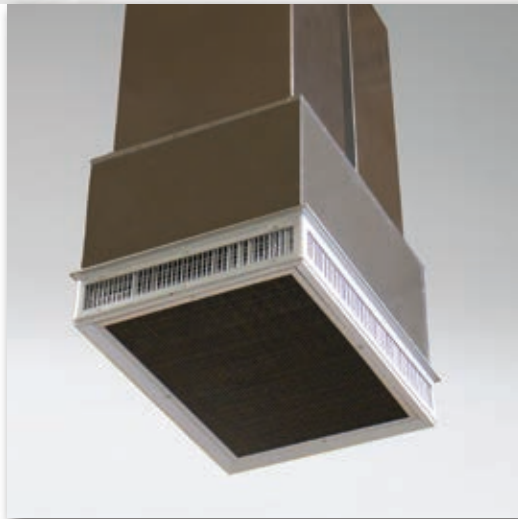
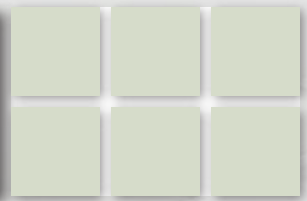


# CONCENTRIC DIFFUSERS

Product Information & Applications



**RUSKIN**<sup>®</sup>  
GO GREEN  GO RUSKIN

# CDF Series

## FLUSH MOUNT CONCENTRIC DIFFUSER SYSTEM

SEE PAGES 4-5 FOR CDF SERIES  
TECHNICAL DATA

### LIGHT COMMERCIAL 'T' BAR CEILING



### LIGHT COMMERCIAL PLASTER CEILING



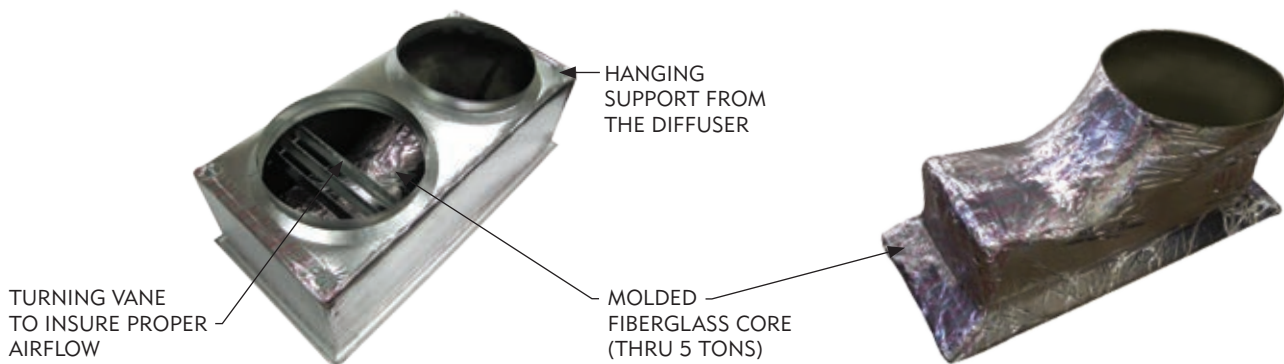
**RUSKIN'S CDF SERIES** concentric diffuser system is designed to provide a single point air distribution system. The systems may be used with either a T-Bar ceiling or a plaster ceiling. System is available with optional 4" fiberglass filter in the return section.

#### Standard features include:

- All anodized aluminum diffuser frame with aluminum return air egg crate.
- Built-in Anti-Sweat gasket.
- Molded Fiberglass Core (thru 5 tons).
- Built-in hanging supports.
- Diffuser box constructed of fiberglass ductboard (through 7.5 tons) or sheetmetal.
- Stainless steel thumb screws.

#### Standard benefits include:

- Even four (4) way air distribution
- Lightweight design.
- Factory assembled and sealed.
- Designed to prevent short cycling.
- Return air eggcrate is easily removed.
- Units are fully insulated (both supply and return).



# CDS Series

## SIDE DISCHARGE CONCENTRIC DIFFUSER SYSTEM

SEE PAGES 6-7 FOR CDS SERIES  
TECHNICAL DATA

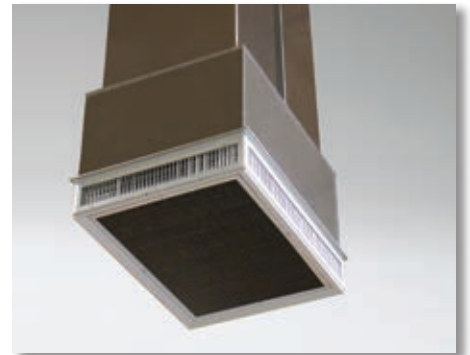
### LIGHT COMMERCIAL 'T' BAR CEILING



### LIGHT COMMERCIAL PLASTER CEILING



### OPEN CEILING



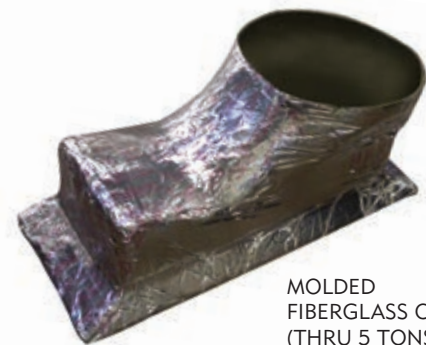
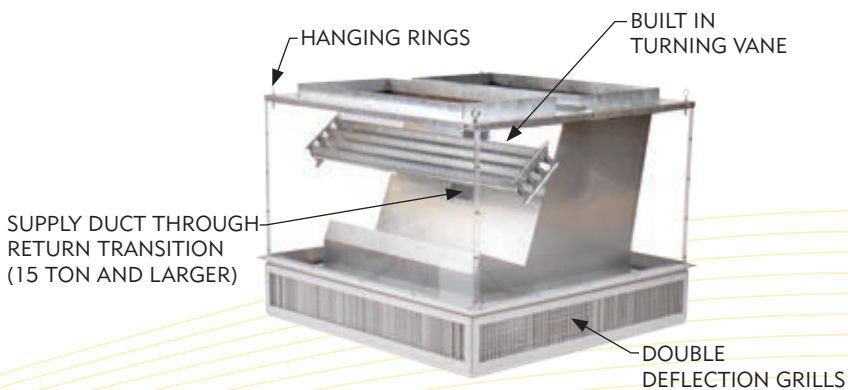
**RUSKIN'S CDS SERIES** concentric diffuser system is designed to provide a single point air distribution system with the added benefit of having directional air control. The systems may be used with either a T-Bar ceiling, a plaster ceiling, or with no ceiling at all. System is available with an optional 1" Hogs Hair filter in the return section.

