

Model: 250 Grille Series

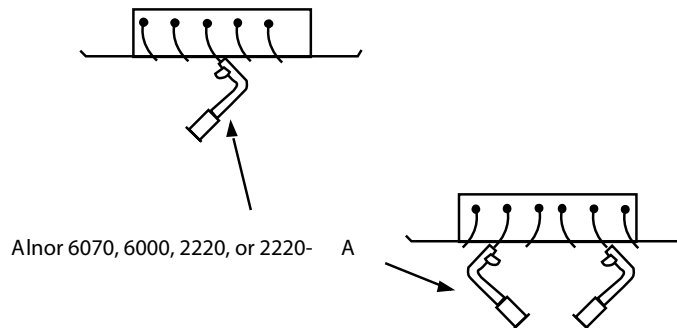
The 250 grille series is comprised of 1-, 2-, 3-, and 4-way grilles. The air flow measurement procedures are divided between 1- and 2-way, then 3- and 4-way procedures.

1- and 2-way Airflow Measurements Procedure

1. Position all vanes as shown below.
2. Center velometer probe over the trailing edge of a vane as shown in the figures.
3. Record and average a number of velocity readings taken at uniformly spaced positions over the face of the grille.
4. Calculate airflow rate using the following equation and factor tables below.

Flow Rate: CFM = K-Factor x Average Velocity x Core Length (core length parallel to vanes in inches).

Note: Core Length = Nominal - 3/4-inch



250 Air Flow Factors

All One-way

Width	Number of Vanes	K-Factor
4	4	0.0084
6	7	0.016
8	9	0.021
10	12	0.028
12	15	0.035
14	17	0.040
16	20	0.047
18	23	0.055
20	25	0.060
24	31	0.074

All Two-way

Width	Number of Vanes	K-Factor
4	4	0.0064
6	6	0.011
8	10	0.021
10	12	0.026
12	14	0.031
14	18	0.040
16	20	0.045
18	22	0.050
20	26	0.060
24	30	0.070

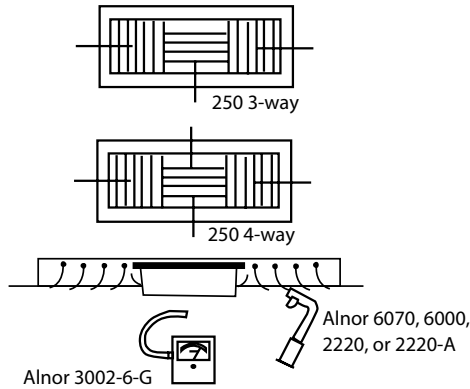
Note 1: K-factors valid only for the blade orientation shown.

Note 2: Width refers to nominal dimension perpendicular to vanes.

3- and 4-way Airflow Measurements Procedure

1. Position all vanes with template as shown.
2. Center velometer jet over the trailing edge of a vane as shown.
3. Record and average a number of velocity readings taken at evenly spaced positions over the outlet face.
4. Calculate flow rate using the following equation.
Flow Rate: CFM = Factor x Average Velocity

Note: Select and use the applicable factor from the table provided.



250, Three- and Four-way Grille K-Factors

Size (inches)	Three-way	Four-way	Size (inches)	Three-way	Four-way
8 x 4	0.057	0.055	18 x 6	0.235	0.215
8 x 5	0.067	0.75	18 x 8	0.320	0.325
8 x 6	0.097	0.090	18 x 12	0.515	0.490
8 x 8	0.130	0.135	18 x 18	0.795	0.770
10 x 4	0.060	0.055	20 x 4	0.160	0.245
10 x 5	0.080	0.080	20 x 6	0.270	0.245
10 x 6	0.110	0.095	20 x 8	0.370	0.370
10 x 8	0.145	0.145	20 x 12	0.595	0.565
10 x 10	0.190	0.185	20 x 18	0.915	0.890
12 x 4	0.095	0.085	20 x 20	1.000	1.000
12 x 5	0.120	0.125	24 x 4	0.200	0.185
12 x 6	0.155	0.145	24 x 6	0.340	0.305
12 x 8	0.215	0.215	24 x 8	0.460	0.465
12 x 10	0.275	0.270	24 x 12	0.735	0.700
12 x 12	0.340	0.325	24 x 18	1.150	1.100
14 x 4	0.095	0.090	24 x 24	1.550	1.500
14 x 5	0.125	0.130	30 x 12	0.980	0.940
14 x 6	0.165	0.150	30 x 18	1.550	1.450
14 x 8	0.225	0.225	30 x 24	2.050	2.000
14 x 10	0.295	0.285	30 x 30	2.600	2.550
14 x 12	0.365	0.345	36 x 12	1.150	1.100
14 x 14	0.420	0.425	36 x 18	1.750	1.700
16 x 4	0.135	0.130	36 x 24	2.350	2.350
16 x 6	0.225	0.210	36 x 30	3.000	2.950
16 x 8	0.310	0.310	36 x 36	3.600	3.550
16 x 12	0.495	0.475	48 x 12	1.600	1.550
18 x 4	0.665	0.655	48 x 24	3.350	3.300
18 x 4	0.140	0.130			

Note 1: Size of grille refers to nominal dimension (duct size).

Note 2: Factors are valid only for the blade orientation shown.