

22/23  
PRODUCTS

Product Catalogue

# Flow Bar Diffuser

Type ( FBD )



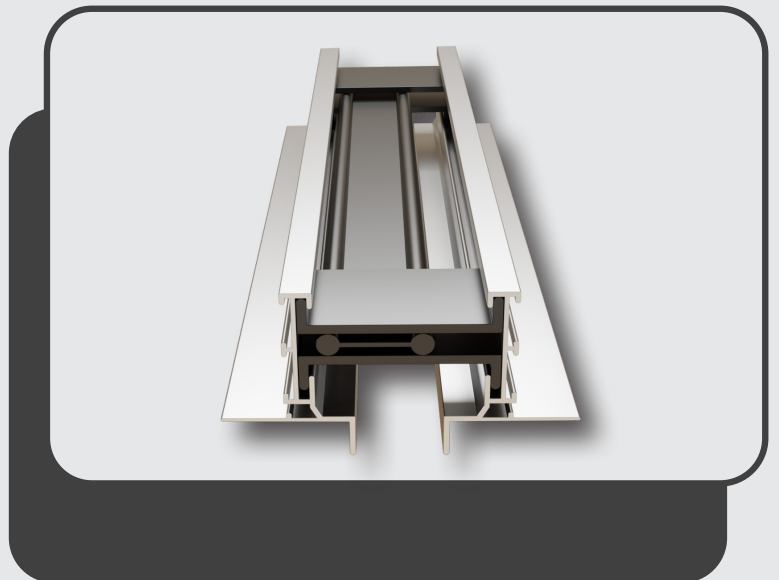
**Khedr Trust**  
ALL AIR PRODUCTS

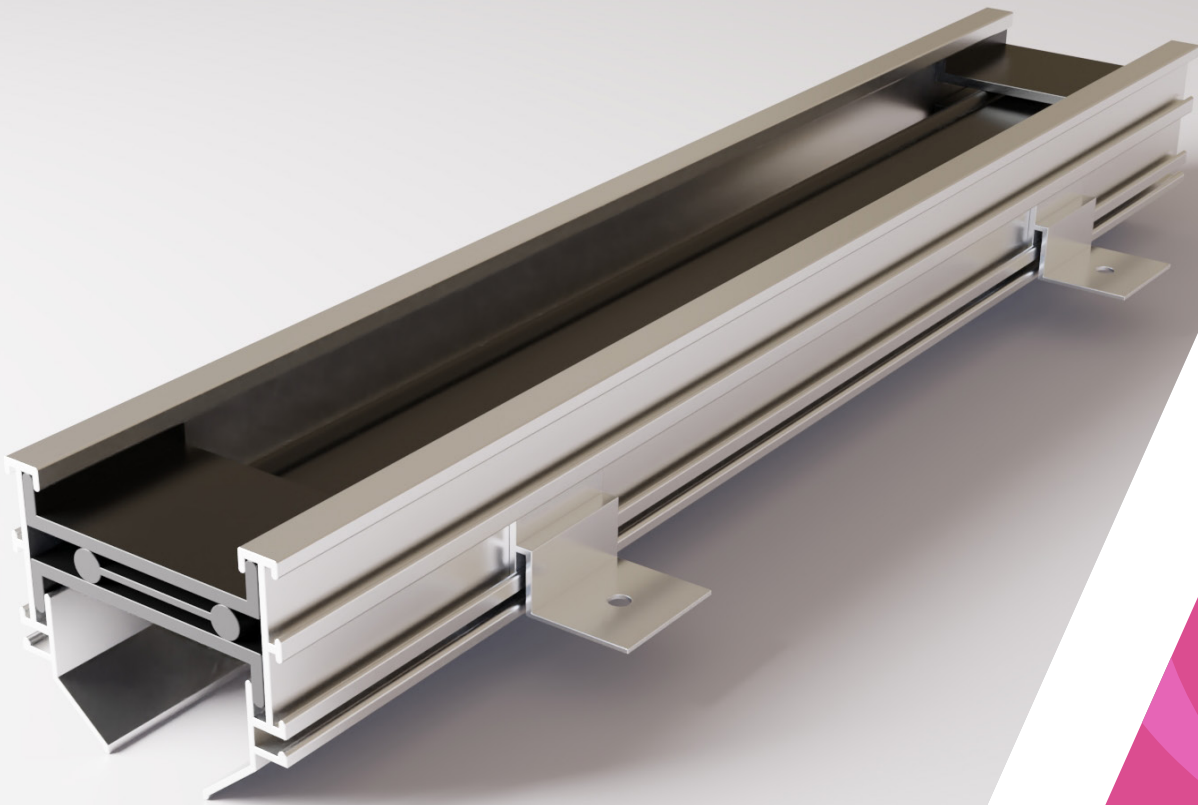
Flow Bar Diffuser products are  
manufactured by



