

AMERICAN COOLAIR CORPORATION

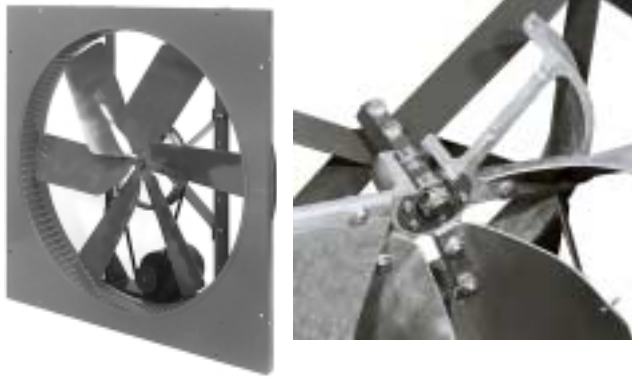
CONTROLLED ENVIRONMENT SYSTEMS



Product Line Guide

Farm Products Division





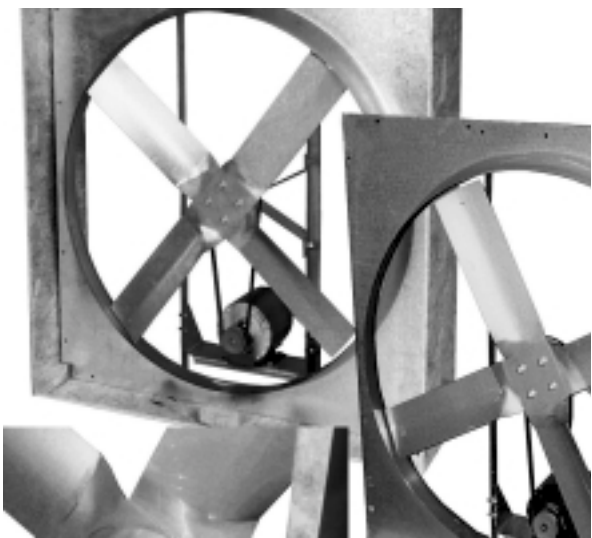
NBF FAN

American Coolair's NBF fan provides the solution to fresh air ventilation in most types of farm buildings. NBF fans are built to give you years of heavy-duty trouble-free service. The rugged, belt-driven construction operates in any position, has permanently lubricated ball bearings, and is available with single or two-speed totally enclosed motors. We utilize our proven drive assembly that allows V-belt power to be transmitted directly through the bearings, resulting in more economical operation and increased bearing life.

NCF FAN

Now you can buy Coolair quality in our NCF fan, with its unique blade design, at a savings to you and your customers. These galvanized fans are the answer to your ventilation requirements. We utilize our proven drive assembly that allows V-belt power to be transmitted directly through the bearings, resulting in more economical operation and increased bearing life.

Performance and efficiency are the keynotes to Coolair fans. Our use of quality materials and precise engineering techniques in constructing blade assemblies assure you years of quiet, trouble-free service.



NEF FAN

You can also buy Coolair quality in our four blade design at a savings to you and your customers. NEF fans are another economical answer to your ventilation requirements. We utilize our proven drive assembly that allows V-belt power to be transmitted directly through the bearings, resulting in more economical operation and increased bearing life.



