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**BETA**  
industrial  
PRODUCTS CATALOGUE

PRODUCT BULLETIN

**12** May 2024



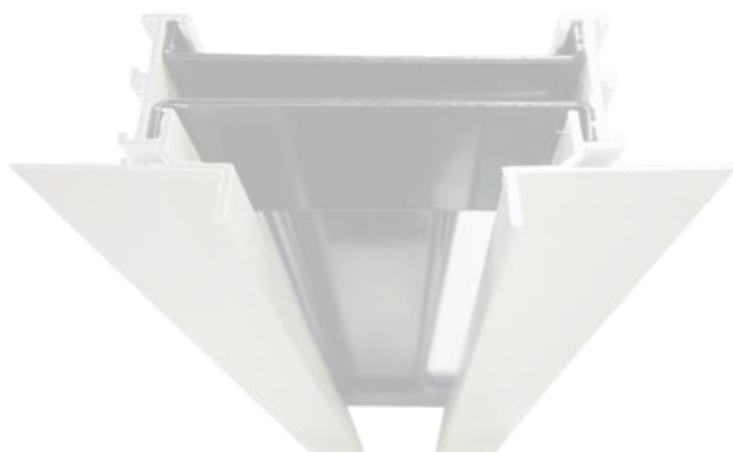




**BETA**  
i n d u s t r i a l

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- >> **FLOW BAR DIFFUSERS** I
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High Throw Flow Bar Diffuser - FBR/FBF

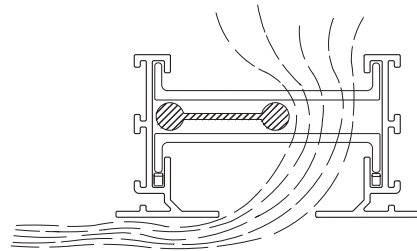
- Continuous slot system which allows the air distribution to become inconspicuous, while fully integrating and complementing the ceiling system and other ceiling components.
- Ceiling installation with unique clip and hanger support systems.
- Heavy extruded aluminium profile.
- Standard slot sizes are 50 & 38 ,25mm. Section lengths up to 12 feet are standard to minimize joints in long run.
- Integral pattern controllers allowing the airstream to be directed left and right for horizontal and vertical airflow. The format and colours of the table to be like below.
- Allows supply, return and exhaust air all from one diffuser, reducing ceiling clutter.



