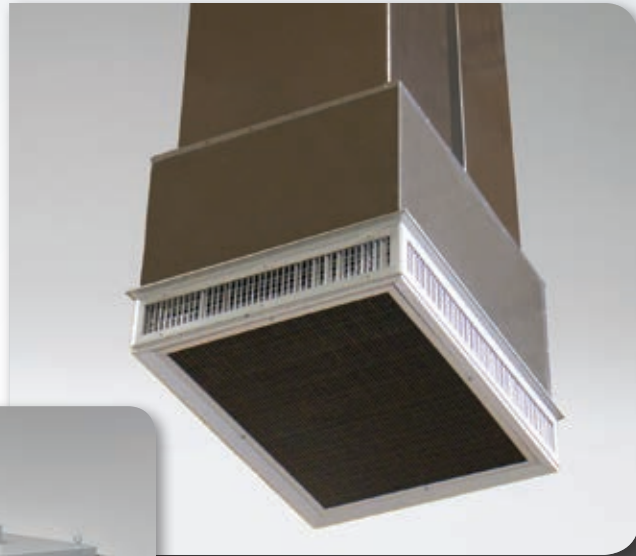


# RRS ROOFTOP SYSTEMS



## **CONCENTRIC** Product Information & Applications

# CONCENTRICS

As the leading manufacturer of Concentric Diffusers for the past 30 years, Ruskin Rooftop Systems offers a cost effective way of distributing air in a simple and practical manner. Ruskin Rooftop Systems is the only manufacturer that provides a supply duct through return air transition, allowing even air flow on all four sides of the diffuser — this supply through transition offers 25% better air flow than the competition.

25% BETTER AIR FLOW

## Concentric Diffuser Selection Tool

Ruskin Rooftop Systems Concentric Diffuser Selection Tool helps you select the model and size of the concentric diffuser needed for your next job. Concentric Diffusers allow you to minimize your duct runs and eliminate multiple registers by integrating both supply and return air for an easy commercial installation.



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# 510 & 515 Series

## FLUSH MOUNT CONCENTRIC DIFFUSER SYSTEM WITH FILTER GRILL

### Light Commercial 'T' Bar Ceiling



### Light Commercial Plaster Ceiling



**RRS's 510 & 515 SERIES** concentric diffuser systems are designed to provide a single point air distribution system. The systems may be used with either a "T-Bar" ceiling or a plaster ceiling.

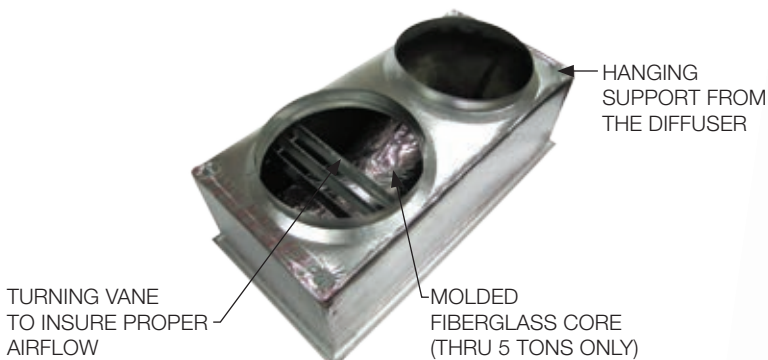
515 series — same as the 510 series, with an additional 4" fiberglass filter in the return section.

