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FLOW BAR DIFFUSER



FLOW BAR DIFFUSER

HIDDEN FLANGE

FLOW BAR DIFFUSER

CONSTRUCTION:

Frame: High quality extruded aluminium profile of 1.2mm thickness.

Deflector: Heavy duty adjustable Aluminium profile.

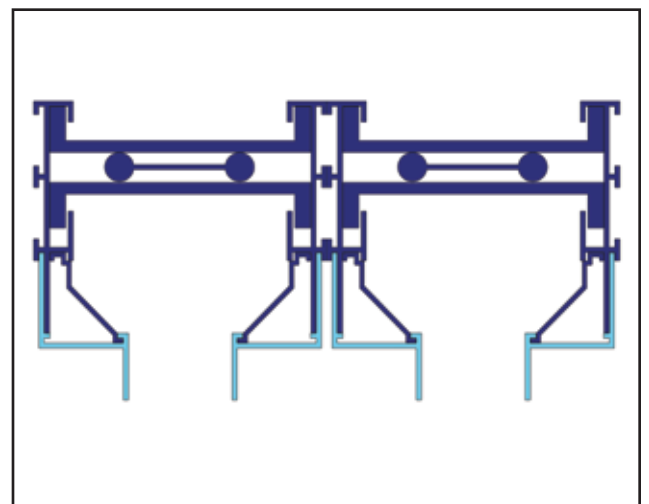
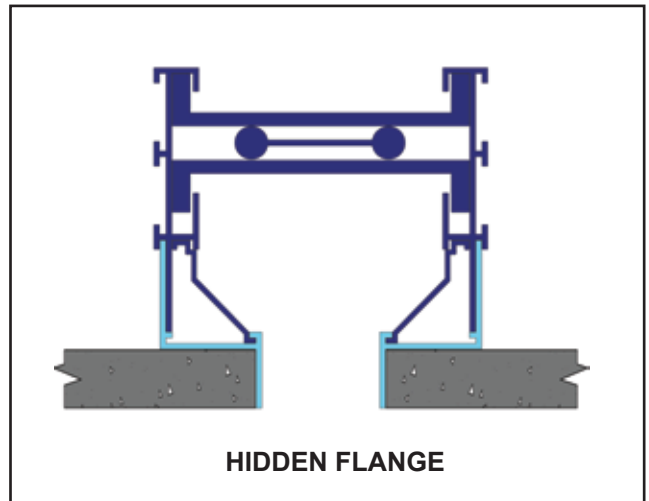
U-Channel: Spring loaded Aluminium channels to hold deflector.

Side deflector: Angled aluminium profile to guide airflow.



DESCRIPTION:

- **Airflowac** Flowbar Diffuser is specially designed for **hidden flange** application. Its enhanced performance coupled with special design that blends seamlessly into the ceiling makes it a fine choice for interior designers to suit contemporary architectural demands.
- It is designed for ceiling mounted applications. Side and center flange will remain invisible for both single and double slot opening. The view of a black opening into the ceiling gives a high-class finish to the building interiors.
- Flowbar Diffuser can easily handle huge air volumes per slot opening without increasing the pressure drop or NC level as compared to regular slot diffuser.
- FLOW BAR I is equipped with an adjustable flat deflector profile. It can be moved horizontally on both directions (left or right) which helps in discharging air in a horizontal pattern. Air tends to attach itself with the ceiling due to Coanda effect as it travels horizontally.
- Slot opening up to 2 slots are available. The deflector is sandwiched between U-Channels to control the direction of air flow. The U channels are spring loaded for smooth operation of deflector.
- Special side deflectors are provided to channel airflow smoothly towards the opening thereby reducing the pressure drop significantly and subsequently the noise level.
- White frame with black interior makes the finish more elegant.



- Applications include shopping malls, exhibition halls, office spaces, airports, hotels and so on.

FLOW BAR DIFFUSER

HIDDEN FLANGE

STANDARD FINISHES:

- White powder coated frame as per RAL color code 9010/9016 with black interior as standard.
- Special RAL color powder coating is optional.
- Anodized finish

OPTIONS:

1. SLOT OPENING: 25mm, 38mm, 50mm, 63mm and 75mm
2. Black perforated sheet fixed at the neck to reduce ceiling visibility.

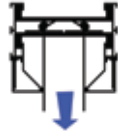
END CAP OPTIONS:



OPEN END



WITH DUMMY



FLOW BAR DIFFUSER

HIDDEN FLANGE

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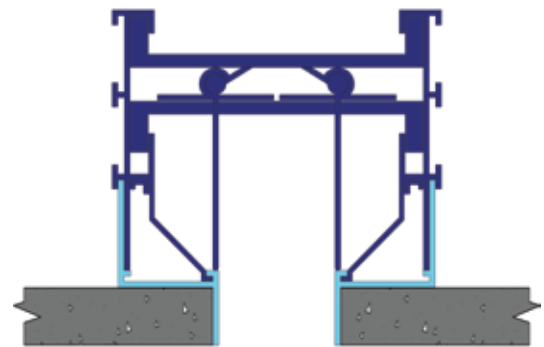
U-Channel: Spring loaded Aluminium channels to hold deflector.

Side deflector: Angled aluminium profile to guide airflow.

