

RESIDENTIAL/LIGHT-COMMERCIAL LOW-PRESSURE/VELOCITY DUCT SIZE TABLE

CFM Range	Duct Sizes Round>Square>Flatter Rectangles Suggested Sizes									REMARKS	
Maximum Best Practice	ROUND DUCT SIZE	SQUARE-ish		2:1 Flatter		3:1 Flat		4:1 Flattest		Do not use ducts greater than 3:1 aspect ratio on return/negative pressure side or greater than 4:1 on supply/positive pressure side, unless reinforced with tie-rods or other means per SMACNA	
		W	H	W	H	W	H	W	H		SIZING CRITERIA
RDG Branches											
50	4	No economical or practical rectangular equivalent.									Min. Size Bathroom Exhaust, 10 Ft. max.
60	5	No economical or practical rectangular equivalent.									Terminal RDG 500 FPM Maximum Vel.
100	6					10	3.25			Terminal RDG 500 FPM Maximum Vel.	
140	7					14	3.25			Terminal RDG 500 FPM Maximum Vel.	
180	8	8	8	10	6	12	5	16	4	Terminal RDG 500 FPM Maximum Vel.	
260	10	10	10							Terminal RDG 500 FPM Maximum Vel.	
400	12	12	12	16	8			24	6	Terminal RDG 500 FPM Maximum Vel.	
Mains/Sub-Mains											
CFM Max. Best Practice	Equiv. Round	SQUARE-ish		2:1 Flatter		3:1 Flat		4:1 Flattest			
		W	H	W	H	W	H	W	H		
210	8	8	8	12	6	Minimum Recommended Sizes.				Greater of 0.08"/100 LF or 750 FPM Vel.	
380	10	10	10	12	8	6	16			Greater of 0.08"/100 LF or 750 FPM Vel.	
600	12	12	12	14	10	18	8	24	6	Greater of 0.08"/100 LF or 750 FPM Vel.	
800	14	14	12	18	10	24	8	28	7	Greater of 0.08"/100 LF or 750 FPM Vel.	
1150	16	16	14	20	12	24	10	32	8	Greater of 0.07"/100 LF or 800 FPM Vel.	
1400	18	18	16	24	12	30	10	36	9	Greater of 0.06"/100 LF or 900 FPM Vel.	
2000	20	20	18	24	16	30	12	40	10	Greater of 0.06"/100 LF or 900 FPM Vel.	
3000	24	24	20	32	16	40	14	48	12	Greater of 0.05"/100 LF or 950 FPM Vel.	
3750	26	26	24	36	18	40	16	48	14	Greater of 0.05"/100 LF or 1000 FPM Vel.	
4200	28	28	24	36	20	40	18	56	14	Greater of 0.05"/100 LF or 1000 FPM Vel.	
5000	30	30	26	40	20	54	16	64	14	Greater of 0.05"/100 LF or 1000 FPM Vel.	
NOTES:											
1. Duct construction per SMACNA to 2" WG Pressure Class (i.e. "Low-Pressure/Low-Velocity". Seal Class A, Leakage Class 3 minimum standard.											
2. Sizes are recommended and representative. Use duct calculator for other sizes and use your professional judgement.											
3. As a general rule, the closer you are to the diffuser or grille or the room served, the lower shall be the velocity.											
4. Sizes are "rounded-up" to whole single or even-numbered inches unless otherwise noted. Use what is economical for your duct methods.											
5. Chart is for the convenience of responsible contractors and does not constitute professional engineering advice. All risk is assumed by the user.											
6. Each application varies. This chart is for general HVAC use, supply, return and general or toilet exhaust. It is not for use in sizing dryer exhaust.											