PROFESSIONAL Air Outlets

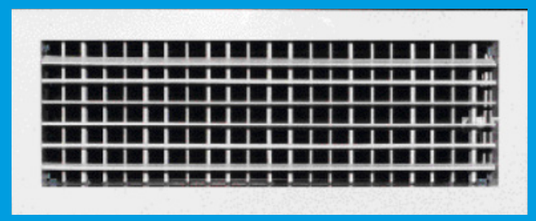
Grilles & Registers

SR & SG & RR & RG

Scan Me

Pro-airoutlets.com

DOUBLE DEFLECTION REGISTER SR



TYPES

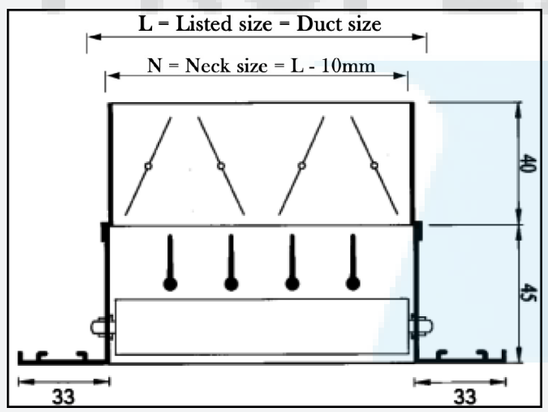
•SRH : Supply register horizontal .
•SRV : Supply register vertical

MATERIALS

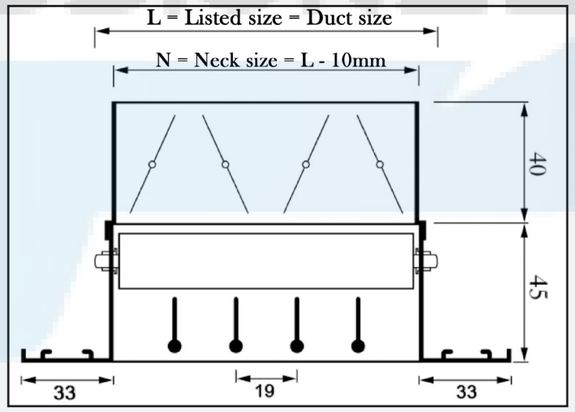
• Frame : Extruded aluminium Profile
(with 33 mm flange).
• Blades : Extruded aluminium – solid section(spacing: 19 mm as standard).
• Damper frame and blades : Extruded aluminium Profile

FINISH

•Standard mill finish or powder coated.



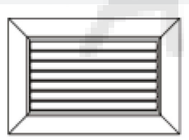
Front Vertical
(SRV)

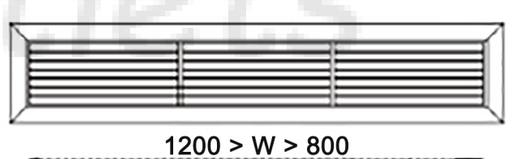


Front Horizontal
(SRH)

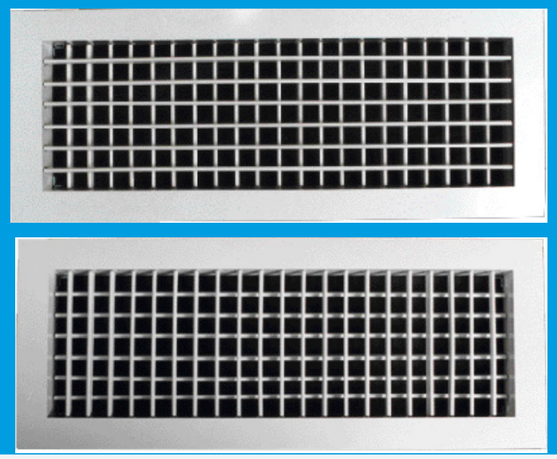
FEATURES

• All extruded aluminium construction engineered to provide the advantage of corrosion resistance and Light weight construction.
• SIZE : Stocked in many standard sizes. Other size, enquire.
• Model SRH : Two set of aerofoil blade front set parallel to long dimension and individually adjustable to any degree of deflection in Horizontal plane . Second set parallel to short dimension and individually adjustable to any degree of deflection in vertical plane with damper.
• Model SRV : Two set of aerofoil blade front set parallel to short dimension and individually adjustable to any degree of deflection in Vertical plane . Second set parallel to long dimension and individually adjustable to any degree of deflection in Horizontal plane with damper.
• Frame is separated from aerofoil deflection blades by nylon bushings. This method of assembly ensures quiet, smooth and rattle free operation.
• The frame is assembled by pressing in the four angles which together create very robust product.
• Screw type of fastening operated from face or concealed fastening.
• Foam gasket is sealed around the back of the frame as option to avoid air leakage.
• DAMPER : Opposed blade . key operated.
• If one of the grilles dimensions is over 400mm, a U supporter will be added at the center of the grille.
•If one of the grilles dimensions is over 800mm, a U supporters will be added equidistantly.





DOUBLE DEFLECTION GRILLE SG



TYPES

•SGH : Supply Grille horizontal .
•SGV : Supply Grille vertical

MATERIALS

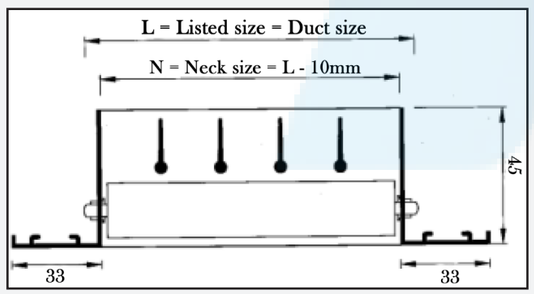
•Frame : Extruded aluminium Profile
(with 33 mm flange).
•Blades : Extruded aluminium – solid section(spacing: 19 mm as standard).

FINISH

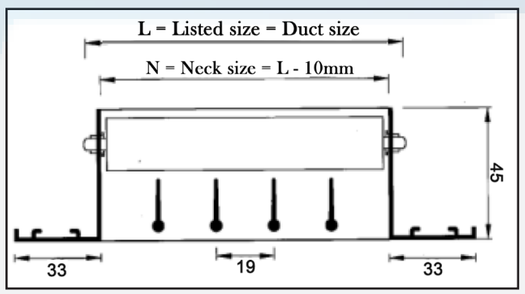
•Standard mill finish or powder coated.

FEATURES

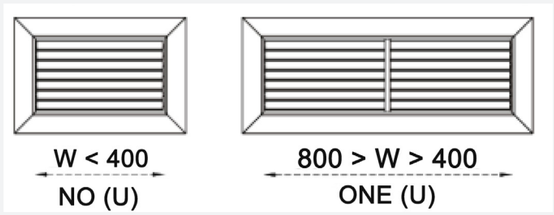
• All extruded aluminium construction engineered to provide the advantage of corrosion resistance and Light weight construction.
• Screw type of fastening operated from face or concealed fastening.
• Maximum effective pressure areas can be achieved when the blades are positioned at 0° position.
• If one of the grilles dimensions is over 400mm, a U supporter will be added at the center of the grille.
• If one of the grilles dimensions is over 800mm, a U supporters will be added equidistantly.

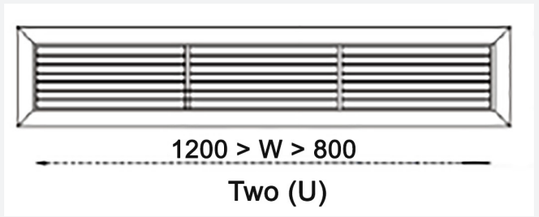


Front Vertical
(SGV)



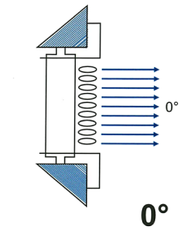
Front Horizontal
(SGH)



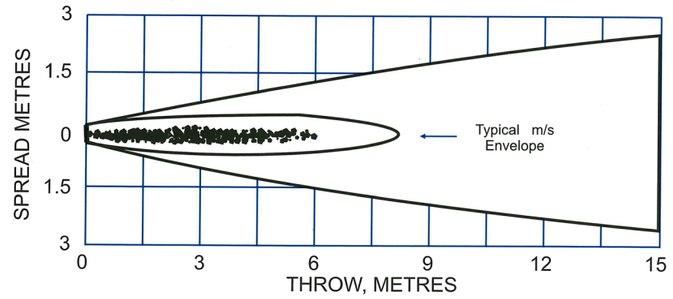


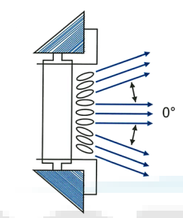
PERFORMANCE DATA

Spread Characteristics with Three Deflection Setting

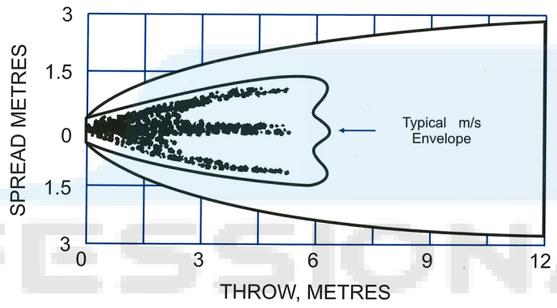


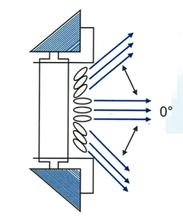
0°
DEFLECTION



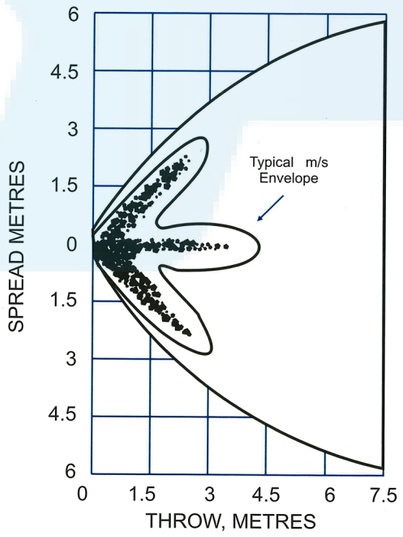


22½°
DEFLECTION





45°
DEFLECTION



ENGINEERING PERFORMANCE

- The most important thing in any air conditioning system is that the selection of a Suitable Register or a Grille to ensure satisfactory performance. For this the following charts were given to help you in predicting performance . In making selections , sound Engineering judgement is essential as the permissible drops and noise levels can change greatly with the usage of space , location of obstacles and available clear mounting heights. So , before selection give close attention to the following considerations.

