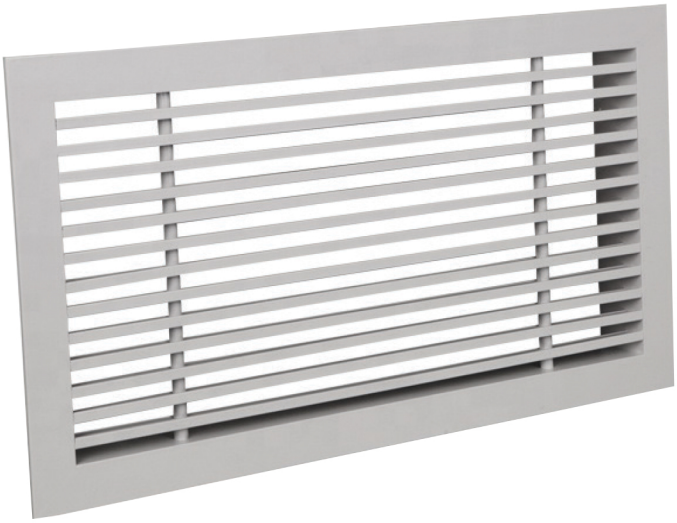
LINEAR BAR GRILLS & REGISTERS

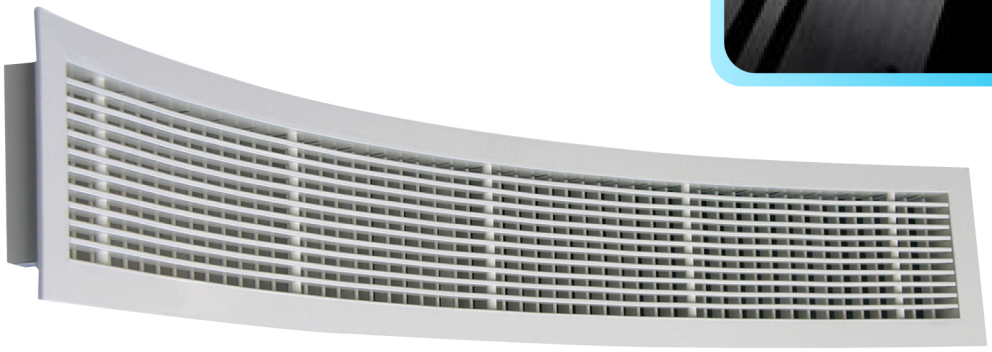
MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

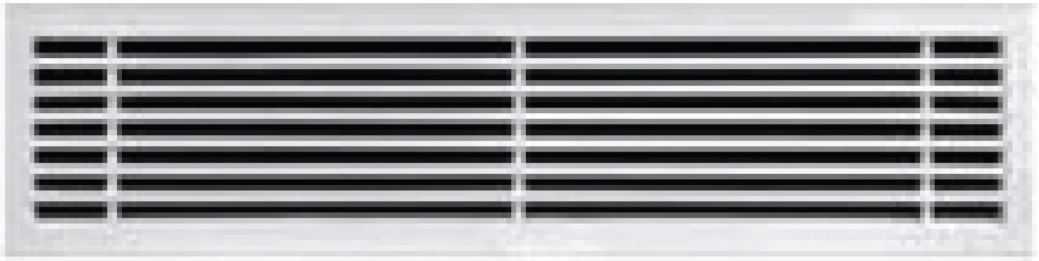
SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)





Efficient Air Distribution System

LINEAR BAR GRILLS & REGISTERS



Model: AP-SLG-DD - Double Deflection Linear Bar Grill

Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of the frame by nylon bushes. These blades can be adjusted manually and individually in the vertical plane to obtain optimum air distribution.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Total structure is manufactured by mechanical assembly, assuring rigidity and to maintain straight line appearance.