“Your comfort is  
our priority”

[www.khedr-eg.com](http://www.khedr-eg.com)





### Models

- Angular Type
- Flushed Type
- Exposed Type



### Features

- Three different modules to suit all applications (Angular , Exposed and flushed Types)
- Standard 1 to 4 slots with slot sizes 2 ,1 and 3 inches.
- Section lengths up to 12 feet are standard.
- Optional Matched Plenum Box.



## Flow Bar Diffuser

### Model Use

Khedr Model FBD is a continuous slot system which allows the air distribution to become inconspicuous, while fully integrating and complementing the ceiling system and other ceiling components

### Unit Design

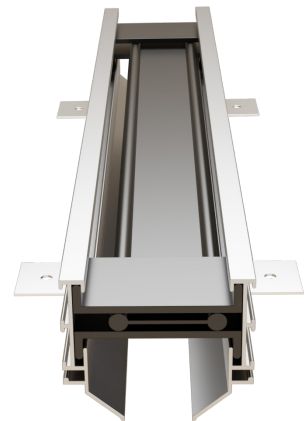
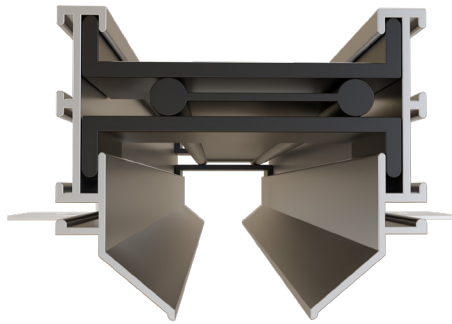
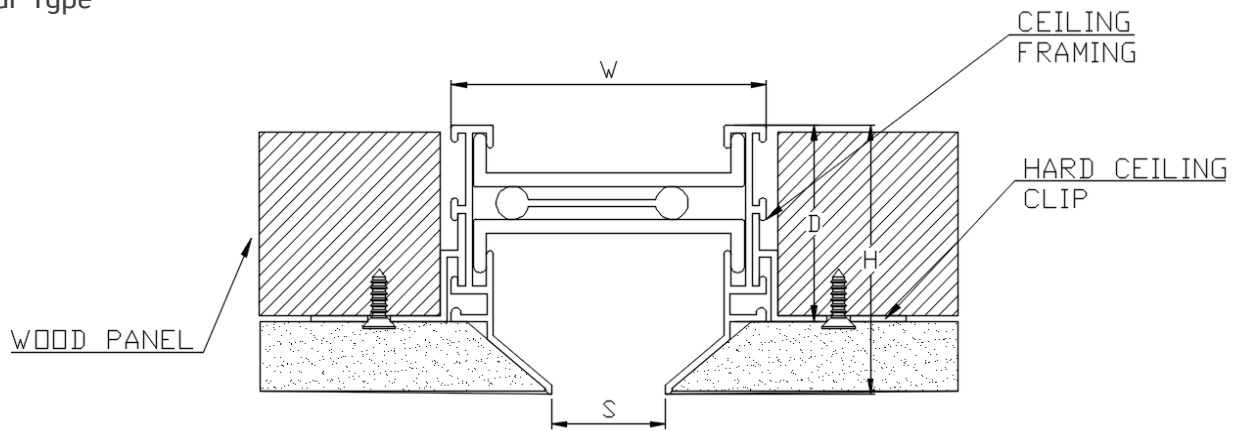
Khedr Model FBD satisfy both the architect's and engineer's requirements for designing an air distribution system that will maintain optimum room air conditions while being inconspicuous to the viewer.