- In general , the occupant should not be subject to velocities above 50 FPM for an extended period to time as the air velocities below 15 FPM leave a feeling of stagnation and velocities above 65 FPM create drafts so these charts are based on a terminal velocity of 50 FPM in determining throw . It is assured that longer throws will be required larger drops are probably satisfactory. In more exacting applications outlets should be sized with shorter throws , smaller drops and lower noise levels.

- Up to 800 FPM voltmeter velocity , the noise caused by the grille it self is negligible . The engineer should consider acoustical insulation , vibration etc . because the vibration through duct work or fan noise may be transmitted to the zone of occupancy.

- Considerable caution must be exercised in selection and positioning the grille to determine that the air will not drop into the occupied zone. However , it should be also kept in mind that the other extreme of overthrow can cause objectionable down drafts of air along any wall or surface.

- Generally , prescribed rule is to select a grille that will have a throw of approximately 3/4 of the distance to the opposite wall with its termination at approximately six feet above the floor level as shown in the fig. 1 , below.

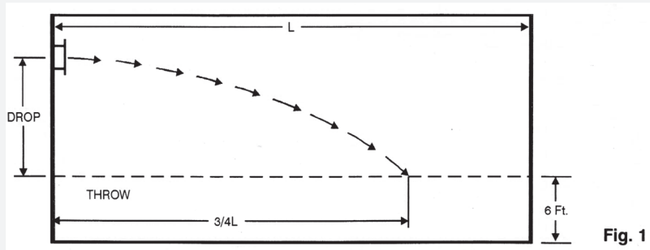


Fig. 1

ENGINEERING PERFORMANCE DATA

Throw Requirement

The basis performance data will show two throw values.The maximum throw is the Distance of air travel to a point having air velocity of 50 FPM and the minimum throw is the distance of air travel to a point having Air velocity of 100 FPM

Generally

The throw distance requirement is determined from the supply air terminal to the opposite wall or to the intersection of its air stream with air being delivered from another supply air terminal.

Drop

Drop is a vertical distance between the lowest horizontal plane having 50 FPM of air down stream and the center of the core.

Velocity

The average face velocity on the grilles surface as measured with a ANLOR voltmeter with tip no . 2220A minimum of four readings should be taken at random over the face of the grille and averaged.

Total Pressure

Total pressure is measured in inches of water gauge (w.g) . If static pressure drop is required calculate the
CORE AREA = (Nominal length - 1/4) x (Nominal width -1/4) and divide the CFM by this area to determine the CORE VELOCITY .
Using this velocity , enter table 1 to find the velocity pressure subtracting velocity pressure from total pressure gives static pressure drop across the grille .

NC LEVEL -، NOISE CRITERIA ،

The NC values shown in the performance data are based upon a room absorption of 10 dB , and a sound power level re : 10^{12} watts.

$$\text{CORE AREA} = \frac{(\text{Nominal length} - 1/4) \times (\text{Nominal width} - 1/4)}{144}$$

$$\text{CORE VELOCITY} = \frac{\text{CFM}}{\text{CORE AREA}}$$

STATIC PRESSURE DROP = Total Pressure - Velocity Pressure

BALANCING DATA

Step (1) :- To determine CFM of the Supply grille or Register , an ANLOR Voltmeter with tip no . 2220A minimum is used.

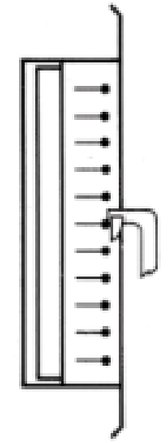
Step (2) :- Locate voltmeter jet in the air stream as shown in the figure below. Take a minimum of four velocity readings at random across the grille face and average them to determine the velocity.

Step (3) :- From the performance table select proper AK factor for the size of supply grille or register tested. Using the following formula , calculate the air flow rate :

CFM = AK x Average Velocity.

EXAMPLE :-

Determine the CFM through a 24" x 6" SV6-II. The blades are set for a 45^0 deflection
Pattern . The instrument to be used is an ANLOR Voltmeter with a 2220A Tip .



To determine velocity
Using ANLOR with Tip
No. 2220A

SOLUTION :-

1. Position the ANLOR Voltmeter with a 2220A Tip . and find velocity at a minimum of 4 points at random . (Suppose the average velocity is found to be 300 FPM) .

2. From the performance table select AK factor for the given size 45^0 deflection blade setting.

AK = .52 Sq. ft.

