



## BlueFan BF 50

High performance

Energy-efficient

Intelligent design

Long durability





## BF 50 BENEFITS

The BF 50 is ideal for Tunnel houses as well as in Combi-Tunnel houses for side mode and tunnel mode ventilation.

The fan is available in stepless (0-100%) variants, as well as traditional ON/OFF modifications.

The stepless variants ensure a 100% stepless system where the animals' ventilation requirements are met in the most optimum way – always providing the correct air velocity.

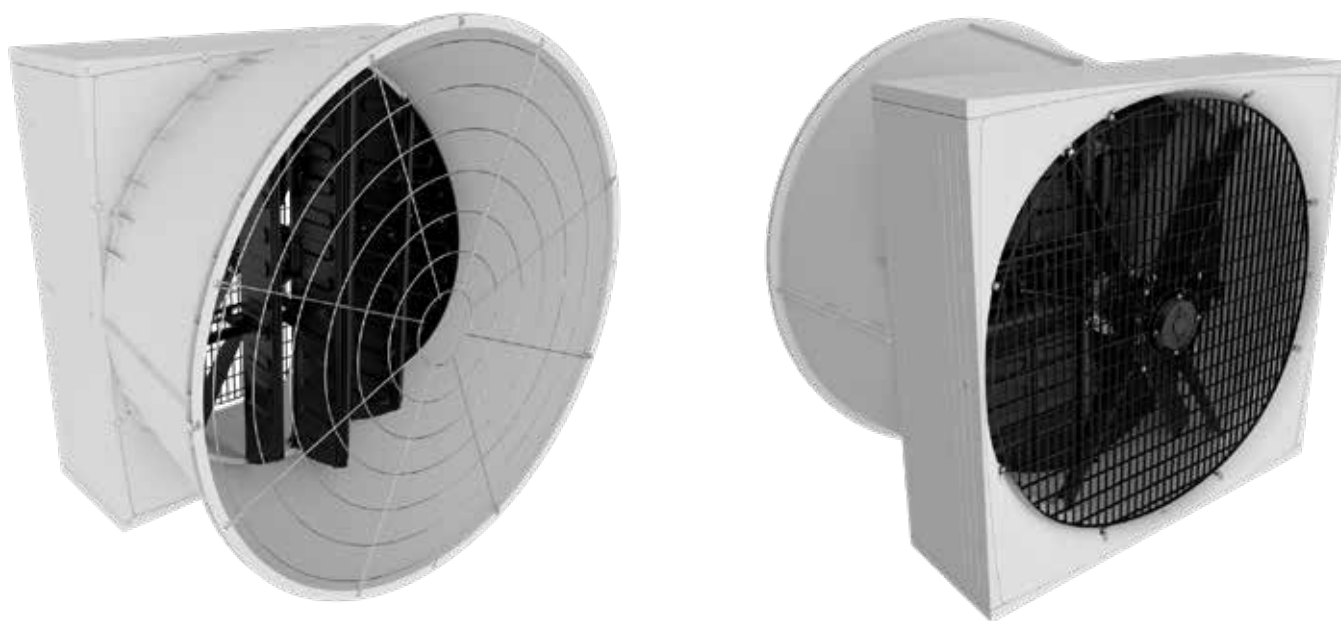
You can also combine the BF 50 with other fans of the BlueFan family to keep the animal welfare and investment in focus.

The BF 50 fans can be regulated according to the Dynamic Multi-Step® principle, where fans are connected in groups. Fans will run at approx. 50% of their output and add more fans when needed. When all fans run at 50% capacity, and more air is required, they will be regulated in parallel up to 100% capacity.

BF 50 has a low energy consumption, and when used in combination with the Dynamic MultiStep control principle, the customer gets the most energy-efficient ventilation system on the market.

