TAWREED

TAWREED TRADING & CONTRACTING · DUCT FACTORY IN QATAR SINCE 2012

TECHNICAL DATA SHEET // AIR OUTLETS

Single & Double Deflection Grilles and Registers

جريلات وريجسترات انحراف مفرد ومزدوج

CONTENTS

01 Construction & blade options

02 Fixing details & product summary

03 Air-flow data, 0° and 45° deflection

DOCUMENT

13 pages, extracted from:
Technical Submittal - Air Outlet, p. 60–71
Revision 01 · October 2026

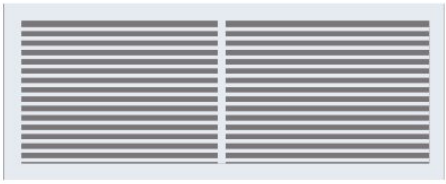
CONTACT · REQUEST A QUOTE

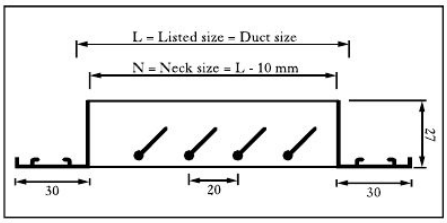
Phone / WhatsApp: +974 7097 0111 Email: hvac@tawreed.ltd
Factory: Zone 91, Street 3138, Building 66, Birkat Al Awamer, Qatar
Web: tawreed.ltd Hours: Sat–Thu, 9am–5pm

Data supplied for submittal and specification purposes. Values are nominal; confirm project-specific requirements with Tawreed before ordering.

COOLX Industrial

CONSTRUCTION:
Frame: High quality extruded aluminium profile with 30 mm flange width as standard.
Blades: Aerofoil blades from aluminium profiles.
Blade spacing: 20 mm as standard .





Description:

ï The frame and blades are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity .

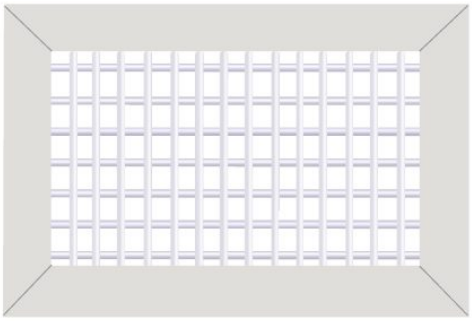
ï Deflection blades are fixed rigidly to the frame at an angle of °45 to the horizontal plane.

Standard finishes:
ï Natural anodized aluminium finish.
ï Powder coated colour finish as per RAL colour codes.
ï Flexibility of finishing is available as option.

COOLX Industrial

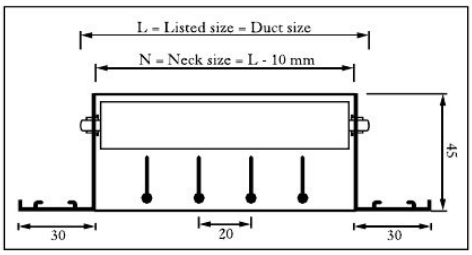
DOUBLE DEFLECTION GRILLE

CONSTRUCTION:
Frame: High quality extruded aluminium profile with 30 mm flange width as standard. 24 ,20 ,12 mm flange widths are optional.
Blades: Aerofoil blades from aluminium profiles.
Blade spacing: 20 mm as standard .



Description:

- The frame and blades are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity .
- Grilles have two sets parallel aerofoil blades with one set mounted horizontally on the front and other set vertically at the rear.
- Frame is separated from aerofoil deflection blades by nylon bushings. This method of assembly ensures quiet, smooth and rattle free operation.
- Deflection blades can be adjusted manually and individually , to provide air deflection in both horizontal and vertical planes.
- Maximum effective pressure areas can be achieved when the blades are positioned at °0 position.