3 . CFM = AK x Ave. measured velocity.
= .052 Sq. ft. x 300 fpm
= 155 CFM

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in)	5 x 6			8 x 5			14 X 4			14 X 5			14 X 6			24 X 4		
	(W x H)	8 x 4			10 x 4			10 X 6			18 X 4			20 X 4			16 X 6		
		6 x 6			8 x 6			12 X 5			12 X 6			16 X 5			12 X 8		
					12 x 4			16 X 4						10 X 8			20 X 5		
					10 x 5												10 X 10		
	Deflection	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	Ak	0.16	0.14	0.13	0.20	0.18	0.19	0.27	0.25	0.23	0.32	0.30	0.28	0.36	0.34	0.31	0.41	0.40	0.37
50	Velocity	315	355	385	250	280	295												
	Toal Pressure	0.008	0.012	0.013	0.005	0.006	0.007												
	Throw	7.10	4.6	3.6	7.10	3.6	3.5												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
75	Velocity	470	535	575	375	415	440												
	Toal Pressure	0.018	0.027	0.029	0.011	0.014	0.015												
	Throw	9.12	5.8	5.7	9.12	4.8	4.7												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
100	Velocity	625	715	770	500	555	590	370	400	435	315	330	355	280	295	325	245	250	270
	Toal Pressure	0.033	0.048	0.052	0.020	0.025	0.027	0.009	0.013	0.014	0.006	0.008	0.008	0.005	0.006	0.007	0.004	0.004	0.004
	Throw	10.14	6.9	6.8	10.14	6.9	6.8	10.14	5.9	5.8	10.14	5.9	4.8	10.14	5.9	4.8	9.15	5.8	4.7
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
125	Velocity	780	892	960	625	695	735	463	500	545	390	415	445	345	370	405	305	315	340
	Toal Pressure	0.051	0.075	0.087	0.031	0.039	0.042	0.014	0.020	0.022	0.009	0.012	0.013	0.008	0.009	0.011	0.006	0.006	0.006
	Throw	11.16	7.11	7.9	11.16	7.10	7.9	11.16	6.9	6.8	11.16	6.9	5.8	11.16	6.9	5.8	11.16	6.10	5.8
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
150	Velocity	940	1070	1155	750	835	882	555	600	650	480	500	535	415	440	485	365	375	405
	Toal Pressure	0.074	0.109	0.118	0.045	0.057	0.061	0.021	0.028	0.031	0.014	0.018	0.019	0.011	0.013	0.015	0.008	0.009	0.010
	Throw	12.17	8.11	7.10	12.17	8.11	7.10	12.17	8.11	7.10	12.18	7.11	7.10	12.18	7.11	7.10	12.17	6.11	6.10
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
175	Velocity				875	972	1029	650	700	760	545	585	625	490	515	565	425	435	470
	Toal Pressure				0.066	0.077	0.083	0.028	0.038	0.047	0.020	0.025	0.026	0.015	0.018	0.020	0.011	0.012	0.014
	Throw				13.18	9.12	8.11	13.18	9.12	8.11	13.19	8.12	8.11	13.19	8.12	8.11	13.19	7.12	7.11
	NC				< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
200	Velocity				1000	1100	1175	740	800	870	635	660	715	555	590	645	490	500	540
	Toal Pressure				0.081	0.100	0.109	0.037	0.052	0.055	0.025	0.032	0.034	0.019	0.023	0.027	0.014	0.016	0.017
	Throw				14.20	9.13	8.11	14.20	9.13	8.11	14.20	9.12	8.11	14.20	9.12	8.12	14.20	8.12	7.12
	NC				< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
225	Velocity										705	750	805	625	660	725	550	565	610
	Toal Pressure										0.031	0.041	0.043	0.024	0.029	0.034	0.018	0.020	0.021
	Throw										15.22	10.14	9.12	15.22	10.13	9.12	15.22	9.13	8.12
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
250	Velocity										780	835	895	695	735	805	615	625	675
	Toal Pressure										0.039	0.050	0.053	0.030	0.036	0.042	0.022	0.025	0.027
	Throw										16.23	11.14	10.12	16.23	11.14	10.12	16.23	10.14	9.12
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
275	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
300	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
325	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
350	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
375	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
400	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
425	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
450	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in)	18 x 6			20 x 6			16 x 8			24 x 6		22 x 6	20 x 8			22 x 8		32 x 6
	(W x H)	26 x 4			12 x 10						18 x 8		36 x 4	16 x 10			36 x 5		24 x 8
		22 x 5			30 x 4						14 x 10		30 x 5	28 x 6			30 x 6		16 x 12
		28 x 4			24 x 5						12 x 12			14 x 12			18 x 10		
		14 x 8									28 x 5						48 x 4		
	Deflection	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	Ak	0.48	0.44	0.40	0.52	0.18	0.44	0.56	0.52	0.48	0.66	0.59	0.52	0.69	0.65	0.59	0.85	0.72	0.63
100	Velocity	220	225	250	190	205	225												
	Toal Pressure	0.002	0.003	0.004	0.002	0.002	0.003												
	Throw	9.15	4.8	4.7	8.14	3.8	3.7												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
125	Velocity	260	265	315	240	255	285												
	Toal Pressure	0.004	0.005	0.006	0.003	0.003	0.005												
	Throw	11.16	5.10	6.9	10.16	4.9	4.9												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
150	Velocity	315	340	375	290	305	340	270	290	315	240	260	285						
	Toal Pressure	0.006	0.007	0.008	0.004	0.006	0.006	0.004	0.005	0.005	0.003	0.004	0.004						
	Throw	12.17	6.11	6.10	12.17	6.11	5.10	12.17	6.11	5.9	12.17	5.11	5.9						
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20						
175	Velocity	365	400	440	335	360	400	315	335	365	265	295	335						
	Toal Pressure	0.007	0.010	0.011	0.005	0.008	0.008	0.005	0.007	0.007	0.004	0.006	0.005						
	Throw	13.19	7.12	7.11	13.19	7.12	6.11	13.19	7.12	6.10	13.19	6.12	6.10						
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20						
200	Velocity	415	455	540	385	410	455	355	385	415	315	35	375	290	310	340			
	Toal Pressure	0.007	0.010	0.011	0.008	0.010	0.011	0.007	0.008	0.009	0.006	0.006	0.007	0.004	0.005	0.006			
	Throw	14.20	8.12	7.11	14.20	8.13	7.11	14.20	8.12	7.11	14.20	7.12	6.11	13.20	7.13	6.11			
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			
225	Velocity	470	510	560	432	460	510	400	430	470	370	380	430	325	345	380			
	Toal Pressure	0.013	0.016	0.018	0.010	0.013	0.014	0.009	0.010	0.011	0.007	0.007	0.009	0.005	0.006	0.008			
	Throw	15.22	9.13	8.12	15.22	9.13	8.12	16.22	9.13	8.12	15.21	8.13	7.12	14.22	8.14	7.12			
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			
250	Velocity	520	570	625	480	550	570	445	480	520	395	430	470	360	385	430			
	Toal Pressure	0.015	0.020	0.022	0.012	0.015	0.018	0.010	0.013	0.014	0.009	0.010	0.012	0.006	0.007	0.009			
	Throw	16.23	10.14	9.12	16.23	10.14	9.12	16.23	10.14	9.12	16.22	9.14	8.12	16.23	8.14	8.13			
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			
275	Velocity				530	560	625	490	530	575	415	465	530	400	425	465			
	Toal Pressure				0.017	0.017	0.022	0.012	0.015	0.017	0.010	0.012	0.016	0.007	0.008	0.011			
	Throw				17.25	10.14	9.13	17.25	11.15	10.13	17.23	10.15	9.13	17.25	9.15	8.14			
	NC				< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			
300	Velocity				575	610	680	535	575	625	475	530	575	435	480	500	350	415	475
	Toal Pressure				0.017	0.022	0.025	0.015	0.019	0.020	0.012	0.014	0.017	0.009	0.011	0.013	0.007	0.009	0.010
	Throw				17.25	11.15	10.13	17.25	11.15	10.13	17.25	11.16	10.14	17.26	10.15	9.14	17.24	9.16	9.14
	NC				< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
325	Velocity										490	550	625	470	500	550	380	450	515
	Toal Pressure										0.013	0.019	0.020	0.011	0.013	0.014	0.008	0.011	0.012
	Throw										18.26	11.17	10.15	18.27	11.16	10.14	18.26	10.17	10.15
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
350	Velocity										555	615	675	505	540	605	410	485	555
	Toal Pressure										0.17	0.020	0.023	0.012	0.015	0.018	0.010	0.012	0.013
	Throw										18.26	11.17	10.15	19.27	11.17	10.15	19.27	11.17	10.15
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
375	Velocity										570	635	720	545	575	635	440	520	595
	Toal Pressure										0.019	0.022	0.026	0.014	0.017	0.020	0.011	0.014	0.015
	Throw										19.28	12.17	11.16	20.29	12.18	10.16	20.29	12.18	11.16
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
400	Velocity										635	700	770	580	615	685	470	555	635
	Toal Pressure										0.022	0.026	0.030	0.016	0.019	0.023	0.013	0.016	0.019
	Throw										20.29	13.18	11.16	20.29	13.18	11.16	20.29	13.18	11.16
	NC										< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
425	Velocity													615	655	720	500	590	675
	Toal Pressure													0.018	0.021	0.026	0.015	0.018	0.021
	Throw													21.30	14.19	12.17	21.30	14.19	12.17
	NC													< 20	< 20	< 20	< 20	< 20	< 20
450	Velocity													650	690	770	530	625	715
	Toal Pressure													0.020	0.025	0.030	0.016	0.020	0.023
	Throw													21.31	15.20	12.18	21.30	14.19	12.17
	NC													< 20	< 20	< 20	< 20	< 20	< 20
475	Velocity													690	730	805	560	660	755
	Toal Pressure													0.022	0.028	0.033	0.018	0.022	0.026
	Throw													22.33	16.21	12.19	22.32	14.20	12.17
	NC													< 20	< 20	< 20	< 20	< 20	< 20
500	Velocity													725	770	845	590	695	795
	Toal Pressure													0.025	0.030	0.037	0.020	0.025	0.027
	Throw													22.33	16.21	13.19	23.32	14.20	12.18
	NC													< 20	< 20	< 20	< 20	< 20	< 20
550	Velocity																650	765	875
	Toal Pressure																0.024	0.030	0.035
	Throw																24.34	15.21	13.18
	NC																< 20	< 20	< 20