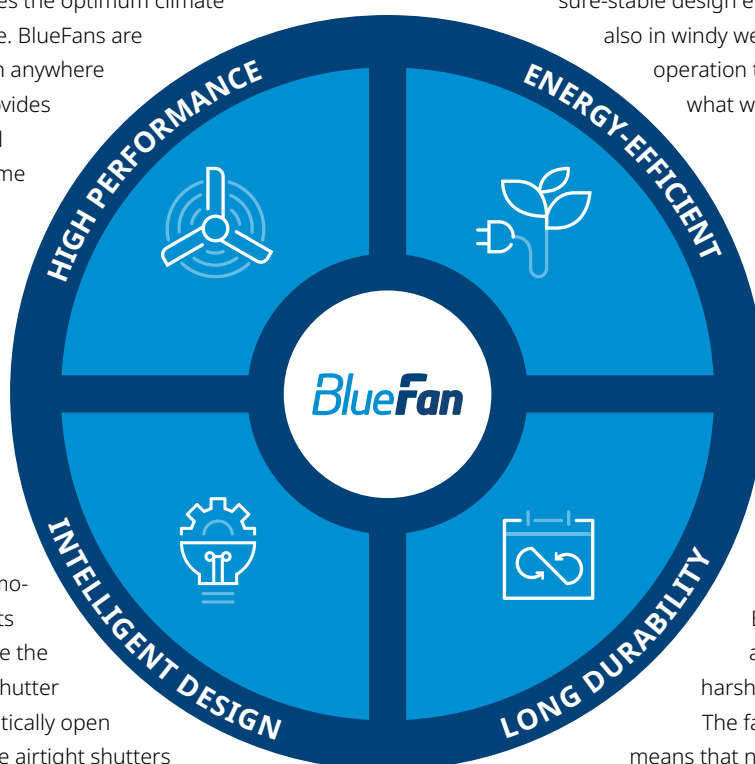






BlueFan combines a minimum energy consumption with a high airflow ratio. The pressure-stable design enables the fans to run efficiently and always ensures the optimum climate conditions in the livestock house. BlueFans are available in variants that can run anywhere between 0-100% capacity. It provides optimal and correct airflow at all times, rather than using cycle time (where the relay is shifting on and off).

BlueFan is energy-efficient and ensures a minimum energy consumption to exhaust air from the livestock houses. The pressure-stable design ensures that the fans run optimally, also in windy weather. BlueFans allow a combined operation to be even more energy-efficient – what we call Dynamic MultiStep. It lowers the utility bill and ensures a fast return on investment.



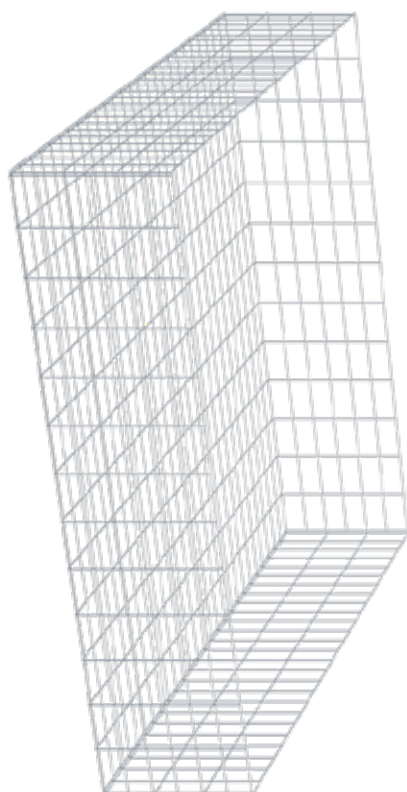
The BlueFan is available with a motorized shutter that remains in its correct position always to ensure the right airflow. Furthermore, the shutter system can be set up to automatically open in the case of power failures. The airtight shutters have a high degree of insulation, which prevents drafts and minimizes condensation when the fan is not in operation.

BlueFan is made of thermoplastics and stainless steel, so it stands the harsh environment in a livestock house. The fan has directly driven wings, which means that no adjustment and maintenance of belts are needed. The motor and controller are separated, which makes service and replacement less expensive.