Standard finishes:

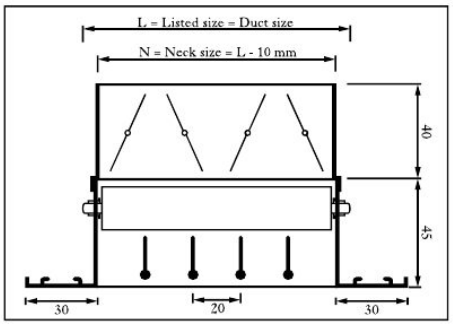
- Natural anodized aluminium finish.
- Powder coated colour finish as per RAL colour codes.
- Flexibility of finishing is available as option.

COOLX Industrial

DOUBLE DEFLECTION REGISTER

CONSTRUCTION:
Frame: High quality extruded aluminium profile with 30 mm flange width as standard.
Blades: Aerofoil blades from aluminium profiles.
Blade spacing: 20 mm as standard .
Damper frame and blades: High quality extruded aluminium profiles with natural aluminium finish. Black matt finish as option.





Description:

- The frame and blades are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Grilles have two sets parallel aerofoil blades with one set mounted horizontally on the front and other set vertically at the rear.
- Frame is separated from aerofoil deflection blades by nylon bushings . This method of assembly ensures quiet, smooth and rattle free operation.
- Deflection blades can be adjusted manually and individually , to provide air deflection in both horizontal and vertical planes.
- Grilles are rigidly fixed with opposed blade damper by grippers. Damper blade is screw operated from the face opening.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage .

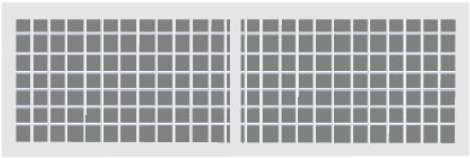
Standard finishes:

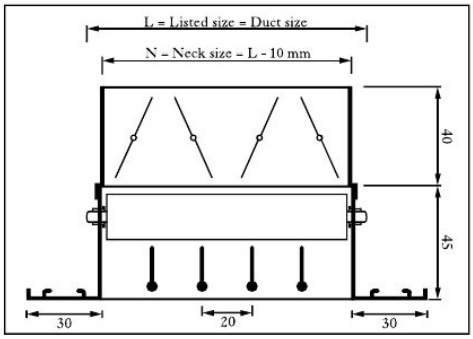
- Natural anodized aluminium finish.
- Powder coated colour finish as per RAL colour codes.
- Flexibility of finishing is available as option.

COOLX Industrial

DOUBLE DEFLECTION REGISTER

CONSTRUCTION:
Frame: High quality extruded aluminium profile with 30 mm flange width as standard.
Blades: Aerofoil blades from aluminium profiles.
Blade spacing: 20 mm as standard .
Damper frame and blades: High quality extruded aluminium profiles with natural aluminium finish. Black matt finish as option.





Description:

ï The frame and blades are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.

ï Grilles have two sets parallel aerofoil blades with one set mounted horizontally on the front and other set vertically at the rear.

ï Frame is separated from aerofoil deflection blades by nylon bushings . This method of assembly ensures quiet, smooth and rattle free operation.

ï Deflection blades can be adjusted manually and individually , to provide air deflection in both horizontal and vertical planes.

ï Grilles are rigidly fixed with opposed blade damper by grippers. Damper blade is screw operated from the face opening.

ï Foam gasket is sealed around the back of the frame as option to avoid air leakage .

