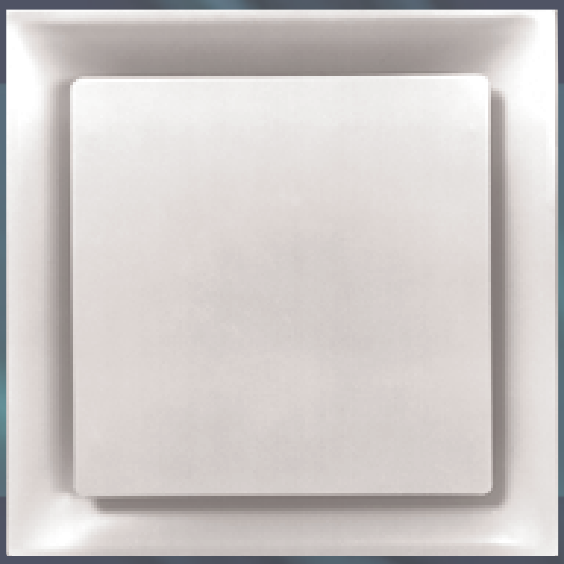
ISSUE B, OCT 2009

Architectural Square Ceiling Diffusers

UNI & AUNI Diffusers



Architectural Ceiling Diffusers
Uni Series

- High Performance
- Square Face
- Round Neck

The Advanced Air Model Series 'UNI' Square Ceiling Air Diffuser has been specially designed to provide both the unobtrusive appearance required for architectural excellence and the 360° diffusion pattern at minimum NC levels required for high engineering performance. The stamped one-piece outer cone eliminates mitred corners and the die-formed curves provide consistent quality and performance.

The UNI diffuser compliments any decor, blending beautifully with virtually any architectural style or requirement. The UNI diffuser provides stable diffusion and mixing patterns under constant and changing load conditions and is particularly suitable for variable air volume systems.

The UNI diffusers are available to suit many situations including surface mount, T-Bar lay-in and panel applications. Standard finish is a high quality polyester powder finish for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 32mm in height for easy, secure connection.

Standard Features:

- Engineered air diffusion pattern.
- Stamped shapes for uniformity.
- High neck collars for solid connection.
- Removable inner core.
- Face panel is virtually flush with the ceiling line.
- Face panel is double-skinned for rigidity and strength and features a hemmed edge for a professional finish.
- Unique neck bracketry is virtually invisible from most angles.

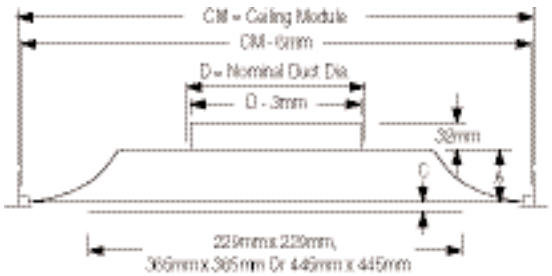
Material:

- Heavy gauge, corrosion-resistant steel or aluminium with miscellaneous steel components.

Finish:

- AW Appliance White polyester powder finish RAL 9010 semi-gloss as standard. Other finishes are available.

Type L Lay-in, T-Bar Frame



Dimensional Data

CM	Metric Units (mm)				
Metric Modules	Duct Size D	A	B	C	F
600 x 600	152, 203, 254, 305, 356, 381	59	519	10	629
500 x 500	152, 203, 254	57	470	11	N/A
300 x 300	102*	25	279	16	330
	127, 152, 178, 203				

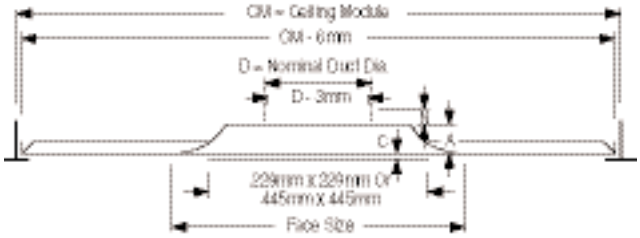
* Supplied with a reducer.

The 500 x 500 module is only available with the Type L frame.

