



Company Profile



مصنع نظام التبريد للصناعة

A black and white photograph of a large, industrial cooling fan. The fan has a prominent, curved metal grille made of many parallel bars. The fan is mounted on a dark, circular base. The background is a plain, light-colored wall. The lighting is dramatic, highlighting the texture of the metal and the circular shape of the fan.

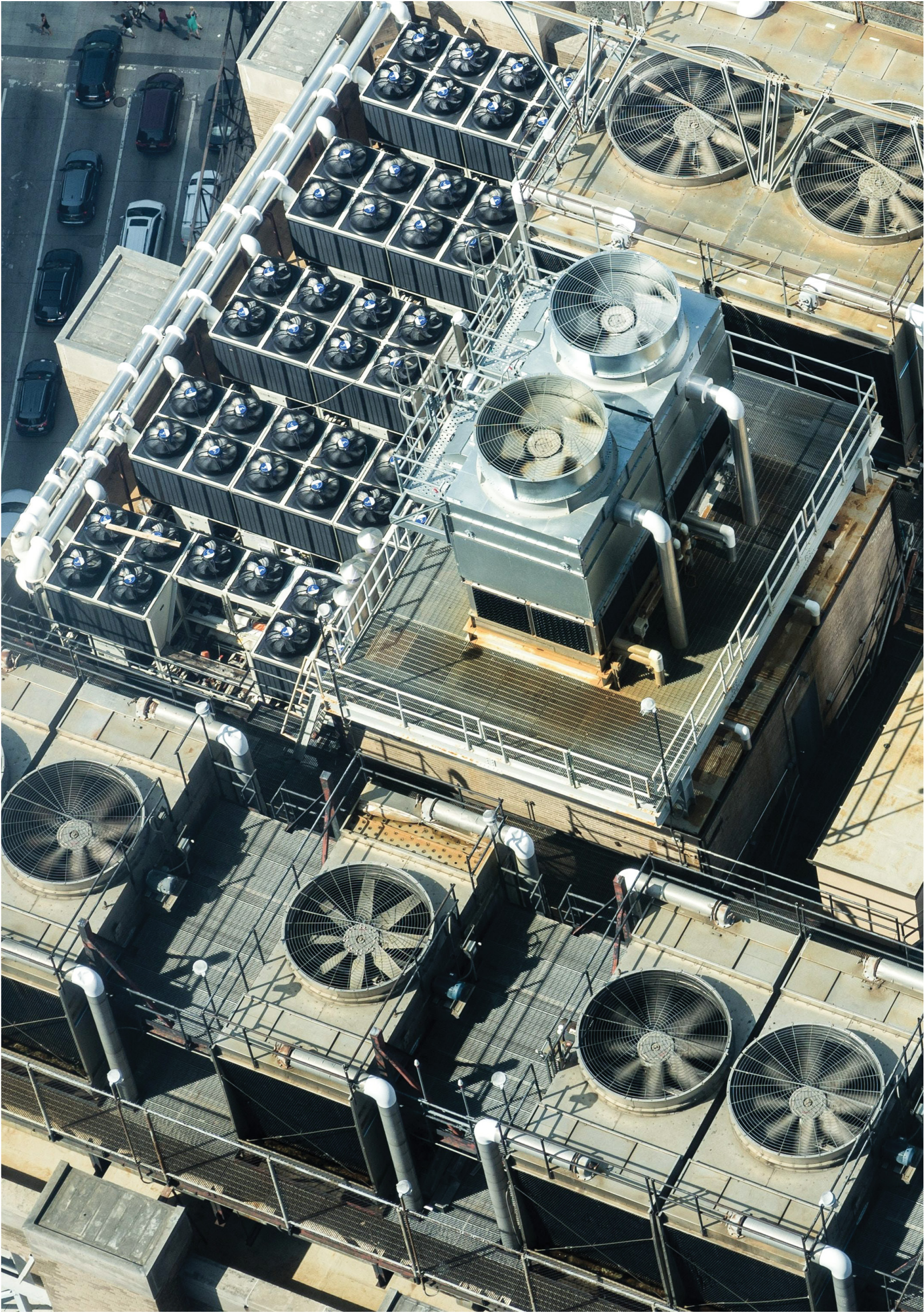
تصنيع بمعايير عالمية



مصنع نظام التبريد

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من نحن

مصنع نظام التبريد للصناعة هو منشأة صناعية متخصصة في تصنيع فتحات وإكسسوارات تكييف الهواء بمختلف أنواعها، حيث نعتمد على أحدث التقنيات وخطوط الإنتاج المتطورة لضمان منتجات عالية الجودة تتميز بالدقة والكفاءة والمتانة. نلتزم بتطبيق أعلى معايير التصنيع والسلامة، ونحرص على تقديم حلول متكاملة تلبي احتياجات المشاريع السكنية والتجارية والصناعية، مع التركيز على تحسين كفاءة تدفق الهواء، وترشيد استهلاك الطاقة، وتحقيق أداء موثوق ومستدام. كما نسعى باستمرار إلى تطوير منتجاتنا بما يواكب متطلبات السوق ويلبي تطلعات عملائنا.





رسالتنا

تقديم منتجات عالية الجودة في مجال فتحات وإكسسوارات تكييف الهواء، من خلال الالتزام بأفضل ممارسات التصنيع، وتوظيف أحدث التقنيات، وتوفير حلول موثوقة وفعالة تلبي متطلبات مختلف المشاريع. نسعى إلى تحقيق رضا عملائنا عبر الأداء المتميز، والدقة في التنفيذ، والالتزام بمعايير السلامة والاستدامة، مع التطوير المستمر لمنتجاتنا وخدماتنا بما يواكب تطلعات السوق.

أهدافنا

نسعى في مصنع نظام التبريد للصناعة إلى تحقيق التميز في تصنيع فتحات وإكسسوارات تكييف الهواء من خلال تقديم منتجات عالية الجودة تلبي أعلى المعايير الفنية. نهدف إلى تعزيز كفاءة الطاقة وتحسين أداء أنظمة التبريد، وتوسيع نطاق منتجاتنا لتلبية احتياجات مختلف القطاعات، مع الالتزام بالسلامة والاستدامة. كما نحرص على تطوير قدراتنا الصناعية، وبناء علاقات طويلة الأمد مع عملائنا وشركائنا، والمساهمة في دعم المشاريع بكفاءة وموثوقية.

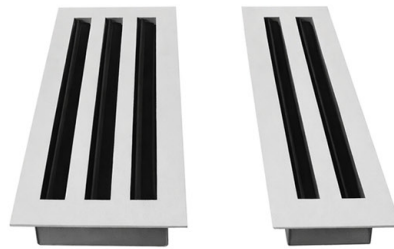


Linear Slot Diffusers

ناشرات الهواء الخطية ذات الفتحات (Linear Slot Diffusers) صُممت ناشرات الهواء الخطية المصنوعة من الألومنيوم (طراز LSD) للاستخدام في تطبيقات الأسقف (كما يمكن استخدامها في الحوائط) لتوفير مظهر معماري متميز. يتوفر طراز LSD إلى نوعان: LSDS: للإمداد (Supply). LSDR: للراجع (Return).

تُستخدم هذه الناشرات في أنظمة التبريد، التدفئة، وأنظمة التهوية الأخرى. المواصفات الفنية:

- التكوين: متوفر بعدد فتحات يتراوح من (1 إلى 8) فتحات.
- عرض الفتحة: يتوفر بعرضين للفتحات: 3/4 بوصة (20 مم) و 1 بوصة (25 مم).
- التصميم: يمكن توفير طراز LSD بتصميم منحنى حسب الطلب.
- الطلاء: يتميز طراز LSD بطلاء قياسي حرارياً لضمان عمر طويل وسهولة في التنظيف.
- الألوان: اللون القياسي هو الأبيض (RAL 9016)، وتتوفر ألوان أخرى عند الطلب.
- يتم تزويد طراز LSDS بزوج من زعانف توجيه النمط (Pattern Deflectors) في كل فتحة لتوفير مرونة كاملة في ضبط نمط توزيع الهواء.



Flow Bar

Linear Slot Diffuser – Plaster-In Type

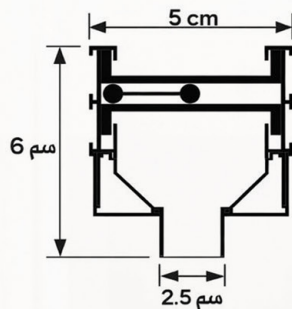
Industrial Cooling Systems Factory presents the Flow Bar system, a concealed linear air diffuser designed for installation prior to gypsum (Plaster-In) works. It is fully integrated into the ceiling structure so that, after final finishing, only a sleek and elegant linear air slot remains visible without any exposed frame. This provides the project with a modern and luxurious architectural appearance that reflects quality execution and attention to detail.

Technical Features:

- Fully concealed design that harmonizes with modern gypsum ceilings
- Custom-manufactured in various lengths and dimensions
- Available in Single, Double, or Multi-Slot configurations
- Smooth and balanced airflow distribution to achieve maximum performance efficiency
- High-quality electrostatic powder-coated finish in approved colors
- Suitable for residential, commercial, administrative, and hospitality projects

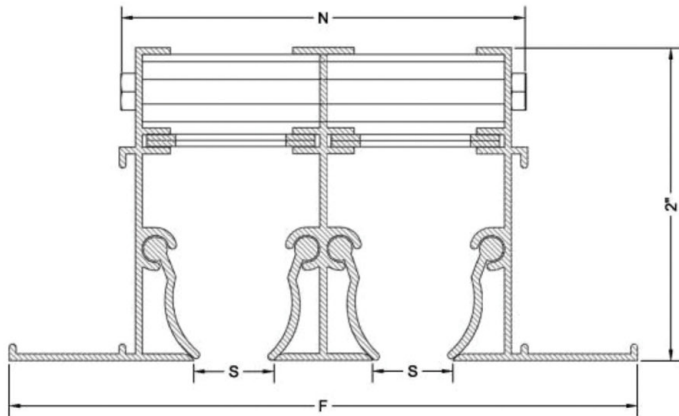
Materials & Specifications:

- Manufactured from high-quality, corrosion-resistant aluminum
- Custom sizes available according to project drawings and client requirements
- Compatible with central air conditioning systems (HVAC Systems)

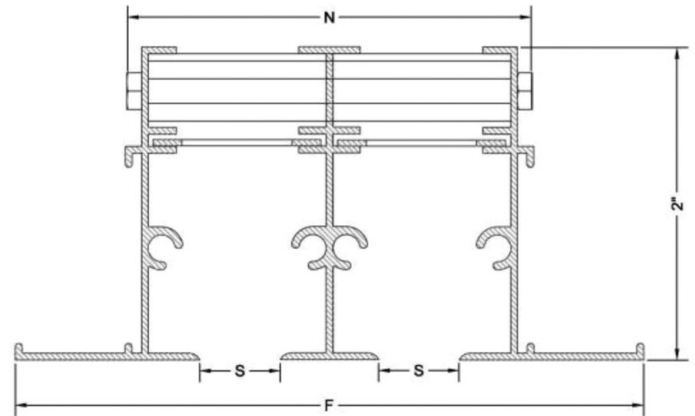


Linear Slot Diffusers

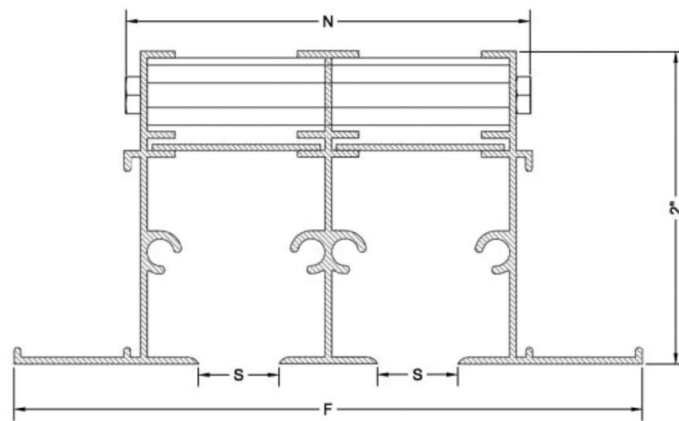
Dimensional Data



LSDS



LSDR



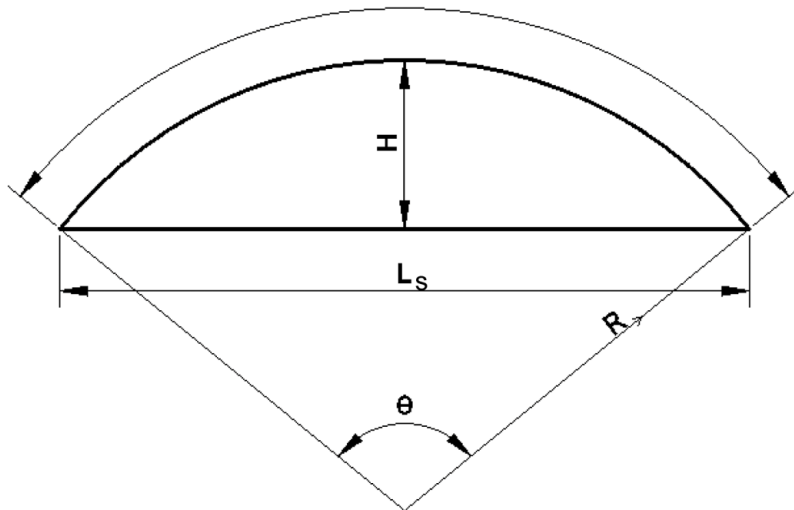
LSDD

Dimensions

No. of slots	S = 3/4" or 20 mm				S = 1" or 25 mm			
	N		F		N		F	
	inches	mm	inches	mm	inches	mm	inches	mm
1	1-13/16	46	3-1/8	79	2	50	3-1/4	83
2	3-1/4	83	4-5/8	117	3-8/16	91	4-15/16	125
3	4-3/4	120	6-1/16	154	5-3/16	132	6-9/16	165
4	6-1/4	158	7-1/2	191	6-7/8	174	8-1/8	207
5	7-11/16	195	9	228	6-7/16	215	9-3/4	248
6	9-1/8	232	10-7/16	265	10-1/16	256	11-3/8	269
7	10-9/16	269	11-7/8	302	11-11/16	297	13	330
8	12-1/16	306	13-3/8	339	13-5/16	338	14-5/8	371

Linear Slot Diffusers

Diffuser Segments



θ = Angle in degrees.

R = Radius.

H = Segment height.

$= R \times (1 - \cos(\theta / 2))$

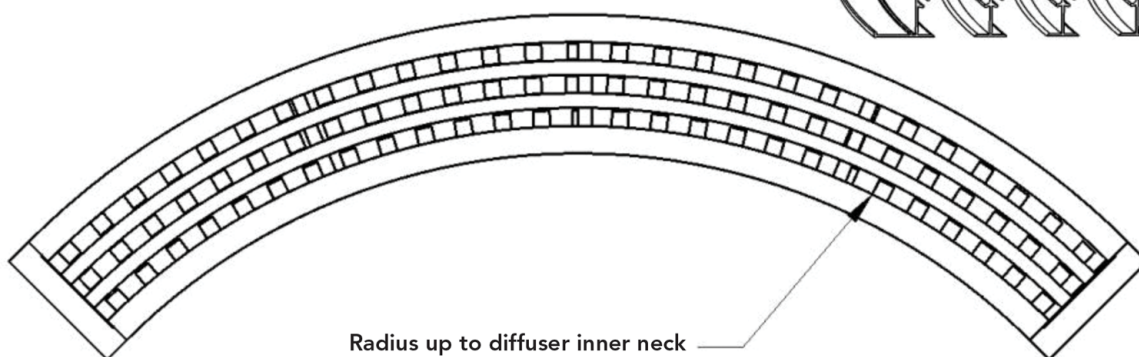
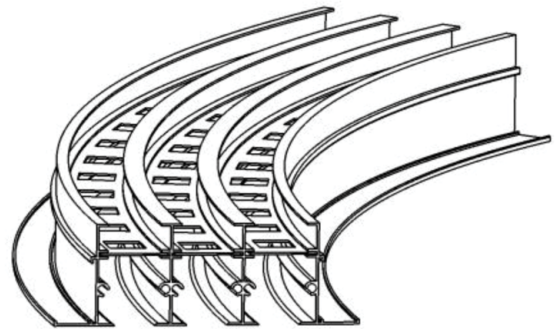
Ls = Segment Length.

$= 2 \times R \times (\sin(\theta / 2))$

L = Arc length

$= \theta \times (\pi / 180) \times R$

LSD-V
CURVED LINEAR SLOT DIFFUSER FOR CEILING



Radius up to diffuser inner neck

Minimum radius for any curve or circle 1 meter. Otherwise, consult Rabie representative

Curve slot diffuser is supplied with single holed strip and with no deflectors.

Minimum two dimensions are required for curves e.g. L & R. Otherwise, please bring forma (a cut to actual carton)

Linear Slot Diffuser Supply Performance Data

LSDS S – 3/4"

No. of Slots	CFM/FT.	10	20	30	40	50	60	70	80	90	100	125	150	200	250	300	350	400
1	HOR. SP	.022	.089	.200	.356	.557	.802	1.092	1.426	1.804	2.228							
	THROW	7-10	13-15	15-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33							
	NC	<20	<20	30	39	41	47	>50	>50	>50	>50							
	VERT. SP	.010	.039	.088	.157	.245	.353	.480	.627	.794	.980							
	THROW	2-5	9-15	16-23	22-27	25-30	27-32	29-35	31-37	33-39	35-42							
	NC	<20	<20	<20	20	27	33	38	42	146	49							
2	HOR. SP		.022	.050	.089	.139	.200	.273	.356	.451	.557	.870						
	THROW		9-13	14-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33	31-37						
	NC		<20	<20	<20	28	33	38	42	46	>50	>50						
	VERT. SP		.010	.022	.039	.061	.088	.120	.157	.199	.245	.383						
	THROW		3-6	7-13	12-21	19-26	23-31	27-35	30-37	33-39	35-42	39-46						
	NC		<20	<20	<20	<20	<20	<20	23	27	30	37						
3	HOR. SP			.022	.040	.062	.089	.121	.158	.200	.248	.387	.557					
	THROW			11-16	15-21	19-24	23-26	23-28	25-30	27-32	28-33	31-37	34-41					
	NC			<20	<20	<20	22	27	31	35	38	46	50					
	VERT. SP			.010	.017	.027	.039	.053	.070	.088	.109	.170	.245					
	THROW			4-8	7-13	10-20	15-26	20-30	25-34	28-38	31-42	39-46	43-51					
	NC			<20	<20	<20	<20	<20	<20	<20	<20	26	32					
4	HOR. SP				.022	.035	.050	.068	.089	.113	.139	.218	.313	.557				
	THROW				13-18	16-23	20-27	23-28	26-30	27-32	28-33	31-37	34-41	40-47				
	NC				<20	<20	<20	<20	24	27	31	38	43	>50				
	VERT. SP				.010	.015	.022	.030	.039	.050	.061	.096	.138	.245				
	THROW				4-9	7-13	10-18	13-25	17-30	22-33	27-36	34-46	40-51	50-58				
	NC				<20	<20	<20	<20	<20	<20	<20	<20	24	33				
5	HOR. SP					.022	.032	.044	.057	.072	.089	.139	.200	.356	.557			
	THROW					15-20	18-24	20-28	23-30	26-32	29-33	31-37	34-41	40-46	44-52			
	NC					<20	<20	<20	<20	21	24	32	37	46	>50			
	VERT. SP					.010	.014	.019	.025	.032	.039	.061	.088	.157	.245			
	THROW					5-10	7-13	9-18	12-23	16-29	19-33	30-41	36-49	48-58	56-65			
	NC					<20	<20	<20	<20	<20	<20	<20	<20	27	34			
6	HOR. SP						.022	.030	.040	.050	.062	.097	.139	.248	.387	.557		
	THROW						16-22	19-26	21-29	24-33	27-35	31-37	34-41	40-47	44-52	48-57		
	NC						<20	<20	<20	<20	<20	27	32	41	49	>50		
	VERT. SP						.010	.013	.017	.022	.027	.043	.061	.109	.170	.245		
	THROW						5-10	7-14	9-18	12-22	15-27	23-38	33-45	44-58	55-65	61-71		
	NC						<20	<20	<20	<20	<20	<20	<20	22	29	35		
7	HOR. SP							.022	.029	.037	.045	.071	.102	.182	.284	.409	.557	
	THROW							17-24	20-27	22-31	35-34	31-37	34-41	40-47	44-52	48-56	52-61	
	NC							<20	<20	<20	<20	22	28	37	44	50	>50	
	VERT. SP							.010	.013	.016	.020	.031	.045	.080	.125	.180	.245	
	THROW							6-11	7-14	9-18	12-22	18-33	26-42	41-55	51-65	61-70	66-77	
	NC							<20	<20	<20	<20	<20	<20	<20	25	31	37	
8	HOR. SP								.022	.028	.035	.054	.078	.139	.218	.313	.426	.557
	THROW								18-26	21-29	23-32	29-37	35-41	40-47	44-52	48-56	52-61	56-66
	NC								<20	<20	<20	<20	24	34	41	46	50	>50
	VERT. SP								.010	.012	.015	.024	.034	.061	.096	.138	.188	.245
	THROW								6-12	8-15	10-18	15-28	22-39	38-52	48-64	57-70	66-77	70-82
	NC								<20	<20	<20	<20	<20	<20	21	27	32	36

- NC Data based on 10dB room attenuation
- Throw (in feet) Data based on isothermal air at 100 and 50 fpm terminal velocity respectively.
- Horizontal Throw is 1 way pattern.
- Static Pressure (SP) in inches w.g.

