DMPR-KC100 Internal Vertical Blade-to-Blade Linkage

Use the DMPR-KC100 Internal Vertical Blade-to-Blade Linkage when stacking panels vertically and the linkage needs to be in the airstream.

Kit Includes

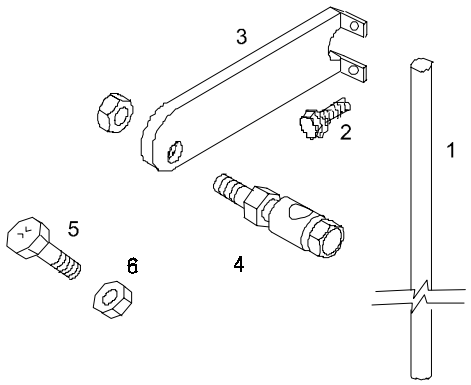

Figure 1: Kit Components

Table 1: Kit Components

Item	Description	Quantity
1	Linkage Rod	1
2	Screw, #12-24 x 1/2 inch, Hex-head, Self-tapping	4
3	Blade Arm	2
4	Ball Joint with Nut	2
5	#10-32 x 1-1/4 inch long Hex-head Screw	4
6	#10-32 Hex Nut	4

Item 1 available separate as DMPR-KC102.

Item 3 available separate as DMPR-KC100.

Item 4 available separate as DMPR-KC300.

Tools Required

- drill and 3/16 inch (5 mm) drill bit
- screwdriver, flat-blade, 5/16 inch or #12 nut driver
- wrench, 5/16 and 7/16 inch

Procedures

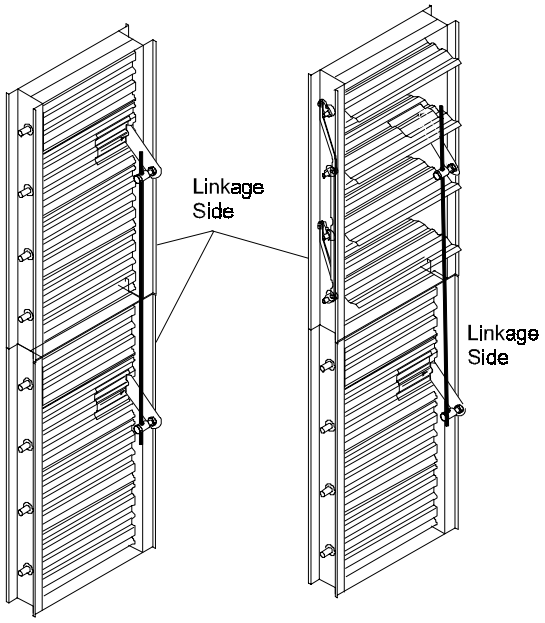

Figure 2: Panel Positions

Figure 2 shows the connections with both panels normally closed or normally open, and when one panel is normally open and the other normally closed.

Note: For a damper with one panel normally open and the other normally closed, as in a face/bypass application, one of the panels must be turned around.

Table 2: Preferred Drive Location

Panel Height, in.	Blades
24 or less	No. 1 or 3
Greater than 24 but less than 48	No. 3 or 5
Greater than 48 but less than 76	No. 5 or 7

For either arrangement, install the linkage to one of the blades shown in Table 2 on each panel. The ideal situation is to use a blade near the center of the panel height to distribute the torque evenly. Use only odd-numbered blades for panels with opposed blade rotation.

1. On the linkage side of the driving blade for each panel, using a 3/16 inch (or equivalent) bit, drill two holes for the blade arm. For best results:

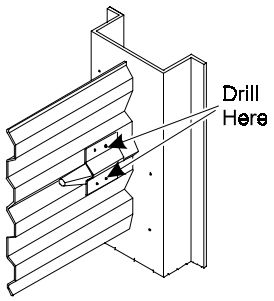

Figure 3: 16-Gauge Blades

- Single-piece blades - drill out the first punch marks from the end channel.

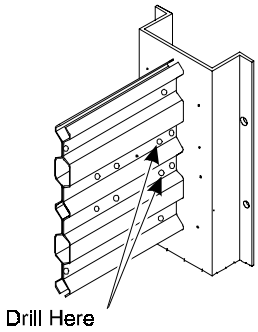

Figure 4: Double-Piece Blades

- Double-piece blades - drill out the second set of nuggets from the end.

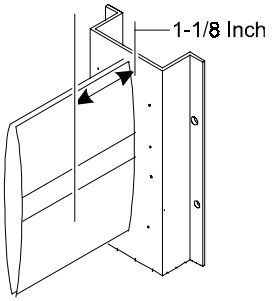

Figure 5: Airfoil Blades

- Airfoil blades - measure 1-1/8 inches from the end channel and drill on the lines etched in the blade.

2. Secure the blade arm (item 3 in Figure 1) to the preferred driving blade.

- 16-gauge blade: Use the two #12-24 x 1/2 inch hex-head, self-tapping screws (item 2 in Figure 1).
- Double-piece blade: Use the two #12-24 x 1/2 inch hex-head, self-tapping screws (item 2 in Figure 1).
- Airfoil blade: Use the two #10-32 x 1-1/4 inch hex-head screws (item 5 in Figure 1) and two #10-32 hex nuts (item 6 in Figure 1).

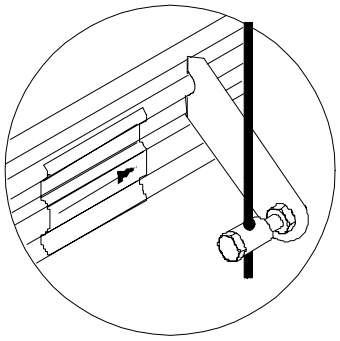

Figure 6: Installing Linkage Rod

3. Remove the nuts from the ball joints (item 4 in Figure 1) and insert the threaded portion of the ball joint through the holes in the blade arms. Both ball joints should always be on the same side of the blade arm.
4. Use a 5/16 inch wrench to secure the ball joints to the blade arms using the nuts removed in Step 3.
5. Slide the linkage rod (item 1 in Figure 1) into the ball joints and adjust for proper length.
6. Remove the linkage rod and cut off any excess. Reinstall the linkage rod.
7. Secure the linkage rod to both swivel ball joints using a 7/16 inch wrench.
8. Stroke the connected panels to verify full unobstructed travel.

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