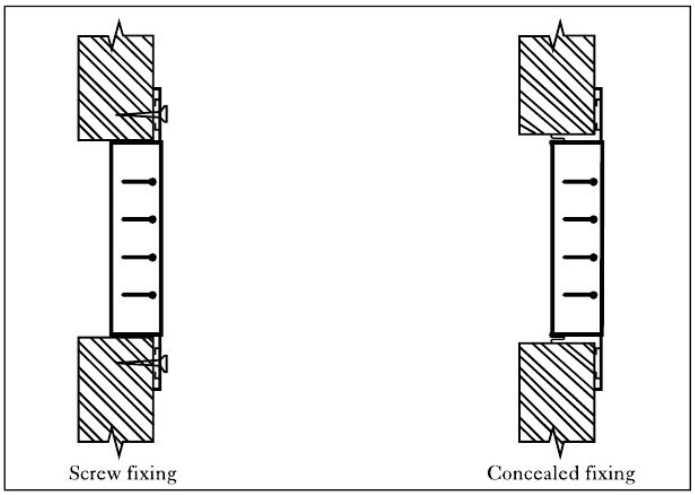
Standard finishes:

ï Natural anodized aluminium finish.
ï Powder coated colour finish as per RAL colour codes.
ï Flexibility of finishing is available as option.

COOLX Industrial

FIXING DETAILS

Fixing details:



Product summary:

DF- DDG	DOUBLE DEFLECTION GRILL
DF- DDR	DOUBLE DEFLECTION REGISTER
DF- SDG	SINGLE DEFLECTION GRILL
DF- SDR	SINGLE DEFLECTION REGISTER

Product order checklist:

- Model number - please refer product summary above.
- Size
- Colour (RAL 9010, 9016, Anodised aluminium finish or other RAL colours)
- Quantity
- Fixing details

CoolX

COOLX Industrial

SINGLE DEFLECTION GRILLES AND REGISTERS

FIXED HORIZONTAL BLADES AT 0° DEFLECTION

Table 2.1 Air flow data

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	P_s mm H_2O	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
	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	15	20	24	27	30	34	37	40
	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	<15	17	21	24	28	31	35	38
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	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	M³/sec	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200 / 600x150	NC	<15	15	23	27	30	34	37	40
	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	16	21	25	29	33	37	40
350x350 / 400x300	CFM	510	620	720	820	930	1030	1140	1240
500x250 / 600x200	M³/sec	0.241	0.293	0.340	0.387	0.439	0.486	0.538	0.586
900x150	NC	15	20	24	29	32	37	40	43
	CFM	580	700	820	940	1050	1170	1290	1400
400x400 / 500x300	M³/sec	0.274	0.331	0.387	0.444	0.496	0.553	0.609	0.661
600x250 / 800x200	NC	15	20	25	30	34	38	41	44
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	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	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300 / 900x250	M³/sec	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

- Face velocity is measured in m/sec.
- P_s: Static pressure loss in mm of H_2O
- NC based on a room attenuation of 10 dB.

CoolX

COOLX Industrial

SINGLE DEFLECTION GRILLES AND REGISTERS

FIXED HORIZONTAL BLADES AT 23° DEFLECTION

Table 2.2 Air flow data

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	P_s mm H_2O	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	CFM	510	620	720	820	930	1030	1140	1240
500x250 / 600x200	M³/sec	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	M³/sec	0.274	0.331	0.387	0.444	0.496	0.553	0.609	0.661
600x250 / 800x200	NC	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	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	19	24	28	33	36	38	42	46
500x500 / 550x450	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300 / 900x250	M³/sec	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

- Face velocity is measured in m/sec.
- P_s: Static pressure loss in mm of H_2O
- NC based on a room attenuation of 10 dB.