LINEAR BAR GRILLS & DIFFUSER

Model: AP-SLR-DD - Double Deflection Linear Bar Registers

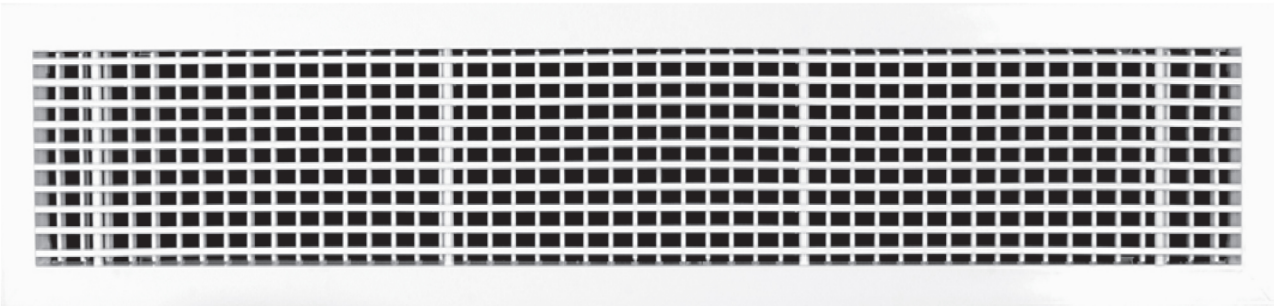
Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.
- **Damper frame and blades:** High quality extruded aluminum profiles with natural aluminum finish. Black matt finish as option.

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of the frame by nylon bushes. These blades can be adjusted manually and individually in the vertical plane to obtain optimum air distribution.
- Grilles are fixed rigidly with an opposed blade damper by grippers to ensure positive control over the air stream. Damper blades can be screw operated from the face opening of the grill.
- Provided with alignment strip for continuous appearance. Foam gasket is sealed around the back of the frame to avoid air leakage.

Model: AP-RLG-D – Single Deflection Linear Bar Grills.



LINEAR BAR GRILLS & REGISTERS

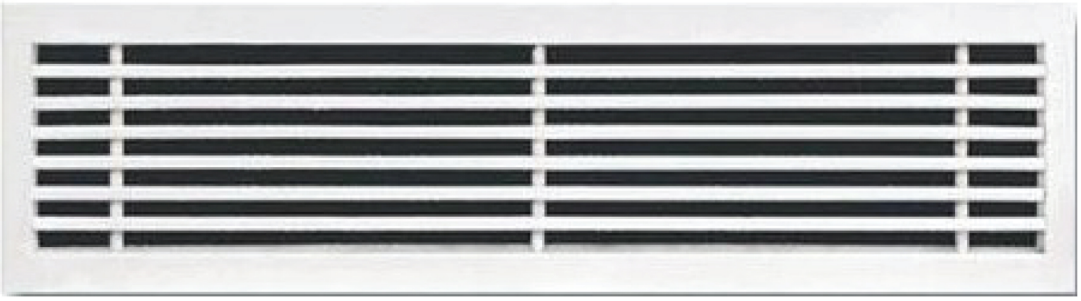
Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Total structure is manufactured by mechanical assembly, assuring rigidity and to maintain straight line appearance.

Model: AP-RLR-D – Single Deflection Linear Bar Registers.



Construction:

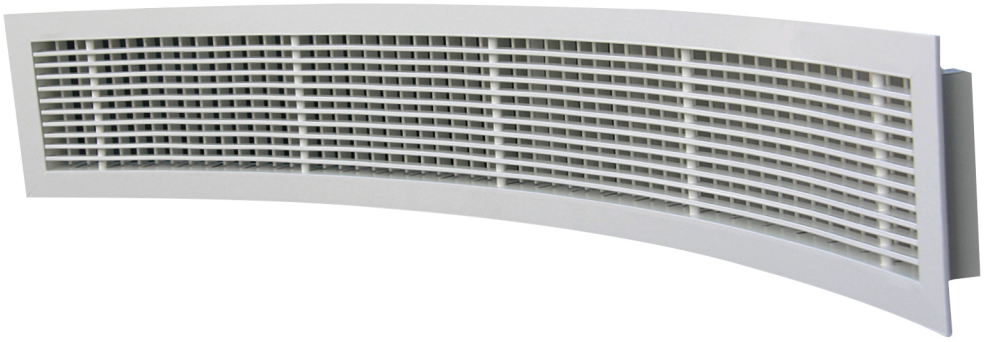
- **Frame:** High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.
- **Damper Frame and Blades:** High quality extruded aluminum profiles with natural aluminum finish. Black matt finish as option.

LINEAR BAR GRILLS & DIFFUSER

Description:

- Frame and face bars are of high quality extruded aluminum profile construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Grilles are fixed rigidly with opposed blade damper by grippers. This ensures positive control over the air stream. Damper blades can be screw operated from the face opening.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.

