

# BOX SASH WINDOW *FABRICATORS MANUAL*

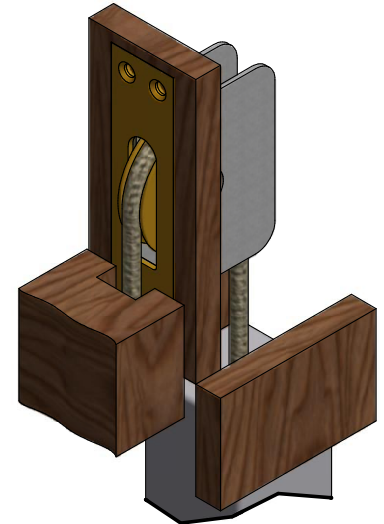
1st Edition



## **Cavendish Hardware Ltd,**

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Web Site: [www.cavendish-hardware.co.uk](http://www.cavendish-hardware.co.uk)

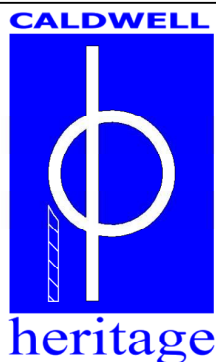


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## KEY FEATURES

- TRADITIONAL ROPE AND PULLEY VERTICAL SLIDING SYSTEM
- IDEAL FOR MEETING TRADITIONAL HERITAGE AND LISTED BUILDING REQUIREMENTS
- CHOICE OF BALL BEARING OR AXLE PULLEYS IN A VARIETY OF FINISH OPTIONS
- CHOICE OF LEAD OR CAST IRON WEIGHTS
- SASH CORD OR CHAIN OPTIONS
- VARIETY OF SASH WEIGHT CONNECTORS AND ACCESSORIES



## Introduction

### **What is a Traditional Box Sash Window?**

A BOX SASH WINDOW is a type of vertical sliding window based on traditional hardware, and a strong emphasis on heritage and time honoured aesthetics. Hardware consists of two pulleys per sliding sash balanced using either cast iron or lead weights.

Caldwell Hardware (UK) Ltd offer an extensive range of axle and ball bearing type pulleys in a variety of finishes to suit you and your customers application.

This manual is intended to give guidance and recommendations on how to prepare and assemble a traditional box sash window, in timber, using components designed and manufactured by Caldwell Hardware (UK) Ltd.

### **Why Choose Caldwell Weights and Pulleys?**

Caldwell Hardware (UK) Ltd offer an extensive range of traditional box sash hardware which is supported by our reputation for quality and consistency.

Traditionally recognised from the CALDWELL RT brand, Caldwell Hardware (UK) Ltd have underpinned the product range with unrivalled customer support, at both a general technical support level and on an individual customer basis.

Where recommended cutting sizes or deductions are given, these should be checked to ensure they are exactly applicable to your specific window design. If you have any special concerns then please contact us for assistance.

In addition to providing this manual and the general guidance within, we are pleased to advise window manufacturers on the use of box sash window components within their own bespoke designs.

**CALDWELL**  
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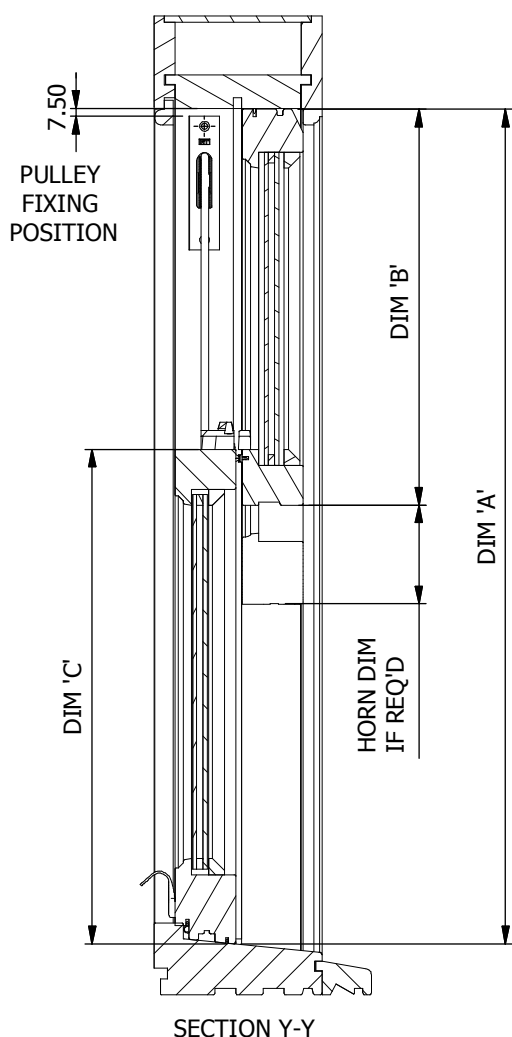
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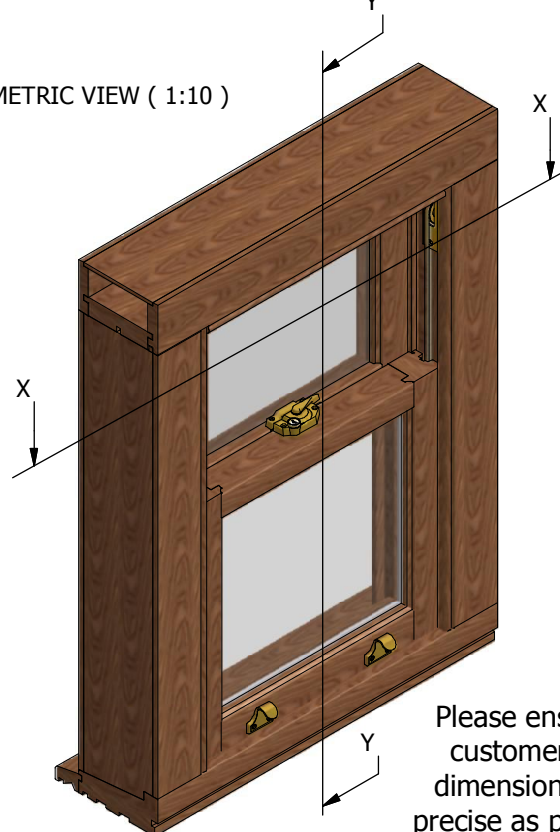
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## BOX SASH WINDOW GENERAL ARRANGEMENT

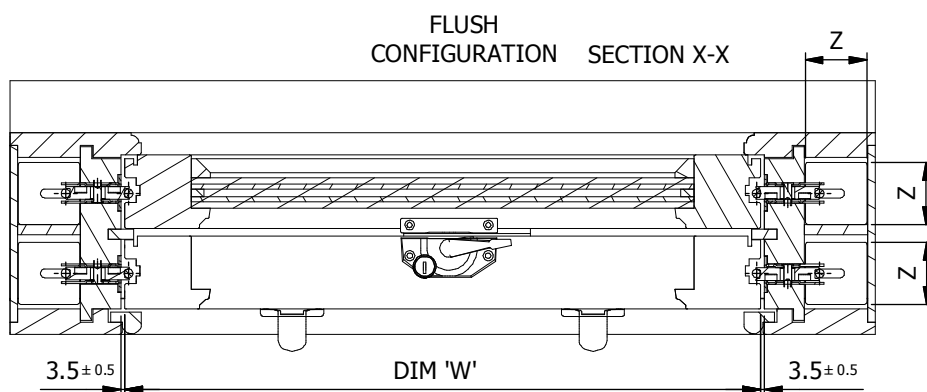
The details shown on this data sheet are of a typical general arrangement for a traditional BOX SASH window. Dimensions A,B,C and W are the dimensions required on our weights estimator form on page 13 in order to estimate the correct Pulley and Weights.



ISOMETRIC VIEW ( 1:10 )



Please ensure the customers sash dimensions are as precise as possible to enable an accurate estimation



### WEIGHT SIZES

The 'Z' dimensions for the weight should be equal or smaller than the pulley diameter. If a larger weight is required then it is recommended that the 'Z' dimension is kept as small as possible for your application. i.e. If the pulley is 2" diameter then the 'Z' dimensions should also measure 2" or less.