Linear Slot Diffuser Supply Performance Data

LSDS S – 1”

No. of Slots	CFM/FT.	10	20	30	40	50	60	70	80	90	100	125	150	200	250	300	350	400
1	HOR. SP	.010	.040	.090	.160	.250	.360	.490	.640	.810	1.000							
	THROW	4-8	10-15	15-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33							
	NC	<20	<20	25	34	41	47	>50	>50	>50	>50							
	VERT. SP	.007	.029	.066	.117	.183	.263	.358	.468	.592	.731							
	THROW	2-4	8-15	16-22	21-27	25-29	27-32	29-35	31-37	33-39	35-42							
	NC	<20	<20	<20	<20	21	27	32	36	40	43							
2	HOR. SP		.010	.023	.040	.063	.090	.122	.160	.203	.250	.391						
	THROW		6-11	11-15	14-20	18-24	22-26	23-28	25-30	27-32	28-33	31-37						
	NC		<20	<20	<20	22	28	33	37	41	44	50						
	VERT. SP		.007	.016	.029	.046	.066	.089	.117	.148	.183	.285						
	THROW		3-6	6-12	11-21	17-25	22-30	26-35	29-37	33-39	35-42	39-46						
	NC		<20	<20	<20	<20	<20	<20	<20	21	24	31						
3	HOR. SP			.010	.018	.028	.040	.054	.071	.090	.111	.174	.250					
	THROW			7-13	12-17	15-21	18-24	21-28	23-30	26-32	28-33	31-37	34-41					
	NC			<20	<20	<20	<20	22	26	30	33	40	46					
	VERT. SP			.007	.013	.020	.029	.040	.052	.066	.081	.127	.183					
	THROW			3-7	6-12	9-18	13-24	18-29	24-33	27-37	30-41	37-46	43-51					
	NC			<20	<20	<20	<20	<20	<20	<20	<20	<20	26					
4	HOR. SP				.010	.016	.023	.031	.040	.051	.063	.098	.141	.250				
	THROW				8-15	13-18	15-21	18-25	20-28	23-32	25-33	32-37	34-41	40-47				
	NC				<20	<20	<20	<20	<20	22	25	32	38	47				
	VERT. SP				.007	.011	.016	.022	.029	.037	.046	.071	.103	.183				
	THROW				4-8	6-12	9-17	12-22	16-29	20-32	24-36	32-44	39-51	50-58				
	NC				<20	<20	<20	<20	<20	<20	<20	<20	<20	27				
5	HOR. SP					.010	.014	.020	.026	.032	.040	.063	.090	.160	.250			
	THROW					9-16	13-19	16-22	18-25	20-28	23-31	28-37	34-41	40-47	44-51			
	NC					<20	<20	<20	<20	<20	<20	26	32	41	48			
	VERT. SP					.007	.011	.014	.019	.024	.029	.046	.066	.117	.183			
	THROW					4-9	6-12	9-16	11-21	14-26	17-32	27-40	35-47	46-58	56-65			
	NC					<20	<20	<20	<20	<20	<20	<20	<20	21	28			
6	HOR. SP						.010	.014	.018	.023	.028	.043	.063	.111	.174	.250		
	THROW						10-18	14-20	17-23	19-26	21-29	29-36	31-41	40-47	44-52	48-57		
	NC						<20	<20	<20	<20	<20	21	27	36	43	49		
	VERT. SP						.007	.010	.013	.016	.020	.032	.046	.081	.127	.183		
	THROW						5-9	6-13	8-16	11-20	13-25	21-36	20-43	42-58	53-65	61-71		
	NC						<20	<20	<20	<20	<20	<20	<20	<20	23	29		
7	HOR. SP							.010	.013	.017	.020	.032	.046	.082	.128	.184	.250	
	THROW							11-19	14-22	17-24	19-27	24-33	29-39	38-47	44-52	48-57	52-61	
	NC							<20	<20	<20	<20	<20	23	32	39	45	50	
	VERT. SP							.007	.010	.012	.015	.023	.034	.060	.093	.134	.183	
	THROW							5-10	7-13	9-16	11-20	16-30	24-40	39-53	49-65	59-71	66-77	
	NC							<20	<20	<20	<20	<20	<20	<20	<20	25	30	
8	HOR. SP								.010	.013	.016	.024	.035	.063	.098	.141	.191	.250
	THROW								12-20	15-23	18-25	22-31	27-37	36-47	45-52	48-57	52-61	56-66
	NC								<20	<20	<20	<20	<20	28	35	41	46	50
	VERT. SP								.007	.009	.011	.018	.026	.046	.071	.103	.140	.183
	THROW								6-11	7-13	9-16	13-25	19-35	34-50	46-62	55-71	64-77	70-82
	NC								<20	<20	<20	<20	<20	<20	<20	21	26	30

- NC Data based on 10dB room attenuation
- Throw (in feet) Data based on isothermal air at 100 and 50 fpm terminal velocity respectively.
- Horizontal Throw is 1 way pattern.
- Static Pressure (SP) in inches w.g.

Linear Slot Diffuser Return Performance Data

LSDR S – 3/4”

No. of Slots	Negative SP	.015	.062	.134	.241	.372	.549	.756	.991
1	CFM/Foot	10	20	30	40	50	60	70	80
	NC	<20	<20	<20	22	27	32	37	42
2	CFM/Foot	20	40	60	80	100	120	140	160
	NC	<20	<20	24	32	38	43	48	>50
3	CFM/Foot	30	60	90	120	150	180	210	240
	NC	<20	<20	30	38	42	49	>50	>50
4	CFM/Foot	40	80	120	160	200	240	280	320
	NC	<20	23	34	43	48	>50	>50	>50
5	CFM/Foot	50	100	150	200	250	300	350	400
	NC	<20	26	38	46	>50	>50	>50	>50
6	CFM/Foot	60	120	180	240	300	360	420	480
	NC	<20	29	40	48	>50	>50	>50	>50
7	CFM/Foot	70	140	210	280	350	420	490	560
	NC	<20	31	43	>50	>50	>50	>50	>50
8	CFM/Foot	80	160	240	320	400	480	560	640
	NC	<20	33	45	>50	>50	>50	>50	>50

Linear Slot Diffuser Return Performance Data

LSDR S – 1”

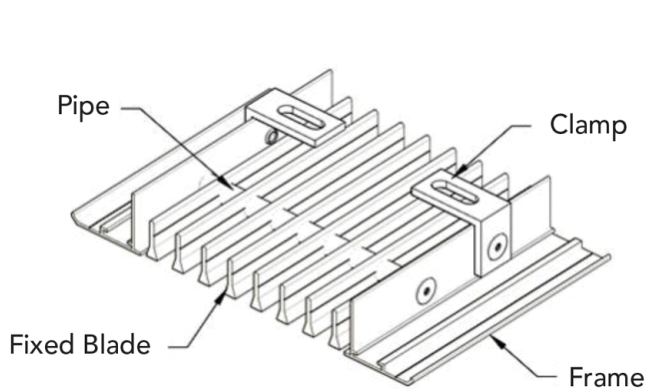
No. of Slots	Negative SP	.026	.095	.154	.240	.344	.451	.574	.991
1	CFM/Foot	20	30	40	50	60	70	80	100
	NC	<20	<20	<20	21	26	30	32	38
2	CFM/Foot	40	60	80	100	120	140	160	200
	NC	<20	<20	23	29	31	37	41	44
3	CFM/Foot	60	90	120	150	180	210	240	300
	NC	<20	<20	25	32	36	40	45	50
4	CFM/Foot	80	120	160	200	240	280	320	400
	NC	<20	22	26	34	39	43	48	>50
5	CFM/Foot	100	150	200	250	300	350	400	500
	NC	<20	24	29	36	42	45	50	>50
6	CFM/Foot	120	180	240	300	360	420	480	600
	NC	<20	26	32	39	45	49	>50	>50
7	CFM/Foot	140	210	280	350	420	490	560	700
	NC	<20	29	36	43	48	>50	>50	>50
8	CFM/Foot	160	240	320	400	480	560	640	800
	NC	<20	31	40	46	>50	>50	>50	>50

- NC Data based on 10dB room attenuation
- Static Pressure (SP) in inches w.g.



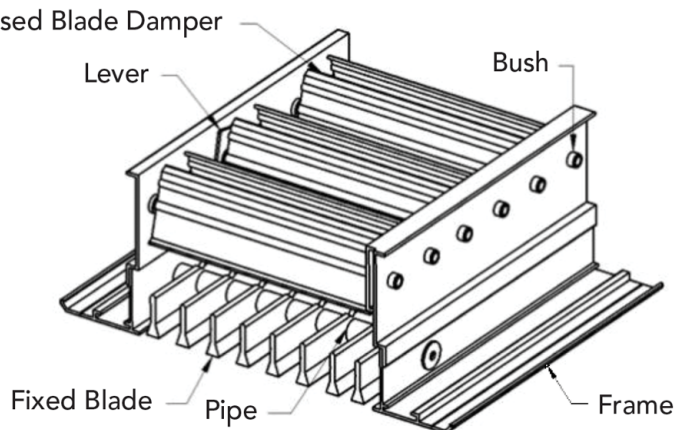
Linear Bar Grill (LBG)

Construction And Dimensional



LINEAR BAR GRILLES RETURN LBGR

Is a linear bar grille composed of a set of fixed horizontal bars in the front face, used as a return grille.



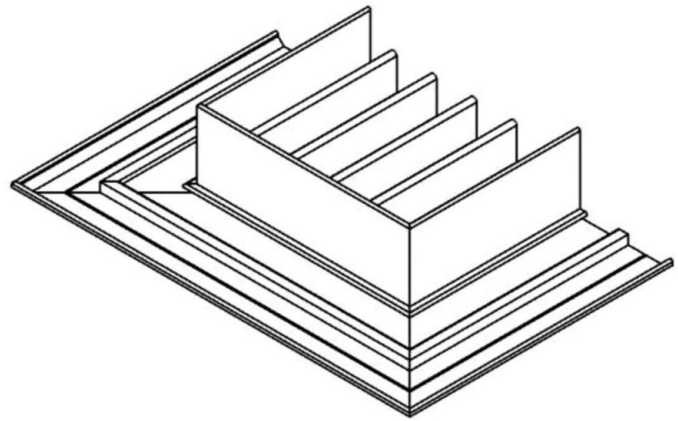
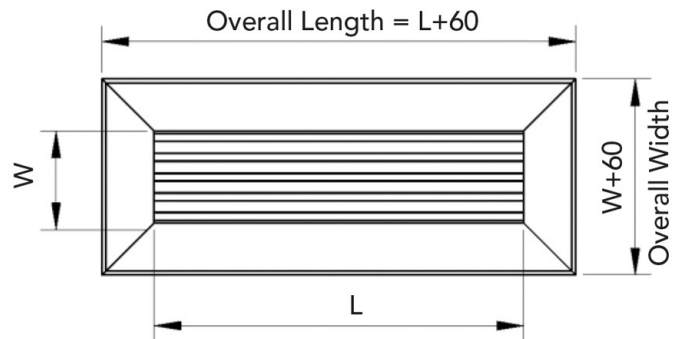
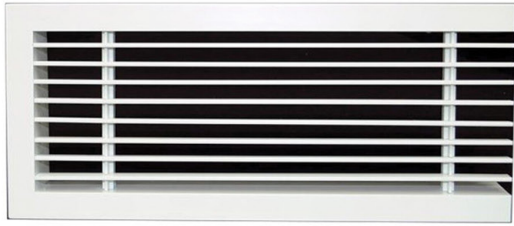
LINEAR BAR GRILLES SUPPLY LBGS

Is a linear bar grille composed of a set of fixed horizontal bars in the front face, with opposed blade damper (OBD) supplied to achieve air flow control, lever operated through the face of the unit., used as a supply grille.

Linear Bar Grill (LBG)

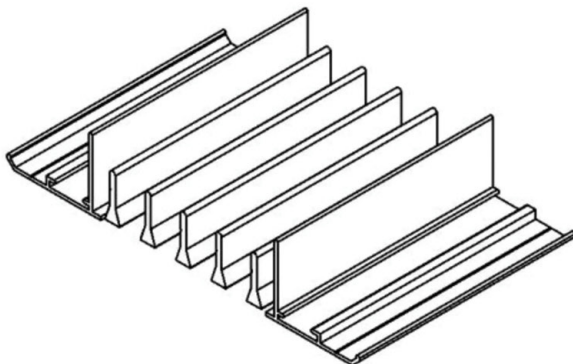
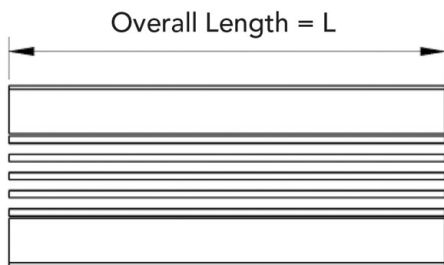
Mitered End Cap (STANDARD)

Option M



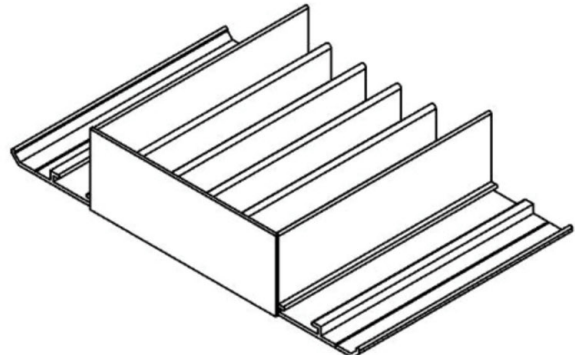
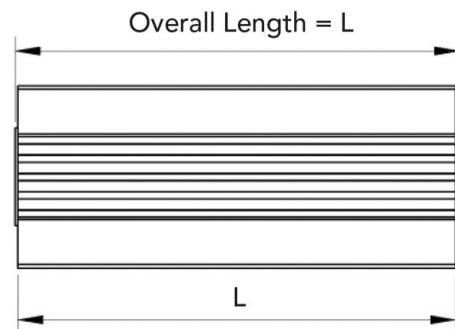
Without End Cap

Option W



Flat End Cap

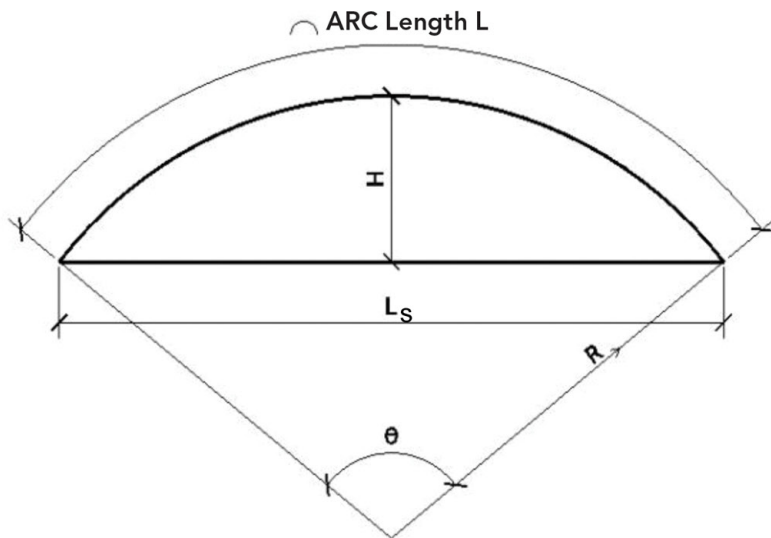
Option C



Linear Bar Grill (LBG)

Dimensional Data - Curves

GRILL SEGMENTS



θ = Angle.

R = Radius.

H = Segment height.

$= R \times (1 - \cos(\theta / 2))$

L_s = Segment Length.

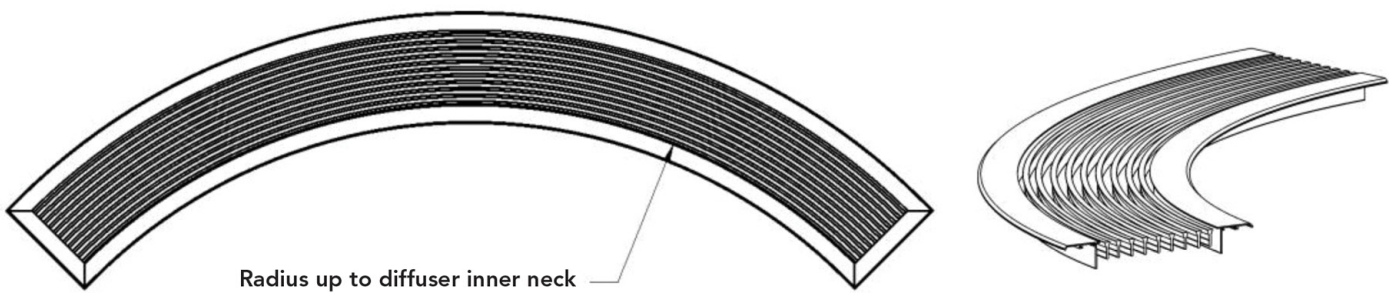
$= 2 \times R \times (\sin(\theta / 2))$

L = Arc length

$= \theta \times (\pi / 180) \times R$

LBG-V

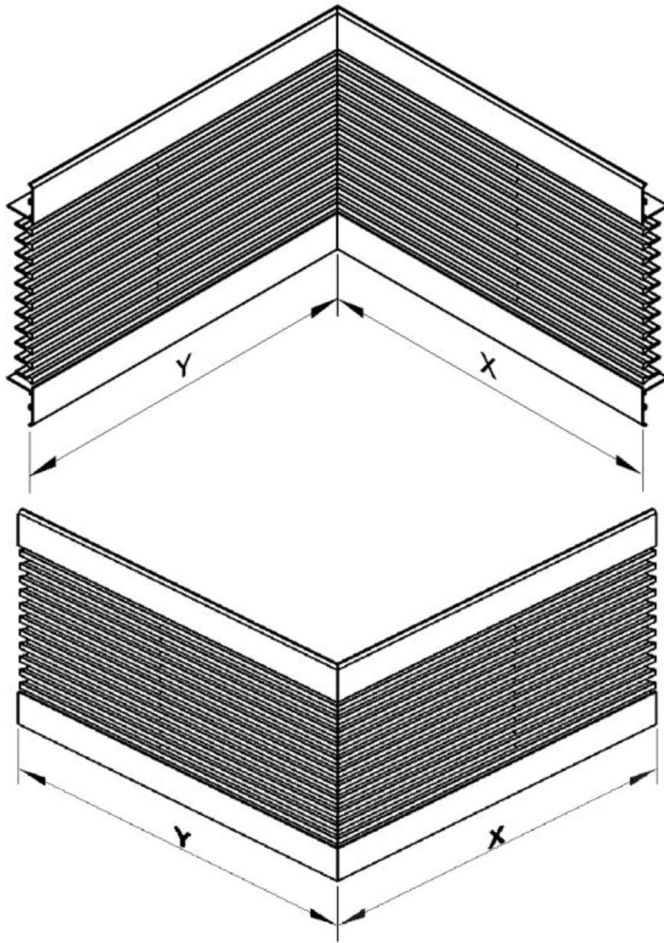
CURVED LINEAR BAR GRILL FOR CEILING



- Minimum radius for any curve or circular 1 meter. Otherwise, consult Rabie representative
- Curved section are supplied without OBD
- Minimum two dimensions are required for curves e.g. L & R . Otherwise, please bring frma (a cut to actual carton)

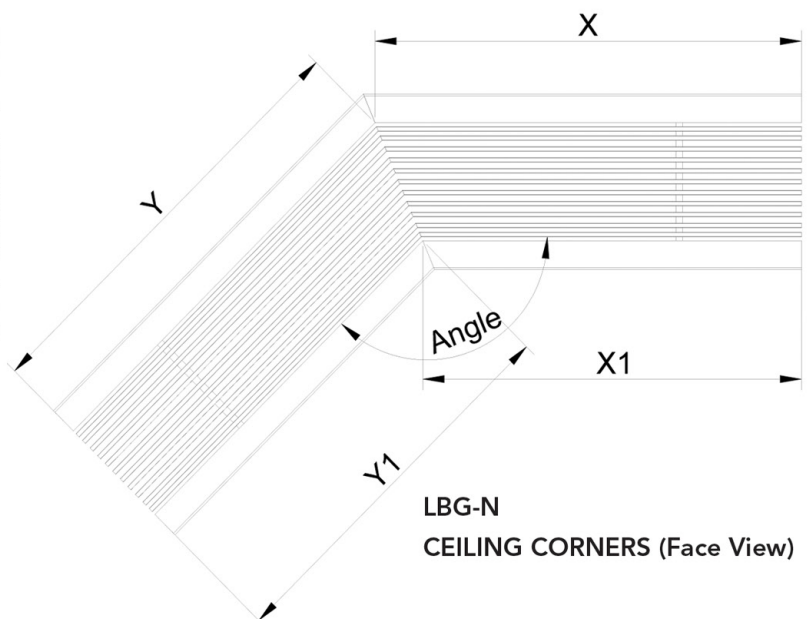
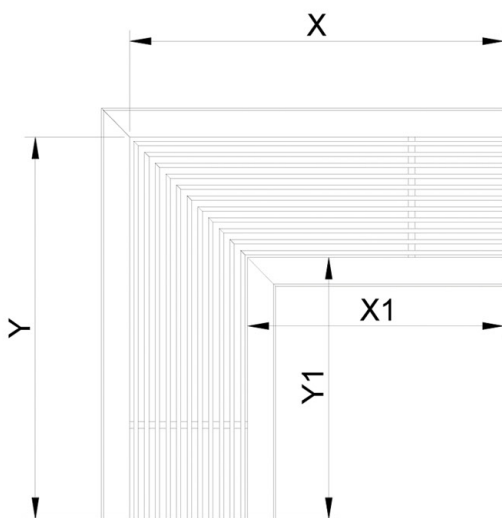
Linear Bar Grill (LBG)

Corner Pieces



LBG-NI
SIDE WALL - INSIDE CORNER

LBG-NO
SIDE WALL - OUTSIDE CORNER



LBG-N
CEILING CORNERS (Face View)

CORNER PIECES

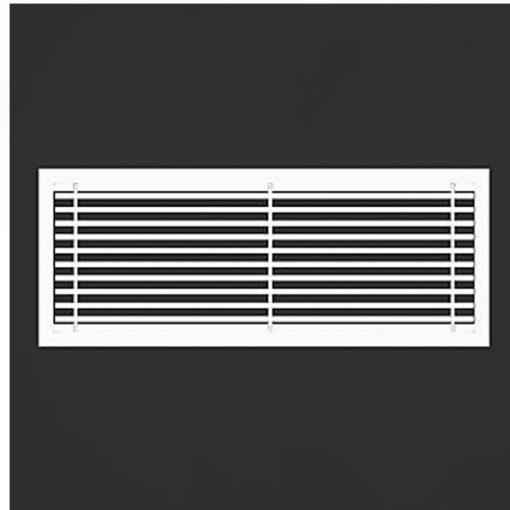
- X & Y = 16" (Minimum) Face to face.
- Available standard angles 90° and 135°.

