RECTANGULAR DAMPERS

CD40, CD50, CD60 SERIES

DESCRIPTION

Ruskin parallel and opposed-blade HVAC control dampers are custom made-to-order. The damper frames are made of galvanized steel in a channel frame construction, offering an equivalent 13-gauge metal strength. The **CD40 Series** has 6" wide V-groove blades that are made of 16-gauge galvanized steel with synthetic bearings. The **CD50** has aluminum airfoil blades with synthetic bearings. **CD60** dampers offer 14-gauge blades.

CD44 Basic control damper, approximately 4% leakage
CD45 Standard control damper, AMCA Class 3
CD46 Low leakage control damper, AMCA Class 2
CD50 Aluminum frame air foil, ultra-low AMCA Class 1A
CD60 Steel air foil, ultra-low AMCA Class 1A

CD-46

COMMON SPECIFICATIONS

Type	Parallel or opposed blade
Shaft	6"L x 0.5" Dia. (15.2 x 1.3 cm) located on linkage side
Frame	Equivalent 13 gauge galvanized (CD 50 aluminum); 5" face-to-face dimension
Bearings	Synthetic
Blade Design	6" galvanized steel for CD40, CD60; 6" aluminum for CD50; blade pins 0.5" steel hex
Side Seals	Self-adjusting steel (CD45, 46, 50, 60)
Linkage	Concealed in frame
Available Options	Flanges (front and/or rear)
Weight	7 lbs/sq. ft (shipping weight estimate)
RoHS Statement	Yes
Warranty	1 year

INDIVIDUAL SPECIFICATIONS

	CD44	CD45	CD46	CD50	CD60
Blades	16-gauge V-groove	16-gauge V-groove	16-gauge V-groove	Aluminum airfoil	14-gauge steel airfoil
Jam seals	None	Flexible steel	Flexible steel	Flexible steel	Flexible steel
Blade seals	None	Foam	PVC coated polyester	Ruskiprene®	Ruskiprene®
Leakage (% of maximum flow)	2.7 to 4.3% @ 1" WC differential pressure	0.7 to 1.1% @ 1" WC differential pressure	0.4 to 0.5% @ 1" WC differential pressure	<8 cfm/sq. ft. @ 4" WC differential pressure	<3 cfm/sq. ft. @ 1" WC differential pressure
AMCA Class	Not classified	Class 3	Class 2	Class 1A	Class 1A
Operating Temperature	-40° to 240°F (-40° to 116°C)	-25° to 180°F (-32° to 83°C)	-25° to 180°F (-32° to 83°C)	-72° to 275°F (-58° to 135°C)	-72° to 275°F (-58° to 135°C)
Maximum Velocity	2000 fpm @ 2.5" WC	2000 fpm @ 2.5" WC	2000 fpm @ 2.5" WC	3000 fpm @ 3.5" WC	3000 fpm @ 3.5" WC
Torque required	2.5 in-lb/sq. ft.	5 in-lb/sq. ft.	7 in-lb/sq. ft.	7 in-lb/sq. ft.	7 in-lb/sq. ft.

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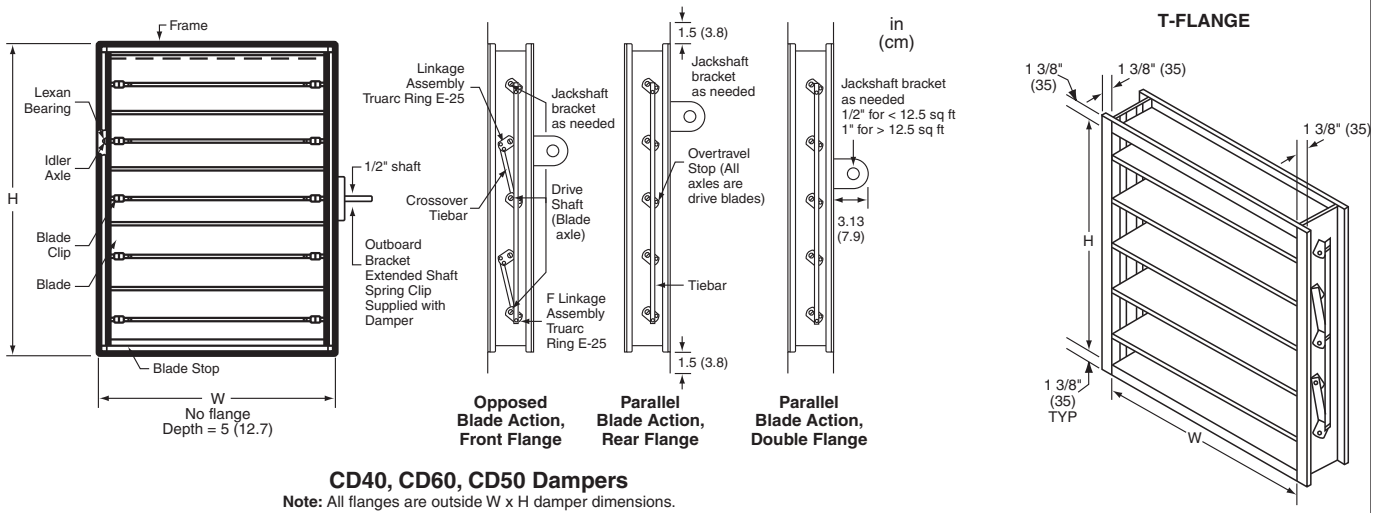
DAMPER OPTION DIAGRAMS