Model: AP-SLG(C)-DD – Double Deflection Curved Linear Bar Grill:



Description:

- **Frame:** High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.

Description:

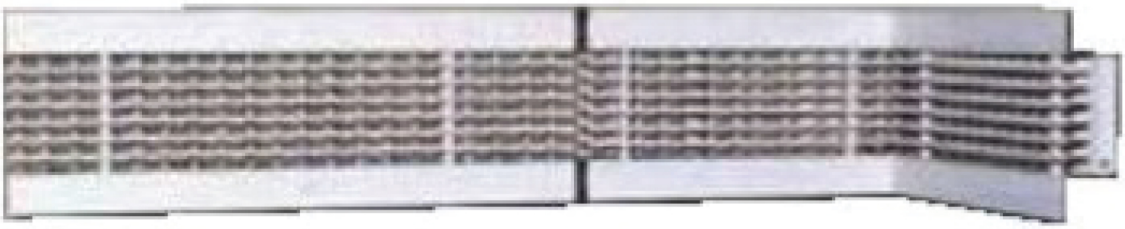
- Frame and face bars are of high quality extruded aluminum profile construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of frame by nylon blushing. These blades can be adjusted manually and individually in the vertical plain to obtain.
- Optimum Air Distribution.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.

LINEAR BAR GRILLS & REGISTERS

- Curved linear bar grills are available up to a length of 3 meter with minimum radius of curvature of 1 meter.
- Available without damper. Dampers can be provided to use in plenum boxes as option.
- Foam Gasket is sealed around the back of the frame option to avoid air leakage
- Standard application on curved wall.

Model: AP-RLG-C-DD same as **AP-SLG-C-DD** without vertical aerofoil blades.

STANDARD FINISHES AND MITERED OPTIONS



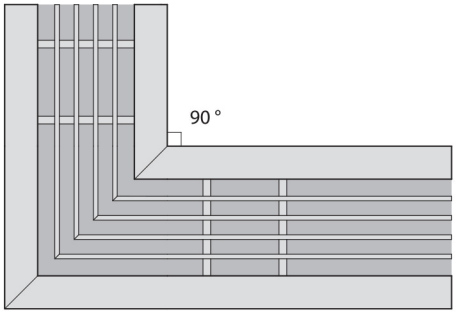
Standard Finishes:

- Natural anodized aluminium finish. Powder coated colour finish as per RAL colour codes. Flexibility of finishing is available as option.

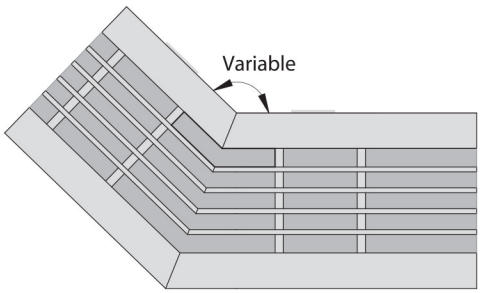
LINEAR BAR GRILLS & DIFFUSER

OPTIONAL MITERED CORNERS

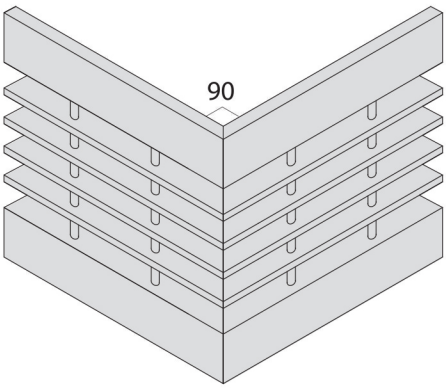
- **90 ° Horizontal -** Standard 90° horizontal metered corner available for floor, sill and ceiling applications in 0° , 15° - 1 way throw and 15° – 2 way throw without damper.



- **Variable angle (90° - 180°) and 90° Vertical Inside** – Special horizontal metered corner selection available for floor, sill and ceiling applications includes an angle greater than 90° and less than 180° available in 0° , 15° – 1 way throw and 15° -2 way throw without damper.



