Linx Industries

YOUR SOURCE FOR LINDAB PRODUCTS

Air Distribution Catalog

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Products

Registers for spiral ducts RGS-3

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General

Supply or exhaust registers shall be Linx Industries' RGS-3 for direct mounting on spiral ducts of sizes shown on the plans or outlet schedule.

The register is to be mounted without the use of a rectangular register tap. The top and bottom flanges are to meet flush with the spiral duct wall regardless of duct diameter. End caps shall be provided that conform to the varying duct diameter.

Materials

The register shall be manufactured of 22 gauge galvanized steel without further surface treatment. Welds or other surface discolorations on the register are unacceptable.

Construction

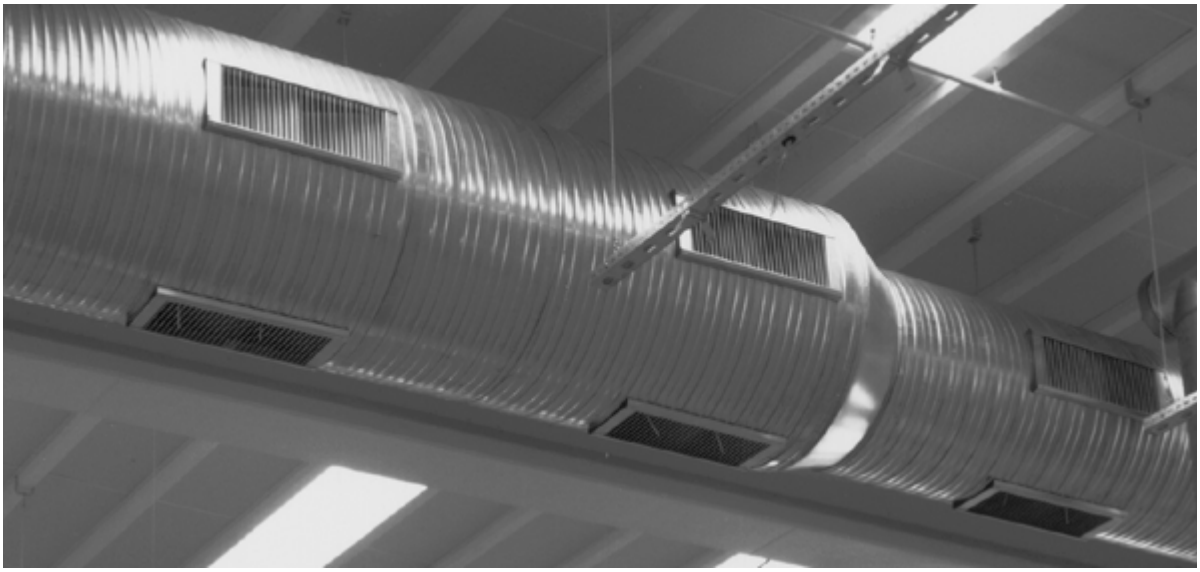
The register shall have double deflection adjustable blades with the front blades parallel to the short dimension of the register. Blades shall be placed on 3/4" centers and shall have steel friction pivots on both ends to allow for individual blade adjustment without loosening or rattling. Screw holes shall be countersunk for a flush, neat appearance.

Damper

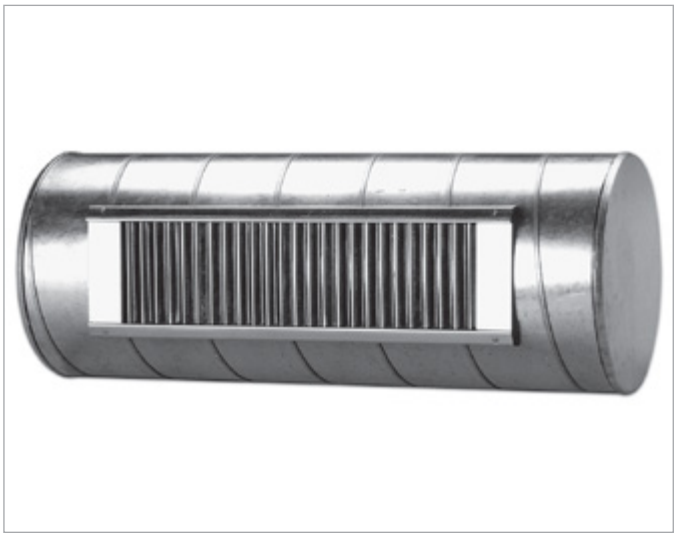
The volume damper shall be of the single blade type manufactured from 22 gauge electro-galvanized steel. Volume damper shall be operable from the face of the register via a volume control rod. Notched rod shall be fixed in place by a tension lock located at the front of the register.

Performance

Performance of register shall be as per manufacturer's cataloged data. Manufacturers whose registers utilize a rectangular register tap to adapt to use with spiral duct shall submit correction factors for their cataloged data.



Registers for spiral ducts RGS-3



Description

The RGS-3 is a supply/return register with adjustable double deflection blades and a volume damper designed specifically for direct mounting on a spiral duct. The use of rectangular register taps are not required.

The register is designed in such a way that the flanges always meet flush to the duct regardless of the duct diameter. The RGS-3 comes equipped with end caps and gasketing material around the neck of the register. This prevents air leakage. The RGS-3 is manufactured from galvanized sheet steel and is assembled without the use of welding. This allows the register to be used without further surface treatment and gives it the same finish as the duct.

Materials and finish

Register: galvanized sheet steel
Damper: electro-galvanized sheet steel

Maintenance

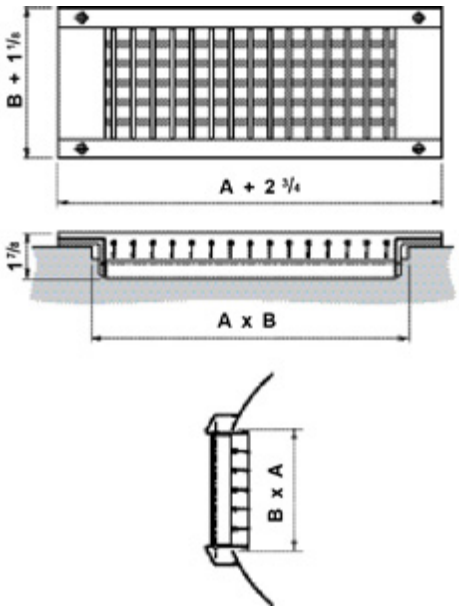
The grille should be removed to gain access to the duct.