#### Standard features include:

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

#### Standard benefits include:

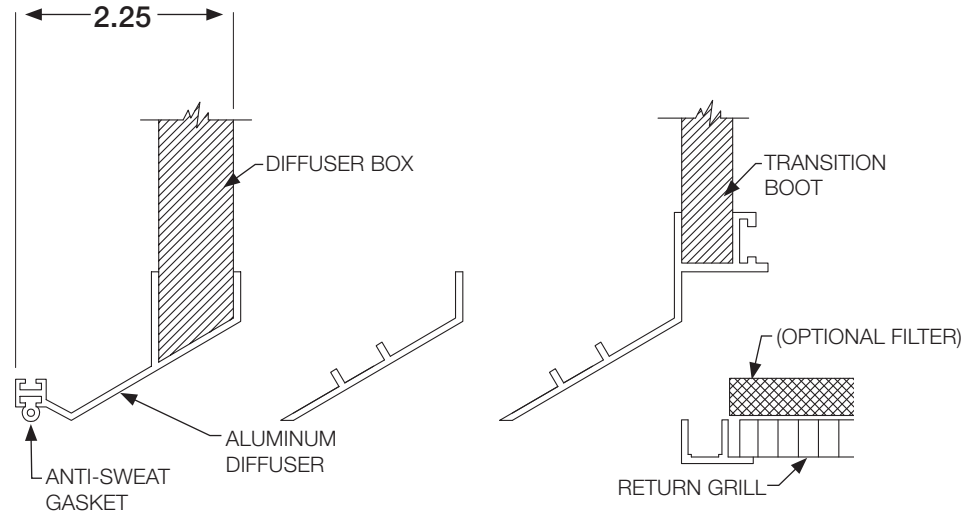
- Even four (4) way air distribution
- Lightweight design.
- Factory assembled and sealed.
- Guaranteed not to "sweat".
- Guaranteed not to recirculate airflow (short cycle).
- Return air eggcrate is easily removed.
- Units are fully insulated (both supply and return).



# 510 & 515 Series

## Typical specifications

Furnish and install Ruskin Rooftop Systems “510 & 515 SERIES” concentric diffuser systems. The system shall consist of an aluminum supply diffuser with an aluminum eggcrate return. It shall also have a permanent (not adhesive) anti-sweat gasket and hanging supports. All units that are five (5) tons and smaller shall have a molded fiberglass interior transition.



## 510 & 515 Series Concentric Diffuser Engineering Data

MODEL #	CFM	STATIC PRESSURE	THROW IN FEET	NECK VELOCITY	JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
01-510-16 01-515-16	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
01-510-18 01-515-18	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
01-510-20	2000	0.36	21-29	781	1389	40	27.00
	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
01-510-22	3200	0.31	22-29	816	1592	40	42.00
	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

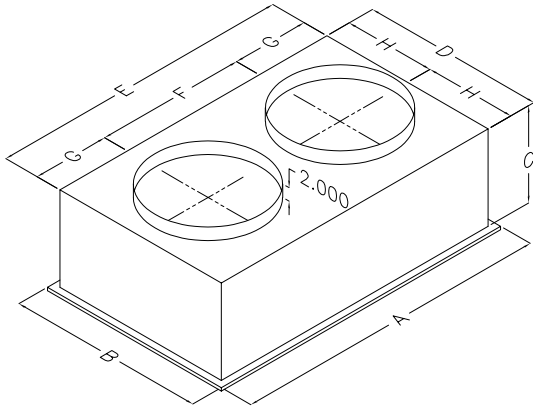
MODEL #	CFM	STATIC PRESSURE	THROW IN FEET	NECK VELOCITY	JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
01-510-50	4500	0.31	25-34	922	1795	40	151.00
	5000	0.34	24-33	938	1829	40	151.00
	5400	0.39	32-41	1083	2107	45	151.00
01-510-60	5600	0.36	28-37	1000	2082	45	158.00
	6000	0.42	40-50	1071	2230	45	158.00
	6400	0.50	43-52	1143	2379	50	158.00
01-510-80	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
01-510-100	8400	0.56	44-54	1162	2442	50	197.00
	8800	0.63	48-59	1217	2558	50	197.00
	9600	0.41	32-41	1036	2159	45	197.00
01-510-300	10000	0.45	37-46	1079	2249	45	197.00
	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.\*
5. Actual noise levels are less than those shown.

\* Jet velocity is higher than neck velocity on the (510) flush mount diffusers because the air gets "pinched down" as it exits – similar to high pressure water coming out of a garden hose with a sprayer.

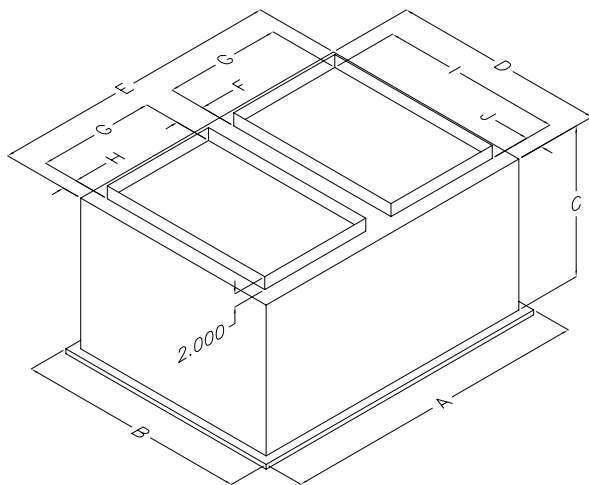
The drop down (530) diffusers have enough face area in the supply grills so that the air velocity does not increase significantly as it exits the concentric. That is why "Neck Velocity" and "Jet Velocity" are the same for the drop downs.