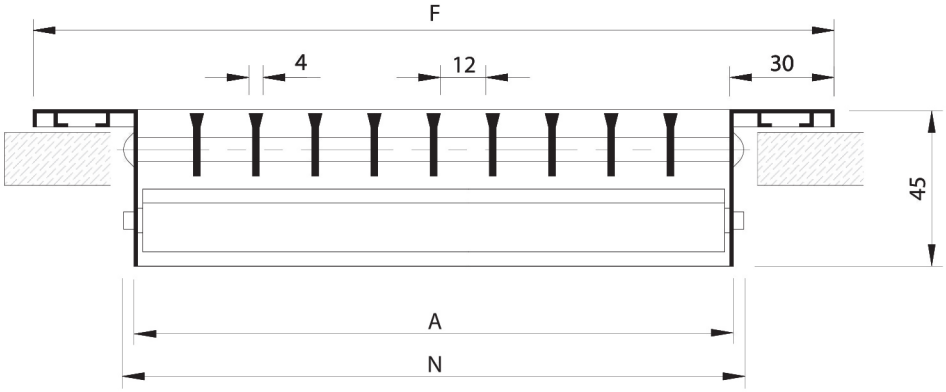
- **90 ° Vertical Outside –** metered corner are available for wall application at the junction of two outside walls with a standard angle of 90° . Available in 0, 15° - 1 way throw and 15° - 2 way throw without damper.



LINEAR BAR GRILLS & REGISTERS

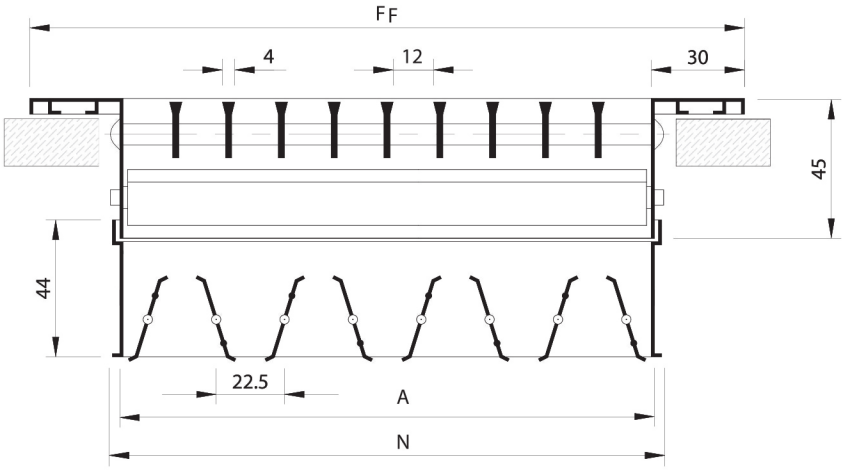
Linear Bar Grills with Vertical Rear Blades

- **Model: AP-SLG-DD**



Bar Spacing = 12 mm (standard)

- **Model: AP-SLR-DD**



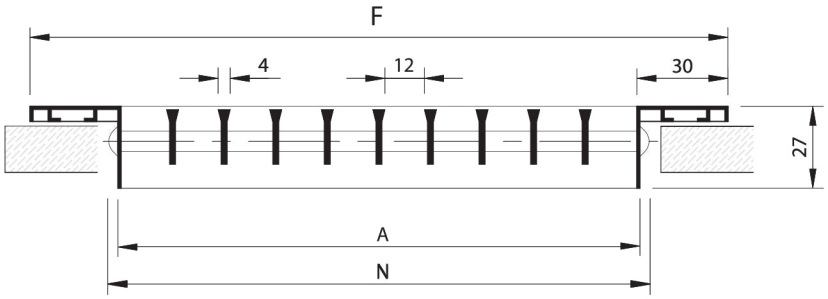
Bar Spacing = 12 mm (standard)

- Fixed horizontal front bar blades, adjustable vertical rear blades w/o Opposed Blade Damper
- Grills called Supply Air Bar Grill and coded as AP-SLG-DD are usually supplied w/o Opposed Blade Damper.
- Grills called Supply Air Bar Register and coded as AP-SLR-DD.

LINEAR BAR GRILLS & DIFFUSER

Linear Bar Grills without Rear Blades

- **Model: AP-RLG-D**

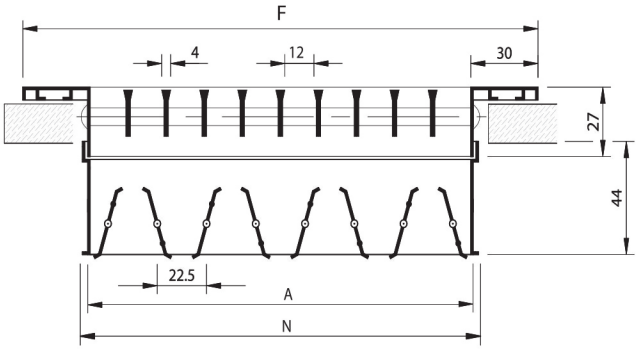


Bar Spacing = 12 mm (standard)

- AP-RLG-D is Return Air Linear Bar Grill, w/o rear blades and Opposed Blade Damper.
- Grills called Return Air Linear Bar Grill and coded as AP-RLG-D are usually supplied w/o Opposed Blade Damper.

