

# TOUCHWOOD PRODUCTS

## SPIRAL SASH BALANCE INSTALLATION

### (TYPE 'D' BALANCES)

Read instructions fully before installing balances.

It is recommended that before balances are installed the sashes are glazed and in the case of timber windows all painting is completed ensuring that both sashes slide freely in the frame.

While sketches show timber windows throughout, fitting instructions apply to all types.

## Preparation of Windows

- 1 Grooves to house balances can be in either frame jambs or in sash stiles, rounded or square and must be of minimum dimensions shown (Figs. 1 & 2). Bottoms of sashes should be prepared to suit balance foot attachment to be used. Cut-outs to be of sufficient depth to receive attachments and screw heads.

FIG. 1

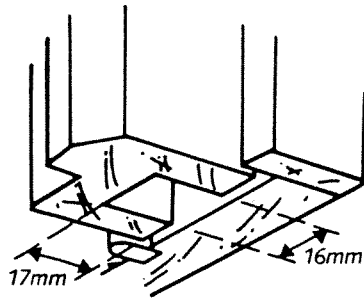


FIG. 2

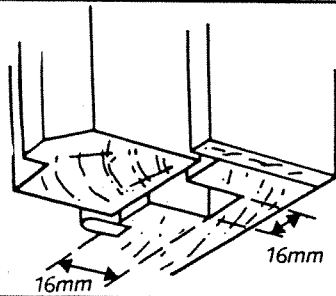


FIG. 3 - Bottom rail preparation for standard foot.

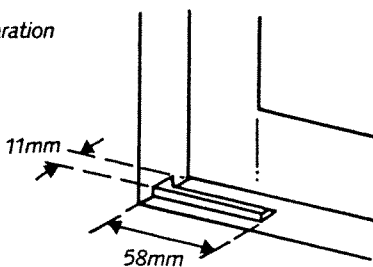


FIG. 4 - Stile preparation for channel fitting.

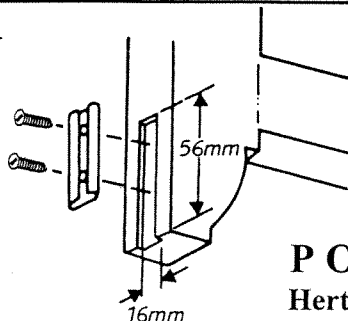


FIG. 5 - Bottom rail preparation for standard foot.

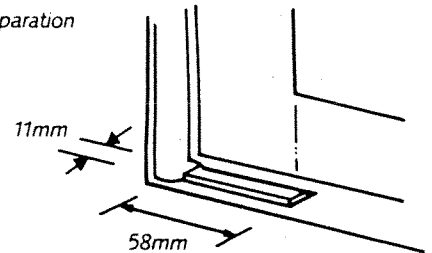
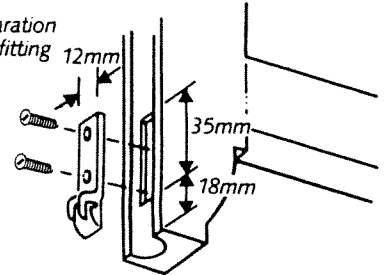


FIG. 6 - Grooved stile preparation (fix foot attachment prior to fitting sash into frame).



## Checking balances

- 2 It is important that the balances used are suitable for the weight of the sash. They are manufactured in three weight groups and identified by a number 2, 4 or 6 stamped on the spiral rod. (See Fig. 7)

**D2** is for sash weights up to 6.8Kg (15lb).

**D4** for over 6.8Kg (15lb) up to 13.6Kg (30lb).

**D6** for over 13.6Kg (30lb) up to 18.1Kg (40lb).

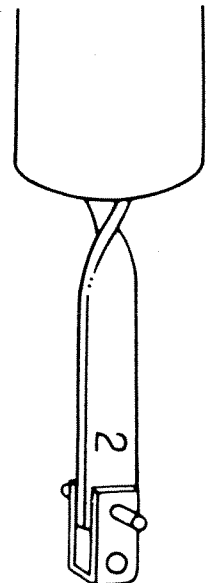


FIG. 7

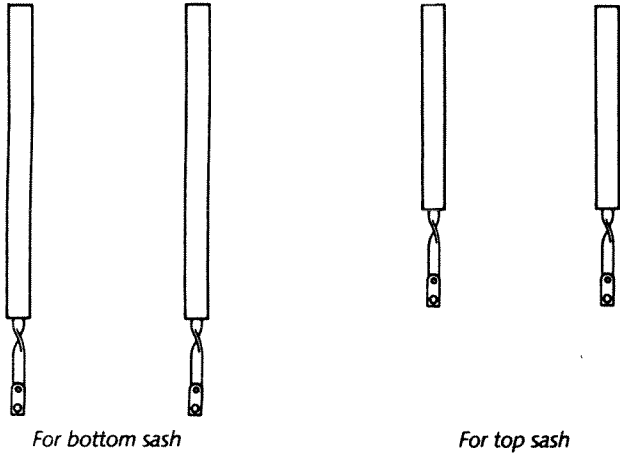
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## Installing balances