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in) (W x H)	14 x 14 20 x 10 34 x 6			36 x 6 18 x 12 22 x 10 28 x 8 16 x 14			30 x 8 24 x 10 18 x 14 48 x 5 20 x 12		32 x 8 16 x 16	28 x 10 20 x 14 48 x 6 36 x 8 24 x 12		30 x 10	32 x 10 20 x 16 40 x 8 18 x 18 28 x 12		24 x 14	36 x 10 30 x 12 20 x 18 48 x 8 32 x 12		24 x 16
	Deflection	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º
	Ak	0.82	0.76	0.69	0.94	0.88	0.79	1.06	0.96	0.90	1.22	1.14	1.03	1.36	1.29	1.16	1.51	1.42	1.28
300	Velocity	365	395	435															
	Toal Pressure	0.005	0.007	0.008															
	Throw	17.24	9.16	9.14															
	NC	< 20	< 20	< 20															
325	Velocity	395	430	470															
	Toal Pressure	0.006	0.008	0.009															
	Throw	18.26	10.17	10.15															
	NC	< 20	< 20	< 20															
350	Velocity	425	460	505															
	Toal Pressure	0.007	0.010	0.012															
	Throw	19.27	11.17	10.15															
	NC	< 20	< 20	< 20															
375	Velocity	455	495	540															
	Toal Pressure	0.008	0.011	0.012															
	Throw	20.28	12.18	11.16															
	NC	< 20	< 20	< 20															
400	Velocity	490	525	580	425	455	505												
	Toal Pressure	0.009	0.013	0.015	0.008	0.009	0.011												
	Throw	20.29	12.18	11.16	20.29	12.18	11.16												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
425	Velocity	520	560	615	452	485	540												
	Toal Pressure	0.010	0.015	0.017	0.009	0.010	0.012												
	Throw	21.30	13.19	12.16	21.30	13.19	12.17												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
450	Velocity	550	590	650	480	510	570												
	Toal Pressure	0.011	0.016	0.019	0.010	0.012	0.014												
	Throw	21.30	13.19	12.16	21.30	13.19	12.17												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
475	Velocity	580	625	688	505	540	600												
	Toal Pressure	0.012	0.018	0.021	0.011	0.013	0.016												
	Throw	22.31	14.20	12.17	22.31	14.20	12.17												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
500	Velocity	610	680	725	530	570	635	470	510	555	400	430	490	360	390	430	330	350	380
	Toal Pressure	0.013	0.019	0.023	0.012	0.014	0.017	0.010	0.011	0.014	0.006	0.007	0.009	0.005	0.006	0.007	0.004	0.005	0.006
	Throw	23.32	14.20	12.17	23.32	14.20	12.18	23.32	14.20	12.18	22.32	12.20	12.18	22.32	12.20	11.18	22.31	12.20	11.18
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
550	Velocity	670	725	795	585	625	695	520	560	610	430	460	515	400	425	475	365	385	430
	Toal Pressure	0.016	0.024	0.029	0.015	0.017	0.021	0.012	0.014	0.017	0.007	0.008	0.010	0.006	0.007	0.008	0.005	0.006	0.007
	Throw	24.34	15.21	13.18	24.34	15.21	13.18	23.34	14.21	13.18	23.33	13.20	13.18	23.33	13.20	12.18	23.33	13.20	12.18
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
600	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
650	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
700	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
750	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
800	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
900	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1000	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in) (W x H)	22 x 8 36 x 5 30 x 6 18 x 10 48 x 4	24 x 8 16 x 12	14 x 14 20 x 10 34 x 6	36 x 6 18 x 12 22 x 10 28 x 8 16 x 14			30 x 8 24 x 10 18 x 14 48 x 5 20 x 12	32 x 8 16 x 16	28 x 10 20 x 14 48 x 6 36 x 8 24 x 12		30 x 10	32 x 10 20 x 16 40 x 8 18 x 18 28 x 12	24 x 14
	Deflection	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º	0º	22½º	45º
	Ak	0.82	0.72	0.63	0.85	0.76	0.69	0.94	0.88	0.79	1.06	0.98	0.90	1.22	1.14	1.03	1.36	1.29	1.16
600	Velocity	720	835	950	705	790	870	640	680	760	656	610	665	460	515	590	435	465	515
	Toal Pressure	0.28	0.036	0.042	0.019	0.028	0.034	0.018	0.021	0.025	0.014	0.016	0.021	0.009	0.010	0.012	0.007	0.008	0.010
	Throw	25.35	15.22	14.19	25.35	16.22	14.19	25.35	15.22	14.19	24.35	15.22	14.19	24.34	15.22	14.19	24.34	15.22	14.19
	NC	22	23	23	21	22	22	20	20	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
650	Velocity	785	900	1030	765	855	940	690	740	825	615	665	720	510	585	650	470	505	580
	Toal Pressure	0.031	0.042	0.051	0.022	0.033	0.039	0.021	0.025	0.029	0.016	0.019	0.025	0.010	0.011	0.015	0.008	0.009	0.012
	Throw	25.36	16.23	15.21	26.37	17.24	15.20	26.37	16.23	15.20	26.37	16.23	15.20	25.35	16.23	14.20	25.35	16.23	14.20
	NC	24	26	27	24	25	25	25	25	26	22	23	23	< 20	20	21	< 20	< 20	< 20
700	Velocity	845	970	1110	825	920	1015	745	795	885	660	715	780	595	635	690	505	545	605
	Toal Pressure	0.039	0.049	0.053	0.026	0.037	0.045	0.024	0.028	0.029	0.019	0.021	0.028	0.012	0.013	0.017	0.009	0.011	0.014
	Throw	26.38	17.24	15.21	27.38	17.24	15.21	27.38	17.24	15.21	27.38	17.23	15.20	27.39	17.24	15.21	27.39	17.24	15.21
	NC	26	27	29	26	27	27	28	28	29	24	24	24	23	23	23	20	20	20
750	Velocity	905	1040	1190	880	985	1090	800	855	950	710	765	830	615	660	730	545	580	645
	Toal Pressure	0.045	0.060	0.061	0.029	0.042	0.052	0.027	0.032	0.039	0.022	0.024	0.032	0.013	0.014	0.019	0.010	0.012	0.016
	Throw	28.40	18.25	16.22	28.40	18.25	16.22	28.40	18.25	16.22	28.40	18.24	16.21	28.40	18.25	16.22	29.40	18.25	16.22
	NC	29	30	32	29	29	31	28	28	29	27	27	28	25	25	26	23	22	22
800	Velocity	965	1110	1230	940	1055	1160	850	910	1015	755	815	890	690	720	780	580	620	690
	Toal Pressure	0.051	0.064	0.069	0.034	0.048	0.058	0.032	0.036	0.044	0.025	0.028	0.037	0.016	0.017	0.022	0.012	0.014	0.018
	Throw	29.43	18.25	16.22	29.43	18.25	16.22	28.42	18.25	16.22	28.40	18.24	16.21	29.41	18.26	16.22	29.41	18.28	16.22
	NC	31	32	33	31	31	32	29	30	30	28	28	28	27	27	27	24	25	25
900	Velocity													740	795	865	650	700	775
	Toal Pressure													0.020	0.022	0.028	0.015	0.017	0.022
	Throw													30.43	19.27	17.23	30.43	19.28	17.23
	NC													30	30	30	26	29	29
1000	Velocity													830	880	965	725	775	860
	Toal Pressure													0.025	0.027	0.034	0.018	0.021	0.028
	Throw													32.46	20.28	17.25	32.46	20.28	18.25
	NC													34	34	34	32	32	32
1100	Velocity																795	855	950
	Toal Pressure																0.022	0.026	0.033
	Throw																33.47	21.30	18.26
	NC																35	35	36
1200	Velocity																870	930	1035
	Toal Pressure																0.026	0.030	0.040
	Throw																35.49	22.31	19.27
	NC																38	38	38
1300	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1400	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1500	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1600	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1700	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1800	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1900	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
2000	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in)	36 x 10		24 x 16	28 x 14			30 x 14			30 x 16			50 x 10			24 x 24		60 x 10
	(W x H)	30 x 12			22 x 18			24 x 18			40 x 12			42 x 12			36 x 16		
		20 x 18			20 x 20			36 x 12			48 x 10			36 x 14			48 x 12		
		48 x 8			40 x 10						60 x 8			28 x 18			72 x 8		
		32 x 12			34 x 12									32 x 16			58 x 10		
	Deflection	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	Ak	1.51	1.42	1.28	1.75	1.64	1.47	1.81	1.70	1.52	2.00	1.88	1.69	2.12	2.00	1.79	2.48	2.34	2.10
600	Velocity	395	425	470															
	Toal Pressure	0.006	0.007	0.008															
	Throw	25.34	13.22	13.19															
	NC	< 20	< 20	< 20															
650	Velocity	430	460	510															
	Toal Pressure	0.007	0.008	0.009															
	Throw	26.38	15.22	14.20															
	NC	< 20	< 20	< 20															
700	Velocity	465	495	545	400	425	475												
	Toal Pressure	0.008	0.009	0.011	0.006	0.007	0.008												
	Throw	26.40	16.24	15.21	26.38	17.24	14.21												
	NC	< 20	< 20	< 20	< 20	< 20	< 20												
750	Velocity	495	530	585	430	455	510												
	Toal Pressure	0.009	0.010	0.013	0.007	0.008	0.009												
	Throw	28.41	17.25	16.21	26.39	17.25	14.21												
	NC	21	21	22	20	20	21												
800	Velocity	530	565	625	460	485	545	440	470	525	400	425	475						
	Toal Pressure	0.010	0.012	0.014	0.008	0.009	0.010	0.006	0.007	0.009	0.005	0.006	0.007						
	Throw	29.41	18.25	16.22	28.40	18.26	15.22	29.41	17.25	15.22	28.40	16.25	15.22						
	NC	23	24	24	22	23	23	21	22	22	20	20	20						
900	Velocity	595	635	705	515	550	610	495	530	590	450	480	535	425	450	500			
	Toal Pressure	0.012	0.015	0.018	0.010	0.011	0.013	0.008	0.009	0.012	0.006	0.007	0.009	0.005	0.006	0.008			
	Throw	30.43	19.27	17.23	30.43	19.27	16.24	30.43	18.27	17.23	30.42	18.27	17.23	30.42	18.27	16.23			
	NC	27	28	28	26	27	27	25	25	25	24	24	24	23	23	23			
1000	Velocity	660	705	780	570	610	680	550	590	670	500	530	590	470	500	560			
	Toal Pressure	0.015	0.018	0.022	0.012	0.013	0.016	0.010	0.011	0.014	0.008	0.009	0.011	0.006	0.007	0.01			
	Throw	32.45	20.28	18.25	32.45	20.29	18.25	32.45	20.28	18.25	32.45	19.28	18.26	32.45	20.29	18.25			
	NC	31	31	31	30	30	30	28	29	29	27	27	27	25	25	25			
1100	Velocity	730	775	880	630	670	750	610	645	725	550	585	650	520	550	615	445	470	525
	Toal Pressure	0.019	0.022	0.027	0.015	0.016	0.019	0.012	0.014	0.017	0.010	0.011	0.013	0.007	0.008	0.012	0.005	0.006	0.009
	Throw	33.48	21.29	19.26	33.47	21.30	18.26	34.48	21.29	19.26	33.47	20.29	19.27	33.47	21.30	18.26	33.47	21.30	18.26
	NC	34	34	34	33	33	33	32	32	32	30	31	31	28	29	29	24	25	25
1200	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1300	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1400	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1500	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1600	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1700	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1800	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
1900	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		
2000	Velocity																		
	Toal Pressure																		
	Throw																		
	NC																		