### Design Shaping

Khedr Model FBD are found also mitered and curved section with different bar thickness.

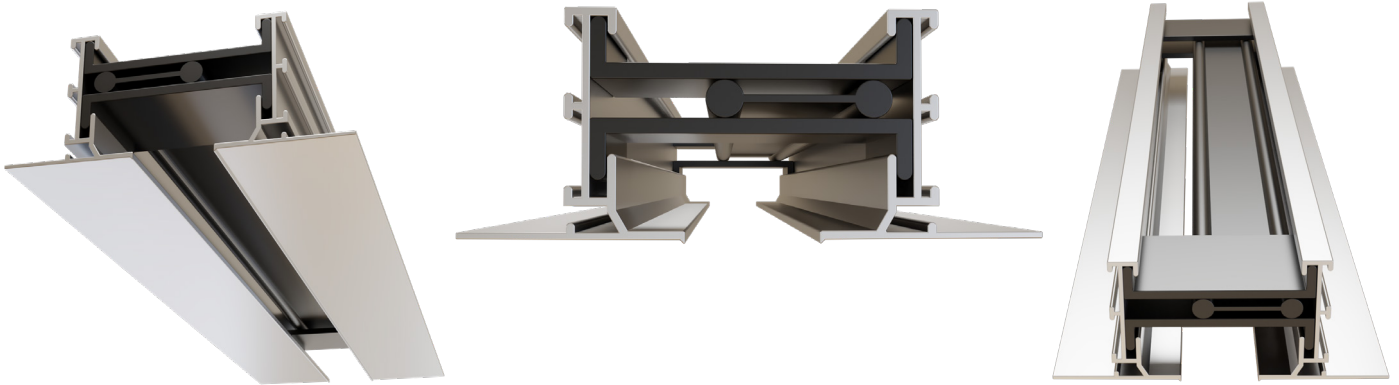
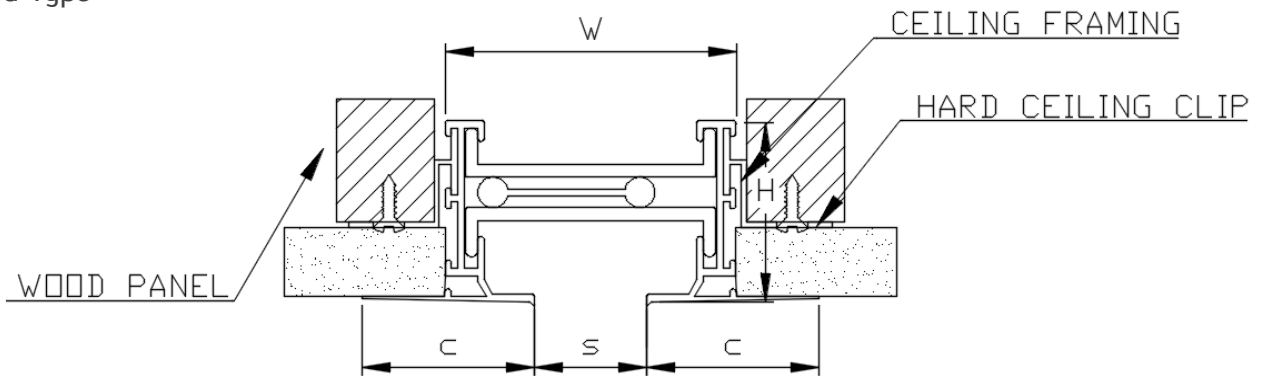
**- Dimensions**

