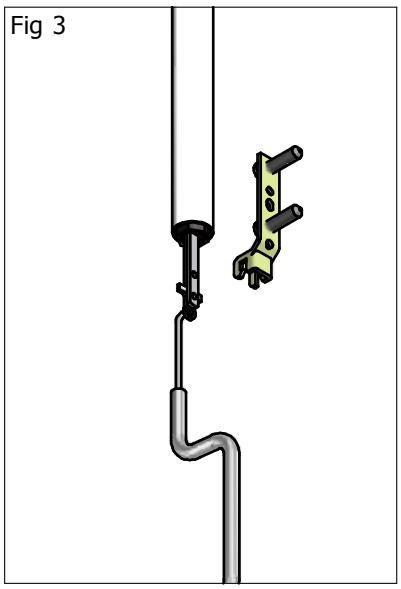


Fig 2: The balance should be fixed directly under the head.
Do not overtighten the fixing screw.

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.

Fig 3



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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INSTALLATION PROCEDURE
TIMBER WINDOWS WITHOUT HORNS

TORSO BALANCES

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

Fig 1

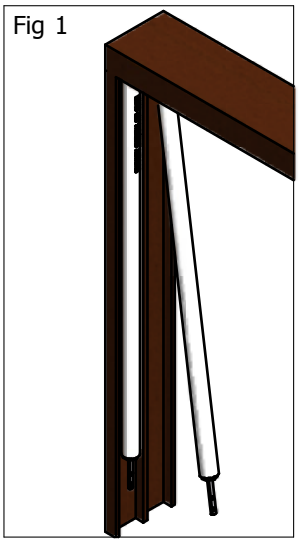

Fig 1: Load balances into outer frame before installing sashes, then load the sash into the frame. If window is already installed, see Fig 1A.

Fig 1A

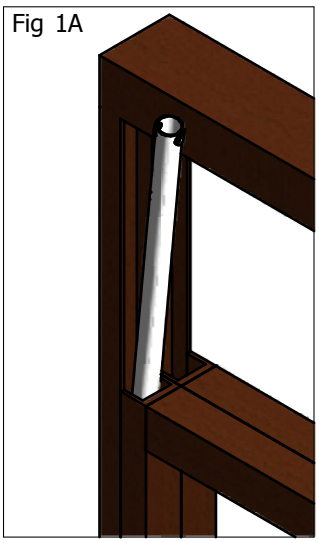

Fig 1A: Fully lower the sash before inserting the balance into the machined groove in the sash or frame.
During this operation the balance must not be distorted in any way

Fig 2

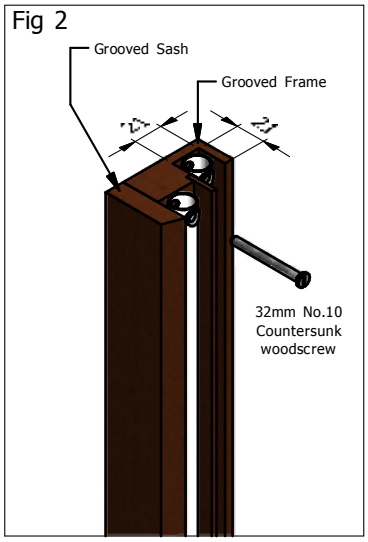

Fig 2: The balance should be fixed directly under the head.
Do not overtighten the fixing screw.

FIXING METHOD FOR THE UNDERSIDE OF SASHES

Fig 3

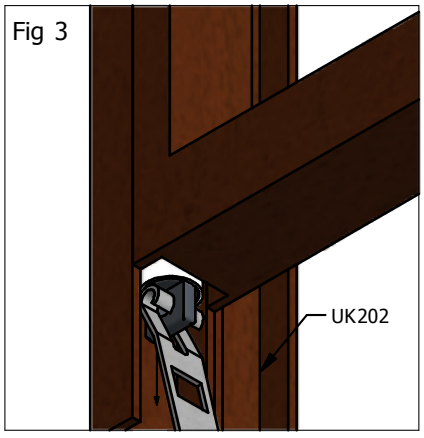

Fig 3: Fully raise the sash and support on a suitable strut. The pull down the sash bracket and lay on the underside of the sash.

