

ABBI-AEROTECH



**ABBI-AEROTECH**

*The ventilation experts*

# Abbifan 140-XXP-2



Made in **HOLLAND**

Our import agent for Canada:



**EXACON** INC.®



# Abbifan 140-XXP-2

*Leading standard in barn ventilation!*

The reliable and exceptionally energy-efficient Abbifan 140-XXP-2 features the latest direct-drive motor technology. The fan's propeller is fitted directly onto the new motor's shaft, so slipping no longer occurs. This also means that you no longer have maintenance or wear and tear on parts such as pulleys, bearings, and drive belts.

The compact motor has a built-in converter in a separately protected section of the casing. The fan comes with a 2-plug contact connection (plug and play) for fast and easy installation of power and control cables. The connector plugs are supplied as a standard with two lengths of cable; you only need to provide the central 240V power cable and a 0-10V control cable.

## YOUR ADVANTAGES

- Minimal air resistance with aerodynamic orifice panel made from recyclable synthetic
- Highly compact DC motor with built-in electronics for precise rotational speed control
- Direct-driven Wave propeller; no slipping
- No maintenance and no wear parts
- Curved Wave propeller blades generate airflow with consistent optimal air speed
- Sustainable and recyclable

Result:

*More air with less energy and at a lower cost!*

Compact direct-drive DC motor

Electronic converter (plug and play)

Direct-driven Wave propeller

Extremely robust mounting bracket

Aerodynamic orifice panel for perfect airflow

## PRODUCT SPECIFICATIONS

Motor:	EC DC motor with permanent magnet
Voltage*:	240V/1-phase
Frequency:	50/60Hz
Max. energy consumption:	533W
Current:	2.2A
Electronic converter:	0-10V control signal (EMC)
Propeller rotational speed:	501rpm
External dimensions:	147x38x144cm 57.8"x15"x56.7"
Fitting dimensions:	140x38x140cm 55"x 15"x55"
Diameter 'Wave' propeller:	125cm / 49.22"
Diameter 'Std.' propeller:	122cm / 48.03"
Weight:	46.5kg / 102lbs
Energy efficiency label:	AA+
Sound levels:	58.1dB(A) (Lpa 7m/22.97') 63.1dB(A) (Lpa 4m/13.12')

*"The Abbifan 140-XXP-2 dairy fan is extremely energy-efficient.*

*And yes, we're very proud of that!"*



### Throw length and throw width

Throw length		Air velocity		Throw width	
[m]	[ft]	[m/sec]	[ft/sec]	[m]	[ft]
3.00	9.84'	7.3	23.95	2.00	6.56'
6.00	19.69'	4.9	16.08	5.00	16.41'
12.00	39.37'	2.8	9.19	10.00	32.81'
15.00	49.22'	2.2	7.22	10.00	32.81'
18.00	59.06'	1.8	5.91	10.00	32.81'

### Abbifan 140-XXP-2 energy consumption

Ventilation capacity [%]	Control signal [Vdc]	Rotational speed [rpm]	Energy consumption [W]	Current [A]
100	9.8	501	533	2.2
75	7.5	413	314	1.3
50	5.3	315	160	0.7
25	3	214	72	0.4
10	1.6	150	42	0.3

# Savings

A proper ventilation system in your barn, complete with energy-efficient, direct-driven fans and full-automatic control, can cost you around \$3,400 CAD per fan. That sounds like a lot of money, but this is a one-time expense.

It is not only the investment itself that counts but also the daily costs associated with it. This extremely energy-efficient Abbifan 140-XXP-2 can easily provide a cost difference of anywhere from \$160.00 CAD up to \$430.00 CAD (at continuous full power) per fan per year! With an energy

consumption of just 0.53kW at its highest setting as opposed to no less than the 1.42kW by the 'cheaper' fans on the market with motor power of 1.1kW, this will lead to savings of \$270.00\* per fan annually. And if we increase the kWh price by 3 cents, your savings can amount to up to \$340.00 CAD per fan each year!

Your return on investment is faster thanks to savings on your daily costs plus the maintenance costs you save on not having to replace bearings, belts, or pulleys.

\* Based on an assumed price of \$0.1125 CAD/kWh and 2,700 operating hours/year (av.) at cont. full power.

# Cross ventilation concept

Abbi-Aerotech could well be considered the inventor of the cross-ventilation system. We introduced this system in 2015, and today we see that this concept is increasingly being applied across the globe.

This is no surprise to us! Cross ventilation is the only system that cools your cows whilst supporting and improving the natural ventilation in your barn. This leads to a cooling airflow in the barn which draws fresh air in through the side walls and disperses the heated 'used' barn air through the ridge. The air quality in the barn is significantly improved, which in turn has a highly positive effect on your cattle.

Cross ventilation cools your cows much better than other ventilation systems because the air flows along the length of the animals (in the cubicles and at the feed fence). As a result, the cow's body heat dissipates more quickly and over a larger body surface area. However, there must be enough natural ventilation (through the side walls and the ridge) to allow for sufficient air exchange.

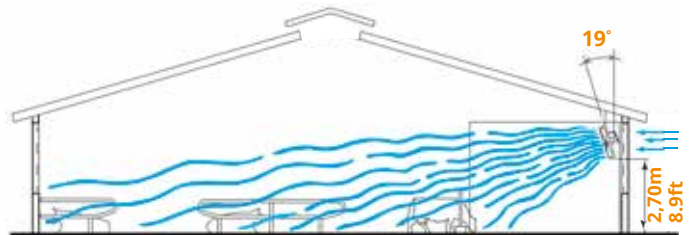
Fans can be mounted on both sides of the barn, provided the ridge vents are large enough. The fans are then placed at regular intervals along the inside of the barn in front of

the curtain. Depending on the barn width, an additional row of fans can be installed.

The fans need to be installed facing downwards at an angle measuring approx. 19 degrees to generate optimal airflow. Under normal circumstances, this angle is reached as soon as the fans are running at full speed.

In practice, about as many fans are needed for cross ventilation as are typically required for longitudinal ventilation. However, mounting will be much cheaper, which means: lower installation costs. Moreover, you will no longer have additional obstacles hanging in your barn.

*All this makes cross ventilation the best ventilation system for your barn!*



*“Abbi-Aerotech, the company that invented cross ventilation in dairy barns!”*



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