

THERMA-FUSER™

THERMALLY POWERED VAV DIFFUSER



MODULAR VAV SYSTEMS

PERFORMANCE GUIDE

Models: TF-C VAV cooling only.
 TF-CW VAV cooling with warm up heating.
 TF-HC VAV heating and VAV cooling.
 TF-D Manually adjustable blades.

Performance Chart - I-P

Inlet Designation	Inlet Diameter in	Inlet Static Pressure in wg	Maximum Flow CFM	Maximum Flow				25% Maximum Flow			
				Throw (ft)* @v _i =				Throw (ft)* @v _i =			
				50 FPM	100 FPM	150 FPM	¹ NC	50 FPM	100 FPM	150 FPM	¹ NC
6	5 15/16	0.05	100	6	4	3	< 15	3	2	1	< 15
		0.10	140	8	5	4	20	4	3	2	17
		• 0.11	147	8	5	4	21	4	3	2	18
		0.15	175	9	6	5	26	5	4	3	21
		0.20	200	9	7	6	31	6	5	3	24
		0.25	220	10	8	7	34	7	6	4	27
8	7 15/16	0.05	160	8	6	4	< 15	5	3	2	< 15
		0.10	225	10	7	5	20	6	4	3	16
		• 0.13	255	11	8	6	23	7	5	3	19
		0.15	275	11	8	6	25	7	5	3	21
		0.20	320	12	9	7	30	8	6	4	25
		0.25	355	13	10	8	34	9	6	4	28
10	9 15/16	0.05	260	9	7	5	15	7	6	4	< 15
		0.10	370	11	8	6	23	9	7	5	18
		• 0.12	402	12	9	7	25	9	7	5	20
		0.15	450	13	10	8	27	10	8	6	22
		0.20	520	14	11	9	31	11	9	7	26
		0.25	580	15	12	10	34	12	10	7	29
12	11 15/16	0.05	350	11	8	6	15	7	6	4	< 15
		0.10	470	13	10	8	23	9	7	5	19
		0.15	560	15	12	10	27	10	8	6	23
		• 0.16	576	15	12	10	28	10	8	6	24
		0.20	640	16	13	11	31	12	10	8	27
		0.25	720	17	14	12	34	14	11	9	30

NOTES

- Denotes 750 fpm / 3.81 m/s inlet velocity.
- *Throw data is for air 20°F/11°C lower than room temperature. Throws for isothermal air are 40 to 50% greater.
- ¹NC based on Lw(10⁻¹² watts reference) -10db
- Tested in accordance with ANSI/ASHRAE 70-1991, ANSI S12.31, ARI 890-2001, ISO 5219 and ISO 3741.
- When bypassing air into the plenum at the diffuser with Acutherm R-Rings, throws may be as low as 90% of and the NC 2db higher than those listed in the performance chart.
- When blocking for direction with the Acutherm directional baffles, the air volume for a given static pressure is reduced from maximum flow listed in the performance chart by:

Blow Patterns	Reduction
3-Way	0.78
2-Way	0.56
1-Way	0.34

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Performance Chart - SI (Metric)

Inlet Designation	Nominal Inlet Dia. mm	Inlet Static Pressure Pa	Maximum Flow		Maximum Flow				25% Maximum Flow			
					Throw (m)* @v _i =				Throw (m)* @v _i =			
					L/s	m ³ /h	0.25 m/s	0.50 m/s	0.75 m/s	[†] NC	0.25 m/s	0.50 m/s
6	150	10	43	157	1.7	1.2	0.9	< 15	0.9	0.6	0.3	< 15
		20	59	211	2.2	1.4	1.1	18	1.1	0.8	0.5	16
		• 30	73	262	2.6	1.7	1.4	22	1.3	1.0	0.7	19
		40	85	307	2.8	1.9	1.6	27	1.6	1.3	0.9	22
		50	95	341	2.8	2.2	1.8	31	1.8	1.5	0.9	24
		60	102	368	3.0	2.4	2.1	33	2.1	1.8	1.2	26
8	200	10	69	250	2.3	1.8	1.2	< 15	1.5	0.9	0.6	< 15
		20	94	339	2.8	2.0	1.4	18	1.7	1.1	0.8	16
		• 30	116	417	3.2	2.3	1.7	22	2.0	1.4	0.9	18
		40	134	484	3.4	2.5	1.9	26	2.2	1.6	1.0	22
		50	151	545	3.7	2.8	2.2	30	2.5	1.8	1.2	25
		60	165	593	3.9	3.0	2.4	33	2.7	1.9	1.2	27
10	250	10	112	405	2.6	2.1	1.5	< 15	2.0	1.8	1.2	< 15
		20	154	556	3.1	2.3	1.7	20	2.5	2.0	1.4	17
		• 30	190	685	3.6	2.7	2.1	25	2.9	2.3	1.7	20
		40	219	791	4.0	3.1	2.5	28	3.1	2.5	1.9	23
		50	246	886	4.3	3.4	2.8	31	3.4	2.8	2.2	26
		60	269	968	4.5	3.6	3.0	33	3.6	3.0	2.2	28
12	300	10	154	555	3.2	2.3	1.7	< 15	2.0	1.8	1.2	< 15
		20	200	719	3.7	2.8	2.2	20	2.5	2.0	1.4	17
		30	239	861	4.2	3.3	2.7	25	2.9	2.3	1.7	21
		• 40	272	981	4.7	3.8	3.1	28	3.2	2.6	2.0	24
		50	303	1091	4.9	4.0	3.4	31	3.7	3.1	2.5	27
		60	333	1200	5.1	4.2	3.6	33	4.2	3.3	2.7	29

NOTES

- 1) All SI (metric) ratings are soft conversion from I-P ratings.
- 2) • Denotes 750 fpm / 3.81 m/s inlet velocity.
- 3) *Throw data is for air 20°F/11°C lower than room temperature. Throws for isothermal air are 40 to 50% greater.
- 4) [†]NC based on Lw(10⁻¹² watts reference) -10db
- 5) Tested in accordance with ANSI/ASHRAE 70-1991, ANSI S12.31, ARI 890-2001, ISO 5219 and ISO 3741.
- 6) When bypassing air into the plenum at the diffuser with Acutherm R-Rings, throws may be as low as 90% of and the NC 2db higher than those listed in the performance chart.
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