**FLUSH MOUNT  
CONCENTRIC DIFFUSER SYSTEM  
WITH FILTER GRILL**



**Dimensional Data**

MODEL #	A	B	C	D	E	F	G	H	DUCT SIZE
01-510-16 01-515-16	47 5/8	23 5/8	13 1/2	21	45	22 1/2	11 1/4	10 1/2	16 RD
01-510-18 01-515-18	47 5/8	23 5/8	13 1/2	21	45	22 1/2	11 1/4	10 1/2	18 RD
01-510-20	47 5/8	29 5/8	16 5/8	27	45	22 1/2	11 1/4	13 1/2	20 RD



**Dimensional Data**

MODEL #	A	B	C	D	E	F	G	H	I	J	DUCT SIZE
01-510-22	47 5/8	35 5/8	23 1/4	33	45	4 1/2	18	2 1/4	28	2 1/2	18x28
01-510-50	47 5/8	41 5/8	29 1/4	39	45	4 1/2	18	2 1/4	32	3 1/4	18x32
01-510-60	47 5/8	47 5/8	29 1/4	45	45	4 1/2	18	2 1/4	36	4 1/2	18x36
01-510-80	59 5/8	59 5/8	35 1/4	57	57	4 1/2	24	2 1/4	48	4 1/2	24x48
01-510-100	59 5/8	59 5/8	35 1/4	57	57	4 1/2	24	2 1/4	54	1 1/2	24x54
01-510-300	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



# 530 & 535 Series

## Light Commercial Plaster Ceiling



## Commercial 'T' Bar Ceiling



## Open Ceiling



**RRS's 530 & 535 SERIES** concentric diffuser systems are 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.

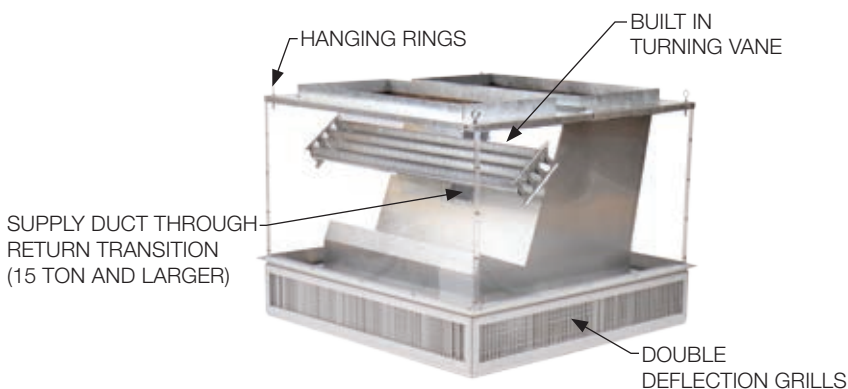
535 Series — Same as the 530 series, with an additional 1" Hogs Hair filter in the return section.

### Standard features include:

- All anodized 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 Transition (thru five tons).
- Built-in hanging supports.
- Diffuser box constructed of fiberglass ductboard (thru 7.5 tons) or sheetmetal.
- Stainless steel thumb screws.