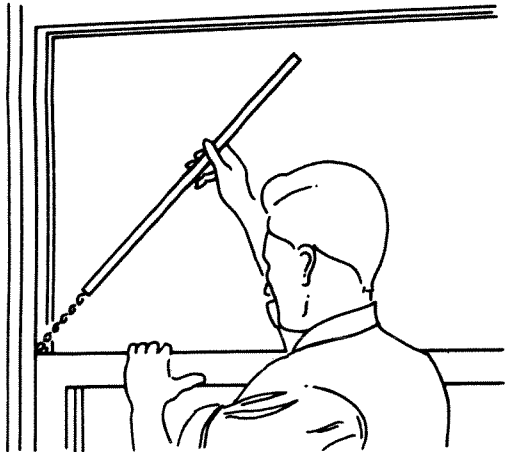
**3** It is important to note that short balances are used for top sash and long balances for bottom sash, assuming sashes are of equal height.

FIG. 8



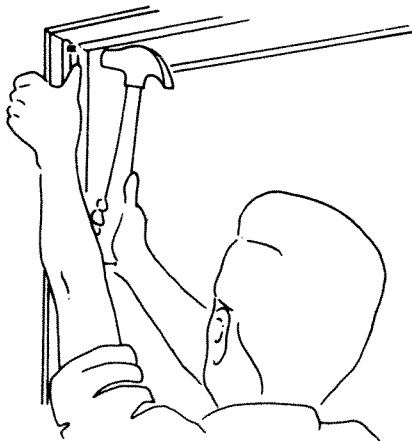
When sashes are of equal size and in lowered position, the balances can be easily inserted into the grooves. See Fig 9. In the case of unequal size sashes it is possible to slightly bow the balance for insertion into the groove of the larger sash. In some cases larger sashes may have to be removed.

FIG. 9



Fix top of balances to the frame jamb at the centre of the groove and tight up against the frame head.

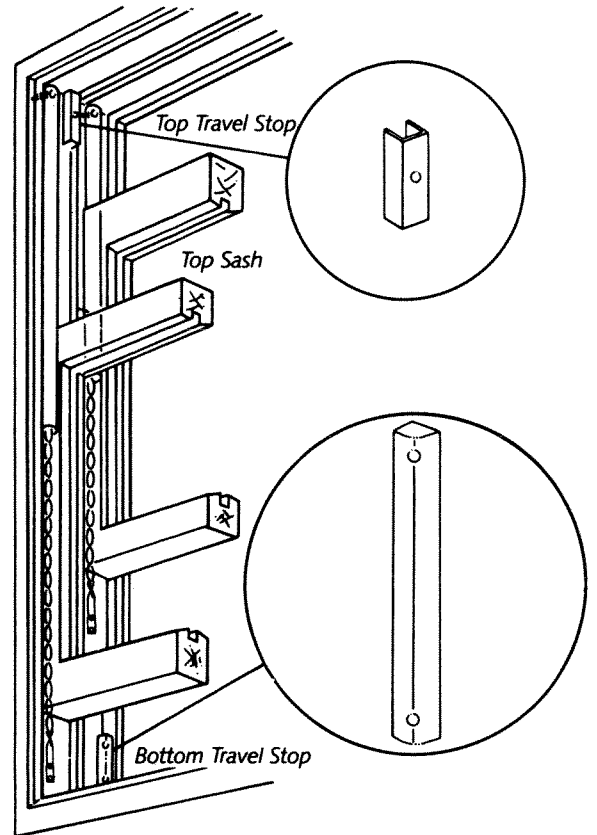
FIG. 10



## Fix travel stops

**4** Fix travel stops provided, the shorter one at the top of the bottom sash run, see Fig. 11. In the case of non-standard applications special stops may be required. (Instructions will be on the packing note in such cases.)

FIG. 11



## Fix foot attachments

**5** Raise the sashes as high as possible and prop up. Fix foot attachments ensuring that spiral rod is located between sides of fitting.