Dimensional Data and Frame Types

Models UNI and AUNI

Type PL Panel Mounted Lay-in T-Bar

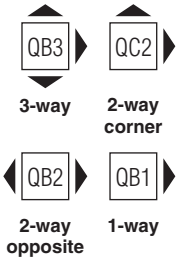


CM	Metric Units (mm)				
Metric Modules	Face Size	Duct Size D	N	A	C
600 x 600		102*	83		
		127, 152, 178, 203	32		
600 x 300	300 x 300	102*	83	25	16
		127, 152, 178, 203	32		
500 x 500		102*	83		
		127, 152, 178, 203	32		
1200 x 600	600 x 600	152, 203, 254, 305, 356, 381	32	59	10

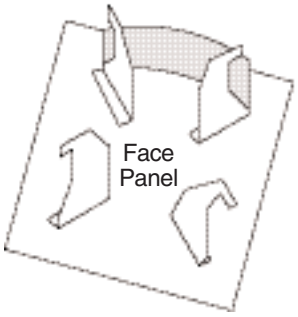
Directional Blow Option • QB Quadrant Blanks

- Converts **UNI** from standard 4-way (360°) blow pattern to 1, 2 or 3-way.
- Supplied factory installed when specified or available loose for simple field installation.
- Installs between outer cone and face panel and locates between neck bracketry.
- Positive full depth blank-off follows neck circumference.

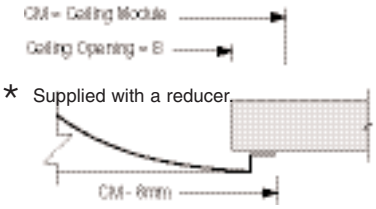
Blow Patterns



QB Illustration

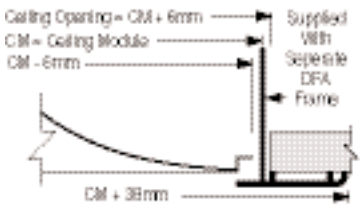


Type L Surface Mount



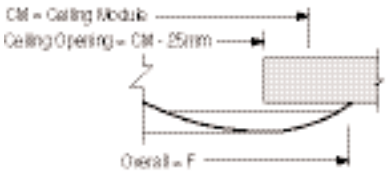
Hard duct connection recommended.

Type L Surface Mount with DFA



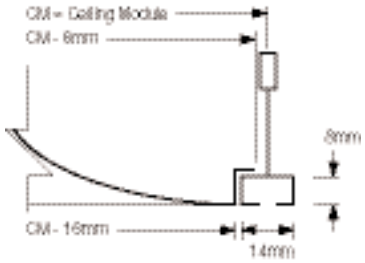
Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

Type S Surface Mount

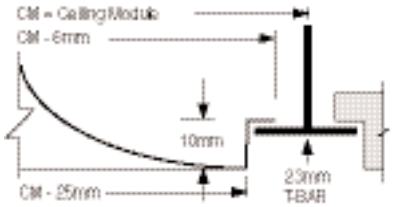


Aluminium model (AUNI) is only available in 300mm x 300mm module. Hard duct connection recommended.

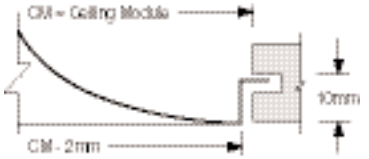
Type F Threadline/Fineline®



Type TL Tegular Lay-in



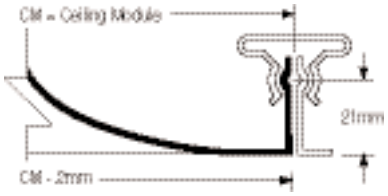
Type SP Spline



Steel models only. For one directional exposed T-Bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

Type M Metal Pan (Snap-in)