#### Standard features include:

- All aluminum diffuser frame with aluminum return air egg crate.
- Double deflection diffuser with the blades secured by spring steel.
- Built-in Anti-Sweat gasket.
- Molded Fiberglass Core (thru five tons).
- Built-in hanging supports.
- Diffuser box constructed of fiberglass ductboard (thru 7.5 tons) or sheetmetal.

#### Standard benefits include:

- Even four (4) way air distribution.
- All exposed surfaces (below ceiling) are brushed aluminum.
- Factory assembled and sealed.
- Designed to prevent short cycling.
- Return air eggcrate is easily removed.
- Units are fully insulated (both supply and return).
- Lightweight design.



# CDF Series

ENGINEERING DATA AND DIMENSIONS

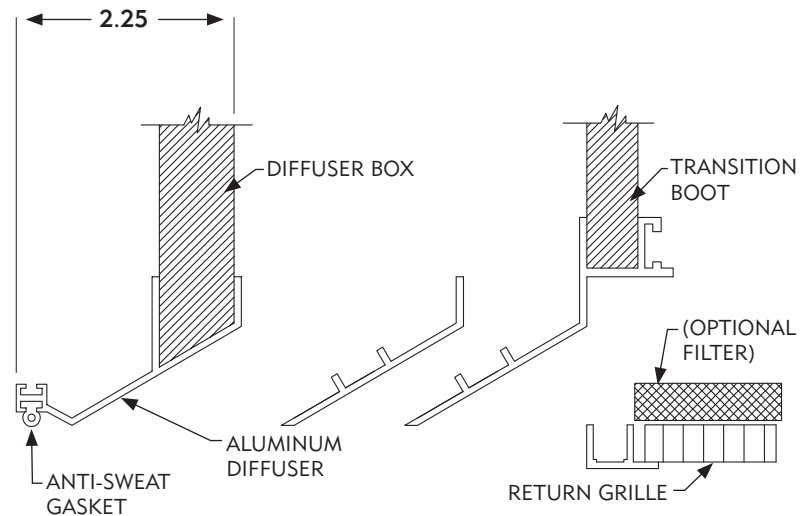
## FLUSH MOUNT CONCENTRIC DIFFUSER SYSTEM

### SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, flush mount concentric diffusers manufactured in an ISO9001 facility. Diffusers shall consist of an aluminum supply diffuser with an aluminum eggcrate return. Unit shall be complete with a permanent non-adhesive anti-sweat gasket and hanging supports. Diffusers five ton and smaller shall have a molded fiberglass interior transition. Units fifteen ton and larger shall have supply duct through return transition ensure equal airflow to all four sides of diffuser. Manufacturers published data sheet shall include CFM rating, velocity rating, noise, static, and throw information. Flush mount concentric diffusers shall be in all respects equivalent to Ruskin Model CDF series.

### Specifier Select Option

Furnish flush mount concentric diffusers complete with 4" fiberglass filter in the return section.



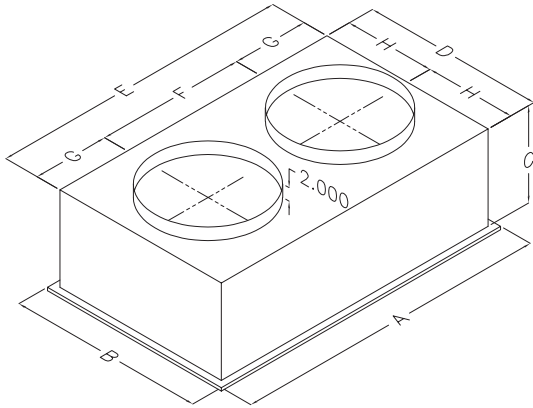
### ENGINEERING DATA

MODEL #	CFM	STATIC PRESSURE	THROW IN FEET	NECK VELOCITY	JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
CDF-16	600	0.09	10-14	234	417	18	27.00
	800	0.11	12-18	313	556	20	27.00
	1000	0.14	15-20	391	691	20	27.00
	1200	0.17	16-22	469	833	25	27.00
	1400	0.20	17-24	547	972	30	27.00
CDF-18	1000	0.14	15-20	391	694	20	27.00
	1200	0.17	16-22	469	833	25	27.00
	1400	0.20	17-24	547	972	30	27.00
	1600	0.24	18-25	625	1111	30	27.00
	1800	0.30	20-28	703	1250	35	27.00
	2000	0.36	21-29	781	1389	40	27.00
CDF-20	2200	0.40	22-30	859	1528	40	27.00
	2600	0.17	19-24	663	1294	30	42.00
	2800	0.20	20-28	714	1393	35	42.00
	3000	0.25	21-29	765	1492	35	42.00
	3200	0.31	22-29	816	1592	40	42.00
CDF-22	3400	0.37	22-30	867	1692	40	42.00
	3600	0.17	22-29	844	1646	34	104.00
	4000	0.21	24-33	938	1829	40	104.00
	4400	0.27	28-37	1032	2011	40	104.00