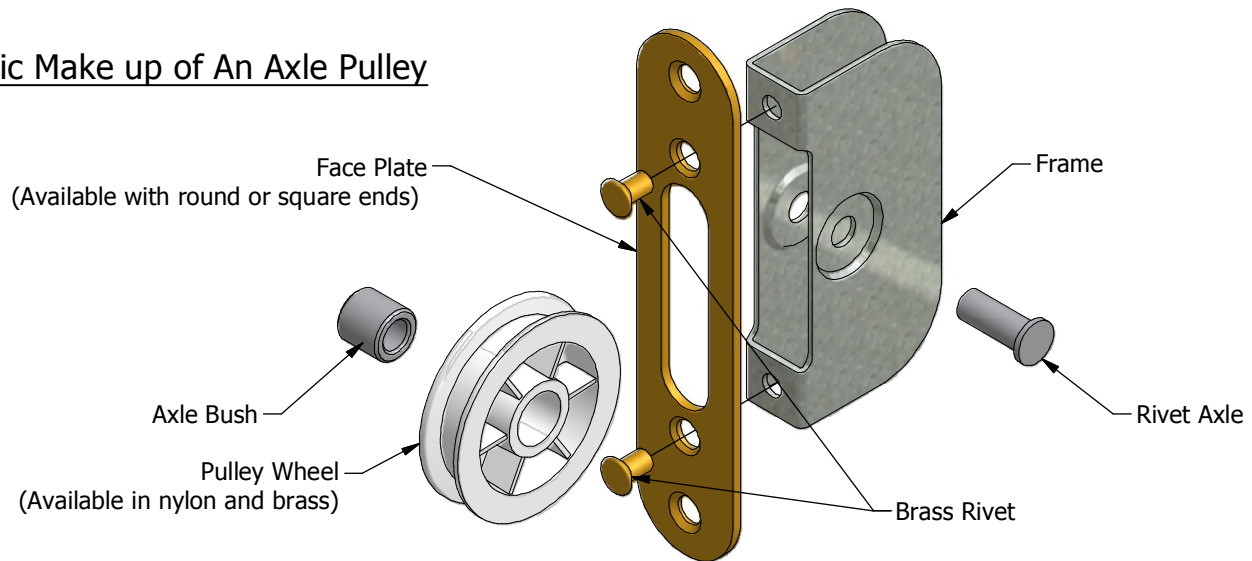
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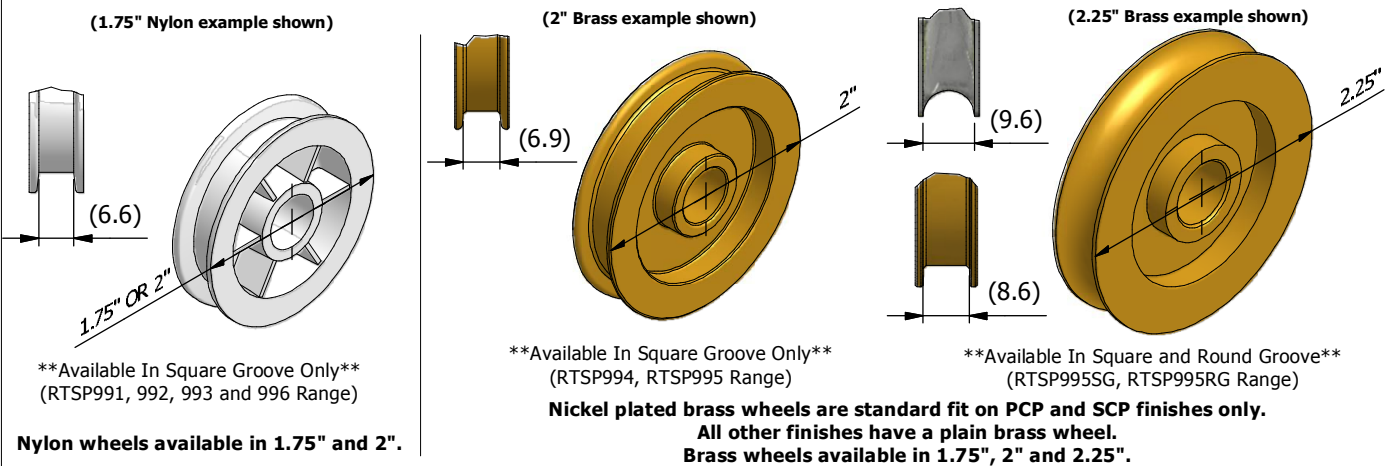
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## INTRODUCTION TO AXLE PULLEYS

### Basic Make up of An Axle Pulley



### Caldwell's Range of Axle Pulley Wheels

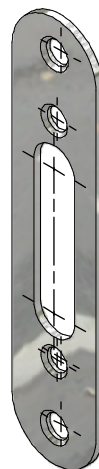


### Axle Pulley Face Plate Options

#### SQUARE CORNERS



#### RADIUS END (RE)



### Faceplate Finish Options

Galvanised  
 Bright Zinc Plated - BZP  
 Linished Brass - LIN  
 Polished Brass - PB  
 Polished Brass Laquered - PBL  
 Light Bronze - LBZ  
 Polished Chrome Plated - PCP  
 Satin Chrome Plated - SCP

**Some finishes are specific to different models so please see the quick reference matrix on page 7 for correct applications.**

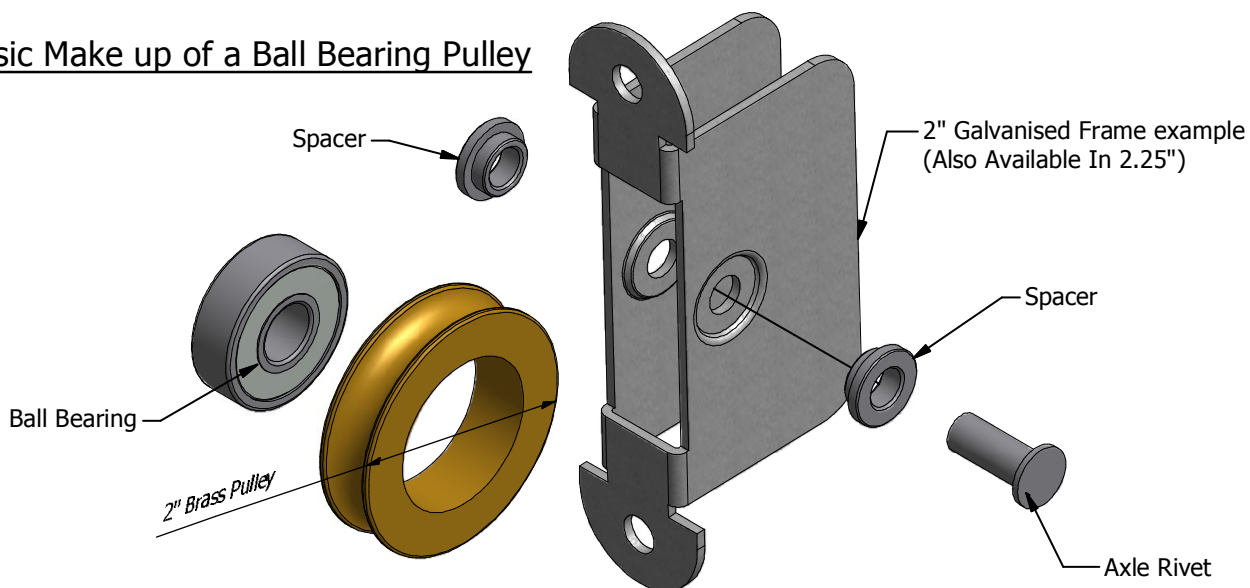
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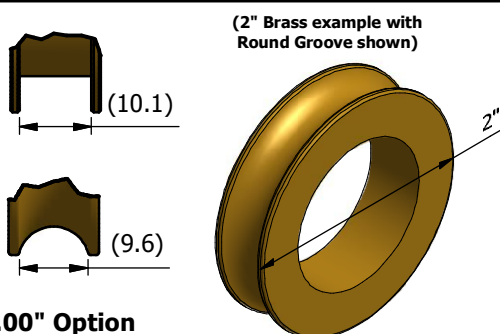
## INTRODUCTION TO BALL BEARING PULLEYS

### Basic Make up of a Ball Bearing Pulley



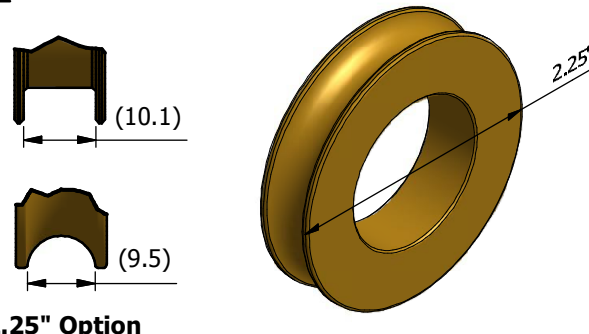
### Caldwell's Range of Ball Bearing Pulley Wheels

(2.25" Example with Round Groove Shown)



#### 2.00" Option

\*\*Available In Square and Round Groove \*\*  
(RTSPBBRG-2, 2RC, 2RE & RTSPBBSG-2, 2RC, 2RE Range)

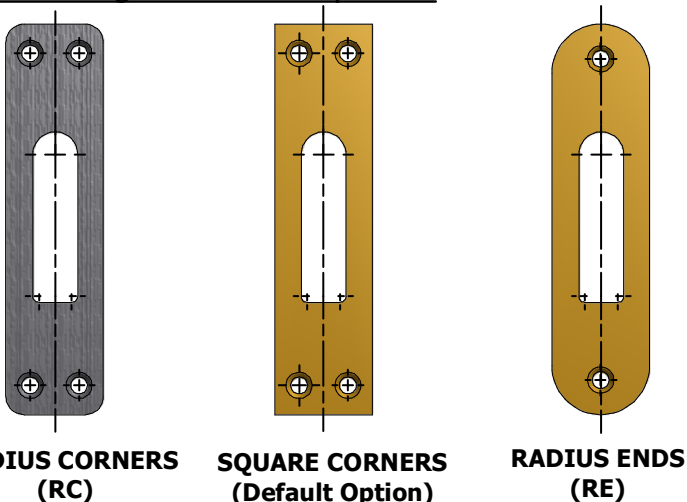


#### 2.25" Option

\*\*Available In Square and Round Groove\*\*  
(RTSPBBSG- 225, 225RC, 225RE & RTSPBBRG-225, 225RC, 225RE)

Nickel plated brass wheels are standard fit on PCP, SCP, BSS and PSS finishes only. All other finishes have a plain brass wheel.

### Ball Bearing Face Plate Options



#### Faceplate Finish Options

Linished Brass - LIN  
Polished Brass Laquered - PBL  
Polished Stainless Steel - PSS  
Brushed Stainless Steel - BSS

Some finishes are specific to different models  
so please see the quick reference matrix on page 7  
for correct applications.  
Faceplates are only sold as part of the entire pulley assembly  
and are not available for sale seperately.