Fig 4

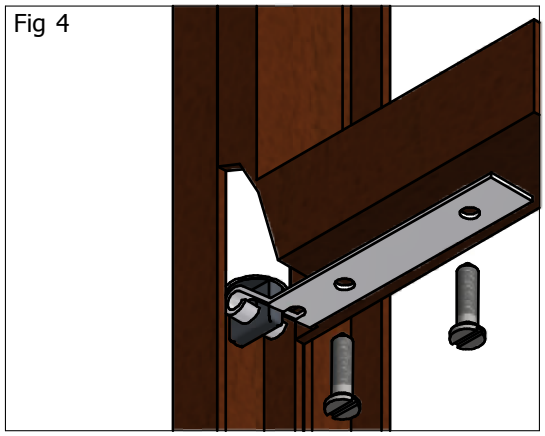

Fig 4: Fix the sash using two woodscrews (18mm minimum penetration) through the holes in the bracket.

(SEE PAGE 13 FOR FIXING TO THE HORN)

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INSTALLATION PROCEDURE
TIMBER WINDOWS WITH HORNS

TORSO BALANCES

FITTING UPPER SASH BALANCES TO SASHES WITH HORNS

MACHINED SASH METHOD

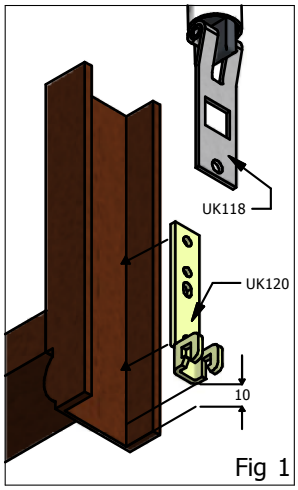

Fig 1: The UK120 bracket should be fitted so that the bottom edge is 10mm above the bottom of the horn. The top and bottom holes in the UK120 bracket must be used to prevent the bracket bending. (Penetration of screws to be 10mm minimum)

Groove sizes
21mm x 21mm

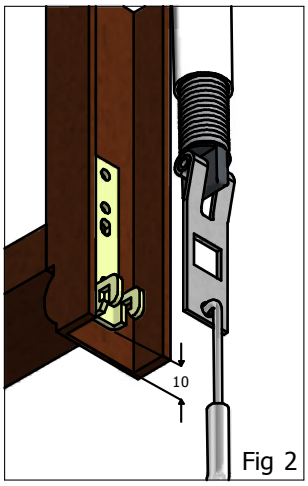

Fig 2: The UK118 bracket is then pulled down and the square hole located over the jaws on the UK120 bracket. The tension on the balance spring will hold the balance bracket in place. No screws should be fixed through the UK118 bracket.

MACHINED FRAME METHOD

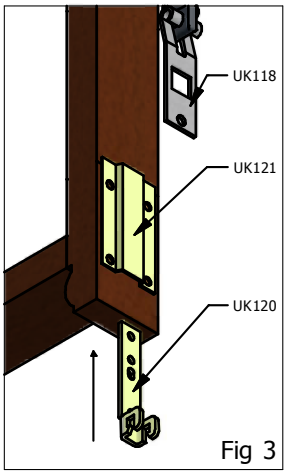

Fig 3: Fix UK121 to horn before sash is in place (Penetration of screws shoould be 10mm minimum). When sash is fitted, UK120 is slid into UK121 as shown, and it's bottom edge should be 10mm above the bottom of the horn.