### Standard benefits include:

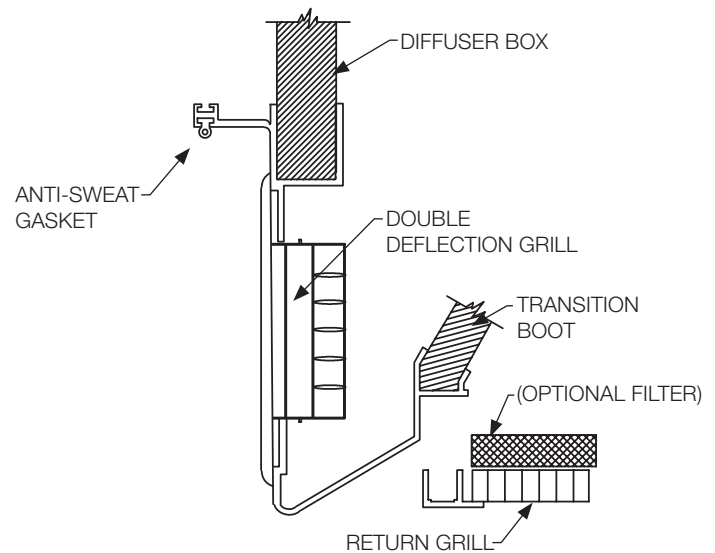
- Even four (4) way air distribution.
- All exposed surfaces (below ceiling) are brushed aluminum.
- Factory assembled and sealed.
- Guaranteed not to "sweat".
- Guaranteed not to recirculate airflow (short cycle).
- Return air eggcrate is easily removed.
- Units are fully insulated (both supply and return).
- Lightweight design.



## SIDE DISCHARGE CONCENTRIC DIFFUSER SYSTEM WITH FILTER GRILL

### Typical specifications

Furnish and install Ruskin Rooftop Systems **"530 & 535 SERIES"** concentric diffuser systems. The system shall consist of an aluminum double deflection supply diffuser with an aluminum eggcrate return. ALL EXPOSED SURFACES (BELOW CEILING) MUST BE BRUSHED ALUMINUM. It shall also have a permanent (not adhesive) anti-sweat gasket and hanging supports. All units that are five (5) tons and smaller shall have a molded fiberglass interior transition.



### 530 & 535 Series Concentric Diffuser Engineering Data

RSI PART NO.	CFM	STATIC PRESSURE	THROW FEET	NECK/JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
01-530-16 01-535-16	600	0.09	8-15	210	20	38.00
	800	0.11	9-16	281	20	38.00
01-530-18 01-535-18	1000	0.14	10-17	351	20	38.00
	1200	0.17	11-18	421	20	38.00
01-530-20 01-535-20	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
01-530-22 01-535-22	2000	0.36	14-23	702	20	38.00
	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
01-530-50 01-535-50	3000	0.25	27-33	772	25	82.00
	3200	0.31	28-35	823	25	82.00
	3400	0.37	30-37	874	30	82.00
	3600	0.17	25-33	851	30	122.00
01-530-80 01-535-80	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
	4400	0.27	34-42	1040	30	122.00
01-530-100 01-535-100	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
01-530-300 01-535-300	5400	0.39	29-35	988	30	145.00

RSI PART NO.	CFM	STATIC PRESSURE	THROW FEET	NECK/JET VELOCITY	NOISE LEVEL	UNIT WEIGHT
01-530-60 01-535-60	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
01-530-80 01-535-80	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
01-530-100 01-535-100	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
01-530-300 01-535-300	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

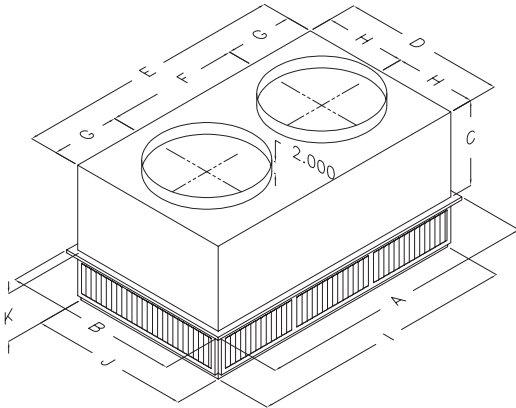
1. All data is based on the Air Diffusion Council guidelines.
2. Throw data is based on Terminal Velocities of 75 FPM using isothermal air.
3. "Neck Velocity" is the speed in feet per minute of the air coming into the diffusers – similar to duct velocity.\*
4. "Jet Velocity" is the speed in feet per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

\* Jet velocity is higher than neck velocity on the (510) flush mount diffusers because the air gets "pinched down" as it exits – similar to high pressure water coming out of a garden hose with a sprayer.

The drop down (530) diffusers have enough face area in the supply grills so that the air velocity does not increase significantly as it exits the concentric. That is why "Neck Velocity" and "Jet Velocity" are the same for the drop downs.