**- Angular Type**



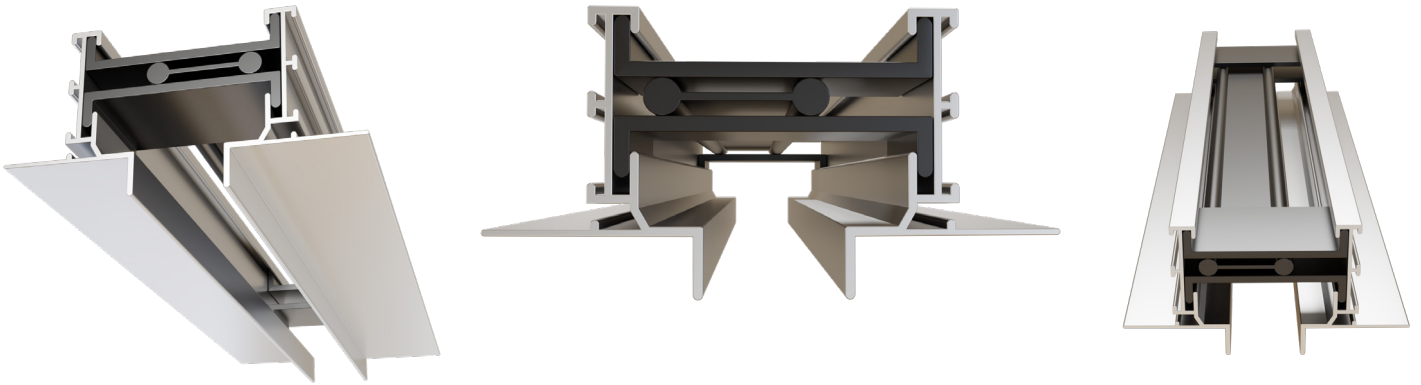
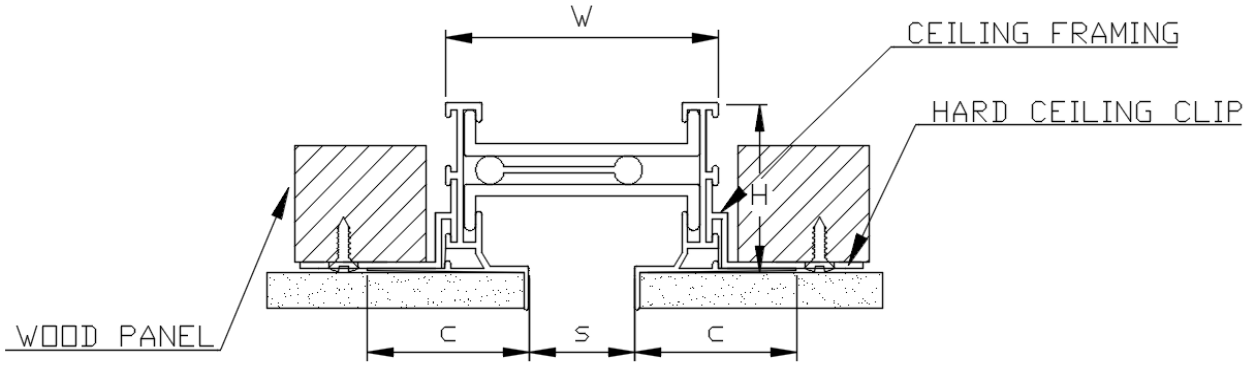
Slot Width "Inch"	W "mm"	D "mm"	H "mm"
1"	69.6	42.8	58.7
2"	95	42.8	58.7
3"	120.4	42.8	58.7

- Flushed Type



Slot Width "Inch"	W "mm"	D "mm"	H "mm"
1"	69.6	41.2	42.8
2"	95	41.2	42.8
3"	120.4	41.2	42.8

- Exposed Type



Slot Width "Inch"	W "mm"	D "mm"	H "mm"
1"	69.6	41.2	42.8
2"	95	41.2	42.8
3"	120.4	41.2	42.8