MODEL #	CFM	STATIC PRESSURE	THROW IN FEET	NECK VELOCITY	JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
CDF-50	4500	0.31	25-34	922	1795	40	151.00
	5000	0.34	24-33	938	1829	40	151.00
	5400	0.39	32-41	1083	2107	45	151.00
CDF-60	5600	0.36	28-37	1000	2082	45	158.00
	6000	0.42	40-50	1071	2230	45	158.00
	6400	0.50	43-52	1143	2379	50	158.00
CDF-80	6600	0.54	45-56	1179	2454	50	158.00
	7200	0.39	26-35	996	2093	45	197.00
	8000	0.50	42-51	1107	2326	50	197.00
	8400	0.56	44-54	1162	2442	50	197.00
CDF-100	8800	0.63	48-59	1217	2558	50	197.00
	9600	0.41	32-41	1036	2159	45	197.00
	10000	0.45	37-46	1079	2249	45	197.00
CDF-300	10400	0.50	42-51	1122	2339	50	197.00
	10000	0.57	37-46	713	1506	35	244.00
	11000	0.72	46-56	785	1657	35	244.00
	12000	0.90	54-66	856	1808	40	244.00
	13000	1.10	62-75	927	1958	40	244.00

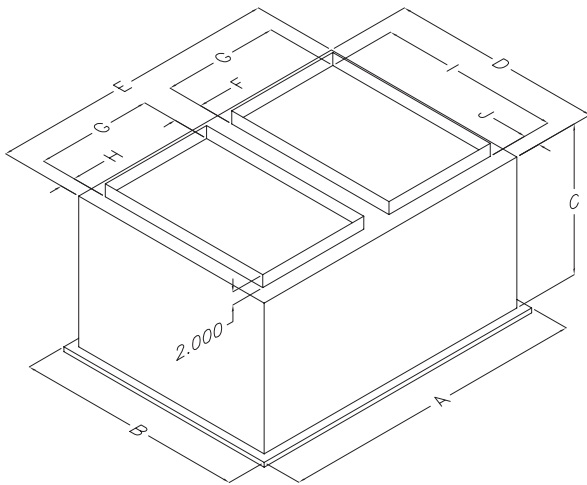
1. All data is based on the Air Diffusion Council guidelines.
2. Throw data is based on Terminal Velocities of 75 FPM using isothermal air.
3. "Neck Velocity" is the speed in feet per minute of the air coming into the diffusers - similar to duct velocity.\*
4. "Jet Velocity" is the speed in feet per minute of the air exiting the diffusers.\*

\* Jet velocity is higher than neck velocity on the CDF flush mount diffusers because the air gets "pinched down" as it exits, unlike the drop down CDS diffuser where Jet Velocity and Neck Velocity are essentially equal.



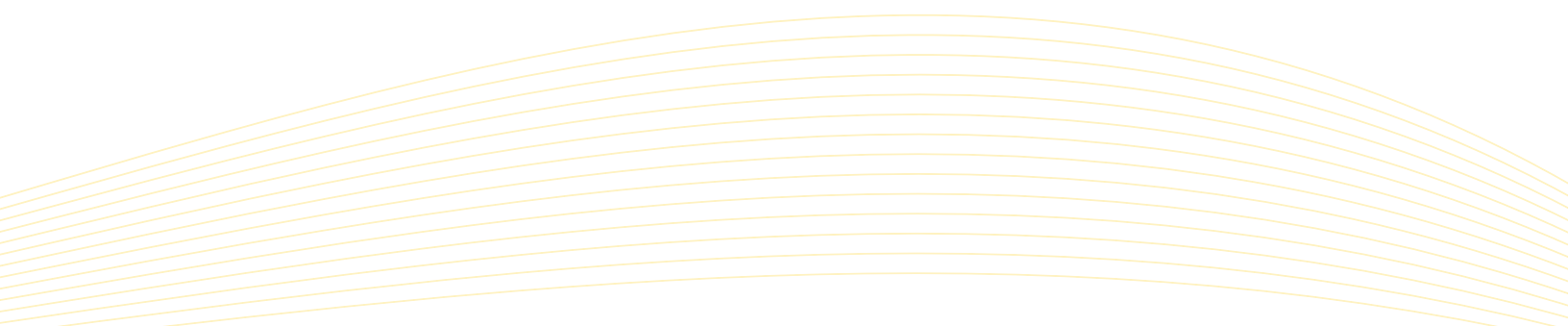
## DIMENSIONS

MODEL #	A	B	C	D	E	F	G	H	DUCT SIZE
CDF-16	47 5/8	23 5/8	13 1/2	21	45	22 1/2	11 1/4	10 1/2	16 RD
CDF-18	47 5/8	23 5/8	13 1/2	21	45	22 1/2	11 1/4	10 1/2	18 RD
CDF-20	47 5/8	29 5/8	16 5/8	27	45	22 1/2	11 1/4	13 1/2	20 RD



## DIMENSIONS

MODEL #	A	B	C	D	E	F	G	H	I	J	DUCT SIZE
CDF-22	47 5/8	35 5/8	23 1/4	33	45	4 1/2	18	2 1/4	28	2 1/2	18x28
CDF-50	47 5/8	41 5/8	29 1/4	39	45	4 1/2	18	2 1/4	32	3 1/4	18x32
CDF-60	47 5/8	47 5/8	29 1/4	45	45	4 1/2	18	2 1/4	36	4 1/2	18x36
CDF-80	59 5/8	59 5/8	35 1/4	57	57	4 1/2	24	2 1/4	48	4 1/2	24x48
CDF-100	59 5/8	59 5/8	35 1/4	57	57	4 1/2	24	2 1/4	54	1 1/2	24x54
CDF-300	63 5/8	63 5/8	40	63 1/8	63 1/2	4 1/2	28	1 1/4	60	1 1/2	28x60



