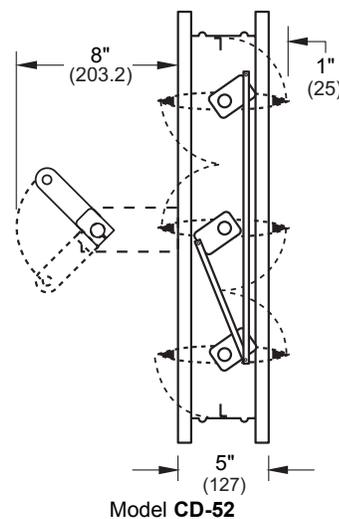
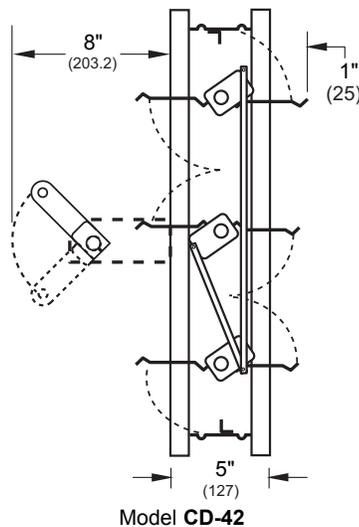


The following installation details apply to models **CD-41, CD-42, CD-45, CD-46, CD-51, CD-52, CD-53 and CD-54**

Control Damper Multi-Section Breakdown

1. Dampers larger than the maximum single section size are manufactured in multiple assemblies. The assemblies consist of equal size sections and interconnected with a jackshaft. All assemblies greater than two (2) sections wide will have a $\frac{3}{4}$ " jackshaft provided; otherwise, standard $\frac{1}{2}$ " jackshaft will be utilized. Jackshafting runs parallel to the width ("W" dimension) of the damper.
2. The maximum assembled shipping size is 144" x 72" for CD-41, CD-42, CD-45, CD-46 and 120" x 72" for the CD-51, CD-52, CD-53 and CD-54. Larger units, or as requested, are shipped in individual sections for in field installations.
3. Multiple sections require bracing to support the weight of the assembly and to hold against system pressure. Bracing should support the damper horizontally at 8' center-to-center. Large vertical assemblies and high systems pressure may require additional bracing.
4. Use the details on the back side to determine how the control damper with standard construction will be manufactured. Details do not apply if control damper has any of the following features:
 - A. Unequal section sizes
 - B. Face and bypass arrangement
 - C. Special construction request
 - D. Damper assemblies exceeding 240" x 144"
5. Installation clearance requirements:

Clearance Dimension	CD-41, 42, 45, 46 clearance (inches)	CD-51, 52 clearance (inches)
Crankarm clearance w/jackshaft	8" (203)	8" (203)
Maximum blade extension past frame	1" (25)	1" (25)