## - Performance Data

No. of Slots	Slot Width 1"							
1 Slot	Air flow "CFM/Ft"	25	40	55	70	85	100	115
	PS "Inch Water"	0.028	0.072	0.136	0.221	0.325	0.450	0.596
	Noise Criteria "NC"	10	16	26	33	39	44	49
	Throw "Feet"	8-14	13-18	15-21	17-24	19-27	20-29	22-31
2 Slot	Air flow "CFM/Ft"	50	75	100	125	150	175	200
	PS "Inch Water"	0.025	0.063	0.113	0.176	0.253	0.345	0.450
	Noise Criteria "NC"	10	17	26	33	39	44	48
	Throw "Feet"	11-20	17-25	20-29	23-32	25-35	27-38	29-41
3 Slot	Air flow "CFM/Ft"	75	100	150	180	250	290	350
	PS "Inch Water"	0.022	0.055	0.10	0.155	0.24	0.32	0.40
	Noise Criteria "NC"	12	17	27	34	39	44	49
	Throw "Feet"	12-23	19-28	24-35	26-39	29-40	30-45	35-45
4 Slot	Air flow "CFM/Ft"	100	150	200	250	300	350	400
	PS "Inch Water"	0.020	0.052	0.090	0.135	0.20	0.28	0.38
	Noise Criteria "NC"	15	18	28	35	40	45	50
	Throw "Feet"	15-27	22-35	27-40	31-44	33-49	36-52	39-57

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No. of Slots	Slot Width 2"							
1 Slot	Air flow "CFM/Ft"	30	50	70	90	110	130	150
	PS "Inch Water"	0.020	0.057	0.111	0.184	0.274	0.383	0.510
	Noise Criteria "NC"	10	11	22	30	36	41	46
	Throw "Feet"	9-16	14-20	17-24	19-27	21-30	23-33	25-35
2 Slot	Air flow "CFM/Ft"	60	95	130	165	200	235	270
	PS "Inch Water"	0.018	0.051	0.096	0.154	0.227	0.313	0.413
	Noise Criteria "NC"	10	12	22	30	36	41	46
	Throw "Feet"	12-22	19-28	23-33	26-37	29-41	31-44	33-47
3 Slot	Air flow "CFM/Ft"	90	145	200	250	285	385	420
	PS "Inch Water"	0.016	0.045	0.080	0.140	0.21	0.29	0.40
	Noise Criteria "NC"	13	15	23	33	38	42	47
	Throw "Feet"	16-30	25-39	31-46	35-37	39-50	41-60	44-65
4 Slot	Air flow "CFM/Ft"	120	190	260	325	385	450	525
	PS "Inch Water"	0.015	0.041	0.065	0.125	0.185	0.26	0.385
	Noise Criteria "NC"	15	17	25	35	40	45	48
	Throw "Feet"	16-30	25-39	31-46	35-37	39-50	41-60	44-65

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No. of Slots	Slot Width 3"							
1 Slot	Air flow "CFM/Ft"	35	55	75	100	120	150	160
	PS "Inch Water"	0.020	0.057	0.111	0.184	0.274	0.383	0.510
	Noise Criteria "NC"	11	12	23	31	37	42	46
	Throw "Feet"	10-17	15-22	18-25	20-28	22-31	24-33	26-35
2 Slot	Air flow "CFM/Ft"	60	120	180	240	300	360	420
	PS "Inch Water"	0.010	0.044	0.100	0.177	0.277	0.399	0.543
	Noise Criteria "NC"	10	10	21	30	37	43	48
	Throw "Feet"	10-21	21-32	27-39	32-45	35-50	39-55	42-59
3 Slot	Air flow "CFM/Ft"	100	155	210	290	350	425	450
	PS "Inch Water"	0.009	0.040	0.085	0.150	0.20	0.31	0.50
	Noise Criteria "NC"	17	15	24	34	40	45	49
	Throw "Feet"	12-25	25-35	30-45	39-50	42-55	45-60	48-65
4 Slot	Air flow "CFM/Ft"	135	200	300	385	460	585	625
	PS "Inch Water"	0.008	0.037	0.075	0.12	0.18	0.28	0.485
	Noise Criteria "NC"	15	18	26	37	42	46	50
	Throw "Feet"	14-29	28-45	36-54	43-63	47-67	52-75	56-80