Groove sizes
21mm x 21mm

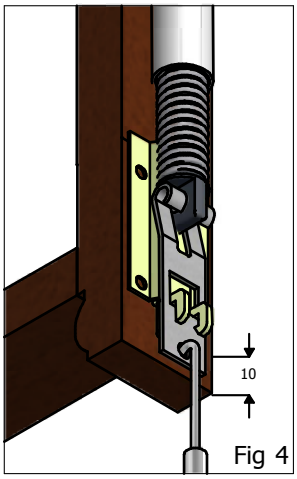

Fig 4: The UK118 bracket is then pulled down and the square hole located over the jaws on the UK120 bracket. The tension on the balance spring will hold the balance bracket in place. No screws should be fixed through the UK118 bracket.

DO NOT OPERATE THE WINDOW UNTIL THE TRAVEL STOPS ARE FITTED INTO POSITION. (SEE PAGES 8 & 9)

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CALDWELL
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Telephone 024 7643 7900

FRAME AND SASH PREPARATION OF TIMBER WINDOWS

TORSO E-BALANCES

Applications

Torso E-Balances are suitable to be used in Non-tilting VS Windows. These balances have a tube diameter of 25mm, which require a larger rebate detail to accept them.
Torso E-Balances have a higher weight band, ranging from 50.5KG - 65.0KG.
Caldwell Hardware recommend sashes to be a **MAXIMUM OF 35.0kg** when tilting, Anything above that weight is at the customers discretion.

(i) Machined Frame Method- **Groove sizes 30mm x 30mm**

Fig.1

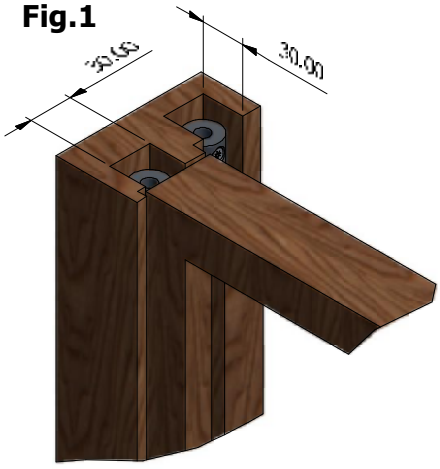


Fig.1 Frame rebate dimensions

Fig.2

Fully raise the sash and support with suitable blocks. Pull down the fixing bracket flush to the underside as shown

Fig.3

UK202 BOTTOM FIX TORSO BRACKET

Method for fixing E-Balance to sashes without Horns

(ii) Machined Sash Method- **Groove sizes 30mm x 30mm**

Fig.4

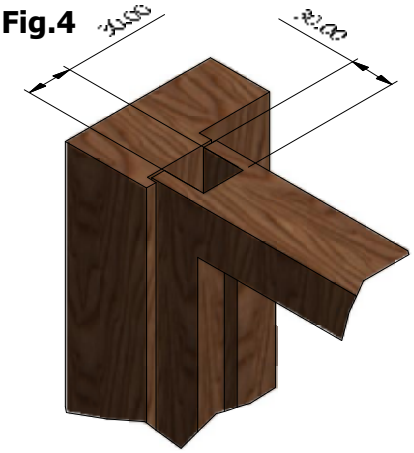
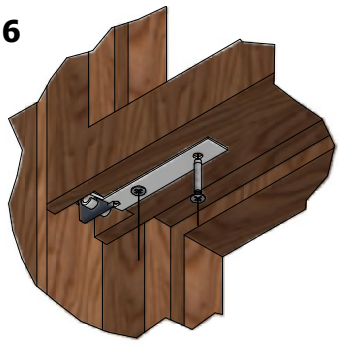


Fig.4 Sash Rebate dimensions

Fig.5

Raise the sash fully to the head and support with suitable blocks.
Align the UK202 bracket with the underside of the sash and ensure it is sitting flush.

Fig.6



Fix the sash using two woodscrews **(18mm Minimum penetration)** through the holes in the bracket as shown.

