#### Features:

**AEROSYS** is manufacturing best designed air grilles/registers to suit in a myriad of indoors applications, Series SD Single Deflection grilles are suitable for supply or extract in walls, ceilings and ductwork. Single bank of individually adjustable blades. Single Deflection grilles are a step un from

blades, Single Deflection grilles are a step up from supply units like air valves. Able to handle much larger air volumes, and with the adjustable blades enabling throw to be directed anywhere in a single plane. With an aerodynamic design creating minimal turbulence, the fully extruded aluminum blades of Single Deflection Gell's allow throw adjustment, whilst keeping noise and pressure drops to a minimum. When being used for extract this result in the advantages of being able to handle greater air volumes.



With two banks of individually adjustable blades, Series DD Double Deflection grilles are more suited to supply applications than their Single Deflection cousins. Just like SD grilles though, Double Deflection grilles are suitable for a wide range of settings, including ceilings, walls and on ductwork. Rearmounted opposed blade dampers are available factory fitted into your Supply SD/DD Grille. With the grille blades set at a sufficient spacing to allow adjustment through the damper face with a screwdriver, there is no need specify a removable core to enable volume control adjustment.

#### How to Order?

Itom	Model		Specificatio	n	Mat	erial l	Finish
Item	Model	Frame	Blades	Application	Frame	Blade	FIIIISII
Air Grilles / Registers	AR	Square / Rectangular	Single / Double Deflection	Supply / Return	AL*/SS	AL* / SS	Mill* / Powder coated
	AG	Square / Rectangular	Single / Double Deflection	Supply / Return	AL*/SS	AL* / SS	Mill*/ Powder coated

#### Standard Construction: - (AERO – AG/AR)

Frame – High quality extruded aluminum profile with 30 mm flange width.

Register s / Grilles shall be manufactured by Aerofoil blades from aluminum profile. It have two sets of parallel aerofoil blades with one set mounted vertically on the front\* / rear and other set horizontally at the front / rear\*.



• Spacing – Two sets of aero foil blades were spaced by 20 mm as standard.

• Bushes – Frame is separated from aero foil deflection blades by nylon bushings.

This method of assembly ensures quiet, smooth and rattles free

operation.

• OBD – Supply Air Registers are rigidly fixed with opposed blade damper by grippers.

Damper blade is screw operated from the face opening.

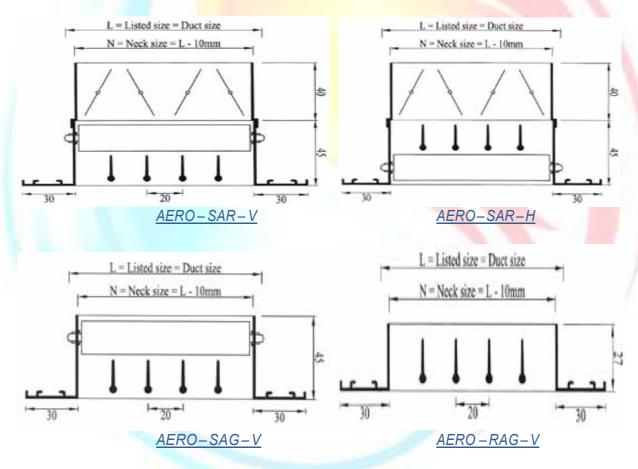
Adjustment – Deflection blades can be adjusted manually and individually, to provide air

deflection in both horizontal and vertical planes.

Min. Size – 4" X 4" (100 X 100 mm).

• Max. Size – 48" X 48" (1200 X 1200 mm)

#### Dimensional Details (AERO - AG / AR):



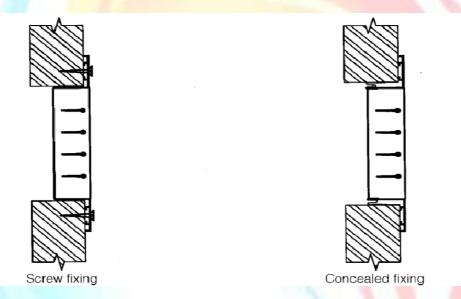
## Mullion Arrangement (AERO - AG / AR):

- Aluminum Profiled U-channel.
- If the length of the grille is above 600 mm, horizontal aerofoil blades are connected through a mullion, fixed at the center of the grille for stability.
- For grilles of the length 1200 mm and above, two mullions will be connected vertically at equidistant.

