

# Residential Duct Sizing Guide

Key Points to Remember when using this guide

- The sizing chart is designed for estimating the airflow in an “average” system.
- The chart assumes the blower motor and total effective length of the duct system to be adequate for a .1 friction rate.
- The chart should not be used to design complete duct systems.
- To insure proper distribution of air, volume dampers must be used for all branch runs.
- The chart is based on metal duct. Flex duct has a higher pressure drop and as such may require the size shown on this guide be increased by 1 round size for up to 800 CFM and 2 round sizes above 800 CFM to insure proper airflow. Failure to do so will result in high velocity and very likely, loss of airflow.
- ACCA Manual D is the industry standard containing procedures used for designing residential duct systems. You can obtain a copy directly from ACCA by visiting their website: [www.acca.org](http://www.acca.org)

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The following duct sizes are based on a friction rate of .10 inches per 100 feet of lineal duct. This "Equal-Friction" method of duct sizing should be adequate for normal residential furnace heating and air conditioning applications. Larger air volumes or higher static pressures should be dealt with on an individual job basis. See page 1 for details.

## Rectangular and Round Duct

Air Volume CFM	Duct Height Inches					Equivalent Round Duct"	Air Volume CFM
	4"	6"	8"	10"	12"		
50	6 x 4					5	50
75	6 x 4					6	75
100	8 x 4	6 x 6				6	100
125	10 x 4	6 x 6				7	125
150	10 x 4	8 x 6				7	150
175	12 x 4	8 x 6				8	175
200	14 x 4	8 x 6				8	200
225	16 x 4	10 x 6				8	220
250	16 x 4	10 x 6				9	250
275		12 x 6	8 x 8			9	275
300		12 x 6	8 x 8			9	300
400		14 x 6	10 x 8			10	400
500		18 x 6	12 x 8	10 x 10		11	500
600		20 x 6	14 x 8	12 x 10		12	600
700		24 x 6	16 x 8	12 x 10		12	700
800		26 x 6	18 x 8	14 x 10	12 x 12	13	800
900		30 x 6	20 x 8	16 x 10	12 x 12	14	900
1000			22 x 8	16 x 10	14 x 12	14	1000
1100			24 x 8	18 x 10	16 x 12	15	1100
1200			26 x 8	20 x 10	16 x 12	15	1200
1300			28 x 8	20 x 10	18 x 12	16	1300
1400			30 x 8	22 x 10	18 x 12	16	1400
1500				24 x 10	20 x 12	16	1500
1600				24 x 10	20 x 12	17	1600
1700				26 x 10	22 x 12	17	1700
1800				28 x 10	22 x 12	18	1800
1900				30 x 10	22 x 12	18	1900
2000					24 x 12	18	2000