

Introduction



The Channel Blender by Blender Products® is an economizing damper module. Integrated OA and RA dampers channel hot and cold airstreams into adjacent paths, mixing the flows into a homogenous air stream.

In 8-12" downstream from the trailing edge of the module, the Channel Blender provides the same mixing as an Air Blender section.

The Channel Blender can be provided as a standalone component or supplied from Blender Products in a mixing box designed to match any air handling unit (AHU) plenum.

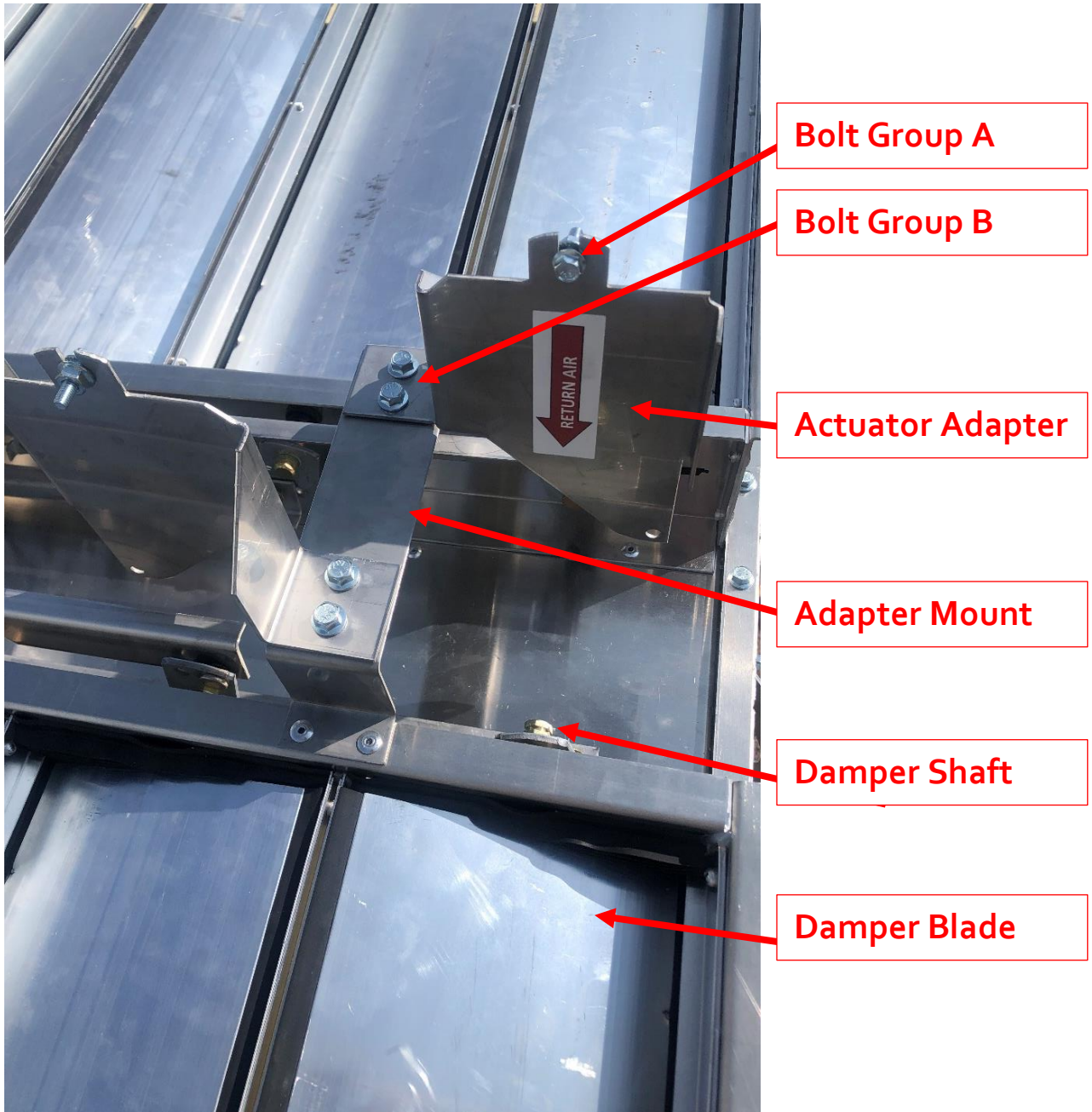
This guide details the procedure to install damper actuators Channel Blender.