# CDS Series

ENGINEERING DATA AND DIMENSIONS

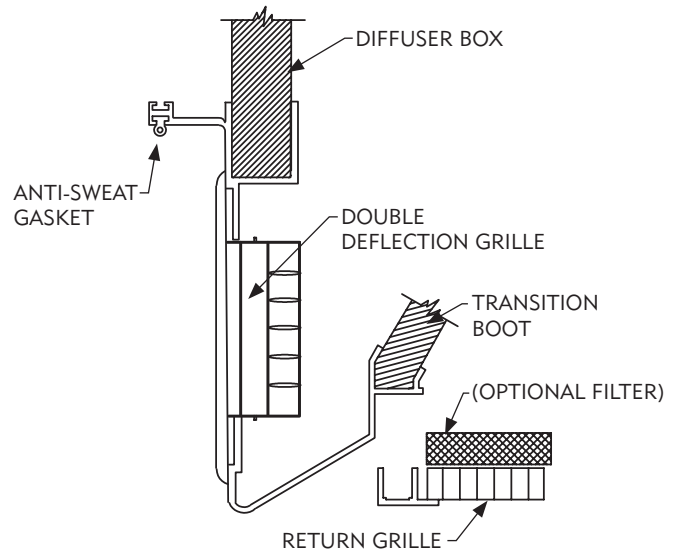
## SIDE DISCHARGE CONCENTRIC DIFFUSER SYSTEM

### SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, side discharge concentric diffusers, manufactured in an ISO9001 facility. Diffusers shall consist of an aluminum double deflection supply diffuser with an aluminum eggcrate return. Double deflection diffuser blades shall be secured with interwoven spring steel. All exposed surfaces below ceiling must be brushed aluminum. Units shall be complete with a permanent non-adhesive anti-sweat gasket and hanging supports. Diffusers five ton and smaller shall have a molded fiberglass interior transition. Units fifteen ton and larger shall have supply duct through return transition ensuring equal airflow to all four sides of diffuser. Manufacturers published data sheet shall include CFM rating, velocity rating, noise, static, and throw information. Flush mount concentric diffusers shall be in all respects equivalent to Ruskin Model CDS series.

### Specifier Select Option

Furnish side discharge concentric diffusers complete with 1" Hogs Hair filter in the return section.



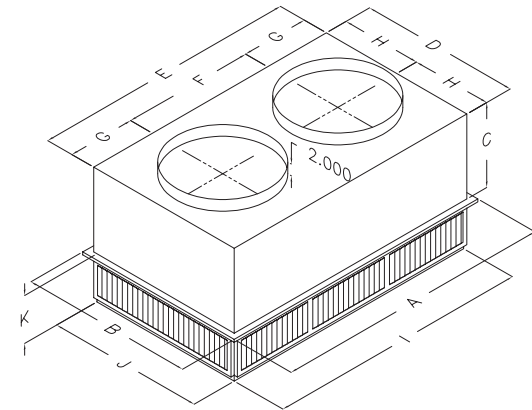
### ENGINEERING DATA

RSI PART NO.	CFM	STATIC PRESSURE	THROW FEET	NECK/JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
CDS-16	600	0.09	8-15	210	20	38.00
	800	0.11	9-16	281	20	38.00
	1000	0.14	10-17	351	20	38.00
	1200	0.17	11-18	421	20	38.00
CDS-18	1200	0.17	11-18	421	20	38.00
	1400	0.20	12-19	491	20	38.00
	1600	0.24	12-20	561	20	38.00
	1800	0.30	13-21	632	20	38.00
	2000	0.36	14-23	702	20	38.00
CDS-20	2200	0.40	16-25	772	20	38.00
	2600	0.17	24-29	669	20	82.00
	2800	0.20	25-30	720	25	82.00
	3000	0.25	27-33	772	25	82.00
	3200	0.31	28-35	823	25	82.00
CDS-22	3400	0.37	30-37	874	30	82.00
	3600	0.17	25-33	851	30	122.00
	3800	0.18	27-35	898	30	122.00
	4000	0.21	29-37	946	30	122.00
	4200	0.24	32-40	993	30	122.00
CDS-50	4400	0.27	34-42	1040	30	122.00
	4600	0.31	26-31	841	30	145.00
	4800	0.32	27-32	878	30	145.00
	5000	0.34	28-33	915	30	145.00
	5200	0.36	28-34	951	30	145.00
	5400	0.39	29-35	988	30	145.00

RSI PART NO.	CFM	STATIC PRESSURE	THROW FEET	NECK/JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
CDS-60	5600	0.36	39-49	920	30	217.00
	5800	0.39	42-51	954	30	217.00
	6000	0.42	44-54	1022	30	217.00
	6200	0.46	45-55	1056	30	217.00
	6400	0.50	46-55	1090	30	217.00
	6600	0.54	47-56	1124	30	217.00
CDS-80	7200	0.39	33-38	827	25	238.00
	7600	0.43	36-41	873	25	238.00
	8000	0.50	39-44	918	30	238.00
	8400	0.56	43-49	964	30	238.00
	8800	0.63	47-55	1010	30	238.00
	9200	0.74	49-57	1056	50	238.00
CDS-100	9400	0.80	50-58	1079	55	238.00
	9600	0.83	52-62	1102	55	238.00
	9800	0.86	55-63	1125	55	238.00
	10000	1.00	57-65	1148	55	238.00
	10200	1.07	60-68	1171	60	238.00
	10400	1.16	63-71	1194	60	238.00
CDS-300	10000	.51	46-54	907	30	285.00
	10500	.58	50-58	953	30	285.00
	11000	.65	53-61	998	30	285.00
	11500	.73	55-64	1043	30	285.00
	12000	.82	58-67	1089	30	285.00
	12500	.91	61-71	1134	30	285.00
	13000	1.00	64-74	1179	35	285.00

