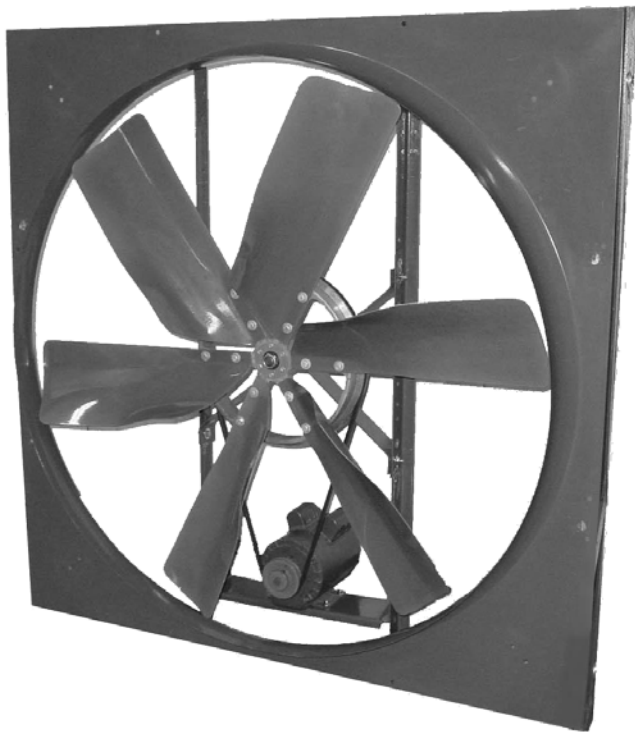


CONTROLLED ENVIRONMENT SYSTEMS FOR FARM BUILDINGS



FARM BUILDING
VENTILATION

TYPE

NBF

FANS



FARM PRODUCTS DIVISION

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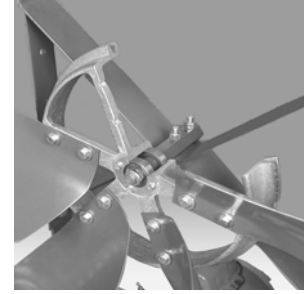
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TYPE NBF FANS

ECONOMICAL, PRACTICAL, EFFECTIVE

American Coolair's Type NBF fan provides the solution to fresh air ventilation in most types of farm buildings. Type 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. Coolair has developed a complete ventilation system for farm use combining the Type NBF fan with a Type LRW all aluminum shutter and heavy gauge galvanized steel wall housing (square box or slope) for exterior mounting, allowing a maximum of unobstructed interior space.



EXCLUSIVE DRIVE ASSEMBLY

Our engineers have developed an innovative drive assembly for the Type NBF fan. Power is applied through V-belts directly to the propeller with blade load concentrated directly over the bearings to eliminate overhung bearing load. The exclusive, time tested design has been widely acclaimed by engineers. Our use of quality materials and precise engineering techniques in constructing wheel assemblies assure you of years of quiet, trouble-free service.

BASIC COMPONENTS

Both the fan panel and the uprights which support the motor and propeller are formed from heavy-gauge steel for maximum strength and rigidity. The propeller is composed of a heavy cast wheel with six die formed blades individually mounted.

Painted parts are coated with a thermosetting epoxy coating to provide a protective coating rated excellent for hardness, impact resistance, adhesion and chemical resistance.

PERFORMANCE AND EFFICIENCY

When economy is measured in terms of cubic feet of air per minute per dollar invested, the Type NBF wall exhaust fan is unsurpassed. American Coolair's Type NBF fan is today's best investment. Coolair uses only the most efficient totally enclosed ball bearing motors available. Motors up through 1 horsepower are resilient base.



TYPE FWH (SQUARE BOX) WALL HOUSING

Coolair's FWH wall housing is an exterior unit to house the Type NBF fan and the Type LRW shutter. The shutter is mounted on the discharge. The FWH wall housing is constructed of heavy gauge galvanized steel and is attached to the exterior walls.

TYPE SWH (SLOPE) WALL HOUSING

The *slope* wall housing allows the shutter to be placed on the intake side of the fan and eliminates air turbulence that occurs with the shutter on the down-wind side of the fan. Locating the shutter on the inlet prevents the warm air from being lost through the metal wall housing to the outside cold air in cold climate conditions. The *slope* wall housing is constructed of galvanized steel for long, durable wear and low maintenance.



TYPE SWHCE (SLOPE) WALL COLLAR WITH CONE

The SWHCE package provides the ultimate in energy efficiency with the addition of a discharge cone to the slope housing. The discharge cone minimizes exhaust air turbulence, yielding more airflow at lower power levels. Both the housing and discharge cone are constructed of durable galvanized steel. Like the SWH package, the SWHCE's aluminum inlet shutter prevents heat loss in cold climate conditions.