CoolX

COOLX Industrial

SINGLE DEFLECTION GRILLES AND REGISTERS

FIXED HORIZONTAL BLADES AT 45° DEFLECTION

Table 2.3 Air flow data

Listed size in mm x mm	Face vel m/sec.	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	P_s mm H_2O	0.91	1.63	2.54	3.68	4.97	6.5	8.33	10.16
	CFM	60	80	100	120	140	160	180	200
250x100 / 200x125	M³/sec	0.0283	0.0378	0.0472	0.0567	0.0661	0.0756	0.085	0.0945
150x150	NC	<15	16	24	27	31	36	41	46
	CFM	81	108	135	162	189	216	243	270
200x150 / 250x125	M³/sec	0.0383	0.051	0.0638	0.765	0.0893	0.102	0.1148	0.1275
300x100	NC	<15	16	24	27	31	36	41	46
	CFM	102	136	170	204	238	272	306	340
250x150 / 300x125	M³/sec	0.0482	0.0642	0.0803	0.0964	0.1124	0.1285	0.1445	0.1606
400x100	NC	<15	15	24	27	31	36	41	46
	CFM	120	160	200	240	280	320	360	400
300x150 / 350x125	M³/sec	0.0567	0.0756	0.0945	0.1134	0.1322	0.1512	0.17	0.1889
450x100	NC	<15	15	25	28	31	36	41	47
	CFM	141	188	235	282	329	376	423	470
250x200 / 350x150	M³/sec	0.0666	0.088	0.1109	0.1332	0.1554	0.178	0.199	0.222
400x125 / 500x100	NC	<15	16	24	27	31	35	40	47
250x250 / 300x200	CFM	162	216	270	324	378	432	486	540
400x150 / 500x125	M³/sec	0.0765	0.102	0.1275	0.153	0.1785	0.204	0.2295	0.255
600x100	NC	<15	16	24	27	31	35	42	47
300x250 / 450x150	CFM	180	270	300	360	420	480	540	600
500x150 / 600x125	M³/sec	0.085	0.1133	0.142	0.17	0.198	0.2267	0.255	0.2833
750x100	NC	<15	17	23	27	31	35	40	46
	CFM	240	320	400	480	560	640	720	800
300x300 / 350x250	M³/sec	0.1133	0.151	0.1889	0.2267	0.2645	0.302	0.3401	0.3778
450x200 / 600x150	NC	<15	18	23	27	31	35	40	47
	CFM	300	400	500	600	700	800	900	1000
350x300 / 400x250	M³/sec	0.1416	0.1889	0.236	0.283	0.331	0.3778	0.425	0.4723
500x200 / 750x150	NC	<15	19	23	27	32	36	40	48
350x350 / 400x300	CFM	360	480	600	720	840	960	1080	1200
500x250 / 600x200	M³/sec	0.17	0.2267	0.283	0.34	0.3967	0.453	0.51	0.5667
900x150	NC	<15	21	24	27	32	36	40	48
	CFM	420	560	700	840	980	1120	1260	1400
400x350 / 550x250	M³/sec	0.198	0.264	0.331	0.397	0.463	0.529	0.595	0.661
700x200	NC	<15	21	24	28	33	37	41	49
	CFM	480	640	800	960	1120	1280	1440	1600
400x400 / 500x300	M³/sec	0.2267	0.3023	0.3778	0.453	0.529	0.6046	0.68	0.7556
600x250 / 800x200	NC	16	22	25	29	33	38	42	49
500x350 / 600x300	CFM	540	720	900	1080	1260	1440	1620	1800
700x250 / 900x200	M³/sec	0.255	0.3401	0.4251	0.51	0.51	0.6801	0.765	0.85
1000x150	NC	17	22	25	29	34	42	43	50
450x450 / 500x400	CFM	600	800	1000	1200	1400	1600	1800	2000
750x250	M³/sec	0.2834	0.3778	0.4723	0.5668	0.6612	0.7556	0.85	0.9446
1000x200	NC	18	23	26	30	35	43	41	50
500x500 / 550x450	CFM	660	880	1100	1320	1540	1760	1980	2200
750x300 / 900x250	M³/sec	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

- Face velocity is measured in m/sec.
- P_s: Static pressure loss in mm of H_2O
- NC based on a room attenuation of 10 dB.