# PARTS IN FAN

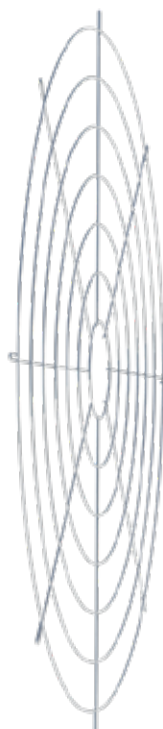
## Outside safety mesh

No hazard zone in front of the fan  
- used if no cone



## Outside safety mesh

No hazard zone in front of the fan  
- used if cone is present



## Cone

Increases airflow and decreases  
energy consumption



## Motor-controlled shutter system

Possibility of emergency opening



We have more than 40 years' experience in the development of ventilation systems. We always focused on developing high-quality systems to ensure that the animals have the best possible conditions, as well as keeping energy consumption to a minimum.

BlueFan combines knowledge and experience.

- Low power consumption
- No noise when the shutter opens and closes
- Easy to install and clean
- Full accessory program
- Higher output - fewer fans needed
- Long durability - fully plastic housing and plastic wings
- Plastic and stainless steel - no rust and corrosion

#### Box fan

Direct-driven motor and impeller

#### Insulated plate

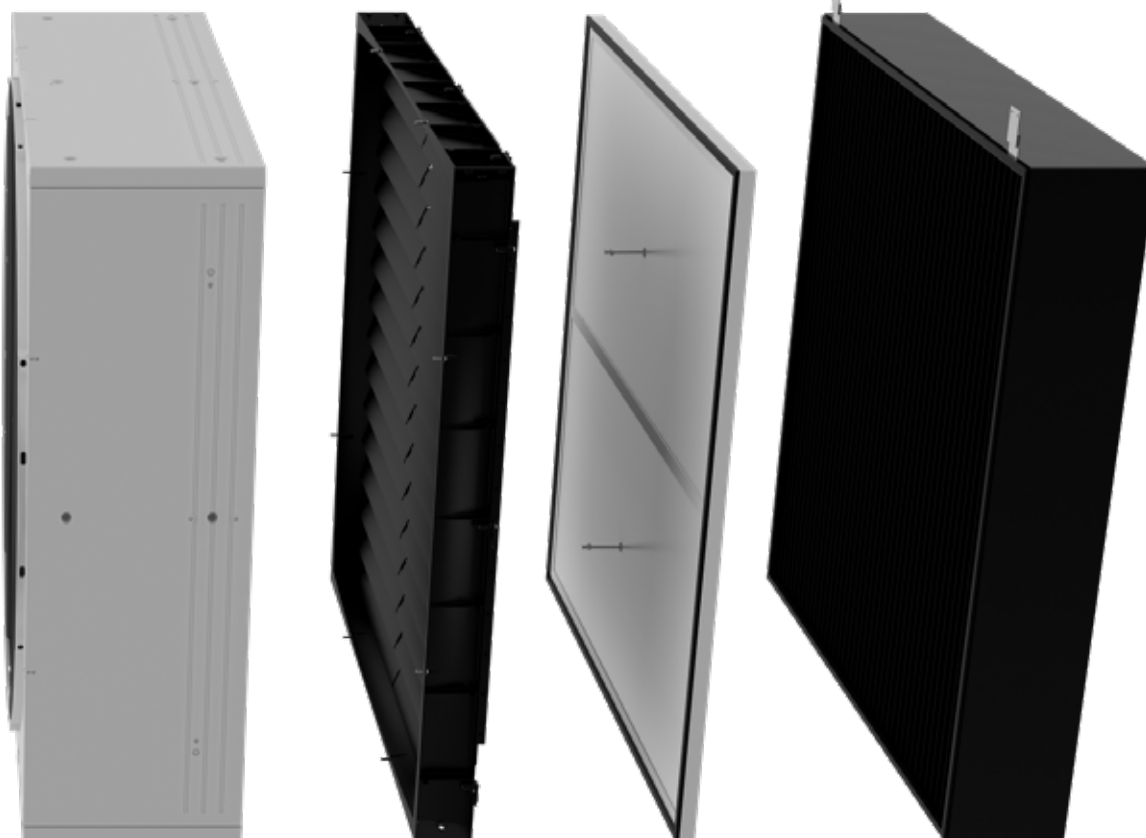
No heat loss when not in operation

#### Air-controlled shutter system

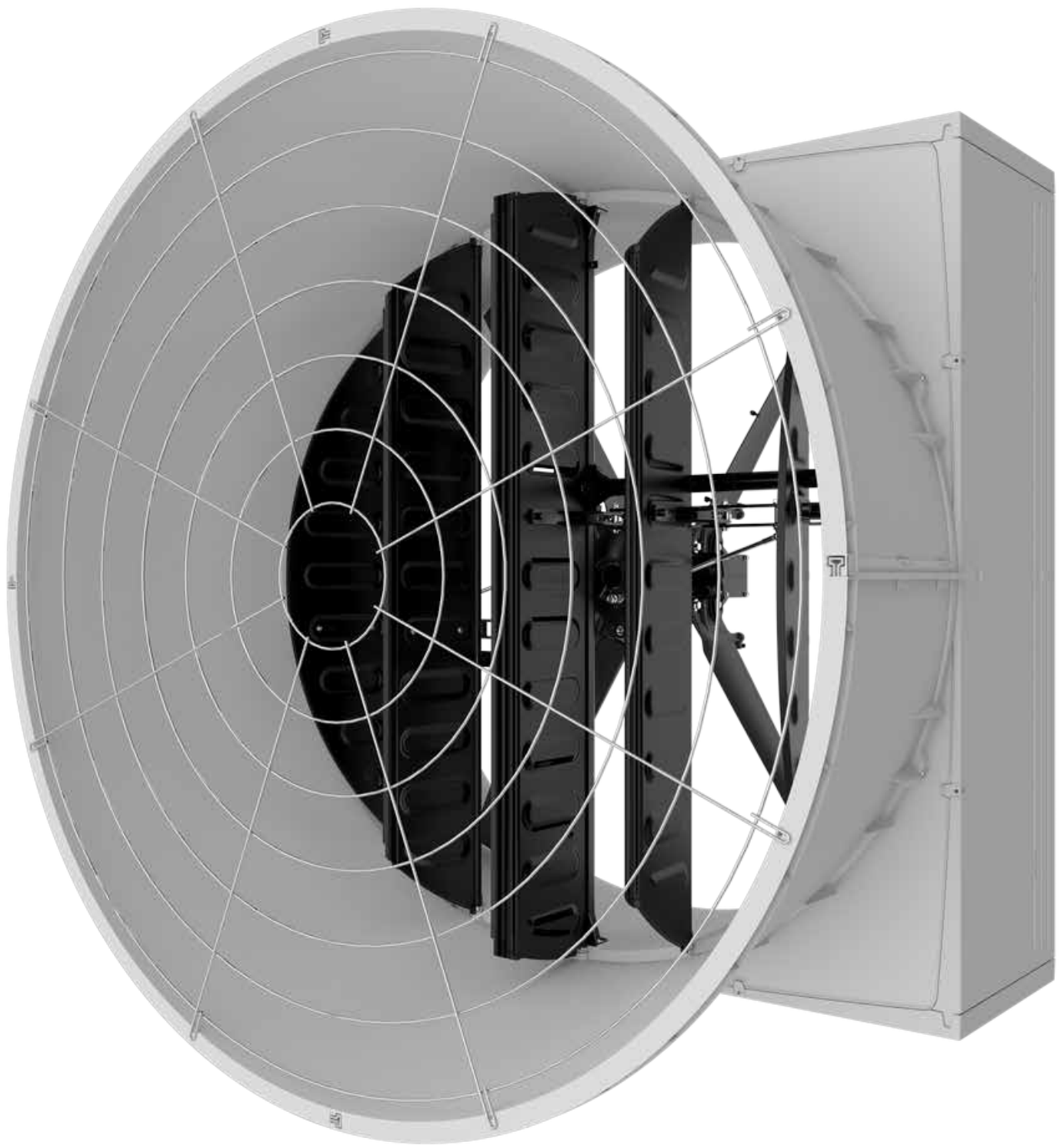
Used as an alternative to motor-controlled shutter system.  
Can be placed both in- and outside depending on the application.