PERFORMANCE RATINGS

AMERICAN COOLAIR CORPORATION certifies that the performance data for the type NBF wall fan models shown below are based on tests conducted in an accredited laboratory in accordance with ANSI/AMCA Standard 210-07.

NBF Fan, SWH Slope Wall Housing, Inlet Shutter & Discharge Guard

| CUBIC FEET PER MINUTE (CFM) AT STATIC PRESSURE | | | | | | | | | | | | | | |
|--|----------|----------|---------|---------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|----------|
| Fan Model | Fan Size | Motor HP | Fan RPM | 0" S.P. | | .05" S.P. | | .10" S.P. | | .15" S.P. | | .20" S.P. | | Ship Wt. |
| | | | | CFM | CFM/Watt | CFM | CFM/Watt | CFM | CFM/Watt | CFM | CFM/Watt | CFM | CFM/Watt | |
| MNBF24G | 24 | 1/4 | 688 | 5,139 | 16.7 | 4,871 | 15.2 | 4,564 | 13.7 | 4,191 | 12.2 | 3,750 | 10.5 | 153 |
| MNBF24H | | 1/3 | 769 | 5,744 | 14.4 | 5,507 | 13.2 | 5,245 | 12.0 | 4,946 | 10.8 | 4,587 | 9.6 | 156 |
| MNBF24J | | 1/2 | 891 | 6,655 | 13.2 | 6,453 | 12.4 | 6,234 | 11.7 | 6,000 | 10.9 | 5,738 | 10.1 | 161 |
| MNBF24K | | 3/4 | 1042 | 7,783 | 9.5 | 7,611 | 9.1 | 7,432 | 8.7 | 7,241 | 8.2 | 7,039 | 7.8 | 165 |
| MNBF30G | 30 | 1/4 | 491 | 6,933 | 22.6 | 6,379 | 20.0 | 5,771 | 17.5 | 4,982 | 14.5 | 3,753 | 10.3 | 179 |
| MNBF30H | | 1/3 | 531 | 7,498 | 20.6 | 6,988 | 18.5 | 6,441 | 16.4 | 5,809 | 14.2 | 4,848 | 11.0 | 182 |
| MNBF30J | | 1/2 | 641 | 9,051 | 17.7 | 8,632 | 16.3 | 8,197 | 15.0 | 7,734 | 13.8 | 7,225 | 12.5 | 186 |
| MNBF30K | | 3/4 | 739 | 10,435 | 13.1 | 10,073 | 12.3 | 9,701 | 11.6 | 9,316 | 10.8 | 8,912 | 10.1 | 189 |
| MNBF36H | 36 | 1/3 | 447 | 9,395 | 25.9 | 8,706 | 22.5 | 7,942 | 19.3 | 6,762 | 14.8 | 5,518 | 11.5 | 228 |
| MNBF36J | | 1/2 | 524 | 11,013 | 23.6 | 10,428 | 21.0 | 9,823 | 18.9 | 9,106 | 16.8 | 8,054 | 13.8 | 234 |
| MNBF36K | | 3/4 | 615 | 12,962 | 16.9 | 12,429 | 15.5 | 11,923 | 14.3 | 11,395 | 13.2 | 10,783 | 12.1 | 238 |
| MNBF36L | | 1 | 692 | 14,544 | 13.8 | 14,103 | 12.9 | 13,656 | 12.1 | 13,201 | 11.4 | 12,721 | 10.7 | 244 |
| MNBF42J | 42 | 1/2 | 371 | 13,406 | 29.7 | 12,324 | 25.6 | 10,929 | 21.4 | 9,717 | 18.1 | 7,516 | 13.1 | 315 |
| MNBF42K | | 3/4 | 430 | 15,538 | 21.9 | 14,656 | 19.7 | 13,470 | 17.2 | 12,346 | 15.1 | 11,297 | 13.3 | 318 |
| MNBF42L | | 1 | 492 | 17,778 | 17.3 | 17,034 | 16.0 | 16,093 | 14.5 | 15,000 | 13.0 | 14,062 | 11.9 | 324 |
| MNBF48J | 48 | 1/2 | 307 | 16,379 | 30.8 | 14,925 | 27.1 | 13,237 | 23.6 | 11,045 | 18.9 | 6,023 | 10.2 | 352 |
| MNBF48K | | 3/4 | 358 | 18,518 | 23.8 | 17,249 | 21.5 | 15,772 | 19.3 | 14,239 | 17.2 | 11,899 | 13.8 | 356 |
| MNBF48L | | 1 | 380 | 19,656 | 22.0 | 18,474 | 20.1 | 17,100 | 18.4 | 15,686 | 16.6 | 13,993 | 14.5 | 362 |
| MNBFH48L | | 1 | 408 | 21,104 | 19.0 | 20,018 | 17.5 | 18,764 | 16.2 | 17,449 | 14.9 | 16,074 | 13.5 | 363 |
| MNBFA54L | 54 | 1 | 374 | 25,231 | 23.1 | 23,668 | 21.0 | 22,150 | 19.2 | 20,406 | 17.3 | 17,646 | 14.7 | 413 |
| MNBFA54M | | 1 1/2 | 414 | 27,929 | 18.2 | 26,511 | 16.8 | 25,144 | 15.5 | 23,716 | 14.3 | 21,956 | 12.9 | 425 |
| MNBFA54N | | 2 | 446 | 30,088 | 14.2 | 28,767 | 13.1 | 27,493 | 12.1 | 26,209 | 11.3 | 24,773 | 10.5 | 434 |
| MNBF60M | 60 | 1 1/2 | 323 | 31,400 | 21.7 | 29,400 | 20.0 | 27,400 | 18.4 | 24,500 | 16.0 | 21,100 | 13.4 | 611 |
| MNBF60N | | 2 | 365 | 35,100 | 17.0 | 33,500 | 15.9 | 31,800 | 14.8 | 29,800 | 13.7 | 27,700 | 12.4 | 609 |
| MNBF60P | | 3 | 414 | 39,800 | 14.5 | 38,300 | 13.7 | 36,800 | 13.0 | 35,300 | 12.3 | 33,400 | 11.6 | 635 |