Linear Bar Grill (LBG)

Performance Data

Quick Selection Table

Nominal Width	Cfm/ Foot
2"	00 - 20
3"	30 - 175
4"	50 - 225
5"	70 - 300
6"	90 - 350
8"	110 - 400
10"	130 - 450



Selection Procedure

Determine air volume flow rate per outlet.

Calculate flow rate per foot.

For supply air grille application, establish required throw.

Establish required maximum noise and pressure values.

From the following performance tables select the most suitable width that meets the

required throw (or more) at the calculated flow rate per foot, and meet required (or better)

NC, and pressure values.





Linear Bar Grill (LBG)

Nominal Width Inches	Area Sq. ft. (Effective free area/Lineal foot)	veloci FPM)		400	600	800	1000	1200	1400	1600	1800	2000
		Total Pressure (in W.G)		0.010	0.022	0.040	0.063	0.089	0.121	0.159	0.202	0.250
2	.045	Flow, CFW/Foot		18	27	36	45	54	63	72	81	90
		Throw, Feet	Sill or floor	1-1	4-4	7-7	9-10	11-13	14-16	16-18	17-20	19-21
			Sidewall		9-12	11-16	14-20	16-23	19-26	21-28	22-30	25-33
		NC						23	28	32	35	38
2 1/2	.066	Flow, CFW/Foot		26	40	53	66	79	92	106	119	132
		Throw, Feet	Sill or floor				12-13	14-16	17-19	20-22	22-23	23-24
			Sidewall		9-12	12-17	16-22	19-25	21-28	25-32	28-36	30-39
		NC					20	25	30	34	37	40
3	.088	Flow, CFM/Foot		35	53	70	88	106	123		158	176
		Throw, Feet	Sill or floor	2-2	7-7	10-11	13-15	16-18	19-21	22-24	24-25	26-27
			Sidewall	7-10	11-15	14-19	17-23	21-27	24-31	27-34	31-39	34-42
		NC					21	26	31	35	38	41
3 1/2	.110	Flow, CFM/Foot		44	66	88	110	132	154	176	198	220
		Throw, Feet	Sill or floor	3-3	8-8	12-12	15-16	19-20	21-22	24-25	26-27	29-29
			Sidewall	7-10	12-16	16-20	20-25	23-28	26-32	29-36	32-40	36-44
		NC					22	27	32	36	39	42
4	.133	Flow CFW/Foot		53	80	106	133	160	186	213	239	266
		Throw, Feet	Sill or floor			13-13	16-17	20-21	23-24	25-26	28-28	31-31
			Sidewall		13-17	17-21	21-26	25-30	28-34	30-37	35-42	38-46
		NC					23	28	33	37	40	43
5	.177	Flow, CFM/Foot		71	106	142	177	212	248	283	318	354
		Throw, Feet	Sill or floor	4-4	10-10	15-15	18-18	22-23	25-25	27-28	30-30	34-34
			Sidewall	10-13	14-18	19-23	22-27	27-32	31-37	33-40	37-44	41-48
		NC					24	29	34	38	41	44
6		Flow, CFW/Foot		89	133	178	222	266	310	355	400	444
		Throw, Feet	Sill or floor	5-5	10-10	15-15	19-19	23-23	25-25	29-29	31-31	36-36
			Sidewall	11-14	16-20	20-24	24-29	29-34	33-39	35-41	40-46	44-50
		NC					25	30	35	39	42	45
8	274	Flow, CFM/Foot		110	164	219	274	329	384	438	493	548
		Throw, Feet	Sill or floor			16-16	20-20	24-24	26-26	30-30	32-32	37-37
			Sidewall	12-15	17-21	21-25	25-30	30-35	34-40		41-47	45-51
		NC				20	26	31	36	40	43	46
10	.338	Flow, CFM/Foot		135	203	270	338	406	473	541	608	676
		Throw, Feet	Sill or floor	6-6	11-11	16-16	21-21	25-25	26-26	32-32	33-33	38-38
			Sidewall	13-16	19-23	22-26	27-32	32-37	36-42	38-43	43-49	48-53
		NC				21	27	32	37	41	44	47



Ceiling Diffuser (CD)

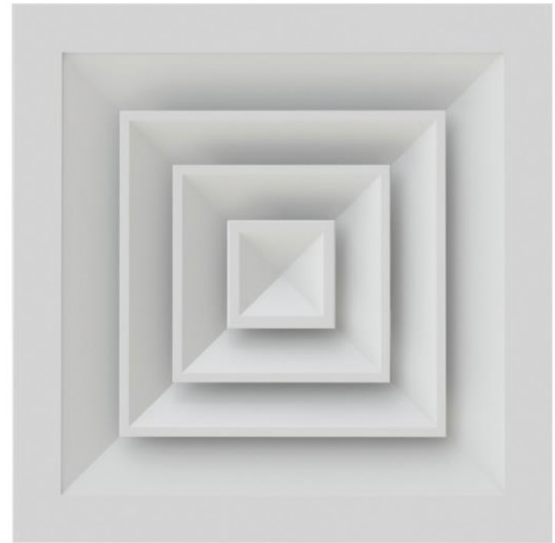
Ceiling Diffuser (CD)

Product Description

RABIE provides a wide range of ceiling diffusers to suite customer requirements of ceiling air distribution, which can be supply or return, square or rectangular shape, with one, two, three or four ways patterns.

Diffusers core is fully removable, opposed blades damper can be connected to the frame with screws and is lever operated from the face.

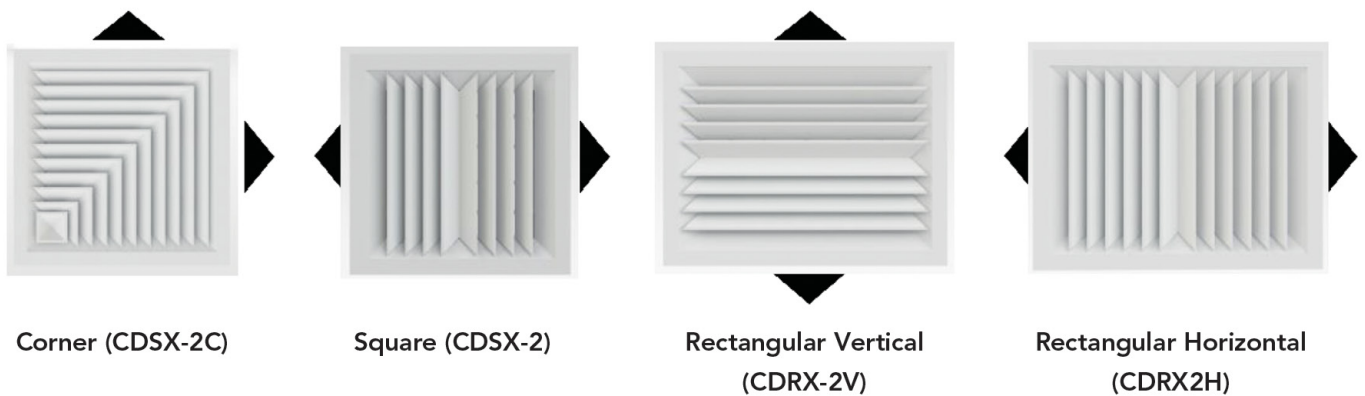
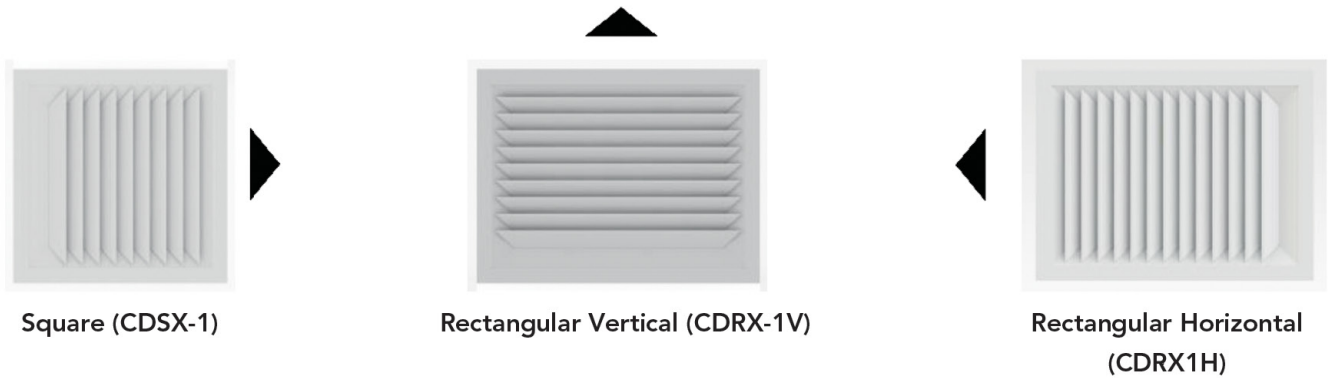
Core and frame are made of extruded aluminum alloy and polyester powder coated to RAL9016 (standard) and others upon request.



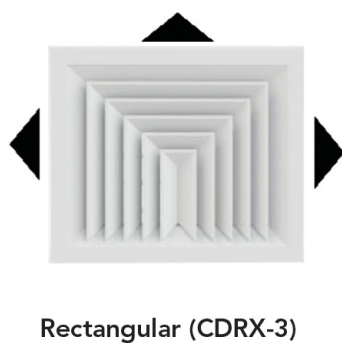
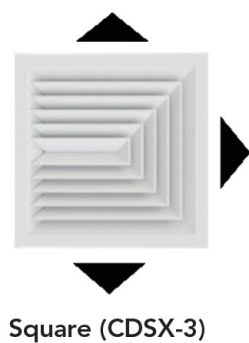
Ceiling Diffuser (CD)

Multi Pattern Ceiling Diffuser

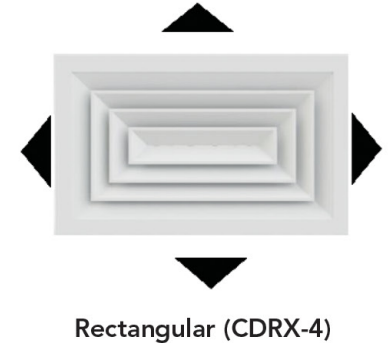
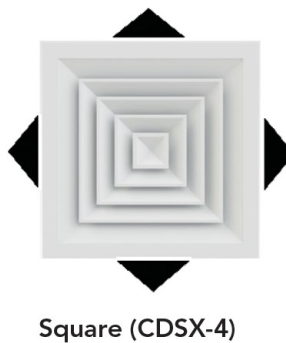
1 way discharge



3 way discharge



4 way discharge



X:
S Supply (with OBD)
R Return (without OBD)

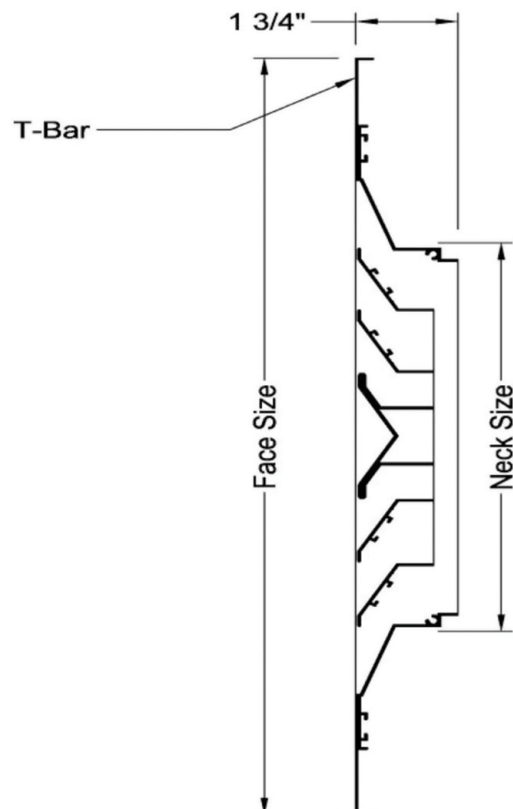
Ceiling Diffuser (CD)



CDT T - Bar Option

When the required face is larger than the neck size by more than 5 1/2" (140mm), then TBar Option is used.

Please specify Face and Neck dimensions.



Ceiling Diffuser (CD)

Sizes and Velocity Pressure Conversion Table

Listed Sizes (Square Ceiling Diffusers)

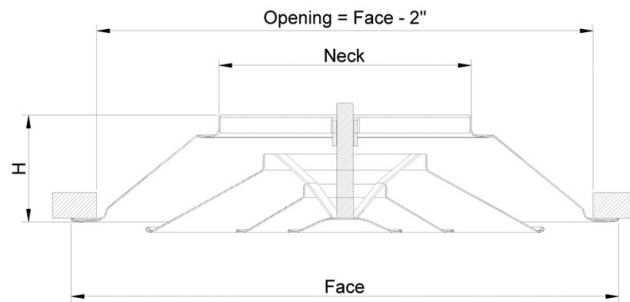
DIMENSIONS			
Size	in. Neck (mm)	in. FACE (mm)	CFM Range
6 x 6	6-5/16" (160)	11-13/16" (300)	50 - 225
9 x 9	8-7/8" (225)	14-3/8" (365)	100 - 500
12 x 12	12-13/64" (310)	17-23/32" (450)	200 - 900
15 x 15	14-31/32" (380)	20-1/2" (520)	300 - 1400
18 x 18	18-1/32" (458)	23-1/2" (598)	450 - 2000
21 x 21	20-7/8" (530)	26-3/8" (670)	600 - 2750
24 x 24	23-13/16" (605)	29-3/8" (745)	800 - 3600

Listed Sizes (Rectangular Ceiling Diffusers)

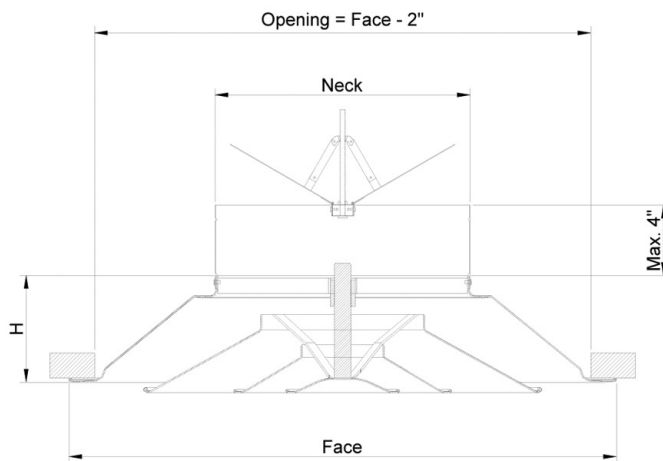
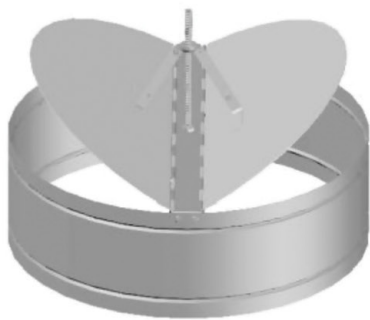
DIMENSIONS							
Size	Horizontal in. (mm)	Vertical in. (mm)	CFM Range	Size	Horizontal in. (mm)	Vertical in. (mm)	CFM Range
9 x 6	9 (228.6)	6 (152.4)	75 - 335	18 x 9	9 (228.6)	6 (152.4)	75 - 335
12 x 6	12 (304.8)	6 (152.4)	100 - 450	18 x 12	12 (304.8)	6 (152.4)	100 - 450
12 x 9	12 (304.8)	9 (228.6)	150 - 675	21 x 6	12 (304.8)	9 (228.6)	150 - 675
15 x 6	15 (381.0)	6 (152.4)	152 - 560	21 x 9	15 (381.0)	6 (152.4)	152 - 560
15 x 9	15 (381.0)	9 (228.6)	190 - 845	24 x 6	15 (381.0)	9 (228.6)	190 - 845
15 x 12	15 (381.0)	12 (304.8)	250 - 1125	24 x 9	15 (381.0)	12 (304.8)	250 - 1125
18 x 6	18 (457.2)	6 (152.4)	150 - 675	24 x 12	18 (457.2)	6 (152.4)	150 - 675



Round Ceiling Diffuser (RCD)



Round Ceiling Diffuser Return
(RCDR)



Round Ceiling Diffuser Supply
(RCDS)

Product Description

Aluminum alloy constructed round ceiling diffuser can be used as a supply or exhaust in cooling, heating or ventilation application, with fully adjustable cores to provide horizontal or vertical air pattern, removable inner core permit easy installation and access to duct.

Butterfly damper used for supply and its D shaped blade can adjust the air volume by regulating the inner screw with screw driver.

