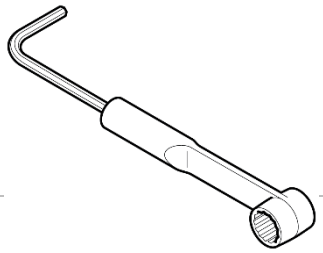
Why Adjust Hardware?

Over time, building settlement or wear of operating components can affect the functionality and performance of installed windows and doors. Innotech products have adjustable hinges and locks that allow you to correct operating problems if they occur. The following adjustments apply to dual action Tilt + Turn Windows and Tilt + Turn Doors installed after July 1, 2015. All adjustments are performed from the hinge side of the door.

Tools Needed

Clearance Adjustments	Locking Tightness Adjustments
4 mm Hex Key 	4 mm Hex Key and 11 mm Wrench OR Combination Hex-socket Tool (4 mm Hex Key, 11 mm Socket Wrench) 

Clearance Adjustments

To correct sashes that catch the frame when opened and closed use one or more of these adjustments:

- Upper hinge side to side
- Bottom hinge side to side
- Lower hinge side to side

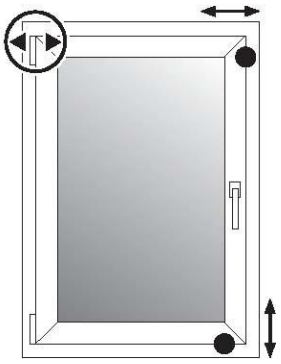
To make these adjustments use a 4 mm hex key. When making adjustments:

1. Turn the hex screw ¼ turn.
2. Check to see if the problem is corrected.
3. Repeat this procedure in ¼ turn increments until the problem is corrected.
4. Because each adjustment moves the entire sash, it is possible that an adjustment will free up one area and cause binding in another. You may need to make more than one adjustment to make the sash operate freely.

In the diagrams, the black dot shows the location where the sash catches against the frame or against one of the locking points. The circled area is where the adjustment is to be made.

> **TIP:** Before many any adjustments, find the problem. Finding the cause of the problem will point you to the right adjustment that needs to be made.
>
> Most problems can be fixed with minimal adjustments. Never make more than one adjustment at a time. After each adjustment, operate (open, close and lock) the window or door to determine if the adjustment made has fixed, improved or worsened the problem. If the problem is worse, undo the adjustment made *before* making a second adjustment.
>
> If you are unsure what adjustment(s) need to be made or if you have any questions, contact your Innotech Dealer or our head office at 604.854.1111 or 1.866.854.1122.

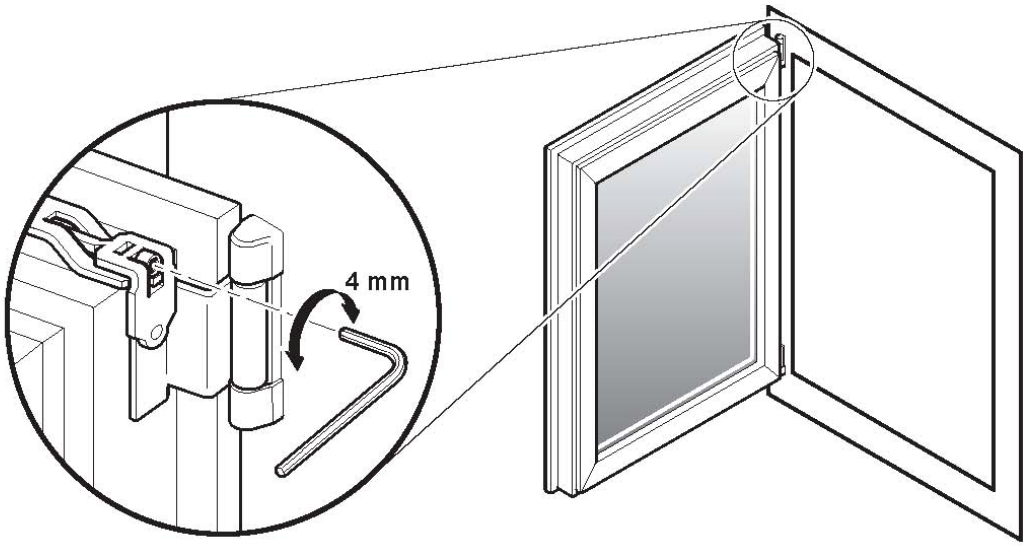
UPPER HINGE SIDE TO SIDE



This adjustment moves the top of the sash toward or away from the upper hinge. It also raises or lowers the free end of the sash.