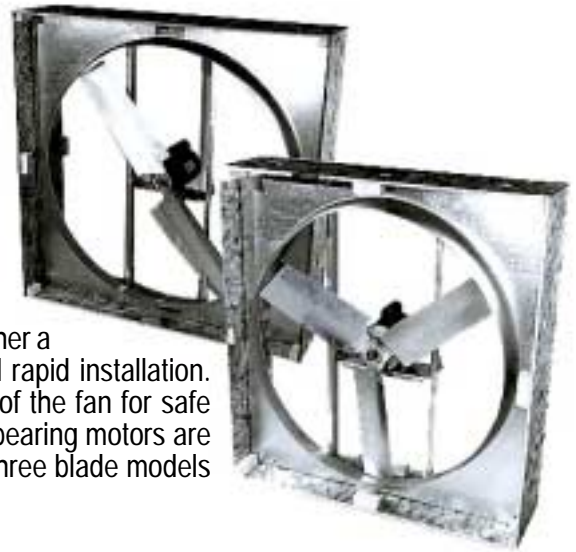


NBR FAN

You can buy quality in our all galvanized, four blade design at a savings to you and your customers. The NBR fan is the answer to your ventilation requirements. We utilize our proven drive assembly that allows V-belt power to be transmitted directly through the bearings, resulting in more economical operation and increased bearing life.

FD FAN

Coolair's direct drive FD fan features long lasting, corrosion resistant galvanized construction. The direct drive FD eliminates the need for belts that might slip or need replacing and helps to reduce drive losses commonly associated with belt-driven fans. The FD fan is mounted in either a waferwood or a metal box for easy handling and rapid installation. Wire guards are installed on both front and rear of the fan for safe operation. Totally enclosed, energy efficient ball bearing motors are used. Coolair's FD fan is offered in 24" and 36" three blade models and a 48" two blade model.

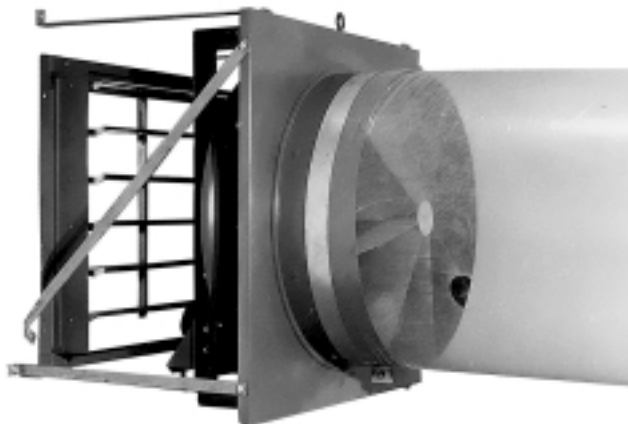


POWER TUBE FAN

In controlled environments where a precise tempering of air is critical to production, American Coolair offers the Power Tube fan.

Coolair Power Tube fans are specially designed units for compatibility with polyethylene tubes. For the necessary low velocity tempering of air, these fans and tubes are perfectly matched.

Constructed of heavy gauge steel, the Coolair Power Tube fan is offered in diameters of 12", 18", 24" and 30". The 12" and 18" fans are direct drive units. The 24" and 30" fans are belt driven and incorporate the exclusive stationary shaft design used with Coolair's NBF fan. All Power Tube fans employ air straightener vanes for efficient air distribution.



EVAPORATIVE COOLING SYSTEMS

To counter periods of extreme temperature that affect in-house environments and therefore production, Coolair Evaporative Cooling Systems are available in two designs - one has an extruded aluminum trough, the other has a PVC trough and a self-contained sump. Both designs use an aluminum top section. When large quantities of air are pulled through evaporative pads that are saturated with water, a substantial cooling effect is realized due to the evaporation of that water. Used in conjunction with Coolair fans, a temperature reduction of 10-25 degrees is commonplace. Suited for virtually all geographic locations, the Coolair Evaporative Cooling System delivers the greatest economic benefits to areas where higher temperatures during longer periods of time are normal.