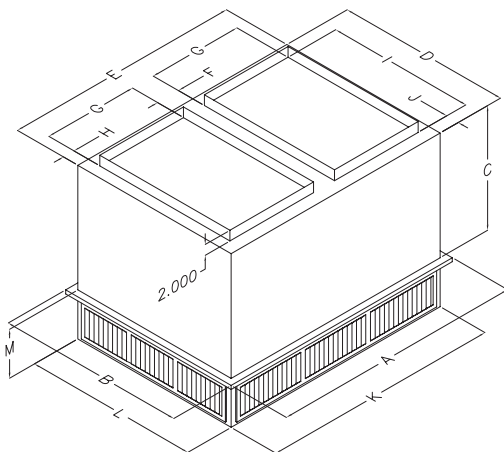
1. All data is based on the Air Diffusion Council guidelines.
2. Throw data is based on Terminal Velocities of 75 FPM using isothermal air.
3. "Neck Velocity" is the speed in feet per minute of the air coming into the diffusers – similar to duct velocity.\*
4. "Jet Velocity" is the speed in feet per minute of the air exiting the diffusers.\*
5. Throw is based on diffuser blades being directed in a straight pattern.

\* The drop down CDS diffusers have enough face area in the supply grills so that the air velocity does not increase significantly as it exits the concentric. Therefore, "Neck Velocity" and "Jet Velocity" are the same for the drop downs.



## DIMENSIONS

MODEL #	A	B	C	D	E	F	G	H	I	J	K	DUCT SIZE
CDS-16	47 5/8	23 5/8	11 3/8	21 1/2	45 1/2	22 1/2	11 1/2	10 3/4	45 1/2	21 1/2	7 1/8	16 RD
CDS-18	47 5/8	23 5/8	11 3/8	21 1/2	45 1/2	22 1/2	11 1/2	10 3/4	45 1/2	21 1/2	7 1/8	18 RD
CDS-20	47 5/8	29 5/8	14 3/8	27 1/2	45 1/2	22 1/2	11 1/2	13 3/4	45 1/2	27 1/2	8 1/8	20 RD



## DIMENSIONS

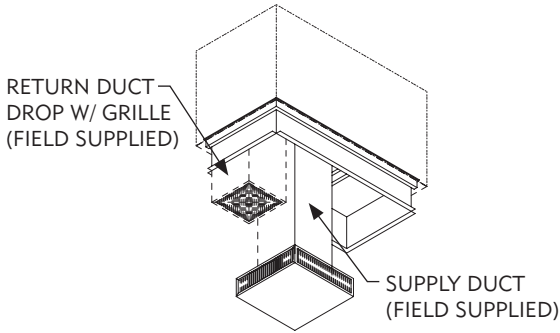
MODEL #	A	B	C	D	E	F	G	H	I	J	K	L	M	DUCT SIZE
CDS-22	47 5/8	35 5/8	20 5/8	33 1/2	45 1/2	4 1/2	18	2 1/2	28	2 3/4	45 1/2	33 1/2	9 1/8	18x28
CDS-50	47 5/8	41 5/8	24 5/8	39 1/2	45 1/2	4 1/2	18	2 1/2	32	3 3/4	45 1/2	39 1/2	9 1/8	18x32
CDS-60	47 5/8	47 5/8	24 5/8	45 1/2	45 1/2	4 1/2	18	2 1/2	36	4 3/4	45 1/2	45 1/2	10 1/8	18x36
CDS-80	59 5/8	59 5/8	30 5/8	57 1/2	57 1/2	4 1/2	24	2 1/2	48	4 3/4	57 1/2	57 1/2	11 1/8	24x48
CDS-100	59 5/8	59 5/8	30 5/8	57 1/2	57 1/2	4 1/2	24	2 1/2	54	1 3/4	57 1/2	57 1/2	11 1/8	24x54
CDS-300	65 5/8	65 5/8	40 1/2	63 1/2	63 1/2	4 1/2	28	1 1/2	60	1 3/4	63 1/2	63 1/2	12 1/8	28x60

# SOD & DLD Series

SPECIALTY DIFFUSERS  
FOR OPEN CEILING  
APPLICATIONS

## RUSKIN SOD SERIES DOUBLE DEFLECTION SUPPLY DIFFUSERS

SEE PAGE 9 FOR TECHNICAL DATA



**RUSKIN'S SOD SERIES** supply diffuser systems are designed to provide an air distribution system with the benefit of having directional air control. The system is ideal for open ceiling applications that need single point supply air with control over where the air is distributed.

### Standard features include:

- All aluminum diffuser.
- Double deflection diffuser with blades secured with spring steel.
- Internal air deflector for quiet operation and low static.
- Optional Duct Cap Accessory.
- Built in hanging supports in Duct Cap Accessory.

### SUGGESTED SPECIFICATION

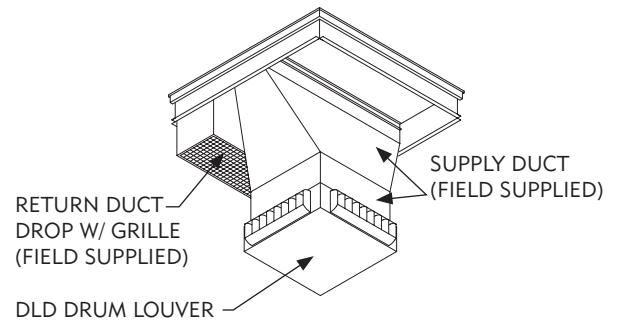
Furnish and install, at locations shown on plans or in accordance with schedules, double deflection supply diffusers manufactured in an ISO9001 facility. Diffuser shall consist of an extruded aluminum frame and aluminum double deflection supply diffusers. Aluminum double deflection supply diffusers shall be secured by spring steel. Galvanized steel bottom panel shall be minimum 20 gauge with powder coat painted finish to match the aluminum extrusion. Unit shall incorporate an internal air deflector to ensure quiet, even airflow to all sides. Manufacturers published data sheet shall include CFM rating, noise, static, and throw information. Double deflection supply diffusers shall be in all respects equivalent to Ruskin Model SOD series.

