

What Every Miniveyor Customer Should Know About the Miniveyor Air VAF-Series.



***WARNING** Always assume a confined space work area is contaminated until it has been proven safe for work personnel. You should NEVER enter a confined space work area until it has been thoroughly tested with appropriate gas detection equipment and proven safe for work personnel.

Dual Wall Plastic Shell: Maintenance is virtually eliminated with a dual-wall, high density plastic shell. Current metal gauge fans will get dinged and banged around. So will our fans. There is one major difference. The metal fans do not absorb the dings and dents. The single layered, thin metal gauge walls will indent. This indent may, and usually does, obstruct the rotation of the fan blade. The fan blade will either stop or break. Either option becomes quite costly. If the unit can be repaired, the fan will be taken out of service while being maintained. Maintenance includes ripping out fan guts (i.e. grill, motor assembly, electrical wiring), pounding out the indents, replacing all necessary components and reassembling. Depending on the amount of damage, purchasing a new ventilator may be less expensive when considering labour repair hours.

The plastic shell will absorb the ordinary ding or bang experienced in the field, eliminating the above mentioned costly maintenance procedure. Better yet, because of the dual wall design, if any foreign object punctures the outer wall, the interior fan chamber is protected by the inner wall. The unit will continue operating and costly maintenance charges will be eliminated.

The plastic shell makes the VAF-Series corrosion free. Once the paint on a metal gauge fan chips or scratches, rust becomes inevitable. If appearance is a concern, then rust is a problem. Rust reduces metal life and is not attractive. The VAF-Series maintains its high quality exterior finish regardless of use in humid, moist climates.

The plastic shell contains an ultraviolet stabiliser, or U.V. inhibitor. Exposure to continuous sunlight rays will not discolour the unit.

Electric Motor: The totally enclosed, non-ventilated motor which reduces external substance entry (i.e. any kind of dust). As non-filtered, dusty air passes through open type motors, particles build up on the motor windings. After continued use in a dusty environment, this particle build-up eventually clogs the motor, causing it to overheat. The solution is replacement. The cost is a new

unit. The VAF-Series totally enclosed motor reduces particle build up extending motor life.

The motor has a built in thermal protective overload switch. The switch senses extreme temperature rises which can be harmful to the motor. When such temperatures are achieved, the switch automatically shuts down the ventilator. This protects the unit from burning out and saves users from costly repairs or replacements.

Duct Diameter: Greater air volume is achieved with a wider duct diameter. Air movement and its performance in a confined space is the ultimate purpose of ventilation. The VAF-300 12 inch (300mm) duct diameter allows users to extend long duct lengths into hard to reach confined spaces. Greater duct lengths are achieved because the larger fan blade produces more CFM under static load. The VAF-200 uses 8 inch (200mm) duct diameters for a more controlled environment.

Flexible Ducting: : A lightweight, durable duct ideal for use on building sites and outdoor applications. Specifically designed for portable and semi-permanent air handling applications, warm air movement, building drying, cooling, moisture control, crop drying, general ventilation and fume extraction.

The VAF-300 can ventilate confined spaces with up to 5x 7.5m (25') lengths of flexible duct attached. This allows our ventilator to be used in a diverse range of jobs. For example, underground contractors use long lengths of duct for purging underground tanks, tunnel ventilation etc..... Some jobs require in excess of 37.5m (125') of duct. If more than 37.5m (125') of duct is necessary on a job, use the VAF-300 as a booster. Simply run 22.5m (75') of duct on one fan, attach the duct end to another fan and attach an additional 22.5m (75') of duct. The total duct length is 45m (150'). The boosters can be continued in any length required. Run boosters in excess of 1,000 feet!

The Miniveyor Air flexible ducting is manufactured from a robust fabric that withstands repeated flexing. A Rugged thermoplastic spiral scuff strip protects against external abrasion. A robust yet lightweight ducting consisting of a yellow PVC coated nylon fabric with a rugged black thermoplastic spiral scuff strip encapsulating a spring steel helix providing additional external protection. A black neoprene coated glass fabric cuff is fitted both ends with an integral web speed clamp.