#### 50" light trap

Available in brownout and blackout



## REFITTING & COMPARISONS



				
	Galvanized 50" box fan	<b>BF 50</b> on/off with air-controlled shutter	<b>BF 50</b> on/off with motor-controlled shutter	<b>BF 50</b> LPC variable with motor-controlled shutter
Impeller drive	Belt	Direct	Direct	Direct
Shutter control	Air/Centrifugal	Air-controlled	Motor-controlled	Motor-controlled
Material	Galvanized metal	Thermoplastic	Thermoplastic	Thermoplastic
Noncorrosive		✓	✓	✓
Maintenance-free		✓	✓	✓
Energy-efficient fan		✓	✓	✓
Cone as an option		✓	✓	✓
Airtight shutter <i>Less back draft from the outside</i>			✓	✓
More insulated fan and shutter <i>Reduced condensation on the inside</i>			✓	✓
Possibility of emergency opening			✓	✓
Stable shutter position <i>Also in windy conditions</i>			✓	✓
Energy-efficient motor				✓
Possibility of using Dynamic Multistep <i>In combination with SKOV controller</i>				✓
Stepless outlet from 0% to 100% <i>In combination with SKOV controller</i>				✓

# FACTS IN NUMBERS

To provide our customers the best solutions, our products are tested in laboratories and test centers as well as livestock house tests before they are released for sale. BlueFan has been tested on several poultry farms around the world and the results were very

compelling. On top of being less noisy than other fans and closing completely tight when not in operation, we have observed energy savings up to 50% per batch.

# SKOV PERFORMANCE TESTS

	Airflow		Energy consumption		Maximum negative pressure		Airflow Ratio
	CFM	m <sup>3</sup> /h	cfm/Watt	W/1000m <sup>3</sup> /h	H <sub>2</sub> O	Pa	
BF 50 ON/OFF Air-controlled shutter	25400	43200	16.5	35.7	0.32	80	0.77
BF 50 ON/OFF Motor-controlled shutter	24900	42400	16.6	35.4	0.40	100	0.77
BF 50 LPC Low Energy	25200	42900	18.0	32.2	0.32	80	0.80
BF 50 LPC High Flow	28100	47800	15.6	37.8	0.40	100	0.83

Note: Above figures@0.10" H2O or 25 Pa including cone  
 Figures are measured at SKOV @ 3x400V 50Hz - Bess lab figures will follow  
 All values are available at SKOV.com





# CASE STORY – PROTEN AUSTRALIA



*"I like the stepless control system of the BF 50 and that it took less labor input to install, but the key matter was performance in combination with power savings."*

*Bill Williams, Chief Executive Officer at ProTen*

ProTen in Australia has tested how the BF 50 BlueFan in combination with Dynamic MultiStep performs compared to their traditional house setup with galvanized box fans and standard control principles.