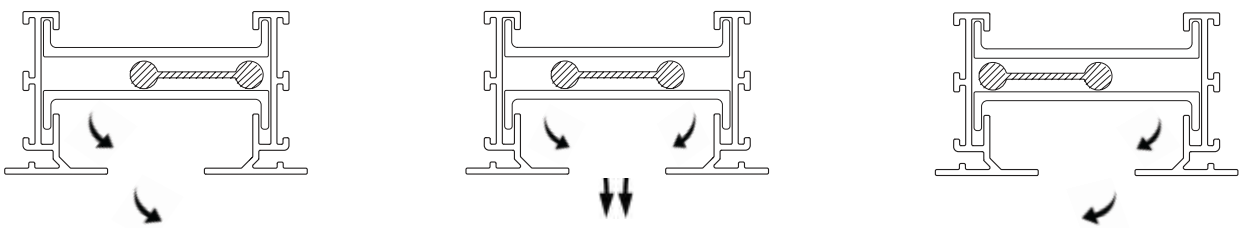
Models

- FBR/FBF 25mm Slot
- FBR/FBF 38mm Slot
- FBR/FBF 50mm Slot

Section Details



Air Pattern

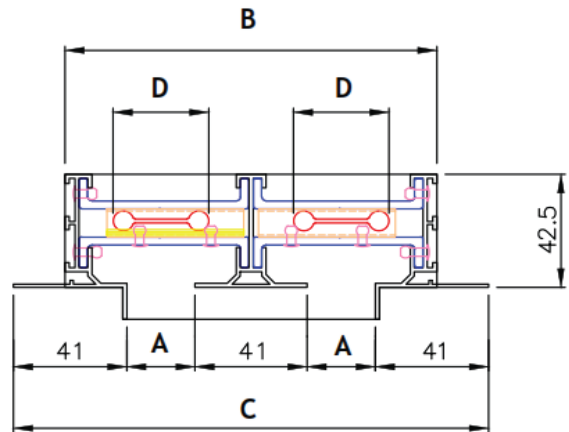
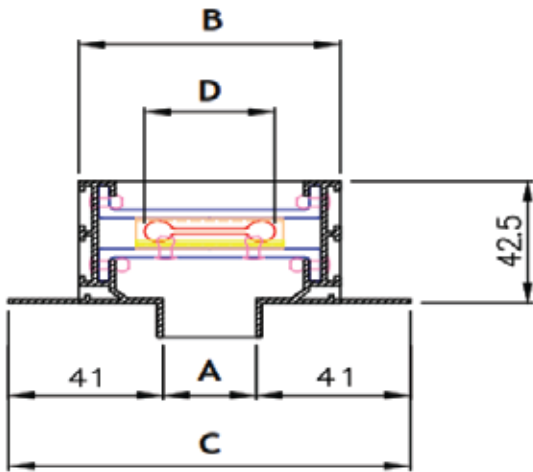




A) FLOW BAR DIFFUSER (FBR - Recessed Type Flow Bar Diffuser)

Number Of Slots	1			2		
	Slot Width, mm (A)	25	38	50	25	38
Neck Dimension, mm (B)	70	82	95	136	160	185
Face Dimension, mm (C)	108	121	133	172	198	222
Air Controller Bar (D)	35	35	54	35	35	54

\* Above dimension with  $\pm 2$  mm tolerance.

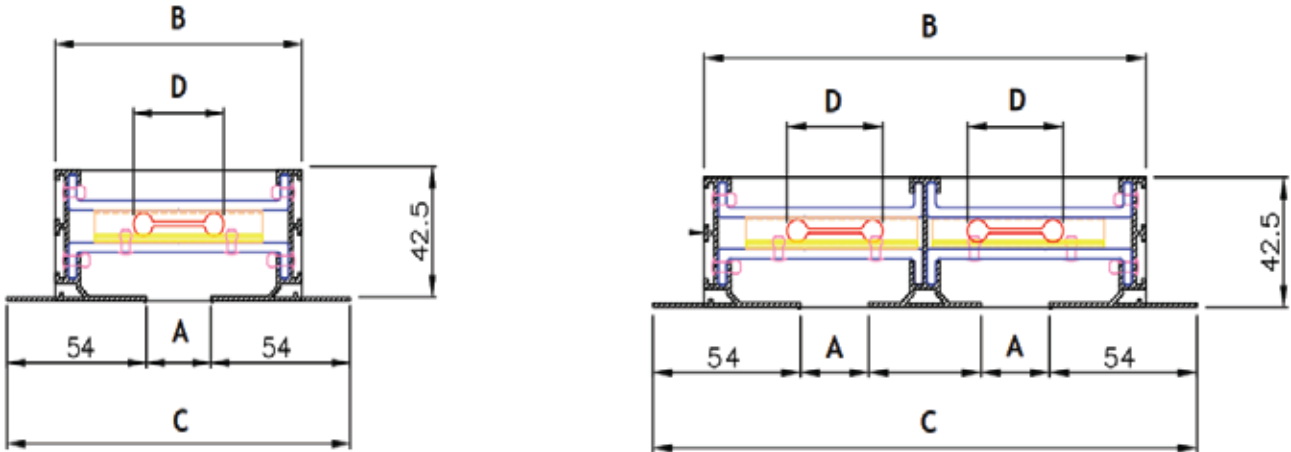




B) FLOW BAR DIFFUSER (FBF - Flush Type Flow Bar Diffuser) 54 mm Flange

Number Of Slots	1			2		
Slot Width, mm (A)	25	38	50	25	38	50
Neck Dimension, mm (B)	95	107	119	163	188	211
Face Dimension, mm (C)	133	146	158	201	223	249
Air Controller Bar (D)	35	35	54	35	35	54