COOLX Industrial

DOUBLE DEFLECTION GRILLE AND REGISTERS

RATING WITH 0° AND 45° DEFLECTION

Table 2.4 Air flow data

CFM	Listed Size in mm x mm	200 x 100		250 x 100 200 x 125 150 x 150		200 x 150 250 x 125 300 x 100		250 x 150 300 x 125 400 x 100		300 x 150 350 x 125 450 x 100	
M³/sec	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		
	P_1 mm H_2O	0.43	1.45	0.35	1.22	0.33	1.04	0.23	0.69		
	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		
0.0472	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
	P_1 mm H_2O	0.99	3.23	0.78	2.72	0.74	2.31	0.53	1.55	0.46	1.07
	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
0.0708	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
	P_1 mm H_2O	1.77	5.76	1.39	4.88	1.3	4.12	0.94	2.77	0.81	1.88
	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
	P_1 mm H_2O	2.76	9.02	2.18	7.62	2.0	6.45	1.45	4.32	1.24	2.95
	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
0.1181	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
	P_1 mm H_2O	3.96	13.21	3.15	10.92	2.9	9.27	2.1	6.22	1.8	4.24
	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
	P_1 mm H_2O	5.38	17.53	4.32	14.98	3.9	12.57	2.87	8.51	2.46	5.77
	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
0.1653	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
	P_1 mm H_2O			5.61	19.56	5.13	16.51	3.76	11.05	3.2	7.52
	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
0.1889	N.C			38	45	36	42	34	40	32	38
450	Face vel.							8.64	14.96	7.899	12.57
	P_1 mm H_2O							4.72	13.97	4.06	9.53
	Throw in (M)							7.3-10.7	6.7-9.1	7.0-10.4	6.4-8.8
0.2125	N.C							39	43	36	42
500	Face vel.									8.78	13.97
	P_1 mm H_2O									5.00	11.74
	Throw in (M)									7.3-10.9	6.7-7.4
0.2362	N.C									40	45

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H_2O & Area factor in square meter.
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec.
- NC based on a room attenuation of 10 dB.

CoolX

COOLX Industrial

DOUBLE DEFLECTION GRILLE AND REGISTERS

RATING WITH 0° AND 45° DEFLECTION

Table 2.4 (cont.) Air flow data

CFM M³/sec	Listed Size in mm x mm	250 x 200 350 x 150 400 x 125 500 x 100		250 x 250 300 x 200 400 x 150 500 x 125 650 x 100		300 x 250 450 x 175 500 x 150 600 x 125 750 x 100		300 x 300 350 x 250 450 x 200 600 x 150		350 x 300 400 x 250 500 x 200 750 x 150	
	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		
	P_t mm H_2O	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		
	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
	P_t mm H_2O	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
	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
	P_t mm H_2O	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
	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
	P_t mm H_2O	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
	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
	P_t mm H_2O	3.91	10.54	2.28	7.24	1.45	4.47	0.94	2.46	0.71	1.65
0.2362	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
	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
	P_t mm H_2O			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
	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
	P_t mm H_2O					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
	N.C					36	42	32	37	25	31
800	Face vel.							8.05	10.24	7.16	8.95
	P_t mm H_2O							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
	N.C							36	41	33	37
900	Face vel.							9.06	11.52	8.05	10.07
	P_t mm H_2O							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
	N.C							40	45	36	41

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H_2O & Area factor in square meter.
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec.
- NC based on a room attenuation of 10 dB.