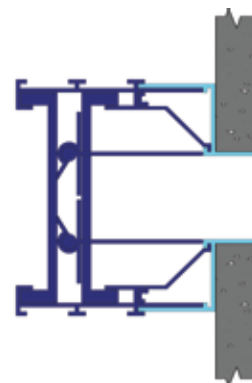


DESCRIPTION:

- ACEVAC Flowbar Diffuser is specially designed for **hidden flange** application. Its enhanced performance coupled with special design that blends seamlessly into the ceiling makes it a fine choice for interior designers to suit contemporary architectural demands.
- It can be used for high ceiling applications, as an alternative to air- curtains near huge windows/ facades to prevent the heat infiltration. It may also be used for wall mounted application where Jet Flow is required.
- In both the above cases side and center flange will remain invisible for both single and double slot opening. The view of a black opening into the ceiling gives a high-class finish to the building interiors.
- Flowbar Diffuser can easily handle huge air volumes per slot opening without increasing the pressure drop or NC level as compared to regular slot diffuser.
- FLOWBAR is equipped with two adjustable flat deflector profiles which guides the air to follow Jet throw pattern.
- Slot opening up to 2 slots are available.
- Applications include shopping malls, exhibition halls, office spaces, airports, hotels and so on.
- The deflector blades can be adjusted to control the direction of airflow.
- White frame with black interior makes the finish more elegant.



CEILING MOUNTED



WALL MOUNTED

FLOW BAR DIFFUSER

HIDDEN FLANGE

STANDARD FINISHES:

- White powder coated frame as per RAL color code 9010/9016 with black interior as standard.
- Special RAL color powder coating is optional.
- Anodized finish

SLOT OPENING OPTIONS:

- 25mm, 38mm, 50mm, 63mm and 75mm.

END CAP OPTIONS:



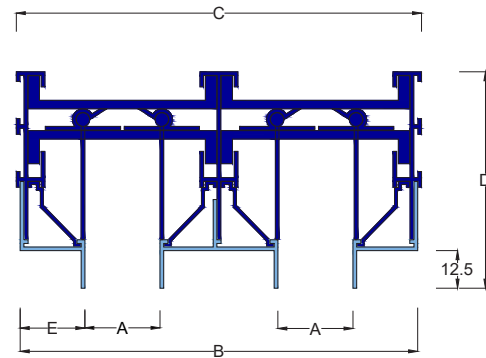
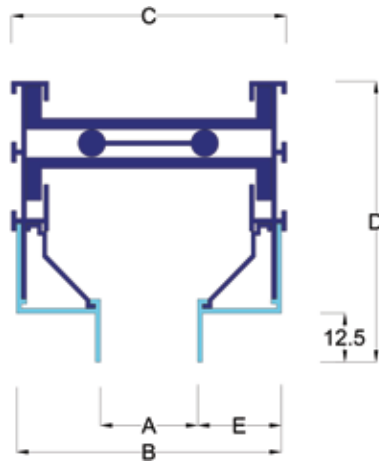
OPEN END



WITH DUMMY

FLOW BAR DIFFUSER

DIMENSION DETAILS:



1 SLOT:

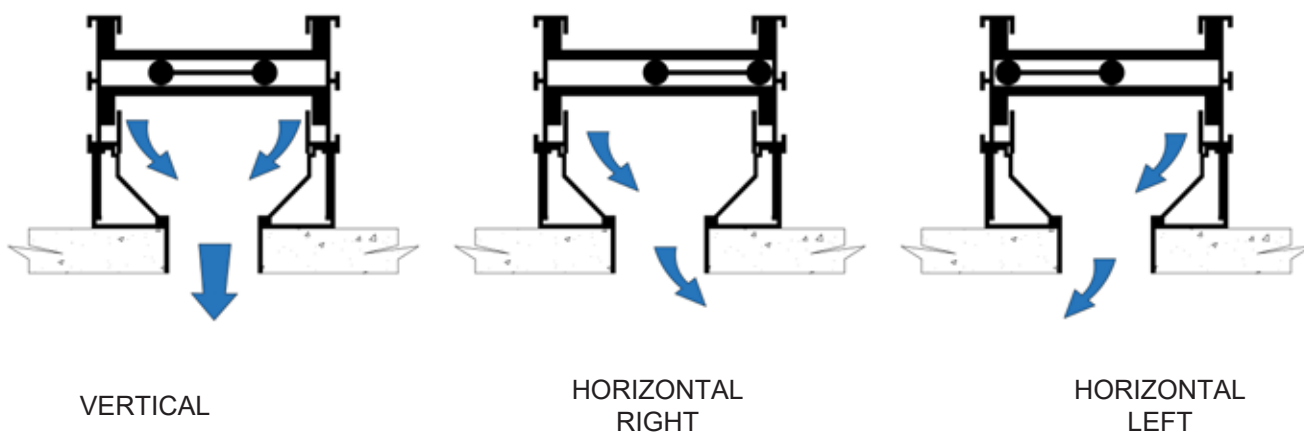
SLOT OPENING	A	B	C	D	E
25MM	25	68	71	72	21.5
38MM	38	81	84	72	21.5
50MM	50	117	119	72	33.5
63MM	63	131	133	72	33.5
75MM	75	142	145	72	33.5