SUPPLY PERFORMANCE DATA

Listed Sizes

CFM	Sizes (in)	36 x 10		24 x 16	28 x 14			30 x 14			30 x 16			50 x 10			24 x 24		60 x 10
	(W x H)	30 x 12			22 x 18			24 x 18			40 x 12			42 x 12			36 x 16		
		20 x 18			20 x 20			36 x 12			48 x 10			36 x 14			48 x 12		
		48 x 8			40 x 10						60 x 8			28 x 18			72 x 8		
		32 x 12			34 x12									32 x 16			58 x 10		
	Deflection	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	Ak	1.5	1.42	1.28	1.75	1.64	1.47	1.81	1.70	1.52	2.00	1.88	1.69	2.12	2.00	1.79	2.48	2.34	2.10
1200	Velocity	795	845	940	685	730	815	665	705	790	600	640	710	565	600	670	485	510	570
	Toal Pressure	0.22	0.026	0.032	0.018	0.019	0.022	0.014	0.016	0.02	0.011	0.013	0.016	0.008	0.009	0.014	0.006	0.007	0.011
	Throw	36.50	22.31	19.27	36.49	22.31	19.27	35.50	22.31	19.27	35.49	22.31	19.28	35.49	22.31	19.27	35.49	22.31	19.27
	NC	37	37	37	36	36	36	35	35	35	34	34	34	31	32	32	26	27	27
1300	Velocity	860	915	1015	740	790	885	720	765	855	650	690	770	615	650	725	525	555	620
	Toal Pressure	0.026	0.031	0.038	0.021	0.022	0.026	0.017	0.019	0.024	0.013	0.015	0.019	0.009	0.011	0.016	0.007	0.008	0.013
	Throw	37.51	22.32	20.28	36.51	23.32	20.28	36.51	23.32	20.28	36.51	23.32	20.29	36.51	23.33	20.28	36.51	23.33	20.28
	NC	39	39	40	38	38	38	37	37	37	36	36	36	34	34	34	28	29	29
1400	Velocity							775	825	920	700	745	830	660	700	780	565	600	665
	Toal Pressure							0.019	0.022	0.027	0.016	0.018	0.022	0.010	0.013	0.018	0.008	0.009	0.015
	Throw							38.53	24.33	21.29	37.53	24.33	21.30	38.53	24.33	20.30	37.53	24.33	20.29
	NC							40	40	40	39	38	38	36	37	37	30	31	31
1500	Velocity													705	750	835	605	640	715
	Toal Pressure													0.011	0.015	0.021	0.009	0.010	0.017
	Throw													39.55	25.35	21.30	39.55	25.35	21.30
	NC													38	40	40	32	33	33
1600	Velocity													755	800	895	645	685	760
	Toal Pressure													0.013	0.017	0.024	0.010	0.011	0.019
	Throw													40.57	26.36	22.31	40.57	26.36	22.31
	NC													41	43	43	34	35	35
1700	Velocity													800	850	950	685	725	810
	Toal Pressure													0.015	0.019	0.027	0.011	0.012	0.021
	Throw													41.58	27.38	23.32	41.58	26.37	22.32
	NC													44	46	46	36	37	37
1800	Velocity													850	900	1005	725	770	855
	Toal Pressure													0.017	0.021	0.030	0.012	0.013	0.023
	Throw													42.60	27.38	23.33	42.60	27.38	23.33
	NC													47	49	49	38	39	39
1900	Velocity																465	810	905
	Toal Pressure																0.013	0.014	0.026
	Throw																44.62	28.40	24.34
	NC																40	41	41
2000	Velocity																805	855	950
	Toal Pressure																0.014	0.015	0.029
	Throw																45.63	29.40	25.35
	NC																42	43	43
2400	Velocity																965	1025	1140
	Toal Pressure																0.020	0.022	0.042
	Throw																49.69	31.44	27.38
	NC																50	> 50	> 50
2800	Velocity																1130	1195	1335
	Toal Pressure																0.027	0.030	0.057
	Throw																53.75	34.48	29.41
	NC																> 50	> 50	> 50
3200	Velocity																1290	1365	1525
	Toal Pressure																0.035	0.039	0.074
	Throw																67.80	36.51	31.44
	NC																> 50	> 50	> 50

SINGLE DEFLECTION REGISTER RR

TYPES

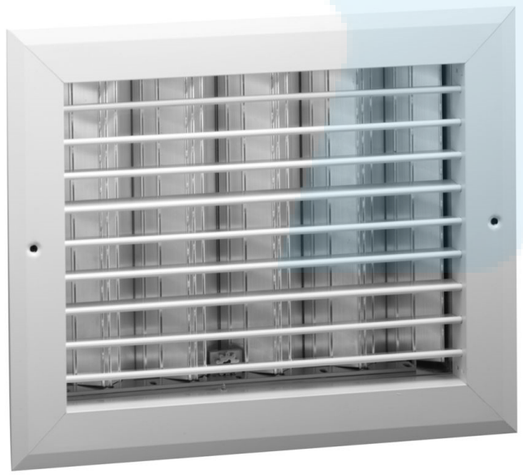
- RR-H : Return Register horizontal 45˚ (Blade spacing 3/4 '').
- RRV : Return Register vertical 45˚ (Blade spacing 3/4 '').
- RR1-H : Return Register horizontal 0˚ (Blade spacing 3/4 '').
- RR1-V : Return Register vertical 0˚ (Blade spacing 3/4 '').
- RR2-H : Return Register horizontal 22.5˚ (Blade spacing ½'').
- RR2-V : Return Register vertical 22.5˚ (Blade spacing ½'').

MATERIALS

- Frame : Extruded aluminium Profile (with 33 mm flange).
- Blades : Extruded aluminium – solid section
(spacing: 19 mm as standard).

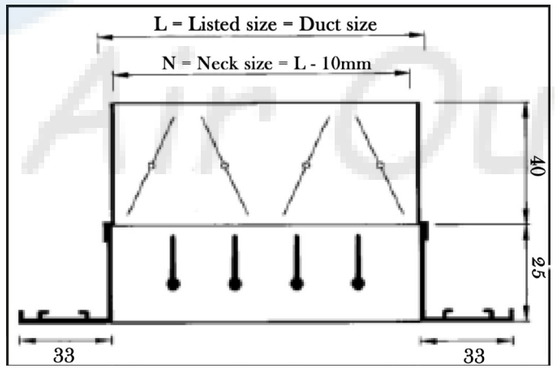
FINISH

- Standard mill finish or powder coated.

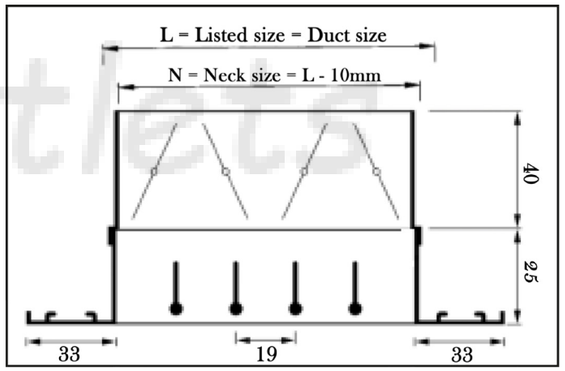


FEATURES

- It is suitable for high side wall , soffit and duct mounting.
- It is used for ventilation , cooling and heating application.
- A fully adjustable register suitable for supply or extract application.
- All extruded aluminium construction engineered to provide the advantage of corrosion resistance and Light weight construction.
- Deflection blades are fixed rigidly to the frame at an angle of 45° to the horizontal plane.
- Deflection blades can be adjusted manually and individually in the horizontal plane to obtain optimum air distribution (0° , 22.$^{1}/_{2}$°) .
- Maximum effective pressure areas can be achieved when the blades are positioned at 0° horizontal position.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.
- Screw type of fastening operated from face or concealed fastening
- DAMPER : Opposed blade . key operated.



Front Vertical
(RRV)



Front Horizontal
(RRH)

SINGLE DEFLECTION GRILLE RG

PROFESSIONAL Air Outlets

TYPES

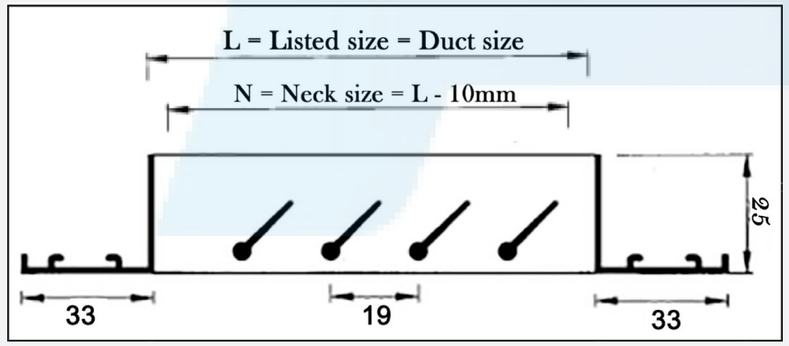
- RG-H : Return Grille horizontal 45˚ (Blade spacing 3/4 ‘’).
- RGV : Return Grille vertical 45˚ (Blade spacing 3/4 ‘’).
- RG1-H : Return Grille horizontal 0˚ (Blade spacing 3/4 ‘’).
- RG1-V : Return Grille vertical 0˚ (Blade spacing 3/4 ‘’).
- RG2-H : Return Grille horizontal 22.5˚ (Blade spacing ½’’).
- RG2-V : Return Grille vertical 22.5˚ (Blade spacing ½’’).

MATERIALS

- Frame : Extruded aluminium Profile (with 33 mm flange).
- Blades : Extruded aluminium – solid section(spacing: 19 mm as standard).