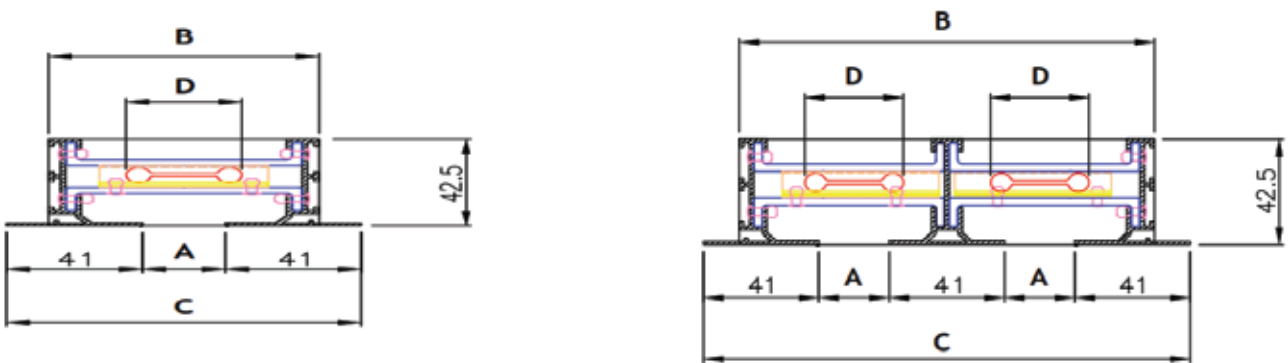
\* Above dimension with ± 2 mm tolerance.



C) FLOW BAR DIFFUSER (FBF - Flush Type Flow Bar Diffuser) 41 mm Flange

Number Of Slots	1			2		
Slot Width, mm (A)	25	38	50	25	38	50
Neck Dimension, mm (B)	82	95	107	148	173	198
Face Dimension, mm (C)	107	120	132	173	199	223
Air Controller Bar (D)	35	35	54	35	35	54

\* Above dimension with ± 2 mm tolerance.





Performance Data

Vertical Flow

<b>25MM Slot</b>	1-Slot	Airflow, cfm/ft.	30	45	60	75	90	105
		Static Pressure	0.03	0.08	0.13	0.2	0.29	0.39
		NC (Noise Criteria)	<15	23	30	37	42	45
	2-Slot	Airflow, cfm/ft.	60	90	120	150	170	200
		Static Pressure	0.09	0.15	0.17	0.23	0.3	0.34
		NC (Noise Criteria)	<10	18	27	33	40	43
<b>38MM Slot</b>	1-Slot	Airflow, cfm/ft.	60	75	90	105	120	135
		Static Pressure	0.08	0.13	0.17	0.24	0.31	0.39
		NC (Noise Criteria)	<15	20	30	34	39	42
	2-Slot	Airflow, cfm/ft.	120	150	170	160	200	250
		Static Pressure	0.04	0.075	0.13	0.183	0.247	0.329
		NC (Noise Criteria)	<15	18	27	35	40	43
<b>50MM Slot</b>	1-Slot	Airflow, cfm/ft.	60	75	85	90	105	135
		Static Pressure	0.09	0.14	0.18	0.21	0.29	0.48
		NC (Noise Criteria)	15	22	26	29	33	42
	2-Slot	Airflow, cfm/ft.	120	150	170	190	220	250
		Static Pressure	0.03	0.64	0.113	0.178	0.271	0.347
		NC (Noise Criteria)	<15	17	22	29	37	44

- All pressures are in inches of water.

Ordering Key:

F	B	R/F	I	/	25
FBF - Flush Type Flow Bar Diffuser FBR - Recessed Type Flow Bar Diffuser					
1 - 1 Slot 2 - 2 Slots					
25 - 25mm Slot Width 38 - 38mm Slot Width 50 - 50mm Slot Width					







Performance Data

Vertical Throw

I Slot 25mm Throw

Vertical Throw                      Inlet Static Pressure 0.011" H2O                      Air Volume 60 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	22	22	26	97	81	73	63	46	–	–	–	–	–	–
3"	27	36	50	78	68	61	57	51	–	–	–	–	–	–
6"	37	108	67	66	56	41	39	45	–	–	–	–	–	–
9"	204	114	67	65	44	31	30	38	–	–	–	–	–	–
12"	26	45	69	51	39	23	–	25	–	–	–	–	–	–
18"	19	22	50	49	33	17	–	–	–	–	–	–	–	–
24"	–	–	17	31	25	–	–	–	–	–	–	–	–	–