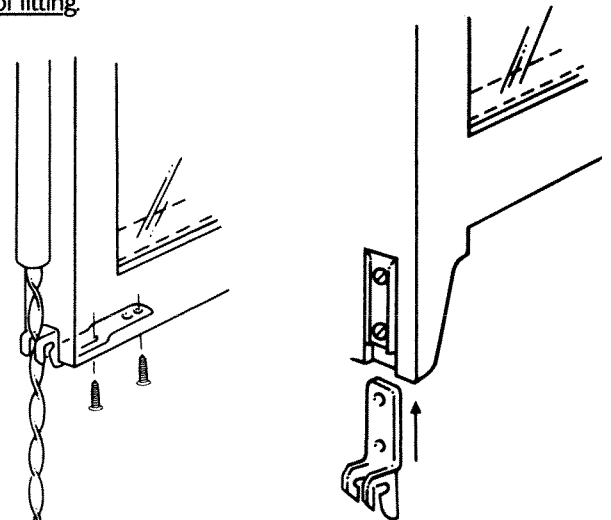


Fig. 12 - Secure standard foot.

Fig. 13 - Firstly fix channel, then bend end of fitting to create interference fit, insert into channel and tap home

## Balancing sashes – adjusting balances

**6** Thread spiral rod upwards into the tube by revolving anti-clockwise, left hand turn as viewed from underside (see Fig. 14). Using the hook tool provided, pull the spiral rod downwards about 200mm (8") without rotating. Now apply adjustment turns in an anti-clockwise direction (see Fig. 15). The number of turns will depend on the sash weight. Refer to adjustment charts (back page) for number of turns to be applied. Return the spiral rod upwards without rotating and engage pin in foot attachment (see Fig. 16). Repeat adjustment for other balance, remove prop and then try sash action.

Correct balancing is achieved when sash is just held in its highest position. If necessary make adjustment turns in either direction on both balances to obtain this condition. Do not over tension.

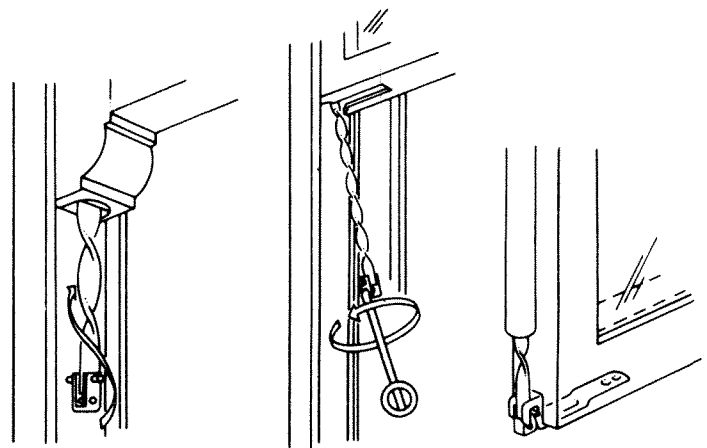


FIG. 14

FIG. 15

FIG. 16

## Slide and tilt applications

For slide and tilt applications in timber windows, provide a channel, the overall dimensions of which are indicated. Purpose made pivot shoes and pivot bars are also available for this system. Bottom rails of sashes should be capable of accepting pivot bars (see detail - the dimensions shown are for standard pivot bars). For slide and tilt applications in aluminium of plastic profiles, a range of tilt shoes, pivot bars and balance types are available.

### A Installing balances

Slide the tilt shoe into the end of the channel and fix channel frame jamb. Insert balance and secure top using screw supplied

### B Balancing sashes – adjusting balances

Thread spiral rod upwards into the tube by revolving anti-clockwise, left hand turn as viewed from underside (see Fig. 14). Using the hook tool provided, pull the spiral rod downwards about 200mm (8") without rotating. Now apply adjustment turns in an anti-clockwise direction (see Fig. 17). The number of turns will depend on the sash weight. Refer to adjustment charts (back page) for number of turns to be applied. Return the spiral rod upwards without rotating and engage pin in the pivot shoe as shown ensuring that the uppermost pin is fully engaged behind the metal ears of the shoe. Repeat adjustment for other balance.

### C Installing sashes

To fix sash into frame, lock the tilt shoes in a convenient position using a pivot bar to turn the cam through 90°. Lift sash into position and slide the pivot bars into the shoes (see Fig. 18) ensuring full engagement. Tighten fixing screws, tilt sash up into sliding position, engage the latch guides at the top and try the sash. If adjustment is necessary remove the sash by reversing above procedure, adjust as previously described and refit. Do not over tension.