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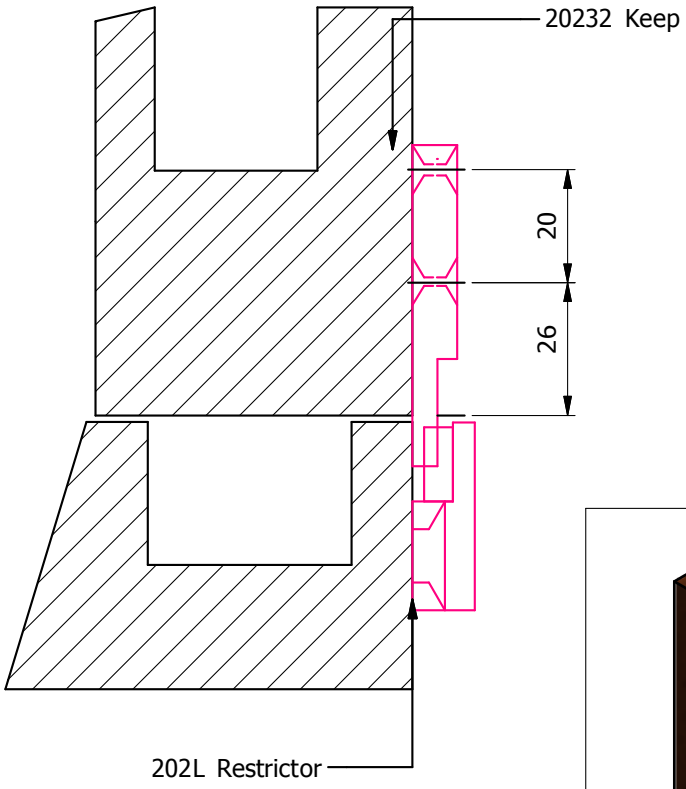
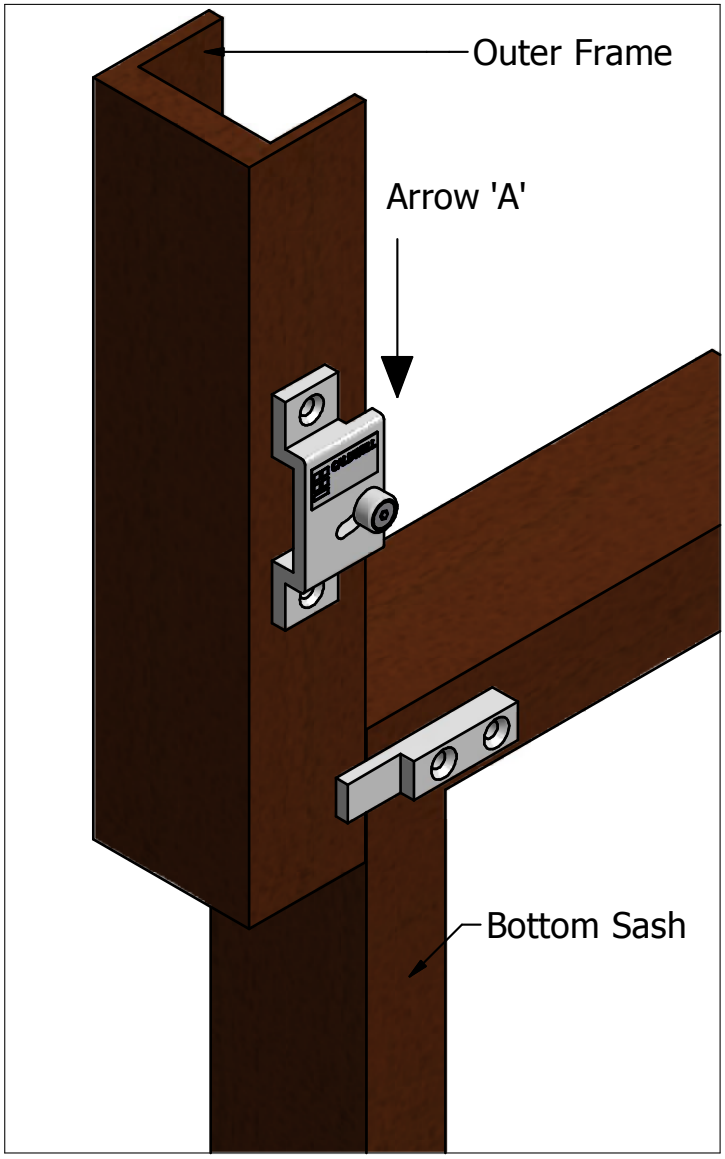
202 TRAVEL RESTRICTOR