Vertical Throw                      Inlet Static Pressure 0.019" H2O                      Air Volume 80 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	19	40	104	129	102	94	78	70	60	45	–	–	–	–
3"	31	71	83	105	84	83	80	65	59	49	–	–	–	–
6"	43	184	104	88	69	59	71	51	50	39	–	–	–	–
9"	277	119	90	80	57	45	56	43	42	31	–	–	–	–
12"	32	42	95	74	43	34	43	27	24	22	–	–	–	–
18"	25	28	67	73	43	27	32	22	19	–	–	–	–	–
24"	18	21	27	39	32	21	24	16	–	–	–	–	–	–

Vertical Throw                      Inlet Static Pressure 0.103" H2O                      Air Volume 185 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	67	75	219	253	225	211	165	116	106	91	–	–	–	–
3"	78	114	189	204	200	207	159	127	118	100	–	–	–	–
6"	101	339	240	175	166	170	127	105	90	95	–	–	–	–
9"	552	336	239	176	146	144	87	77	75	81	–	–	–	–
12"	69	123	199	181	139	109	61	61	48	61	–	–	–	–
18"	52	67	109	158	115	83	37	42	35	34	–	–	–	–
24"	43	50	40	62	67	52	23	21	24	24	–	–	–	–





Performance Data

Vertical Throw

I Slot 38mm Throw

Vertical Throw Inlet Static Pressure 0.020" H2O Air Volume 100 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	30	102	130	125	102	82	64	46	--	--	--	--	--	--
3"	43	53	145	125	90	86	62	49	--	--	--	--	--	--
6"	44	79	125	110	86	74	50	42	--	--	--	--	--	--
9"	546	221	64	79	67	55	45	33	--	--	--	--	--	--
12"	38	45	39	48	52	49	40	24	--	--	--	--	--	--
18"	29	28	26	22	30	33	35	19	--	--	--	--	--	--
24"	22	22	22	15	18	24	16	--	--	--	--	--	--	--

Vertical Throw Inlet Static Pressure 0.036" H2O Air Volume 135 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	62	111	167	186	157	145	134	121	95	78	66	54	44	--
3"	75	62	202	150	128	137	135	118	95	83	73	63	50	--
6"	73	104	184	109	88	108	95	83	79	77	73	59	44	--
9"	552	309	94	54	54	76	64	60	64	60	58	60	39	--
12"	46	61	38	33	33	48	43	30	52	46	47	52	27	--
18"	33	41	24	24	21	32	37	22	32	31	29	53	25	--
24"	27	32	28	28	--	24	27	21	21	20	18	46	18	--

Vertical Throw Inlet Static Pressure 0.168" H2O Air Volume 290 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	31	237	278	374	299	253	223	164	140	127	109	94	90	--
3"	46	136	370	297	236	232	210	175	153	134	124	109	101	--
6"	90	242	447	201	168	163	167	148	137	119	116	100	99	--
9"	552	552	301	106	84	91	100	101	96	102	104	90	92	--
12"	103	127	145	63	60	59	71	59	72	66	68	66	76	--
18"	78	80	73	45	38	42	42	39	48	49	42	44	64	--
24"	62	65	72	54	29	37	33	26	29	39	30	28	52	--





Performance Data

Vertical Throw

I Slot 50mm Throw

Vertical Throw                      Inlet Static Pressure 0.014" H2O                      Air Volume 80 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	18	25	61	87	81	83	68	44	--	--	--	--	--	--
3"	18	40	45	90	68	79	61	50	--	--	--	--	--	--
6"	27	36	55	85	49	63	49	45	--	--	--	--	--	--
9"	476	170	126	76	24	52	37	40	--	--	--	--	--	--
12"	32	52	105	66	24	39	26	31	--	--	--	--	--	--
18"	22	22	24	52	20	39	22	22	--	--	--	--	--	--
24"	16	16	17	27	--	29	--	16	--	--	--	--	--	--