FINISH

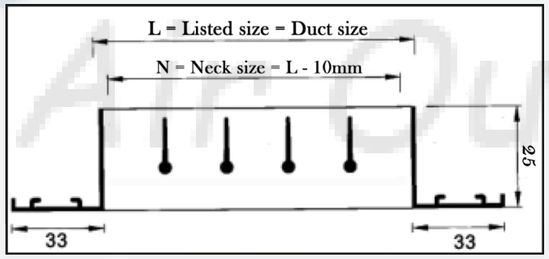
- Standard mill finish or powder coated.



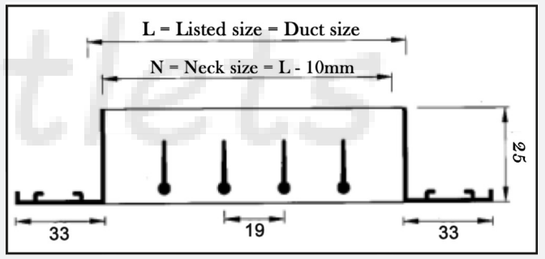
EX - (GH)

FEATURES

- It is suitable for high side wall , soffit and duct mounting.
- It is used for ventilation , cooling and heating application.
- A fully adjustable register suitable for supply or extract application.
- All extruded aluminium construction engineered to provide the advantage of corrosion resistance and Light weight construction.
- Deflection blades are fixed rigidly to the frame at an angle of 45° to the horizontal plane.
- Deflection blades can be adjusted manually and individually in the horizontal plane to obtain optimum air distribution (0° , 22.$^{1}/_{2}$°) .
- Maximum effective pressure areas can be achieved when the blades are positioned at 0° horizontal position.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.
- Screw type of fastening operated from face or concealed fastening



Front Vertical
(RGV)



Front Horizontal
(RGH)

RETURN PERFORMANCE DATA

PREFERRED SIZE

CFM	SIZE	8"*4"			10"*4" 8"*6" 6"*5"			8"*6" 10"*5" 12"*4"			10"*6" 12"*5" 16"*4"			12"*6" 14"*5" 18"*4"			10"*8" 10"*6" 16"*5" 20"4"		
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	AK	0.12	0.10	0.09	0.16	0.14	0.12	0.19	0.17	0.15	0.26	0.23	0.21	0.29	0.26	0.24	0.33	0.29	0.26
50	VELOCITY	415	500	520	315	356	390	260	290	320									
	TOTAL PRESS	0.012	0.017	0.018	0.007	0.009	0.01	0.005	0.006	0.008									
	THROW	10	8	5	9	7	5	8	6	5									
75	VELOCITY	625	750	780	475	535	590	389	438	482	288	325	357						
	TOTAL PRESS	0.03	0.038	0.041	0.016	0.019	0.024	0.011	0.014	0.016	0.007	0.008	0.01						
	THROW	15	12	8	13	10	7	12	9	6	10	8	6						
100	VELOCITY	833	1000	1040	632	713	787	519	585	643	385	432	475	339	382	420			
	TOTAL PRESS	0.047	0.067	0.072	0.028	0.035	0.042	0.02	0.024	0.029	0.011	0.014	0.016	0.009	0.011	0.013			
	THROW	20	16	11	17	14	9	15	12	9	13	11	7	12	10	7			
125	VELOCITY	1040	1250	1300	790	890	979	650	730	803	480	540	595	424	477	525	379	428	469
	TOTAL PRESS	0.073	0.10	0.11	0.044	0.054	0.07	0.03	0.036	0.045	0.017	0.022	0.026	0.014	0.017	0.021	0.011	0.014	0.017
	THROW	24	20	13	21	17	12	19	15	11	17	13	9	15	12	9	14	11	8
150	VELOCITY	1250	1500	1560	950	1069	1175	779	877	965	576	648	714	509	573	630	455	513	562
	TOTAL PRESS	0.10	0.14	0.16	0.062	0.078	0.093	0.043	0.054	0.064	0.024	0.03	0.036	0.02	0.024	0.029	0.016	0.02	0.024
	THROW	29	24	16	26	20	14	23	18	13	20	16	11	18	15	10	17	14	10
175	VELOCITY	1458	1750	1822	1107	1247	1371	909	1023	1130	673	756	833	594	668	735	531	600	656
	TOTAL PRESS	0.14	0.20	0.22	0.085	0.10	0.12	0.06	0.073	0.088	0.034	0.041	0.052	0.027	0.033	0.04	0.022	0.028	0.032
	THROW	34	28	19	30	24	16	27	21	15	23	18	13	22	17	12	20	16	11
200	VELOCITY				1265	1425	1567	1039	1170	1286	769	869	952	678	679	840	606	648	750
	TOTAL PRESS				0.11	0.13	0.16	0.076	0.095	0.11	0.044	0.054	0.065	0.035	0.043	0.051	0.028	0.035	0.042
	THROW				34	27	18	31	24	17	27	21	15	22	20	14	23	18	13
225	VELOCITY				1424	1603	1763	1169	1316	1446	865	972	1071	763	860	945	682	770	845
	TOTAL PRESS				0.14	0.17	0.20	0.10	0.12	0.14	0.05	0.068	0.082	0.044	0.055	0.065	0.036	0.045	0.053
	THROW				39	31	21	35	28	19	30	24	17	28	22	16	26	21	14
250	VELOCITY				1582	1781	1959	1299	1462	1607	961	1080	1190	848	955	1050	758	856	938
	TOTAL PRESS				0.17	0.21	0.25	0.12	0.14	0.17	0.068	0.084	0.10	0.054	0.067	0.08	0.044	0.055	0.065
	THROW				43	34	23	38	31	21	33	26	18	31	25	17	29	23	16
275	VELOCITY							1429	1609	1768	1057	1188	1309	933	1051	1155	834	941	1031
	TOTAL PRESS							0.14	0.18	0.21	0.08	0.10	0.12	0.06	0.08	0.09	0.05	0.06	0.08
	THROW							42	34	23	37	29	20	34	27	19	32	25	18
300	VELOCITY							1559	1757	1929	1153	1297	1428	1018	1146	1260	910	1027	1125
	TOTAL PRESS							0.17	0.21	0.25	0.09	0.12	0.14	0.078	0.096	0.11	0.064	0.079	0.093
	THROW							46	37	25	40	32	22	37	30	21	35	28	19
325	VELOCITY							1689	1900	2090	1250	1405	1547	1103	1242	1365	986	1113	1219
	TOTAL PRESS							0.20	0.24	0.29	0.11	0.14	0.17	0.09	0.11	0.13	0.075	0.093	0.1
	THROW							50	40	27	43	34	24	40	32	33	38	30	21
350	VELOCITY										1346	1513	1666	1188	1337	1470	1062	1198	1313
	TOTAL PRESS										0.13	0.16	0.19	0.10	0.13	0.15	0.086	0.10	0.12
	THROW										47	37	26	43	35	24	41	32	23
375	VELOCITY										1442	1621	1785	1272	1433	1575	1138	1284	1407
	TOTAL PRESS										0.15	0.18	0.22	0.12	0.15	0.17	0.099	0.12	0.14
	THROW										50	40	28	47	37	26	44	35	24
400	VELOCITY										1538	1729	1904	1357	1529	1680	1213	1369	1500
	TOTAL PRESS										0.17	0.21	0.25	0.137	0.17	0.20	0.11	0.134	0.16
	THROW										53	42	30	49	40	28	47	37	26
425	VELOCITY													1442	1624	1785	1289	1455	1594
	TOTAL PRESS													0.15	0.19	0.22	0.12	0.15	0.18
	THROW													53	42	30	50	40	27
450	VELOCITY													1527	1720	1890	1365	1541	1688
	TOTAL PRESS													0.17	0.21	0.25	0.14	0.17	0.20
	THROW													56	44	31	53	42	29
475	VELOCITY																1441	1624	1782
	TOTAL PRESS																0.15	0.19	0.23
	THROW																56	44	31
500	VELOCITY																1517	1712	1876
	TOTAL PRESS																0.17	0.21	0.25
	THROW																59	47	32