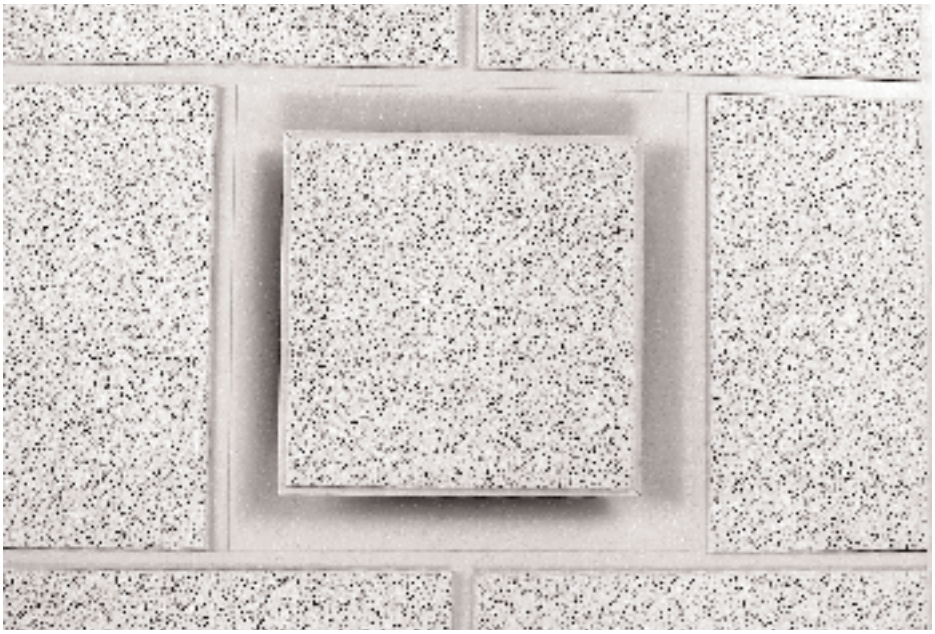
Steel models only



Architectural Option

Model:

- **UNI with optional**
- **RC (retaining channel)**



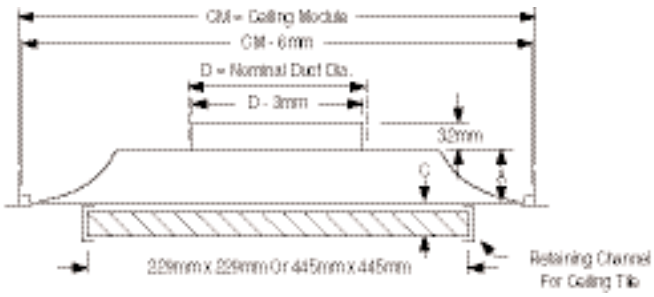
For a unique 'custom' appearance, specify the UNI diffuser with the optional RC Retaining Channel. The retaining channel is shipped separately for field installation of a ceiling tile. Simply cut the tile to size and install it directly on the face panel assembly.

The RC Retaining Channel is supplied in two pieces with pop rivets for field assembly as standard.

The result is a high performance diffuser that blends harmoniously with the specified architectural ceiling design.

Tiles (supplied by others) can also be factory installed at additional cost.

Type L Lay-in T-Bar Frame *



Dimensional Data

CM	Metric Units (mm)				
Metric Modules	Duct Size D	A	B	C	F
600 x 600	152, 203, 254, 305, 356, 381	59	519	29	629
300 x 300	102*	25	279	35	330
	127, 152, 178, 203				

* Supplied with a reducer.

* Refer to previous page for other frame types and installations.

How To Specify or To Order

(Show complete Model Number and Size, unless "Default" is desired)

Square Architectural Ceiling Diffusers • Model Series UNI

UNI - 203 - 600 x 600 - L - AW - –

MODEL

- Steel	UNI
- Aluminium	AUNI

NECK SIZE (inches)

- 102, 127, 152, 178, 203,
- 254, 305, 356, 381

CEILING MODULE SIZE

Metric (mm)

- 300 x 300
- 500 x 500
- 600 x 300 (PL only)
- 600 x 600
- 750 x 750 (PL only)
- 1200 x 600 (PL only)

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Panel T-Bar Lay-in	PL
- Spline	SP
- Metal Pan Snap-In	M
- Threadline/Fineline®	F
- Tegular	TL

ACCESSORIES

- None (default)	—
- Quadrant Blanks	
3-Way Blow	QB3
2-Way Opposite Blow	QB2
2-Way Corner Blow	QC2
1-Way Blow	QB1
- Retaining Channel	RC
- Tile cut and fit	CF