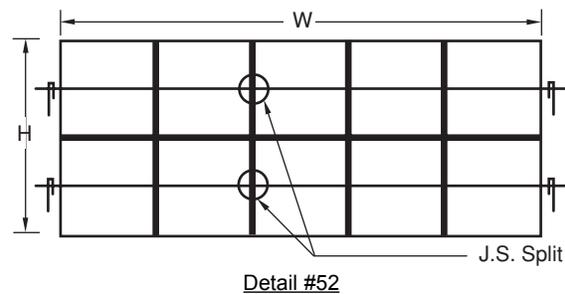
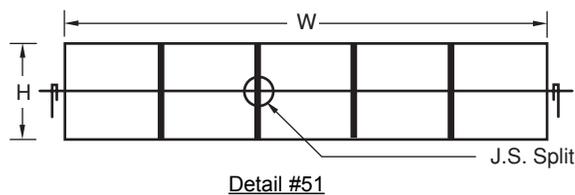
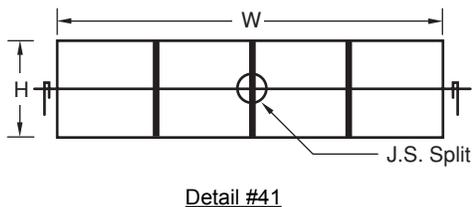
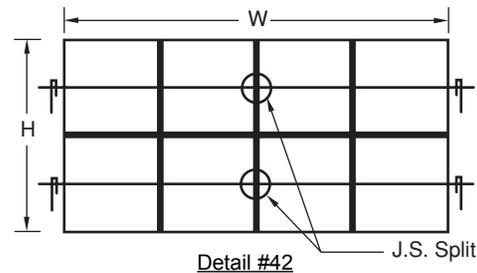
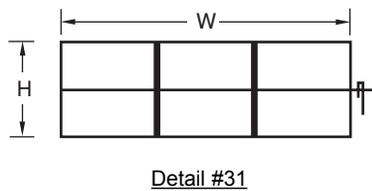
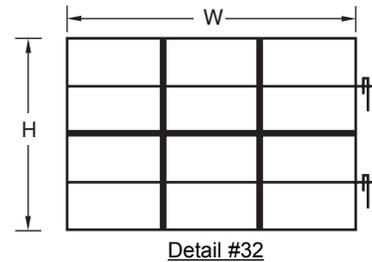
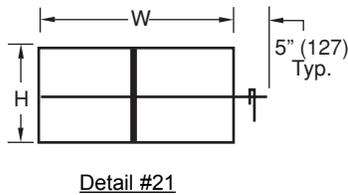
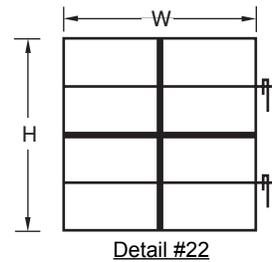
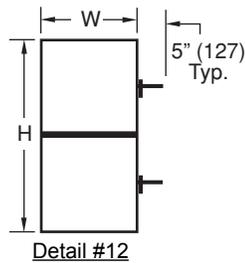
The following installation details apply to models **CD-41, CD-42, CD-45, CD-46, CD-51, CD-52, CD-53 and CD-54**

Multiple Section Control Damper Detail Table

Width - "W" in Inches (Parallel to the blade length)

Height - "H"
in Inches

CD-41, 42, 45, 46	$W \leq 48$ (1219)	$48 < W \leq 96$ (1219) (2438)	$96 < W \leq 144$ (2438) (3658)	$144 < W \leq 192$ (3658) (4877)	$192 < W \leq 240$ (4877) (6096)
$H \leq 72$ (1829)	-	Detail #21	Detail #31	Detail #41	Detail #51
$72 < H \leq 144$ (1829) (3658)	Detail #12	Detail #22	Detail #32	Detail #42	Detail #52
CD-51, 52	$W \leq 60$ (1524)	$60 < W \leq 120$ (1524) (3048)	$120 < W \leq 180$ (3048) (4572)	$180 < W \leq 240$ (4572) (6096)	$240 < W \leq 300$ (6096) (7620)
$H \leq 72$ (1829)	-	Detail #21	Detail #31	Detail #41	Detail #51
$72 < H \leq 144$ (1829) (3658)	Detail #12	Detail #22	Detail #32	Detail #42	Detail #52



