



Designers and Manufacturers of Mobile Health Clinics

ADI Technical Bulletin #18

Air Exchange Rate for Coleman Mach 8 Roof AC Units



Specifications

Mach 8 Plus Roughneck A/C

Btu/h :15,000 Amps (Cool): 14.1 Amps (Heat): 15.2 Weight (lbs): 92

Rate of Air Exchange

Please note that you must make sure the return air filter(s) are clean and undamaged in order for these calculations to be accurate. Dirty or damaged filters reduce the CFM.

CFM (Cubic Feet per Minute) = 300

CFH (Cubic Feet per Hour) = 18,000

Interior Space (L x H x xW) (approximate CF):
WFJ33S = 1,800 CF
WFJ38S = 2,100 CF
WFJ38S Double Slide = 2,500

To calculate your rate of air exchanges divide the CFH (18,000) by the CF of interior space. For example:

$$\text{WFJ33S} = 18,000 \div 1,800 = 10 \text{ Air Exchanges per Hour per AC Unit}$$

$$\text{WFJ38S} = 18,000 \div 2,100 = 8.5 \text{ Air Exchanges per Hour per AC Unit}$$

Multiply your air exchanges per hour by the number of AC units you have to determine how many total air exchanges per hour are happening in your mobile clinic.

You may have additional air exchanges if your mobile unit includes 12VDC Ceiling Vents. The Fantastic 12VDC 3 speed vent fan is reversible (can pull air in or push air out) and has a maximum CFM (on high speed) of 920 CFM (55,200 CFH). Please note that your ceiling fan does not have a filter.

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