## Optional Construction (AERO – AG / AR):

- 12, 16 & 24 mm flange widths are also available.
- Foam gasket is sealed around the back of the frame to avoid air leakage.
- It can be with Equalizing grid.
- It can be supplied along with plenum.
- It can be supplied with multiple elements on request.
- Available on any type of finish on request.

### Recommended Installation method (AERO – AG / AR):



# Engineering & Performance table for (AERO – SAR / SAG):

- Neck velocity is measure in m/sec.
- Area factor in Sqm (Sqaure meters).
- Pr Static pressure loss across the diffuser in mm of H<sub>2</sub>O.
- Throw (meters) is measures for terminal velocities of 0.5 & 0.25 m/sec.
- NC based on a room attenuation of 10 dB.
- Maximum effective pressure areas can be achieved when the blades are positioned at 0° vertical position.

# AERO - SAG / SAR

CFM				250	x100	200 x150		250 x150		300 x150	
CFIVI	Sizes (mm)	200	x 100	200	x125	250	x125	300	x125	350	x125
				150	x 150	300	x 100	400	x 100	450	x 100
(m³/Sec)	A <sub>k</sub> (Area Factor)	0.0191	0.0093	0.0199	0.0102	0.0214	0.0113	0.0246	0.0142	0.0269	0.0169
	Deflection	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°
100	Face vel	2.47	5.08	2.37	4.63	2.21	4.18	1.92	3.32		
100	Pt mm H2O	0.43	1.45	0.35	1.22	0.33	1.04	0.23	0.69		
0.0472	Throw in (M)	4.2-5.4	2.7-4.8	3.9-5.5	3.0-4.9	3.9-5.2	3.0-4.9	4.0-5.2	2.7-4.6		
0.0412	N.C	15	19	<15	16	<15	<15	<15	<15		
150	Face vel	3.71	7.61	3.56	6.94	3.31	6.27	2.87	4.98	2.63	4.19
130	Pt mm H2O	0.99	3.23	0.78	2.72	0.74	2.31	0.53	1.55	0.46	1.07
0.0708	Throw in (M)	4.9-6.4	3.6-5.8	4.6-6.1	3.7-5.5	4.3-6.1	3.7-5.2	4.3-6.1	3.4-5.2	4.0-5.8	3.4-4.9
0.0700	N.C	18	24	16	21	<15	16	<15	<15	<15	<15
200	Face vel	4.95	10.16	4.75	9.26	4.42	8.36	3.84	6.65	3.51	5.59
200	Pt mm H2O	1.77	5.76	1.39	4.88	1.3	4.12	0.94	2.77	0.81	1.88
0.0945	Throw in (M)	5.2-7.3	4.3-6.4	5.2-7.0	4.3-6.1	4.9-7.0	3.9-6.1	4.9-6.7	4.0-5.8	4.6-6.7	4.0-5.8
0.0945	N.C	21	28	19	25	17	24	15	20	<15	15
250	Face vel	6.18	12.69	5.93	11.58	5.52	10.45	4.80	8.32	4.39	6.988
250	Pt mm H2O	2.76	9.02	2.18	7.62	2.0	6.45	1.45	4.32	1.24	2.95
0.1181	Throw in (M)	5.8-7.9	4.8-7.0	5.8-7.9	4.9-7.0	5.5-7.6	4.9-6.7	5.4-7.6	4.6-6.7	5.2-7.6	4.6-6.7
0.1101	N.C	28	35	27	32	24	31	21	27	17	23
300	Face vel	7.42	15.24	7.12	13.89	6.62	12.54	5.76	9.98	5.27	8.38
300	Pt mm H2O	3.96	13.21	3.15	10.92	2.9	9.27	2.1	6.22	1.8	4.24
0.1417	Throw in (M)	5.8-8.2	5.2-7.3	5.8-8.2	5.2-7.3	5.8-8.2	5.2-7.3	5.8-8.2	5.2-7.3	5.8-8.2	5.2-7.3
0.1417	N.C	34	40	31	38	28	36	26	33	23	30
350	Face vel	8.65	17.77	8.31	16.21	7.72	14.63	6.72	11.64	6.14	9.78
330	Pt mm H2O	5.38	17.53	4.32	14.98	3.9	12.57	2.87	8.51	2.46	5.77
0.1653	Throw in (M)	7.0-9.8	5.8-8.2	6.7-9.5	5.8-8.2	6.7-9.5	5.4-7.9	6.4-9.2	5.4-7.9	6.4-9.1	5.4-7.9
0.1000	N.C	37	45	35	42	32	39	30	37	28	35
400	Face vel			9.49	18.52	8.83	16.72	7.68	13.30	7.022	11.18
400	Pt mm H2O			5.61	19.56	5.13	16.51	3.76	11.05	3.2	7.52
0.1889	Throw in (M)			7.6-10.4	6.7-9.1	7.3-10.4	6.4-8.8	7.0-10.1	6.1-8.5	6.7-9.8	6.1-8.5
0.1009	N.C			38	45	36	42	34	40	32	38
450	Face vel							8.64	14.96	7.899	12.57
430	Pt mm H2O							4.72	13.97	4.06	9.53
0.2125	Throw in (M)							7.3-10.7	6.7-9.1	7.0-10.4	6.4-8.8
0.2123	N.C							39	43	36	42
500	Face vel									8.78	13.97
300	Pt mm H2O									5.00	11.74
0.2362	Throw in (M)									7.3-10.9	6.7-7.4
0.2302	N.C									40	45