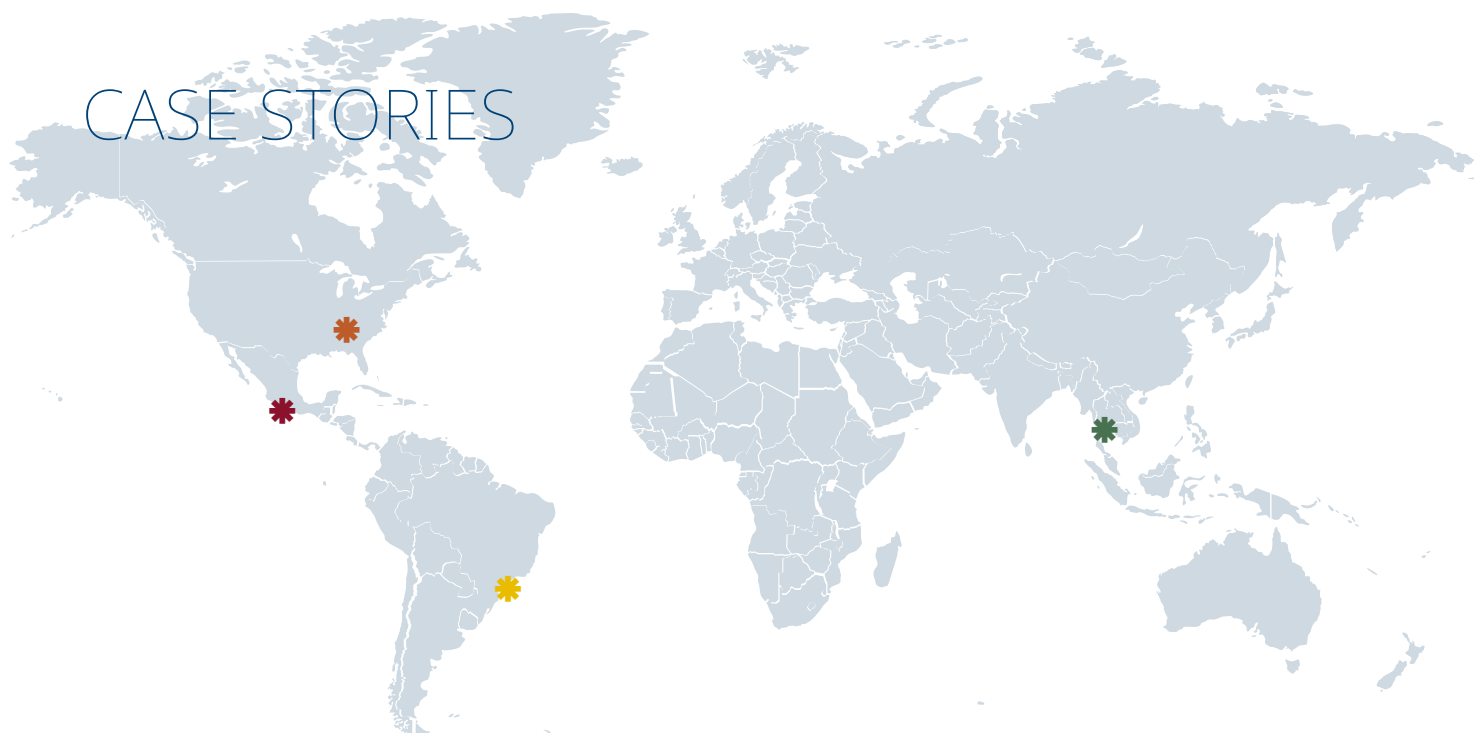
The test was carried out over two batches in two identical houses with the same genetic, feed, stocking density, and management.

ProTen owns and operates 482 poultry houses around Australia, producing more than 111 million broiler chickens a year, or close to 20% of the total Australian broiler production.

	Power consumption kWh Batch 1	Power consumption kWh Batch 2
HOUSE 1: Existing fan	11,002	8,422
HOUSE 2: SKOV BF 50 fans and SKOV controller	6,269	4,105
Savings	4,733 = 43%	4,317 = 51%



## CASE STORIES



Below case stories are based on the same house and production form placed on different locations.

The size of the house is 16 x 130m - 40.000 birds @2,0 Kg. Batch length is 38 day and max. air speed is 3,0 m/sec.

The examples are calculated based on livestock house tests and on climate profiles from Staldvent. We can not guarantee that you will reach the same reduction in your energy consumption. Many factors are important when calculating energy savings, and SKOV will be very happy to help you in calculating your case with the exact location and production profile.

## TUNNEL SYSTEM

Location	KWh/year		Yearly saving	
	Reference house	BF 50 Low Energy	In Kwh	In %
Acapulco *	51000	28000	23000	46
Bangkok *	66000	42000	24000	36

Reference house: 14 x EC 50 1.5 Hp  
SKOV Tunnel: 13 x BF 50 LPC Low Energy

## COMBI-TUNNEL SYSTEM

Location	KWh/year		Yearly saving	
	Reference house	BF 50 Low Energy	In Kwh	In %
Atlanta *	32000	18000	14000	44
Sao Paulo *	36000	17000	19000	53

Reference house: Side mode: 5 x EM 36 + 5 EC 50 1.5 Hp. Tunnel mode: 14 x EC 50 1.5 Hp  
SKOV Tunnel: Side mode: 6 x BF 50 LPC Low Energy. Tunnel mode: 13 x BF 50 LPC Low Energy