Vertical Throw                      Inlet Static Pressure 0.032" H2O                      Air Volume 120 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	27	17	36	94	100	110	103	76	67	63	63	53	40	--
3"	31	24	41	97	109	118	106	89	76	73	68	63	49	--
6"	38	50	90	120	114	104	101	787	70	65	64	60	40	--
9"	551	260	185	146	126	107	85	57	61	63	57	58	33	--
12"	44	66	146	121	114	86	63	45	44	53	48	48	28	--
18"	35	31	36	77	94	71	50	30	37	50	40	46	29	--
24"	31	27	23	24	56	49	35	20	30	47	24	43	20	--

Vertical Throw                      Inlet Static Pressure 0.124" H2O                      Air Volume 235 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)													
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	
1"	44	44	119	127	161	175	133	119	123	110	107	87	85	--
3"	40	46	103	126	159	174	152	140	138	128	122	107	101	--
6"	71	71	126	128	144	1710	161	148	133	130	118	107	94	--
9"	552	379	264	161	164	173	176	151	144	128	107	108	94	--
12"	86	190	360	231	195	182	173	145	133	124	90	100	82	--
18"	57	56	122	260	224	207	188	156	128	126	98	103	79	--
24"	42	57	44	144	180	177	174	150	130	114	98	93	88	--





Performance Data

Horizontal Flow

<b>25MM Slot</b>	1-Slot	Airflow, cfm/ft.	45	53	60	69	84	105
		Static Pressure	0.07	0.10	0.13	0.16	0.24	0.39
		NC (Noise Criteria)	16	21	24	27	33	40
	2-Slot	Airflow, cfm/ft.	60	90	120	150	170	200
		Static Pressure	0.09	0.15	0.17	0.23	0.3	0.34
		NC (Noise Criteria)	<10	18	27	33	40	43
<b>38MM Slot</b>	1-Slot	Airflow, cfm/ft.	60	75	90	105	120	135
		Static Pressure	0.05	0.08	0.11	0.15	0.2	0.25
		NC (Noise Criteria)	<15	23	27	33	38	43
	2-Slot	Airflow, cfm/ft.	120	150	170	160	200	250
		Static Pressure	0.04	0.075	0.13	0.183	0.247	0.329
		NC (Noise Criteria)	<15	18	27	35	40	43
<b>50MM Slot</b>	1-Slot	Airflow, cfm/ft.	60	75	85	90	105	135
		Static Pressure	0.09	0.14	0.18	0.21	0.29	0.48
		NC (Noise Criteria)	15	22	26	29	33	42
	2-Slot	Airflow, cfm/ft.	120	150	170	190	220	250
		Static Pressure	0.03	0.64	0.113	0.178	0.271	0.347
		NC (Noise Criteria)	<15	17	22	29	37	44

- All pressures are in inches of water.





Performance Data

Horizontal Throw

I Slot 25mm Throw

Horizontal Throw      Inlet Static Pressure 0.006" H2O      Air Volume 45 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	68	38	24	35	-	-	-	-	-	-	-	-	-
3"	200	28	30	31	-	-	-	-	-	-	-	-	-
6"	104	23	20	31	-	-	-	-	-	-	-	-	-
9"	56	33	26	32	-	-	-	-	-	-	-	-	-
12"	29	99	19	20	-	-	-	-	-	-	-	-	-
18"	28	26	78	34	-	-	-	-	-	-	-	-	-
24"	29	29	68	49	-	-	-	-	-	-	-	-	-

Horizontal Throw      Inlet Static Pressure 0.031" H2O      Air Volume 100 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	50	43	32	47	30	34	-	-	-	-	-	-	-
3"	76	37	33	46	32	32	-	-	-	-	-	-	-
6"	465	35	27	51	33	21	-	-	-	-	-	-	-
9"	295	47	24	66	29	15	-	-	-	-	-	-	-
12"	123	189	29	80	29	17	-	-	-	-	-	-	-
18"	20	74	176	55	48	30	-	-	-	-	-	-	-
24"	24	59	187	101	80	51	-	-	-	-	-	-	-

Horizontal Throw      Inlet Static Pressure 0.131" H2O      Air Volume 205 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	91	67	41	23	27	27	-	-	-	-	-	-	-
3"	174	71	40	27	37	34	-	-	-	-	-	-	-
6"	552	161	136	32	36	29	-	-	-	-	-	-	-
9"	552	110	129	40	34	23	-	-	-	-	-	-	-
12"	366	119	168	53	46	25	-	-	-	-	-	-	-
18"	42	403	414	234	109	79	-	-	-	-	-	-	-
24"	32	290	410	313	173	103	-	-	-	-	-	-	-