### Specifier Select Option

Furnish double deflection supply diffuser complete with duct cap accessory. Duct cap shall be insulated and designed to mate with the diffuser. Integral hanging supports shall be part of the duct cap accessory.

## RUSKIN DLD SERIES DRUM LOUVER DIFFUSERS

SEE PAGE 10 FOR TECHNICAL DATA



**RUSKIN'S DLD SERIES** supply diffuser systems are designed to provide an air distribution system with the benefit of having directional air control. The system is ideal for open ceiling applications that need single point supply air with long throws. The Drum Louver allows you to "spot" the air where you need it the most.

### Standard features include:

- All aluminum diffuser.
- Drum Louver diffusers for installations that are high above the floor.
- Internal air deflector for quiet operation and low static.
- Optional Duct Cap Accessory.
- Built in hanging supports in Duct Cap Accessory.

### SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, drum louver diffusers manufactured in an ISO9001 facility. Drum louver diffusers shall be aluminum construction and incorporate an internal air deflector to ensure quiet, even airflow to all sides with low pressure drop. Drum louver diffuser shall provide minimum 30° vertical adjustment and full horizontal blade adjustment providing single point supply air for large space applications. Manufacturers published data sheet shall include CFM rating, noise, static and throw information. Drum louver diffuser shall be in all respects equivalent to Ruskin Model DLD.

### Specifier Select Option

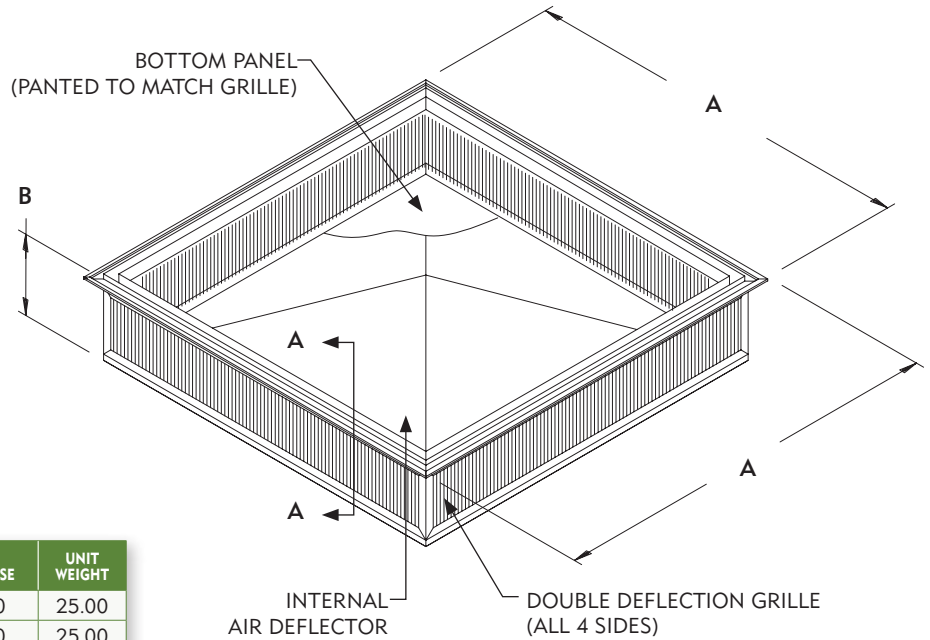
Furnish drum louver diffuser complete with duct cap accessory. Duct cap shall be insulated and designed to mate with the diffuser. Integral hanging supports shall be part of the duct cap accessory.



# SOD Series

ENGINEERING DATA AND DIMENSIONS

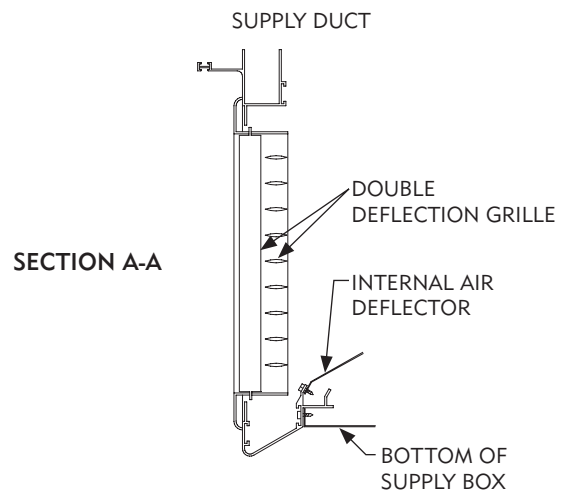
## DOUBLE DEFLECTION SUPPLY DIFFUSERS



### ENGINEERING DATA

MODEL#	CFM	NECK VEL.	STATIC	THROW	NOISE	UNIT WEIGHT
SOD-24	600	270	0.04	12-17	20	25.00
	800	364	0.06	16-22	20	25.00
	1000	450	0.07	20-28	20	25.00
	1200	536	0.09	24-33	20	25.00
	1400	625	0.11	28-39	20	25.00
	1600	714	0.14	33-44	25	25.00
	1800	804	0.16	41-52	30	25.00
	2000	893	0.19	46-55	30	25.00
SOD-36	3600	810	0.19	49-54	25	51.00
	3800	863	0.21	50-55	25	51.00
	4000	909	0.23	51-56	30	51.00
	4200	955	0.26	53-60	30	51.00
	4400	1000	0.30	54-62	30	51.00
SOD-40	5400	1116	0.18	45-53	30	80.00
	5600	1157	0.19	47-55	30	80.00
	5800	1198	0.22	50-57	30	80.00
	6000	1240	0.25	53-59	30	80.00
	6200	1281	0.27	54-61	35	80.00
	6400	1322	0.30	56-63	35	80.00
	6600	1364	0.33	58-65	35	80.00
	7000	1405	0.37	59-67	35	80.00
SOD-60	5600	920	0.18	39-49	30	105.00
	5800	954	0.21	42-51	30	105.00
	6000	1022	0.24	44-54	30	105.00
	6200	1056	0.26	45-55	35	105.00
	6400	1890	0.28	46-55	35	105.00
SOD-80	6600	1124	0.30	47-56	35	105.00
	7200	827	0.18	33-38	25	175.00
	8000	918	0.20	39-44	25	175.00
	8800	1010	0.22	47-55	30	175.00
	9600	1101	0.27	54-62	30	175.00
SOD-300	10000	1148	0.30	57-65	35	175.00
	11200	1140	0.30	44-65	40	212.00
	12000	1300	0.34	52-70	40	212.00