Materials

- Required Tools
 - o 2 x 7/16" wrench or socket
 - o 3/8" wrench or socket
 - o 10 mm deep socket (depending on actuator type)
- Actuator(s)
 - o The supplied Actuator Adapter is compatible with the following actuators:
 - Belimo AFX-24 (or similar body style)
 - Ruskin RUS-L24 (or similar body style)
 - o 1/2" Jackshaft mounting hardware for Actuator clamp (if not provided with actuator contact actuator manufacturer)
- Hardware Provided with the Channel Blender
 - o 1/2" Diameter Jackshafts
 - o Mounting hardware

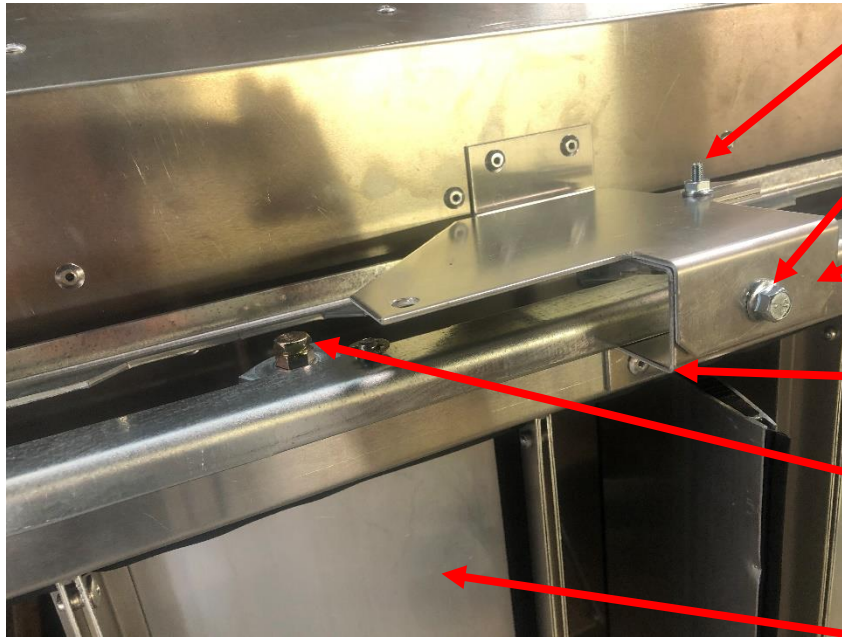
Component Descriptions

For Dual-Damper-Bank Channel Blenders



Channel Blender Version 2.0 Actuator Installation Guide

For Single-Damper-Bank Channel Blenders



Bolt Group A

Bolt Group B

Actuator Adapter

Adapter Mount

Damper Shaft

Damper Blade

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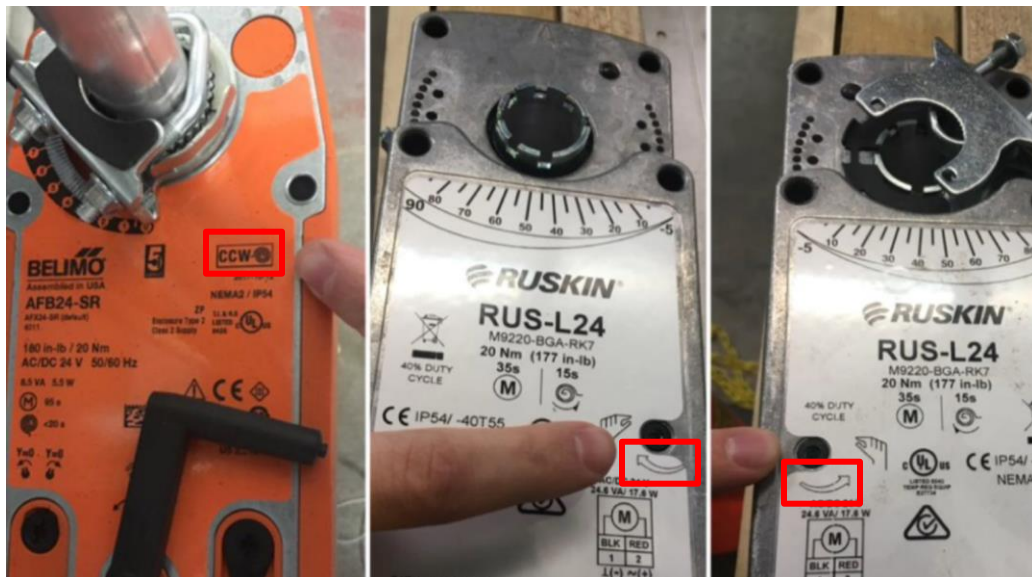
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Procedure