Linear Bar Registers without Rear Blades

- **Model: AP-RLR-D**



Bar Spacing = 12 mm (standard)

- AP-RLR-D is Return Air Linear Bar Register, fixed horizontal front bar blades, w/o rear blades and c/w Opposed Blade Damper.
- Registers called Return Air Linear Bar Register and coded as AP-RLR-D are always equipped with Opposed Blade Damper.

N- Nominal/Listed size =Length (L) x Height (H)
A -Actual size = (L -10) x (H-10)
F- Face size = (L+50) x (H+50)

- Linear Grills/Registers approximately 10mm less than the Nominal/Listed size.
- All dimensions are mm and subject to +/-1 mm tolerance

LINEARBAR GRILLS & REGISTERS

DOUBLE DEFLECTION LINEAR BAR REGISTERS (15°1 Way & 0°)
Model: AP-SLR-DD/AP-SLG-DD-Air Flow Data

Listed size in mm x mm	Face Value	2.75	3.25	4	4.5	5	5.5	6	6.5
	Ps mm H2O	2.16	3.1	4.32	5.59	7.11	8.89	10.92	12.95
250x100/200x125	CFM	150	180	210	240	270	300	330	360
	M³/sec	0.071	0.085	0.099	0.113	0.127	0.142	0.156	0.17
150x150	NC	18	22	25	28	32	36	39	41
200x150/250x125	CFM	180	210	240	280	320	350	390	420
	M³/sec	0.085	0.099	0.113	0.32	0.151	0.165	0.184	0.198
300x100	NC	17	21	25	29	32	36	38	40
250x150/300x125	CFM	220	260	210	350	400	440	490	530
	M³/sec	0.104	0.123	0.146	0.165	0.189	.0.208	0.231	0.25
400x100	NC	19	23	28	31	34	38	41	43
300x150/350x125	CFM	240	290	340	300	440	490	540	590
	M³/sec	0.1132	0.137	0.161	0.184	0.208	0.231	0.255	0.279
450x100	NC	18	23	27	30	33	37	40	43
250x200/350x150	CFM	270	320	370	420	480	530	590	640
	M³/sec	0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125/500x100	NC	16	20	24	27	31	34	38	41
250x250/ 300x200	CFM	310	370	430	490	550	610	680	740
400x150/500x125	M³/sec	0.146	0.165	0.203	0.231	0.259	0.288	321	0.349
600x100	NC	18	22	26	29	33	37	39	42
300x250/450x150	CFM	360	440	510	580	660	730	810	800
500x150/600x125	M³/sec	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	18	23	27	30	34	37	40	42
300x300/350x250	CFM	420	500	590	670	750	840	930	1020
	M³/sec	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200/600x150	NC	< 15	18	26	30	33	37	40	43
350x300/400x250	CFM	450	540	630	720	810	900	1000	1090
	M³/sec	0.213	0.256	0.297	0.34	0.382	0.425	0.472	0.514
500x200/750x150	NC	15	19	24	28	32	36	40	43
350x350/400x300	CFM	510	620	820	820	930	1030	1140	1240
500x250/600x200	M³/sec	0.241	0.293	0.34	0.387	0.439	0.486	0.538	0.586
900x150	NC	18	23	27	32	35	40	43	46
400x400/500x300	CFM	580	700	820	940	1050	1170	1290	1400
	M³/sec	0.274	0.331	0.387	0.444	0.469	0.553	0.609	0.661
600x250/800x200	NC	15	20	25	30	37	41	44	47
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
700x250/900x200	M³/sec	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	19	25	29	35	38	42	45	48
450x450/500x400	CFM	700	840	980	1120	1270	1400	1550	1690
750x250	M³/sec	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	19	24	28	33	36	38	42	46
500x500/550/450	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300/800x250	M³/sec	0.378	0.458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	21	26	30	36	41	43	46	48

