

Duct Size Chart: CFM Reference Sheet

Standard Residential Friction Loss: 0.1 in. w.g. per 100 ft • Based on ACCA Manual D & ASHRAE Standards

1. Round Duct CFM Chart			Rigid Metal @ 0.1 FR
DIA.	CFM	VELOCITY	RECOMMENDED USE
4"	37 CFM	426 FPM	Bath exhaust
5"	67 CFM	492 FPM	Small bedroom
6"	109 CFM	553 FPM	Standard bedroom
7"	163 CFM	611 FPM	Master bedroom
8"	232 CFM	666 FPM	Living branch / trunk
9"	317 CFM	718 FPM	Zone trunk
10"	419 CFM	768 FPM	1-Ton main trunk
12"	678 CFM	863 FPM	1.5–2 Ton main trunk
14"	1019 CFM	953 FPM	2.5-Ton trunk (953 FPM)
16"	1450 CFM	1039 FPM	3.5–4 Ton trunk
18"	1980 CFM	1120 FPM	5-Ton trunk / light comm.
20"	2615 CFM	1199 FPM	Commercial trunk

2. Rectangular Duct CFM Chart			Huebscher Equiv. @ 0.1 FR
SIZE (W×H)	CFM	EQUIV.	VELOCITY
8×6"	200 CFM	7.6"	599 FPM
10×6"	264 CFM	8.4"	634 FPM
12×6"	330 CFM	9.1"	661 FPM
10×8"	393 CFM	9.8"	708 FPM
12×8"	496 CFM	10.7"	743 FPM
14×8"	600 CFM	11.5"	772 FPM
16×8"	706 CFM	12.2"	795 FPM
18×8"	814 CFM	12.9"	814 FPM
20×8"	922 CFM	13.5"	830 FPM
12×10"	673 CFM	12.0"	807 FPM
14×10"	819 CFM	12.9"	843 FPM
16×10"	969 CFM	13.7"	872 FPM
18×10"	1120 CFM	14.5"	896 FPM
20×10"	1274 CFM	15.2"	917 FPM

3. Flexible Duct CFM Chart			Keep velocity < 700 FPM
DIA.	STRETCHED	INSTALLED	VELOCITY
4" Flex	33 CFM	30 CFM	344 FPM
5" Flex	59 CFM	54 CFM	396 FPM
6" Flex	96 CFM	88 CFM	448 FPM
7" Flex	144 CFM	132 CFM	494 FPM
8" Flex	204 CFM	188 CFM	539 FPM

DIA.	STRETCHED	INSTALLED	VELOCITY
9" Flex	279 CFM	256 CFM	579 FPM
10" Flex	369 CFM	338 CFM	620 FPM
12" Flex	597 CFM	548 CFM	698 FPM
14" Flex	897 CFM	823 CFM	770* FPM
16" Flex	1276 CFM	1172 CFM	839* FPM

4. Return Air Duct Sizing			Quiet Target: 500–650 FPM
SYSTEM SIZE	MIN. ROUND	MIN. RECTANGULAR	DESIGN VELOCITY
1.0 Ton (400 CFM)	12"	14×8" / 12×10"	509 FPM
2.0 Ton (800 CFM)	14"–16"	20×10" / 24×8"	573 FPM
3.0 Ton (1,200 CFM)	18"	26×10" / 22×12"	611 FPM
4.0 Ton (1,600 CFM)	20"	30×10" / 26×12"	660 FPM
5.0 Ton (2,000 CFM)	22"–24"	34×10" / 30×12"	679 FPM