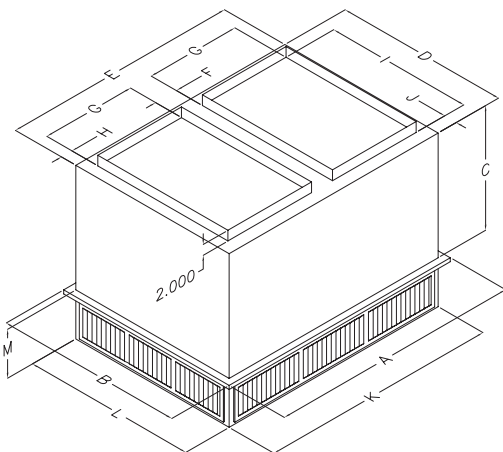
# 530 & 535 Series

## SIDE DISCHARGE CONCENTRIC DIFFUSER SYSTEM WITH FILTER GRILL



### Dimensional Data

MODEL #	A	B	C	D	E	F	G	H	I	J	K	DUCT SIZE
01-530-16 01-535-16	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
01-530-18 01-535-18	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
01-530-20 01-535-20	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

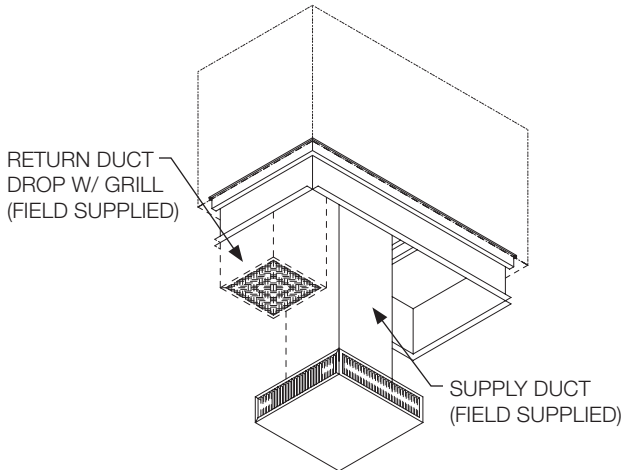


### Dimensional Data

MODEL #	A	B	C	D	E	F	G	H	I	J	K	L	M	DUCT SIZE
01-530-22 01-535-22	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
01-530-50 01-535-50	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
01-530-60 01-535-60	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
01-530-80 01-535-80	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
01-530-100 01-535-100	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
01-530-300 01-535-300	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



### RRS's 570 SERIES DOUBLE DEFLECTION SUPPLY DIFFUSERS



RRS's 570 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:

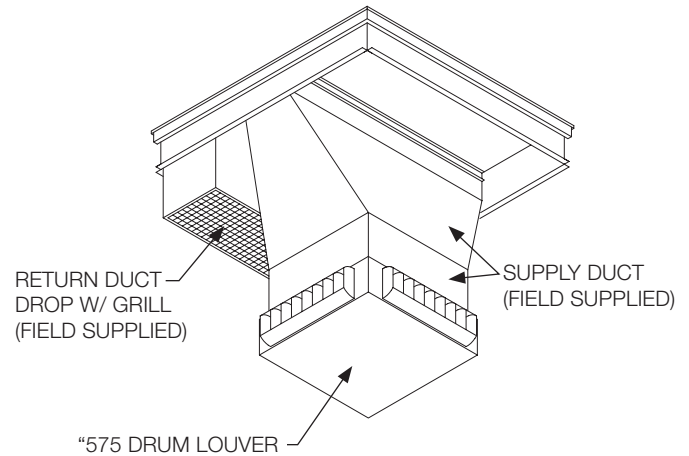
- All aluminum diffuser.
- Double deflection diffuser with blades secured with spring steel.
- Internal air deflector for quiet operation and low static.
- Optional Duct Cap Accessory.
- Built in hanging supports in Duct Cap Accessory.

#### Typical specifications

Furnish and install Ruskin Rooftop Systems "570 Series" Supply diffuser systems. The system shall consist of an extruded aluminum frame, aluminum **double deflection** supply diffusers, a 20 gauge galvanized steel bottom panel powder painted to match the aluminum extrusion and an insulated internal transition to ensure quiet, even airflow.