Order example

RGS-3 13 3

Product
Length (A)
Width (B)

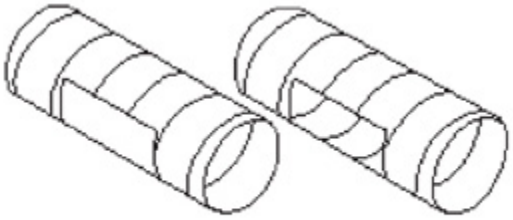
Dimensions



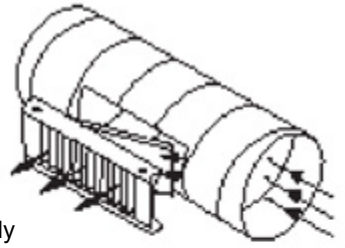
Register nom. size (in)	Min. duct diameter (in)	Free area (ft^2)	Duct opening A x B (in)	Weight (lbs)
13 ×3	6	0.18	12 3/4 × 3	2.4
17 ×3	6	0.25	16 3/4 × 3	3.1
21 ×3	6	0.30	20 5/8 × 3	3.7
25 ×3	6	0.36	24 5/8 × 3	4.2
33 ×3	6	0.48	32 1/2 × 3	5.3
41 ×3	8	0.60	40 3/8 × 3	6.4
49 ×3	8	0.73	48 1/4 × 3	7.1
13 ×6	12	0.36	12 3/4 × 6	3.1
17 ×6	12	0.48	16 3/4 × 6	4.2
21 ×6	12	0.60	20 5/8 × 6	5.1
25 ×6	12	0.73	24 5/8 × 6	5.7
33 ×6	12	1.00	32 1/2 × 6	7.7
41 ×6	12	1.20	40 3/8 × 6	8.6
49 ×6	12	1.46	48 1/4 × 6	9.7
13 ×9	20	0.60	12 3/4 × 8 7/8	4.8
17 ×9	20	0.80	16 3/4 × 8 7/8	6.6
21 ×9	20	1.00	20 5/8 × 8 7/8	7.5
25 ×9	20	1.20	24 5/8 × 8 7/8	8.2
33 ×9	20	1.60	32 1/2 × 8 7/8	11.2
41 ×9	20	2.00	40 3/8 × 8 7/8	12.8
49 ×9	20	2.41	48 1/4 × 8 7/8	13.9

Registers for spiral ducts RGS-3

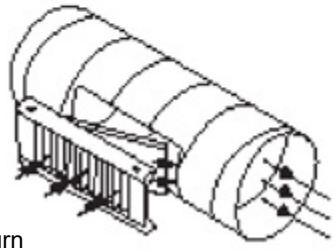
Mounting



Remove the protective backing from template. Position the template on the duct and press firmly. Cut along the edges of the template, following the edges as closely as possible and remove the ”cut-out”.

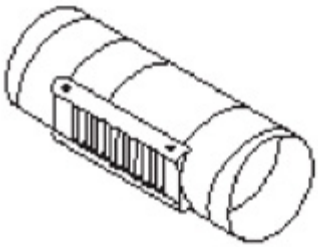


Supply



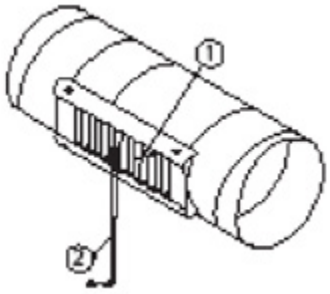
Return

Insert the air extractor control rod through the tension lock on the face of the register. Position the RGS-3 register in the opening, making certain that the gasket material remains in place. Check that register has been installed correctly in relation to the direction of air flow.



Secure the RGS-3 with screws (provided). Adjust vanes as necessary.

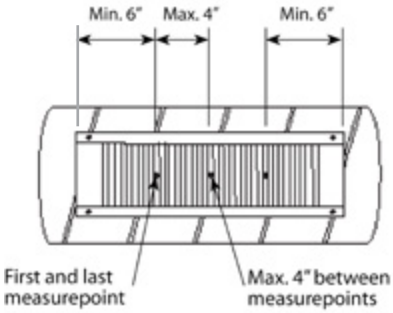
Balancing



① Air control extractor rod
② Probe

Mean velocity, V_o
Measure velocity (V_n) in n number of points. First and last measurements is taken 6” from end of register.
Measurements are spread equally between first and last measurement.

Flowrate [cfm] = F x V_o
V_o Mean velocity [fpm]
F Flow factor



n = number of measurepoints

$$V_0 = \frac{\sum_{n=1}^{n} V_n}{n}$$

Dim. A	n
13"	2
17"	3
21"	3
25"	4
33"	5
41"	7
49"	7

Dim. A (in)	Dim. B					
	3”		6”		9”	
	Sup.	Ret.	Sup.	Ret.	Sup.	Ret.
13	0.18	0.135	0.36	0.27	0.60	0.45
17	0.25	0.19	0.48	0.36	0.80	0.60
21	0.30	0.23	0.60	0.45	1.00	0.75
25	0.36	0.27	0.73	0.55	1.20	0.90
33	0.48	0.36	1.00	0.75	1.60	1.20
41	0.60	0.48	1.20	0.90	2.00	1.50
49	0.73	0.55	1.46	1.10	2.41	1.18