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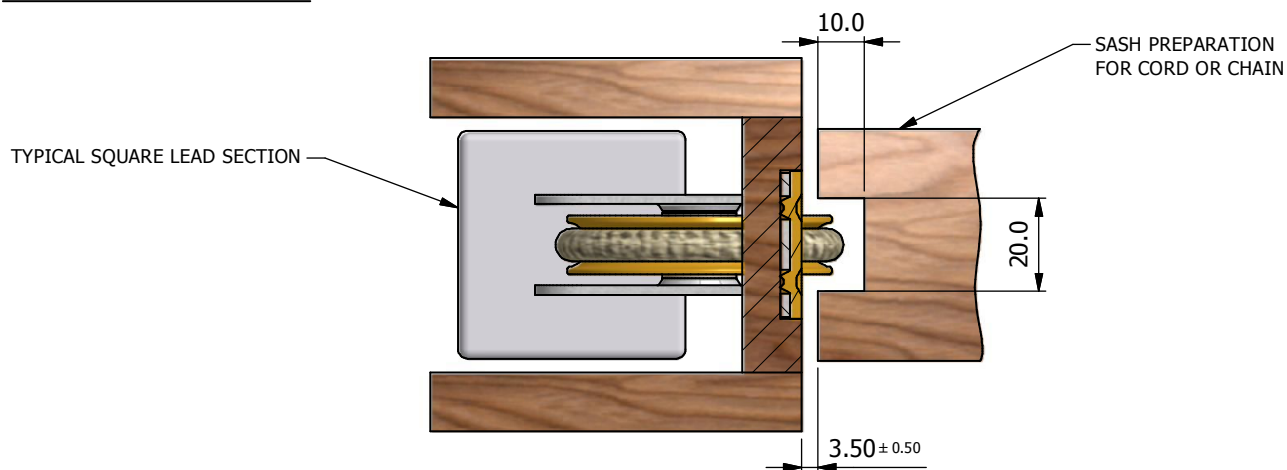


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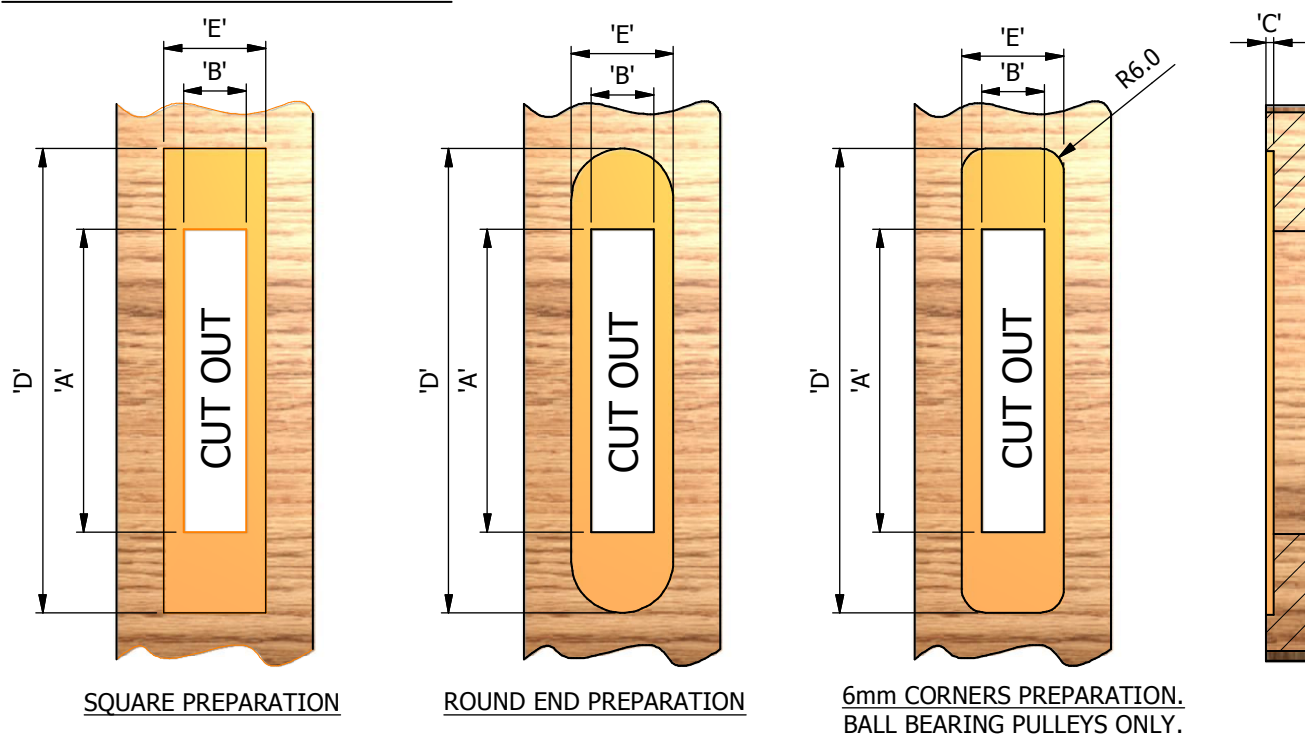
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## Sash & Jamb Routing Details For Weights & Pulleys

### BOX SASH SECTION



### TYPICAL ROUTING PROFILES



WINDOW JAMB PREPARATION DETAILS FOR PULLEYS

PULLEY SIZE	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'
1.75" AXLE (RTSP991/92/93/94/95/96)	77	16	2	117.5	25.5
2" AXLE (RTSP992/93/94/95)	84	16	2.7	127	29
2.25" AXLE (RTSP995RG/SG)	84	23	2.7	127	29
2" BALL BEARING (RTSPBBRG-2/ SG-2)	84	23	4.5	127	32
2.25" BALL BEARING (RTSPBBRG-225/SG-225)	84	23	4.5	127	32



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Telephone 024 7643 7900

## Pulleys Quick Reference Matrix

		Pulleys				Face Plates			Face Plate Finish Options							GALVANISED	ELECTRO BRASS	Max Sash Weight (Per Pair)
		Wheel Diameter	Groove Profile		Type (RTSP)	Radius Ends	Radius Corners	Square Corners										
																		
Axle Pulleys	Nylon Wheel	1.75" Nylon	✓		991	✓		✓								✓ *		25Kg
		1.75" Nylon	✓		992	✓		✓							✓ *		25Kg	
		1.75" Nylon	✓		993	✓		✓	✓	✓	✓ *						25Kg	
		1.75" Nylon	✓		996	✓		✓								✓ *	25Kg	
		2" Nylon	✓		992	✓		✓						✓ *			25Kg	
		2" Nylon	✓		993	✓		✓	✓	✓	✓ *						25Kg	
	Brass Wheel	1.75" Brass	✓		994	✓		✓						✓ *			50Kg	
		1.75" Brass	✓		995	✓		✓	✓	✓	✓ *	✓					50Kg	
		2" Brass	✓		994	✓		✓						✓ *			50Kg	
		2" Brass	✓		995	✓		✓	✓	✓	✓ *	✓					50Kg	
		2.25" Brass	✓		994			✓						✓ *			50Kg	
		2.25" Brass	✓		995SG	✓		✓	✓	✓	✓ *	✓					50Kg	
		2.25" Brass		✓	995RG	✓		✓	✓	✓	✓ *	✓					50Kg	

Ball Bearing Pulleys	Pulleys				Face Plates			Face Plate Finish Options				Max Sash Weight (Per Pair)
	Wheel Diameter	Groove Profile		Type (RTSP)	Radius Ends	Radius Corners	Square Corners	BSS	PSS	PBL	LIN	
												
	2" Brass		✓	BBRG	✓	✓	✓	✓	✓	✓	✓	75Kg
	2" Brass	✓		BBSG	✓	✓	✓	✓	✓	✓	✓	75Kg
	2.25" Brass		✓	BBRG	✓	✓	✓	✓	✓	✓	✓	75Kg
	2.25" Brass	✓		BBSG	✓	✓	✓	✓	✓	✓	✓	75Kg

Finish Code	Finish Description
BZP	Bright Zinc Plate
SCP	Satin Chrome Plate
PCP	Polished Chrome Plate
PSS	Polished Stainless Steel
BSS	Brushed Stainless Steel

Finish Code	Finish Description
PBL	Polished Brass Lacquered
LIN	Linished Brass Lacquered
LBZ	Light Bronze
PB	Polished Brass
PRE GALVANISED	Galvanised finish - Standard finish on RTSP991/2/4 ranges
ELECTRO BRASS	Electro brass - Standard finish on RTSP996 range