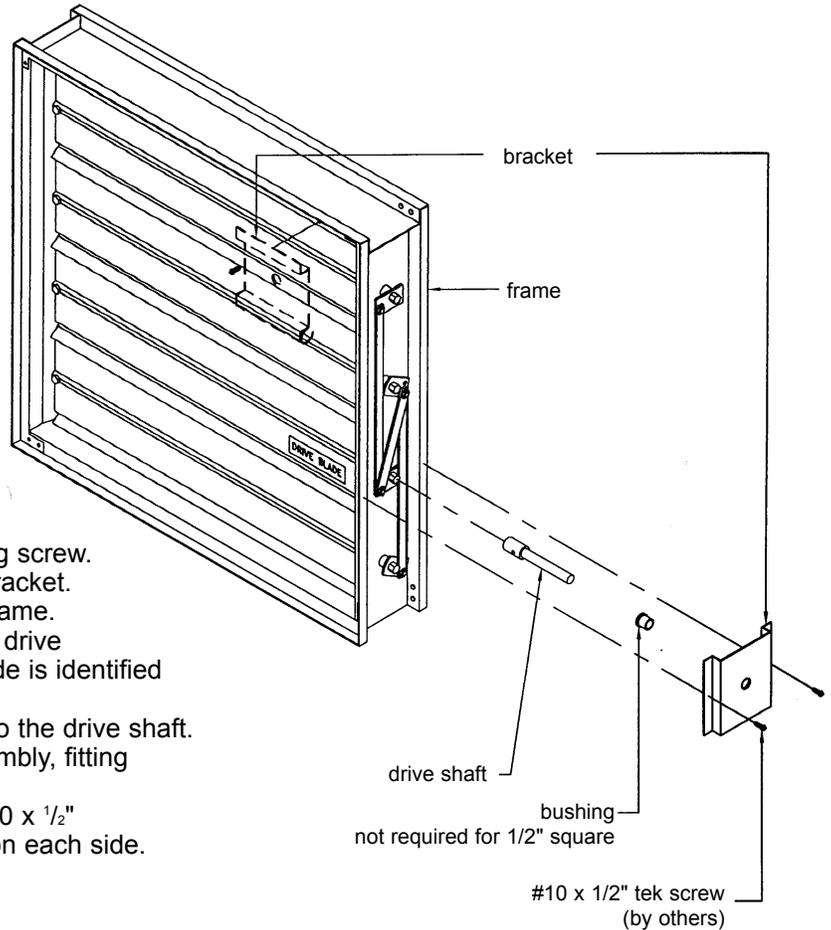
J.S. Split = Jack Shaft Split

The following installation details apply to models **CD-41, CD-42, CD-45, CD-46, CD-51, CD-52, CD-53 and CD-54**

Note: All Dampers installed within an insulated duct shall ensure that the insulation is not between the damper frame and duct. Also, no insulation shall be located between the damper frame and bracket. Damper operation can be affected if insulation is not trimmed back.

Direct Drive Field Installation

1. Remove bracket from frame by removing screw.
2. Remove drive shaft and bushing from bracket.
3. Reinsert screw into the hole left in the frame.
4. Insert the driveshaft onto the axle of the drive blade on the linkage side. The drive blade is identified with a label.
5. Insert the bushing, flanged end first, onto the drive shaft.
6. Insert the bracket onto the coupler assembly, fitting the bushing onto the bracket hole.
7. Screw the bracket to the frame using #10 x 1/2" tek screw (by others). Minimum of one on each side.



Single Section or Multi-Section Installation

- A. Inspect ductwork or opening where damper is to be installed for any obstructions or irregularities that might interfere with blade or linkage rotation or actuator mounting. Duct opening should measure approximately 1/4" (6) larger than the damper dimensions and should be square and level. Duct work must be properly supported around damper to prevent sagging. Care must be taken to prevent dropping, dragging, stepping on, bending, twisting, racking, etc. Do not lift by blades, linkage, axle, motor, or jackshifting.
- B. Position damper section(s) together in duct or opening. Align and match frame markings or labels on adjacent sections, see figure 1. Unless specifically designed for vertical blades, damper must be mounted with blade axis horizontal.
- C. Fasten adjacent frame sections together on front and back sides with screws or nuts and bolts. Shim damper frame and duct opening properly to prevent distortion of frame. Damper should be braced at every horizontal mullion, minimum 8 feet (2438) center-to-center. Dampers in high velocity / high static pressure systems require additional bracing.

4B	3B	2B	1B
4A	3A	2A	1A

Figure 1 - Multiple Assembly Tags