Furnish and install Ruskin Rooftop Systems "570 Series with a Duct Cap Accessory." The system shall consist of aluminum **double deflection** supply diffusers, an internal transition to ensure quiet, even airflow, and an insulated duct cap designed to mate with the diffuser. Hanging supports will be provided with the duct.

### RRS's 575 SERIES DRUM LOUVER DIFFUSERS



RRS's 575 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.

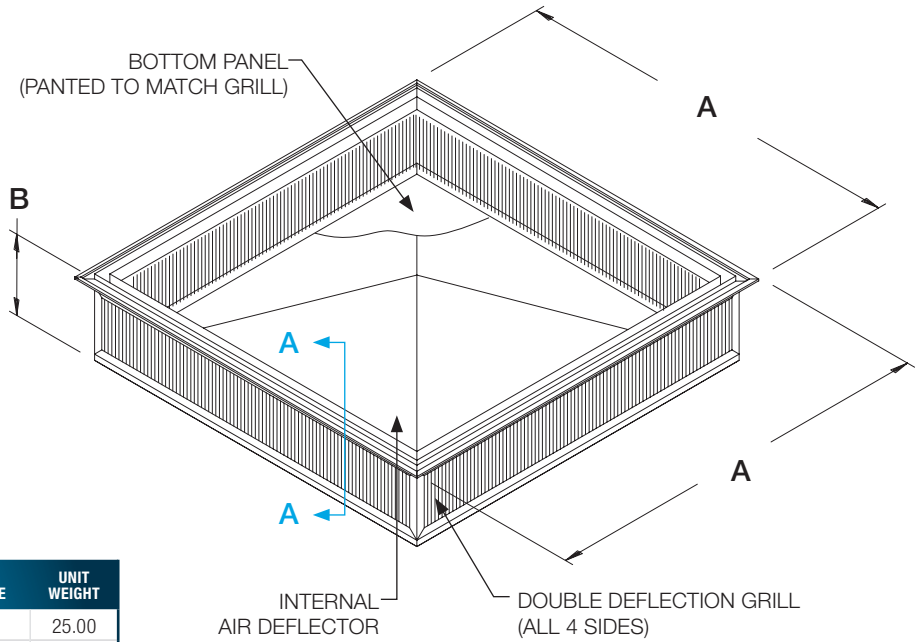
#### Typical specifications

Furnish and install Ruskin Rooftop Systems "575 Series" Supply diffuser systems. The system shall consist of aluminum **drum louver** supply diffusers, and incorporate an internal transition to ensure quiet, even airflow.

Furnish and install Ruskin Rooftop Systems "575 Series with a Duct Cap Accessory." The system shall consist of aluminum **drum louver** supply diffusers, an internal transition to ensure quiet, even airflow, and an insulated duct cap designed to mate with the diffuser. Hanging supports will be provided with the duct cap.

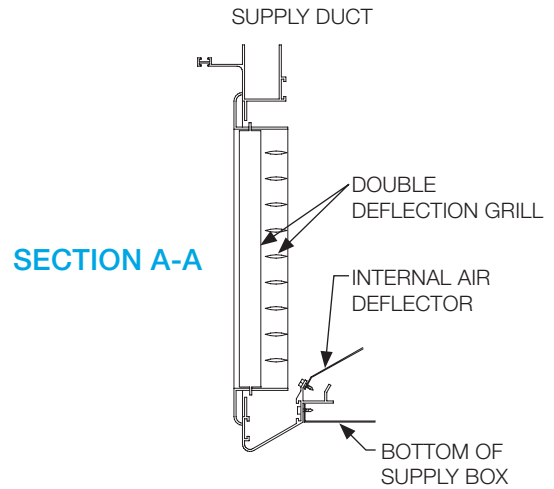
# 570 Series

## DOUBLE DEFLECTION SUPPLY DIFFUSERS



### Engineering Data

RRS MODEL#	CFM	NECK VEL.	STATIC	THROW	NOISE	UNIT WEIGHT
01-570-24	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
01-570-36	2000	893	0.19	46-55	30	25.00
	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
01-570-40	4400	1000	0.30	54-62	30	51.00
	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
01-570-60	6600	1364	0.33	58-65	35	80.00
	7000	1405	0.37	59-67	35	80.00
	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
01-570-80	6200	1056	0.26	45-55	35	105.00
	6400	1890	0.28	46-55	35	105.00
	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
01-570-300	8800	1010	0.22	47-55	30	175.00
	9600	1101	0.27	54-62	30	175.00
	10000	1148	0.30	57-65	35	175.00
01-570-300	11200	1140	0.30	44-65	40	212.00
	12000	1300	0.34	52-70	40	212.00