Standard Sizes						
Size	Neck		Face		Face	
	Inch	(mm)	Inch	(mm)	Inch	(mm)
ø6"	5 5/8	144	12 3/4	325	2 3/8	60
ø8"	7 1/2	190	16 7/8	430	2 3/4	70
ø10"	9 1/2	240	20 7/8	530	3 1/2	90
ø12"	11 5/8	294	25 1/4	640	4 1/2	115
ø14"	13 1/2	344	28 3/8	720	4 1/2	115
ø16"	15 5/8	396	31 1/8	790	5 1/2	140
ø18"	17 1/2	444	34 3/8	873	6	153
						CFM Range
						60-315
						105-560
						165-870
						235-1255
						320-1710
						420-2240
						530-2830

Round Ceiling Diffuser (RCD)

Round Ceiling Diffuser Supply

RCDS (Performance Data)

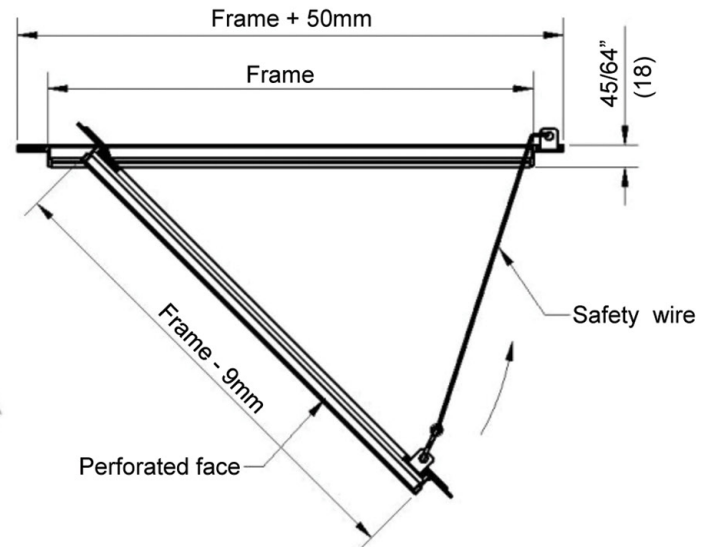
NECK SIZE (inches)	NECK AREA (Sq. Ft.)	NECK VELOCITY (FPM)		300	400	500	600	700	800	900	1000	1100	1200	1400	1600
		Velocity Pressure		0.006	0.010	0.016	0.023	0.031	0.040	0.051	0.063	0.075	0.090	0.122	0.160
6 Dia.	0.196	Air Flow. CFM		60	80	100	120	135	155	175	195	215	235	275	315
		Total Pressure	H	0.024	0.041	0.065	0.093	0.126	0.162	0.207	0.255	0.304	0.365	0.494	0.648
			V	0.035	0.058	0.093	0.133	0.180	0.232	0.296	0.365	0.435	0.522	0.708	0.928
		Radius of Diff., Feet		2-3	2-4	3-5	3-5	4-6	4-6	5-7	5-7	5-7	6-8	6-8	7-9
		NC		<20	<20	<20	<20	<20	23	26	30	33	35	40	44
8 Dia.	0.349	Air Flow. CFM		105	140	175	210	245	280	315	350	385	420	490	560
		Total Pressure	H	0.017	0.029	0.046	0.066	0.088	0.114	0.145	0.180	0.214	0.257	0.348	0.456
			V	0.026	0.044	0.070	0.101	0.136	0.176	0.224	0.277	0.330	0.396	0.537	0.704
		Radius of Diff., Feet		2-4	3-5	4-6	4-7	5-7	6-8	6-8	7-9	7-10	7-10	8-11	9-12
		NC		<20	<20	<20	21	26	31	34	37	40	44	48	>50
10 Dia.	0.545	Air Flow. CFM		165	220	275	325	380	435	490	545	600	655	765	870
		Total Pressure	H	0.017	0.028	0.044	0.063	0.085	0.110	0.140	0.173	0.206	0.248	0.335	0.44
			V	0.025	0.041	0.066	0.095	0.128	0.165	0.210	0.260	0.309	0.371	0.503	0.659
		Radius of Diff., Feet		3-6	5-7	5-8	6-9	7-9	8-10	8-11	9-12	9-12	10-13	11-14	12-15
		NC		<20	<20	<20	<20	21	26	30	33	36	39	44	48
12 Dia.	0.785	Air Flow. CFM		235	315	395	470	550	630	705	785	865	940	1100	1255
		Total Pressure	H	0.015	0.025	0.040	0.057	0.077	0.099	0.126	0.156	0.185	0.222	0.301	0.395
			V	0.022	0.036	0.058	0.083	0.112	0.144	0.184	0.227	0.270	0.324	0.439	0.576
		Radius of Diff., Feet		4-6	5-7	6-9	7-10	8-11	9-12	10-13	10-14	11-14	11-15	13-16	14-18
		NC		<20	<20	<20	<20	22	26	30	33	36	39	45	49
14 Dia.	1.07	Air Flow. CFM		320	430	535	640	750	855	965	1070	1175	1285	1500	1710
		Total Pressure	H	0.014	0.024	0.038	0.055	0.074	0.096	0.122	0.151	0.180	0.216	0.293	0.384
			V	0.022	0.036	0.058	0.083	0.112	0.144	0.184	0.227	0.270	0.324	0.439	0.576
		Radius of Diff., Feet		4-7	6-8	7-10	8-11	9-12	10-13	11-15	12-16	13-16	13-17	15-19	16-23
		NC		<20	<20	<20	23	28	32	36	40	43	46	>50	>50
16 Dia.	1.40	Air Flow. CFM		420	560	700	840	980	1120	1260	1400	1540	1680	1960	2240
		Total Pressure	H	0.014	0.023	0.037	0.053	0.071	0.092	0.117	0.145	0.173	0.207	0.281	0.368
			V	0.021	0.035	0.056	0.080	0.108	0.139	0.177	0.219	0.260	0.312	0.423	0.555
		Radius of Diff., Feet		5-7	7-10	8-12	10-13	11-15	12-16	13-17	14-18	15-19	15-20	17-21	19-23
		NC		<20	<20	<20	22	27	31	35	39	42	44	49	>50
18 Dia.	1.77	Air Flow. CFM		530	710	885	1060	1240	1415	1595	1770	1945	2125	2480	2830
		Total Pressure	H	0.014	0.022	0.036	0.051	0.069	0.089	0.114	0.140	0.167	0.201	0.272	0.357
			V	0.022	0.037	0.059	0.084	0.114	0.147	0.187	0.231	0.275	0.330	0.448	0.587
		Radius of Diff., Feet		6-8	7-11	9-12	10-14	12-16	13-17	14-19	16-20	16-21	18-22	19-24	21-25
		NC		<20	<20	<20	21	26	30	34	37	40	43	48	>50
20 Dia.	2.18	Air Flow. CFM		655	870	1090	1310	1525	1745	1960	2180	2400	2615	3050	3490
		Total Pressure	H	0.012	0.021	0.033	0.047	0.064	0.082	0.105	0.129	0.154	0.185	0.250	0.328
			V	0.023	0.039	0.062	0.090	0.121	0.156	0.199	0.246	0.293	0.351	0.476	0.624
		Radius of Diff., Feet		6-9	8-12	10-14	12-16	14-17	15-19	16-21	17-22	18-23	19-24	21-26	23-28
		NC		<20	<20	<20	21	26	30	34	38	40	43	48	>50

- NC Data based upon 10 dB room attenuation
- All pressure are in inches of water

Access Door Grill (AD)

Access Door with Perforated Core

ADP



Product Description

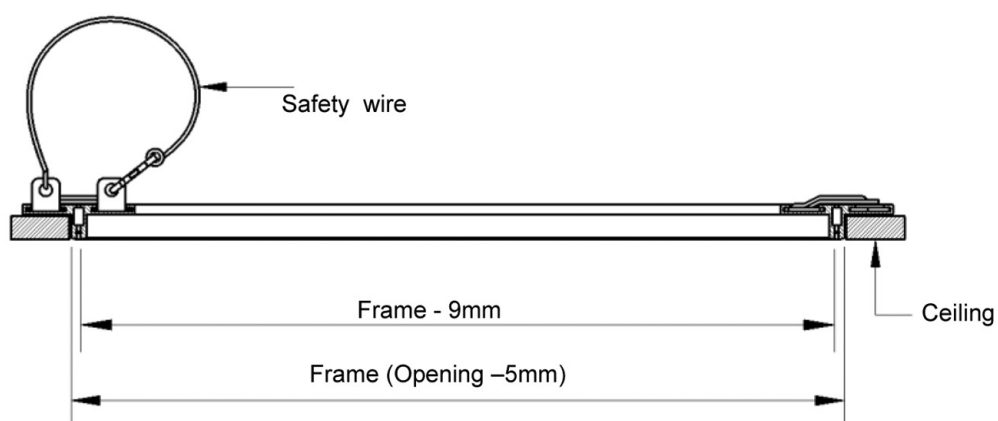
Door perforated face is made of white powder coated aluminum sheet 5/32" diameter holes a pitch of 15/64" and 45% free area, frame has a typically wall thickness of 1/16" made from extruded aluminum alloy and polyester powder coated, air filter available on request.

Listed size			
Size (inches)	CFM Range	Size (inches)	CFM Range
10 x 6	100 - 200	24 x 24	750 - 2250
10 x 8	140 - 275	30 x 12	915 - 1830
12 x 6	125 - 250	30 x 18	700 - 1400
12 x 8	180 - 360	30 x 24	945 - 2830
12 x 12	350 - 615	36 x 18	1690 - 2955
18 x 6	190 - 440	36 x 24	2275 - 3980
18 x 12	270 - 535	36 x 30	2865 - 5010
18 x 18	415 - 1040	48 x 24	3050 - 6100
24 x 12	730 - 1455	48 x 30	3840 - 7680
24 x 18	555 - 1110	48 x 36	4625 - 9250

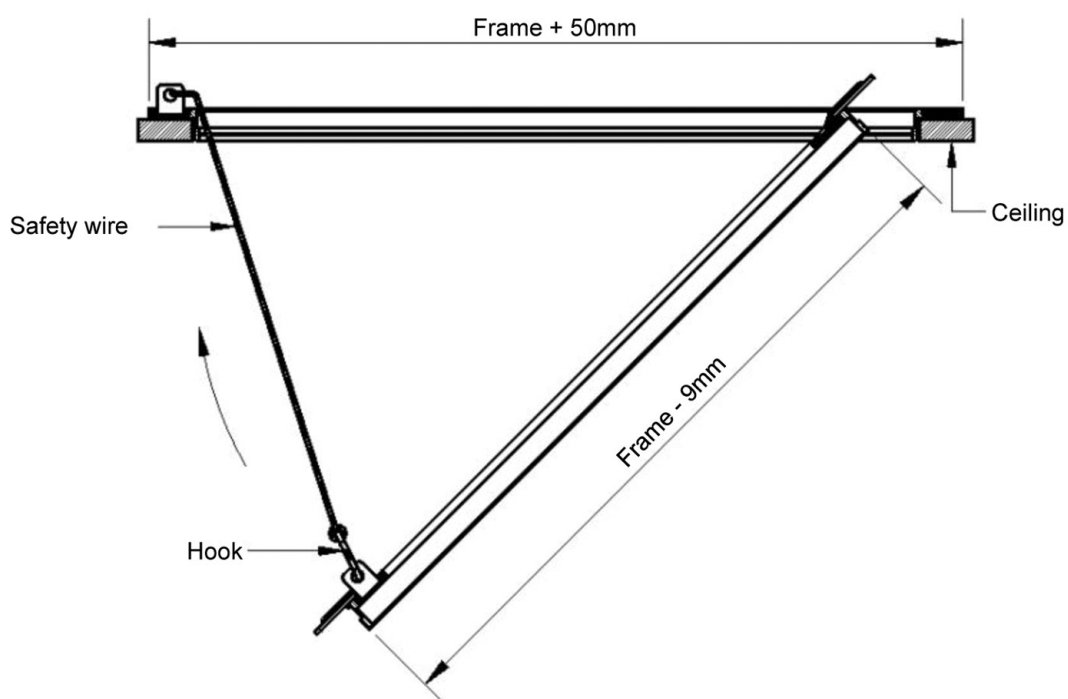
Acces Door Grill (AD)

Installations

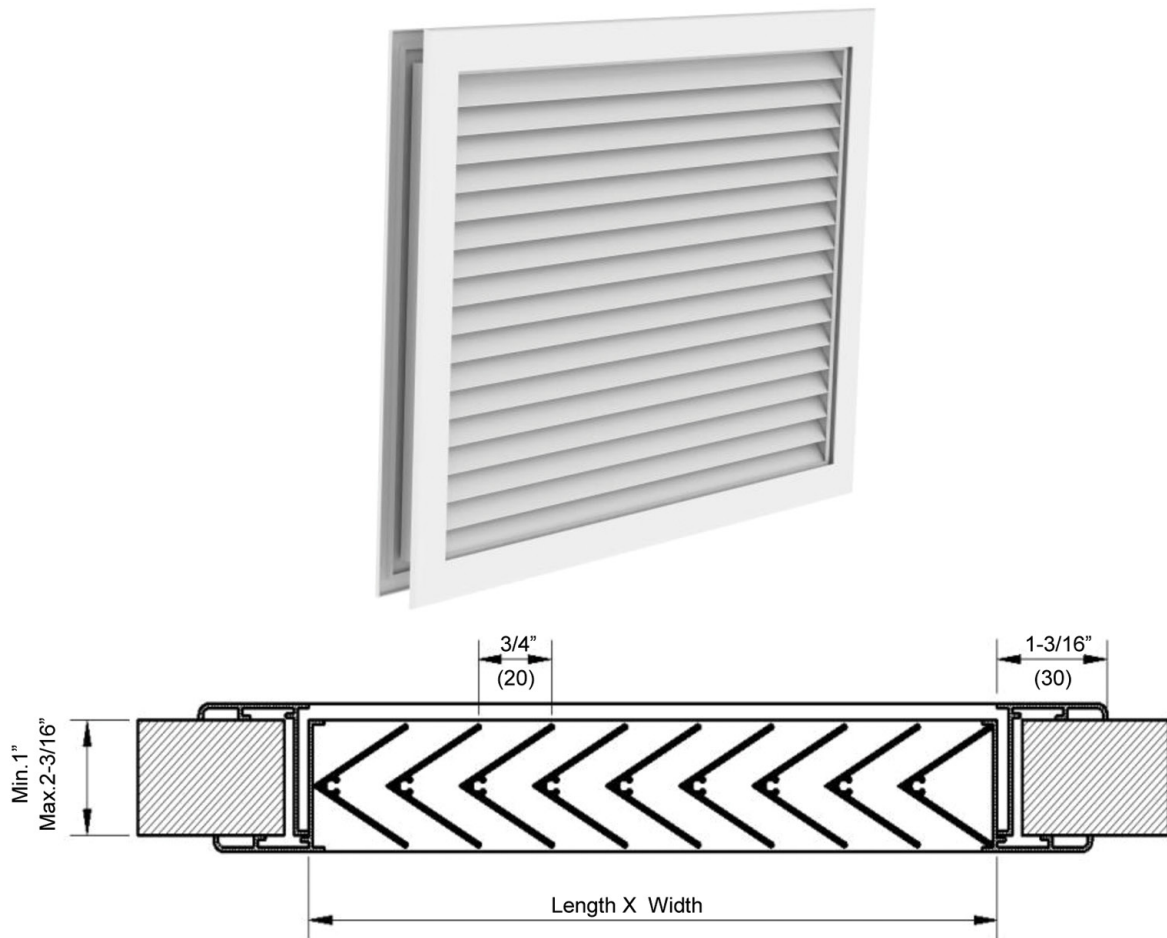
ADP Close Position



ADP Open Position



Door Grill (DG)



Product Description

DOOR GRILL is a grill with V shape inverted blades assembled horizontally with 3/4" opening on center, frame and blades are extruded aluminum alloy and polyester powder coated, suitable for doors, walls or partitions

Sizes	
(Use any combination of length & width)	
Length Width A	Length Width (B)
20	4
24	8
32	12
	16

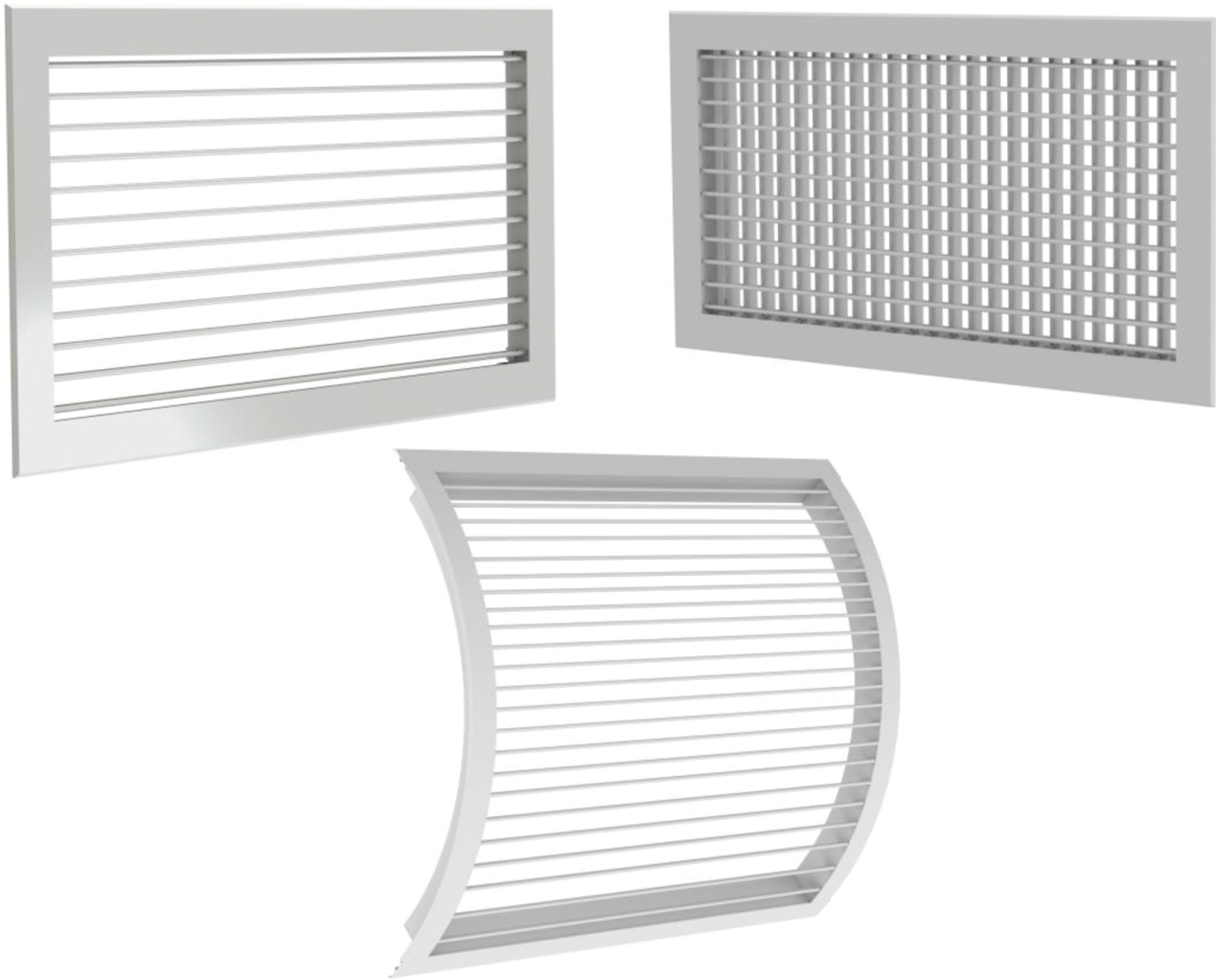
Door Grill (DG)

Door Grill (Performance Data)

DG

Listed sizes (inches)	Core Velocity (fpm)	300	400	450	500	550	600	650	700	750	800
	Static Pressure (in. w.g.)	0.021	0.035	0.044	0.053	0.065	0.076	0.089	0.103	0.115	0.113
	Area Factor (Sq. ft.)	AIR CAPACITY (cfm)									
10 x 6	0.15	45	60	68	75	82	90	98	105	112	120
12 x 6	0.18	54	72	81	90	99	108	117	126	135	144
16 x 6	0.25	75	100	112	125	137	150	162	175	187	200
18 x 6	0.28	84	112	126	140	154	168	182	196	210	224
20 x 6	0.32	96	128	144	160	176	192	208	224	240	256
24 x 6	0.39	117	156	175	195	214	234	253	273	292	312
10 x 8	0.21	63	84	94	105	115	126	136	147	157	168
12 x 8	0.26	78	104	117	130	143	156	169	182	195	208
16 x 8	0.35	105	140	157	175	192	210	227	245	262	280
18 x 8	0.40	120	160	180	200	220	240	260	280	300	320
24 x 8	0.55	165	220	247	275	302	330	357	385	412	440
30 x 8	0.68	204	272	306	340	374	408	442	476	510	544
10 x 10	0.20	81	108	121	135	148	162	175	189	202	216
12 x 10	0.36	108	144	162	180	198	216	234	252	270	288
16 x 10	0.46	138	184	207	230	253	276	299	322	345	368
18 x 10	0.52	156	208	234	260	286	312	338	364	390	416
20 x 10	0.58	174	232	261	290	319	348	377	406	435	464
24 x 10	0.70	210	280	315	350	385	420	455	490	525	560
12 x 12	0.41	123	164	184	205	225	246	266	287	307	328
16 x 12	0.56	168	224	252	280	308	336	364	392	420	448
18 x 12	0.64	192	256	288	320	352	384	416	448	480	512
20 x 12	0.71	213	284	319	355	390	426	461	497	532	568
24 x 12	0.86	258	344	387	430	473	516	559	602	645	688
30 x 12	1.08	324	432	486	540	594	648	702	756	810	864
24 x 16	1.18	354	472	531	590	649	708	767	826	885	944
18 x 18	0.96	288	384	432	480	528	576	624	672	720	768
24 x 18	1.30	390	520	585	650	715	780	845	910	975	1040
30 x 18	1.69	507	676	760	845	929	1014	1098	1183	1267	1352
24 x 24	1.78	534	712	801	890	979	1068	1157	1246	1335	1424
30 x 24	2.28	684	912	1026	1140	1254	1368	1482	1596	1710	1824
30 x 30	2.88	864	1152	1296	1440	1584	1728	1872	2016	2160	2304

Air Grill and Register (AG)



Product Description

SUPPLY AIR GRILL: A grill with two sets of adjustable blades, face blades can be requested either horizontal or vertical shape , used as a side wall supply grill, individually adjustable blades are spaced 3/4" on center, frame & blades are extruded aluminum alloy and polyester powder coated.