1. Add the 1/2" diameter jackshaft adapter to the actuator per the manufacturer's instructions.



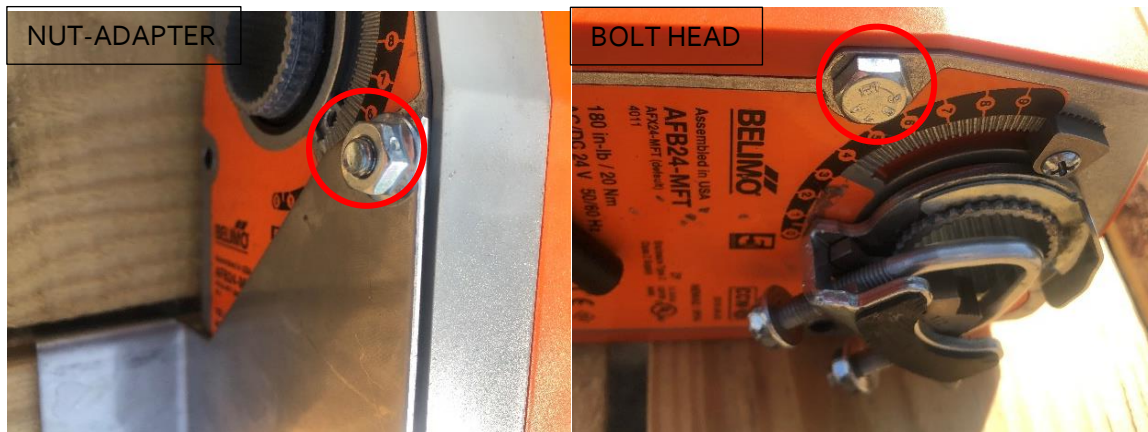
2. Match the actuators' clockwise or counterclockwise direction to the appropriate direction of blade rotation.
 - a. Most actuators have an indicator showing the proper rotational direction. Rotational direction can be reversed by flipping the actuator 180° or reversing the actuator clamp.



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3. Manually open the Damper Blade to 90°.
4. Depending on the preferred failure state manually preload the actuator spring with the crank provided by the manufacturer.
5. Remove Bolt Groups A and B from the Actuator Adapter and Adapter Mount.
6. Attach the actuator to the Actuator Adapter with the included hardware. Ensure the bolt head is on the side with the jackshaft clamp. If the bolt is installed backwards the actuator may interfere with the locknut.



