

CFM Duct Sizing Chart

Supply duct sizes by airflow, for galvanized sheet metal at the standard residential friction rate.

- Friction rate 0.1 in. w.g. per 100 ft
- Galvanized steel, absolute roughness 0.0003 ft
- Equal friction method, ASHRAE Fundamentals Ch. 34 (Darcy-Weisbach with the Haaland friction factor).
- Rectangular sizes are Huebscher equivalents, never smaller than required, aspect ratio 4:1 or less.

CFM	Round duct	Velocity (fpm)	in. w.g. / 100 ft	Rectangular	Low profile
25	4"	286	0.049	4 x 4	—
50	5"	367	0.057	6 x 4	8 x 4
75	6"	382	0.049	6 x 6	12 x 4
100	6"	509	0.082	6 x 6	12 x 4
125	7"	468	0.058	8 x 8	16 x 4
150	7"	561	0.081	8 x 8	16 x 4
175	8"	501	0.056	8 x 8	16 x 4
200	8"	573	0.071	8 x 8	16 x 4
250	9"	566	0.060	10 x 10	18 x 6
300	9"	679	0.083	10 x 10	18 x 6
350	10"	642	0.066	10 x 10	24 x 6
400	10"	733	0.084	10 x 10	24 x 6
450	12"	573	0.043	12 x 12	24 x 6
500	12"	637	0.052	12 x 12	24 x 6
600	12"	764	0.073	12 x 12	24 x 6
700	12"	891	0.096	12 x 12	24 x 6
800	14"	748	0.058	14 x 14	30 x 8
900	14"	842	0.072	14 x 14	30 x 8
1000	14"	935	0.087	14 x 14	30 x 8
1200	16"	859	0.063	16 x 16	30 x 8
1400	16"	1003	0.084	16 x 16	30 x 8
1600	18"	905	0.060	18 x 18	30 x 10
1800	18"	1019	0.075	18 x 18	30 x 10
2000	18"	1132	0.091	18 x 18	30 x 10
2500	20"	1146	0.082	20 x 20	30 x 12
3000	22"	1136	0.072	22 x 22	30 x 14
3500	22"	1326	0.096	22 x 22	30 x 14
4000	24"	1273	0.081	22 x 22	30 x 18

Reference data for everyday sizing, not an engineering design. Final duct sizing should be checked by a licensed professional against ACCA Manual D for the specific system.