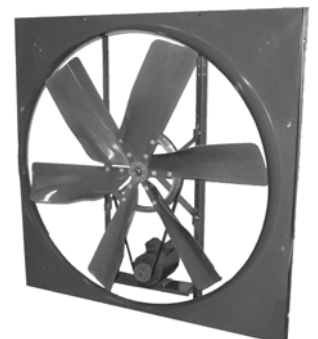
NBF Fan, SWHCE Slope Wall Housing, Inlet Shutter, Discharge Cone & Guard

| | | | | | | | | | | | | | | |
|----------|----|-------|-----|--------|------|--------|------|--------|------|--------|------|--------|------|-----|
| MNBFC36J | 36 | 1/2 | 524 | 11,720 | 27.1 | 11,061 | 24.1 | 10,406 | 20.9 | 9,722 | 18.6 | 8,815 | 15.9 | 270 |
| MNBFC36K | | 3/4 | 615 | 13,756 | 19.6 | 13,192 | 18.0 | 12,635 | 16.2 | 12,074 | 14.6 | 11,492 | 13.4 | 274 |
| MNBFC36L | | 1 | 692 | 15,478 | 16.1 | 14,976 | 15.0 | 14,480 | 13.8 | 13,985 | 12.7 | 13,485 | 11.8 | 279 |
| MNBFC48K | 48 | 3/4 | 358 | 20,249 | 27.6 | 19,110 | 24.7 | 17,669 | 21.3 | 15,853 | 18.6 | 13,914 | 15.9 | 407 |
| MNBFC48L | | 1 | 380 | 21,493 | 23.4 | 20,435 | 21.3 | 19,136 | 18.7 | 17,501 | 17.6 | 15,744 | 14.7 | 414 |
| MNBFC48L | | 1 | 408 | 23,077 | 19.4 | 22,103 | 18.0 | 20,947 | 16.2 | 19,530 | 14.5 | 17,898 | 13.1 | 415 |
| MNBFA54L | 54 | 1 | 374 | 27,537 | 25.3 | 25,598 | 23.1 | 23,368 | 20.9 | 20,675 | 18.6 | 18,337 | 16.1 | 457 |
| MNBFA54M | | 1 1/2 | 414 | 30,482 | 21.0 | 28,744 | 19.5 | 26,832 | 18.0 | 24,568 | 16.5 | 22,102 | 14.8 | 469 |
| MNBFA54N | | 2 | 446 | 32,838 | 18.8 | 31,229 | 17.6 | 29,506 | 16.5 | 27,539 | 15.3 | 25,250 | 14.1 | 478 |
| MNBFC60M | 60 | 1 1/2 | 325 | 34,300 | 24.2 | 32,300 | 22.0 | 30,100 | 19.9 | 27,000 | 17.1 | 22,700 | 14.0 | 659 |
| MNBFC60N | | 2 | 367 | 38,500 | 19.6 | 36,800 | 18.1 | 35,000 | 16.7 | 32,600 | 15.0 | 30,000 | 13.6 | 657 |
| MNBFC60P | | 3 | 413 | 43,300 | 17.0 | 41,800 | 15.8 | 40,100 | 14.8 | 38,290 | 13.5 | 36,110 | 12.6 | 684 |

AMERICAN COOLAIR CORPORATION certifies that the performance data for the type NBF circulator fan models shown below is based on tests conducted in an accredited laboratory in accordance with ANSI/AMCA Standard 230-99.

