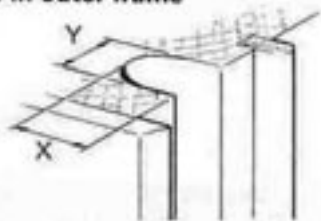


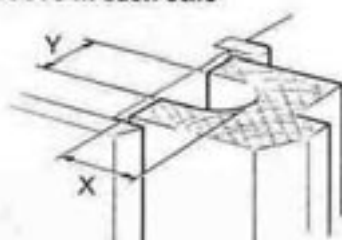
*Before installing balances please read these instructions carefully.
Ensure that windows are finished, glazed and that the sashes slide freely in the frame.*

1. WINDOW PREPARATION

Groove in outer frame

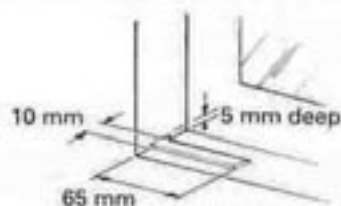


Groove in sash stile

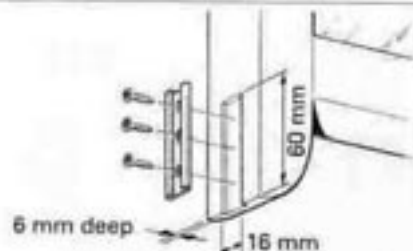


Minimum groove dimensions

| Balance Type | Dimension X | Dimension Y |
|--------------|-------------|-------------|
| D4 & D6 | 17 mm | 17 mm |
| AL20 & AL30 | 18 mm | 18 mm |
| AL40 - AL60 | 20 mm | 20 mm |
| AL70 - AL90 | 22 mm | 22 mm |



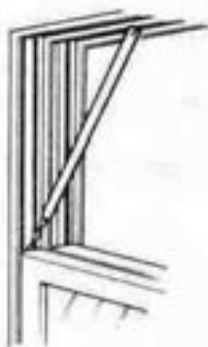
Rebate sash for standard foot.
Secure foot at Stage 2.



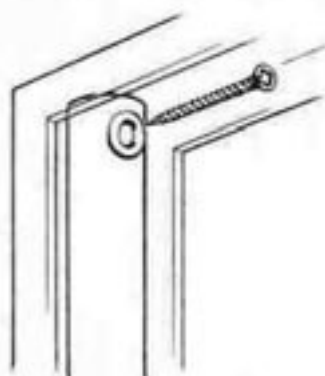
Rebate stile for horn channel prior to installing sashes.
Use at least two No 6 or No 8 x 16mm long countersink screws.

Note: Details shown are for grooved outer frame

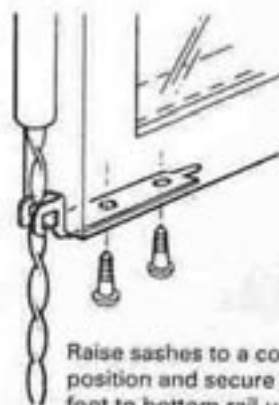
2. FIXING BALANCES



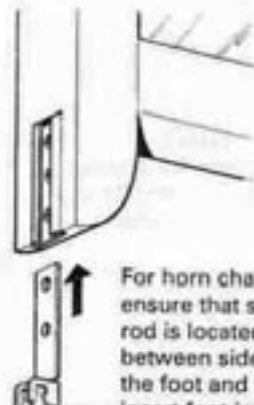
Fit sashes to outer frame. Insert balance in groove with sash lowered. For equal sashes, shorter balances are for top sash, longer balances are for bottom sash. For other than equal sashes, details will be shown on the picking slip sent with the balances.



Fix balances to outer frame, tight up to header. Use No 8 x 30 long (min) countersink screw.

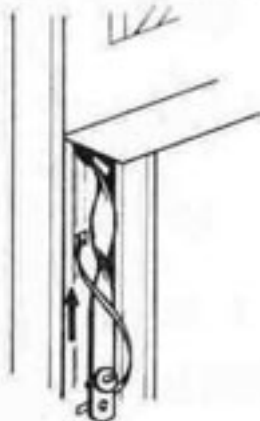


Raise sashes to a convenient position and secure standard foot to bottom rail using No 6 or No 8 x 16 long (min) pan head screws. Ensure that spiral rod is located between the sides of the foot.



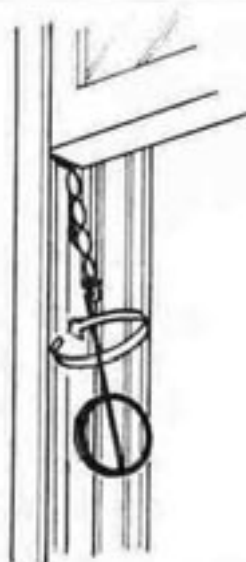
For horn channels, ensure that spiral rod is located between sides of the foot and then insert foot into channel. Foot can be bent slightly to create an interference fit.