## AERO - SAG / SAR

OEM		250	k200	250)	<b>&lt;250</b>	300:	x250	300:	x300	350	k300
CFM		350	x150	300	k200	450	x 175	350×250		400x250	
	Sizes (mm)	400	x 125	400	x 150	500	x 150	450	x 200	500	x 200
		500	x 100	500	x 125	600	x 125	600	x 150	750	x 150
(m3/0ma)				650 x 100		750 x 100					
(m³/Sec)	A <sub>k</sub> (Area Factor)	0.028	0.0178	0.0324	0.022	0.039	0.0288	0.0469	0.0369	0.0528	0.0422
	Deflection	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°
200	Face vel	3.38	5.31	2.91	4.30	2.42	3.28	2.0	2.56		
200	Pt mm H2O	0.64	1.7	0.36	1.17	0.23	0.71	0.15	0.41		
0.0945	Throw in (M)	4.5-6.7	3.7-5.8	4.5-6.7	3.7-5.5	4.6-6.7	3.4-5.5	4.6-6.7	3.1-5.5		
0.0343	N.C	<15	<15	<15	<15	<15	<15	<15	<15		
250	Face vel	4.22	6.63	3.65	5.37	3.03	4.1	2.52	3.201	2.24	2.79
200	Pt mm H2O	0.99	2.64	0.58	1.83	0.36	1.12	0.23	0.61	0.18	0.41
0.1181	Throw in (M)	5.2-7.6	4.6-6.7	5.2-7.6	4.3-6.7	5.2-7.6	4.3-6.4	5.2-7.6	3.9-6.4	5.2-7.3	3.6-6.0
0.1101	N.C	15	21	<15	18	<15	<15	<15	<15	<15	<15
300	Face vel	5.06	7.96	4.37	6.44	3.63	4.92	3.02	3.84	2.68	3.36
300	Pt mm H2O	1.42	3.81	0.84	2.62	0.51	1.6	0.33	0.89	0.25	0.58
0.1417	Throw in (M)	5.8-8.2	5.2-7.3	5.8-8.2	5.2-7.3	5.8-8.2	4.8-7.3	5.8-8.2	4.8-7.3	5.5-7.9	4.9-7.0
0.1417	N.C	20	27	17	22	<15	19	<15	<15	<15	<15
400	Face vel	6.75	10.6	5.83	8.59	4.84	6.56	4.03	5.19	3.58	4.47
400	Pt mm H2O	2.51	6.73	1.47	4.67	0.91	2.87	0.61	1.6	0.46	1.07
0.1889	Throw in (M)	6.7-9.8	6.4-8.8	6.7-9.8	6.1-8.5	6.7-9.8	5.8-8.5	6.7-9.5	5.8-8.2	6.7-9.5	5.5-8.2
0.1009	N.C	29	36	24	27	19	21	<15	17	<15	<15
500	Face vel	8.44	13.27	7.29	10.74	6.06	8.2	5.036	6.4	4.47	5.59
300	Pt mm H2O	3.91	10.54	2.28	7.24	1.45	4.47	0.94	2.46	0.71	1.65
0.2364	Throw in (M)	7.3-10.9	6.7-9.2	7.3-10.9	6.7-9.1	7.6-11.0	6.4-9.1	7.9-11.3	6.4-9.1	7.6-11.3	8.2-9.1
0.2304	N.C	35	42	30	32	26	28	18	24	15	19
600	Face vel			8.75	12.88	7.27	9.84	6.04	7.68	5.37	6.72
000	Pt mm H2O			3.3	10.52	2.06	6.45	1.35	3.58	1.04	2.36
0.2834	Throw in (M)			8.5-12.2	7.0-10.0	8.5-12.2	7.0-10.0	8.5-12.2	7.0-10.0	8.5-12.2	6.7-10.1
0.2004	N.C			36	39	30	35	25	31	19	24
700	Face vel					8.48	11.48	7.05	8.96	6.26	7.84
700	Pt mm H2O					2.82	8.76	1.83	4.83	1.40	3.25
0.3307	Throw in (M)					9.1-13.1	7.6-10.9	9.1-13.1	7.6-11.0	9.1-13.1	7.6-10.9
0.0001	N.C					36	42	32	37	25	31
800	Face vel							8.05	10.24	7.16	8.95
000	Pt mm H2O							2.41	6.35	1.83	4.22
0.3778	Throw in (M)							9.8-14.0	8.2-11.9	9.8-13.7	8.2-11.9
0.0110	N.C							36	41	33	37
900	Face vel							9.06	11.52	8.05	10.07
300	Pt mm H2O							3.05	8.0	2.31	5.3
0.425	Throw in (M)							10.0-14.6	8.5-12.5	10.0-14.6	8.4-12.5
0.423	N.C							40	45	36	41