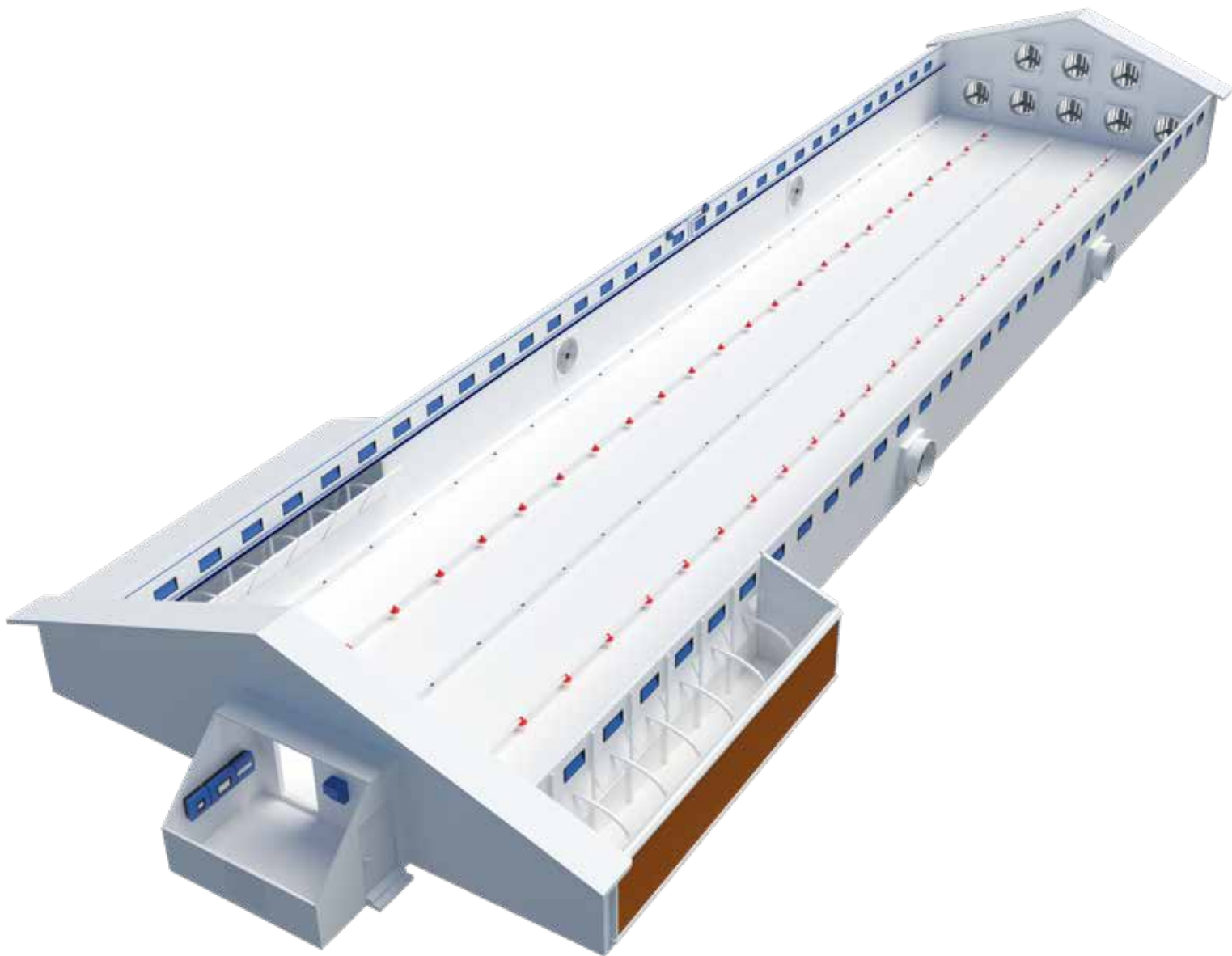
# SYSTEM INTEGRATION

SKOV has been working with climate systems for more than 40 years and is continuously striving to develop new high-quality fans that ensure animals the best conditions while at the same time keeping energy consumption to a minimum.

For the animals in the livestock house to perform optimally, it is crucial that the livestock house climate is adapted to their needs. Regardless of the size, layout, and location of the livestock house, SKOV has a solution for creating an optimum climate in the house.

The BF 50 is used in Tunnel houses as well as in Combi-Tunnel houses for side mode and tunnel mode ventilation and can be combined with other fans of the BlueFan family to keep the animal welfare and investment in focus.

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