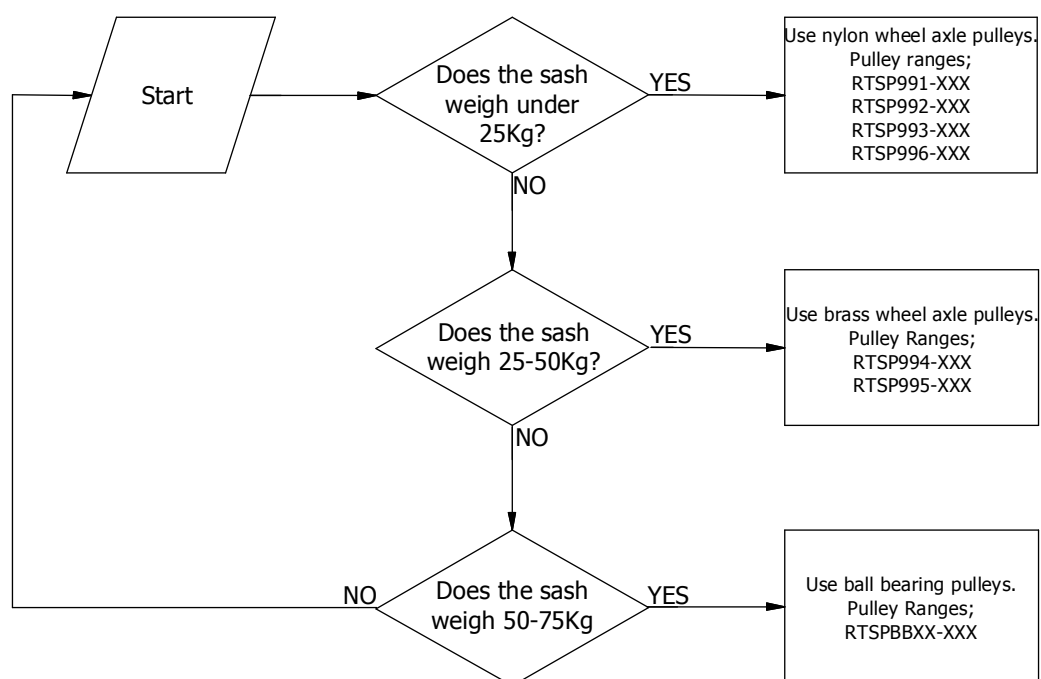
\* SHOWS THE FACEPLATE FINISH THAT WILL BE SUPPLIED IF NO FINISH CODE IS ADDED.

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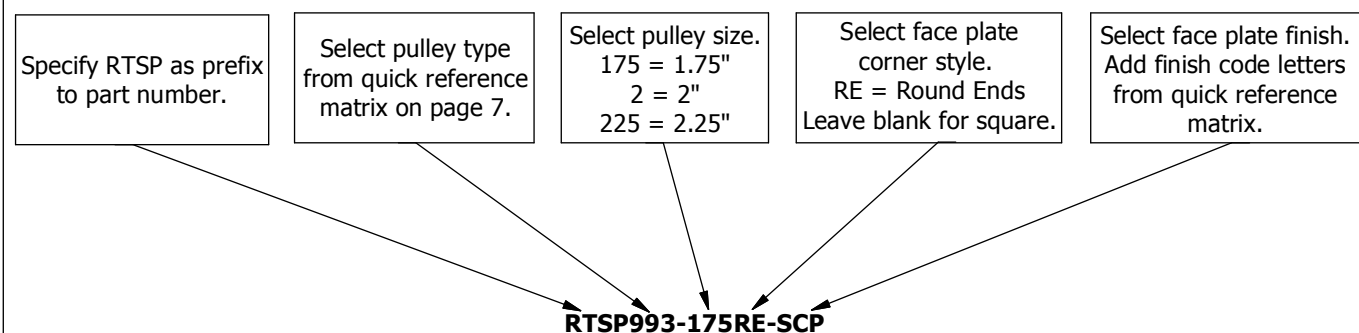


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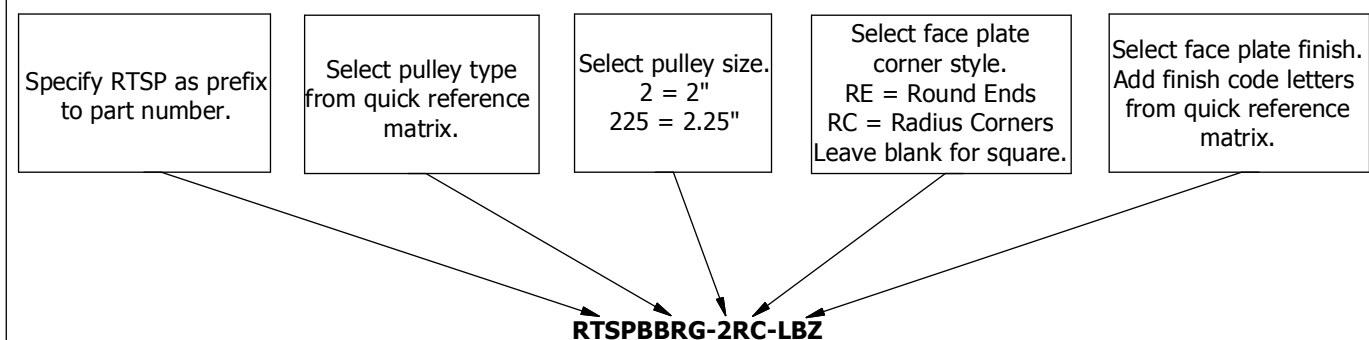
## Caldwell R&T Pulley Selection



### Axle Pulley Part Number Explanation



### Ball Bearing Pulley Part Number Explanation



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## Caldwell R&T Weights and Pulley Accessories

### Caldwell's Range Of Pulley Accessories

#### SASH AND WEIGHT CONNECTORS

TYPE	DESCRIPTION	QTY PER SET	PART NO.
	Bolt Weight Connector - RTSC4 Chain	4 per kit	RTSCC01
	Bolt Weight Connector - RTSC3 Chain		RTSCC02
	Bolt Weight Connector - RTSC1 Chain		RTSCC07
	Loop Weight Connector		RTSCC03
	Sash Plate and Bar - RTSC4 Chain		RTSCC04
	Sash Plate and Bar - RTSC3 Chain		RTSCC05
	Sash Plate and Bar - RTSC1 Chain		RTSCC08
	Lead Weight Bolt Connector - RTSC01 Chain		RTSCC010
	Lead Weight Bolt Connector - RTSC04 Chain		RTSCC011
	Lead Weight Bolt Connector - RTSC03 Chain		RTSCC013
	Washer and Split Pin Connector		RTSCC06
	Screw in Pulley Short Thread	1 per kit	RTSCC012
	Screw in Pulley Long Thread	1 per kit	RTSCC014

#### SASH CHAIN

TYPE	MATERIAL SPEC.	LENGTH	MAX. SASH WEIGHT	BREAK STRAIN	COMPATIBLE PULLEY
	MATERIAL / FINISH	FT	kg / lbs	kg / lbs	DIA. / TYPE
RTSC1-50	STEEL LINKS (BZP) BRONZE RIVETS	50	75 / 165	680 / 1500	2" & 2.25" BBRG ONLY
RTSC3-50	STEEL LINKS (BZP) BRONZE RIVETS	50	51 / 112	454 / 1000	2.25" PULLEYS
RTSC4-50	STEEL LINKS (BZP) BRONZE RIVETS	50	32 / 70	340 / 750	ALL SQ. GROOVE PULLEYS

#### SASH CORD

TYPE	MATERIAL SPEC.	LENGTH	BREAK STRAIN	SUITABLE PULLEY
	MATERIAL / FINISH	m	kg	DIA. / TYPE
RTSCORD3W	No. 3 Waxed Cotton Sash Cord (Dia. 5mm)	12.5	160	1.75", 2"
RTSCORD4N	No. 4 Nylon Sash Cord (Dia. 6mm)	12.5	450	1.75", 2", 2.25"
RTSCORD4W	No. 4 Waxed Cotton Sash Cord (Dia. 6mm)	12.5	300	1.75", 2", 2.25"
RTSCORD5W	No. 5 Waxed Cotton Sash Cord (Dia. 7mm)	12.5	310	1.75", 2", 2.25"
RTSCORD6W	No. 6 Waxed Cotton Sash Cord (Dia. 8mm)	12.5	340	2", 2.25"

**CALDWELL HARDWARE (UK) LTD RECOMMENDS THE USE OF CAST IRON WEIGHTS WHERE POSSIBLE. LEAD WEIGHTS SHOULD ONLY BE USED WHERE THE WINDOW DIMENSIONS DO NOT ALLOW THE EXTRA LENGTH OF CAST IRON WEIGHTS. PLEASE REFER TO OUR 'SAFETY INFORMATION WHEN HANDLING LEAD PAGE' ON PAGE 18 BEFORE HANDLING LEAD WEIGHTS.**

### Lead Weight Part Number Explanation

Specify RTSWL as prefix to part number.

Weight Fixing Connector  
C = Cross Drilled 0.75"  
E = M6 Eyebolt  
H = M6 Hook  
I = M6 Insert

Specify size of weight square section.  
100 = 1"  
125 = 1.25"  
150 = 1.5"  
175 = 1.75"  
200 = 2"  
225 = 2.25"  
250 = 2.5"

Determine sash weight.  
Divide by 2 (two weights per sash) and enter result rounded to the nearest lb.  
(1 kg = 2.2lb)

**RTSWL-H-175-20**

### Cast Iron Weights

Cast iron weights are available in the standard sizes shown in the table on the right. To get the correct weight, determine the weight of the sash and divide this by 2 (two weights per sash). This will calculate the required weight. Order the nearest available standard weights and then use additional make weights to achieve the required weight.

e.g. A 50lb sash would require two 25lb weights. This would be achieved by ordering two 24lb weights and two 1lb make weights.