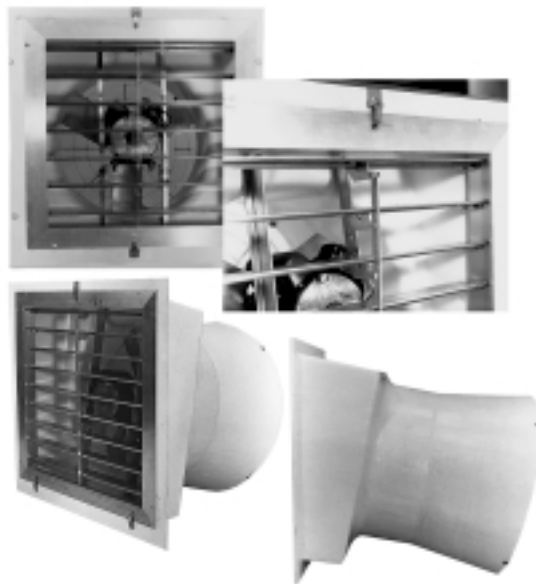


FGS/FGB FIBERGLASS FANS

For the particular problems related to hog house confinement, Coolair offers FGS and FGB Fiberglass fans.

Specially designed for hog house environments, the FGS is molded from a one-piece fiberglass housing unit that ensures safety and efficiency of operation. The FGS utilizes cast aluminum blades, an all aluminum motor mount and shutters to increase resistance to corrosion. These direct drive fans are designed for applications where a minimum of maintenance and economical operation are required. All fittings are stainless steel. The FGS fan is offered in 14", 18", 24" and 36" fan sizes and is shipped completely assembled with the shutter in the carton.

For quieter operation and improved motor efficiency, the FGB Fiberglass belt driven fan is available in a 48" size. Molded from a two-piece fiberglass housing, the FGB utilizes formed aluminum blades, an all aluminum motor mount and shutters to increase resistance to corrosion.



HORIZONTAL AIR FAN

Coolair Horizontal Air fans have totally enclosed, permanent split capacitor motors. Blades are directly mounted to the motor and installed in a galvanized tube with guards on both front and rear of the fan.

In general, the amount of horizontal air movement needed is $2\frac{1}{2}$ to 3 CFM per square foot of floor space.

Coolair FH18 fans give air more directional throw and more overall movement through entrainment of the surrounding air with the fan airstream.



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COOLAIR ACCESSORIES

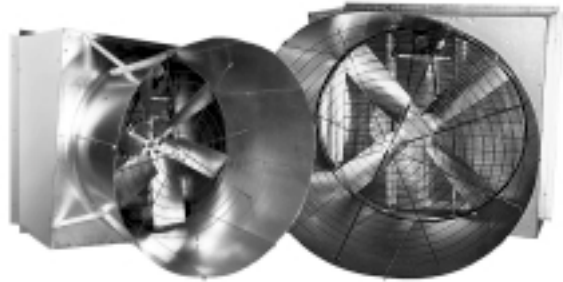


SHUTTERS

Coolair has developed a complete ventilation system for farm use combining the NBF, NCF, NEF, NBR or FD fan with the all aluminum LRW and FES shutters or the PVC constructed AWPVC shutter. Both fan and shutter can be combined with a heavy gauge galvanized steel wall housing (square box or slope) for exterior mounting, allowing a maximum of unobstructed interior space.

DISCHARGE CONES

Discharge cones are available on 36", 48", 52" and 54" fans. The galvanized discharge cones increase airflow without increasing energy costs to drive the fan.



WALL HOUSINGS



Coolair's FWH (square box) wall housing is an exterior unit to house NBF, NCF, NEF, NBR or FD fans and the LRW, FES and AWPVC shutters. It is constructed of heavy gauge galvanized steel and can be attached to exterior walls to free the interior space from obstructions. Guards are included for the intake side of the housing.

The SWH (slope) wall housing allows the shutter to be placed on the intake side of the fan and eliminates air turbulence with the shutter on the downwind side of the fan. It prevents the warm air from being lost, through the metal wall housing, to the outside cold air in cold climate operations. The slope wall housing is constructed of galvanized steel for long, durable wear and low maintenance. Guards are included for the exhaust side of the housing.

MOTORS & THERMOSTATS

MOTORS



American Coolair provides dependable, energy efficient motors to drive our fans.

These totally enclosed motors are available in $\frac{1}{15}$ to $1\frac{1}{2}$ horsepower sizes.