PLAN VIEW on Arrow 'A'



ISOMETRIC VIEW



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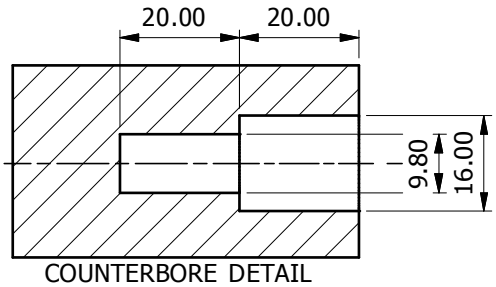
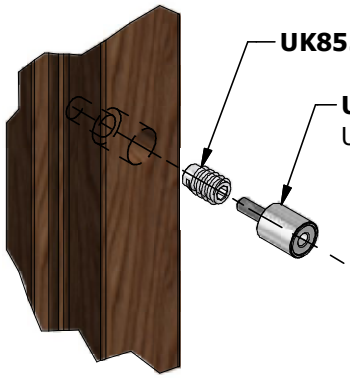
UK646 ROLA VS TRAVEL RESTRICTOR FITTING DETAILS

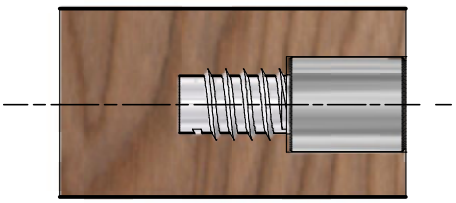


COUNTERBORE DETAIL



UK855 - FASTENER INSERT (ORDERED SEPARATELY)

UK646NICKEL - (ALSO AVAILABLE IN BRASS: UK646BRASS)

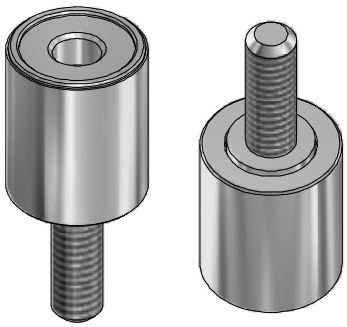


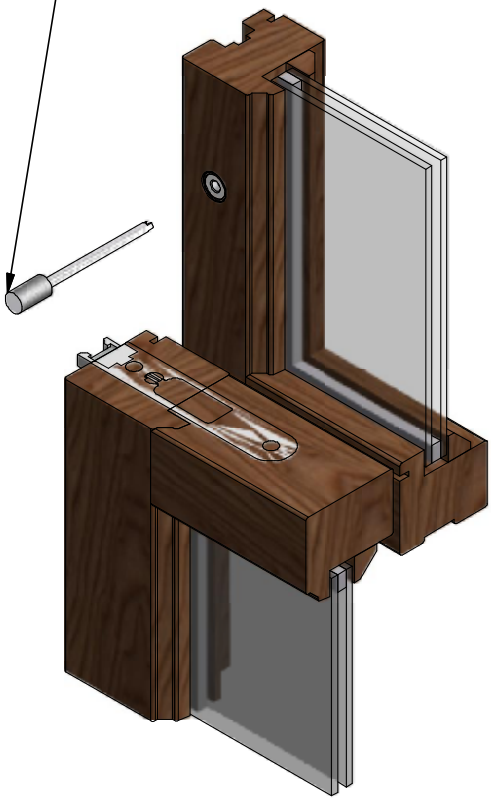
STEP 1: DRILL THE COUNTERBORE TO THE DIMENSIONS ABOVE