## AERO - SAG / SAR

		350	x350	400	x400	500 x350		450	x450	
CFM			x300		x300		x300		x400	
	Sizes (mm)		x 250		x 250		x 250		x 250	
	,		x 200		x 200		x 200		x 200	
			x 150		= 00		x 150			
(m³/Sec)	A <sub>k</sub> (Area Factor)	0.0633	0.0529	0.0827	0.072	0.0962	0.0853	0.1069	0.097	
	Deflection	0°	45°	0°	45°	0°	45°	0°	45°	
500	Face vel	3.73	4.47	2.86	3.28	2.46	2.77	2.21	2.43	
500	Pt mm H2O	0.48	1.02	0.28	0.45	0.20	0.31	0.15	0.23	
0.0000	Throw in (M)	7.3-10.9	5.8-9.1	6.7-10.7	5.5-9.1	9.5-10.4	5.2-9.1	6.1-10.1	4.9-8.8	
0.2362	N.C `´	<15	16	<15	<15	<15	<15	<15	<15	
000	Face vel	4.47	5.36	3.43	3.94	2.95	3.32	2.65	2.92	
600	Pt mm H2O	0.71	1.45	0.41	0.63	0.31	0.43	0.23	0.31	
0.0004	Throw in (M)	8.2-11.9	6.4-10.1	7.6-11.6	6.4-10.1	7.3-11.3	6.1-10.1	7.0-10.7	6.1-9.8	
0.2834	N.C `	16	20	<15	18	<15	15	<15	<15	
700	Face vel	5.22	6.25	4.0	4.59	3.44	3.88	3.09	3.4	
700	Pt mm H2O	0.96	1.98	0.56	0.86	0.41	0.56	0.31	0.43	
	Throw in (M)	8.8-12.8	7.3-10.9	8.5-12.5	7.0-11.0	8.5-12.2	7.0-10.9	8.2-11.9	6.7-10.7	
0.3307	N.C `	22	26	19	23	16	20	15	19	
000	Face vel	5.97	7.14	4.57	5.25	3.93	4.43	3.53	3.89	
800	Pt mm H2O	1.27	2.59	0.71	1.14	0.53	0.74	0.38	0.56	
	Throw in (M)	9.8-13.4	8.2-11.9	9.5-13.1	7.9-10.6	9.5-13.1	7.9-11.6	9.1-12.5	7.6-11.3	
0.3778	N.C `´	30	32	26	28	21	25	20	24	
000	Face vel	6.71	8.03	5.14	5.9	4.42	4.98	3.98	4.38	
900	Pt mm H2O	1.60	3.25	0.91	1.45	0.68	0.94	0.48	0.71	
0.405	Throw in (M)	10.1-14.6	8.5-12.5	10.1-14.3	8.5-12.2	10.1-14.0	8.5-12.2	9.8-13.7	8.2-12.2	
0.3778 900 0.425	N.C `	33	36	30	33	25	30	24	29	
4000	Face vel	7.44	8.92	5.69	6.55	4.92	5.55	4.45	4.86	
1000	Pt mm H2O	1.98	4.01	1.11	1.78	0.84	1.17	0.61	0.86	
0.470	Throw in (M)	10.7-15	9.1-13	10.4-15	9.1-13.1	10.4-14.6	9.1-13.1	10.1-14.3	9.2-13.1	
0.472	N.C	37	40	34	36	30	33	29	32	
4400	Face vel	8.18	9.81	6.25	7.21	5.41	6.11	4.89	5.35	
1100	Pt mm H2O	2.39	4.88	1.35	2.16	1.02	1.42	0.74	1.07	
0.540	Throw in (M)	10.9-16	9.8-14	10.7-15	9.8-14	10.7-15.0	9.8-14	10.4-14.9	9.8-14	
0.519	N.C	40	45	36	40	33	36	32	35	
4000	Face vel			6.83	7.87	5.91	6.67	5.35	5.84	
1200	Pt mm H2O			1.60	2.54	1.22	1.68	1.0	1.24	
0.567	Throw in (M)			11.3-16	10.4-15	11.3-15.9	10.4-14.9	11-15.2	10-14.8	
0.567	N.C			38	43	36	40	35	39	
1400	Face vel			7.96	9.18	6.88	7.77	6.23	6.81	
1400	Pt mm H2O			2.18	3.51	1.65	2.28	1.19	1.73	
0.664	Throw in (M)			12.2-17	11-15.5	12.2-16.8	10.9-15.2	11.6-16.2	10.4-15	
0.661	N.C			44	49	41	44	40	43	