SUPPLY AIR REGISTER: Is a supply air grill with opposed blade damper.

RETURN AIR GRILLE: A grill with a set of horizontal blades or vertical blades individually adjustable blades and spaced 3/4" on center, used as a side wall return grille, frame & blades are extruded aluminum alloy and polyester powder coated.

RETURN AIR REGISTER: Is a return air grill with opposed blade damper.

RABIE Customer support department technicians are available to take actual measurements at site upon request.

Air Grill and Register (AG)

Construction and Dimensions
Supply Air Grill & Register
AGDD & AGDR

Return Air Grill & Register AGSD & AGSR

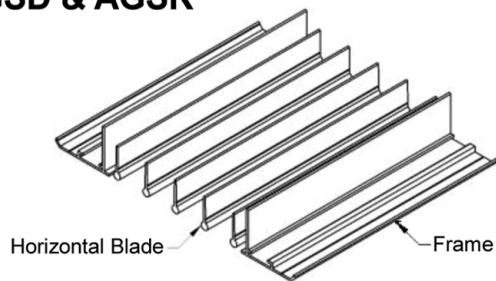


Fig. E (AGSDH)

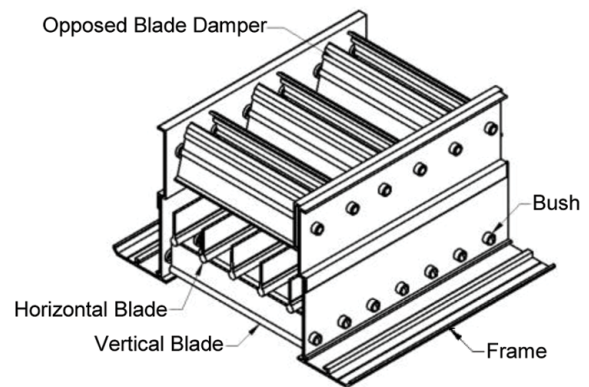


Fig. D (AGDRV)

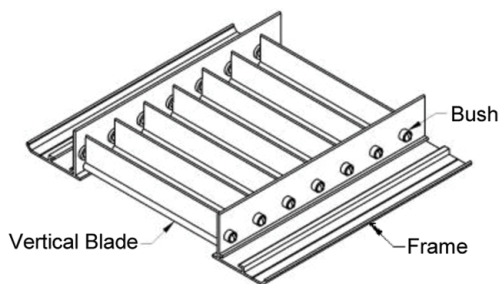


Fig. G (AGSDV)

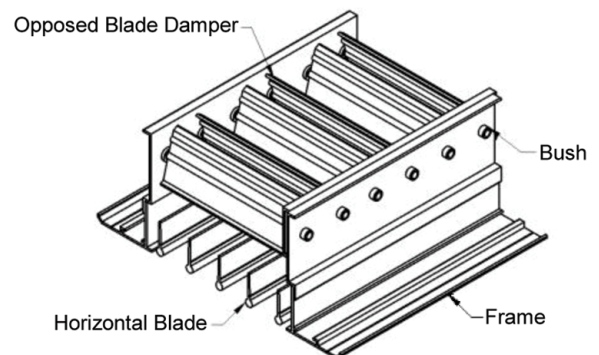


Fig. F (AGSRH)

Dimensional Data

Supply Air Grill & Register AGDD

W = Ceiling or wall opening (width)

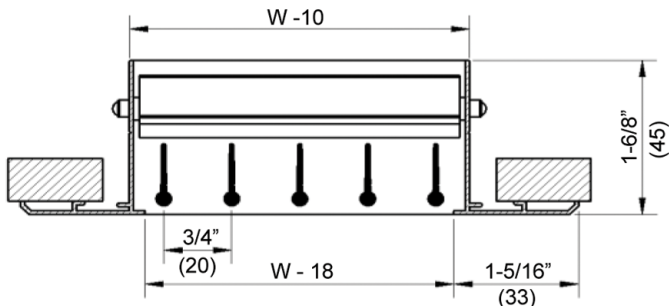


Fig. A (AGDDH)

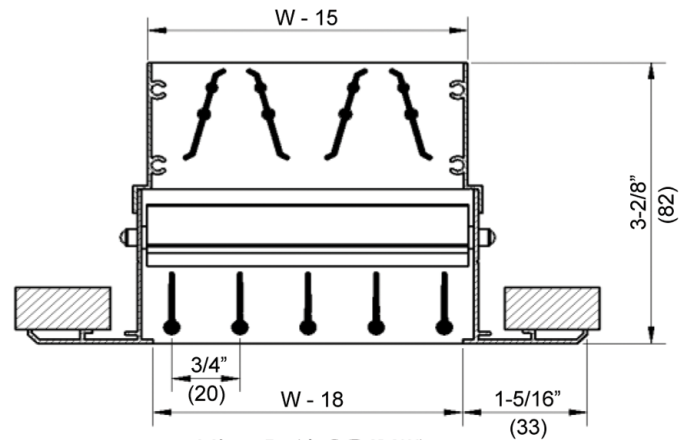


Fig. B (AGDRH)

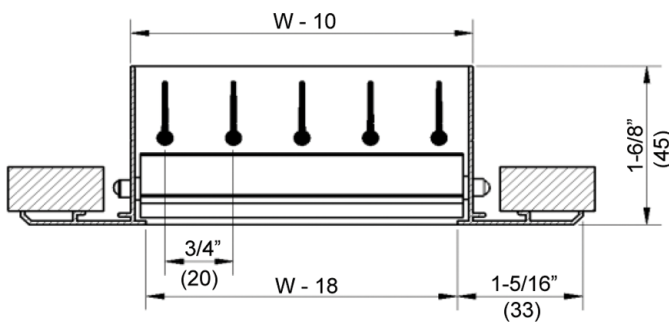


Fig. C (AGDDV)

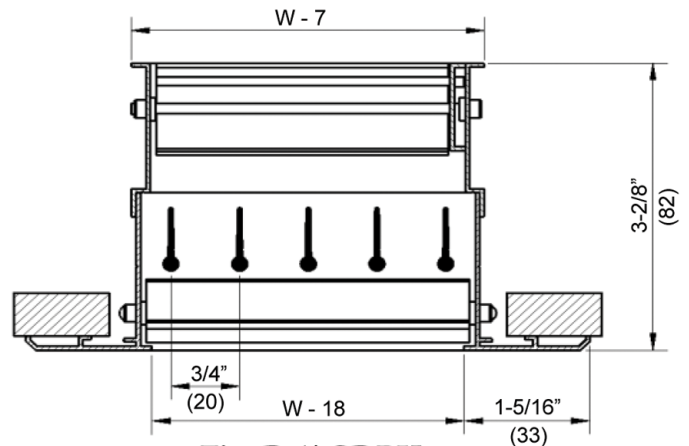


Fig. D (AGDRV)

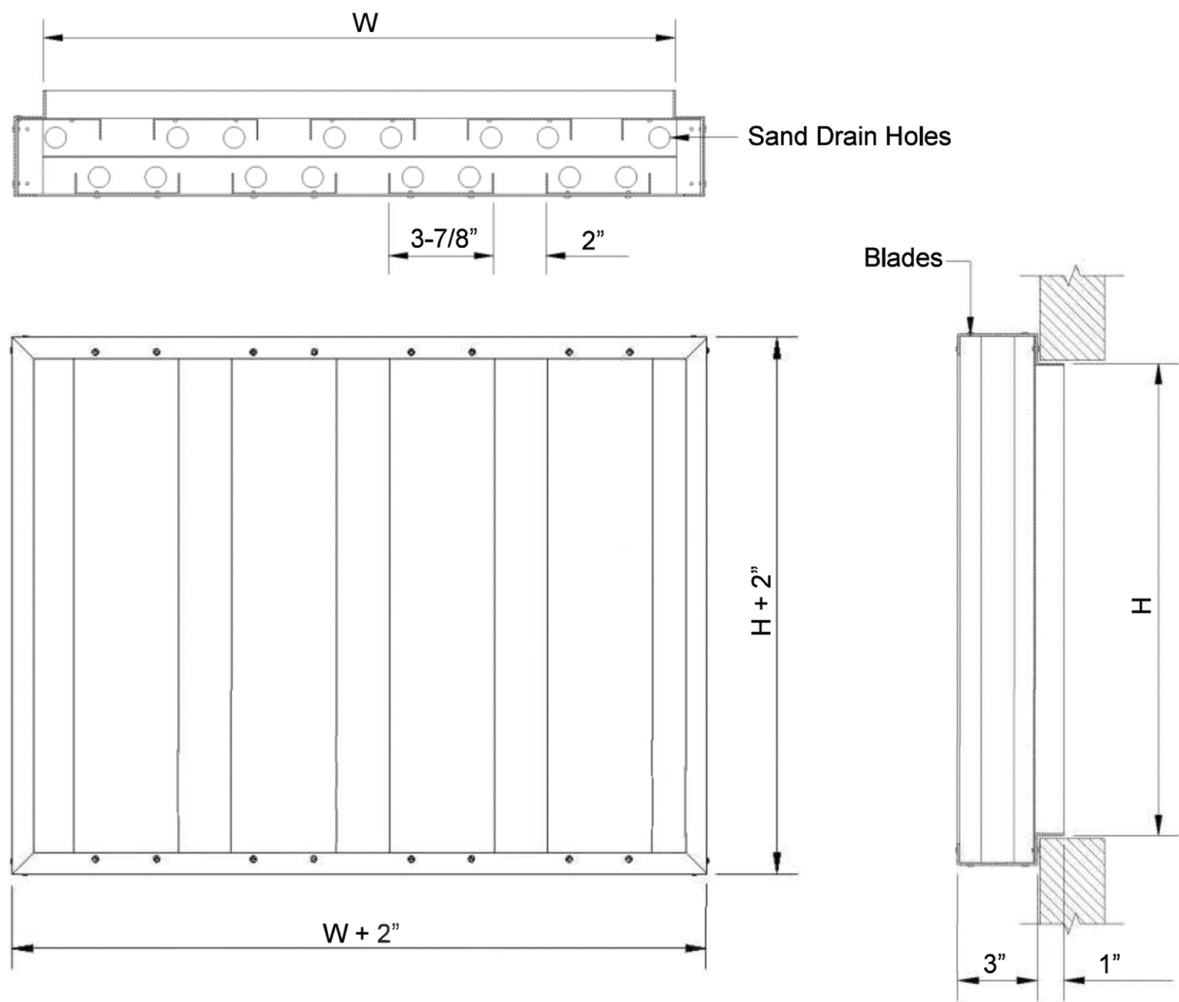
Listed Sizes

Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
8 x 4	50-150	30 x 6	300-800	14 x 10	150-400	24 x 12	500-1000
10 x 4	50-200	32 x 6	300-800	16 x 10	200-500	28 x 12	500-1200
14 x 4	100-200	36 x 6	400-800	18 x 10	300-800	30 x 12	500-1300
18 x 4	100-250	10 x 8	100-250	20 x 10	300-800	32 x 12	500-1300
20 x 4	100-250	12 x 8	100-250	24 x 10	500-800	36 x 12	800-1400
24 x 4	100-250	16 x 8	150-300	28 x 10	500-1000	14 x 14	300-800
8 x 6	50-200	18 x 8	150-400	30 x 10	500-1000	16 x 14	400-800
10 x 6	100-200	20 x 8	200-500	32 x 10	500-1200	18 x 14	500-800
12 x 6	100-250	24 x 8	300-800	36 x 10	500-1300	24 x 14	500-1200
16 x 6	100-250	28 x 8	400-800	12 x 12	150-400	30 x 14	800-1400
18 x 6	100-250	30 x 8	500-800	14 x 12	200-500	16 x 16	500-800
20 x 6	100-300	32 x 8	500-800	16 x 12	300-800	20 x 16	500-1200
24 x 6	150-400	36 x 8	500-1000	18 x 12	400-800	24 x 16	500-1300
28 x 6	200-500	12 x 10	100-300	20 x 12	500-800	30 x 16	800-1400

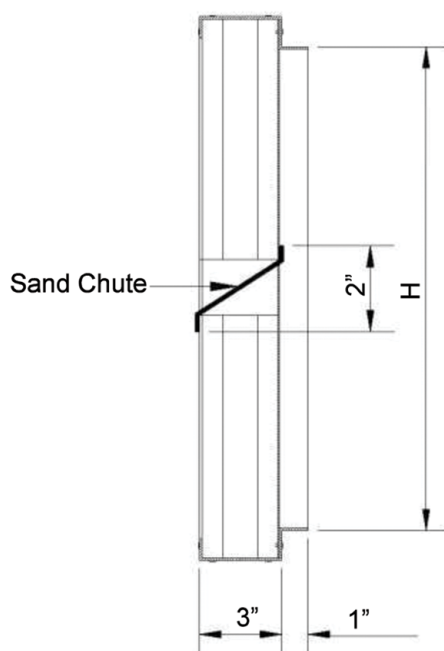
- Maximum distance to make air grill as one section 50 cm for blade length.
- Other sizes are available upon request.

Sand Trap Louver (STL)

DIMENSIONS



Multi Section with Sand Chute



For louver heights more than 1.5 meter intermediate reinforcement with transom and sand chute are used.

Sand Trap Louver (STL)



Product Description

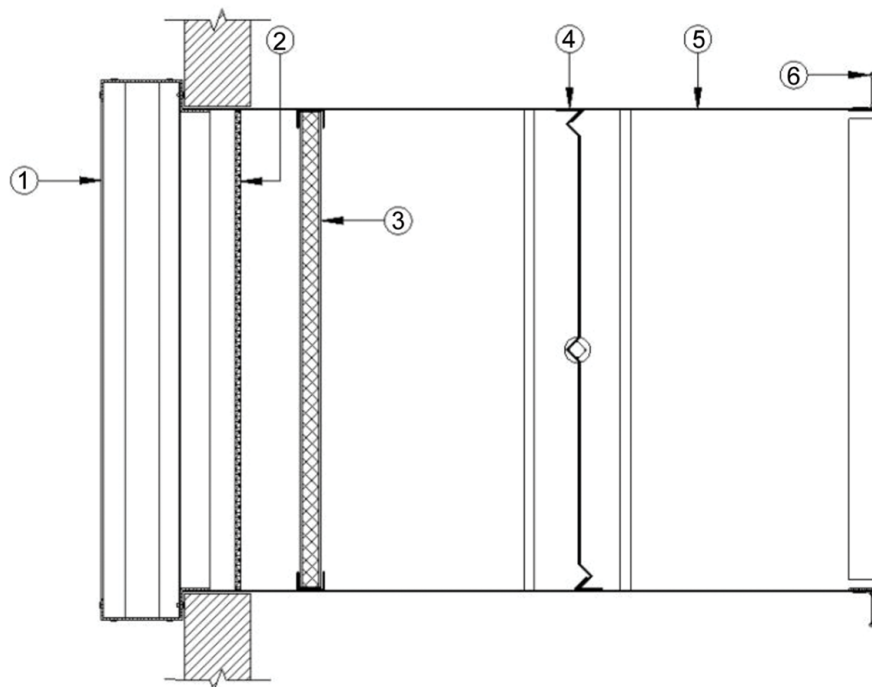
Sand Trap louvers are very effective in trapping sand while having attractive and aesthetic look that meets most architectural needs. Sand Trap louvers are constructed from two sets of inverted C-Channels mounted vertically. The Louver has self emptying holes at the bottom through which the trapped sand is expelled out smoothly. Frame and blades are made from extruded aluminum alloy (6030-T6) polyester powder coated (RAL 9016 or 9010). Other colors are available on request.

Sand Trap louver allows air flow entry while separating and trapping sand from the air.

Sand Trap Louver (STL)

Sand Trap Louver Unit

FAU-S



1. Sand Trap Louver
2. Bird or Insect Screen (Alum. or Galvanized steel)
3. Aluminum Filter (Washable) 1 or 2 Inches
4. Volume Control Damper
5. G.I Duct (20 gauge)
6. Slide on Flange (MS Steel Angle) 35 x 30mm

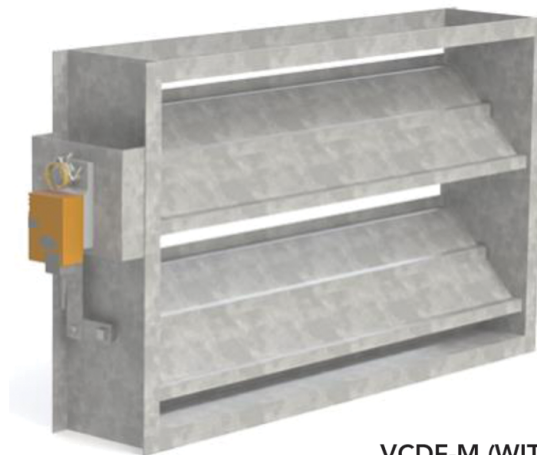
Volume Control Damper (VCD)

Volume Control Damper (Flanged Type)

VCDF



VCDF-H (WITH HAND QUADRANT)



VCDF-M (WITH ACTUATOR)

Product Description

- Volume control damper is made of single or multi blades.
- Blades edge seal can be fitted for low leakage requirements.
- Hand locking quadrant is provided for manual operation.
- Extended shaft and motor base is provided for motorized operation.
- The blades are mounted on nylon bearing and operated by external linkage.
- Opposed blade action on request.

Volume Control Damper (VCD)

Standard Construction

Frame: Flanged Steel Chanel 6" × 1" × 16 gauge galvanized.

Other sizes are available on request.

Blade: 3-V 16 gauge galvanized steel (Reinforced with 3 longitudinal "structurally designed vees")

Bushing: Nylon bearings

Control shaft : 1/2" × 1/2" square steel spindle.

Operation: Hand Quadrant For manual operation.

Actuator for motorized.

Finish: Mill galvanized.

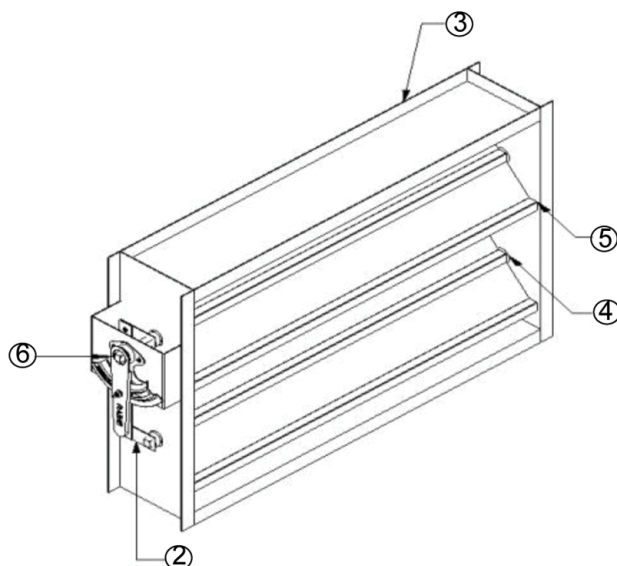
Minimum size: 4"x 4"

Maximum size: 48"x72" as a single section.