CD40, CD60, CD50 Dampers

Note: All flanges are outside W x H damper dimensions.

ORDERING INFORMATION

MODEL	DESCRIPTION
CD44	Steel control damper without jamb or blade seals. No leakage class, 4% of maximum flow approximate leakage at 4" W.C., not recommended for OSA intake
CD45	Steel control damper with flexible stainless steel jamb seals and foam blade seals. AMCA Class 3 leakage, 40 CFM/ft² at 1" W.C.
CD46	Steel control damper with flexible stainless steel jamb seals and PVC blade seals. Very low AMCA Class 2 leakage, 10 CFM/ft² at 1" W.C.
CD50	Aluminum control damper with flexible stainless steel jamb seals and Ruskiprene® blade seals. Ultra-low AMCA Class 1A leakage, 3 CFM/ft² at 1" W.C.
CD60	Steel control damper with flexible stainless steel jamb seals and Ruskiprene® blade seals. Ultra-low AMCA Class 1A leakage, 3 CFM/ft² at 1" W.C.)

BLADE CONFIGURATION	
OB	Opposed blade (damper must have two blades minimum)
PB	Parallel blade (single blade available)

MOUNTING OPTIONS	
0	No flange
1*	Flange on front of damper, opposite side of jack shaft (if jack shaft included)
2*	Flange on back of damper, same side as jack shaft (if jack shaft included)
3*	Flanges both front and back
4*	T-flange frame option for wafer-style mounting with increased free area (see T-Flange Frame drawing)

SPECIAL CONSTRUCTION	
X	Horizontal blade mounting, no special construction
T**	Vertical blade mounting configuration (includes thrust bearings)**

SIZE - WIDTH* by HEIGHT in INCHES (0.01" INCREMENTS), PLEASE OBSERVE LIMITS IN THIS TABLE**

	Model and mounting	Blade style	Single section ‡		Multi-section †	
			Minimum	Maximum	Minimum	Maximum
(W*** x H)	CD4x models horizontal blade:	Opposed	5" x 10"	48" x 72"	48" x 72.01"	Unlimited
		Parallel	5" x 5"	48" x 72"	48" x 72.01"	Unlimited
	CD4x models vertical blade:	Opposed	5" x 10"	36" x 48"	Special construction -- call Kele	
		Parallel	5" x 5"	36" x 48"		
	CD50 models horizontal blade:	Opposed	6" x 9"	60" x 72"	48" x 72.01"	Unlimited
		Parallel	6" x 8"	60" x 72"	48" x 72.01"	Unlimited
	CD50 models vertical blade:	Opposed	6" x 9"	36" x 48"	Special construction -- call Kele	
		Parallel	6" x 8"	36" x 48"		
	CD60 models horizontal blade:	Opposed	8" x 11"	60" x 72"	48" x 72.01"	Unlimited
		Parallel	8" x 10"	60" x 72"	48" x 72.01"	Unlimited
	CD60 models vertical blade:	Opposed	8" x 11"	36" x 48"	Special construction -- call Kele	
		Parallel	8" x 10"	36" x 48"		

* All flanges are outside the ordered damper dimension (W x H). See damper option diagrams for flange dimensions.
** Vertical blade construction
*** Damper width is defined as the outside dimension parallel to the blade(s), regardless of vertical or horizontal orientation.
† Jackshaft is included in all multi-section dampers. Crank arm is not included.
‡ All single-section dampers have 1/2"Ø drive shaft

Example: **CD46-OB-0X-12X18** CD46 steel control damper, opposed blade, no flange, standard horizontal construction, 12"W x 18"H