# AERO – RAG

Listed size in	Face vel m/sec.	2.5	3.0	3.5	4.0	4.5	5.00	5.50	6.00
mm x mm	Pt mm H2O	1.7	2.46	3.35	4.37	5.59	6.86	8.38	9.9
	CFM	150	180	210	240	270	300	330	360
250x100 / 200x125	M3/sec.	0.071	0.085	0.099	0.113	0.127	0.142	0.156	0.17
150x150	NC	<15	19	22	25	29	33	36	38
	CFM	180	210	240	280	320	350	390	420
200x150 / 250x125	M3/sec.	0.085	0.099	0.113	0.132	0.151	0.165	0.184	0.198
300x100	NC	<15	18	22	26	29	33	35	37
/ /	CFM	220	260	310	350	400	440	490	530
250x150 / 300x125	M3/sec.	0.104	0.123	0.146	0.165	0.189	0.208	0.231	0.250
400x100	NC	16	20	25	28	31	35	38	40
300x150 / 350x125	CFM	240	290	340	390	440 0.208	490	540	590
450x100	NC	0.113 15	0.137 20	0.161 24	0.184 27	30	0.231 34	0.255 37	0.279 40
4307100	CFM	270	320	370	420	480	530	590	640
250x200 / 350x150		0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125 / 500x100		<15	17	21	24	28	31	35	38
250x250 / 300x200		310	370	430	490	550	610	680	740
400x150 / 500x125		0.146	0.165	0.203	0.231	0.259	0.288	0.321	0.349
600x100	NC	15	19	23	26	30	34	36	39
300x250 / 450x150	CFM	360	440	510	580	660	730	810	800
500x150 / 600x125	M3/sec.	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	15	20	24	27	31	34	37	39
	CFM	420	500	590	670	750	840	930	1020
300x300 / 350x250		0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200 / 600x150		<15	15	23	27	30	34	37	40
/ /	CFM	450	540	630	720	810	900	1000	1090
350x300 / 400x250		0.213	0.255	0.297	0.34	0.382	0.425	0.472	0.514
500x200 / 750x150 350x350 / 400x300		<15 510	16	21 720	25 820	29	33	37	40
500x250 / 600x200		0.241	620 0.293	0.340	0.387	930 0.439	1030 0.486	1140 0.538	1240 0.586
900x150	NC	15	20	24	29	32	37	40	43
0000100	CFM	580	700	820	940	1050	1170	1290	1400
400x400 / 500x300		0.274	0.331	0.387	0.444	0.496	0.553	0.609	0.661
600x250 / 800x200		15	20	25	30	34	38	41	44
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
	M3/sec.	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	16	22	26	32	35	39	42	45
450x450 / 500x400	CFM	700	840	980	1120	1270	1400	1550	1690
750x250	M3/sec.	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	16	21	25	30	33	35	39	43
500x500 / 550x450		800	970	1130	1280	1440	1600	1770	1930
750x300 / 900x250		0.378	0.458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	18	23	27	33	38	40	43	45
500x500 / 550x450		660	880	1100	1320	1540	1760	1980	2200
750x300 / 900x250		0.3117	0.4156	0.5195	0.6234	0.7273	0.8313	0.935	1.039
1000x200	NC	18	23	27	31	36	40	44	52

