

DMPR-KC213 and DMPR-KC214 Jackshaft Kits

Installation Instructions

Part No. 44-598-302, Rev. —
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Installation

Parts Included

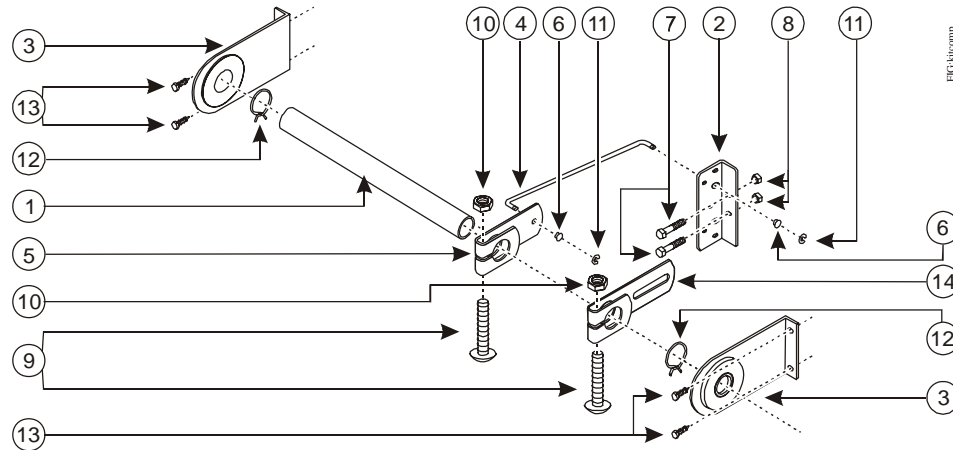


Figure 1: Jackshaft Kit Components

Table 1: Jackshaft Kit Components

Item	Description	Quantity: DMPR-KC-			
		213	214	217	218
1	Jackshaft: 1/2 in. (12.5 mm) Outside Diameter Bar ¹ Length:	5 ft	5 ft	0	0
2	Blade Bracket, Galvanized, Double V-Groove and Airfoil (Not Shown)	1	2	0	0
	Blade Bracket, Galvanized (Single V-Groove, Shown)	1	2	0	0
3	Bearing Bracket: 1/2 in. (12.5 mm) Diameter, 3-3/4 in. (95 mm) to Center	2	2	0	0
4	Tie-Rod	1	2	0	0
5	Crank Arm, 1/2 in. (12.5 mm), Galvanized	1	2	1	0
6	Nylon Bushing	2	4	1	1
7	1/4 x 1-1/4 in. Hex-Head Bolt, Standard Thread	2	4	0	0
8	Nylon Insert Locknut, 1/4-20	2	4	0	0
9	Carriage Bolt 5/16-18 x 1-1/2 in. (38 mm), Plated	2	4	1	1
10	5/16-18 Whiz Lock Nut Plated	2	4	1	1
11	TRUARC Ring	2	4	0	0
12	Spring Hose Clamp: Rotor Clip #HC-8 or Equal	2	2	0	0
13	Self-Drilling Screws: No. 10 x 1/2 in. (13 mm)	4	4	0	0
14	Drive Arm, 1/2 in. (12.5 mm) Diameter, Galvanized (Slotted)	1	2	0	1

1. Cut jackshaft as required.

Mounting

Location Considerations

Jackshaft operation requires a minimum height (clearance) of 11 in. (279 mm). To mount the jackshaft, select the labeled preferred driving blade. If the labeled driving blade is not available, select the drive blade from Table 2.

Note: Mount to a drive blade near the center of the panel height to distribute torque evenly.

Table 2: Jackshaft Location

Damper Height, in. (mm)	Blade Number
Minimum 11 (279), Maximum 24 (610)	1 or 3
Minimum 24 (610), Maximum 48 (1219)	3 or 5
Minimum 48 (1220), Maximum 76 (1930)	5 or 7

Mounting the Blade Bracket

To mount the bracket:

1. Drill two holes for the blade bracket (Item 2 in Figure 1) using a 1/4 in. bit (or equivalent).
2. Position the drilled mounting holes as follows for:
 - Single Piece Blades** - drill out the first punch marks from the end channel as shown in Figure 2.
 - Double-Piece Blades** - drill out the second set of nuggets from the end channel as shown in Figure 2.

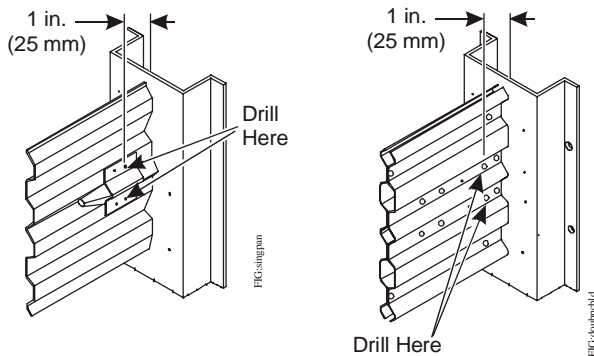


Figure 2: Single-Piece (Left) and Double-Piece (Right) Blades

Airfoil Blades - measure 1 in. (25 mm) from the end channel and drill on the lines etched in the blade, as shown in Figure 3.