2 SLOT:

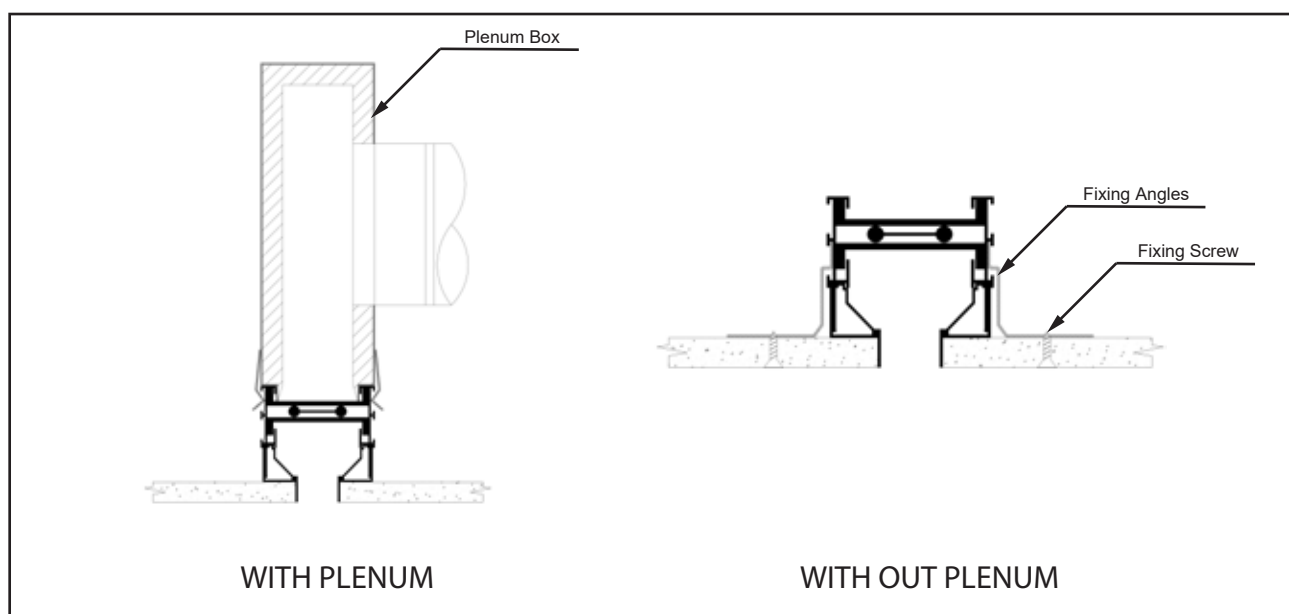
SLOT OPENING	A	B	C	D	E
25MM	25	133	135	72	21.5
38MM	38	159	161	72	21.5
50MM	50	231	233	72	33.5
63MM	63	258	260	72	33.5
75MM	75	281	283	72	33.5

FLOW BAR DIFFUSER

AIR FLOW PATTERN:



FIXING DETAILS:

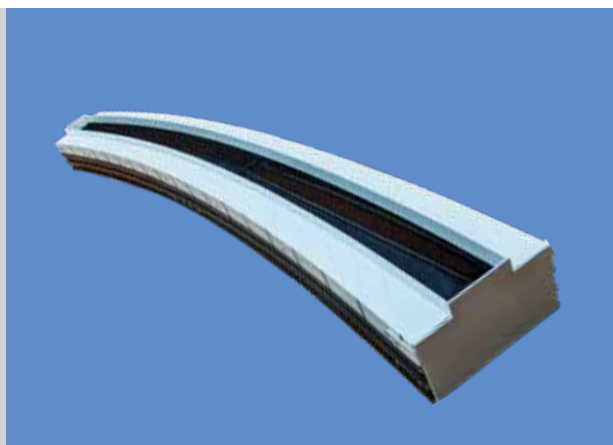


CURVED FLOWBAR DIFFUSER (MODEL: AFBD-3-C):

DESCRIPTION:

- **Airflowac** Curved flowbar diffusers are available with a minimum radius of curvature of 3 meter.
- Deflector shall be factory installed such that air flows inside the direction of curvature.

(Note: Please get in touch with our technical support team at the time of placing order to get more details).





FLOW BAR DIFFUSER

VISIBLE FLANGE

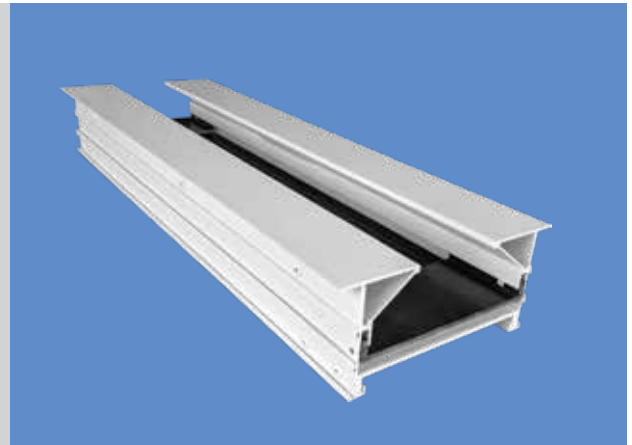
CONSTRUCTION:

Frame: High quality extruded aluminium profile of 1.2mm thickness.

Deflector: Heavy duty adjustable Aluminium profile.