7. For double-bank-units only. Use Bolt Group A to fasten the anti-rotation end of the actuator to the Actuator Adapter.



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8. Remove the retaining pin from the jackshaft. Place the jackshaft in the actuator clamp. Loosely tighten the actuator clamp to the jackshaft, leaving enough space to slightly move/rotate the jackshaft. Note that double bank units the jackshaft head is on the same side of the actuator. For single bank units it is preferable to have the jackshaft head on the opposite side of the actuator



Double-bank units

Single-bank-units



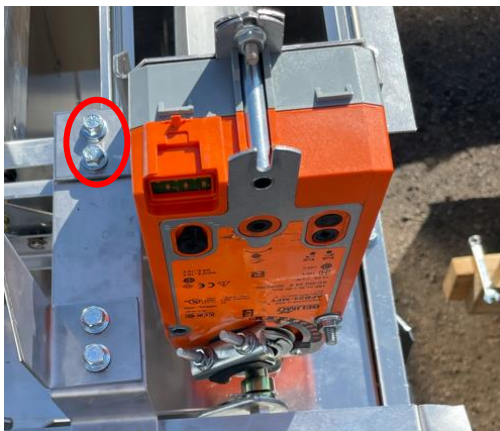
9. Position the actuator/adaptor/jackshaft assembly on the Channel Blender.
 - a. Fully insert the damper shaft head into the jackshaft

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10. Align the hole(s) in the Actuator Adapter with the holes in the Adapter Mount. Reinstall Bolt Group B and tighten.

Double-bank units



Single-bank-units



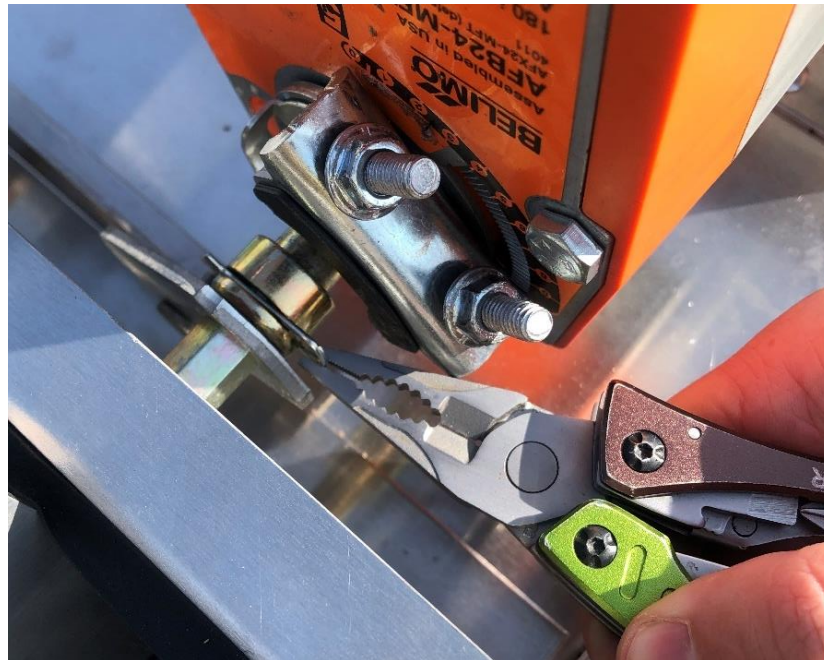
11. For single-bank-units only. Use Bolt Group A to fasten the anti-rotation end of the actuator to the Actuator Adapter.

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12. Reinsert the retaining pin to secure the jackshaft to the damper shaft.



13. Tighten the actuator clamp onto the jackshaft. Note that the actuator may need to be partially cranked to access the nuts on the clamp.



14. Cycle the actuator through its full range of motion. Ensure everything is working smoothly and the damper is clocked to complete the seal between the damper blade seal and the channel walls.

For electrical requirements and controls recommendations, reference the following documents:

- Blender Products' Technical bulletins
 - *CB-TB-108-Sample Damper Control Sequence w-Channel Blender*
 - *CB-TB-109-Damper Authority w-Channel Blender*
- Actuator manufacturer's manual