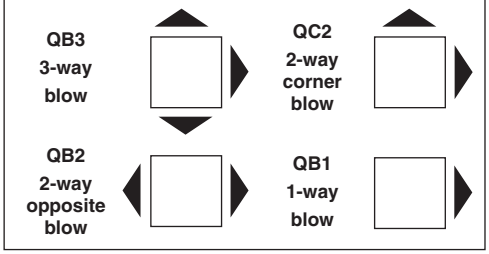
AIR BALANCING DEVICES

- Radial Opposed Blade Damper	4275

FINISH

- Appliance White (default)	AW
- Aluminium	AL
- Special Custom Color	SP

BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Notes:

1. Face sizes 300mm x 300mm and 600mm x 300mm are available in a 102mm to 203mm neck, 500mm x 500mm face size is available in a 152mm, 203mm or 254mm neck and 600mm x 600mm face size is available in a 152mm to 381mm neck.
2. Face size 500mm x 500mm is available only in frame style **L**.
3. Consult text as to limitations of material, module size and frame style combinations.

SUGGESTED SPECIFICATION:

UNI – Steel Construction

Supply and install **Advanced Air UNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White polyester powder finish RAL 9010 semi-gloss (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

AUNI – Aluminium Construction

Supply and install **Advanced Air Model AUNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge aluminium, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White polyester powder finish RAL 9010 semi-gloss (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Models UNI and AUNI • 300mm x 300mm Face Size • 4-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0
	Velocity Pressure (Pa)	3	4	6	8	10	13	16	23	31	41
102 Dia.	Pressure Drop (Pa)	6	9	13	18	23	29	36	52	71	92
	Flowrate (l/s)	17	21	24	28	33	38	40	50	57	66
	Throw (m)	0.6 0.9	0.6 1.2	0.6 1.5	0.9 1.8	0.9 1.8	1.2 2.1	1.2 2.1	1.5 2.1	1.8 2.1	2.1 2.4
	NC Level	-	-	-	13	17	21	24	30	35	40
127 Dia.	Pressure Drop (Pa)	7	11	15	21	28	35	43	62	85	111
	Flowrate (l/s)	26	33	38	45	52	59	64	78	90	104
	Throw (m)	0.6 1.2	0.9 1.5	0.9 1.8	1.2 2.1	1.5 2.4	1.8 2.7	2.1 2.7	2.4 3.0	2.4 3.0	2.7 3.4
	NC Level	-	-	-	14	18	22	25	31	36	41
152 Dia.	Pressure Drop (Pa)	8	13	19	26	33	42	52	75	102	133
	Flowrate (l/s)	38	47	57	66	76	85	94	111	130	149
	Throw (m)	0.9 1.5	1.2 1.8	1.5 2.1	1.5 2.4	1.9 2.7	2.1 3.0	2.4 3.0	2.7 3.4	3.0 3.7	3.0 4.0
	NC Level	-	-	10	15	19	23	26	32	37	42
178 Dia.	Pressure Drop (Pa)	14	23	32	44	57	72	89	129	175	229
	Flowrate (l/s)	50	64	76	90	101	113	125	151	177	203
	Throw (m)	1.2 1.8	1.5 2.1	1.8 2.7	2.1 3.0	2.4 3.0	2.4 3.4	2.7 3.7	3.0 4.0	3.4 4.3	3.7 4.6
	NC Level	-	-	11	16	20	24	27	33	38	43
203 Dia.	Pressure Drop (Pa)	17	27	41	52	68	86	106	152	209	272
	Flowrate (l/s)	66	83	99	116	132	149	165	198	231	264
	Throw (m)	1.5 2.1	1.8 2.7	2.1 3.0	2.4 3.4	2.7 3.7	2.7 4.0	3.0 4.3	3.4 4.6	3.7 4.9	3.7 5.2
	NC Level	-	-	12	17	21	25	28	34	39	44