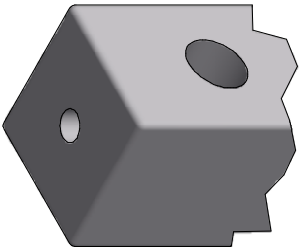
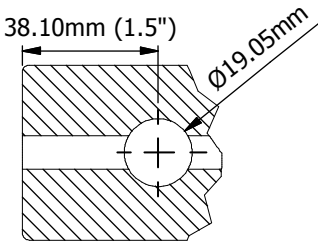
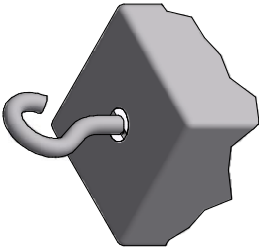
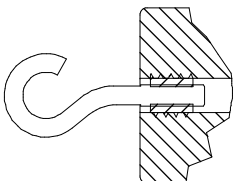
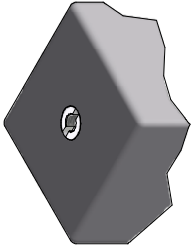
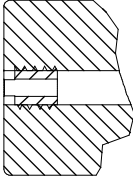
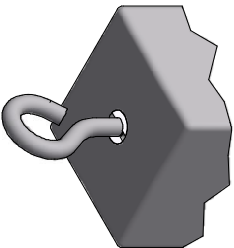
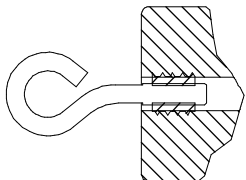
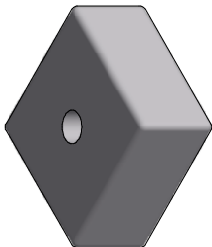
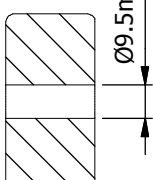
Part No.	Sash Weight	Weight Dimensions
RTSW005	1/2lb 0.23Kg	Make Weight
RTSW01	1lb 0.45Kg	Make Weight
RTSW04	4lb 1.81Kg	Dia.36x279
RTSW06	6lb 2.72Kg	Dia.40x330
RTSW08	8lb 3.63Kg	Dia.37x510
RTSW10	10lb 4.54Kg	Dia.42x476
RTSW12	12lb 5.44Kg	Dia.42x570
RTSW14	14lb 6.35Kg	Dia.45x595
RTSW16	16lb 7.26Kg	Dia.45x640
RTSW18	18lb 8.17Kg	45x45x580
RTSW20	20lb 9.07Kg	48x48x570
RTSW22	22lb 9.98Kg	50x50x560
RTSW24	24lb 10.89Kg	49x49x688
RTSW26	26lb 11.80Kg	49x49x749
RTSW28	28lb 12.70Kg	49x49x811
RTSW30	30lb 13.61Kg	49x49x870

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## LEAD WEIGHT INFORMATION (CORD USE)

CROSS-DRILLED WEIGHTS + 1.5" SIZE	 	PART No.	-----	-----	-----	RTSWL-C-150-WEIGHT	RTSWL-C-175-WEIGHT	RTSWL-C-200-WEIGHT	RTSWL-C-225-WEIGHT	RTSWL-C-250-WEIGHT
M6 HOOK 1-30lbs	 	PART No.	RTSWL-H-100-WEIGHT	RTSWL-H-125-WEIGHT	RTSWL-H-150-WEIGHT	RTSWL-H-175-WEIGHT	RTSWL-H-200-WEIGHT	RTSWL-H-225-WEIGHT	RTSWL-H-250-WEIGHT	
M6 INSERT 1-30lbs	 	PART No.	RTSWL-I-100-WEIGHT	RTSWL-I-125-WEIGHT	RTSWL-I-150-WEIGHT	RTSWL-I-175-WEIGHT	RTSWL-I-200-WEIGHT	RTSWL-I-225-WEIGHT	RTSWL-I-250-WEIGHT	
M6 EYE-BOLT 1-30lbs	 	PART No.	RTSWL-E-100-WEIGHT	RTSWL-E-125-WEIGHT	RTSWL-E-150-WEIGHT	RTSWL-E-175-WEIGHT	RTSWL-E-200-WEIGHT	RTSWL-E-225-WEIGHT	RTSWL-E-250-WEIGHT	
MAKE WEIGHT 1-30lbs	 	PART No.	RTSWL-M-100-WEIGHT	RTSWL-M-125-WEIGHT	RTSWL-M-150-WEIGHT	RTSWL-M-175-WEIGHT	RTSWL-M-200-WEIGHT	RTSWL-M-225-WEIGHT	RTSWL-M-250-WEIGHT	

**NOTE:** FOR OPERATIONAL REASONS LEAD WEIGHTS MAY BE MECHANICALLY JOINTED. THIS JOINTING HAS NO AFFECT ON WEIGHT PERFORMANCE.

**NOTE:** IF ORDERED SEPERATELY, THE PART NUMBERS FOR THE ATTACHMENTS ARE:

HOOK: RT060-525



INSERT: RT060-509



EYE-BOLT: RT060-508



### WEIGHT SIZES

100 = 1"  
125 = 1.25"  
150 = 1.5"  
175 = 1.75"  
200 = 2"  
225 = 2.25"  
250 = 2.5"

**NOTE:** THE ABOVE WEIGHTS AND FITTINGS ARE ONLY FOR LEAD. FOR CAST IRON WEIGHT FITTINGS SEE MAN-0039-09. THIS SHEET ALSO INCLUDES CHAIN INFORMATION

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## Caldwell R&T Weights and Pulleys Quick Order Form

<b>Company Name:</b>	
<b>Delivery Address:</b>	
<b>Contact:</b>	

<b>Order No:</b>	
<b>Order Date:</b>	
<b>Tel No:</b>	
<b>Fax No.</b>	
<b>E-mail Address:</b>	
<b>Required Delivery Date:</b>	

This form is for use by customers who have a good understanding of their required products. If you are unsure of which product you require then please use the full order forms on the following pages.

<b><u>Pulleys</u></b>	<b>PART NO.</b>	<b>QTY</b>
Refer to the pulley selection page (8) and the quick reference matrix on page 7 to identify the required pulley and to determine the part number. Complete the part number and enter the quantity required.	RTSP - -	
	RTSP - -	
	RTSP - -	
	RTSP - -	
	RTSP - -	

<b><u>Sash Cord and Chain</u></b>	<b>PART NO.</b>	<b>QTY</b>
Select the required cord or chain from the accessories section of page 9 and enter the part number and quantity. Ensure that the selection is compatible with the chosen pulley. i.e. Chain for square groove, cord for round. The part numbers should be entered after the RT prefix.	RT	
	RT	
	RT	
	RT	

<b><u>Lead and Cast Iron Weights</u></b>	<b>PART NO.</b>	<b>QTY</b>
Use the weights section of page 9 to determine the correct part numbers for the required weights. Complete the part numbers after the RT prefix and enter the quantity.	RT	
	RT	
	RT	
	RT	
	RT	
	RT	

<b><u>Pulley Accessories</u></b>	<b>PART NO.</b>	<b>QTY</b>
Refer to the accessories range on page 9. Enter the part number of any required parts after the RT prefix and the quantity required.	RT	
	RT	
	RT	
	RT	
	RT	
	RT	

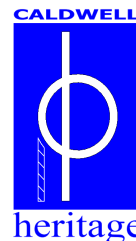
**FAX TO CALDWELL HARDWARE (UK) LTD ON 024 7643 7969**

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

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.

**CALDWELL**

SOLUTIONS THAT SET NEW STANDARDS

**Axle Pulleys Order Form**

<b>Company Name:</b>	
<b>Delivery Address:</b>	
<b>Contact:</b>	

<b>Order No:</b>	
<b>Order Date:</b>	
<b>Tel No:</b>	
<b>Fax No:</b>	
<b>E-mail Address:</b>	
<b>Required Delivery Date:</b>	
<b>(Allow 3 working days for standard finishes)</b>	

For Ordering Guidance Please Refer to **Manual MAN-0039 Pages 4, 6, 7 & 8**

If you would prefer to order using part numbers please use the quick order form MAN-0039-10

**FOR 'AXLE PULLEYS' CONTINUE**

<b>AXLE TYPE</b>	'Axle Type' <input checked="" type="checkbox"/>	<b>Quantity (Specify)</b>	
------------------	---	---------------------------	--

**Step 1**  
(Please tick Req'd Box)



**FOR BALL BEARING  
TYPE ORDER FORM  
OF354**



<b>PULLEY TYPE</b>	NYLON <input type="checkbox"/> BRASS <input type="checkbox"/>
--------------------	--

**Step 2**  
(Please tick Req'd Box)



<b>PULLEY DIAMETER</b>	1.75" <input type="checkbox"/> 2.00" <input type="checkbox"/> 2.25" <input type="checkbox"/>
<b>2.25 BRASS ONLY</b>	

<b>FACE PLATE PROFILE</b>	RADIUS ENDS <input type="checkbox"/> SQUARE CORNERS <input type="checkbox"/>
---------------------------	---

**Step 3**  
(Please tick Req'd Boxes)



<b>PULLEY GROOVE</b>	ROUND <input type="checkbox"/> SQUARE <input type="checkbox"/>
<b>2.25 PULLEY ONLY</b>	

<b>FINISH OPTIONS</b>	BRUSHED STAINLESS STEEL <input checked="" type="checkbox"/> GALVANISED <input type="checkbox"/> SATIN CHROME PLATE <input type="checkbox"/> POLISHED CHROME PLATE <input type="checkbox"/> POLISHED STAINLESS STEEL <input checked="" type="checkbox"/>
-----------------------	---

**Step 4**  
(Please tick Req'd Boxes)



<b>FINISH OPTIONS</b>	POLISHED BRASS <input type="checkbox"/> POLISHED BRASS LACQUERED <input type="checkbox"/> FINISHED BRASS <input type="checkbox"/> LIGHT BRONZE <input type="checkbox"/> BRIGHT ZINC PLATE <input type="checkbox"/> ELECTRO BRASS <input type="checkbox"/>
-----------------------	--

**PART NUMBER  
GENERATED**

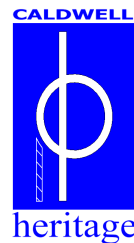
**COMPLETE**

**FAX TO CALDWELL HARDWARE (U.K.) LIMITED ON 024 7643 7969**

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

**CALDWELL**

SOLUTIONS THAT SET NEW STANDARDS

**Ball Bearing Pulleys Order Form**

<b>Company Name:</b>	
<b>Delivery Address:</b>	
<b>Contact:</b>	

<b>Order No:</b>	
<b>Order Date:</b>	
<b>Tel No:</b>	
<b>Fax No:</b>	
<b>E-mail Address:</b>	
<b>Required Delivery Date:</b>	
<b>(Allow 3 working days for standard finishes)</b>	

For Ordering Guidance Please Refer to **Manual MAN-0039 Pages 5, 6, 7 & 8**

If you wish to order using part numbers please refer to MAN-0039-10 for the quick order form.