RETURN PERFORMANCE DATA

PREFERRED SIZE

CFM	SIZE	10"*10" 12"*8" 16"*6" 26"*4"			12"*10" 20"*6" 24"*5" 30"*4"			12"*12" 14"*10" 18"*8" 24"*6"			14"*12" 16"*10" 20"*8" 28"*6"			14"*14" 16"*12" 20"*10" 24"*8" 34"*6"			16"*16" 18"*14" 22"*12" 26"*10" 32"*8"		
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	AK	0.43	0.38	0.35	0.50	0.44	0.40	0.68	0.64	0.6	0.78	0.75	0.72	0.98	0.94	0.91	1.3	1.24	1.2
50	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
	NC																		
75	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
100	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
125	VELOCITY	289	325	358															
	TOTAL PRESS	0.007	0.009	0.01															
	THROW	13	10	7															
150	VELOCITY	347	390	429	300	337	370												
	TOTAL PRESS	0.01	0.013	0.015	0.008	0.01	0.011												
	THROW	15	12	8	14	10	8												
175	VELOCITY	405	456	501	350	394	433	257	270	290									
	TOTAL PRESS	0.014	0.017	0.02	0.011	0.013	0.016	0.007	0.007	0.008									
	THROW	18	14	10	16	13	9	14	11	8									
200	VELOCITY	463	521	573	400	450	495	295	309	333									
	TOTAL PRESS	0.018	0.022	0.026	0.014	0.017	0.02	0.009	0.0094	0.011									
	THROW	20	16	11	19	15	10	16	12	9									
225	VELOCITY	520	586	644	450	506	556	331	348	375									
	TOTAL PRESS	0.022	0.028	0.033	0.018	0.02	0.025	0.011	0.012	0.013									
	THROW	23	18	13	21	17	12	18	14	10									
250	VELOCITY	578	651	716	500	563	618	368	386	416	321	333	350						
	TOTAL PRESS	0.028	0.034	0.04	0.022	0.027	0.03	0.013	0.014	0.016	0.011	0.012	0.0124						
	THROW	26	20	14	24	19	13	20	15	11	19	15	9						
275	VELOCITY	636	716	787	550	619	680	405	425	458	353	367	380						
	TOTAL PRESS	0.034	0.041	0.049	0.026	0.032	0.038	0.016	0.017	0.02	0.013	0.014	0.0150						
	THROW	28	22	15	26	20	14	22	17	12	21	16	9						
300	VELOCITY	698	782	859	600	675	742	441	465	500	385	400	416	304	319	330			
	TOTAL PRESS	0.04	0.05	0.058	0.031	0.038	0.045	0.019	0.021	0.023	0.015	0.016	0.017	0.01	0.012	0.0122			
	THROW	31	24	17	29	22	16	24	19	13	23	18	10	20	16	11			
325	VELOCITY	752	847	931	650	731	805	478	403	541	417	433	451	330	345	357			
	TOTAL PRESS	0.047	0.057	0.068	0.037	0.045	0.052	0.022	0.024	0.027	0.018	0.019	0.02	0.013	0.014	0.0142			
	THROW	33	26	18	31	24	17	26	20	14	25	19	11	22	17	12			
350	VELOCITY	810	912	1002	700	788	866	515	541	583	449	467	486	355	372	385	271	282	291
	TOTAL PRESS	0.054	0.066	0.078	0.042	0.051	0.06	0.026	0.028	0.031	0.021	0.022	0.023	0.015	0.016	0.0165	0.01	0.011	0.011
	THROW	36	28	20	33	26	18	28	22	15	27	21	12	24	18	13	21	16	11
375	VELOCITY	868	977	1074	750	844	928	552	580	625	482	500	520	381	398	412	290	302	315
	TOTAL PRESS	0.062	0.076	0.08	0.048	0.59	0.07	0.03	0.032	0.036	0.024	0.025	0.027	0.017	0.018	0.019	0.011	0.012	0.013
	THROW	38	30	21	36	28	20	31	23	15	29	22	13	26	20	13	22	17	12
400	VELOCITY	926	1042	1146	800	900	990	589	619	666	514	534	555	406	425	440	309	322	330
	TOTAL PRESS	0.07	0.086	0.102	0.055	0.067	0.079	0.033	0.036	0.04	0.027	0.029	0.03	0.019	0.02	0.021	0.013	0.014	0.014
	THROW	41	32	23	38	30	21	33	25	18	31	24	14	27	21	14	24	18	12
425	VELOCITY	984	1107	1217	850	957	1051	625	657	708	546	567	590	431	452	567	329	342	354
	TOTAL PRESS	0.079	0.097	0.115	0.62	0.077	0.09	0.038	0.04	0.046	0.03	0.032	0.043	0.021	0.023	0.024	0.014	0.015	0.016
	THROW	44	34	24	40	32	22	35	26	19	33	25	14	29	22	15	26	19	13
450	VELOCITY	1041	1173	1289	900	1013	1113	662	696	750	578	600	625	457	478	495	348	362	375
	TOTAL PRESS	0.088	0.11	0.129	0.07	0.084	0.10	0.042	0.045	0.051	0.034	0.036	0.038	0.024	0.025	0.027	0.016	0.017	0.018
	THROW	46	36	26	43	34	24	37	28	20	35	27	15	31	24	16	27	21	14
475	VELOCITY	1099	1238	1361	950	1069	1175	699	735	791	610	634	659	482	505	521	367	383	395
	TOTAL PRESS	0.098	0.12	0.14	0.077	0.094	0.11	0.047	0.05	0.057	0.037	0.04	0.042	0.026	0.028	0.029	0.018	0.019	0.02
	THROW	49	38	27	45	36	25	39	30	21	37	28	16	32	25	17	28	22	15
500	VELOCITY	1159	1303	1432	1000	1126	1237	736	773	833	642	667	694	508	531	549	387	403	416
	TOTAL PRESS	0.11	0.134	0.16	0.085	0.104	0.12	0.052	0.055	0.063	0.041	0.044	0.05	0.029	0.031	0.033	0.02	0.01	0.022
	THROW	51	40	29	48	38	26	41	31	22	39	24	17	34	26	18	30	23	16
550	VELOCITY	1273	1426	1575	1100	1238	1361	810	851	916	706	734	763	558	585	604	426	443	460
	TOTAL PRESS	0.13	0.16	0.19	0.102	0.125	0.15	0.062	0.067	0.08	0.05	0.053	0.056	0.035	0.037	0.04	0.024	0.025	0.026
	THROW	56	44	31	52	41	29	45	34	24	42	32	19	38	30	20	33	25	17

RETURN PERFORMANCE DATA

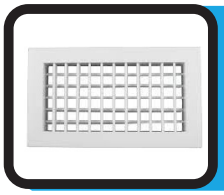
PREFERRED SIZE

CFM	SIZE	10"*8" 14"*6" 16"*5" 20"*4"			10"*10" 12"*8" 16"*6" 20"*5" 26"*4"			12"*10" 20"*6" 24"*5" 30"*4"			12"*12" 14"*10" 18"*8" 24"*6"			14"*12" 16"*10" 20"*8" 28"*6"			14"*14" 16"*12" 20"*10" 24"*8" 34"*6"		
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	AK	0.33	0.29	0.27	0.43	0.38	0.35	0.5	0.44	0.41	0.68	0.65	0.6	0.78	0.75	0.72	0.99	0.94	0.91
600	VELOCITY				1395	1579	1714	1200	1363	1463	882	923	1000	769	800	833	606	638	699
	TOTAL PRESS				0.16	0.20	0.23	0.12	0.15	0.17	0.073	0.078	0.09	0.06	0.062	0.066	0.041	0.044	0.046
	THROW				62	50	35	58	46	32	50	38	26	46	35	24	41	32	21
650	VELOCITY				1512	1710	1857	1300	1477	1585	956	1000	1083	833	867	903	657	692	714
	TOTAL PRESS				0.184	0.23	0.26	0.14	0.176	0.20	0.085	0.092	0.104	0.068	0.073	0.078	0.048	0.052	0.054
	THROW				67	54	37	36	50	35	54	41	29	50	38	26	44	34	23
700	VELOCITY							1400	1591	1707	1029	1077	1167	897	933	972	707	745	769
	TOTAL PRESS							0.164	0.204	0.23	0.098	0.11	0.12	0.08	0.084	0.09	0.055	0.059	0.062
	THROW							57	54	37	58	44	31	54	41	27	48	34	25
750	VELOCITY							1500	1705	1829	1103	1154	1250	962	1000	1042	756	791	824
	TOTAL PRESS							0.187	0.234	0.264	0.112	0.12	0.138	0.09	0.096	0.103	0.062	0.068	0.071
	THROW							72	57	40	62	47	33	58	44	30	51	40	27
800	VELOCITY										1176	1231	1733	1026	1067	1111	808	851	879
	TOTAL PRESS										0.127	0.137	0.156	0.102	0.11	0.12	0.07	0.077	0.081
	THROW										66	51	25	62	47	32	55	42	29
900	VELOCITY										1324	1385	1500	1154	1200	1250	909	951	989
	TOTAL PRESS										0.16	0.173	0.20	0.13	0.14	0.15	0.09	0.096	0.101
	THROW										74	57	40	69	53	36	62	47	32
1000	VELOCITY										1470	1538	1667	1282	1333	1389	1010	1064	1099
	TOTAL PRESS										0.196	0.212	0.24	0.16	0.17	0.18	0.11	0.12	0.124
	THROW										82	63	44	77	59	40	68	53	36
1100	VELOCITY													1410	1467	1528	1111	1170	1209
	TOTAL PRESS													0.19	0.20	0.22	0.134	0.142	0.15
	THROW													85	65	44	75	58	39
1200	VELOCITY													1538	1600	1667	1212	1277	1319
	TOTAL PRESS													0.224	0.24	0.26	0.155	0.168	0.176
	THROW													92	71	48	82	63	43
1300	VELOCITY																1313	1383	1429
	TOTAL PRESS																0.181	0.20	0.21
	THROW																89	68	46
1400	VELOCITY																1414	1489	1538
	TOTAL PRESS																0.21	0.23	0.24
	THROW																96	74	50
1500	VELOCITY																1515	1596	1648
	TOTAL PRESS																0.24	0.26	0.27
	THROW																103	79	53
1600	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
1700	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
1800	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
1900	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
2000	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
2400	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
2800	VELOCITY																		
	TOTAL PRESS																		
	THROW																		
3200	VELOCITY																		
	TOTAL PRESS																		
	THROW																		