Models UNI and AUNI • 500mm x 500mm Face Size • 4-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0
	Velocity Pressure (Pa)	3	4	6	8	10	13	16	23	31	41
152 Dia.	Pressure Drop (Pa)	4	5	8	11	14	18	22	31	43	56
	Flowrate (l/s)	38	47	57	66	76	85	94	111	130	149
	Throw (m)	0.9 1.5	0.9 1.2	1.2 1.5	1.2 1.8	1.5 1.8	1.2 2.1	1.5 2.4	1.8 2.7	1.8 3.0	1.8 3.0
	NC Level	-	-	-	-	14	18	22	28	34	39
203 Dia.	Pressure Drop (Pa)	5	7	11	14	19	24	29	42	58	75
	Flowrate (l/s)	66	83	99	116	132	149	165	198	231	264
	Throw (m)	0.6 1.2	0.9 1.5	0.9 2.1	1.2 2.4	1.5 2.7	1.8 2.7	2.1 3.0	2.4 3.4	2.7 3.7	3.0 4.0
	NC Level	-	-	-	13	18	22	26	32	38	43
254 Dia.	Pressure Drop (Pa)	8	12	18	24	32	40	50	72	98	128
	Flowrate (l/s)	104	127	156	179	205	231	257	309	361	413
	Throw (m)	1.2 2.1	1.5 2.7	1.5 3.0	1.8 3.7	2.1 4.0	2.4 3.7	2.7 4.3	3.4 4.6	3.7 5.2	4.0 5.5
	NC Level	-	-	10	16	21	25	29	35	41	46

For performance notes, see next page.

Performance Data

Models UNI and AUNI • 600mm x 600mm Face Size • 4-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0
	Velocity Pressure (Pa)	3	4	6	8	10	13	16	23	31	41
152 Dia.	Pressure Drop (Pa)	3	5	8	10	13	17	21	30	42	54
	Flowrate (l/s)	38	47	57	66	76	85	94	111	130	149
	Throw (m)	0.9 1.2	0.9 1.2	1.2 1.5	1.2 1.8	1.5 1.8	1.2 2.1	1.5 2.4	1.8 2.7	1.8 3.0	1.8 3.0
	NC Level	-	-	-	-	14	18	22	28	34	39
203 Dia.	Pressure Drop (Pa)	5	7	9	14	18	23	28	41	56	73
	Flowrate (l/s)	66	83	99	116	132	149	165	198	231	264
	Throw (m)	0.6 1.2	0.9 1.5	0.9 2.1	1.2 2.4	1.5 2.7	1.8 2.7	2.1 3.0	2.4 3.4	2.7 3.7	3.0 4.0
	NC Level	-	-	-	13	18	22	26	32	38	43
254 Dia.	Pressure Drop (Pa)	8	12	18	24	31	39	49	70	95	124
	Flowrate (l/s)	104	127	156	179	205	231	257	309	361	411
	Throw (m)	1.2 2.1	1.5 2.7	1.5 3.0	1.8 3.7	2.1 4.0	2.4 3.7	2.7 4.3	3.4 4.6	3.7 5.2	4.0 5.5
	NC Level	-	-	10	16	21	25	29	35	41	46
305 Dia.	Pressure Drop (Pa)	10	16	23	31	41	52	64	92	125	163
	Flowrate (l/s)	149	184	222	260	297	333	370	444	519	592
	Throw (m)	1.5 3.0	2.1 4.0	2.4 4.3	2.7 4.9	3.4 5.2	3.7 5.2	4.3 5.8	4.6 6.1	5.2 7.0	5.5 7.6
	NC Level	-	-	13	19	24	28	32	38	44	49
356 Dia.	Pressure Drop (Pa)	14	21	30	41	54	69	85	122	166	217
	Flowrate (l/s)	201	250	300	352	401	451	500	599	703	800
	Throw (m)	2.1 4.3	2.7 4.9	3.4 5.5	4.0 6.1	4.6 7.0	5.2 7.0	5.8 7.9	6.4 8.5	6.7 9.4	7.3 10.1
	NC Level	-	-	15	21	26	30	34	40	46	51
381 Dia.	Pressure Drop (Pa)	17	26	37	51	66	84	104	149	203	265
	Flowrate (l/s)	231	290	347	406	465	524	580	694	812	930
	Throw (m)	2.7 5.2	3.4 5.8	4.0 6.4	4.9 7.3	5.8 7.9	6.1 8.2	6.4 9.1	7.3 10.1	7.9 10.7	8.2 11.6
	NC Level	-	-	16	22	27	31	35	41	47	52

NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

1. Horizontal throws are given at 0.5 and 0.25 m/s terminal velocities under isothermal conditions.

2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Models UNI and AUNI • 300mm x 300mm Face Size • 3-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
	Velocity Pressure (Pa)	2	3	4	6	8	10	13	16	23	31
152 Dia.	Pressure Drop (Pa)	9	15	24	35	48	62	79	97	134	184
	Flowrate (l/s)	28	38	47	57	66	76	85	94	111	130
	Throw (m)	1.2 1.8	1.8 2.7	2.1 2.7	2.4 3.0	2.7 3.7	2.7 4.0	3.0 4.3	3.4 4.6	3.7 4.9	4.0 5.2
	NC Level	-	-	12	18	23	27	31	34	40	45
203 Dia.	Pressure Drop (Pa)	19	34	54	77	105	137	174	214	309	420
	Flowrate (l/s)	50	66	83	99	116	132	149	165	198	231
	Throw (m)	1.5 2.1	2.1 3.0	2.4 3.4	2.7 3.7	3.0 4.0	3.0 4.3	3.4 4.6	3.7 4.9	3.7 5.2	4.0 5.5
	NC Level	-	-	14	20	25	29	33	36	42	47

Models UNI and AUNI • 600mm x 600mm Face Size • 3-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
	Velocity Pressure (Pa)	2	3	4	6	8	10	13	16	23	31
152 Dia.	Pressure Drop (Pa)	3	5	7	10	14	18	23	29	39	54
	Flowrate (l/s)	28	38	47	57	66	76	85	94	111	130
	Throw (m)	0.9 1.2	0.9 1.2	1.2 1.5	1.5 1.8	1.2 2.1	1.5 2.4	1.8 2.7	1.8 3.0	1.8 3.0	2.1 3.4
	NC Level	-	-	-	11	17	22	26	30	36	42
203 Dia.	Pressure Drop (Pa)	4	7	11	16	22	28	36	44	63	86
	Flowrate (l/s)	50	66	83	99	116	132	149	165	198	231
	Throw (m)	0.6 1.2	0.9 1.8	1.2 2.4	1.5 2.4	1.8 2.7	2.1 3.0	2.4 3.7	2.7 3.7	3.0 4.0	3.4 4.3
	NC Level	-	-	-	15	21	26	30	34	40	46
254 Dia.	Pressure Drop (Pa)	8	14	22	32	43	56	71	88	127	174
	Flowrate (l/s)	78	104	127	156	179	205	231	257	309	361
	Throw (m)	1.2 2.1	1.5 2.7	1.8 3.0	2.1 3.4	2.4 3.7	3.0 4.0	3.4 4.6	3.7 4.9	4.0 5.5	4.3 5.8
	NC Level	-	-	-	18	24	29	33	37	43	49
305 Dia.	Pressure Drop (Pa)	11	20	30	43	60	78	98	121	174	239
	Flowrate (l/s)	111	149	184	222	260	297	333	370	444	519
	Throw (m)	1.5 3.0	2.1 4.0	2.7 4.6	3.4 5.2	4.0 5.5	4.3 5.8	4.6 6.1	4.9 6.7	5.5 7.6	6.4 8.5
	NC Level	-	-	12	21	27	32	36	40	46	52
356 Dia.	Pressure Drop (Pa)	15	27	42	60	83	108	136	168	241	332
	Flowrate (l/s)	151	201	250	300	352	401	451	500	599	703
	Throw (m)	2.1 4.3	2.7 4.9	3.7 5.8	4.6 7.0	5.5 7.3	5.8 7.9	6.4 8.5	6.4 9.1	7.3 10.1	7.9 10.7
	NC Level	-	-	14	23	29	34	38	42	48	54
381 Dia.	Pressure Drop (Pa)	19	33	52	74	102	134	170	208	298	407
	Flowrate (l/s)	175	231	290	347	406	465	524	580	694	812
	Throw (m)	2.7 5.2	3.7 6.1	4.9 7.3	5.8 7.9	6.1 8.2	6.7 9.4	7.3 10.1	7.6 10.7	8.2 11.6	8.8 12.2
	NC Level	-	-	15	24	30	35	39	43	49	55

NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

1. Horizontal throws are given at 0.5 and 0.25 m/s terminal velocities under isothermal conditions.

2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Models UNI and AUNI • 300mm x 300mm Face Size • 2-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
	Velocity Pressure (Pa)	1	2	3	4	6	8	10	13	16	23
152 Dia.	Pressure Drop (Pa)	8	18	32	50	72	98	129	163	201	277
	Flowrate (l/s)	19	28	38	47	57	66	76	85	94	111
	Throw (m)	1.2 1.8	1.8 2.7	2.4 3.0	2.7 3.7	2.7 3.7	3.4 4.6	3.7 4.9	3.7 5.2	4.0 5.5	4.0 5.8
	NC Level	-	-	16	22	25	30	34	38	41	47
203 Dia.	Pressure Drop (Pa)	19	42	75	117	168	229	299	379	467	673
	Flowrate (l/s)	33	50	66	83	99	116	132	149	165	198
	Throw (m)	1.5 2.1	2.1 3.0	2.7 3.7	3.0 4.3	3.4 4.6	3.7 4.9	3.7 5.2	3.7 5.5	4.0 5.8	4.3 6.1
	NC Level	-	11	18	24	27	32	36	40	43	49

Models UNI and AUNI • 600mm x 600mm Face Size • 2-way Blow (360° Pattern)

Nominal Neck Size (mm)	Neck Velocity (m/s)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
	Velocity Pressure (Pa)	1	2	3	4	6	8	10	13	16	23
152 Dia.	Pressure Drop (Pa)	2	4	7	11	16	22	28	36	44	61
	Flowrate (l/s)	19	28	38	47	57	66	76	85	94	111
	Throw (m)	0.9 1.2	1.2 1.5	1.5 1.8	1.2 3.1	1.8 2.7	1.8 3.0	1.8 3.0	2.1 3.4	2.4 3.7	2.7 4.0
	NC Level	-	-	-	12	18	24	29	33	37	43
203 Dia.	Pressure Drop (Pa)	3	7	13	20	29	39	51	64	80	114
	Flowrate (l/s)	33	50	66	83	99	116	132	149	165	198
	Throw (m)	0.6 1.2	0.9 2.1	1.5 2.7	2.1 2.7	2.4 3.4	2.7 3.7	3.0 4.0	3.4 4.3	3.7 4.6	4.0 5.2
	NC Level	-	-	-	16	22	28	33	37	41	47
254 Dia.	Pressure Drop (Pa)	7	17	29	44	66	87	115	145	180	260
	Flowrate (l/s)	52	78	104	127	156	179	205	231	257	309
	Throw (m)	1.2 2.1	1.5 3.0	2.1 4.0	2.7 4.3	3.4 4.6	3.7 5.2	4.0 5.5	4.3 5.5	4.6 5.8	5.2 6.7
	NC Level	-	-	12	19	25	31	36	41	44	50
305 Dia.	Pressure Drop (Pa)	11	23	41	63	91	125	164	206	255	366
	Flowrate (l/s)	76	111	149	184	222	260	297	333	370	444
	Throw (m)	1.5 3.0	2.4 4.3	3.4 5.2	4.3 5.8	4.6 6.1	5.2 7.0	5.5 7.6	5.8 7.6	6.4 8.2	6.7 8.8
	NC Level	-	-	15	22	28	34	39	43	47	53
356 Dia.	Pressure Drop (Pa)	14	33	58	90	130	179	233	294	362	519
	Flowrate (l/s)	99	151	201	250	300	352	401	451	500	599
	Throw (m)	2.1 4.3	3.4 5.5	4.6 7.0	5.8 7.9	6.4 8.5	6.7 9.4	7.3 10.1	7.9 10.1	8.5 11.0	9.1 11.6
	NC Level	-	-	17	24	30	36	41	45	49	55
381 Dia.	Pressure Drop (Pa)	18	41	72	113	162	221	291	369	453	647
	Flowrate (l/s)	116	175	231	290	347	406	465	524	580	694
	Throw (m)	2.7 5.2	4.0 6.4	5.8 7.9	6.4 9.1	7.3 10.1	7.9 10.7	8.2 11.6	8.5 11.9	8.8 12.8	9.4 12.8
	NC Level	-	10	18	25	31	37	42	46	50	56

NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

1. Horizontal throws are given at 0.5 and 0.25 m/s terminal velocities under isothermal conditions.

2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.