

Central-fan-integrated outside air flow rate and duct sizing per ASHRAE Std. 62.2-2003

Central fan duty cycle setting (supply ventilation air)	0.500 (on.time/(on.time+off.time))	fan off	20
Mechanical ventilation cfm per bedroom	7.5 (cfm/bedroom)	fan on	20
Mechanical ventilation cfm as fraction of floor area	0.01 (cfm/100 ft2 conditioned floor area)	duty cycle	0.500
Infiltration ventilation assumed as fraction of floor area	0.02 (cfm/100 ft2 conditioned floor area)		
Fraction of unbalanced mechanical ventilation vs. balanced	1.00 (unbalanced/total)		

Number of bedrooms	Floor area	Wall height (ft)	Mechanical ventilation flow needed		Infiltration ventilation assumed		Total air exchange mech + assumed infil		OA Duct size with 6" wall cap (inch)	OA Duct Pressure	
			(cfm)	(ach)	(cfm)	(ach)	(cont cfm)	(ach)		(Pa)	(Inch H2O)
2	1200	8	69	0.216	24	0.150	42	0.263	6	17	0.07
2	1400	8	73	0.196	28	0.150	46	0.246	6	19	0.08
3	1600	8	92	0.216	32	0.150	56	0.263	8	11	0.05
3	1800	8	96	0.200	36	0.150	60	0.250	8	12	0.05
3	2000	8	100	0.188	40	0.150	64	0.240	8	13	0.05
3	2200	9	104	0.158	44	0.133	68	0.206	8	15	0.06
3	2400	9	108	0.150	48	0.133	72	0.201	8	16	0.06
4	2600	9	127	0.163	52	0.133	82	0.210	8	22	0.09
4	2800	9	131	0.156	56	0.133	86	0.205	8	24	0.10
4	3000	9	135	0.150	60	0.133	90	0.201	8	25	0.10
4	3200	9	139	0.145	64	0.133	94	0.197	8	27	0.11
4	3400	9	143	0.140	68	0.133	99	0.193	8	29	0.12
4	3600	9	147	0.136	72	0.133	103	0.191	8	31	0.12
4	3800	9	151	0.132	76	0.133	107	0.188	8	32	0.13