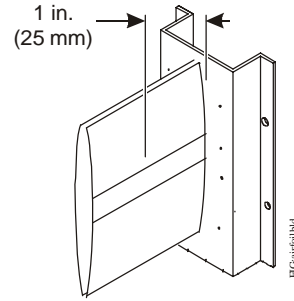


Figure 3: Airfoil Blades

3. Secure the blade bracket to the preferred driving blade using two 12-24 x 1/2 in. self-tapping screws (not provided).

Connecting Multiple Dampers

To mount **single-panel dampers**, continue with the *Mounting the Bearing Bracket* section. For multiple dampers:

1. Position the panels side-by-side on the floor with the blades closed and the labeled sides facing the same direction.
2. Place couplers (not provided) on each blade pin on one panel as shown in Figure 4.

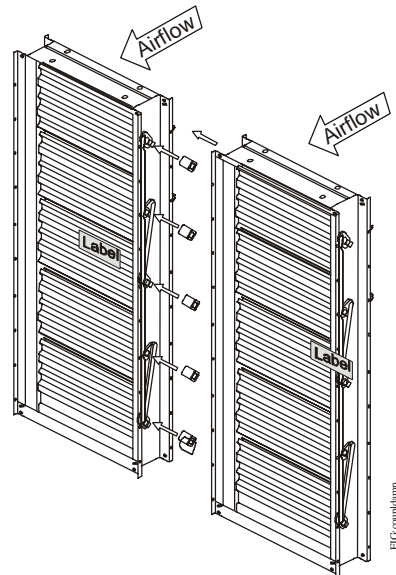


Figure 4: Coupling Dampers

- Slide the panel without the couplers toward the panel with the couplers. The blade pins should line up with the couplers as shown in Figure 5.

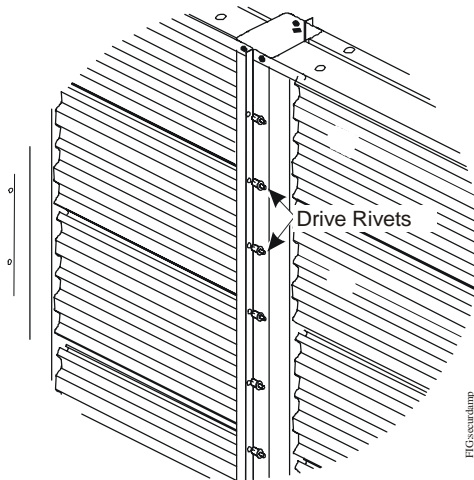


Figure 5: Securing Dampers Together

- Make sure to align the bottoms of the dampers.
- Insert drive rivets (not provided) in each hole along the end channels of the two adjoining dampers to secure the damper connection.
- Repeat Step 1 through Step 5 for three-panel configurations.
- Remove the shipping clips securing the blades and operate by hand to verify operation.

Mounting the Bearing Bracket

To mount the bearing bracket:

- Position the bearing bracket (Item 3 in Figure 1) on the framework (see Figure 6). Repeat for each bearing bracket.

Note: Be sure to position the bearing bracket flush with the inside of the damper frame.

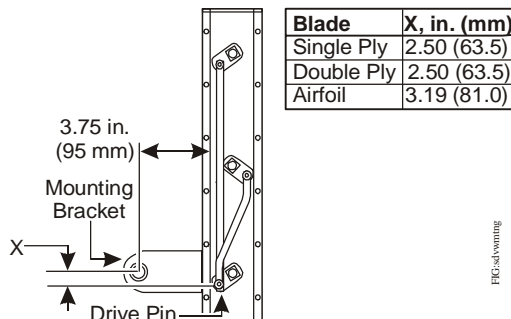


Figure 6: Side View of Mounting Bracket Position

- Hold the brackets in place and secure with the self-drilling No. 10 screws (Item 13 in Figure 1).