**FOR 'BALL BEARING PULLEYS' CONTINUE**

<b>BALL BEARING TYPE</b>		<input checked="" type="checkbox"/>
	Quantity (Specify)	

**Step 1**  
(Please tick Req'd Box)

<b>AXLE TYPE</b>	<b>FOR AXLE TYPE ORDER FORM OF353</b>
------------------	---------------------------------------

**Step 2**  
(Please tick Req'd Box)

<b>PULLEY TYPE</b>		<input checked="" type="checkbox"/>
--------------------	--	-------------------------------------

<b>PULLEY DIAMETER</b>		2.00" Max 50.0 Kg <input type="checkbox"/>
		2.25" Max 75.0 Kg <input type="checkbox"/>

**Step 3**  
(Please tick Req'd Boxes)

<b>FACE PLATE PROFILE</b>		RADIUS ENDS <input type="checkbox"/> SQUARE CORNERS <input type="checkbox"/> RADIUS CORNERS <input type="checkbox"/>
---------------------------	--	--

<b>PULLEY GROOVE</b>		ROUND (FOR CORD) <input type="checkbox"/> SQUARE (FOR CHAIN) <input type="checkbox"/>
----------------------	--	--

**Step 4**  
(Please tick Req'd Boxes)

<b>FINISH OPTIONS</b>		BRUSHED STAINLESS STEEL <input type="checkbox"/> GALVANISED <input checked="" type="checkbox"/> SATIN CHROME PLATE <input type="checkbox"/> POLISHED CHROME PLATE <input type="checkbox"/> POLISHED STAINLESS STEEL <input type="checkbox"/>
-----------------------	--	--

<b>FINISH OPTIONS</b>		POLISHED BRASS <input type="checkbox"/> POLISHED BRASS LACQUERED <input type="checkbox"/> FINISHED <input type="checkbox"/> LIGHT BRONZE <input type="checkbox"/> BRIGHT ZINC PLATE <input type="checkbox"/>
-----------------------	--	--

**PART NUMBER GENERATED**

**COMPLETE**

**FAX TO CALDWELL HARDWARE (U.K.) LIMITED ON 024 7643 7969**

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

# CALDWELL

SOLUTIONS THAT SET NEW STANDARDS

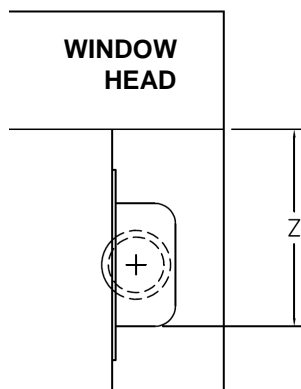
## CALDWELL CAST IRON & LEAD WEIGHT ESTIMATOR

<b>CUSTOMER DETAILS</b>	<b>ORDER No.</b>
	<b>CONTACT:</b>
	<b>DELIVERY DATE:</b>
	<b>TEL No.</b>
	<b>FAX No.</b>

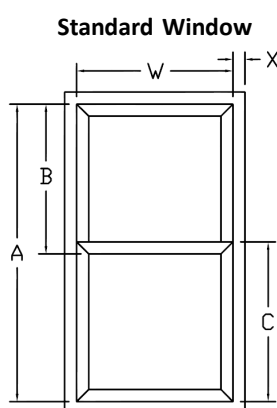
MATERIAL (TICK)	
CAST IRON WEIGHT REQUIRED	
LEAD WEIGHT REQUIRED	

WOOD TYPE (TICK)	
SOFTWOOD	
HARDWOOD	

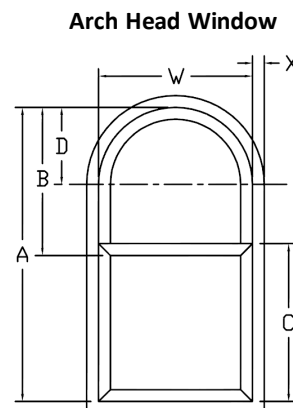
**NOTE:** If Cast Iron weights are selected, but are not possible to be used due to the window size, Lead Weights will be calculated instead. It is presumed that reduced travel is not acceptable.



**A** - Under the head onto sill (sash run).  
**B** - Top sash height (excluding horns if fitted).  
**C** - Bottom sash Height.  
**D** - Arch height (if applicable).  
**W** - Sash width  
**X** - Box section size (smallest cross section size of a weight that will fit).  
**Z** - Underside of the head to the bottom of the pulley chassis. Standard & Arch Head Windows



**Standard Window**



**Arch Head Window**

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

**THIS IS AN ESTIMATE: We cannot accept responsibility for goods supplied incorrectly if accurate sash weights have not been provided.**

<b>"Z"</b> (mm)	
--------------------	--

<b>"X"</b> (TICK)	25.4mm (1")		31.8mm (1.25")		38.1mm (1.5")		44.5mm (1.75")		50.8mm (2")		57.2mm (2.25")		63.5mm (2.5")
----------------------	----------------	--	-------------------	--	------------------	--	-------------------	--	----------------	--	-------------------	--	------------------

GEORGIAN BARS (PLANT ON TYPE ONLY) (IF YES- SPECIFY NO. HORIZONTAL & NO. VERTICAL BARS PER SASH)							YES	NO
							HORIZONTAL	VERTICAL

REF.	QTY OF WINDOWS	DIM "W" (mm)	DIM "A" (mm)	DIM "B" (mm)	DIM "C" (mm)	DIM "D" (mm)	SIZE OF HORN	GEO BARS (TICK)	GLAZING CONFIG E.G. 4-16-4	GLAZED SASH WEIGHT (lbs)	
											UPPER
											LOWER
											UPPER
											LOWER
											UPPER
											LOWER
											UPPER
											LOWER

LEAD WEIGHT CONNECTORS (TICK)							
CROSS DRILLED (ON WEIGHTS 1½" SQUARE AND ABOVE)		HOOK BOLT (ON WEIGHTS UP TO 30LBS)		EYE BOLT (ON WEIGHTS UP TO 30LBS)		INSERT (ON WEIGHTS UP TO 30LBS)	

CAST IRON WEIGHT CONNECTORS	
FILL IN PART NUMBER REQUIRED (SEE R&T MANUAL-0039)	

ALL OTHER ACCESSORIES CAN BE FOUND ON THE ACCESSORIES ORDER FORM (i.e. PULLEYS, MAKE-WEIGHTS, SASH LOCKS, SASH LOCK KEEPS & SASH LIFTS) - PLEASE CONTACT CALDWELL TECHNICAL FOR MORE INFORMATION (AVAILABLE PRODUCTS SHOWN IN MANUAL-0039).

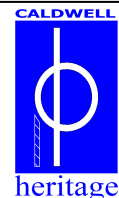
**THIS ORDER IS ACCEPTED UNDER OUR CURRENT 'TERMS & CONDITIONS OF SALE' COPIES AVAILABLE UPON REQUEST.**



# CALDWELL




SOLUTIONS THAT SET NEW STANDARDS






## Weight & Pulleys Accessories Order Form








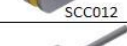


<b>Company Name:</b>	
<b>Delivery Address:</b>	
<b>Contact:</b>	

<b>Order No:</b>	
<b>Order Date:</b>	
<b>Tel No:</b>	
<b>Fax No:</b>	
<b>E-mail Address:</b>	
<b>Req'd Delivery Date:</b>	

SASH CHAIN							
TYPE	SPECIFICATION	LENGTH	MAX. SASH WEIGHT	BREAK STRAIN	COMPATIBLE PULLEY	SPECIFY TYPE REQ'D	REEL QTY REQ'D
(RT)	(Material/ Finish)	(FT)	(Kg / lbs)	(kg / lbs)	(DIA/ TYPE)	(TICK BOX(ES)) <input checked="" type="checkbox"/>	(EACH- PLEASE SPECIFY)
 SC1-50	STEEL LINKS (BZP) & BRONZE RIVETS	50	75 / 165	680 / 1500	2" & 2.25" BBRG ONLY		
 SC3-50	STEEL LINKS (BZP) & BRONZE RIVETS	50	51 / 112	454 / 1000	2.25" PULLEYS		
 SC4-50	STEEL LINKS (BZP) & BRONZE RIVETS	50	32 / 70	340 / 750	ALL SQ GROOVE TYPES		

