

## **Comar 5P.i & 5P.i ECO Casement Windows Operations & Maintenance**

### **Casement Windows Operation**

Casement windows can be:

1. Top hung: the vent will open out at the bottom of the window
2. Bottom hung: the vent opens inwards at the top of the window
3. Side hung: opening the vent along the vertical side of the window

### **Locking**

Casement windows, whether side or top hung can have three main methods of locking mechanism:

1. Espagnolette locking
2. Shoot-bolt locking
3. Cockspur locking

#### **1. Espagnolette locking**

Espagnolette locking systems have a single handle mounted in the centre of the horizontal rail or vertical stile, which operates sliding gearing located within the window section. When the handle is closed mushroom heads move into recesses and engage, pulling the window closed. Certain hardware will incorporate a black button, which will not allow the handle to be operated unless pushed with the thumb.

The handle is turned through 90° to the open position. The handle will sit in line with the rail when closed, or will be visible from outside, through the glass, when opened. The sash can be locked securely with a key or can also be locked with the same key, partially open, in order to provide trickle ventilation.

#### **2. Shoot-bolt locking**

Shoot-bolt locking has the mushroom heads of espagnolette locking but also incorporates shoot-bolts at the corners of the opening vent of the windows that locate into keeps on the outer frame of the window. This is an enhanced security option. Again in the closed position, move the handle through 90° and the vent will open.

#### **3. Cockspur locking**

Cockspur locking is surface mounted, and engages onto a nylon wedge on the visible up-stand of the frame. There is no adjustment possible to this part, and the window, when set correctly should work perfectly. There may be two handles on a sash over 900mm in width. The handle is again rotated through 90° to the open position.

There is no lockable trickle ventilation when this type of handle is used; the window is either open or closed.

### **Friction Hinge Operation**

The window will be hung on friction stays or butt hinges, which support the weight of the window through open and closing cycles. If a restricted hinge is fitted, there is a button in the friction hinge. Depression (or lifting, depending on hinge type) of the button will allow the sash to open fully for cleaning purposes, and as the sash is closed the restrictor will re-engage.

The window may alternatively have additional restrictors fitted, which may or may not be removable, depending on the original specification.

There is a small brass adjusting screw, mounted in a nylon block in the hinge, which can be used to adjust the operation of the window. Tightening the screw will increase friction, thereby increasing the resistance to wind and operating forces, while loosening the screw will have the adverse effect.

### **Butt Hinges Operation**

Butt hinges have no adjustment, and will be visible from the external at the junction between the frame and sash. There will be a requirement for a window restrictor with this type of hinge, which may or may not be removable, depending on specification.

Alternatively, a folding opener may be employed, which are commonly used on high-level windows. This system will have a 'folding cam' system, often linked by rods. There may be a ring fitted to the rod in order to accept a hook, which in turn is fitted to a wooden pole, to ease operation should the window be located in a high position.

The rod or cam should be lifted up, and the cam will fold outwards, pushing the sash forward. To close the window the rod or cam is lifted again, and pulled downward to its original position. There is no adjustment, and no need for lubrication for this type of operator.

### **Teleflex Operation**

'Teleflex' type system employs a 'winder' cable, concealed within either the cavity of the building / screens, or a conduit fixed to the surface thereof. The operating handle will be mounted on the surface of the wall at a lower level, and maintenance of this system needs to be carried out by a competent contracts.

The opening sash elements will be hung on either friction stays, or butt hinges with this type of operating system.

### **Bottom Hung Windows**

Bottom hung windows utilise butt hinges, fixed at the sill level. They will open inwards only, and will be restricted. Generally this type of window is positioned at high level, and used for ventilation, or to allow smoke to exit the building. Depending on the requirements of the building they can be operated by Teleflex, or automatic electric actuators, which could be attached to a fire alarm or other sensor.

If positioned low enough, they could have a storm catch fitted to the head, which is pulled downwards to release, and re-engages into the keep mounted on the frame head. This type of catch is normally spring loaded to ease loading.

### **Casement Windows Maintenance**

When set correctly, the handles and locking mechanisms will need no adjustment, apart from occasional lubrication with resin free grease or oil.

A 6 monthly check of all operations should be carried out.

1. The hardware around the sash should be thoroughly cleaned with a damp cloth and soapy water and wiped dry.
2. Fixings should be tightened as necessary.
3. Moving parts to be lubricated with resin free grease or oil.
4. A qualified technician MUST carry out all major adjustments or replacements. Any attempt to complete repairs without the correct tools or knowledge could result in personal injury or damage to the mechanism.

Replacement parts are available from CB Solutions. Only Comar approved parts can be fitted. Replacement parts to be fitted only by competent, trained personnel.