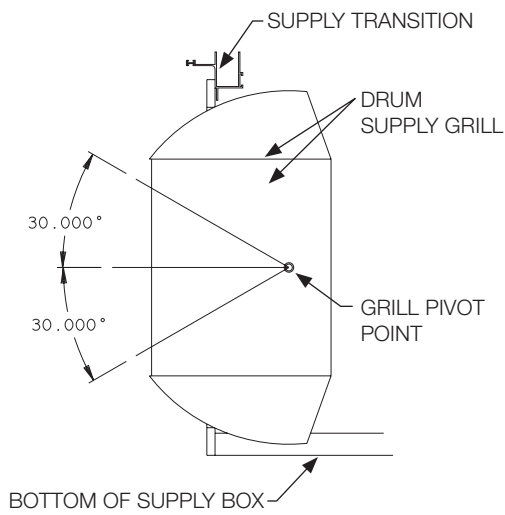
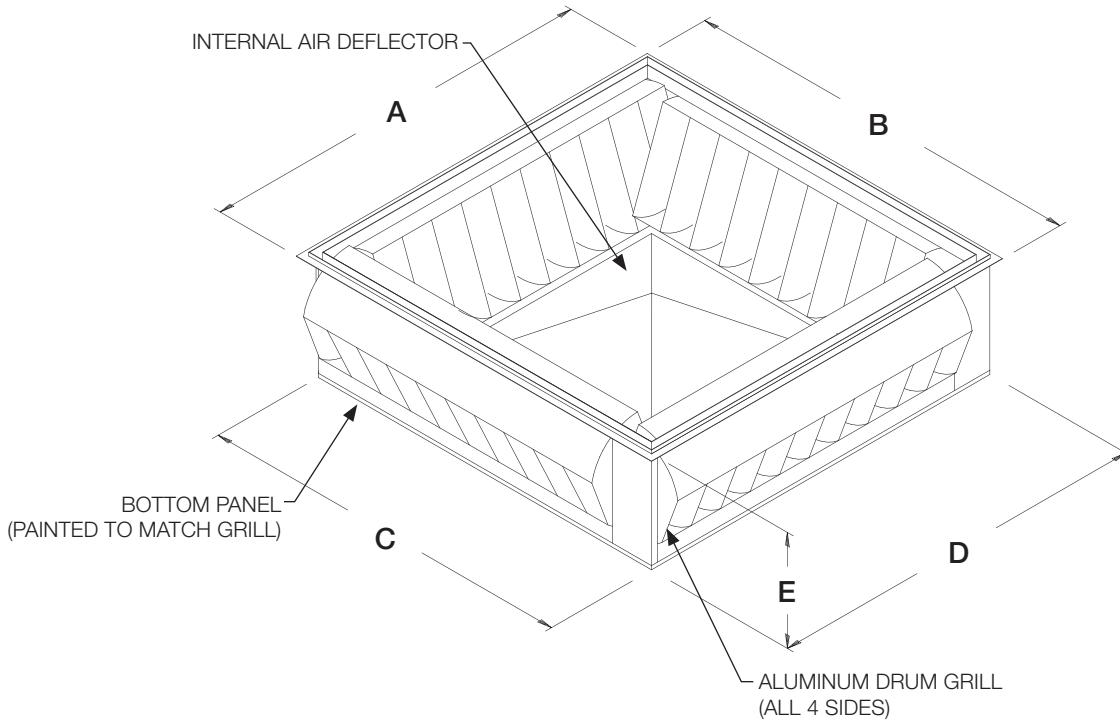


RRS MODEL#	A	B
01-570-24	23 5/8	7 1/4
01-570-36	35 5/8	9
01-570-40	40	11
01-570-60	47 5/8	10
01-570-80	59 5/8	11
01-570-300	65 5/8	11

1. For white diffusers change the "01" numbers to "90." Example: 90-570-24  
 2. Special sizes available. Call for details.