Registers for spiral ducts RGS-3

SELECTION CHART SUPPLY AND RETURN

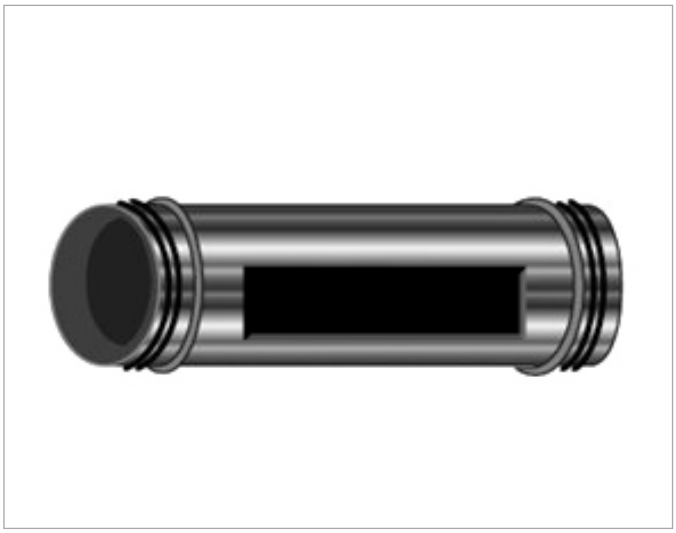
Core velocity (fpm)			300	400	500	600	700	800	1000	1200
Velocity Pressure			0.006	0.010	0.016	0.023	0.031	0.040	0.063	0.090
Total Pressure		0°	0.011	0.019	0.028	0.039	0.052	0.067	0.101	0.141
		22.5°	0.012	0.021	0.032	0.044	0.059	0.075	0.114	0.159
Size		45°	0.019	0.033	0.049	0.069	0.092	0.117	0.177	0.248
A_c 0.18 (ft^2)	cfm		54	72	90	108	126	144	180	216
13 x 3	NC	0°	-	-	-	14	20	25	33	40
	Throw ft	0°	3 4 7	6 7 12	8 9 18	10 12 23	12 14 27	14 17 32	17 21 40	19 25 47
		22.5°	3 2 5	5 5 10	6 7 14	8 10 18	10 11 22	11 13 25	13 17 32	15 20 37
		45°	2 2 3	3 3 6	4 5 9	5 6 11	6 7 14	7 8 16	8 10 20	9 12 23
A_c 0.24 (ft^2)	cfm		72	96	120	144	168	192	240	288
17 x 3	NC	0°	-	-	12	18	24	29	37	44
	Throw ft	0°	3 5 9	6 8 15	8 11 20	10 13 25	12 16 30	14 18 34	17 22 42	19 26 49
		22.5°	3 4 7	5 6 12	7 8 16	8 11 20	10 13 24	11 14 27	14 18 34	15 21 39
		45°	2 2 5	3 4 7	4 5 10	5 7 13	6 8 15	7 9 17	8 11 21	10 13 25
A_c 0.30 (ft^2)	cfm		90	120	150	180	210	240	300	360
21 x 3	NC	0°	-	-	14	21	26	31	39	46
	Throw ft	0°	3 6 11	6 9 17	8 12 22	11 14 27	12 17 32	14 19 36	17 23 44	19 27 51
		22.5°	3 5 9	5 7 13	7 9 17	8 11 21	10 13 25	11 15 29	14 18 35	15 21 41
		45°	2 3 6	3 4 8	4 6 11	5 7 13	6 8 16	7 9 18	9 12 22	10 13 25
A_c 0.36 (ft^2)	cfm		108	144	180	216	252	288	360	432
25 x 3,	NC	0°	-	-	14	21	26	31	39	46
13 x 6	Throw ft	0°	4 7 13	6 10 19	9 13 24	11 15 29	13 18 33	14 20 38	17 24 46	19 28 53
		22.5°	3 5 10	5 8 15	7 10 19	9 12 23	10 14 27	12 16 30	14 19 37	16 22 42
		45°	2 3 6	3 5 9	4 6 12	5 8 14	6 9 17	7 10 19	9 12 23	10 14 26
A_c 0.48 (ft^2)	cfm		144	192	240	288	336	384	480	576
33 x 3,	NC	0°	-	12	20	27	32	37	45	52
17 x 6	Throw ft	0°	4 9 16	7 12 22	9 14 27	11 17 32	13 19 37	15 22 41	18 26 49	20 30 56
		22.5°	3 7 13	5 9 17	7 11 22	9 14 26	10 15 29	12 17 33	14 21 39	16 24 45
		45°	2 4 8	3 6 11	4 7 14	6 8 16	7 10 18	7 11 21	9 13 25	10 15 28
A_c 0.60 (ft^2)	cfm		180	240	300	360	420	480	600	720
41 x 3,	NC	0°	-	15	23	29	35	40	48	54
21 x 6,	Throw ft	0°	4 10 19	7 13 25	9 16 30	12 18 35	13 21 40	15 23 44	18 27 52	20 31 59
13 x 9		22.5°	4 8 15	6 10 20	8 13 24	9 15 28	11 17 32	12 19 35	14 22 42	16 25 47
		45°	2 5 10	4 6 12	5 8 15	6 9 17	7 10 20	8 12 22	9 14 26	10 16 29
A_c 0.73 (ft^2)	cfm		219	292	365	438	511	584	730	876
49 x 3,	NC	0°	-	15	23	29	35	40	48	54
25 x 6	Throw ft	0°	4 10 19	7 13 25	9 16 30	12 18 35	13 21 40	15 23 44	18 27 52	20 31 59
		22.5°	4 8 15	6 10 20	8 13 24	9 15 28	11 17 32	12 19 35	14 22 42	16 25 47
		45°	2 5 10	4 6 12	5 8 15	6 9 17	7 10 20	8 12 22	9 14 26	10 16 29
A_c 0.80 (ft^2)	cfm		240	320	400	480	560	640	800	960
17 x 9	NC	0°	-	18	26	33	38	43	51	58
	Throw ft	0°	5 12 22	8 15 28	10 17 3	12 20 38	14 23 43	16 25 47	19 29 55	21 33 62
		22.5°	4 9 18	6 12 22	8 14 27	10 16 31	11 18 34	13 20 38	15 23 44	17 26 50
		45°	3 6 11	4 7 14	5 9 17	6 10 19	7 11 21	8 12 24	9 15 8	10 16 31

SELECTION CHART SUPPLY AND RETURN

Core velocity (fpm)			300	400	500	600	700	800	1000	1200
Velocity Pressure			0.006	0.010	0.016	0.023	0.031	0.040	0.063	0.090
Total Pressure		0°	0.011	0.019	0.028	0.039	0.052	0.067	0.101	0.141
		22.5°	0.012	0.021	0.032	0.044	0.059	0.075	0.114	0.159
Size		45°	0.019	0.033	0.049	0.069	0.092	0.117	0.177	0.248
A_c 1.00 (ft^2)	cfm		300	400	500	600	700	800	1000	1200
33 x 6,	NC	0°	10	21	29	35	41	46	54	61
21 x 9	Throw ft	0°	6 13 24	8 16 30	11 18 35	13 21 40	15 23 44	16 26 49	19 30 57	21 34 64
		22.5°	5 10 19	7 12 24	9 15 28	10 17 32	12 19 36	13 21 39	15 24 45	17 27 51
		45°	3 6 12	4 8 15	5 9 17	6 10 20	7 12 22	8 13 24	10 15 28	11 17 32
A_c 1.20 (ft^2)	cfm		360	480	600	720	840	960	1200	1440
41 x 6,	NC	0°	13	23	31	38	43	48	56	63
25 x 9	Throw ft	0°	6 13 24	9 16 30	11 18 35	13 21 40	15 23 44	17 26 49	20 30 57	22 34 64
		22.5°	5 10 19	7 12 24	9 15 28	11 17 32	12 19 36	14 21 39	12 24 45	18 27 51
		45°	3 6 12	4 8 15	6 9 17	7 10 20	8 12 22	9 13 24	10 15 28	11 17 32
A_c 1.46 (ft^2)	cfm		438	584	730	876	1022	1168	1460	1752
49 x 6	NC	0°	15	25	33	40	46	50	59	65
	Throw ft	0°	7 11 21	10 14 27	12 17 32	14 20 37	16 22 42	18 24 46	21 29 54	23 32 61
		22.5°	6 9 17	8 11 22	10 14 26	11 16 30	13 18 34	14 20 37	17 23 43	18 26 49
		45°	4 6 11	5 7 14	6 8 16	7 10 19	8 11 21	9 12 23	10 14 27	11 16 31
A_c 1.60 (ft^2)	cfm		480	640	800	960	1120	1280	1600	1920
33 x 9	NC	0°	16	26	35	41	47	52	60	66
	Throw ft	0°	8 10 19	10 13 25	13 16 30	15 18 35	17 21 39	18 23 44	21 27 52	23 31 59
		22.5°	6 8 15	8 10 20	10 13 24	12 15 28	13 17 32	15 18 35	17 22 41	19 25 47
		45°	4 5 9	5 6 12	6 8 15	7 9 17	8 10 2	9 12 22	11 14 26	12 15 29
A_c 2.00 (ft^2)	cfm		600	800	1000	1200	1400	1600	2000	2400
41 x 9	NC	0°	19	29	37	44	49	54	62	69
	Throw ft	0°	9 12 22	12 15 28	14 18 34	16 21 40	18 23 44	20 26 49	23 29 56	25 32 61
		22.5°	7 9 18	9 12 23	11 14 27	13 17 32	14 19 35	16 2039	18 2345	20 26 49
		45°	4 6 11	6 7 14	7 9 17	8 10 20	9 12 22	10 13 24	11 15 28	12 16 30
A_c 2.41 (ft^2)	cfm		723	964	1205	1446	1687	1928	2410	2892
49 x 9	NC	0°	21	31	40	46	52	57	65	71
	Throw ft	0°	10 13 5	13 17 32	15 20 38	17 23 43	19 25 48	21 27 52	24 31 59	26 34 64
		22.5°	8 11 20	10 13 25	12 16 30	14 18 34	15 20 38	17 22 41	19 25 47	21 27 51
		45°	5 7 13	6 8 16	8 10 19	9 11 21	10 13 24	10 14 26	12 16 29	13 17 32