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## - Recommended Noise Criteria

	Room Types	Noise Criteria (NC)
Residences, apartments	Living areas	30
	Bathrooms, kitchens, utility rooms	35
Hotels/motels	Individual rooms or suites	30
	Meeting/banquet rooms	30
	Corridors and lobbies	40
	Service/support areas	40
Office buildings	Executive and private offices	30
	Conference rooms	30
	Teleconference rooms	25
	Open-plan offices	40
	Corridors and lobbies	40
Courtrooms	Unamplified speech	30
	Amplified speech	35
Performing arts spaces	Drama theaters, concert and recital halls	20
	Music teaching studios	25
	Music practice rooms	30
Hospitals and clinics	Patient rooms	30
	Wards	35
	Operating and procedure rooms	35
	Corridors and lobbies	40
Laboratories	Testing/research with minimal speech Communication	50
	Extensive phone use and speech communication	45
	Group teaching	35
Churches, mosques, synagogues	General assembly with critical music programs	25
Schools	Classrooms	30
	Large lecture rooms with speech amplification	30
	Large lecture rooms without speech amplification	25
Libraries		30
Indoor stadiums, gymnasiums	Gymnasiums and natatoriums	45
	Large-seating-capacity spaces with speech, amplification	50

**- Selection Procedure**

1. Determine the required CFM per each outlet as per cooling Load Calculation
2. Select no. of Slots , slot width and the length of air outlet that give the required CFM at recommended outlet velocity from performance data tables.

**- Selection Procedure Example**

1. 1- Required 300 CFM as per cooling load calculations.
  
- 3- Determine the length as per required CFM.  
 (Example : 40 cfm/feet x 8 feet outlet length,  
 50 cfm/feet x 6 feet outlet length, etc ..)
2. 4- Determine the No. of slots as per recommended noise criteria .
3. 5- You can select 1-Slot 1" width ,8 Feet length outlet @ NC = 16 ,  
 OR 1-Slot 1" width ,6 Feet length outlet @ NC = 26  
 OR 1-Slot 2" width ,6 Feet length outlet @ NC = 11

No. of Slots	Slot Width 1"			
1 Slot	Air flow "CFM/Ft"	25	40	55
	PS "Inch Water"	0.028	0.072	0.136
	Noise Criteria "NC"	10	16	26
	Throw "Feet"	8-14	13-18	15-21

No. of Slots	Slot Width 2"			
1 Slot	Air flow "CFM/Ft"	30	50	70
	PS "Inch Water"	0.020	0.057	0.111
	Noise Criteria "NC"	10	11	22
	Throw "Feet"	9-16	14-20	17-24

Other Products are provided by Khedr Trust Co.

#### Diffusers & Grills

Slot Linear Diffuser  
Eye Ball Diffuser  
Circular Ceiling Diffuser  
Swirl Diffuser  
Perforated Ceiling Diffuser  
Jet Diffuser  
Square Ceiling Diffuser  
Disc Valve Diffuser  
Linear Bar Grill  
Supply / Return Grill  
Door Grill

#### Louvers

Aluminum Louver  
Sand Trap Louver

#### Dampers

Volume Damper  
Fire Damper  
Smoke Motorized Damper  
Shutter Damper  
Pressure Relief Damper

#### Special Parts

Sound Attenuator  
Plenum Box

#### Duct Works

Galvanized Steel Duct  
Black Steel Duct  
Stainless Steel Duct  
Spiral Duct  
Flexible Duct  
Canvas  
Flanges  
Flexible Duct Connector



# Khedr Trust

ALL AIR PRODUCTS



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