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THERMOSTATS



The **T109** is a two stage thermostat in a NEMA 4X box, with a temperature range from 40°-100° F, and for use in control of a $\frac{3}{4}$ HP (or less), 2 speed motor.

The **T16** is a single stage thermostat in a NEMA 4X box, with a temperature range from 40°-100° F, and for use in control of a 1 HP (or less) motor.



The **A19** is a single stage, single pole thermostat with a temperature range from 30° to 100° F and for use in control of a 1 HP (or less) motor.



WHAT TO LOOK FOR IN A FARM VENTILATION FAN

HOW RADIAL LOADING AFFECTS FAN LIFE

Radial bearing loading is the largest factor affecting fan life in wall fans, causing premature deterioration of fan life over a period of time. Radial bearing loading is minimized when the drive load is in the same plane as the bearings. Radial bearing loading is multiplied dramatically as the load is offset from the bearings. The relationship is usually expressed as L_{10} hours life, which is a good indicator of the useful life of the bearings, a fan's most critical component.

HOW DRIVE DESIGN AFFECTS FAN LIFE

Drive design has a direct impact on fan life. A design that uses much larger drives or driven pulley diameters ensures longer belt life, typically twice that of designs using smaller drives or driven pulley diameters. Also, the ability to align all components precisely is affected by the distance between bearings. The difficulty of proper alignment increases exponentially as the distance between bearings increases.

HOW BLADE ASSEMBLY AFFECTS FAN LIFE

The blade assembly is one of the hardest working parts of a fan. This assembly is subjected to conditions that encourage vibration and in turn can reduce fan life. American Coolair hubs incorporate a circular support that increases blade assembly rigidity by a factor of at least two.

HOW PAINT FINISH AFFECTS FAN LIFE

An effective paint finish begins with proper cleaning and pretreatment. Any finish is limited by the bond it establishes at the surface of the fan. Then a continuous quality coating must be properly applied - experts agree that electrostatically applied thermosetting epoxy coatings are superior to conventional liquid painting. Finally the finish must be baked on, rather than air dried, if acceptable levels of finish hardness are to be achieved.

OPERATION AND MAINTENANCE

Proper fan maintenance is essential for efficient, trouble-free service. It is recommended that periodic cleaning of the entire unit be performed. Keep the motor and blade clean for efficient operation. Instructions for proper lubrication of the fan motor are shown on the motor. All pivot points on the shutter should be wiped clean periodically.

LIMITED WARRANTY

In the sale of its products American Coolair Corporation agrees to correct by repairs or replacement any defects in workmanship or material which may develop under proper or normal use during the period of one year from date of shipment from factory. Any product or part proving upon American Coolair's examination to be defective during limited warranty period will be replaced or repaired, at American Coolair's option. f.o.b. factory, without charge. Deterioration or wear caused by chemicals, abrasive action or excessive heat shall not constitute defects. Motors are guaranteed only to the extent of the manufacturer's warranty. American Coolair's limited warranty does not apply to any of its products or parts that have been subject to accidental damage, misuse by the user, unauthorized alterations, improper installation or electrical wiring, or lack of proper lubrication or other service requirements established by American Coolair. Repairs or replacements provided under the above terms shall constitute fulfillment of all American Coolair's obligations with respect to limited warranty. THE LIMITED WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WITHOUT LIMITATION THAT OF MERCHANTABILITY AND FITNESS. No liability for reinstallation cost or for any special, indirect or consequential damages of any nature is assumed or shall be imposed upon American Coolair.

WARNING



DO NOT INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. **DO NOT** USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. **DO NOT** WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. **DO NOT** SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

CAUTION

WARNING: If these ventilation products are used in agricultural structures to support life where failure of the ventilation could result in loss or injury, the user must provide an adequate backup ventilation system and a failure alarm system. The user must accept the risk of such loss or injury from failure of the ventilation system.

Farm Products Division



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