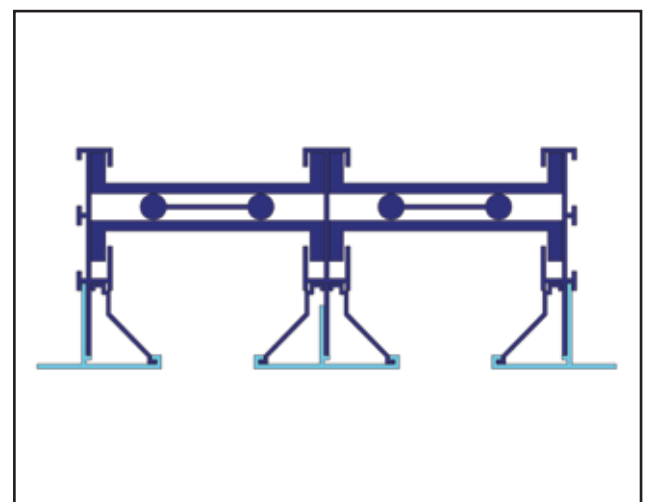
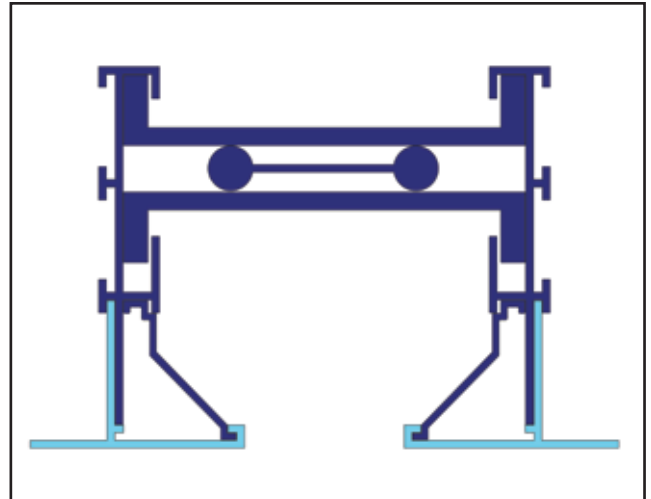
U-Channel: Spring loaded Aluminium channels to hold deflector.

Side deflector: Angled aluminium profile to guide airflow.



DESCRIPTION:

- **AirflowAC** Flowbar Diffuser is designed for flanged, ceiling mounted applications. The view of a black opening into the ceiling gives a high-class finish to the building interiors.
- Flowbar Diffuser can easily handle huge air volumes without increasing the pressure drop or NC level as compared to regular slot diffuser.
- FLOWBAR is equipped with an adjustable flat deflector profile. It can be moved horizontally on both directions (left or right) which helps in discharging air in a horizontal pattern. Air tends to attach itself with the ceiling due to Coanda effect as it travels horizontally.
- Slot opening up to 2 slots are available. The deflector is sandwiched between U-Channels to control the direction of air flow. The U channels are spring loaded for smooth operation of deflector.
- Special side deflectors are provided to channel airflow smoothly towards the opening thereby reducing the pressure drop significantly and subsequently the noise level.
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FLOW BAR DIFFUSER

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- Anodized finish

OPTIONS:

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END CAP OPTIONS:



OPEN END



WITH DUMMY



WITH FLANGE



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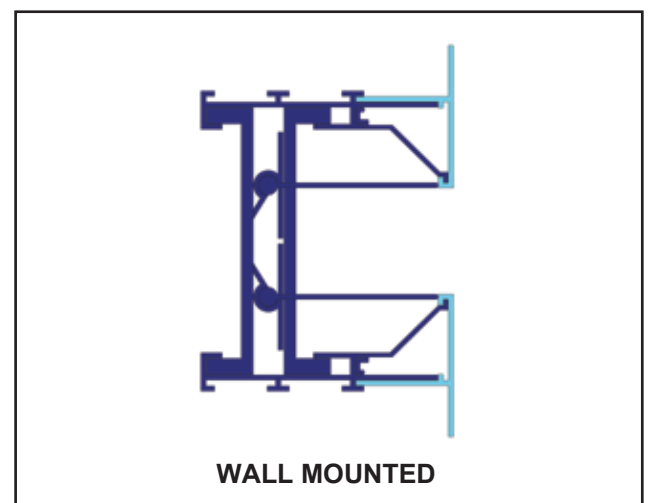
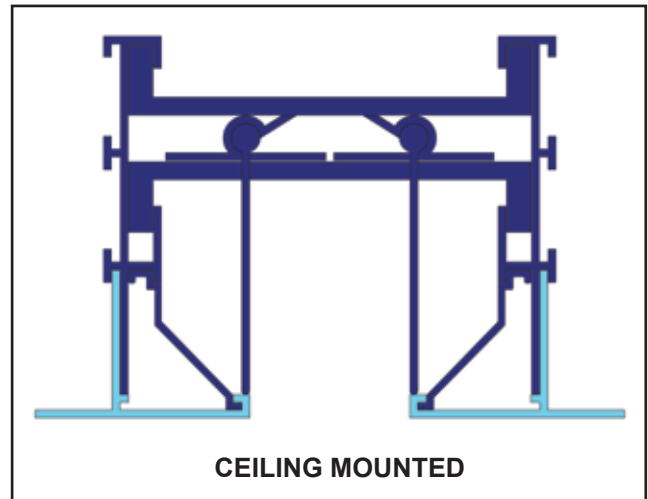
Side deflector: Angled aluminium profile to guide airflow.