1. White finish available.
2. Special sizes available.

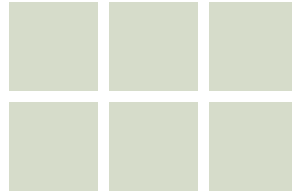


### DIMENSIONS

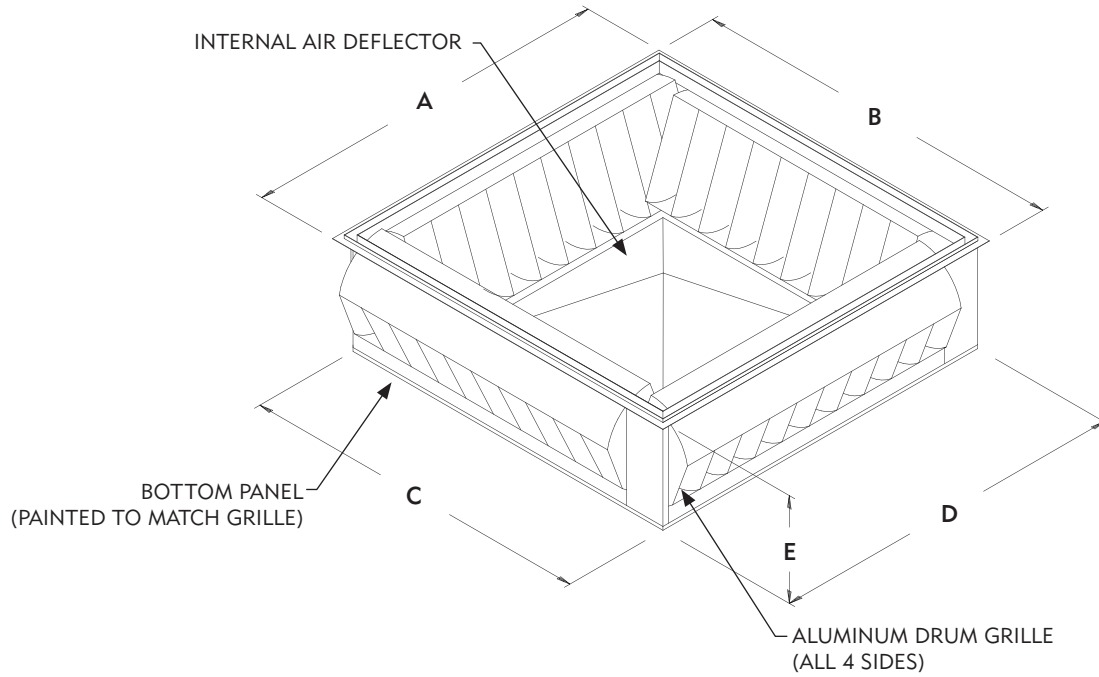
MODEL#	A	B
SOD-24	23 5/8	7 1/4
SOD-36	35 5/8	9
SOD-40	40	11
SOD-60	47 5/8	10
SOD-80	59 5/8	11
SOD-300	65 5/8	11

# DLD Series

ENGINEERING DATA AND DIMENSIONS

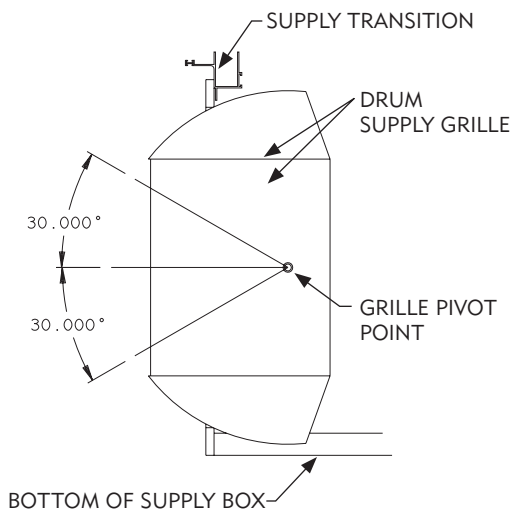


DRUM LOUVER  
DIFFUSERS



## ENGINEERING DATA

MODEL#	CFM	30° DEFLECTION			0° DEFLECTION		
		NOISE	STATIC	THROW	NOISE	STATIC	THROW
DLD-2010	4000-5000	<45	0.420	34-37	<40	0.29	40-45
DLD-2510	6000	<45	0.508	39	<40	0.33	48
DLD-3012	8000	<45	0.440	47	<40	0.30	63
DLD-3510	8000	<45	0.440	47	<40	0.30	63
DLD-4010	10000	<45	0.528	46	<40	0.33	62
DLD-5010	12000	<45	0.543	56	<40	0.35	72