Easily compressed by 85% for convenient transportation and storage. Operating temperature Range - 0°C to +95°C in 20°C ambient

Typical Air Flow Rates for Miniveyor Air VAF-300 when fitted with flexible ducting-

Air Flow Rates	110 & 230 Volt	
	CFM	M ³ /Hr
Free Air	2000	3,390
7.5 Metres straight	1585	2,690
7.5 Metres 1 x 90° bend	1500	2,550
7.5 Metres 2 x 90° bends	1430	2,430
15 Metres Straight	1315	2,230
30 Metres Straight	635	1,080

Lightweight: The VAF-Series plastic ventilators are lighter than the competition. With a built-in, centrally located handle design, the ventilator is quite portable on any job site. Compared to metal gauge ventilators, our high powered, low weight plastic ventilator is easily carried reducing chances of back injury.

Stack: Place ventilators on top of one another. Its cone shaped design allows units to operate stacked, increasing the air volume movement in confined spaces.

Corrosion Resistant: An epoxy powder coat is baked onto the steel components to prevent rusting and corrosion. This allows the ventilator to be used in high moisture atmospheres.

Rubber Feet: Centrifugal fans use spring loaded, anti-vibration feet. These shock resistant feet are used because centrifugal fans are built with the motor and the fan blade built off centre. Vane axial fans are symmetrically built, creating a balanced air ventilator. This superior design and engineering does not require anti-vibration or shock absorbent feet. A non-vibrating ventilator can be placed on a sloping surface.

Working Temperatures: The Blowers should be used in temperatures below 65°C/149°F and the flexible ducting 150°C/302°F

Warranty: One year. Not 30 days, not 60 days, not 90 days or 6 months, like other ventilator manufacturers, but one year. Ask and compare. Miniveyor Air stands behind its quality and design and backs it up with the one year parts warranty. We now provide a 10 year warranty upgrade on the fan body once the product is registered by either returning the registration card or registering online. See the Owner's Manual for warranty details, general safety, safety precautions, instructions for operation and care, parts list and trouble shooting.

Filter: If required you can add the VAF 200 litre filter to the VAF-300 to remove up to 97% of the particulates in the extracted air.

Ventilating Confined Spaces: VAF Air recommends that you change the air in a confined space at least 20 times each hour, or once every 3 minutes. Where possible we would always recommend that you not only extract the air but also utilize a blower to push clean air into the work space. The Miniveyor Air VAF fans work on both positive and negative air flow, so are equally at home extracting as well as blowing. To use this recommended method you would need 2 or more openings to your confined work space and employ 2 fans. If you only have 1 opening then you should use positive airflow and use the fan to blow air into the confined work space.

To determine which of our exhaust blowers is suitable for your application you must first calculate the volume of your confined work space.

If the space is a regular shape (cube or rectangle) then you would simply multiply the length by the width, and then finally by the height. It is important that you use the same unit of measurement as used to rate the fan. You should use either feet or meters as our blowers are rated in either cubic feet per minute (CFM) or cubic meters per hour (m³/hour).

If the work space is not rectangular or cube, simply divide the space into smaller rectangular spaces to help you calculate the volume.

For cylindrical spaces, such as tanks, pipes or silos calculate the volume using Pi (3.142) x the radius squared x the length.

CFM Example (Imperial units)

Space Length =20 feet
Space Width = 10 feet
Space Height =10 feet

Volume (L x W x H) = 2000 cubic feet

The fan to be used is the VAF-200 that has a free air flow of 800 CFM which would change the air in the confined space in 2.5 minutes or 24 times an hour (2000 cubic feet divided by 800).

In this example the VAF-200 would be suitable.

m³/hour Example (Metric units)

Space Length =6 meters
Space Width = 4.5 meters
Space Height =4.5 meters

Volume (L x W x H) = 121 cubic meters

Again we want to use the VAF-200 which has a rating of 1350 cubic meters per hour (m³/hour). Multiply the volume by 20 (minimum number of air changes required) to give the required fan rating.

121m³ x 20 = 2420 m³/hour

In this example the VAF-200 would not be suitable when used as a single fan as the required air flow is below that of the VAF-200.

You would have 2 solutions-

Solution 1: Stack 2 VAF-200 fan units to multiply the air flow to 2700 m³/hour

Solution 2: Alternatively use the VAF-300 which has a free air flow 3400 m³/hour

NOTE: The addition of flexible ducting reduces the free air movement of the fan. If you are planning to use flexible ducting with your choice of fan then you must consult the flexible ducting flow charts below.