CoolX

COOLX Industrial

DOUBLE DEFLECTION GRILLE AND REGISTERS

RATING WITH 0° AND 45° DEFLECTION

Table 2.4 (cont.) Air flow data

CFM M³/sec	Listed Size in mm x mm	350 x 350 400 x 300 500 x 250 600 x 200 900 x 150		400 x 400 500 x 300 600 x 250 750 x 200		500 x 350 600 x 300 700 x 250 900 x 200 1200 x 150		450 x 450 500 x 400 800 x 250 1000 x 200	
	Area factor	0.0633	0.0529	0.0827	0.072	0.0926	0.0853	0.1069	0.097
	Deflection	0°	45°	0°	45°	0°	0°	0°	45°
500	Face vel.	3.73	4.47	2.86	3.28	2.46	2.77	2.21	2.43
	P_t mm H_2O	0.48	1.02	0.28	0.45	0.20	0.31	0.15	0.23
0.2362	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
	N.C	<15	16	<15	<15	<15	<15	<15	<15
600	Face vel.	4.47	5.36	3.43	3.94	2.95	3.32	2.65	2.92
	P_t mm H_2O	0.71	1.45	0.41	0.63	0.31	0.43	0.23	0.31
0.2834	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
	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
	P_t mm H_2O	0.96	1.98	0.56	0.86	0.41	0.56	0.31	0.43
0.3307	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
	N.C	22	26	19	23	16	20	15	19
800	Face vel	5.97	7.14	4.57	5.25	3.93	4.43	3.53	3.89
	P_t mm H_2O	1.27	2.59	0.71	1.14	0.53	0.74	0.38	0.56
0.3778	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
	N.C	30	32	26	28	21	25	20	24
900	Face vel	6.71	8.03	5.14	5.9	4.42	4.98	3.98	4.38
	P_t mm H_2O	1.60	3.25	0.91	1.45	0.68	0.94	0.48	0.71
0.425	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
	N.C	33	36	30	33	25	30	24	29
1000	Face vel	7.44	8.92	5.69	6.55	4.92	5.55	4.45	4.86
	P_t mm H_2O	1.98	4.01	1.11	1.78	0.84	1.17	0.61	0.86
0.472	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
	N.C	37	40	34	36	30	33	29	32
1100	Face vel	8.18	9.81	6.25	7.21	5.41	6.11	4.89	5.35
	P_t mm H_2O	2.39	4.88	1.35	2.16	1.02	1.42	0.74	1.07
0.519	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
	N.C	40	45	36	40	33	36	32	35
1200	Face vel			6.83	7.87	5.91	6.67	5.35	5.84
	P_t mm H_2O			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
	N.C			38	43	36	40	35	39
1400	Face vel			7.96	9.18	6.88	7.77	6.23	6.81
	P_t mm H_2O			2.18	3.51	1.65	2.28	1.19	1.73
0.661	Throw in (M)			12.2-17	11-15.5	12.2-16.8	10.9-15.2	11.6-16.2	10.4-15
	N.C			44	49	41	44	40	43

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H_2O & Area factor in square meter.
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec.
- NC based on a room attenuation of 10 dB.