Fitting bodies

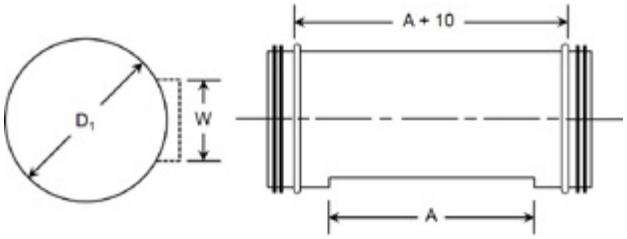
TRGSU

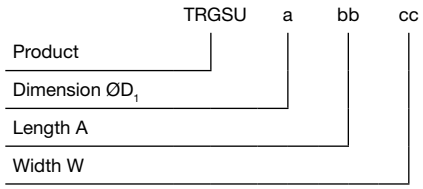


Description

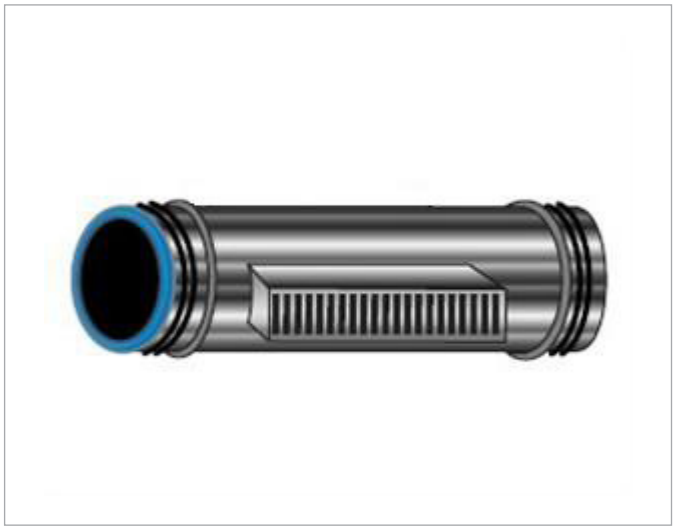
Single wall smooth fitting body
Length of body = A+10
Register sold separately

Dimensions





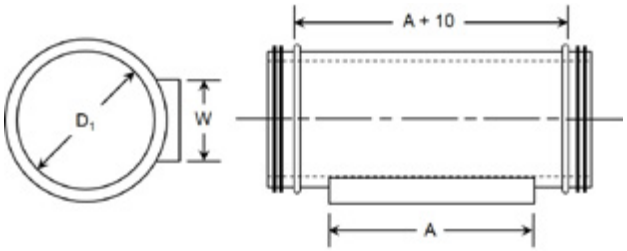
TRGSUI

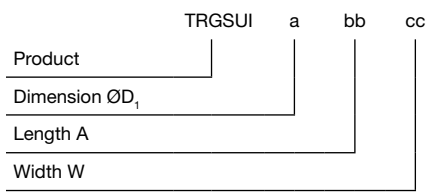


Description

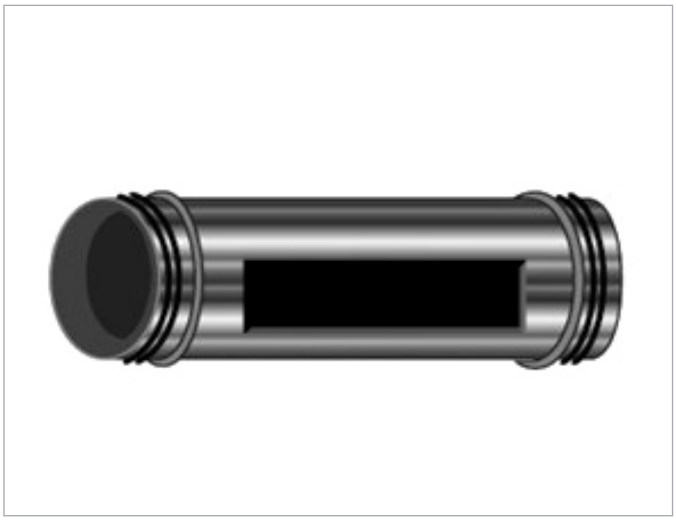
Double Wall smooth fitting body with mounted register (RGS)
Length of body = A+10

Dimensions





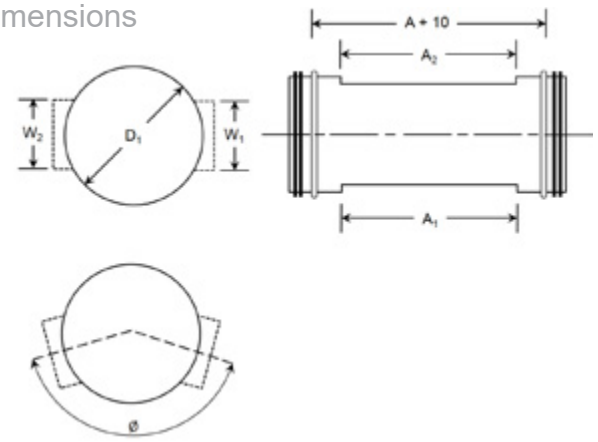
Crossing fitting bodies XRGSU



Description

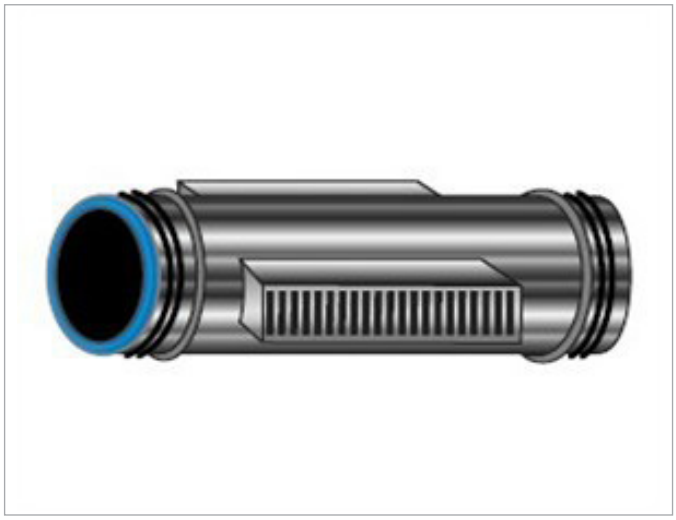
Single wall smooth fitting body cross
Length of body = A+10
A= largest (A_2 or A_1)
Register sold separately

