303 SERIES COMPRESSION SLIDER DOOR
SASH ADJUSTMENT GUIDE

Introduction
Following installation, and if required thereafter, the hardware of Compression Slider Doors can be adjusted to achieve and maintain optimal performance, and air and water tightness.

Note: Adjustments to Cascadia’s window and door hardware should only be performed by skilled and experience window installers or service providers, familiar with European style multi-point hardware.

Adjustments can be made to the sliding door sash(es) for sash position, sash tilt, parallel operation, and inward/outward position (for gasket compression). The following instructions indicate the sequence and goal of each adjustment, and then refer to appendices, provided by the hardware manufacturer, for details on the method of adjustment. Note: Where the appendices indicate “move sash into tilted position”, for the 303 Series door, simply open the door (it will be in a vertical position).

The range of possible adjustments may not be sufficient to compensate for some installation deficiencies. It is always recommended to correct any significant installation deficiency, rather than attempt to compensate for it with hardware adjustments. Hardware adjustments should only be used to optimise the performance and ease of operation of a correctly installed product.

Updated Oct 2010
Hardware Type
• Roto Patio 4150 S NT, by Roto-Frank of America.

Required Tools
• 4mm Allen wrench (a.k.a. “#4 hex wrench” or “#4 Allen key”)
• 17mm wrench (adjustment 4 only)

Sequence and Summary of Adjustments

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<td>Controls location where sliding sash stops, and closes to frame.</td>
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<td>Stop at head for same purpose as #1 - guide block (at sill).</td>
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1. **Guide Block Position**
Refer to Appendix-A (1pg) for detailed method and illustrations. The guide block is located on the aluminum slider track at the sill, on the side that the sash closes to. Instructions #1 and #2 in Appendix-A can be simplified as follows:

• Ensure that the distance between the metal strikers (on the frame) and the sash is ¼”, as depicted (figure 1):

![Figure 1 – Partially closed sash at jamb (plan view)](image)

2. **Stop Position at Head**
Once the guide block (step #1) is correctly positioned and secured, check the position of the sash stop at the head, located in the guide track (photo 1). Position stop as follows:

- Slowly slide sash closed; stop the sash at the exact point that the wheel assembly contacts the guide block at the sill. (At this point, sliding the sash closed any further would start it moving inward to the closed position.)
- Slide the sash stop at the head toward the stay arms until it makes firm contact.
- Re-tighten the sash stop in this position.
3. **Parallel Sash Position**
Refer to Appendix-B (1pg) for detailed method and illustrations. The sash must be parallel to the frame, in the direction of slide, in order for the sides of the sash to close evenly.

4. **Sash Horizontal Adjustment**
Refer to Appendix-C (1pg) for detailed method and illustrations. Ensure that the sash is aligned to the frame’s sill, jamb, and mullion.

If this adjustment appears necessary, first check the installation to confirm that the sill is level and the jamb is plumb. If the installation is not plumb, level, and square, the range of possible hardware adjustments may be insufficient to correct the installation deficiencies. In this case, correct the installation prior to adjusting the sash.

5. **Cam locks**
Refer to Appendix-D (1pg) for detailed method and illustrations. The individual lock points (cams) allow for the inward/outward adjustment of the sash perimeter, which affects the compression of the perimeter gasket.

Every lock point (cam) can be independently adjusted to control perimeter gasket compression. The factory setting for cams is in the middle position, for even compression. If uneven compression is observed, adjust the cams closest to where the uneven compression is occurring.

To determine where uneven compression is occurring, pull the window or door closed, and slowly lock the handle. Locations with too much gasket compression will be observed to close and tighten before the rest of the perimeter gasket. Locations with too little compression will be observed to be insufficiently compressed, even after the handle is locked. Correct these conditions by adjusting the cams, as described below, and illustrated in Appendix-D.
Method
To increase or decrease the gasket compression at any lock cam, insert the #4 Allen wrench into the cam (photo 2), and adjust as follows:

The lock cam can be rotated in either direction for adjustment. The full range of adjustment occurs over 180 degrees; continuing to turn past 180 degrees reverses the adjustment, until the lock cam returns to its original position (at 360 degrees). Lock cams have an indicator dot on the perimeter of the cam, which shows its position.

Tip: Make small adjustments; regularly check the results until even gasket compression is achieved.

Photo 2 – Rotate wrench in lock cam for adjustment

6. Other adjustments
Refer to Appendix-E (4pgs) for detailed method and illustrations. Appendix E includes instructions for the following:

- Mounting/adjusting the buffer stop
- Unhinging the sash
- Hinging the sash
- Wheel assembly (bogie) safety mechanism; bogie cover; scissor-stay arm cover
Mounting the guide block

1. Position the guide block jig (material no. 563 969) as depicted in the drawing, alternatively position the guide block on the handle side approx. 78 mm from the roller track’s outer edge. Lightly tighten the top screw with a T25 hexalobular socket Torx key (material no. 563 971) (max. 1 Nm).
2. Bring the sash into the tilted position and check the clearance on both sides (12 mm). Reposition the guide block if need be.
3. Firmly tighten both screws on the guide block with a T25 hexalobular socket Torx key (max. 4 Nm).