## AERO – RAG

Listed size in	Face vel m/sec.	2.75	3.25	4.0	4.5	5.0	5.5	6.0	6.5
mm x mm	Ps mm H2O	2.16	3.05	4.32	5.59	7.11	8.89	10.92	12.95
	CFM	150	180	210	240	270	300	330	360
250x100 / 200x125	M3/sec.	0.071	0.085	0.099	0.113	0.127	0.142	0.156	0.17
150x150	NC	18	22	25	28	32	36	39	41
	CFM	180	210	240	280	320	350	390	420
200x150 / 250x125	M3/sec.	0.085	0.099	0.113	0.132	0.151	0.165	0.184	0.198
300x100	NC	17	21	25	29	32	36	38	40
	CFM	220	260	310	350	400	440	490	530
250x150 / 300x125	M3/sec.	0.104	0.123	0.146	0.165	0.189	0.208	0.231	0.250
400x100	NC	19	23	28	31	34	38	41	43
	CFM	240	290	340	390	440	490	540	590
300x150 / 350x125	M3/sec.	0.113	0.137	0.161	0.184	0.208	0.231	0.255	0.279
450x100	NC	18	23	27	30	33	37	40	43
	CFM	270	320	370	420	480	530	590	640
250x200 / 350x150	M3/sec.	0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125 / 500x100	NC	16	20	24	27	31	34	38	41
250x250 / 300x200	CFM	310	370	430	490	550	610	680	740
400x150 / 500x125	M3/sec.	0.146	0.165	0.203	0.231	0.259	0.288	0.321	0.349
600x100	NC	18	22	26	29	33	37	39	42
300x250 / 450x150	CFM	360	440	510	580	660	730	810	800
500x150 / 600x125	M3/sec.	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	18	23	27	30	34	37	40	42
	CFM	420	500	590	670	750	840	930	1020
300x300 / 350x250	M3/sec.	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200 / 600x150	NC	<15	18	26	30	33	37	40	43
	CFM	450	540	630	720	810	900	1000	1090
350x300 / 400x250	M3/sec.	0.213	0.255	0.297	0.34	0.382	0.425	0.472	0.514
500x200 / 750x150	NC	15	19	24	28	32	36	40	43
350x350 / 400x300		510	620	720	820	930	1030	1140	1240
500x250 / 600x200		0.241	0.293	0.340	0.387	0.439	0.486	0.538	0.586
900x150	NC	18	23	27	32	35	40	43	46
	CFM	580	700	820	940	1050	1170	1290	1400
400x400 / 500x300		0.274	0.331	0.387	0.444	0.496	0.553	0.609	0.661
600x250 / 800x200		15	20	25	30	37	41	44	47
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
700x250/900x200	M3/sec.	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	19	25	29	35	38	42	45	48
450x450 / 500x400		700	840	980	1120	1270	1400	1550	1690
750x250	M3/sec.	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	19	24	28	33	36	38	42	46
500x500 / 550x450		800	970	1130	1280	1440	1600	1770	1930
750x300 / 900x250		0.378	0.458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	21	26	30	36	41	43	46	48