Dimensions



XRGSU	a	bb	cc	dd	ee	ff
Product						
Dimension D_1						
Length A_1						
Width W_1						
Length A_2						
Width W_2						
Angle between taps Ø						

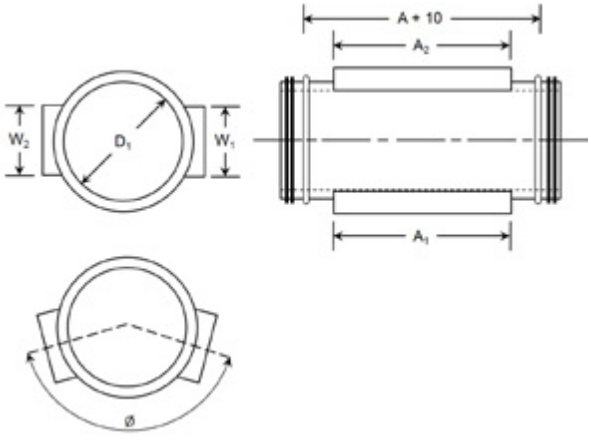
XRGSUI



Description

Double wall smooth fitting body cross with mounted registers (RGS)
Length of body = A+10
A= largest (A_2 or A_1)

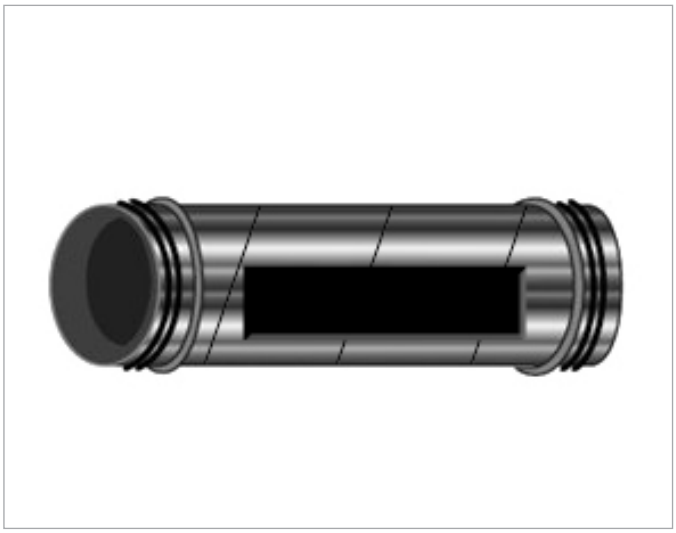
Dimensions



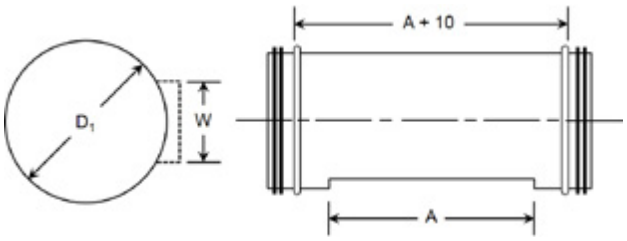
XRGSUI	a	bb	cc	dd	ee	ff
Product						
Dimension D_1						
Length A_1						
Width W_1						
Length A_2						
Width W_2						
Angle between taps Ø						

Spiral bodies

SRTRGSU



Dimensions

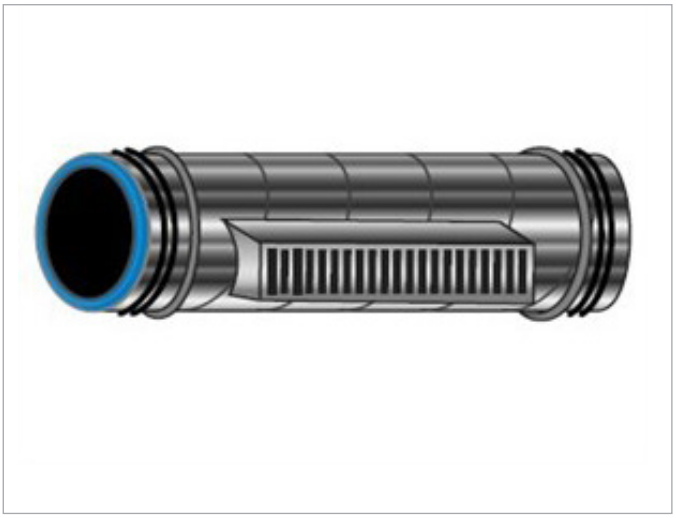


SRTRGSU	a	bb	cc
Product			
Dimension ØD1			
Length A			
Width W			

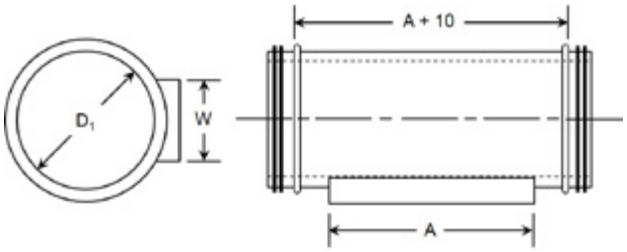
Description

Single wall spiral fitting body
Length of body = A+10
Register sold separately

SRTRGSUI



Dimensions

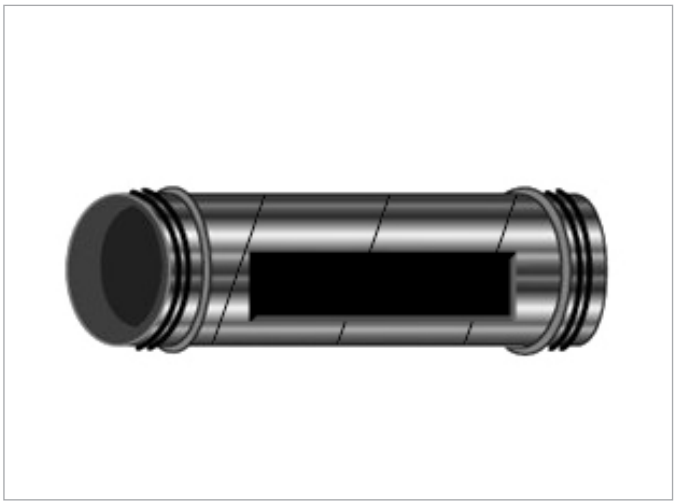


SRTRGSUI	a	bb	cc
Product			
Dimension ØD1			
Length A			
Width W			

Description

Double wall spiral fitting body with mounted register (RGS)
Length of body = A+10