3. BALANCES



A. Prop bottom sash in its highest position. Thread spiral rod upwards into balance until it reaches the bottom of the sash.

B. Insert winding tool into the hole at the end of the spiral rod. Without allowing the winding tool to rotate, pull the spiral rod up and down approximately 100 to 200mm. If the spiral rod does not return to the bottom of the sash, add an additional turn or two anti-clockwise until it does. Now, again holding the winding tool so that it cannot unwind, pull the spiral rod down to a convenient position 100 to 150mm below the bottom of the sash and add adjustment turns anti-clockwise as per picking slip or adjustment chart.



C. Engage cross pin into foot.

D. Repeat for other side of bottom sash.

E. Raise and lower the sash. The sash should operate evenly. If the sash falls from its highest position or operates downwards harder than upwards, add or take off a turn or two as required.

Repeat the above operations for the top sash.

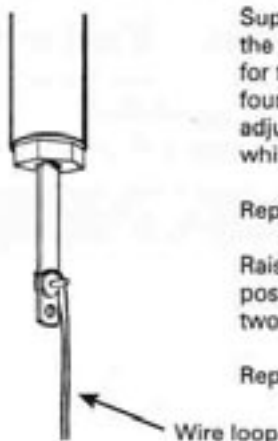
4. ADJUSTING ASSISTED LIFT BALANCES

Support the bottom sash in its highest position.

Pull spiral rod down past balance foot using either the winding tool inserted into the hole at the end of the rod, or a loop of wire attached to the cross pin.

Engage cross pin into the claws of the balance foot. repeat for the other side of the sash.

Remove support and operate sash up and down a few times, **being careful not to over-extend the balances because travel limit stops have not been fitted at this stage.**



Support the sash again. Using the winding tool, pull the spiral rod down out of the balance foot (a slight twist anti-clockwise may be required). If any tendency for the spiral rod to rotate is felt, rotate the spiral rod until a neutral position is found. Now apply adjustment turns anti-clockwise as per picking slip or adjustment chart. Maintain a firm downward pressure with the winding tool whilst tensioning.

Repeat for other side of bottom sash.

Raise and lower sash. Sash should operate evenly. If sash falls from highest position or operates downwards harder than upwards add or take off a turn or two as necessary.

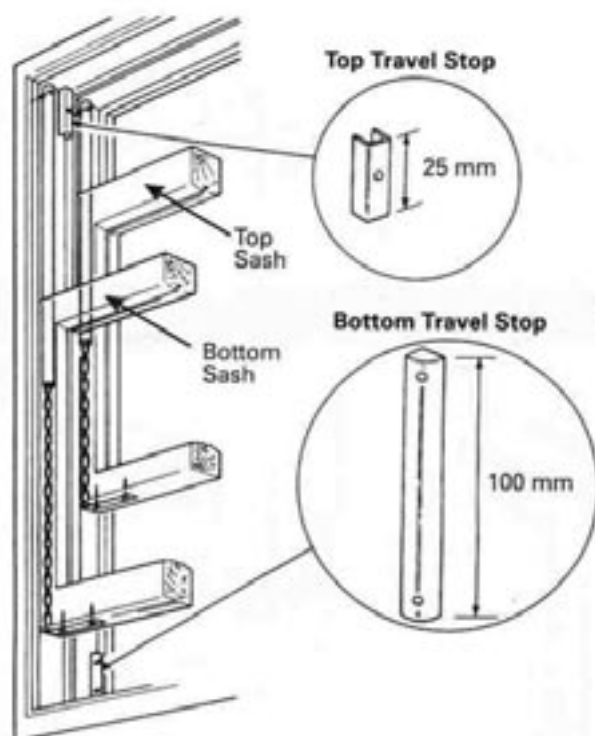
Repeat preceding operations for top sash.

5. TRAVEL STOPS

It is important that the travel of the sashes is limited to prevent over-extension or retraction of the balances. Standard metal stops can be provided for sashes of equal size and these should be positioned tight to the head and sill – short and long respectively.

When a longer stop is required, 12 mm quadrant should be cut to the required lengths and fitted tight to the head and sill

IMPORTANT:
FAILURE TO FIT TRAVEL STOPS WILL RESULT IN BALANCE FAILURE



IMPORTANT NOTES

- DON'T** bend spiral rods
- DON'T** forget travel stops
- DON'T** fix balances out of line with groove of sash
- DON'T** use balances beyond their respective weight ranges
- DON'T** tension balances more than necessary to hold sash in highest position
- DON'T** tension balances before glazing
- DON'T** blame the balances for paint-stuck or improperly fitted sash

BALANCE IDENTIFICATION

PAWL COLOUR

| | |
|------------------|--------|
| D4 | RED |
| D6 | YELLOW |
| ASSISTED LIFT 30 | BLUE |
| ASSISTED LIFT 40 | BLACK |
| ASSISTED LIFT 50 | WHITE |
| ASSISTED LIFT 60 | YELLOW |