NBF Circulator Fan

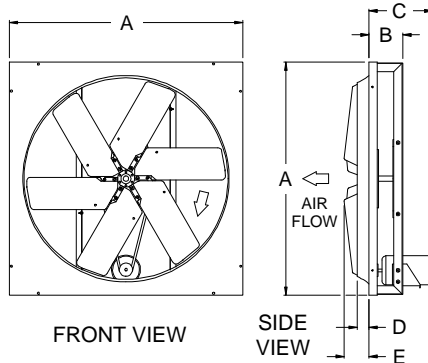
| Fan Model | Fan Size | Motor HP | Fan RPM | Thrust Eff. Lb/kW | CFM | CFM/Watt | Ship Wt. |
|-----------|----------|----------|---------|-------------------|--------|----------|----------|
| NBF36J | 36 | 1/2 | 524 | 22.7 | 16,590 | 30.9 | 136 |
| NBF36L | | 1 | 692 | 20.7 | 21,399 | 22.0 | 145 |
| NBFH48L | 48 | 1 | 408 | 23.6 | 30,719 | 31.4 | 205 |
| NBFA54L | 54 | 1 | 374 | 23.1 | 35,365 | 32.9 | 227 |
| NBFA54M | | 1 1/2 | 414 | 21.4 | 40,853 | 26.5 | 239 |
| NBFA54N | | 2 | 446 | 20.0 | 45,244 | 21.4 | 247 |
| NBF60M | 60 | 1 1/2 | 323 | 19.8 | 43,042 | 28.2 | 363 |
| NBF60N | | 2 | 365 | 18.6 | 48,377 | 23.1 | 361 |
| NBF60P | | 3 | 414 | 17.3 | 55,451 | 20.0 | 386 |



DIMENSIONS AND DRAWINGS

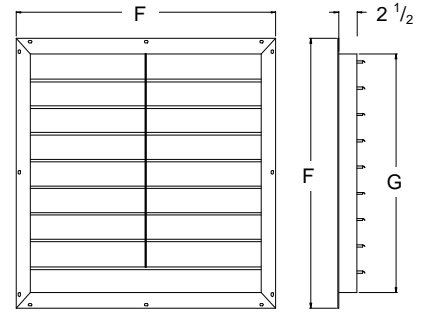
TYPE NBF FANS

| Fan Model | A | B | C | D | E |
|-----------|----|-------|--------|---|-------|
| NBF24 | 32 | 5 1/8 | 12 1/2 | 4 | 5 |
| NBF30 | 38 | 5 1/8 | 12 1/2 | 4 | 5 1/8 |
| NBF36 | 44 | 5 1/8 | 13 1/4 | 4 | 5 1/4 |
| NBF42 | 50 | 5 1/8 | 13 1/4 | 4 | 5 7/8 |
| NBF48 | 56 | 5 1/8 | 13 1/4 | 4 | 6 1/4 |
| NBFA54 | 62 | 5 1/8 | 13 1/4 | 4 | 6 1/2 |
| NBF60 | 68 | 6 1/8 | 18 | 4 | 6 |

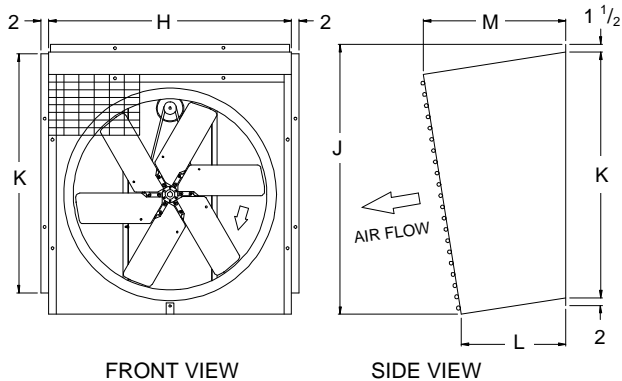


TYPE LRW SHUTTER (ALL ALUMINUM)

| Shutter Model | F | G* | Ship. Wt. |
|---------------|--------|----|-----------|
| LRW27 | 30 1/4 | 27 | 12 |
| LRW33 | 36 1/4 | 33 | 14 |
| LRW39 | 42 1/4 | 39 | 17 |
| LRW45 | 48 1/4 | 45 | 20 |
| LRW51 | 54 1/4 | 51 | 24 |
| LRW57 | 60 1/4 | 57 | 30 |
| LRW66 | 69 1/4 | 66 | 38 |