# 575 Series

## DRUM LOUVER DIFFUSERS



RRS MODEL#	A	B	C	D	E	GRILL SIZE	UNIT WEIGHT
01-575-2010	29.625	29.625	27.500	27.500	13.000	20 x 10	53.00
01-575-2510	34.625	34.625	32.500	32.500	13.000	25 x 10	62.00
01-575-3012	39.625	39.625	37.500	37.500	15.000	30 x 12	73.00
01-575-3510	44.625	44.625	42.500	42.500	13.000	35 x 10	91.00
01-575-4010	49.625	49.625	47.500	47.500	13.000	40 x 10	124.00
01-575-5010	59.625	59.625	57.500	57.500	13.000	50 x 10	151.00

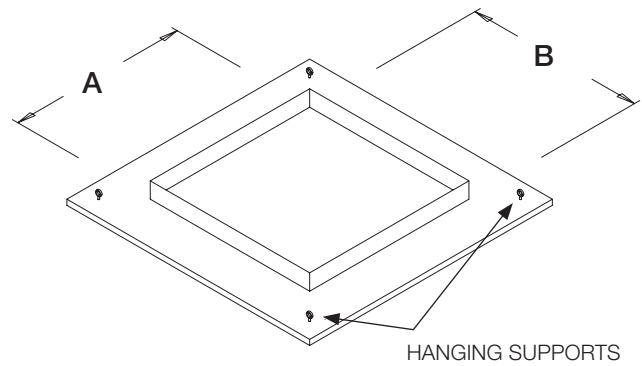
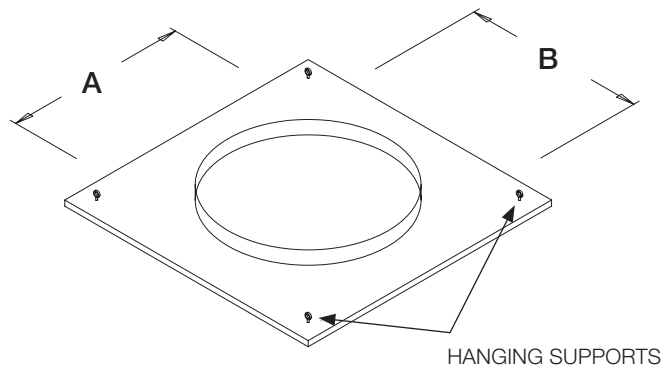
RRS MODEL#	CFM	30° DEFLECTION			0° DEFLECTION		
		NOISE	STATIC	THROW	NOISE	STATIC	THROW
01-575-2010	4000-5000	<45	0.420	34-37	<40	0.29	40-45
01-575-2510	6000	<45	0.508	39	<40	0.33	48
01-575-3012	8000	<45	0.440	47	<40	0.30	63
01-575-3510	8000	<45	0.440	47	<40	0.30	63
01-575-4010	10000	<45	0.528	46	<40	0.33	62
01-575-5010	12000	<45	0.543	56	<40	0.35	72

FOR 575 SERIES ACCESSORY DUCT CAP SEE BACK PAGE

# 570 & 575 Series

## DUCT CAP ACCESSORIES

The Duct Cap Accessory is Attached to the Diffuser & Fully Insulated



STD. 570 DIFFUSER MODEL	570 MODEL W/CAP	DUCT SIZE	
		A	B
01-570-24	01-570-2418R	18	*
	01-570-2418	18	18
01-570-36	01-570-3620R	20	*
	01-570-3624	24	24
01-570-40	01-570-4028	28	28
01-570-60	01-570-6030	30	30
01-570-80	01-570-8036	36	36
	01-570-8042	42	42
01-570-300	01-570-30044	44	44

STD. 575 DIFFUSER MODEL	575 MODEL W/CAP	DUCT SIZE	
		A	B
01-575-2010	01-575-201024	24	24
01-575-2510	01-575-251028	28	28
01-575-3012	01-575-301230	30	30
01-575-3510	01-575-351036	36	36
01-575-4010	01-575-401042	42	42
01-575-5010	01-575-501044	44	44

1. Special sizes available upon request.
2. Cap shipped attached to diffuser.
3. Part number with cap is the complete assembly. Example 01-570-3624



1625 Diplomat Drive, Carrollton, Texas 75006-6510  
 Phone (972) 247-7447 (800) 552-HVAC Fax (972) 243-0940

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