DESCRIPTION:

- **AirflowAC** Flowbar Diffuser is designed with flanges for high ceiling or wall mounted applications.
- It can be used for high ceiling applications; as an alternative to air- curtains near huge windows/ facades to prevent the heat infiltration. It may also be used for wall mounted application where Jet Flow is required.
- The view of a black opening into the ceiling gives a high-class finish to the building interiors.
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END CAP OPTIONS:



OPEN END



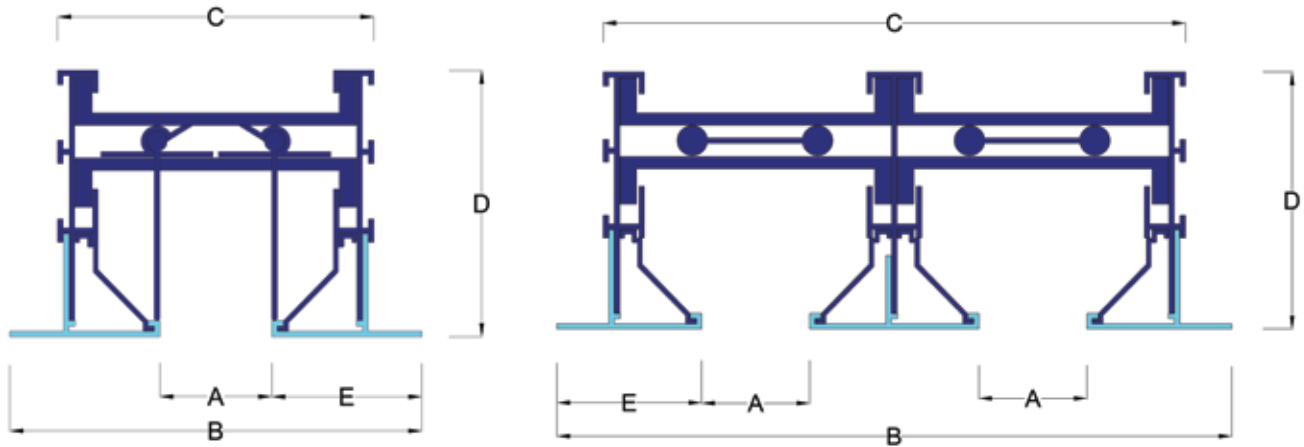
WITH DUMMY



WITH FLANGE

FLOW BAR DIFFUSER

DIMENSION DETAILS:



1 SLOT:

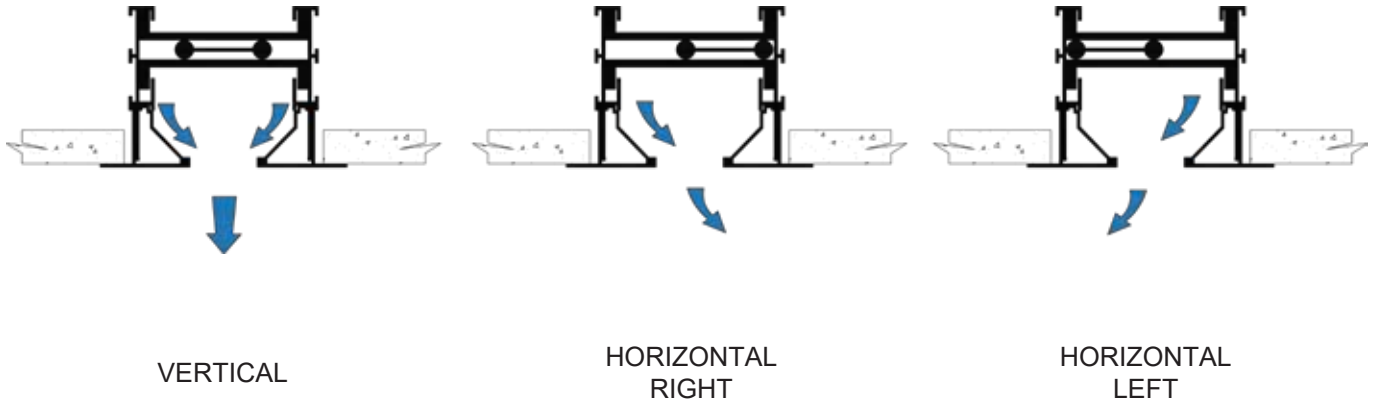
SLOT OPENING	A	B	C	D	E
25MM	25	92	71	59.5	33.5
38MM	38	105	84	59.5	33.5
50MM	50	141	119	59.5	45.5
63MM	63	155	133	59.5	45.5
75MM	75	166	145	59.5	45.5