1. Open the sash to swing open to one side.
2. Insert the 4 mm hex key into the screw head at the end of the stay arm.
3. Rotate in a clockwise direction to raise the bottom corner of the sash on the handle side. Rotate in a counter-clockwise direction to lower the bottom corner of the sash on the handle side.

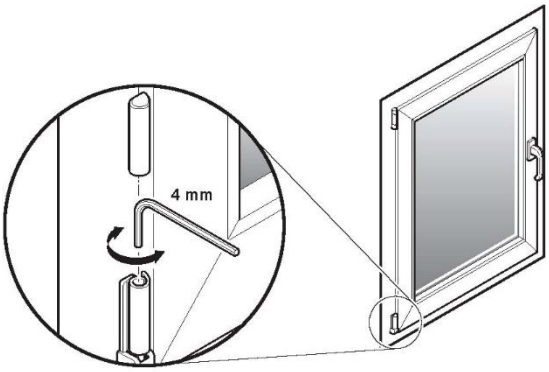
This adjustment raises or lowers the bottom corner of the sash as much as 2 mm (3/32 in.).

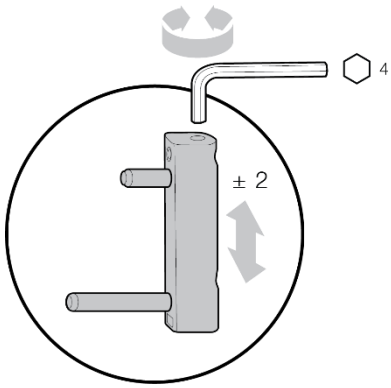


BOTTOM HINGE UP/DOWN

This adjustment raises or lowers the sash as much as 2 mm (3/32 in.) up or down.

1. Open the sash to swing open to one side.
2. Lift the plastic hinge cover by prying it up from the bottom.
3. Insert the 4 mm hex key into the exposed screw head.
4. Rotate in a counter-clockwise direction to lower the sash. Rotate in a clockwise direction to raise the sash.
5. Close the sash to see if it continues to bind.
6. Open the sash in the tilt position to see if it binds.
7. Replace the plastic hinge cover.



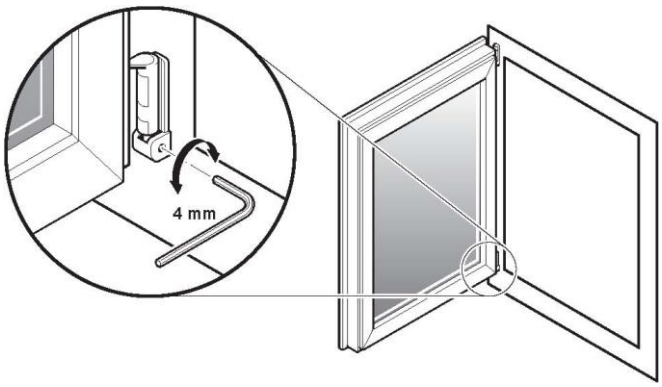


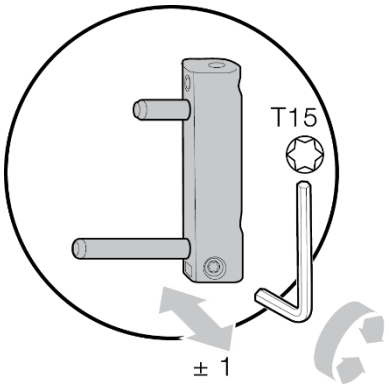
BOTTOM HINGE SIDE TO SIDE

This adjustment moves the bottom of the sash toward or away from the lower hinge and also raises or lowers the free end of the sash.