CoolX

COOLX Industrial

DOUBLE DEFLECTION GRILLE AND REGISTERS

RATING WITH 0° AND 45° DEFLECTION

Table 2.4 (cont.) Air flow data

CFM M³/sec	Listed Size in mm x mm	600 x 400 900 x 250 800 x 300 1200 x 200		800 x 350 900 x 300 1100 x 250 1400 x 200		600 x 600 900 x 400 1000 x 350 1200 x 300		750 x 600 900 x 500 1000 x 450 1500 x 300 1200 x 375		800 x 750 900 x 700 1000 x 600 1200 x 500	
	Area factor	0.1352	0.1	0.162	0.1159	0.216	0.162	0.27	0.216	0.354	0.288
	Deflection	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°
1100	Face vel	3.84	5.19	3.20	4.48	2.4	3.2	1.92	2.4		
	P_t mm H_2O	0.64	0.98	0.59	0.84	0.52	0.76	0.42	0.62		
0.519	Throw in (M)	9.8-14.3	9.2-13.2	9.2-13.6	8.6-12.8	8.8-13.0	8.1-11.3	7.0-9.1	6.2-8.3		
	N.C	30	33	28	29	25	27	20	24		
1200	Face vel	4.19	5.67	3.5	4.89	2.63	3.5	2.1	2.63	1.6	1.97
	P_t mm H_2O	0.87	1.09	0.69	0.92	0.58	0.81	0.48	0.71	0.38	0.51
0.567	Throw in (M)	10.3-14.8	9.8-14.0	9.7-14.3	9.1-13.2	9.3-13.8	8.4-11.9	7.5-10.8	6.8-9.4	6.3-9.2	5.7-8.1
	N.C	32	35	30	32	27	29	24	26	20	22
1400	Face vel	4.89	6.61	4.08	5.7	3.06	4.08	2.45	3.06	1.87	2.29
	P_t mm H_2O	0.93	1.51	0.76	1.21	0.63	0.98	0.51	0.79	0.43	0.58
0.661	Throw in (M)	10.8-15.4	10.2-14.6	10.1-15.0	9.7-13.8	9.7-14.3	8.8-11.3	8.1-11.3	7.3-10.1	6.8-10.1	6.1-8.8
	N.C	35	38	33	35	30	32	27	29	23	25
1600	Face vel	5.59	7.56	4.67	6.52	3.5	4.82	2.8	3.5	2.13	2.63
	P_t mm H_2O	1.03	1.82	0.84	1.43	0.71	1.12	0.63	0.91	0.51	0.64
0.756	Throw in (M)	11.5-16.9	10.8-15.1	10.6-15.4	10.1-14.5	10.1-14.8	9.3-12.1	8.8-12.1	7.9-10.7	7.3-10.9	6.7-9.2
	N.C	38	40	36	37	33	34	29	31	25	28
1800	Face vel	6.29	8.5	5.25	7.33	3.94	5.32	3.15	3.94	2.4	2.95
	P_t mm H_2O	1.32	2.24	0.97	1.73	0.82	1.34	0.72	1.13	0.58	0.78
0.85	Throw in (M)	12.6-18.2	11.4-17.3	11.8-16.7	10.7-15.3	10.9-16.1	9.8-14.1	10.1-14.2	8.2-12.2	7.9-11.6	7.1-9.8
	N.C	41	44	39	41	36	37	31	33	28	31
2000	Face vel	6.99	9.78	5.83	8.15	4.38	5.83	3.5	4.38	2.7	3.28
	P_t mm H_2O	1.61	2.53	1.03	1.92	0.88	1.52	0.78	1.23	0.61	0.83
0.945	Throw in (M)	13.8-19.7	12.4-18.6	13.2-18.1	11.6-16.5	12.1-17.3	10.3-14.8	10.7-15.1	8.8-13.1	8.2-11.8	7.4-10.4
	N.C	44	47	41	43	39	41	33	36	28	32
2200	Face vel			6.41	8.96	4.81	6.41	3.85	4.81	2.94	3.61
	P_t mm H_2O			1.16	2.42	0.95	1.82	0.83	1.45	0.72	0.93
1.039	Throw in (M)			14.3-19.5	12.4-17.7	12.8-18.1	10.9-15.7	11.2-16.4	9.3-13.8	8.9-13.0	8.1-11.3
	N.C			44	47	41	44	35	39	30	33
2400	Face vel					5.25	7.0	4.2	5.25	3.2	3.94
	P_t mm H_2O					1.13	2.04	0.93	1.63	0.81	1.03
1.134	Throw in (M)					13.7-19.2	11.4-16.4	12.2-17.3	9.9-14.7	9.5-13.8	8.7-12.1
	N.C					43	46	37	42	32	35
2600	Face vel					5.69	7.58	4.55	5.69	3.47	4.26
	P_t mm H_2O					1.43	2.43	1.07	1.93	0.92	1.32
1.228	Throw in (M)					14.4-21.3	12.1-17.6	13.1-18.4	10.7-15.4	10.7-15.7	9.3-13.2
	N.C					45	48	40	44	33	37

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H_2O & Area factor in square meter.
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec.
- NC based on a room attenuation of 10 dB.