2 SLOT:

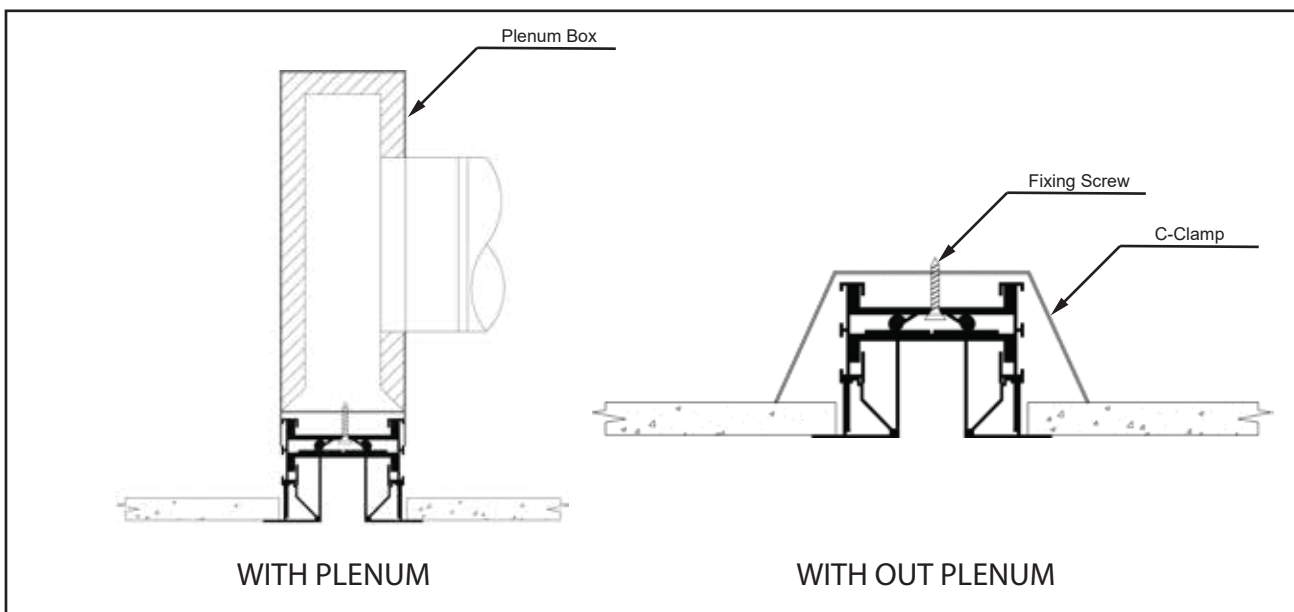
SLOT OPENING	A	B	C	D	E
25MM	25	156	135	59.5	33.5
38MM	38	182	161	59.5	33.5
50MM	50	254	233	59.5	45.5
63MM	63	281	260	59.5	45.5
75MM	75	304	283	59.5	45.5

FLOW BAR DIFFUSER

AIR FLOW PATTERN:



FIXING DETAILS:

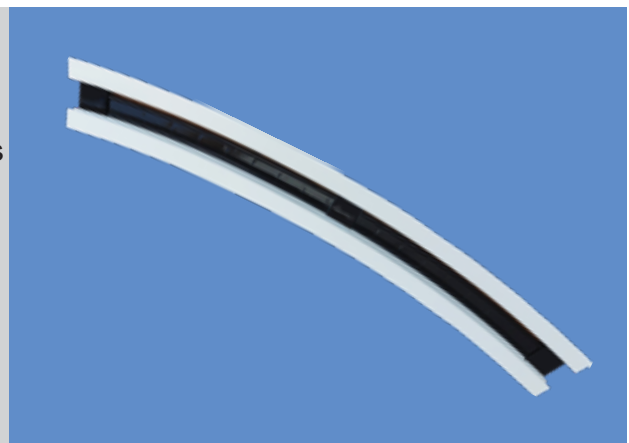


CURVED FLOWBAR DIFFUSER (MODEL: AFBD-1-C):

DESCRIPTION:

- FLOWBAR CURVED model flowbar diffusers are available with a minimum radius of curvature of 3 meter.
- Deflector shall be factory installed such that air flows inside the direction of curvature.

(Note: Please get in touch with our technical support team at the time of placing order to get more details).



PERFORMANCE DATA

DATA FOR 25mm SLOT OPENING

1 SLOT	CFM/mt	75	125	175	225	275	325	375
	Pressure (Pa)	7	14	30	51	78	108	145
	Ps in mmH ₂ O	0.71	1.4	3	5.1	7.8	10.8	14.5
	NC (dB)	<10	15	25	33	38	44	49
	Throw (mt)	1.4-2.3-4.2	2.6-4.0-5.5	3.7-4.6-6.5	4.3-5.1-7.3	4.5-5.7-8.2	5.1-6.1-8.9	5.4-6.7-9.5
2 SLOT	CFM/mt	150	225	300	375	450	525	600
	Pressure (Pa)	7	13	26	37	55	78	105
	Ps in mmH ₂ O	0.71	1.33	2.65	3.77	5.61	7.95	10.7
	NC (dB)	<10	14	24	29	35	40	46
	Throw (mt)	2.0-3.2-6.1	3.2-5.0-7.4	4.5-6.0-8.7	5.6-6.8-9.4	6.0-7.4-10.3	6.5-7.9-11.2	6.8-8.6-12.1

DATA FOR 38mm SLOT OPENING

1 SLOT	CFM/mt	90	140	180	220	260	300	340
	Pressure (Pa)	8	17	29	47	55	75	95
	Ps in mmH ₂ O	0.82	1.73	2.96	4.79	5.61	7.65	9.69
	NC (dB)	<10	13	22	29	33	38	41
	Throw (mt)	1.7-2.9-4.7	2.9-4.2-5.6	3.9-4.7-6.5	4.1-5.2-7.3	4.6-5.4-7.8	4.9-6.1-8.5	5.2-6.4-9.4
2 SLOT	CFM/mt	190	270	350	430	510	590	670
	Pressure (Pa)	8	16	26	39	55	75	96
	Ps in mmH ₂ O	0.82	1.63	2.65	3.98	5.61	7.65	9.79
	NC (dB)	<10	13	23	30	35	40	44
	Throw (mt)	2.6-4.2-6.7	3.9-5.7-8.2	5.0-6.3-9.0	5.6-7.2-9.9	6.3-7.8-10.9	6.9-8.4-11.7	7.2-8.7-12.6