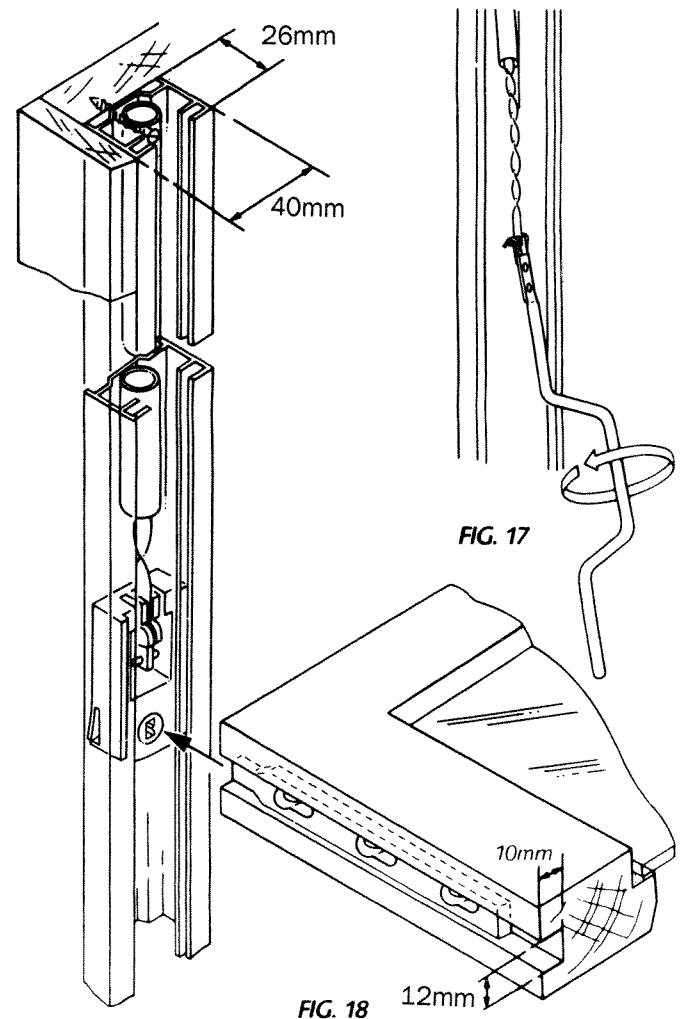


FIG. 17

FIG. 18

## Maintenance

Depending upon location, cleaning and lubrication of the spiral rod may be desirable after a length of time, the period of which will vary according to site circumstances. A few drops of light oil applied to the spiral rod will always improve the operating action of a balance after long service.

## Important

**DON'T** bend Spiral Rod.  
**DON'T** forget Limit Stops.  
**DON'T** use 'D' Balances on Sashes over 18.1Kg (40lb) glazed weight.  
**DON'T** tension Balance more than necessary  
**DON'T** tension Balances before glazing

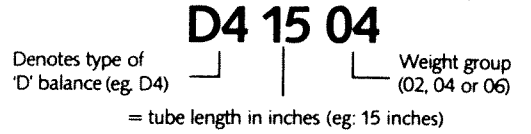
# ADJUSTMENT CHARTS

## (TYPE 'D' BALANCES)

Read these charts with reference to section 6 of the "Installation Instructions" and section C of the "Slide and Tilt Applications".

To determine the suggested number of adjustment turns:

1. Establish balance number (see section 2 of "Installation Instructions").
2. Establish sash weight.
3. Read across from the relevant balance reference number, and down from the required sash weight to find the suggested number of adjustment turns.



		D2															
		SASH WEIGHT															
Tube Length (ins)	Kgs	23 27 32 36 41 45 50 54 59 64 68															
		lbs 5 6 7 8 9 10 11 12 13 14 15															
11		1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	
12		1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	
13		1	1	1	2	2	2	2	2	3	3	3	3	3	3	3	
14		2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	
15		2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	
16		2	2	2	3	3	3	3	4	4	4	5	5	5	5	5	
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24		3	3	4	4	4	5	5	5	6	6	6	6	6	6	6	
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37		6	6	6	7	7	8	8	9	9	10	10	10	10	10	10	
38		6	6	7	7	8	8	9	9	10	10	10	10	10	10	10	
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41		7	7	8	8	9	9	10	10	11	11	11	11	11	11	11	
42		8	8	8	9	9	10	10	11	11	12	12	12	12	12	12	
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48		10	10	11	11	12	12	13	13	14	14	14	14	14	14	14	
49		10	10	11	11	12	12	13	13	14	14	14	14	14	14	14	

		D4															
		SASH WEIGHT															
Tube Length (ins)	Kgs	6.8 7.3 7.7 8.2 8.6 9.1 10.0 10.4 10.9 11.3 11.8 12.3 13.2 13.6															
		lbs 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30															
11		1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	
12		1	1	2	2	2	2	2	2	3	3	3	3	4	4	4	
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48		9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	
49		9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	

		D6															
		SASH WEIGHT															
Tube Length (ins)	Kgs	14.1 14.3 15.0 15.4 15.9 16.3 16.8 17.3 17.7 17.9															
		lbs 31 32 33 34 35 36 37 38 39 40															
11		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14		2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	
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32		5	5	5	6	6	6	6	6	7	7	7	7	7	7	7	
33		6	6	6	7	7	7	7	8	8	8	8	8	8	8	8	
34																	