SASH CORD						
TYPE	DESCRIPTION	LENGTH	BREAK STRENGTH	COMPATIBLE PULLEY	SPECIFY TYPE REQ'D	HANK QTY REQ'D
(RT)	(Material/ Finish)	(m)	(kg)	(DIA/ TYPE)	(TICK BOX(ES)) <input checked="" type="checkbox"/>	(EACH- PLEASE SPECIFY)
 CORD3W	No 3 Waxed Cotton Sash Cord (Dia. 5mm)	12.5	160	1.75", 2"		
 CORD4N	No 4 Nylon Sash Cord (Dia. 6mm)	12.5	450	2.25"		
 CORD4W	No 4 Waxed Cotton Sash Cord (Dia. 6mm)	12.5	300	1.75", 2", 2.25"		
 CORD5W	No 5 Waxed Cotton Sash Cord (Dia. 7mm)	12.5	310	1.75", 2", 2.25"		
 CORD6W	No 6 Waxed Cotton Sash Cord (Dia. 8mm)	12.5	340	1.75", 2", 2.25"		

SASH AND WEIGHT CONNECTORS						
TYPE	DESCRIPTION	QTY PER SET	Max. Weight	SPECIFY TYPE REQ'D	QTY OF SETS REQ'D	
(RT)	(Material/ Finish)	(each)	(kg / lbs)	(TICK BOX(ES)) <input checked="" type="checkbox"/>	(EACH- PLEASE SPECIFY)	
	Bolt Weight Connectors- SC4 CHAIN	SUPPLIED IN 4 PER SET	n/a			
	Bolt Weight Connectors- SC3 CHAIN		n/a			
	Bolt Weight Connectors- SC1 CHAIN		n/a			
 SSCC03	Loop Weight Connectors		n/a			
	Sash Plate and Bar- SC4 CHAIN		n/a			
	Sash Plate and Bar- SC3 CHAIN		n/a			
	Sash Plate and Bar- SC1 CHAIN		n/a			
	Lead Weight Bolt Connector - SC4 CHAIN		13.6 / 30			
	Lead Weight Bolt Connector - SC1 CHAIN		13.6 / 30			
	Lead Weight Bolt Connector - SC1 CHAIN		13.6 / 30			
 SCC06	Washer and Split Pin Connector		n/a			
 060-508	M6 Eyebolt (supplied fitted to lead weight)		n/a			
 SCC012	Screw In Pulley Short thread	1 per kit	n/a			
 SCC014	Screw In Pulley Long thread	1 per kit	n/a			

**FAX TO CALDWELL HARDWARE (U.K.) LIMITED ON 024 7643 7969**

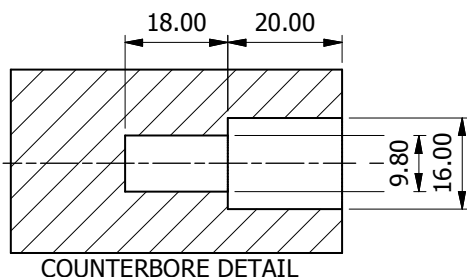
**THIS ORDER IS ACCEPTED ONLY UNDER CURRENT 'TERMS & CONDITIONS OF SALE'**  
**COPIES AVAILABLE UPON REQUEST**

# CALDWELL

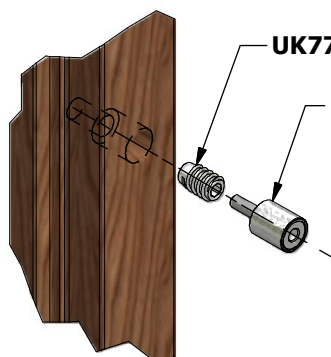
SOLUTIONS THAT SET NEW STANDARDS

Telephone 024 7643 7900

## UK646 ROLA VS TRAVEL RESTRICTOR FITTING DETAILS



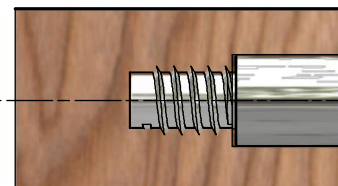
**STEP 1:** DRILL THE COUNTERBORE TO THE DIMENSIONS ABOVE



**STEP 2:** SCREW IN THE UK777 INTO THE COUNTERBORE CLOCKWISE USING AN ALLEN KEY

**UK777** - FASTENER INSERT (ORDERED SEPARATELY)

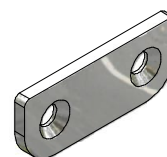
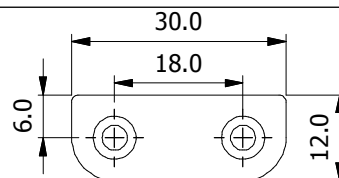
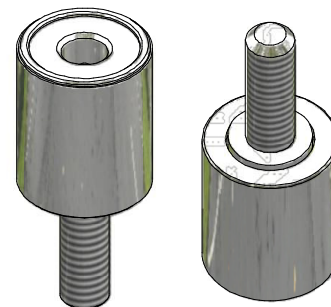
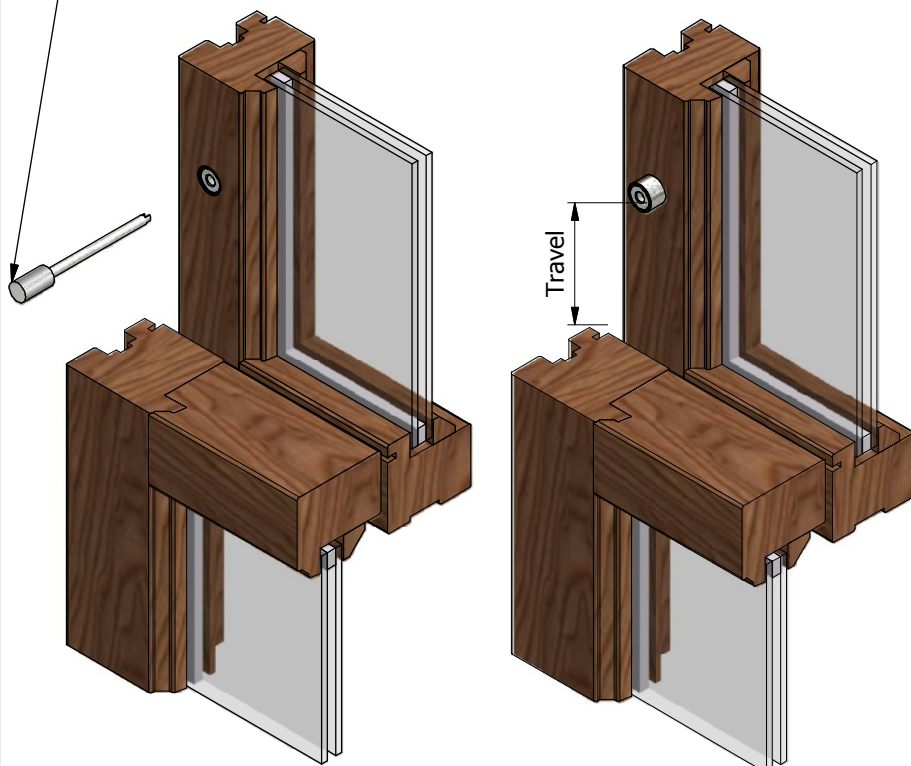
**UK646NICKEL** - (ALSO AVAILABLE IN BRASS: UK646BRASS)



**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.

### 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 UK777. IF IN ANY DOUBT, PLEASE CONTACT CALDWELL TECHNICAL DEPARTMENT.

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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.

# CALDWELL

SOLUTIONS THAT SET NEW STANDARDS

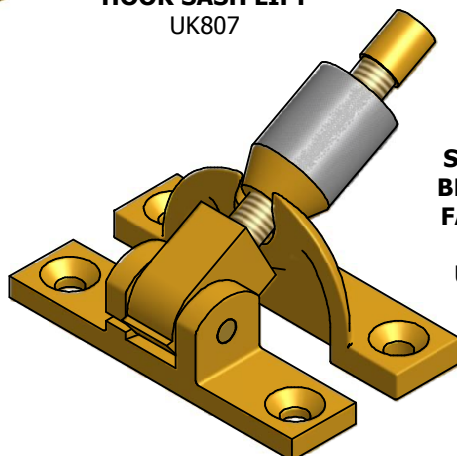
Telephone 024 7643 7900

## BRASS ACCESSORIES

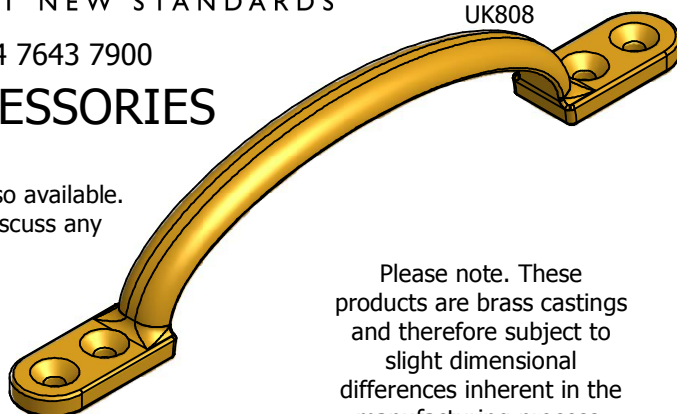
Other brass accessories are also available.  
Please contact Caldwell to discuss any requirements.