DATA FOR 50mm SLOT OPENING

1 SLOT	CFM/mt	90	160	230	290	350	410	470
	Pressure (Pa)	5	14	27	40	54	75	95
	Ps in mmH ₂ O	0.51	1.43	2.75	4.08	5.51	7.65	9.69
	NC (dB)	<10	10	23	29	34	39	44
	Throw (mt)	1.4-2.6-4.8	2.6-4.3-6.2	4.1-5.3-7.5	4.7-5.6-8.1	4.9-6.2-9.0	5.4-6.7-9.8	5.8-7.3-10.4
2 SLOT	CFM/mt	190	300	410	520	630	740	850
	Pressure (Pa)	5	12	23	36	54	76	101
	Ps in mmH ₂ O	0.51	1.22	2.35	3.67	5.51	7.75	10.3
	NC (dB)	<10	12	21	29	35	40	45
	Throw (mt)	2.1-3.7-6.8	3.9-5.7-8.6	5.0-6.9-9.9	6.3-7.8-11.2	6.9-8.8-12.4	7.5-9.3-13.3	8.1-9.9-14.2

PERFORMANCE DATA

DATA FOR 63mm SLOT OPENING

1 SLOT	CFM/mt	90	170	250	330	410	490	570
	Pressure (Pa)	3	9	21	35	55	79	106
	Ps in mmH ₂ O	0.31	0.92	2.14	3.57	5.61	8.06	10.8
	NC (dB)	<10	10	22	30	36	41	46
	Throw (mt)	1.2-2.3-4.8	3.0-4.5-6.3	4.3-5.4-7.9	5.1-6.3-8.8	5.7-6.9-10.1	6.4-7.6-11.0	6.7-8.2-11.9
2 SLOT	CFM/mt	190	330	470	610	750	890	1030
	Pressure (Pa)	3	9	18	31	47	66	90
	Ps in mmH ₂ O	0.31	0.93	1.84	3.16	4.79	6.73	9.18
	NC (dB)	<10	14	23	31	36	41	46
	Throw (mt)	1.8-3.3-6.7	3.9-6.0-8.7	5.7-7.5-10.5	7.0-8.5-12.1	7.8-9.6-13.6	8.4-10.1-14.7	9.0-11.1-15.7

DATA FOR 75mm SLOT OPENING

1 SLOT	CFM/mt	90	190	290	390	490	590	690
	Pressure (Pa)	2.5	10	24	41	65	95	130
	Ps in mmH ₂ O	0.25	1.02	2.45	4.18	6.63	9.69	13.2
	NC (dB)	<10	<10	17	26	34	39	43
	Throw (mt)	0.9-2.0-4.5	3.0-4.5-6.7	4.7-5.8-8.3	5.5-6.7-9.8	6.3-7.7-10.6	6.8-8.2-11.7	7.3-8.8-12.7
2 SLOT	CFM/mt	190	380	570	760	950	1140	1330
	Pressure (Pa)	3	11	24	42	67	96	132
	Ps in mmH ₂ O	0.31	1.12	2.45	4.28	6.83	9.79	13.4
	NC (dB)	<10	<10	20	29	36	42	46
	Throw (mt)	1.5-3.0-6.5	4.2-6.3-9.6	6.4-8.1-11.8	7.9-9.7-13.7	8.8-10.5-15.1	9.6-11.7-16.6	10.2-12.6-17.8

- Throw (meters) is measured for terminal velocities of 0.25, 0.5 & 0.75 m/sec.
- Throw data based on 1200mm active section. Refer throw correction table to calculate the actual throw based on length.
- Data is based on continuous slot plenum and one way discharge from slot.
- NC based on a room attenuation of 10 dB.
- Refer NC correction table to calculate actual NC level for selected lengths.

PERFORMANCE DATA

DATA FOR 25mm SLOT OPENING

1 SLOT	CFM/mt	65	130	195	260	325	390	455
	Pressure (Pa)	2	7	15	26	41	60	82
	Ps in mmH ₂ O	0.2	0.71	1.53	2.65	4.18	6.12	8.36
	NC (dB)	<10	<10	16	22	29	33	37
	Throw (mt)	0.5-0.8-2.0	1.2-2.1-3.9	2.0-2.8-5.5	2.6-3.8-6.5	3.2-5.0-7.1	3.9-5.6-7.7	4.5-6.0-8.7
2 SLOT	CFM/mt	130	275	420	565	710	855	1000
	Pressure (Pa)	2	8	17	31	50	72	100
	Ps in mmH ₂ O	0.2	0.82	1.73	3.16	5.10	7.34	10.2
	NC (dB)	<10	12	21	27	33	36	43
	Throw (mt)	0.8-1.5-2.6	2.1-3.0-6.1	2.9-4.5-8.1	4.2-6.1-9.7	5.1-7.6-11.0	6.4-8.5-11.8	7.3-9.1-12.7