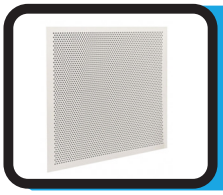
RETURN PERFORMANCE DATA

PREFERRED SIZE

CFM	SIZE	16"*16" 18"*14" 22"*12" 26"*10" 32"*8"			20"*14" 24"*12" 28"*10" 36"*8" 48"*6"			18"*18" 20"*16" 32"*10" 40"*8"			20"*20" 22"*18" 28"*14" 34"*12" 40"*10"			28"*18" 32"*16" 36"*14" 42"*12" 50"*10"			36"*16" 24"*24" 48"*12" 58"*10" 72"*8"		
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
	AK	1.29	1.24	1.2	1.39	1.34	1.29	1.59	1.53	1.48	2.0	1.93	1.86	2.51	2.4	2.34	2.57	3.5	3.36
600	VELOCITY	465	484	500	432	448	465	377	392	405	300	311	323						
	TOTAL PRESS	0.028	0.03	0.031	0.025	0.027	0.028	0.021	0.022	0.023	0.016	0.0164	0.017						
	THROW	36	28	19	35	26	18	32	25	17	29	22	15						
650	VELOCITY	504	524	542	468	485	504	409	425	439	325	337	349	258	271	278			
	TOTAL PRESS	0.0327	0.033	0.036	0.029	0.031	0.033	0.024	0.025	0.027	0.018	0.019	0.02	0.014	0.015	0.0151			
	THROW	39	30	20	38	29	20	35	27	18	31	24	16	28	22	15			
700	VELOCITY	543	565	583	405	522	543	440	458	473	350	363	376	279	292	299			
	TOTAL PRESS	0.037	0.04	0.042	0.034	0.035	0.038	0.028	0.03	0.031	0.021	0.022	0.023	0.016	0.017	0.0173			
	THROW	42	32	22	40	31	21	38	29	20	34	26	17	30	23	16			
750	VELOCITY	581	605	625	540	560	581	472	490	507	375	389	403	299	313	321			
	TOTAL PRESS	0.043	0.045	0.047	0.04	0.041	0.043	0.032	0.034	0.035	0.024	0.025	0.026	0.018	0.019	0.02			
	THROW	45	34	23	43	33	22	41	31	21	36	28	19	32	25	17			
800	VELOCITY	620	645	667	576	597	620	503	423	541	400	415	430	319	333	342			
	TOTAL PRESS	0.05	0.051	0.054	0.044	0.046	0.05	0.036	0.038	0.024	0.027	0.028	0.03	0.02	0.021	0.022			
	THROW	48	37	25	46	35	24	43	33	22	39	29	20	34	26	18			
900	VELOCITY	698	726	750	648	672	698	566	588	608	450	466	484	359	375	385	252	257	268
	TOTAL PRESS	0.061	0.064	0.067	0.055	0.057	0.061	0.045	0.048	0.05	0.034	0.035	0.037	0.026	0.027	0.028	0.017	0.0174	0.018
	THROW	54	41	28	52	40	27	49	37	25	43	33	22	39	30	20	32	25	17
1000	VELOCITY	775	806	833	719	746	775	629	654	676	500	518	538	398	417	427	280	286	298
	TOTAL PRESS	0.074	0.078	0.082	0.067	0.07	0.074	0.055	0.058	0.061	0.04	0.043	0.045	0.031	0.033	0.034	0.02	0.021	0.022
	THROW	60	46	31	58	44	30	54	41	28	48	37	25	43	33	22	36	27	19
1100	VELOCITY	853	887	917	791	821	853	692	719	743	550	570	591	438	458	470	308	314	327
	TOTAL PRESS	0.09	0.094	0.1	0.08	0.084	0.089	0.067	0.07	0.073	0.05	0.051	0.054	0.037	0.04	0.041	0.0247	0.025	0.026
	THROW	66	50	34	63	49	33	59	45	31	53	40	27	47	36	24	40	30	20
1200	VELOCITY	930	968	1000	863	896	930	755	784	811	600	622	645	478	500	513	336	343	357
	TOTAL PRESS	0.105	0.111	0.116	0.094	0.1	0.11	0.078	0.083	0.086	0.058	0.061	0.064	0.044	0.046	0.048	0.029	0.03	0.031
	THROW	72	50	37	69	53	36	65	49	34	58	44	30	52	40	27	43	33	22
1300	VELOCITY	1008	1048	1083	935	970	1008	818	850	878	650	674	699	518	542	556	364	371	389
	TOTAL PRESS	0.122	0.129	0.136	0.11	0.116	0.122	0.09	0.1	0.101	0.067	0.07	0.074	0.051	0.054	0.055	0.034	0.035	0.037
	THROW	78	60	40	75	57	39	70	54	36	63	48	32	56	43	29	47	35	24
1400	VELOCITY	1085	1129	1167	1007	1045	1085	881	915	946	700	725	753	558	583	598	392	400	417
	TOTAL PRESS	0.141	0.15	0.16	0.127	0.133	0.14	0.11	0.111	0.12	0.078	0.081	0.085	0.058	0.062	0.064	0.039	0.04	0.042
	THROW	84	64	43	81	62	42	76	58	39	67	51	35	60	46	31	50	38	26
1500	VELOCITY	1163	1210	1250	1079	1119	1163	943	980	1014	750	777	806	598	625	641	420	429	446
	TOTAL PRESS	0.161	0.17	0.18	0.144	0.152	0.161	0.096	0.126	0.132	0.088	0.093	0.097	0.067	0.07	0.0725	0.044	0.045	0.047
	THROW	90	69	47	87	66	45	81	62	42	72	55	37	64	49	33	54	41	28
1600	VELOCITY	1240	1290	1333	1151	1194	1240	1006	1046	1081	800	829	860	637	667	683	448	457	476
	TOTAL PRESS	0.182	0.192	0.2	0.163	0.172	0.182	0.135	0.143	0.15	0.1	0.105	0.11	0.075	0.079	0.082	0.05	0.051	0.053
	THROW	96	73	50	92	71	48	86	66	45	77	59	40	69	53	36	58	44	30
1700	VELOCITY	1318	1371	1417	1223	1269	1318	1069	1111	1149	850	881	914	677	708	726	476	486	506
	TOTAL PRESS	0.204	0.22	0.23	0.183	0.193	0.204	0.152	0.16	0.168	0.112	0.117	0.123	0.084	0.089	0.092	0.056	0.057	0.06
	THROW	102	78	53	98	75	51	92	70	48	82	62	42	73	56	38	61	48	32
1800	VELOCITY	1395	1452	1500	1295	1343	1395	1132	1176	1216	900	933	968	717	750	769	504	514	536
	TOTAL PRESS	0.217	0.24	0.253	0.205	0.216	0.217	0.17	0.18	0.187	0.125	0.131	0.137	0.094	0.1	0.102	0.062	0.063	0.067
	THROW	108	82	56	104	79	54	97	74	50	87	66	45	77	59	40	65	49	33
1900	VELOCITY	1473	1532	1583	1367	1418	1473	1195	1242	1284	950	984	1022	757	792	812	532	543	565
	TOTAL PRESS	0.253	0.268	0.28	0.227	0.24	0.253	0.188	0.198	0.21	0.138	0.145	0.152	0.104	0.11	0.113	0.069	0.07	0.073
	THROW	114	87	60	110	84	57	102	78	53	91	70	47	82	63	42	68	52	35
2000	VELOCITY	1550	1612	1667	1439	1493	1550	1258	1307	1351	1000	1036	1075	797	833	855	560	571	595
	TOTAL PRESS	0.28	0.3	0.31	0.25	0.26	0.28	0.21	0.22	0.23	0.152	0.16	0.17	0.115	0.12	0.125	0.075	0.077	0.081
	THROW	120	92	62	115	88	60	108	82	56	96	73	50	86	66	45	72	55	37
2400	VELOCITY							1509	1569	1622	1200	1244	1290	956	1000	1026	672	686	714
	TOTAL PRESS							0.293	0.31	0.33	0.22	0.23	0.24	0.16	0.17	0.18	0.106	0.11	0.114
	THROW							129	99	67	115	88	60	103	79	53	86	65	44
2800	VELOCITY										1400	1451	1505	1116	1167	1197	784	800	833
	TOTAL PRESS										0.29	0.3	0.32	0.216	0.23	0.24	0.14	0.145	0.15
	THROW										135	103	70	120	92	62	101	76	52
3200	VELOCITY													1275	1333	1368	896	914	952
	TOTAL PRESS													0.28	0.29	0.3	0.18	0.186	0.195
	THROW													137	105	71	115	82	59



GRILLES AND REGISTERS



PERFORATED CEILING DIFFUSERS

SQUARE & RECTANGULAR & Circular CEILING DIFFUSERS

GRAVITY SHUTTERS

LINEAR BAR GRILLES&REGISTERS

TRANSFER GRILLES

Linear Slot Diffusers

DISC VALVES

EXTERNAL LOUVERS

SWIRL DIFFUSERS

SAND TRAP LOUVERS

VOLUME CONTROL DAMPERS

JET NOZZLES

CURTAIN FIRE DAMPERS

JET DIFFUSERS

SMOKE MOTORIZED DAMPERS

Contact us

Website: www.Pro-airoutlets.com

E-mail: info@Pro-airoutlets.com

Phone : 01273649465 - 01001965968

Address : #8 Mohamed Omar Street, off Taha Hussein Street, fourth floor, Apartment 7, New Nozha