**HOOK SASH LIFT**  
UK807

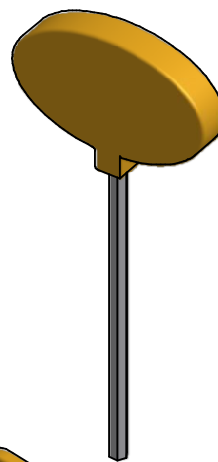


**SLIMLINE  
BRIGHTON  
FASTENER**  
UK685  
UK690CH



**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

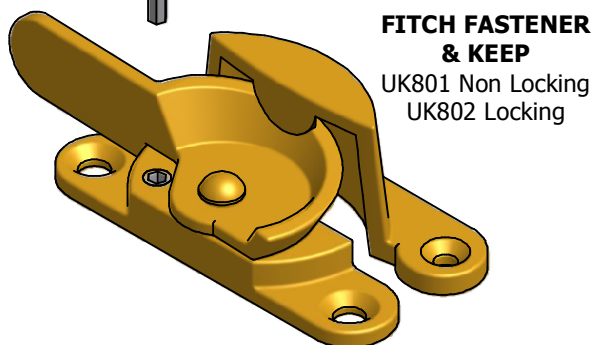
**RING SASH LIFT**  
UK806



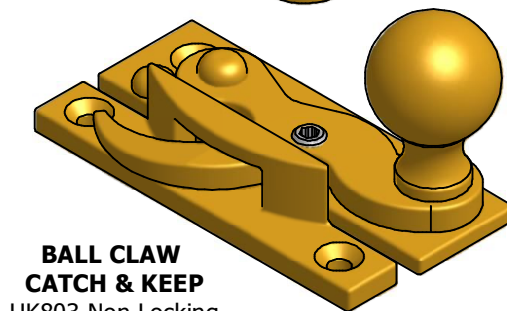
**WEEKES CATCH**  
UK810



**POLE HOOK**  
UK809



**FITCH FASTENER  
& KEEP**  
UK801 Non Locking  
UK802 Locking



**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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with Caldwell Hardware to ensure that you have the latest issue level.

# CALDWELL

SOLUTIONS THAT SET NEW STANDARDS

Telephone 024 7643 7900

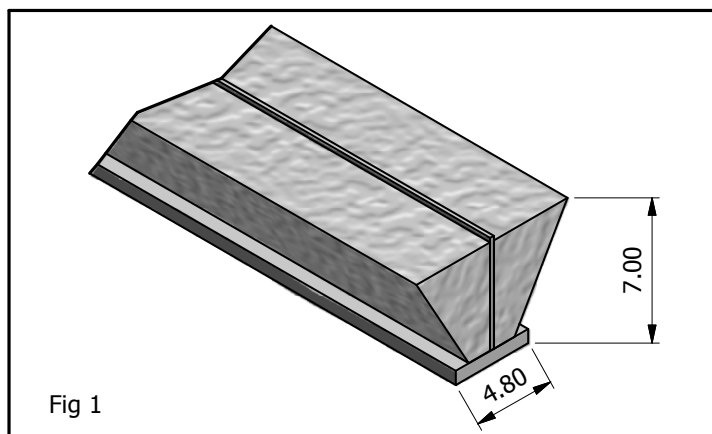
## WEATHERSEAL ACCESSORIES

### 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 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).

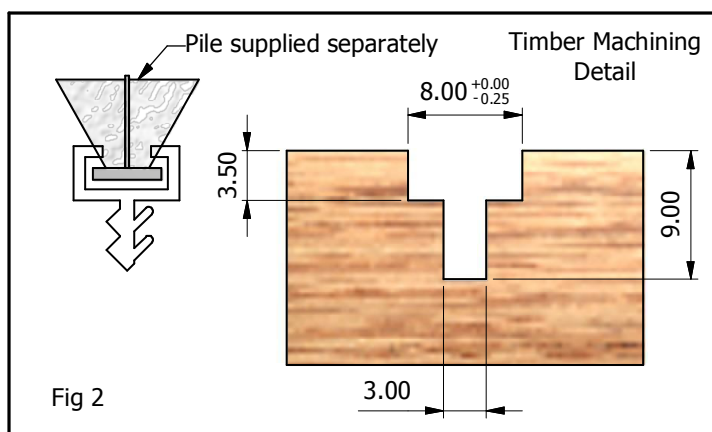
Pile base width: 4.8mm  
 Pile height: 7mm  
 Caldwell Part No: UK687



### 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).

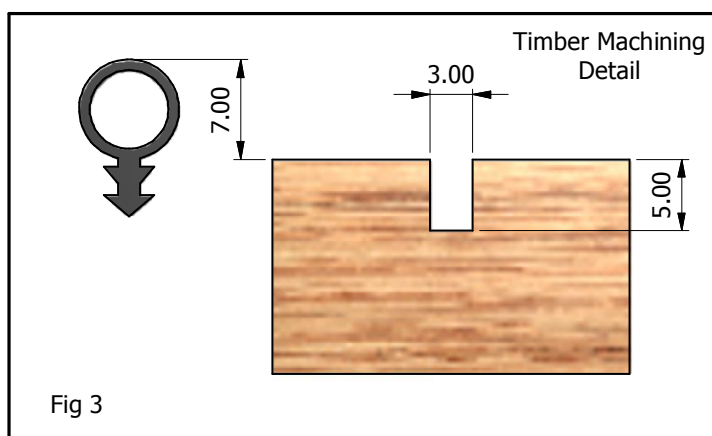
Caldwell Part No. UK688



### 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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Telephone 024 76437900

## Safety information when handling & working with lead products.



Lead can be a harmful to your health if used incorrectly or if you are exposed to airborne particles of lead for long periods of time. However short term exposure to solid lead carries only a limited risk & is unlikely to be harmful.

### **When working with lead ensure that:**

Gloves are worn, do not eat or drink, do not smoke, apply barrier cream to hands before working with lead, keep your hands away from your face, use disposable tissues instead of handkerchiefs, remove overalls before leaving work, & wash work wear separately.

### **After working with lead ensure that:**

Hands are washed thoroughly with hot soapy water. Always wash your hands before eating or drinking.

### **If you have an emergency with lead i.e.**

Lead in the eye, Immediately flush the eye with water. If irritation persists get medical assistance. Skin contact, wash off with hot soapy water. If swallowed, get medical assistance.

### **When lifting lead:**

Lead is very heavy for its size. It is 11.3 times heavier than water at the same volume. Great care should be taken when moving lead products, always ensure that correct lifting techniques are used & assistance obtained when ever required. Seek professional guidance if unsure.

If in doubt please contact Caldwell Hardware Technical Services department on 02476 437960.

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### **MAINTENANCE OF BRASS FINISHES**

Brass fittings are generally supplied with lacquer coating which helps prevent tarnishing caused by oxidization. Our lacquer coating is applied using an electrophoretic process and whilst this gives an extremely good looking and durable finish, it should not be viewed as totally permanent.

In common with other methods of lacquering, it is subject to wear and tear caused by general usage i.e. scuffing and attack by applied or airborne pollutants, although the correct cleaning will undoubtedly help preserve the appearance.

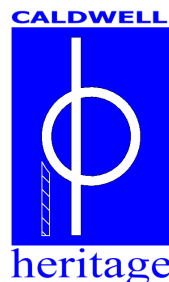
Lacquered items should be cleaned with soft soap and water and thoroughly dried.

They will also benefit from an occasional coating of wax polish. Do not use any other types of cleaners or polishes.

**Avoid contamination by solvent-based cleaners commonly used in the construction industry.**

We do not recommend lacquered items to be used on the exterior of buildings, places of extremely heavy usage. Marine environments etc. In these cases we would strongly suggest using un-lacquered brass products that can be polished regularly using proprietary brass cleaners.

Lacquer can be removed using paint stripper if required.



### **MAINTENANCE OF BRASS FINISHES**

Brass fittings are generally supplied with lacquer coating which helps prevent tarnishing caused by oxidization. Our lacquer coating is applied using an electrophoretic process and whilst this gives an extremely good looking and durable finish, it should not be viewed as totally permanent.

In common with other methods of lacquering, it is subject to wear and tear caused by general usage i.e. scuffing and attack by applied or airborne pollutants, although the correct cleaning will undoubtedly help preserve the appearance.

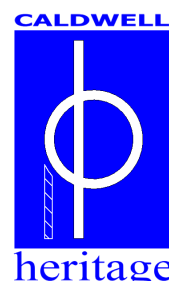
Lacquered items should be cleaned with soft soap and water and thoroughly dried.

They will also benefit from an occasional coating of wax polish. Do not use any other types of cleaners or polishes.

**Avoid contamination by solvent-based cleaners commonly used in the construction industry.**

We do not recommend lacquered items to be used on the exterior of buildings, places of extremely heavy usage. Marine environments etc. In these cases we would strongly suggest using un-lacquered brass products that can be polished regularly using proprietary brass cleaners.

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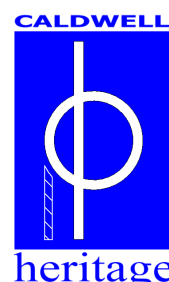
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Telephone 024 76437900

## Cleaning Instructions for Decorative & Plated finishes



The decorative finishes on Caldwell Hardware products are of a high quality. Please take care when installing, using tools and sealants etc. To keep finishes in good condition clean with a soft damp cloth only.

**ON NO ACCOUNT** should any household bleaches, detergents or abrasive polish etc. be used on Caldwell Hardware products.

If in doubt please contact Caldwell Hardware Technical Services department on 02476 437900.



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.

# AUTHORITIES

**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.**