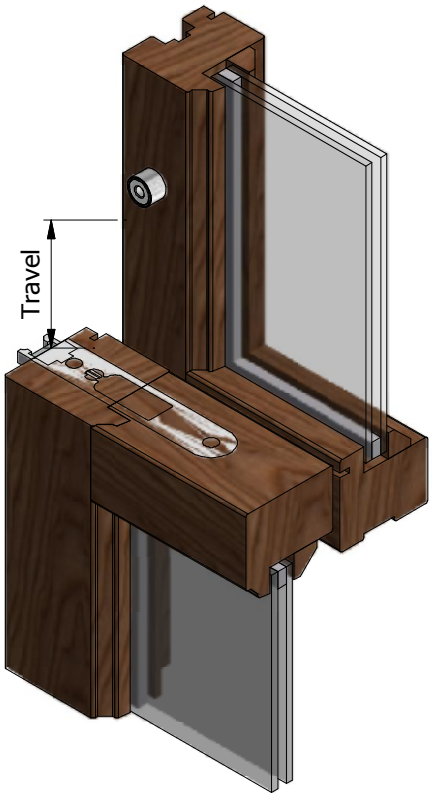
STEP 2: SCREW IN THE UK855 INTO THE COUNERBORE CLOCKWISE USING AN ALLEN KEY

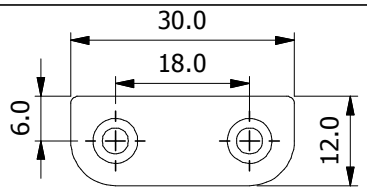
STEP 3: SCREW IN THE UK646 BY HAND

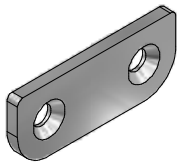
UK647 KEY -
TURN **CLOCKWISE** TO PROPEL THE RESTRICTOR INTO THE SASH.
TURN **ANTI-CLOCKWISE** TO PROPEL OUT OF THE SASH.











Also available for timber windows are strike plates to stop damage to the strike point on the meeting rails. These are also available in the same finishes as the travel restrictors.