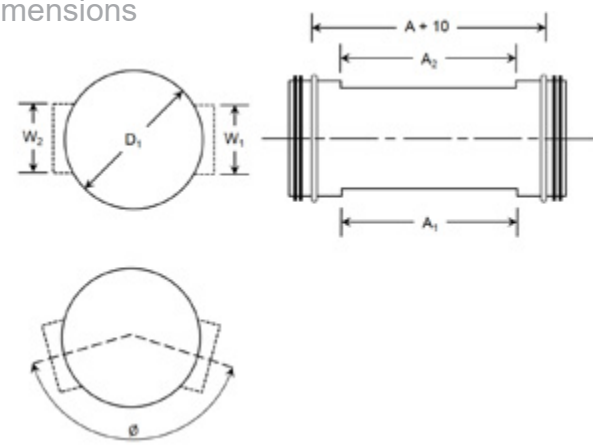
Crossing spiral bodies SRXRGSU



Description

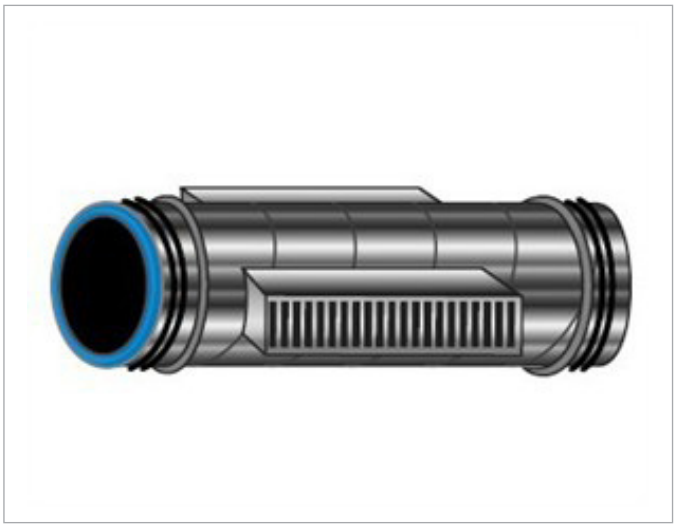
Single wall spiral fitting body cross
Length of body = A+10
A= largest (A_2 or A_1)
Register sold separately

Dimensions



SRXRGSU	a	bb	cc	dd	ee	ff
Product						
Dimension D_1						
Length A_1						
Width W_1						
Length A_2						
Width W_2						
Angle between taps Ø						

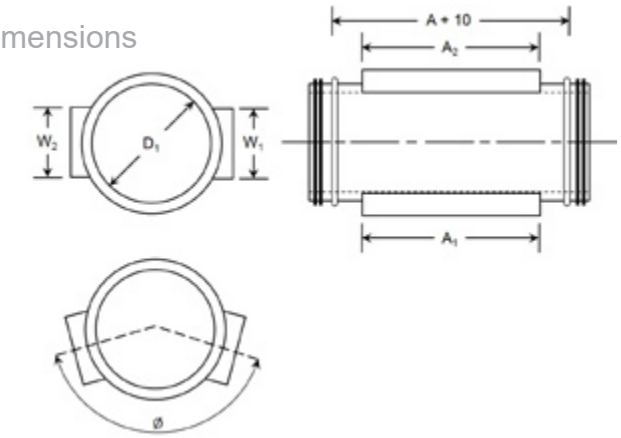
SRXRGSUI



Description

Double Wall spiral fitting body cross with mounted registers (RGS)
Length of body = A+10
A= largest (A_2 or A_1)

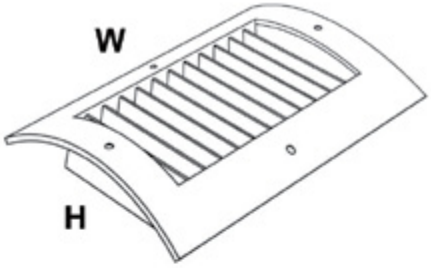
Dimensions

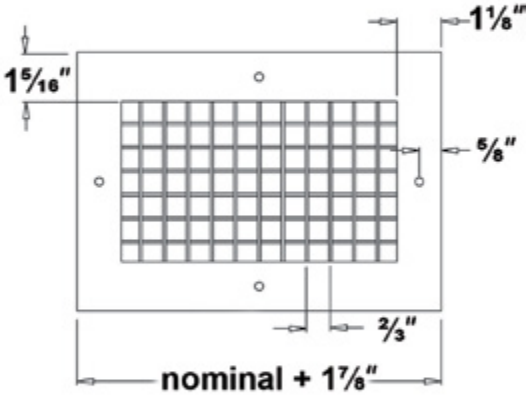


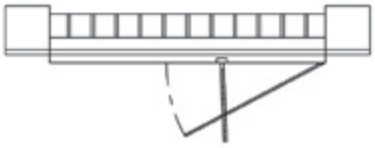
SRXRGSUI	a	bb	cc	dd	ee	ff
Product						
Dimension D_1						
Length A_1						
Width W_1						
Length A_2						
Width W_2						
Angle between taps Ø						

Curved register

CREG







Description

The CREG is a supply/return register with a contoured face that mounts directly on spiral ductwork. It has adjustable double deflection blades that allow for 4-way airflow and half length screwdriver operated volume adjusting scoop.

Duct diameter must be 4" larger than height (H) of diffuser. Registers are manufactured to fit duct diameters 8" - 48".

Register nom. size W x H (in)	Min. duct diameter (in)	Free area (ft^2)	Duct opening W X H (in)	Weight (lbs)
12 × 4	8	0.231	12 x 4	1.8
14 × 4	8	0.271	14 x 4	2.1
12 x 6	10	0.362	12 x 6	2.5
14 x 6	10	0.425	14 x 6	2.9
16 x 6	10	0.488	16 x 6	3.3

Materials and finish

Galvanized sheet steel (standard).
Custom finishes are available. Call for details.

Order example

CREG	12	4	16	Galv	None
Product					
Width (W)					
Height (H)					
Diameter of Duct					
Material					
Finish					

Curved register

CREG

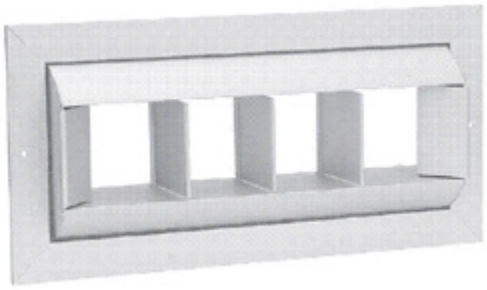
Core velocity (fpm)			300	400	500	600	700	800	1000	1200
Velocity Pressure			0.004	0.008	0.013	0.018	0.025	0.033	0.051	0.074
Size										
A_c 0.231 (ft^2) 12 x 4	cfm		69	92	116	139	162	185	231	277
	NC	0°	< 20	< 20	< 20	20	25	30	35	40
	Throw ft	0°	5 6 6.5	6 7 9	8 9 11	9 10 14	11 12 16	12 14 18	14 16 24	16 18 28
A_c 0.271 (ft^2) 14 x 4	cfm		81	108	136	163	190	217	271	325
	NC	0°	< 20	< 20	< 20	20	25	30	35	40
	Throw ft	0°	5 7 8	7 8 10	10 11 13	11 12 16	13 15 20	14 16 22	16 19 29	19 22 34
A_c 0.362 (ft^2) 12 x 6	cfm		109	145	181	217	254	290	362	435
	NC	0°	< 20	< 20	< 20	20	25	30	35	40
	Throw ft	0°	6 7 8	8 9 11	10 12 14	12 13 18	14 16 21	16 18 24	18 21 32	22 26 38
A_c 0.425 (ft^2) 14 x 6	cfm		128	170	213	255	298	340	425	510
	NC	0°	< 20	< 20	< 20	20	25	30	35	40
	Throw ft	0°	6 8 9	9 10 12	11 12 15	12 14 19	14 16 22	17 19 25	19 22 33	22 26 39
A_c 0.488 (ft^2) 16 x 6	cfm		146	195	244	293	342	391	488	586
	NC	0°	< 20	< 20	< 20	20	25	30	35	40
	Throw ft	0°	7 8 10	9 10 12	11 13 16	13 15 20	15 17 23	17 20 26	19 22 34	23 27 40