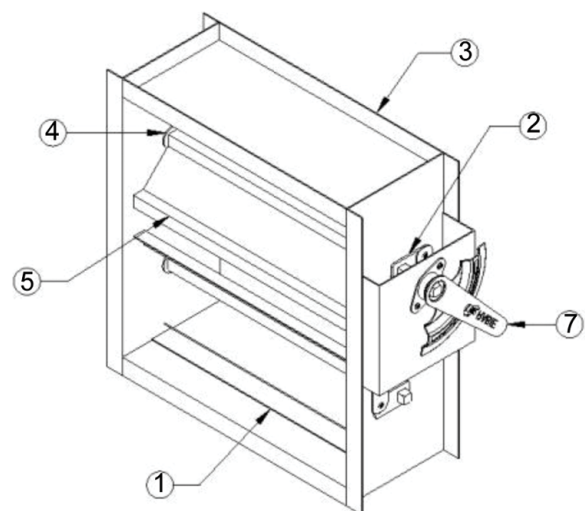
Multiple section assembly of unlimited size, where each section

1. Landing Angle	4. Bushing	7. Quadrant
2. Side Linkage	5. Blade	
3. Casing	6. Spindle	

Parallel Blades



Opposed Blades



Volume Control Damper (VCD)

Volume Control Damper (CEE SHAPE)

VCDC



VCDC-H (WITH HAND QUADRANT)



VCDC-M (WITH ACTUATOR)

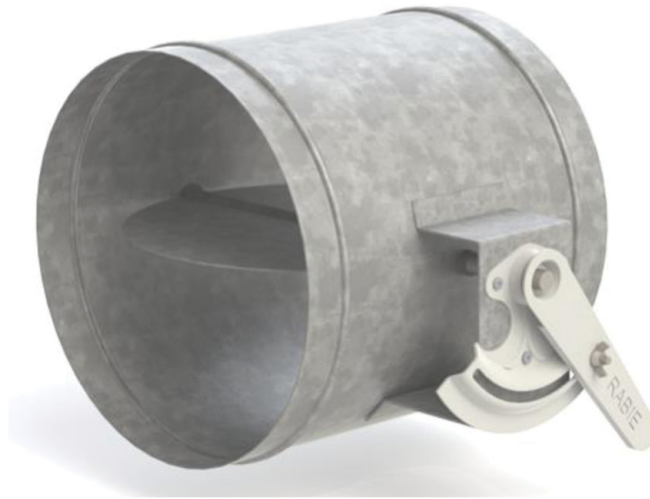
Product Description

- Volume control damper is made of single or multi blades.
- Frame is of galvanized steel construction.
- Blades are of single skin inter locking galvanized steel.
- Hand locking quadrant is provided for manual operation.
- Extended shaft and motor base is provided for motorized operation.
- The blades are mounted on Nylon bearing and operated by external and internal linkage.
- Opposed blade action on request.

Volume Control Damper (VCD)

Volume Control Damper (ROUND TYPE)

VCDR



VCDR- H (WITH HAND QUADRANT)



VCDR-M (WITH ACTUATOR)

Product Description

Dampers can be manual with locking quadrant or motorized with different sizes of actuator.

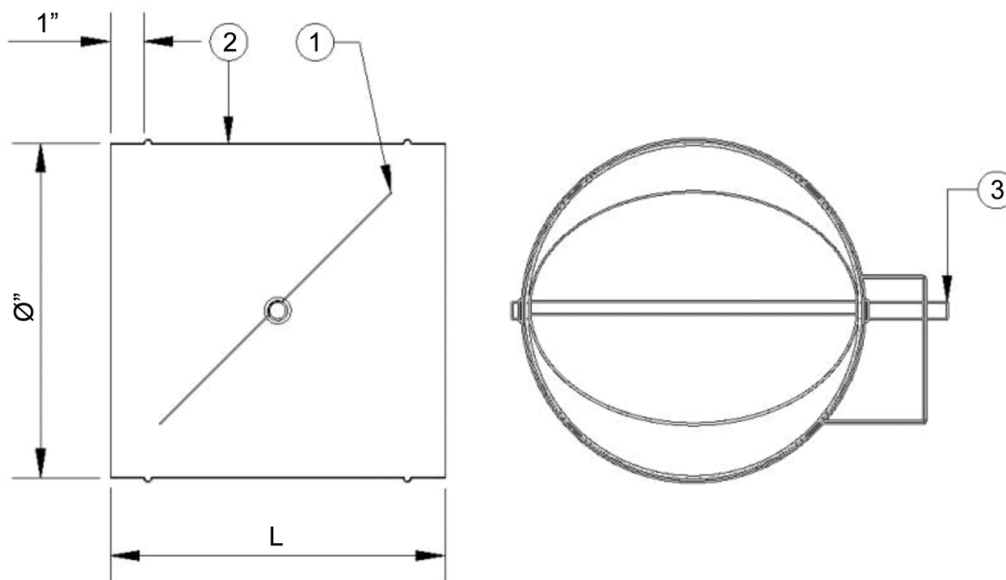
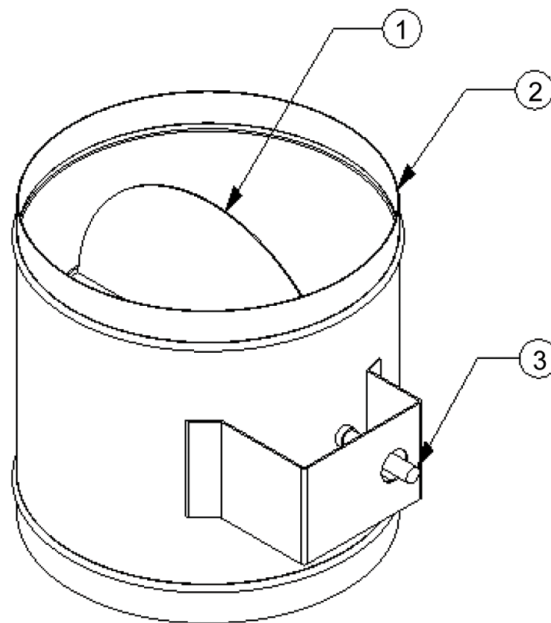
Volume Control Damper (VCD)

Dimensions

1. Blade

2. Casing

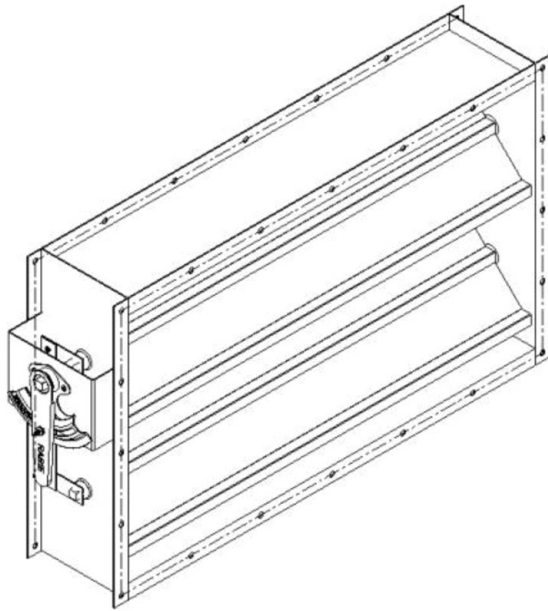
3. Drive shaft / spindle



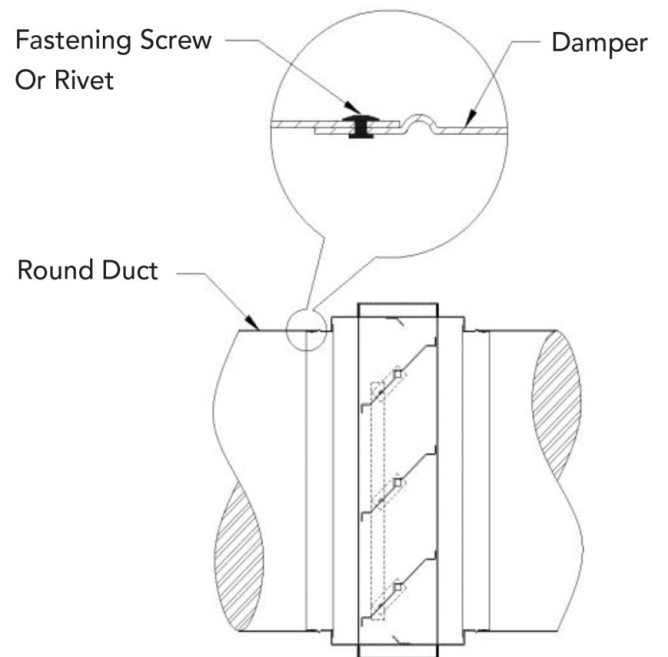
Volume Control Damper (VCD)

Insallation

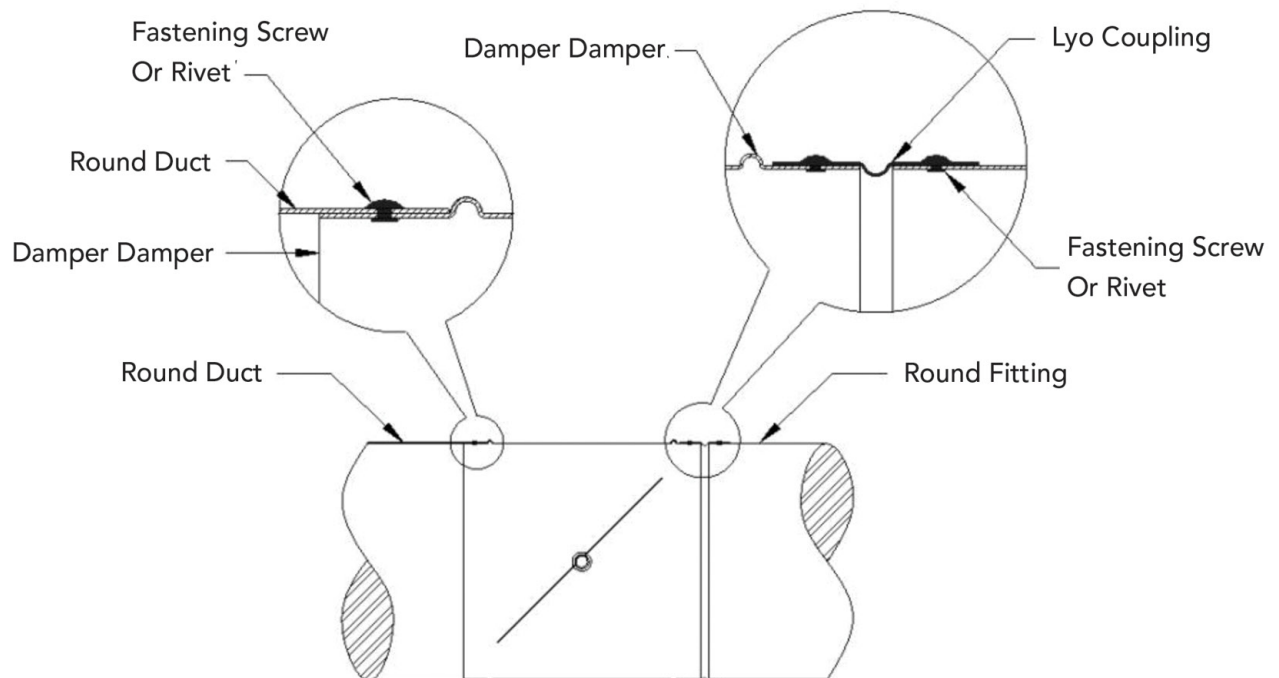
Flange Drilling



Circular and Oval



Round



Fire Dampers (FD)

Fire Damper Parts

1. Stainless steel closure spring

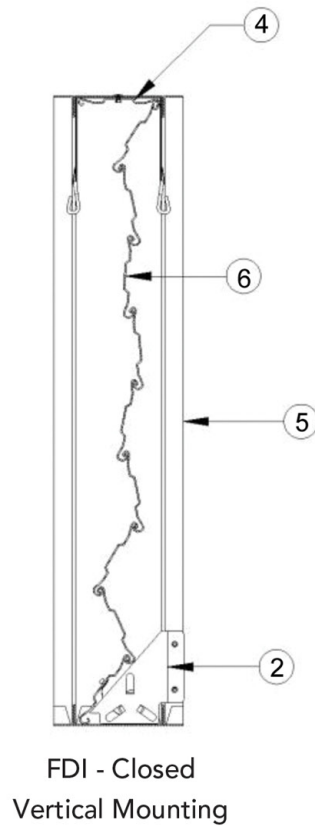
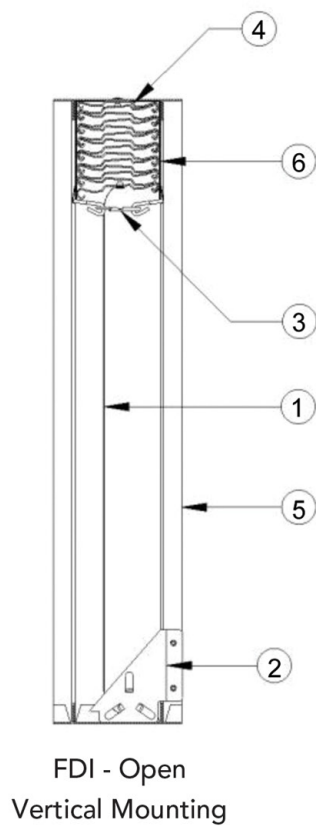
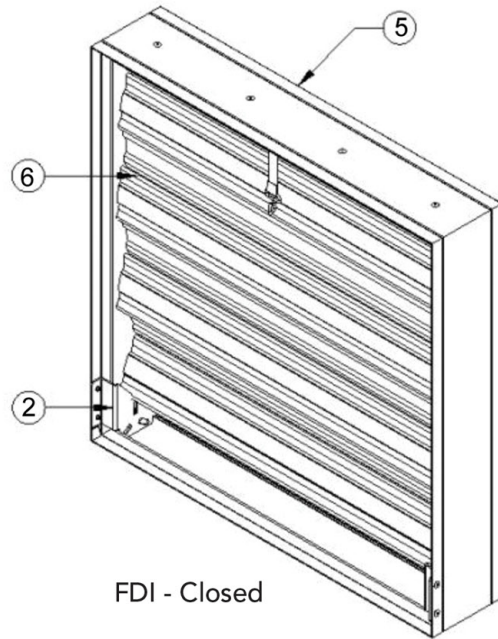
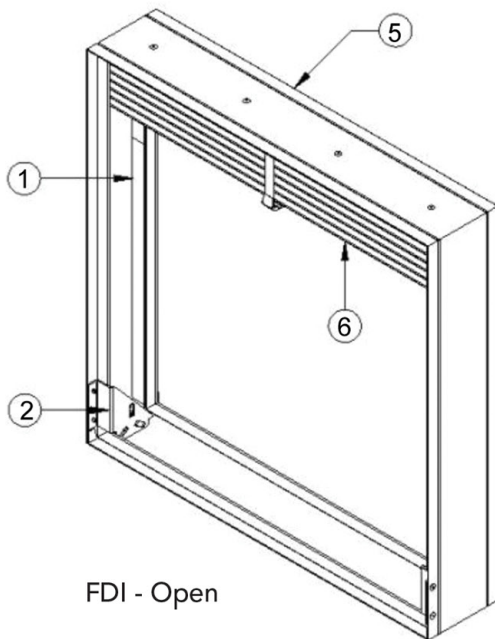
3. Fusible link (72°C) UL listed

5. Galvanized steel casing

2. Locking ramp

4. Top blades are riveted to frame

6. Galvanized steel blades



Air Grill and Register (AG)

Dimensional Data

Return Air Grill & Registers

AGSD

W = Ceiling or wall opening (width)

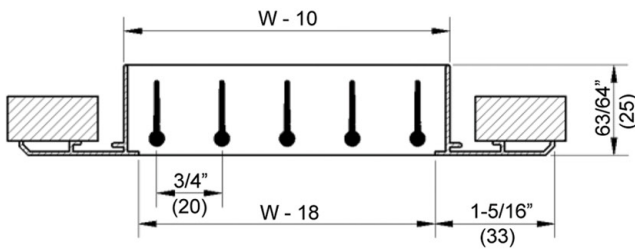


Fig. A (AGSDH)

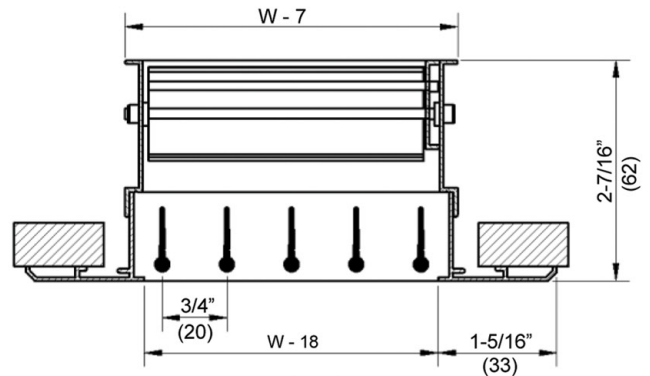


Fig. B (AGSRH)

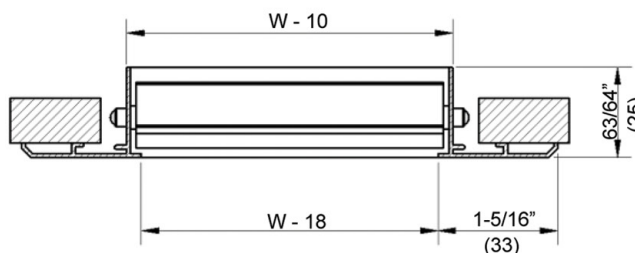


Fig. C (AGSDV)

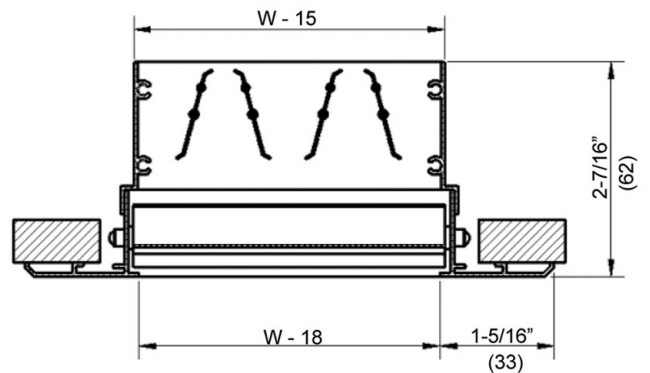


Fig. D (AGSRV)

Listed Sizes

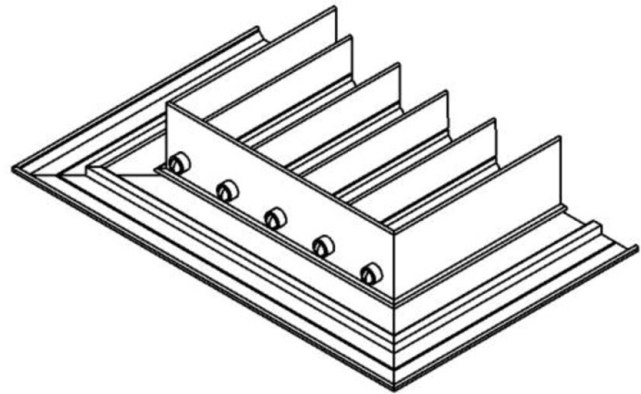
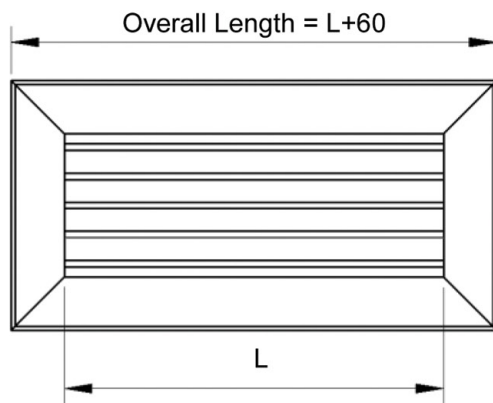
Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
8 x 4	50-150	30 x 6	300-800	14 x 10	150-400	24 x 12	500-1000
10 x 4	50-200	32 x 6	300-800	16 x 10	200-500	28 x 12	500-1200
14 x 4	100-200	36 x 6	400-800	18 x 10	300-800	30 x 12	500-1300
18 x 4	100-250	10 x 8	100-250	20 x 10	300-800	32 x 12	500-1300
20 x 4	100-250	12 x 8	100-250	24 x 10	500-800	36 x 12	800-1400
24 x 4	100-250	16 x 8	150-300	28 x 10	500-1000	14 x 14	300-800
8 x 6	50-200	18 x 8	150-400	30 x 10	500-1000	16 x 14	400-800
10 x 6	100-200	20 x 8	200-500	32 x 10	500-1200	18 x 14	500-800
12 x 6	100-250	24 x 8	300-800	36 x 10	500-1300	24 x 14	500-1200
16 x 6	100-250	28 x 8	400-800	12 x 12	150-400	30 x 14	800-1400
18 x 6	100-250	30 x 8	500-800	14 x 12	200-500	16 x 16	500-800
20 x 6	100-300	32 x 8	500-800	16 x 12	300-800	20 x 16	500-1200
24 x 6	150-400	36 x 8	500-1000	18 x 12	400-800	24 x 16	500-1300
28 x 6	200-500	12 x 10	100-300	20 x 12	500-800	30 x 16	800-1400

- Maximum distance to make air grill as one section 50 cm for blade length.
- Other sizes are available upon request.