ORDER CODES

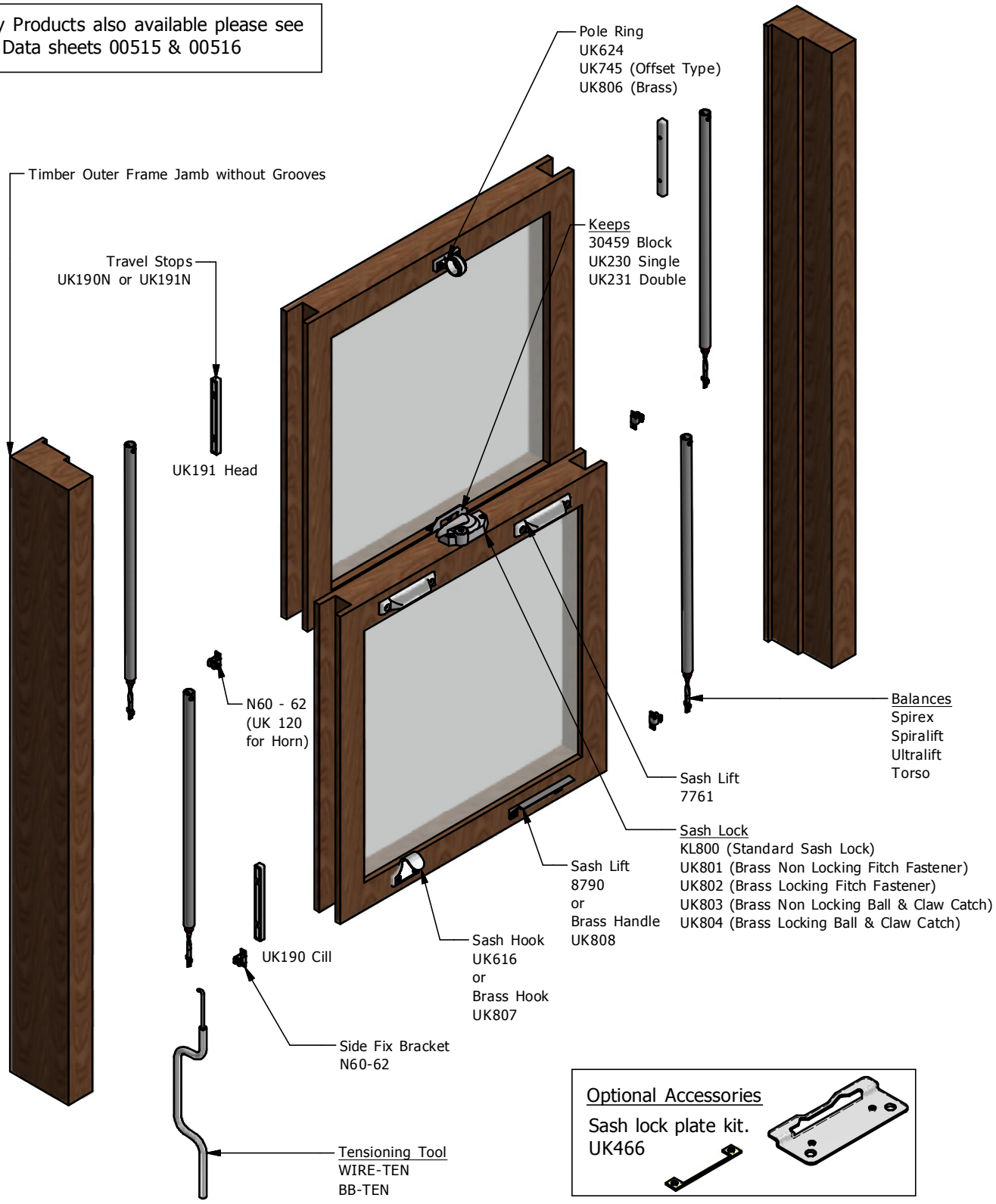
POLISHED CHROME
UK737CH
WHITE POWDER COAT
UK737HIPCAWHITE
POLISHED GOLD
UK737DG

NOTE: IF FITTING TO PVC PROFILES, USE RIVET-NUTS (NOT SUPPLIED BY CALDWELL) INTO THE REINFORCEMENT, INSTEAD OF THE UK855. IF IN ANY DOUBT, PLEASE CONTACT CALDWELL TECHNICAL DEPARTMENT.

CALDWELL
SOLUTIONS THAT SET NEW STANDARDS

Conventional Timber Vertical Sliders

Security Products also available please see Data sheets 00515 & 00516



Optional Accessories

Sash lock plate kit.
UK466

NB Other balance fixing brackets are available as per DATASHT-00104 (Page 4)

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CALDWELL
SOLUTIONS THAT SET NEW STANDARDS

CONVENTIONAL TIMBER VS BALANCE ORDER FORM

PLEASE SEND TO CALDWELL HARDWARE VIA EMAIL: SALES@CALDWELL.CO.UK OR FAX: 024 7643 7969

CUSTOMER DETAILS

Order No.

Contact:

Delivery Date:

Tel. No.

Fax No.

Balances housed in Outer Frame ☐ OR Balances housed in Sash ☐

Georgian Bars (Plant on type)	YES	☐	NO	☐
(If Yes- Specify no. Horizontal & no. Vertical Bars)	HORIZONTAL		VERTICAL	
Pre-tensioned balances only	YES	☐	NO	☐
Torso balances only	YES	☐	NO	☐
Wood Type	Softwood	☐	Hardwood	☐