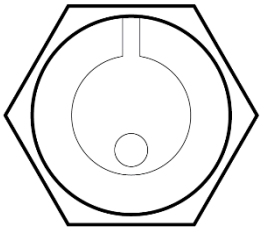
1. Open the sash to swing open to one side.
2. Insert the 4 mm hex key into the pivot screw below the lower hinge.
3. Rotate in a counter-clockwise direction to move the sash toward the hinge side. Rotate in a clockwise direction to move the sash away from the hinge side.

This adjustment moves the sash as much as 2 mm (3/32 in.) to the right or to the left.





Locking Tightness Adjustments



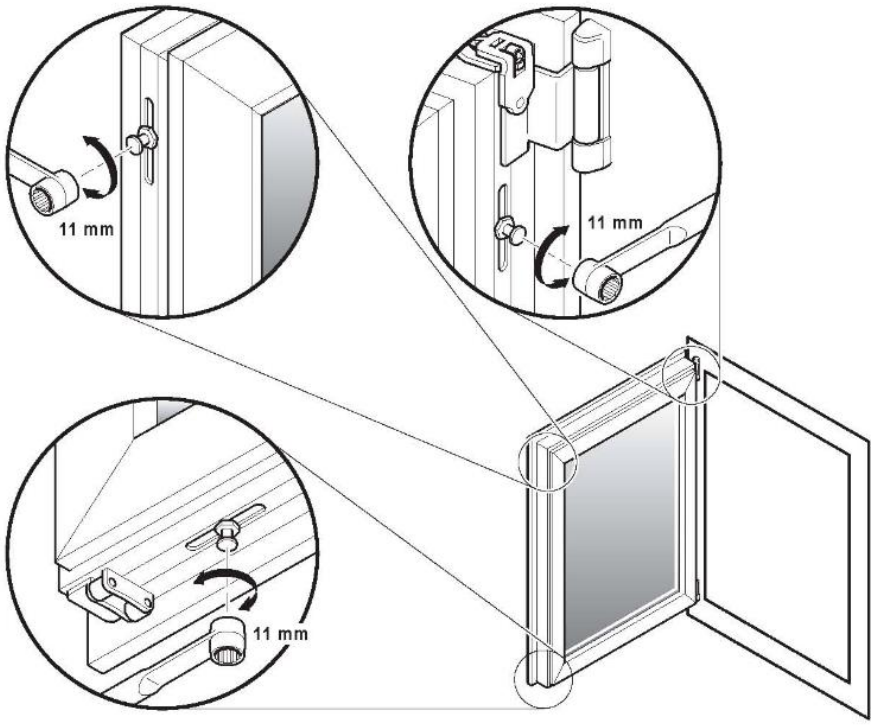
If you discover air leaking around a closed and locked sash or have difficulty rotating the handle, use these adjustments to make the sash lock more or less tightly.

If there is noticeable air leakage, adjust the locking cam that is closest to where the air leaks in. If there is still some air leakage after you have made the adjustment, adjust the cams on either side. Do not adjust the cams any more than necessary or you may make the handle more difficult to operate.

If the handle is difficult to operate, use these adjustments to decrease the sash locking tightness.

FLAT HEAD CAM ADJUSTMENT

Flat head cams, also known as mushroom locks, are locking pins that engage when the handle is operated to open and close the sash. There are a minimum of three flat head cams on a sash. You will find flat head cams on either side of the sash near the top, and on the bottom of the sash under the handle. Depending on the height and width of your window or door and sill option of your door, you may have additional cams



TIP: If you look closely at the cam, you will see an index groove cut out at the base of the cam. When you adjust the cam, it rotates it around this index groove. Use the index groove to measure how much the cam moves with each adjustment.

Flat head cams can be adjusted with the socket head of the combination hex-socket tool. You can also adjust the hexagonal base with an 11 mm wrench.

1. Open the sash to swing open to one side.

2. Find the cam you want to adjust.

3. Use the socket head of the combination hex-socket tool or an 11 mm wrench turn the cam 90° clockwise to increase the locking tightness. Turn the cam 90° counter clockwise to decrease the locking tightness.

NOTE: turn the cam in 1/4 turn increments, then check the sash operation to make sure the adjustment does not make the sash difficult to lock.

This adjustment moves the sash as much as 1 mm (1/32 in.) toward or 1 mm (1/32 in.) away from the frame.