Air Grill and Register (AG)

End Cap Arrangement

Mitered End Cap (Standard)



Performance Data

Quick Selection Table	
Sized	CFM
10" x 6"	100 - 200
12" x 6"	100 - 250
18" x 6"	100 - 250
20" x 6"	100 - 300
24" x 6"	150 - 400
12" x 8"	100 - 250
16" x 8"	150 - 300
20" x 8"	200 - 500
24" x 8"	300 - 800
30" x 8"	500 - 800
20" x 10"	300 - 800
24" x 10"	500 - 800
30" x 10"	500 - 1000
32" x 10"	500 - 1200
24" x 12"	500 - 1000
30" x 12"	500 - 1300
36" x 12"	800 - 1400

Fresh Air Louver (FAL)



Product Description

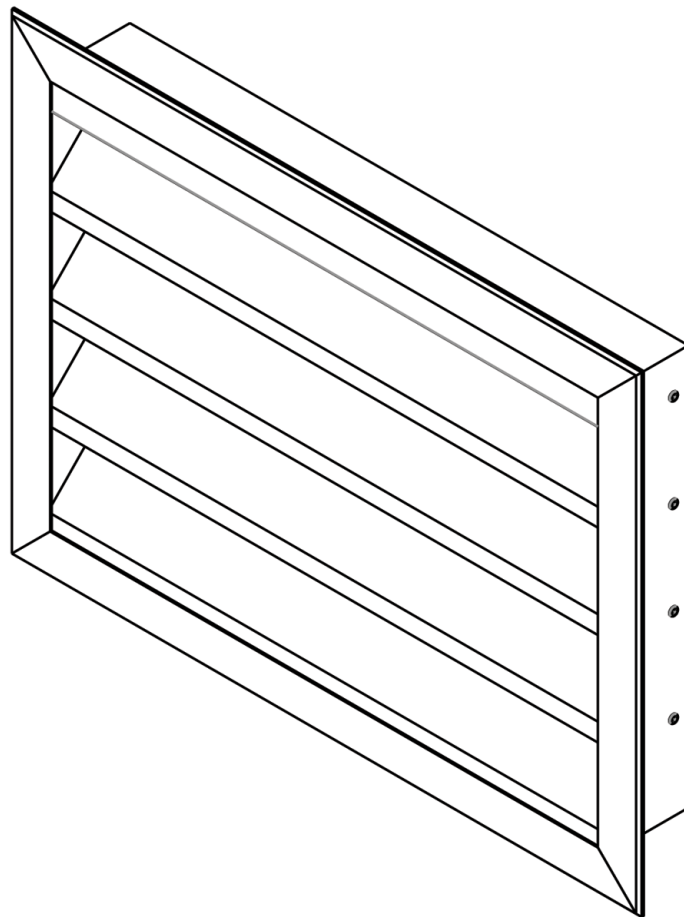
Fresh air louver used for exhaust & fresh air is composed of a set of horizontal mounted fixed blades and inclined down 30° and spaced 1 3/8" (35mm) for small blade type & 2 inch (50mm) for big blade type, which allows air to pass through it while keeping out unwanted elements such as water, dirt etc.

Frame and blades are manufactured from extruded aluminum alloy (6063-T6) and are polyester powder coated RAL (9016 or 9010, other colors available on request).

The FAL is designed for both intake and exhaust opening.

Fresh Air Louver (FAL)

Construction



Options

- Bird or insect screen (Aluminum or Galvanized steel)
- Opposed blade damper.
- Removable and washable air filters, 1 or 2 inches thick.

Sand Trap Louver (STL)

SELECTION GUIDE

Example:

If a fan requires to suck 6000 cfm through a louver with maximum pressure drop 60 Pa. Estimate the required size.

Solution—At the chart, pivot the pressure drop 60 Pa then intersect with the pressure drop curve to get the face velocity as 300 fpm approximately.

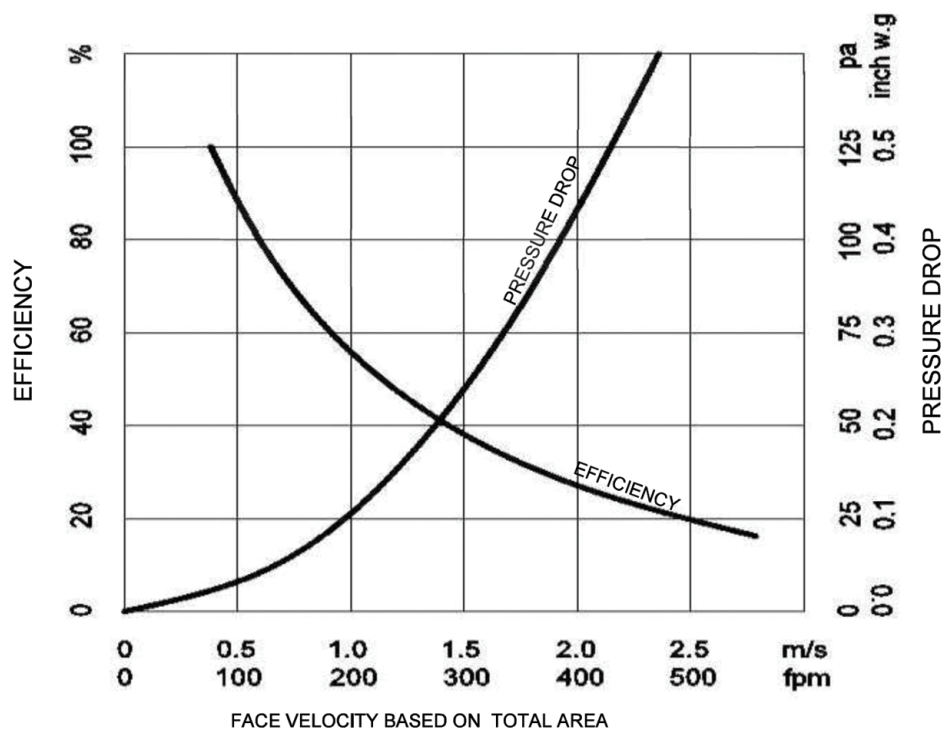
-Minimum required Area = flow rate / face velocity = $6000 / 300 = 20 \text{ ft}^2$

-Select any sizes give at least 20 ft^2
e.g. (4.5 x 4.5) ft. or (6.7 x 3) ft.

PERFORMANCE

Test results conducted on similar equipment indicate a typical efficiency of 80% on AC coarse (20 - 200 microns) and 50% on AC fine test duct (1 to 70 microns)

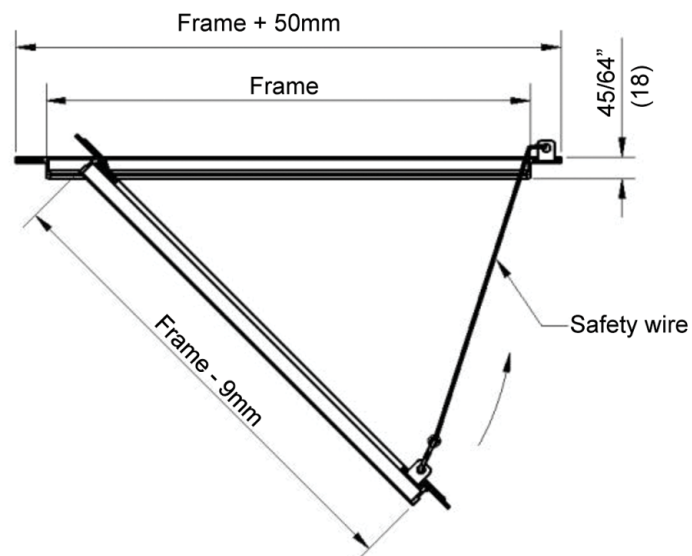
$$\text{CFM} = \frac{H'' \times W'' \times \text{Air Face Velocity (fpm)}}{144}$$



Access Door Grill (AD)

Ceiling Access Door

ADC



Product Description

Ceiling Access Door ADC is a customized ceiling access door frame that can adopt any diffuser/grill type or false ceiling tile.

The frame is supplied with mini latches that allow for easy open/close operation, and optionally with safety wire to prevent accidental falling of the cover.

Air Grill Fixed Blade (AGF)



Product Description

FIXED BLADES AIR GRILL is a grill of a single set of fixed horizontal (fig. A) or vertical (fig. B) blades on 45° shape, frame blades are extruded aluminum alloy and polyester powder coated, used as a side wall return grille.

FIXED BLADES AIR REGISTER is a return air grill with opposed blade damper.

RABIE Customer support department technicians are available to take actual measurements at site upon request.

Air Grill Fixed Blade (AGF)

Dimensional Data

Air Grill Fixed Blade & Registers AGF

W = Ceiling or wall opening (width)

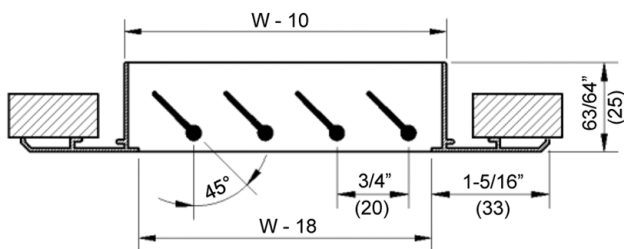


Fig. A (AGFBH)

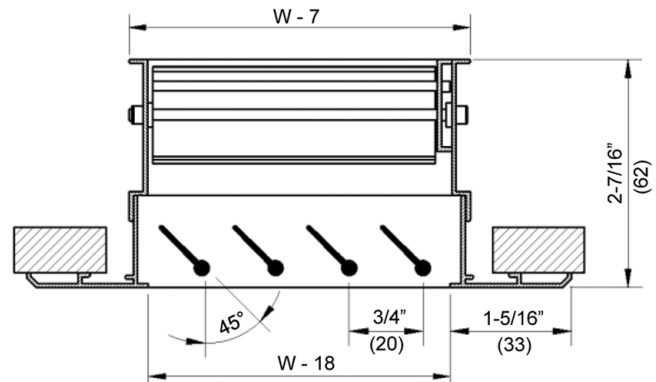


Fig. B (AGFRH)

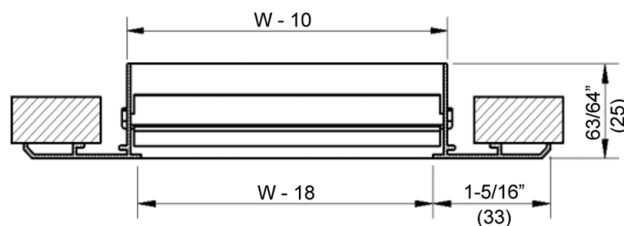


Fig. C (AGFBV)

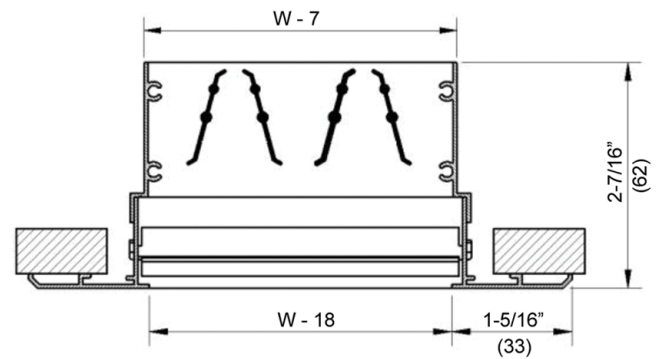


Fig. D (AGFRV)

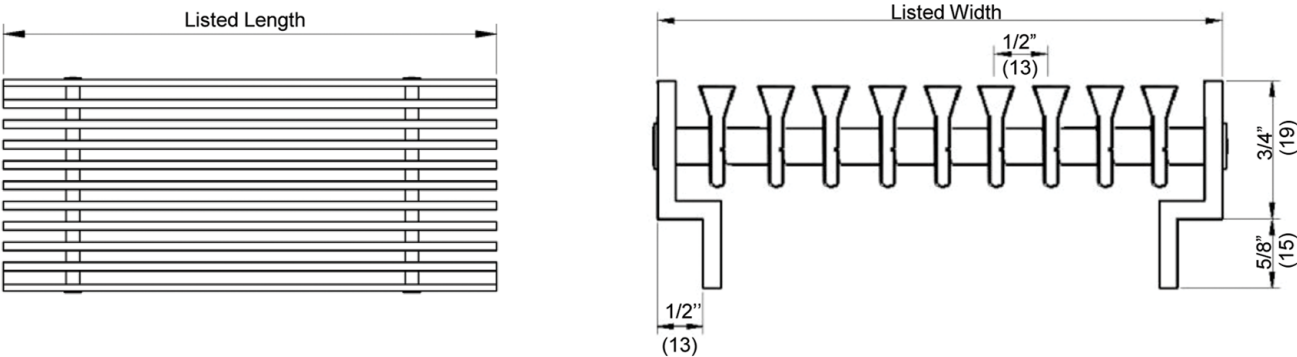
Listed Sizes

Size (inches)	Velocity (fpm)	Size (inches)	Velocity (fpm)	Size (inches)	Velocity (fpm)	Size (inches)	Velocity (fpm)
12 x 6	300-900	18 x 8	300-900	30 x 10	300-900	18 x 18	300-900
18 x 6	300-900	20 x 8	300-900	32 x 10	300-900	24 x 18	300-900
18 x 6	300-900	24 x 8	300-900	36 x 10	300-900	30 x 18	300-900
20 X 6	300-900	30 x 8	300-900	12 x 12	300-900	36 x 18	300-900
24 x 6	300-900	36 x 8	300-900	18 x 12	300-900	20 x 20	300-900
30 x 6	300-900	12 x 10	300-900	24 x 12	300-900	24 x 20	300-900
36 x 6	300-900	18 x 10	300-900	28 x 12	300-900	30 x 20	300-900
12 x 8	300-900	20 x 10	300-900	30 x 12	300-900	24 x 24	300-900
16 x 8	300-900	24 x 10	300-900	36 x 12	300-900	36 x 24	300-900

- Other sizes are available upon request.

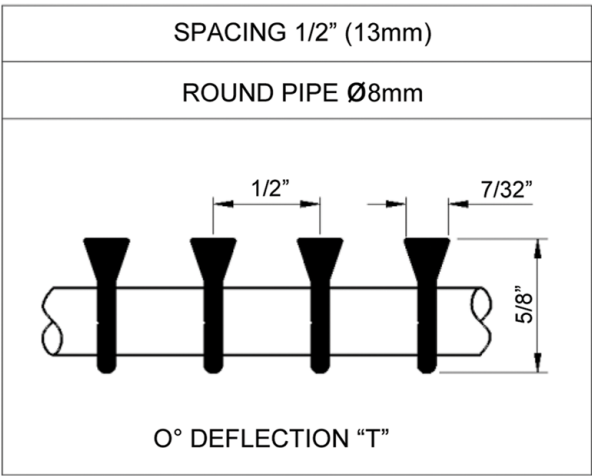
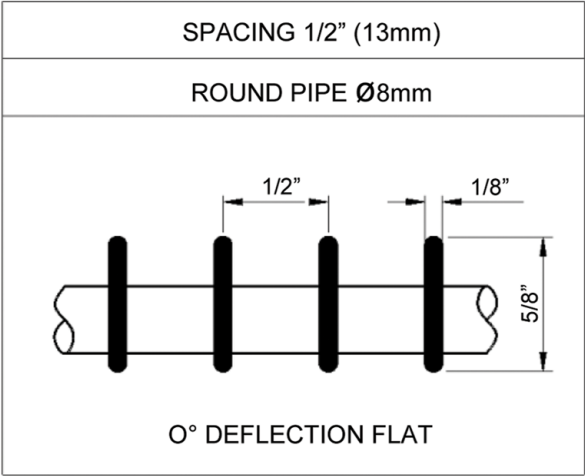
Linear Bar Grill (LBG)

4 mm Thick Aluminum



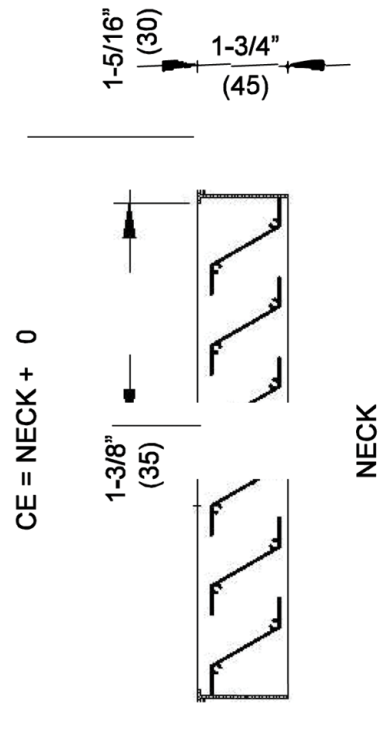
Floor Linear Bar Grille LBGF

Blade Types



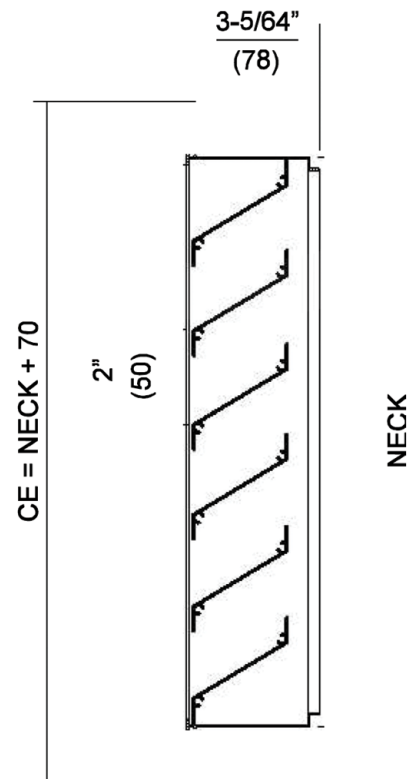
Dimensions

Fresh Air Louver Small Blade Fal



Dimensions

Fresh Air Louver Big Blade Fal-50



SELECTION GUIDE

Knowing the volumetric flow rate required and maximum allowable pressure drop, you can use the performance chart and free area table to estimate an appropriate size.

Example:

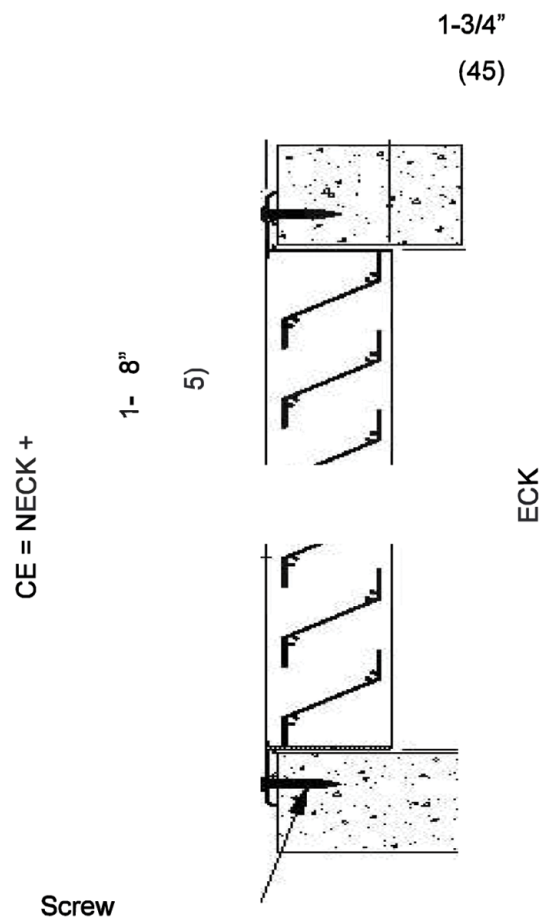
If a fan requires to draw 6000 cfm through a louver with a maximum pressure drop 60 Pa, estimate the required size.

Solution: At the chart, pivot the pressure drop of 60 Pa, then intersect with the "Intake" line to get the free air velocity as approximately 1200 fpm.

-Free area = flow rate / free air velocity = 6000 / 1200 = 5 ft².

- From the table, select any sizes that give at least 5 ft² free area, e.g., (56 x 40) in. or (48 x 48) in.