- Data based on one meter unit length of the grill with damper in full open position
- Face velocity is measured in m/sec.
- Ps- Static pressure loss is in mm of H2O
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 and 0.25 m/sec.
- NC based on a room attenuation of 10 dB

LINEAR BAR GRILLS & REGISTERS

DOUBLE DEFLECTION LINEAR BAR REGISTERS (15°1 Way & 0°)
Model: AP-SLR-DD/AP-SLG-DD-Air Flow Data

With in mm Ak in m²	Face Velocity in m/sec	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°
		3.5	3.5	3.5	4	4	4	4.5	4.5	4.5	5	5	5
50	Cfm	290	296	296	330	339	339	373	381	381	413	423	423
	M³/sec	0.137	0.14	0.14	0.156	0.16	0.16	0.176	0.18	0.18	0.195	0.2	0.2
0.039	Ps in mm H2o	0.25	0.25	0.23	0.32	0.31	0.28	0.4	0.99	0.96	0.51	0.5	0.46
	Throw in m	4.3-5.2-7.3	4.5-5.4-7.7	4.6-5.6-7.9	4.6-5.5-7.6	4.8-5.8-8.1	4.9-5.6-8.3	4.9-8.8-8.2	5.1-6.1-8.9	5.4-6.4-9.3	4.9-6.0-8.5	5.2-6.4-9.3	5.5-6.8-9.8
	NC	16	17	17	22	22	22	25	25	25	30	31	31
100	Cfm	498	483	483	500	550	550	563	620	620	625	688	688
	M³/sec	0.207	0.228	0.228	0.236	0.26	0.26	0.266	0.293	0.293	0.295	0.325	0.325
0.059	Ps in mm H2o	0.3	0.3	0.28	0.39	0.38	0.35	0.51	0.5	0.46	0.61	0.6	0.56
	Throw in m	5.2-6.8-5	5.4-6.2-9	5.6-6.4-9.3	5.5-6.7-9.1	5.8-7.9-7	5.9-7.2-10	5.8-7.3-10	6.1-7.5-10.8	6.4-8.1-11.2	6.7-6-10.7	6.4-8.1-11.7	6.8-8.6-12.4
	NC	17	18	18	22	23	23	27	27	27	31	32	32
150	Cfm	578	652	652	660	745	745	743	838	838	825	932	932
	M³/sec	0.273	0.308	0.308	0.312	0.352	0.352	0.351	0.396	0.396	0.39	0.44	0.44
0.078	Ps in mm H2o	0.36	0.36	0.33	0.46	0.45	0.42	0.58	0.57	0.53	0.71	0.7	0.65
	Throw in m	5.8-7.3-10	6.7-6.10-6	6.2-7.8-11	6.4-8-10.7	6.7-8.4-11.4	6.9-8.7-11.7	6.7-8.5-11.6	7.8-9.12.5	7.4-9.3-13	7.8-8-12.2	7.4-9.9-13.3	7.8-9.8-14
	NC	17	18	18	23	24	24	28	29	29	32	34	34
200	Cfm	718	824	824	821	940	940	925	1058	1058	1022	1175	1175
	M³/sec	0.339	0.389	0.389	0.388	0.444	0.444	0.437	0.499	0.499	0.485	0.555	0.555
0.097	Ps in mm H2o	0.39	0.39	0.36	0.53	0.52	0.48	0.66	0.65	0.6	0.91	0.9	0.84
	Throw in m	6.7-8-11.9	6.9-8.3-12	7.1-8.5-12.3	7.3-8.8-11.9	7.7-9.2-12.7	7.9-9.5-13	7.6-9.5-12.8	8.9-9-13.8	8.4-10.4-14.5	8-9.8-13.7	8.5-10.4-15	9.11-15.8
	NC	21	21	21	26	26	26	31	32	32	35	36	36
250	Cfm	860	993	993	982	1135	1135	1105	1277	1277	1228	1419	1419
	M³/sec	0.406	0.469	0.469	0.464	0.536	0.536	0.522	0.603	0.603	0.58	0.67	0.67
0.116	Ps in mm H2o	0.43	0.42	39	0.58	0.5	0.52	0.76	0.77	0.7	0.94	0.92	0.86
	Throw in m	7.3-8.8-12.2	7.6-9.2-12.9	7.8-9.5-13.3	8.9-5-13.1	8.4-10-14	8.6-10.3-14.4	8.2-10-14	8.6-10.5-15	9-11-15.9	8.5-10.7-15	9-11.3-16.4	9.5-12-17.4
	NC	25	27	27	31	31	34	35	35	35	37	40	40
300	Cfm	1008	1200	1200	1125	1372	1372	1295	1543	1543	1440	1715	1715
	M³/sec	0.476	0.567	0.567	0.544	0.648	0.648	0.612	0.73	0.73	0.68	0.8	0.8
0.136	Ps in mm H2o	0.47	0.47	0.44	0.64	0.64	0.99	0.85	0.84	0.78	1.02	1	0.94
	Throw in m	7.9-9.8-19.1	8.2-10.2-14	8.4-10.5-14.3	8.5-10.4-14	8.9-11-15	9.2-11.2-15.4	8.8-11-15	9.2-11.6-16	9.6-12.2-17	9.1-11.6-16	9.6-12.3-17.6	10.2-13-18.6
	NC	28	30	30	32	33	33	35	37	37	40	42	42