DATA FOR 38mm SLOT OPENING

1 SLOT	CFM/mt	100	200	300	400	500	600	700
	Pressure (Pa)	3	8	19	33	50	72	98
	Ps in mmH ₂ O	0.31	0.82	1.94	3.37	5.10	7.34	9.99
	NC (dB)	<10	<10	18	24	30	34	38
	Throw (mt)	0.5-1.2-2.0	1.5-2.1-4.5	2.1-3.3-6.7	2.9-4.4-7.7	3.6-5.5-9.0	4.4-6.5-9.5	5.0-7.4-10.4
2 SLOT	CFM/mt	190	390	590	790	990	1190	1390
	Pressure (Pa)	2	8	18	32	50	72	98
	Ps in mmH ₂ O	0.20	0.82	1.84	3.26	5.10	7.34	9.99
	NC (dB)	<10	<10	20	28	33	39	41
	Throw (mt)	0.5-1.5-2.9	2.1-3.0-6.4	3.0-4.6-9.5	4.2-6.3-11.2	5.1-7.8-12.7	6.3-9.3-13.9	7.2-10.5-14.8

DATA FOR 50mm SLOT OPENING

1 SLOT	CFM/mt	110	240	370	500	630	760	890
	Pressure (Pa)	2	7	16	27	43	62	87
	Ps in mmH ₂ O	0.20	0.71	1.63	2.75	4.38	6.32	8.87
	NC (dB)	<10	<10	18	25	29	34	38
	Throw (mt)	0.3-0.8-2.0	1.5-2.4-4.5	2.4-3.7-7.0	2.9-4.7-9.0	3.9-6.0-10.2	4.7-7.1-11.1	5.3-8.4-12.0
2 SLOT	CFM/mt	225	485	745	1005	1265	1525	1785
	Pressure (Pa)	2	6	15	27	43	62	89
	Ps in mmH ₂ O	0.20	0.61	1.53	2.75	4.38	6.32	9.08
	NC (dB)	<10	<10	18	25	33	37	41
	Throw (mt)	0.6-1.2-2.9	2.1-3.3-6.4	3.3-4.9-10.1	4.5-6.6-12.7	5.4-8.5-14.6	6.6-9.9-15.8	7.8-11.8-17.3

PERFORMANCE DATA

DATA FOR 63mm SLOT OPENING

1 SLOT	CFM/mt	130	310	490	670	850	1030	1210
	Pressure (Pa)	2	7	18	30	49	74	101
	Ps in mmH ₂ O	0.20	0.71	1.84	3.06	5.00	7.55	10.3
	NC (dB)	<10	<10	17	26	31	35	40
	Throw (mt)	0.3-0.8-2.0	1.8-2.4-5.1	2.7-4.0-7.9	3.6-5.3-10.5	4.5-6.9-11.8	5.3-8.4-12.9	6.6-9.9-13.9
2 SLOT	CFM/mt	260	620	980	1340	1700	2060	2420
	Pressure (Pa)	2	7	17	32	49	72	101
	Ps in mmH ₂ O	0.20	0.71	1.73	3.26	5.00	7.34	10.3
	NC (dB)	<10	12	21	29	35	39	43
	Throw (mt)	0.5-1.2-3.0	2.3-3.5-7.1	3.6-5.6-11.2	5.1-7.8-14.9	6.6-9.6-16.7	8.7-11.7-18.2	9.3-13.9-20.0

DATA FOR 75mm SLOT OPENING

1 SLOT	CFM/mt	165	375	585	795	1005	1215	1425
	Pressure (Pa)	2	8	16	30	49	72	96
	Ps in mmH ₂ O	0.20	0.82	1.63	3.06	5.00	7.34	9.79
	NC (dB)	<10	<10	18	25	30	36	41
	Throw (mt)	0.3-0.8-2.4	1.7-2.5-5.2	2.6-4.1-8.4	3.9-5.6-11.5	4.7-7.1-12.6	5.9-8.6-14.1	6.8-10.1-15.3
2 SLOT	CFM/mt	325	750	1175	1600	2025	2450	2875
	Pressure (Pa)	2	8	18	31	49	74	101
	Ps in mmH ₂ O	0.20	0.82	1.84	3.16	5.00	7.55	10.3
	NC (dB)	<10	<10	22	28	34	40	45
	Throw (mt)	0.5-1.2-3.3	2.3-3.8-7.4	3.9-6.0-12.1	5.4-8.1-16.2	6.9-10.2-18.3	8.4-12.6-20.0	9.9-14.8-21.6

- Throw (meters) is measured for terminal velocities of 0.25, 0.5 & 0.75 m/sec.
- Throw data based on 1200mm active section. Refer throw correction table to calculate the actual throw based on length.
- Data is based on continuous slot plenum and one way discharge from slot.
- NC based on a room attenuation of 10 dB.
- Refer NC correction table to calculate actual NC level for selected lengths.

PERFORMANCE DATA

NC CORRECTION FOR LENGTH:

Length mm	600	1200	1800	2400	3000
Supply	-3	0	+2	+3	+5
Return	0	+3	+5	+6	+8

THROW CORRECTION MULTIPLIER FOR LENGTH:

Length mm	600	1200	2400	3000	3600
Supply	0.72	1	1.5	1.7	1.8