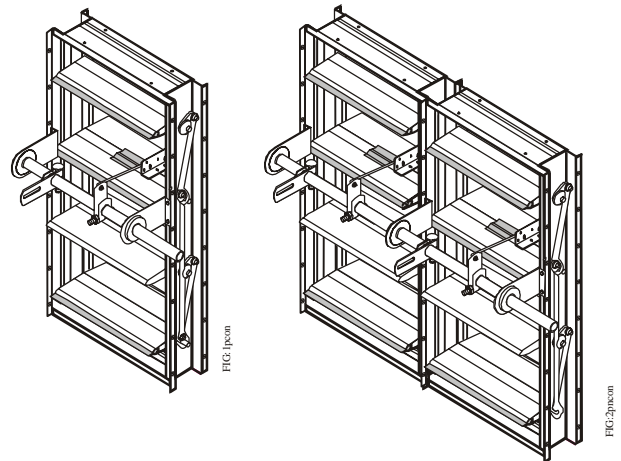


Figure 7: One-Panel (DMPR-KC213, Left) and Two-Panel (DMPR-KC214, Right) Connections

- Attach each bearing bracket to the framework using two No. 10-HWH x 1/2 in. CG self-drilling screws (Item 13 in Figure 1) per mounting bracket.

Mounting the Jackshaft, Crank Arm, and Drive Arm

To mount the jackshaft, crank arm, and drive arm:

- Slide the jackshaft (Item 1 from Figure 1) through one mounting bracket until it almost reaches the other mounting bracket.
- Install one spring hose clamp (Item 12 from Figure 1) onto the jackshaft and position it against the first mounting bracket.
- Install one crank arm (Item 5 from Figure 1) and one drive arm (Item 14 from Figure 1) onto the jackshaft; secure each with a carriage bolt (Item 9 from Figure 1) and lock nut (Item 10 from Figure 1).

Note: Complete all connections before tightening the nut to the carriage bolt holding the crank arm to the jackshaft.

Note: Repeat Step 1 through Step 3 for two-panel configurations.

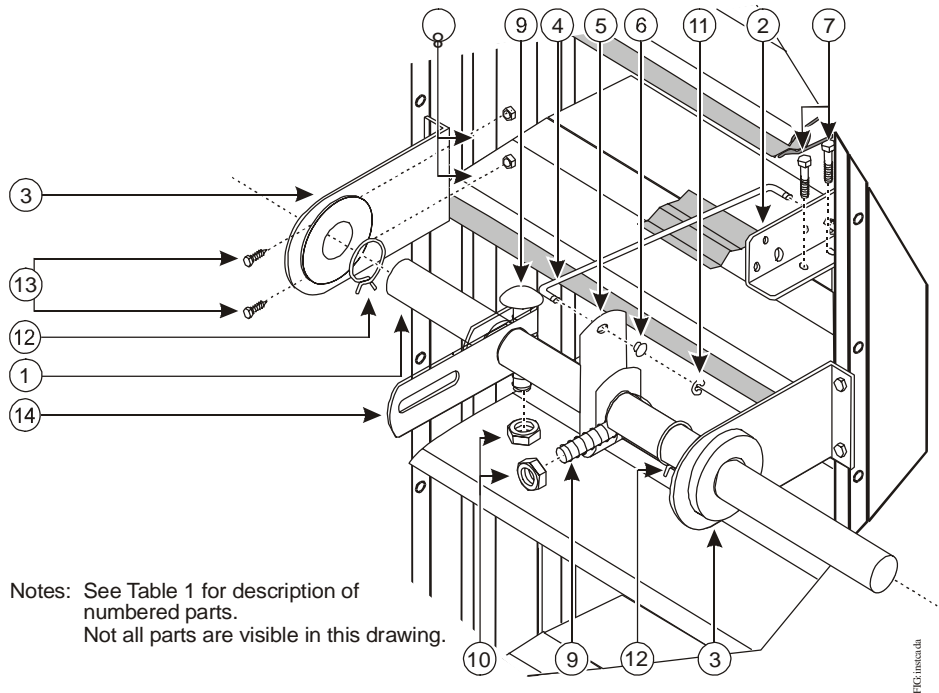
- Install the second spring hose clamp (Item 12 from Figure 1) on the inside edge of the final mounting bracket, leaving enough room to insert the jackshaft through the other mounting bracket.

5. After threading the jackshaft through all mounting brackets, position the two spring hose clamps against each mounting bracket to prevent side-to-side movement. Make sure to allow enough tubing (outside one of the mounting brackets) to install the final crank arm.

Jackshaft Connections

To make the jackshaft connections:

1. Secure the tie-rod (Item 4 from Figure 1) to the crank arm using the nylon bushing (Item 6 from Figure 1) and the E-Ring (Item 11 from Figure 1).
2. Secure the other end of the tie-rod to the Blade Bracket (Item 2 from Figure 1) using the other Nylon bushing (Item 6 from Figure 1) and the other E-Ring (Item 11 from Figure 1).
3. Slide the remaining crank arm onto the jackshaft; secure it with a carriage bolt (Item 9 from Figure 1) and lock nut (Item 10 from Figure 1).
4. Make the appropriate drive connections.
5. Manually rotate the jackshaft to check for proper operation before attaching the actuators.



Notes: See Table 1 for description of numbered parts.
Not all parts are visible in this drawing.

Figure 8: Installing the Crank Arm and Drive Arm

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