Performance notes:

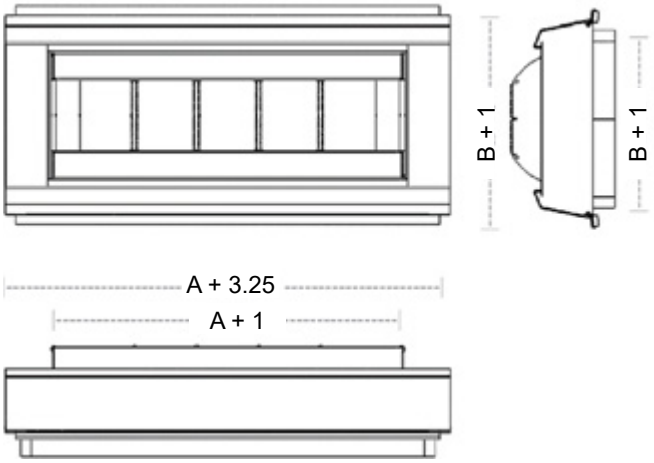
1.) Performance data calculated with blades set at 0º.
2.) Engineering based off nominal face dimension.
3.) Throw values are measured in feet for terminal velocities of 150/100/50 FPM.
4.) Throw data is based on supply air and room air both at isothermal conditions.
5.) Effective core areas listed in chart are defined as the measurement of space between the blades actually utilized by the air.
6.) Data obtained from tests conducted in accordance with ANSI/ASHRAE standard 70-2006.

Drum louvers

DRLAA



Dimensions



Description

DRLAA series supply drum grilles and registers are recommended for theaters, arenas, convention halls, factories and shopping centers; anywhere requiring long or short throws.

Air flow patterns are adjustable in both the horizontal and vertical planes for maximum versatility.

The unique extruded aluminum universal mounting frame results in low installation costs and will adapt to a variety of duct sizes without requiring any expensive duct taps.

The extractor-damper that is available will also eliminate the need for secondary extraction devices needing to be mounted remote to the unit. DRLAA grilles and registers efficiently distribute anywhere from 200 through 10,000 CFM and are available in 6 x12 thorough 10 x 72 sizes.

DRLAA drum grilles are built with a single bank of adjustment vanes that also provides control for the direction and length of air streams. DRLAA drum grilles and registers can be installed in either horizontal or vertical orientations to meet architectural and engineering design conditions for reliable performance.

A Width (in)	B Height (in)	
	6	10
12	X	
18	X	
24	X	X
30	X	X
36	X	X
42		X
48	X	X
54		X
60	X	X
66		X
72		X

Height (in)	6	10
Duct Diameter (min/max)	10 / 65	20 / 97

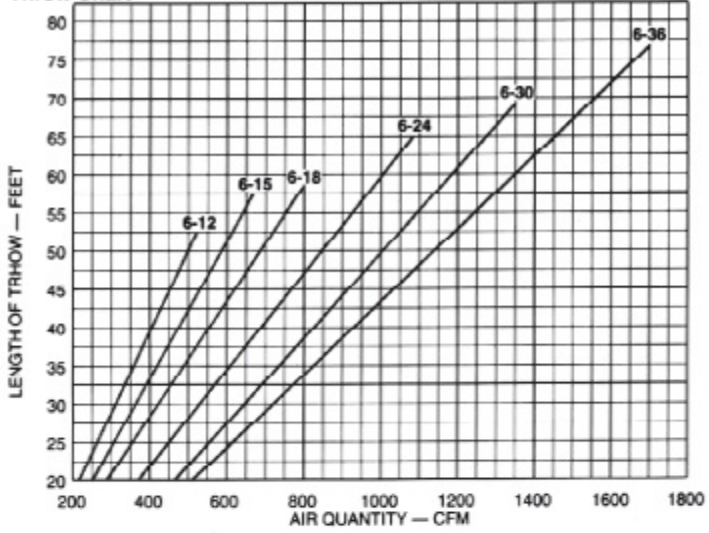
Order example

DRLAA 24 10

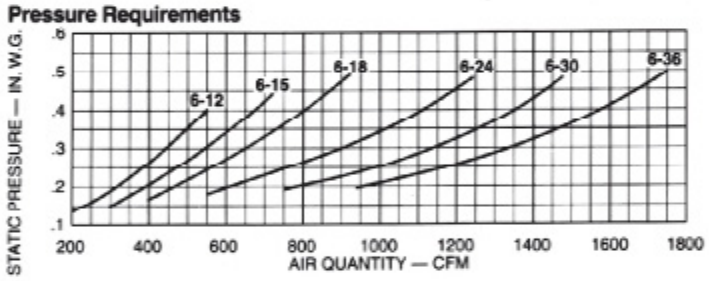
- Product
- Width (A)
- Height (B)