Refer to page 46 for dimension X

Example:
Jig reference dimension at 8 mm coverage and x = 0 mm

Guide block jig
Material no. 563 969

max. 1 Nm

max. 4 Nm

Torx key: T25 hexalobular socket
Material no. 563 971
Aligning the bogies parallel

in order to warrant the sash entering the frame smoothly.

1. Move the sash into the tilted position (not depicted).
2. Loosen the connecting rod on the handle-sided bogie with a T25 hexalobular socket Torx key (material no. 563 971).
3. Align the hinge-sided bogie parallel by sliding the connecting rod to the left or right.
4. Tighten up the connecting rod on the handle-sided bogie with a T25 hexalobular socket Torx key (max. 7 Nm).
Aligning the sash horizontally

1. Check the clearance all round (not depicted).
2. Remove the anti-twist devices.
3. Raise or lower the bogies via the adjusting screws with a T40 hexalobular socket Torx key (material no. 563 970). 1 adjusting screw per bogie.

⚠️ Caution
When installing the sash without glass or with a low sash weight
Lower the bogies as far as possible with the adjusting screws.

The bogies must be adjusted evenly at their adjusting screws in order to avoid jamming.
(The bogies are uniformly preset in the factory.)

4. Install the anti-twist devices after adjusting the bogies, correct the adjusting screws’ setting beforehand if necessary.
### Locking cam adjustment instructions

<table>
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<tr>
<th>Cam type</th>
<th>Adjustment range</th>
<th>Gasket compression</th>
<th>Height</th>
<th>Side view</th>
<th>Tool</th>
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<tr>
<td><strong>E cam</strong></td>
<td></td>
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<tr>
<td><img src="image" alt="E cam illustration" /></td>
<td>+/− 0.8 mm</td>
<td></td>
<td></td>
<td><img src="image" alt="E cam side view" /></td>
<td><img src="image" alt="E cam tool" /></td>
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</table>

| **V cam** |                 |                    |        |          |      |
| ![V cam illustration](image) | +/− 0.8 mm | +/− 0.2 mm |        | ![V cam side view](image) | ![V cam tool](image) |
| ![V cam illustration](image) | 180° | 180° | +/− 0.4 mm | ![V cam side view](image) | ![V cam tool](image) |
| ![V cam illustration](image) | 270° | 270° | +/− 0.8 mm | +/− 0.6 mm | ![V cam side view](image) | ![V cam tool](image) |
| ![V cam illustration](image) | 360° | 360° | +/− 0.8 mm | ![V cam side view](image) | ![V cam tool](image) |
Mounting the buffer-stop

1. Screw on the bottom buffer-stop to the roller track in the desired position. Torx key, T25 hexalobular socket (material no. 563 971), max. 3 Nm
2. Slide the sash as far as the buffer-stop (not depicted).
3. Slide in the top buffer-stop into the guide track and screw-fix Torx key, T25 hexalobular socket, max. 4 Nm
4. Mount the guide track’s end cap (not depicted).

Important advice:
In order to avoid damaging the hardware components, the sash must run up against the top and bottom buffer-stop simultaneously.
Unhinging the sash

1. Open the sash
2. Bring each of the bogie safety mechanisms into the disengaged position

⚠️ Caution
Safeguard the sash against falling out prior to releasing the locking screw.

3. Detach the cover caps from the stay-connecting profile
4. Loosen the locking screw
5. Slide the scissors-slider out of the stay-connecting profile
6. Tilt the disengaged sash and lift it from the roller track (not dep.).
Frame and sash connection
Hinging the sash

Set the sash profile on the roller track

1. Move the handle into the horizontal sliding position. Lift the sash at a slight angle and set it down with the bogie rollers on the front edge of the roller track. Check the position of the rollers by pushing the sash and correct if necessary.

Connecting sash frame to guide track

2. Slide the scissors-slider into the stay-connecting profile.
3. Position the scissors-slider flush with the slide bar and tighten the locking screw (T25 hexalobular socket, max. 10 Nm).

⚠️ Warning
If the locking screw is not firmly connected to the stay-connecting profile, the window sash is not sufficiently secured. This can lead to grievous bodily harm.

4. Mount the cover caps on the ends of the stay-connecting profile at the left and right,
Activating the bogie safety mechanism and mounting the bogie cover

1. Slide back the bogie safety mechanism on both bogies, until they engage in the depicted position.

⚠️ **Warning**
If the bogie safety mechanism is not correctly engaged (or not at all) in the depicted position, the sash is not sufficiently safeguarded. This can lead to grievous bodily harm.

2. Cut the cover profile to length in line with the marks on the bogies.
3. Line up the cover profile with the bogie marks and clip onto the bogie and cover support bracket.
4. Clip on the bottom-left and bottom-right cover cap to the reinforcement brackets.
   For Patio 100 S: Mount the bottom-left and bottom-right cover cap on the side over the cover profile and clip into the bogie.

Subject to change.