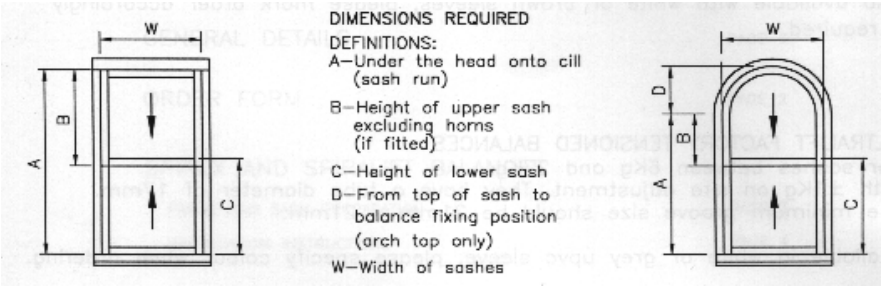
THIS ORDER FORM MUST ONLY BE USED WHEN ORDERING SASH BALANCES FOR USE WITH CONVENTIONAL TIMBER VERTICAL SLIDING WINDOWS

Ref.	QUANTITY OF WINDOWS	DIM "W" (mm)	DIM "A" (mm)	DIM "B" (mm)	DIM "C" (mm)	DIM "D" (mm)	SIZE OF HORN	GEORGIAN BARS (Tick)	GLAZING CONFIG. E.G. 6-12-6	GLAZED SASH WEIGHT (kg)	
								☐			UPPER
											LOWER
								☐			UPPER
											LOWER
								☐			UPPER
											LOWER
								☐			UPPER
											LOWER
								☐			UPPER
											LOWER

White Tubes		White travel Stops		Brown Tubes		Brown Travel Stops	

		Qty		Qty		Qty		Qty
Side Fix Brackets	UK121		UK120		UK212		UK835	
Bottom Fix Brackets	UK136		UK632		WS60-32			
Nyclad Brackets	WDST75-47		UK115N		UK114N		UK101N	

WINDOW DETAILS



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.

PLEASE REQUEST DATA SHEET 00363 FOR WINDOW DIMENSION TERMINOLOGY

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

CALDWELL

SOLUTIONS THAT SET NEW STANDARDS

CONVENTIONAL TIMBER ACCESSORIES ORDER FORM

TO: CALDWELL HARDWARE FAX: 024 7643 7969

CUSTOMER: ORDER No:

Please enter quantity required in boxes:

BALANCE TENSIONING TOOLS

Wire-Ten Tensioning Tool		BB Tensioning Tool	

SASH LOCKS

9600	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless		Black		Bronze	
Key for 9600 - 9114														
9400	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless		Black		Bronze	
KL800	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless					
NL800	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless					

KEEPERS

UK230	Bronze		Chrome		Dawn Gold		White		Brushed Stainless	
UK231	Bronze		Chrome		Dawn Gold		White		Brushed Stainless	
30459	Chrome		Dawn Gold		Legrand Gold		White		Brushed Stainless	

SASH LOCK PLATE

UK465	White		UK466	White	

SASH LIFTS & POLE RINGS

7761	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless		Black		Bronze	
8970	White		Chrome		Dawn Gold		Legrand Gold		Brushed Stainless		Black		Bronze	

UK184	Black		White								
UK616	Chrome		Dawn Gold		Legrand Gold		White		Brushed Stainless		
UK624	Chrome		Dawn Gold		Legrand Gold		White		Brushed Stainless		
UK745	Chrome		Dawn Gold		Legrand Gold		White		Brushed Stainless		

BRASS HARDWARE

	UK807	UK685	UK806	UK810	UK809	UK808	UK801	UK802	UK803	UK804
Lacquered Brass (LB)										
Chrome (CH)										
Brushed Nickel (BN)										

RESTRICTORS

PE401	Chrome		Dawn Gold		White		Brushed Stainless	
PE633	Chrome		Dawn Gold		White		Brushed Stainless	
202R	White		Silver Anodised					
202L	White		Silver Anodised					
20232	White		Silver Anodised					

BRUSH PILE – UK687

10 METRES		100 METRES		550 METRES	

BRUSH PILE HOLDER – UK688

10 x 1 METRE STRIPS (WHITE)		100 x 2.9 METRE STRIPS (WHITE)	
10 x 1 METRE STRIPS (BROWN)		100 x 2.9 METRE STRIPS (BROWN)	

BUBBLE SEAL – UK689

10 METRES		100 METERS	

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