Engineering data

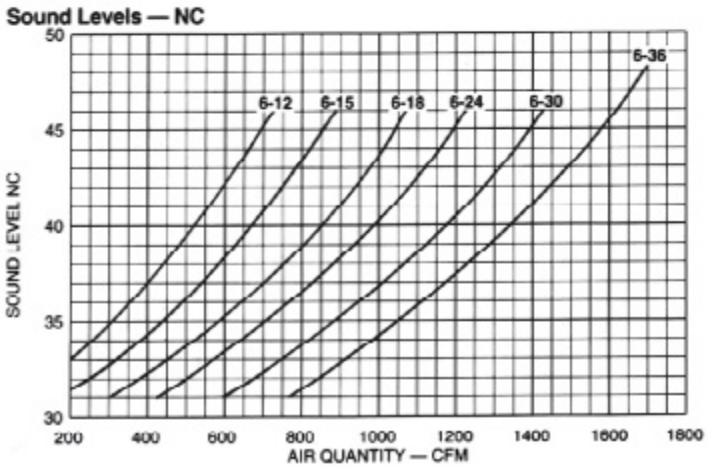
Throw Chart



Pressure Requirements



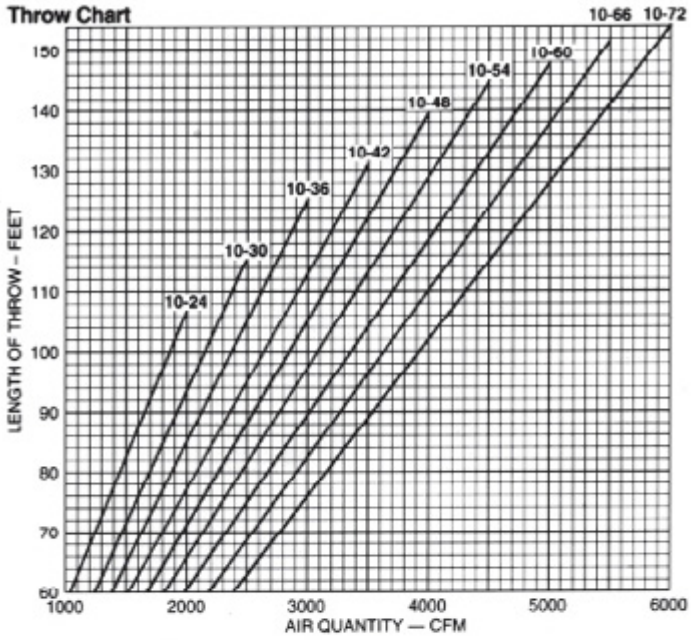
Sound Levels — NC

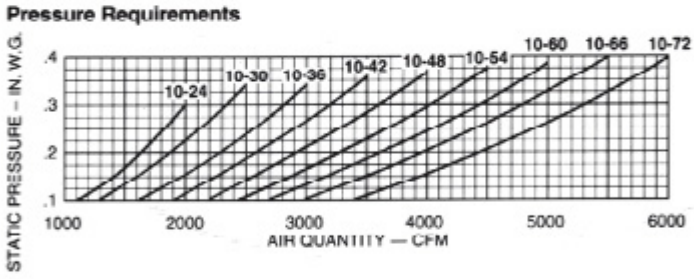


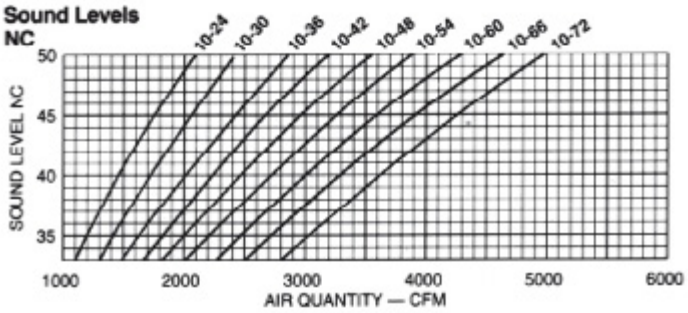
A_k Outlet Area In Square Feet	
Unit Size	A_k
06-12	0.181
06-15	0.226
06-18	0.277
06-24	0.381
06-30	0.484
06-36	0.536
10-24	0.710
10-30	1.024
10-36	1.233
10-42	1.495
10-48	1.626
10-54	1.757
10-60	1.888
10-66	2.019
10-72	2.150

Products Notes (6):

1. Throws are based on terminal velocity of 50 fpm. Throws can be reduced up to 35% by adjustable vane settings.
2. Test data based on 70 ºF air with rotating barrel and adjustable vanes set parallel to air flow for maximum projection.
3. NC based upon 8dB room absorption.

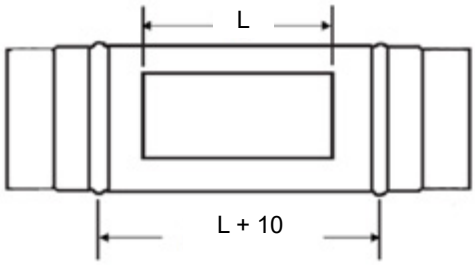


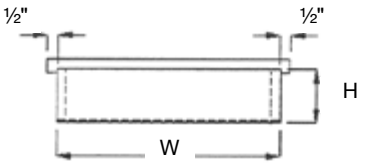


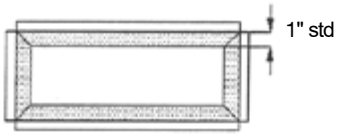


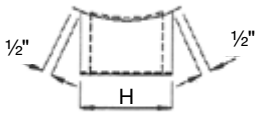
Products Notes (10):

1. Throws are based on terminal velocity of 50 fpm. Throws can be reduced up to 35% by adjustable vane settings.
2. Test data based on 70 ºF air with rotating barrel and adjustable vanes set parallel to air flow for maximum projection.
3. NC based upon 8dB room absorption.









Description

The RDTP is a heavy duty, high capacity rectangular tap off of round duct. RDTP's are designed specifically for direct mount applications on round duct, to accept mounting of register grilles.

The base of the RDTP is fabricated to the outside radius of the duct on which it is to be mounted. The grille mount side can be ordered with a flanged surface, either turned in or turned out, or a raw end can also be requested.

Standard Features:

- 1" flange turned in
- H = 6"
- W ≤ outside duct diameter
- Single wall

Options:

- Flange turned out or plain
- Various flange widths
- Various tap heights
- Double wall or lined

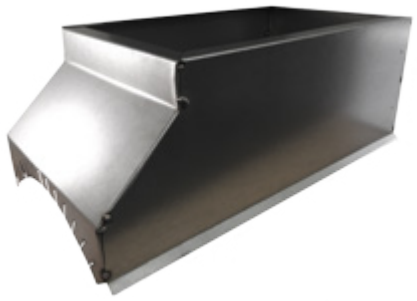
Order example

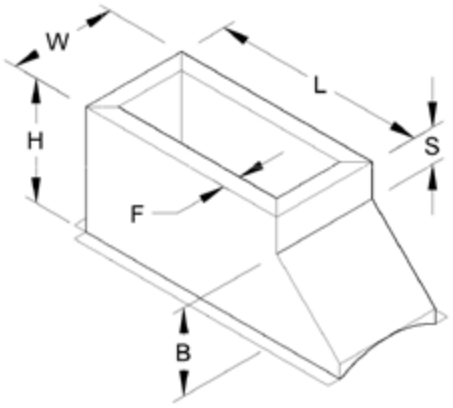
Product Code: RDTP D – L x W – H – F

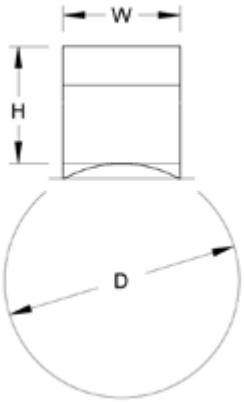
- Type
- Outside diameter of duct
- Length of tap
- Width of tap
- Height of tap
- Flange width (turned in, turned out or raw)

Rectangular taps

RDBTP







Description

The RDBTP is a heavy duty, high capacity rectangular boot tap off of round duct. RDBTP's are designed specifically for direct mount applications on round duct, to accept mounting of register grilles.

The base of the RDBTP is fabricated to the outside radius of the duct on which it is to be mounted. The grille mount side can be ordered with a flanged surface, either turned in or turned out, or a raw end can also be requested.

Standard Features:

- galvanized sheet steel
- "tack and seal" assembled
- Height is 6", where S = 2" and B = 4"
- Flange width is 1" turned in

NOTE: S = Amount of straight, B = Boot Height
S + B = H (Ex. 6 + 3 = 9)

Options:

- Flange turned out or plain (raw)
- Various flange widths
- Various tap heights
- Double Wall or lined

Order example

Product Code: RDBTP D – L x W – H – F

Type
Outside diameter of duct
Length of tap
Width of tap
Height of tap
Flange width

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