- Data based on one meter unit length of the grill with damper in full open position
- Face velocity is measured in m/sec.
- Ps- Static pressure loss is in mm of H2O
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 and 0.25 m/sec.
- NC based on a room attenuation of 10 dB

LINEARBAR GRILLS & REGISTERS

SINGLE DEFLECTION LINEAR BAR REGISTERS (15° Way & 0°)
Model: AP-RLR-DD/AP-RLG-DD-Air Flow Data

Nominal Width mm		15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°
50	Cfm	332	332	332	417	417	417	500	500	500	585	585	585	667	667	667	750	750	750
	M^3/sec.	0.157	0.157	0.157	0.197	0.197	0.197	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354
	Ps in mm H2O	0.48	46	0.43	0.74	0.72	0.69	1.07	1.03	0.99	1.47	1.42	1.37	1.91	1.88	1.83	2.41	2.32	2.23
	NC	<15	<15	<15	18	<18	17	26	25	24	32	31	30	36	31	33	42	40	38
100	Cfm	417	417	417	500	500	500	585	585	585	667	667	667	750	750	750	833	833	833
	M^3/sec.	0.197	0.197	0.197	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393
	Ps in mm H2O	0.51	0.48	0.45	0.71	0.69	0.66	0.97	0.93	0.89	1.27	1.2	1.14	1.6	1.55	1.48	1.98	1.88	1.78
	NC	15	<15	<15	20	19	18	27	24	23	32	31	31	35	34	33	40	38	36
150	Cfm	500	500	500	585	585	585	667	667	667	750	750	750	833	833	833	1000	1000	1000
	M^3/sec.	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472
	Ps in mm H2O	0.51	0.48	0.45	0.69	0.67	0.64	0.89	0.86	0.81	1.14	1.1	1.04	1.4	1.34	1.27	2.01	1.92	1.83
	NC	17	15	15	22	20	17	28	27	26	32	31	28	34	31	30	38	37	36
200	Cfm	585	585	585	667	667	667	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167
	M^3/sec.	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551
	Ps in mm H2O	0.48	0.45	0.43	0.64	0.64	0.64	0.81	0.78	0.65	0.99	0.99	0.91	1.42	1.37	1.4	1.91	1.85	1.8
	NC	16	17	17	23	23	22	26	25	24	32	30	27	35	34	33	40	38	37
250	Cfm	667	667	667	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167	1332	1332	1332
	M^3/sec.	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551	0.629	0.629	0.629
	Ps in mm H2O	0.48	0.45	0.43	0.61	0.59	0.56	0.74	0.71	0.66	1.07	1.02	0.94	1.45	1.36	1.27	1.9	1.79	1.67
	NC	19	19	19	23	22	21	25	24	23	31	30	29	35	33	32	40	38	36
300	Cfm	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167	1333	1333	1330	1500	1500	1500
	M^3/sec.	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551	0.629	0.629	0.629	0.708	0.708	0.708
	Ps in mm H2O	0.5	0.48	0.45	0.64	0.6	0.58	0.77	0.74	0.69	1.13	1.05	0.98	1.52	1.45	1.32	2	1.8	1.7
	NC	20	19	19	25	23	22	27	25	24	31	30	28	38	37	36	44	42	40

- Data based on one meter unit length of the grill.
- Ps- Static pressure loss is in mm of H2O
- NC based on a room attenuation of 10 dB.

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