Performance Data

Horizontal Throw

I Slot 38mm Throw

Horizontal Throw      Inlet Static Pressure 0.006" H2O      Air Volume 70 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	138	19	16	43	–	–	–	–	–	–	–	–	–
3"	259	24	25	42	–	–	–	–	–	–	–	–	–
6"	162	44	22	27	–	–	–	–	–	–	–	–	–
9"	90	99	26	25	–	–	–	–	–	–	–	–	–
12"	44	146	43	21	–	–	–	–	–	–	–	–	–
18"	23	40	77	51	–	–	–	–	–	–	–	–	–
24"	17	21	65	35	–	–	–	–	–	–	–	–	–

Horizontal Throw      Inlet Static Pressure 0.014" H2O      Air Volume 105 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	295	39	36	23	40	26	–	–	–	–	–	–	–
3"	369	29	30	20	39	26	–	–	–	–	–	–	–
6"	123	58	22	–	30	19	–	–	–	–	–	–	–
9"	51	111	22	16	23	–	–	–	–	–	–	–	–
12"	31	193	42	15	18	–	–	–	–	–	–	–	–
18"	36	49	109	125	64	31	–	–	–	–	–	–	–
24"	32	51	100	134	111	48	–	–	–	–	–	–	–

Horizontal Throw      Inlet Static Pressure 0.043" H2O      Air Volume 185 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	.5'	1'	1.5'	2'	2.5'	3'	3.5'	4'	6'	8'	10'	12'
1"	198	57	–	37	37	18	–	–	–	–	–	–	–
3"	490	48	22	36	40	25	–	–	–	–	–	–	–
6"	402	78	20	34	37	27	–	–	–	–	–	–	–
9"	194	154	24	31	32	29	–	–	–	–	–	–	–
12"	121	313	31	34	31	25	–	–	–	–	–	–	–
18"	43	166	240	192	115	41	–	–	–	–	–	–	–
24"	40	142	221	228	195	99	–	–	–	–	–	–	–





Performance Data

Horizontal Throw

I Slot 50mm Throw

Horizontal Throw      Inlet Static Pressure 0.018" H2O      Air Volume 90 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'
1"	437	84	115	113	76	72	59	50	–	–	–	–	–
3"	62	139	130	124	87	71	60	46	–	–	–	–	–
6"	33	96	95	111	95	60	48	39	–	–	–	–	–
9"	30	28	62	99	81	48	29	32	–	–	–	–	–
12"	23	18	38	77	72	50	26	25	–	–	–	–	–
18"	22	15	28	58	54	47	19	19	–	–	–	–	–
24"	16	–	–	35	35	40	–	–	–	–	–	–	–

Horizontal Throw      Inlet Static Pressure 0.027" H2O      Air Volume 110 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'
1"	434	255	161	134	122	106	91	82	70	64	51	47	–
3"	264	292	187	145	132	123	104	95	83	75	62	52	–
6"	28	119	150	108	106	101	100	101	86	76	64	48	–
9"	22	48	117	104	105	113	100	92	80	69	61	41	–
12"	17	16	40	59	80	91	84	81	70	59	50	34	–
18"	–	–	–	40	65	86	77	69	51	53	51	33	–
24"	–	–	–	22	49	71	61	61	32	48	47	29	–

Horizontal Throw      Inlet Static Pressure 0.076" H2O      Air Volume 185 CFM

Distance From Ceiling (in.)	Distance From Diffuser (Ft)												
	0'	1'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'
1"	552	378	263	255	197	177	157	136	122	109	102	82	–
3"	400	457	306	257	215	200	176	155	145	130	122	94	–
6"	46	209	226	208	174	189	171	150	145	127	124	99	–
9"	34	95	189	189	182	191	174	154	144	126	133	98	–
12"	24	22	46	123	135	174	162	133	123	119	124	87	–
18"	18	24	21	73	107	162	153	123	122	112	119	77	–
24"	15	23	19	30	73	124	116	102	108	104	95	68	–









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