INSTALLATION

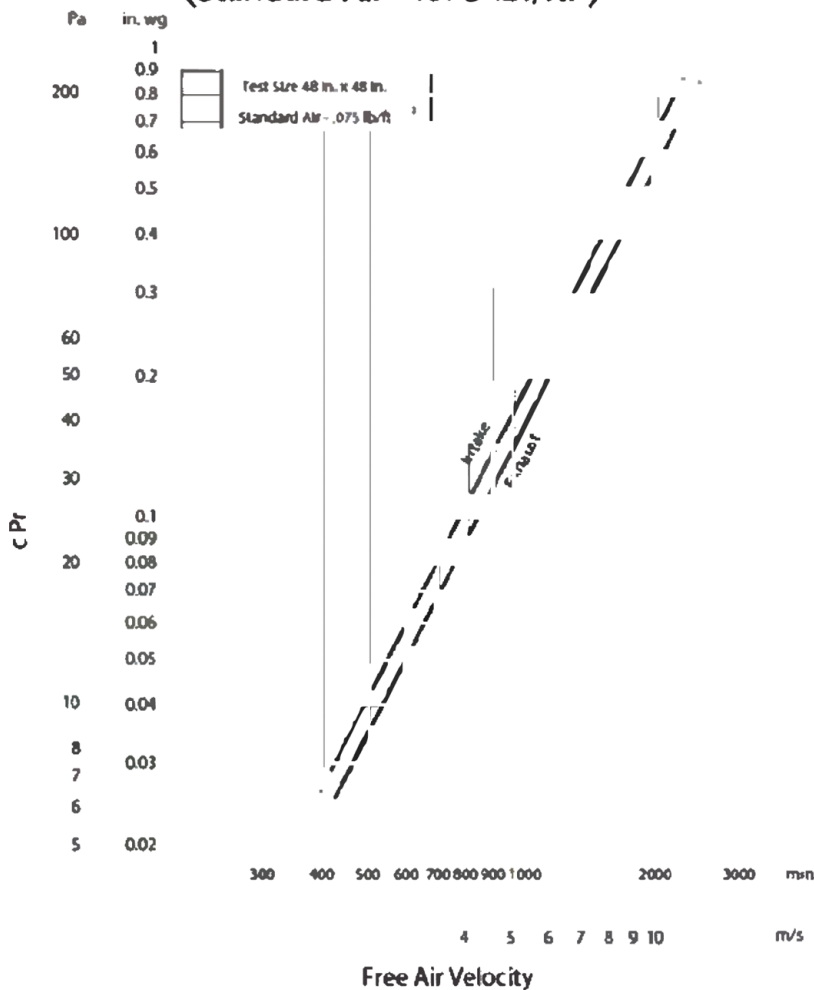


Free Area of Listed Sized

Height (inch)	Free Area & Listed Sizes(ft²)												
	Width (inch)												
	12	16	20	24	28	32	36	40	44	48	52	56	60
12	0.28	0.38	0.47	0.57	0.66	0.76	0.85	0.95	1.04	1.14	1.23	1.33	1.42
16	0.40	0.53	0.66	0.80	0.93	1.06	1.19	1.33	1.46	1.59	1.72	1.86	1.99
20	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.71	1.88	2.05	2.22	2.39	2.56
24	0.63	0.83	1.04	1.25	1.46	1.67	1.88	2.08	2.29	2.50	2.71	2.92	3.13
28	0.74	0.99	1.23	1.48	1.72	1.97	2.22	2.46	2.71	2.96	3.20	3.45	3.69
32	0.85	1.14	1.42	1.71	1.99	2.27	2.56	2.84	3.13	3.41	3.69	3.98	4.26
36	0.97	1.29	1.61	1.93	2.25	2.58	2.90	3.22	3.54	3.86	4.19	4.51	4.83
40	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60	3.96	4.32	4.68	5.04	5.40
44	1.19	1.59	1.99	2.39	2.78	3.18	3.58	3.98	4.38	4.77	5.17	5.57	5.97
48	1.31	1.74	2.18	2.61	3.05	3.49	3.92	4.36	4.79	5.23	5.66	6.10	6.54
52	1.42	1.89	2.37	2.84	3.32	3.79	4.26	4.74	5.21	5.68	6.16	6.63	7.10
56	1.53	2.05	2.56	3.07	3.58	4.09	4.60	5.12	5.63	6.14	6.65	7.16	7.67
60	1.65	2.20	2.75	3.30	3.85	4.40	4.94	5.49	6.04	6.59	7.14	7.69	8.24

Performance

(Standard Air - .075 lb./ft.³)



-From the above table, we can deduce that the free area range is 28—33 %

Therefore, we can assume it for typical selection as 30%

-Or knowing the louvre size, The approximate free area percentage for sizes not shown on the table also can be estimated as following:

$$\text{Free area} = (0.5H - 0.26) \times (W - 0.1)$$

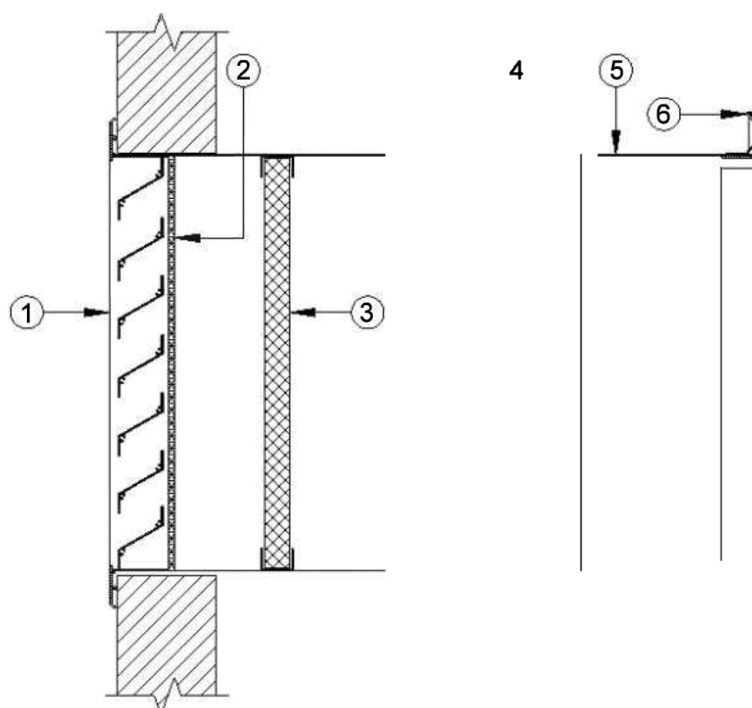
** H and W in feet

-Flow rate = Free area x Free air velocity

-Free area = Total area x Free area percentage

Fresh Air Louver Unit

Fau-F



1. Fresh Air Louver.
2. Bird or Insect Screen (Aluminum or Galvanized).
3. Aluminum Filter (Washable) 1 or 2 Inches.
4. Volume Control Damper.

5. GI Duct (20 gauge).
6. Slide on flange (MS Steel Angle) 35 x 30mm.

Note: Customer should confirm the position of the damper quadrant or actuator and access door for filter at either left or right side from louver face.

Description

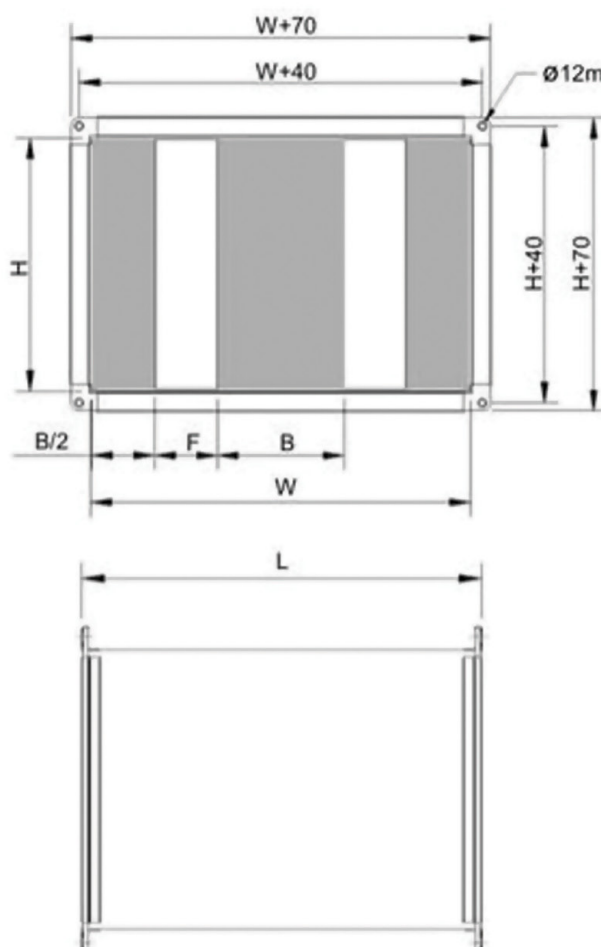
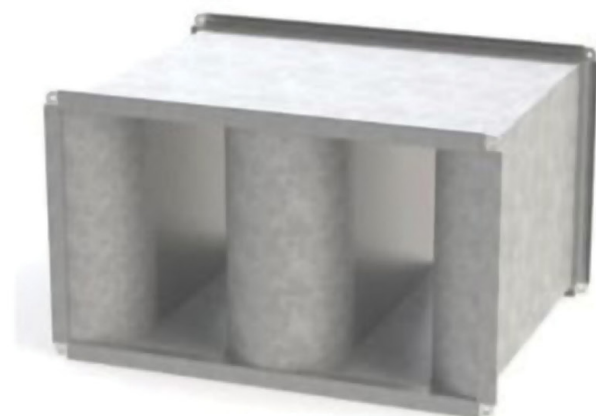
Sound attenuators are used to reduce fan and machine noise to meet the required noise levels, can be straight RSAR (Rectangular), or bend shapes RSABV (Vertical), and RSABH (Horizontal).

Special Features

- Splitters are fitted with an acoustic absorbing material has a glass tissue facing, non-flammable, non-hygroscopic, not sustain vermin or fungus, rot proof and odorless.
- Diffusion angle to improve pressure drop.
- Bullnose Baffles to help minimize turbulence and to minimize air pressure loss and regenerated noise.
- 20 gauge galvanized steel for casing.
- 22 gauge perforated galvanized for splitters.
- End connection of Duct Mate Flange or M.S steel angle secured to casing end.
- Components are also available in stainless steel or aluminum construction.
- attenuators are normally supplied in sections when any dimensions are exceeded.

DIMENSIONAL DETAILS

Sound Attenuator Rectangular RSAR



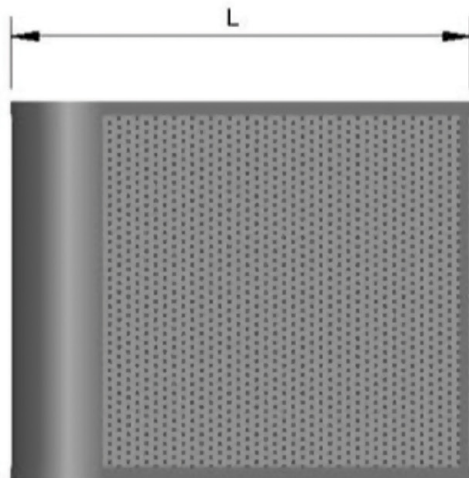
Splitters



Splitters are fitted with an acoustic absorbing material and tested to the following tests

1. Acoustic performance	ASTM C 1071 - ASTM C432-77
2. Fire resistant	NFPA 90A
3. Surface burning characteristics	UL 723-ASTM E84
4. Moisture absorption	ASTM D-07 B-ASTM C550
5. Mold growth	ASTM D2020-UL 181

Both splitters' sides are from perforated sheet to protect and prevent fiber erosion up to 40 m/s airway velocity.



PRODUCT DESCRIPTION

VAV terminal boxes type RAV were developed for the control of air flow, especially in variable volume systems.

They come in different models:

- RAV-BS/BC Single Duct Terminal Box (VAV/CAV)
- RAV-BP By-Pass Terminal Box

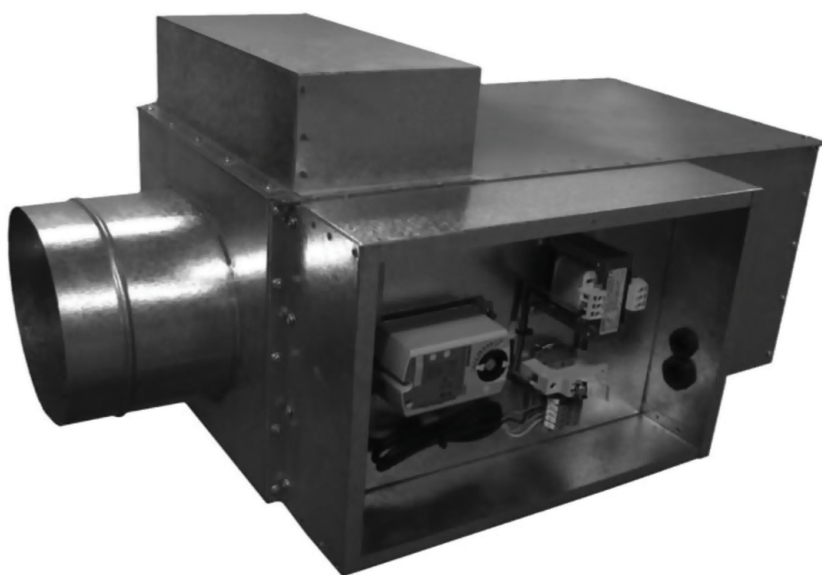
Factory fitted control package, ensures the most accurate setup of required flow rates. The flow rate control is a closed circuit system with external power supply. RAV boxes can be supplied with control components from any reputable manufacturer to suit the project specification.

RAV contains a differential pressure sensor for air flow measurement (not for Bypass type), a control damper and an integral sound attenuator for reducing the air regenerated noise.

The control damper blade with seal insures best air tightness when closed.

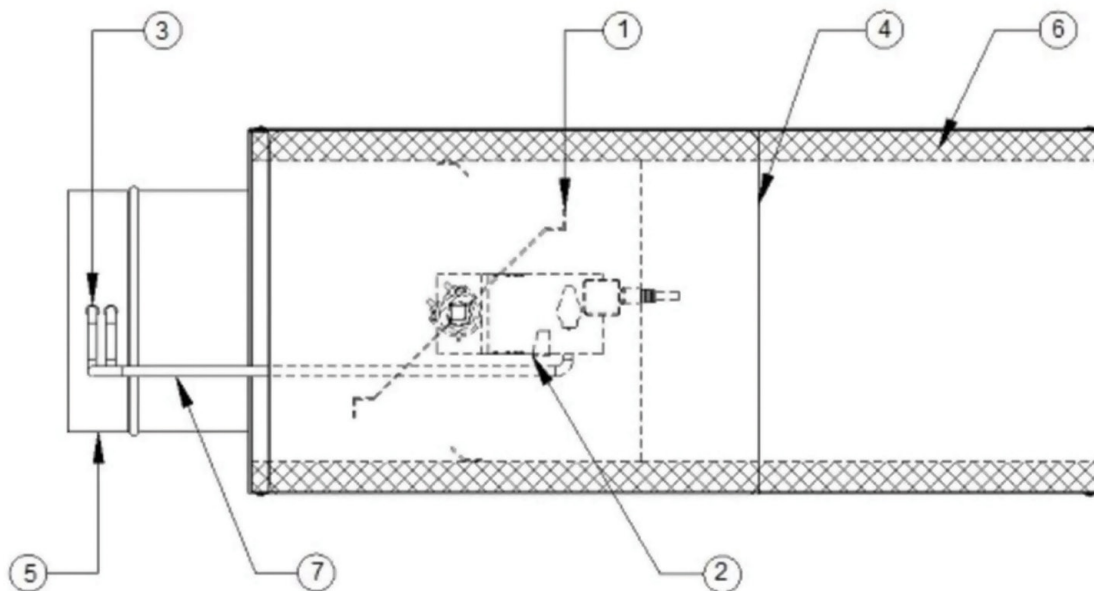
RAV has a circular spigot connection up to 200 mm (8") size, and oval connection for larger sizes on the fan side (high pressure end) and a rectangular flange connection on the room side (low pressure end).

RAV-BP (By-Pass) - Pressure Dependent



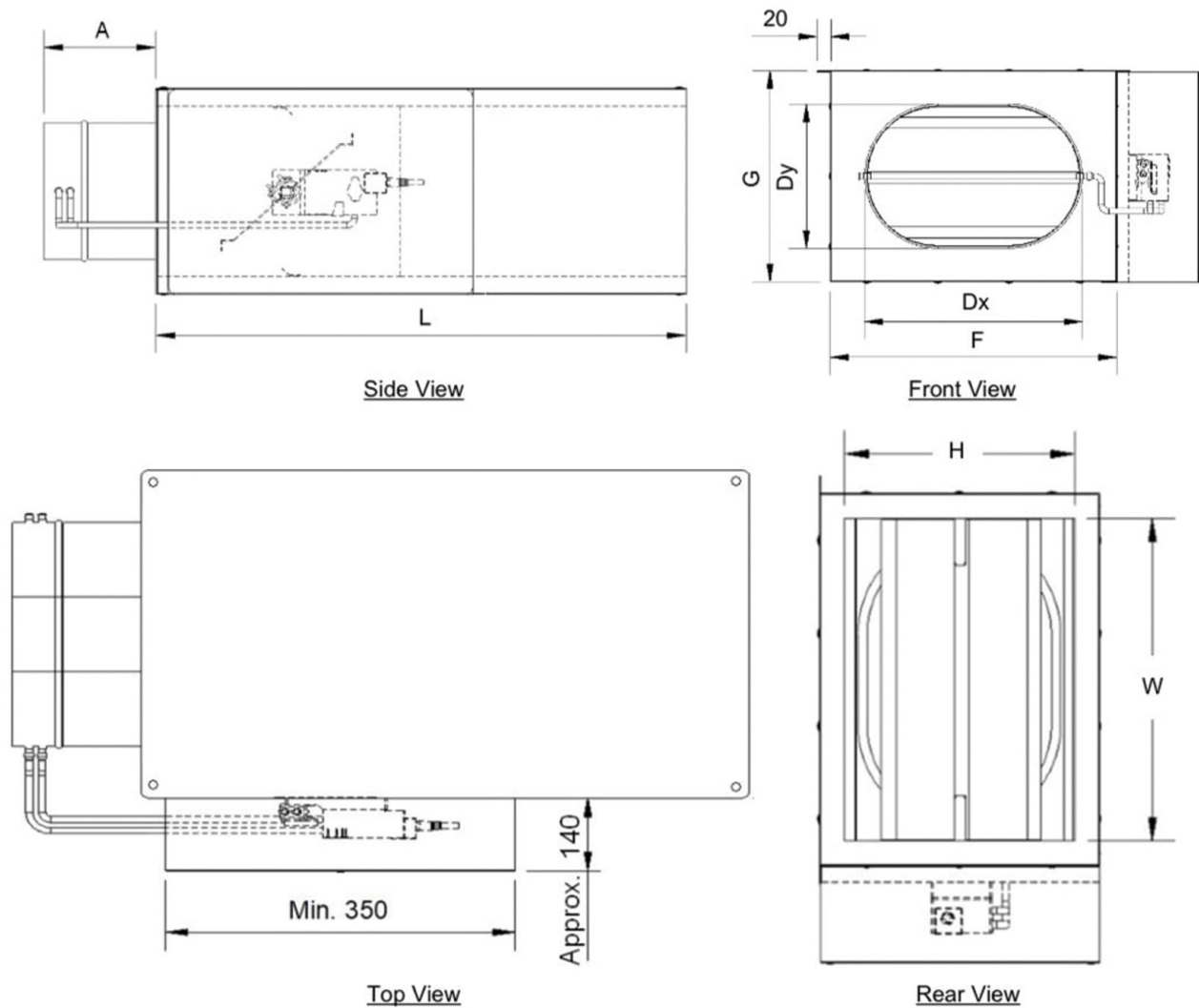
RAV-BS/RAV-BC - CONSTRUCTION AND CHARACTERISTICS

- Casing of galvanized steel sheet, gauge 22
- Lining in the sound attenuator section of 25mm thickness
- Control damper blade of galvanized sheet steel of Gauge 16 with suitable seal
- Sensor tubes of aluminum with plastic pipes to the actuator
- Nylon Bushing
- Controller fitted to the control damper made by Belimo or Siemens. Optionally we can use any other controller if requested
- Flow rate range is 1:10 (according to selected controller accuracy)
- Flow range is setup and programmed in the factory as required by end-user, based on data extracted from the calibration test rig



- | | |
|---------------------------------|----------------------------|
| 1) Control Blade | 5) Inlet Spigot |
| 2) Controller | 6) Acoustic Liner |
| 3) Differential Pressure Sensor | 7) DP Sensor plastic hoses |
| 4) VAV Main Casing Box | |

DIMENSIONS



Model	Inlet Shape	Dx (mm)	Dy (mm)	A (mm)	F (mm)	G (mm)	L (mm)	Outlet Size (mm)	
								W	H
RAV-BS-150 RAV-BC-150	Round	150	150	150	300	250	600	250	200
RAV-BS-200 RAV-BC-200	Round	200	200	150	300	300	700	250	250
RAV-BS-250 RAV-BC-250	Flat Oval	300	200	150	400	300	700	350	250
RAV-BS-300 RAV-BC-300	Flat Oval	400	200	150	500	300	700	450	250
RAV-BS-350 RAV-BC-350	Flat Oval	450	250	150	550	350	800	500	300
RAV-BS-400 RAV-BC-400	Flat Oval	575	250	150	650	350	800	600	300
RAV-BS-450 RAV-BC-450	Flat Oval	610	300	200	700	400	900	650	350
RAV-BS-500 RAV-BC-500	Flat Oval	750	300	200	850	400	900	800	350
RAV-BS-600 RAV-BC-600	Flat Oval	910	350	200	1000	450	1000	950	400





مصنع نظام التبريد للصناعة