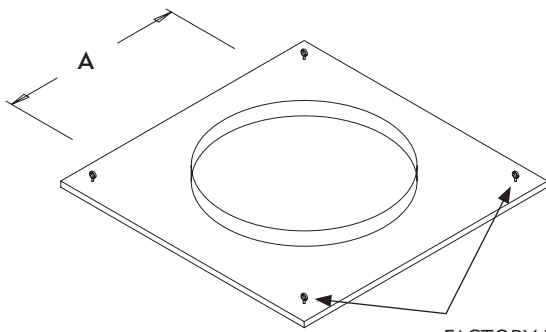


## DIMENSIONS

MODEL#	A	B	C	D	E	GRILLE SIZE	UNIT WEIGHT
DLD-2010	29.625	29.625	27.500	27.500	13.000	20 x 10	53.00
DLD-2510	34.625	34.625	32.500	32.500	13.000	25 x 10	62.00
DLD-3012	39.625	39.625	37.500	37.500	15.000	30 x 12	73.00
DLD-3510	44.625	44.625	42.500	42.500	13.000	35 x 10	91.00
DLD-4010	49.625	49.625	47.500	47.500	13.000	40 x 10	124.00
DLD-5010	59.625	59.625	57.500	57.500	13.000	50 x 10	151.00

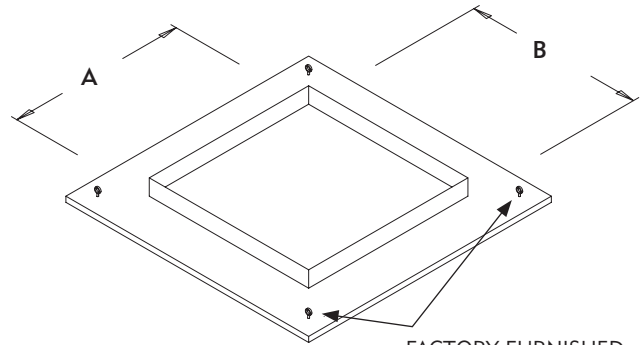
# SOD & DLD Series

FACTORY MOUNTED  
DUCT CAP ACCESSORIES



**SOD ONLY**

FACTORY FURNISHED  
HANGING SUPPORTS



**SOD & DLD**

FACTORY FURNISHED  
HANGING SUPPORTS

## DIMENSIONS (SOD)

SOD MODEL	DUCT SIZE	
	A	B
SOD-24	18	*
	18	18
SOD-36	20	*
	24	24
SOD-40	28	28
SOD-60	30	30
SOD-80	36	36
	42	42
SOD-300	44	44

\* Round duct sizes.

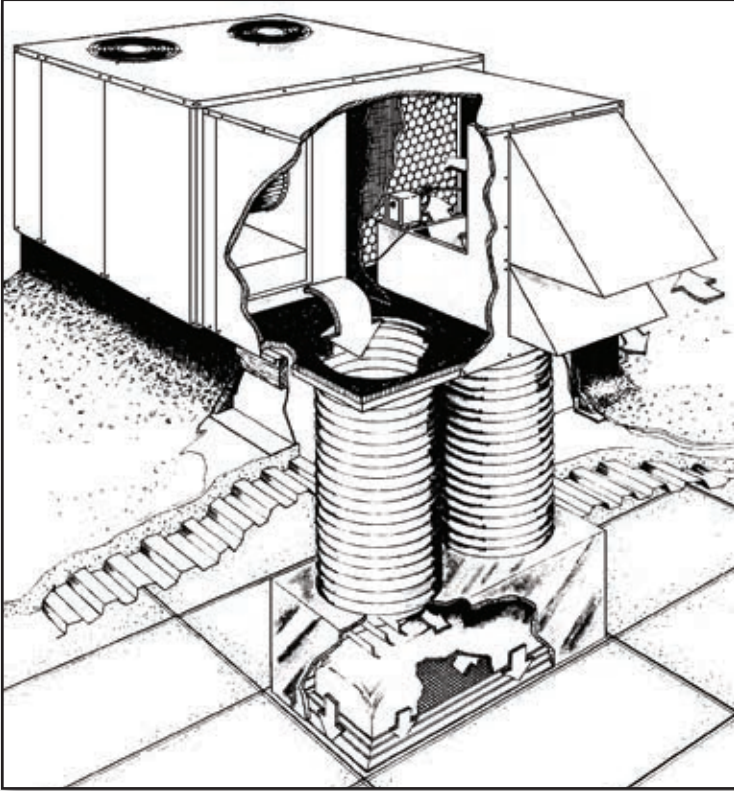
## DIMENSIONS (DLD)

DLD MODEL	DUCT SIZE	
	A	B
DLD-2010	24	24
DLD-2510	28	28
DLD-3012	30	30
DLD-3510	36	36
DLD-4010	42	42
DLD-5010	44	44

1. Special sizes available upon request.
2. Duct cap is fully insulated and shipped attached to diffuser.

# CONCENTRIC DIFFUSERS

## APPLICATION



*This CAD rendering demonstrates the supply and return air paths from the rooftop AC equipment into the concentric diffuser. Concentrics make the installation of the single diffuser easier by reducing the complexity of ductwork and transitioning within the concentric plenum.*

5 tons, Ruskin utilizes molded fiberglass transitions and in larger diffusers, 15 tons and higher, Ruskin's exclusive design includes the supply duct running through the return air transition creating 25% more air than competitive models.

Ruskin is a leading manufacturer of concentric diffusers that combine the supply and return air into a single diffuser air distribution system for rooftop air conditioning units. Ruskin concentrics range from 2 to 32.5 ton (600 to 13,000 cfm) and feature low noise and pressure drop. Commonly used in department stores, strip malls and restaurants, concentrics can be installed in T-bar or plaster ceilings or duct mounted in open areas. Supply air is evenly distributed around the perimeter while return air flows through an architecturally pleasing aluminum egg-crate grille.

Ruskin diffusers are constructed to prevent condensation and short-cycling. Up through

**RUSKIN**<sup>®</sup>  
GO GREEN  GO RUSKIN

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