TYPE NBF FANS in SWH (SLOPE) WALL HOUSING

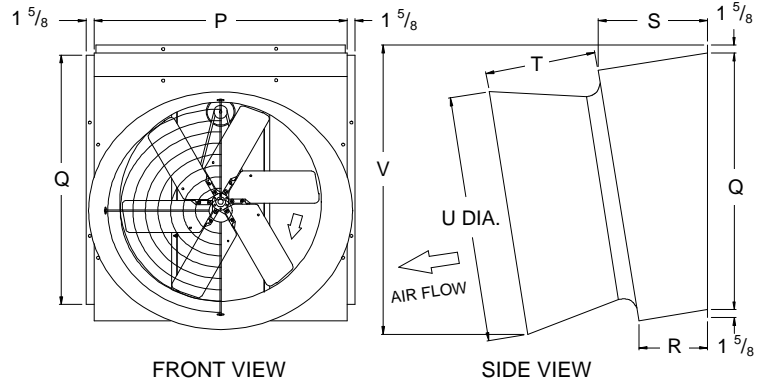


| Fan Model | H | J | K | L | M |
|-----------|--------|----------|----------|--------|----------|
| MNBF24 | 32 3/8 | 37 11/16 | 32 11/16 | 23 7/8 | 29 1/16 |
| MNBF30 | 38 3/8 | 44 1/2 | 38 3/4 | 23 | 29 1/16 |
| MNBF36 | 44 3/8 | 50 5/16 | 44 13/16 | 22 1/2 | 29 9/16 |
| MNBF42 | 50 3/8 | 56 5/16 | 50 15/16 | 21 3/4 | 29 11/16 |
| MNBF48 | 56 3/8 | 62 3/8 | 57 | 21 5/8 | 30 1/2 |
| MNBF54 | 62 3/8 | 68 11/16 | 63 1/16 | 22 3/4 | 32 9/16 |
| MNBF60 | 68 1/4 | 74 1/4 | 69 1/8 | 22 1/4 | 33 |

Rough Opening for SWH and SWHCE Housings:

Add 1/2" to 'H' or 'P' for Width For 4" Wall: Add 1 1/4" to 'K' or 'Q' for Height
For 2" Wall: Add 3/4" to 'K' or 'Q' for Height For 6" Wall: Add 1 1/2" to 'K' or 'Q' for Height

TYPE NBF FANS in SWHCE (SLOPE) WALL COLLAR WITH CONE

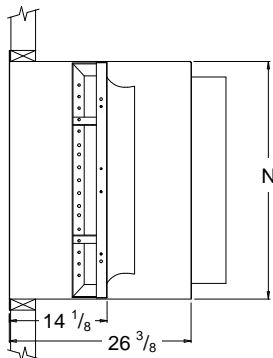


| Fan Model | P | Q | R | S | T | U | V |
|-----------|--------|----------|---------|---------|--------|---------|---------|
| MNBFC36 | 44 3/8 | 44 13/16 | 19 3/8 | 26 5/16 | 24 1/2 | 43 5/8 | 54 1/2 |
| MNBFC48 | 56 3/8 | 57 | 16 5/16 | 25 1/8 | 32 3/8 | 59 3/4 | 68 |
| MNBFC54 | 62 3/8 | 63 1/16 | 11 1/8 | 20 7/8 | 33 7/8 | 62 1/16 | 72 1/16 |
| MNBFC60 | 68 1/4 | 69 1/8 | 14 | 24 1/2 | 36 1/8 | 68 | 78 1/2 |

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.

TYPE FWH (SQUARE BOX) WALL HOUSING



| Model | N | Ship. Wt. |
|-------|--------|-----------|
| FWH24 | 32 3/8 | 43 |
| FWH30 | 38 3/8 | 51 |
| FWH36 | 44 3/8 | 77 |
| FWH42 | 50 3/8 | 87 |
| FWH48 | 56 3/8 | 97 |
| FWH54 | 62 3/8 | 108 |

Rough Opening Add 1/2" to 'N'

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 back-up ventilation system and a failure alarm system. The user must accept the risk of such loss or injury from failure of the ventilation system.



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