

## CL-5400

Climate control in naturally-ventilated houses

- 1 Fan group and 12 individual curtain controls
- Weather compensation
- 4 temperature controls and 2 cooling controls
- 6 intensity-controlled timers, optionally with twilight switches
- Safety guaranteed by an emergency stop and an anti-crush facility
- All curtains are opened/closed briefly and automatically every day
- Secured communication with FarmConnect



## CL-5400: the number one climate solution in naturally-ventilated cattle houses

The CL-5400 features virtually all possible ventilation controls that occur in modern cattle farming. It enables you to constantly monitor and control the climate in the cattle house. The cattle computer has one ventilation group and twelve curtain controls. These controls can be programmed individually and are linked to different temperature sensors. The controller raises or lowers the curtains depending on the temperature measured. The CL-5400 also features weather compensation. In conjunction with the weather station and the rain sensor, the cattle computer ensures that any influence of rain and wind on the climate in the house is minimised. The individual ventilation groups are corrected based on wind speed, wind direction and rain, after which the corresponding curtains are opened/closed. The weather station can communicate with several houses at a time. To guarantee optimum safety and a long service life of the curtains, the CL-5400 has an anti-crush facility and a daily automatic and short open/close action.

### Technical specifications

Standard on CL-5400	
Digital inputs for dim switches and/or counters	3
Temperature inputs	5
0-10V inputs for RH, CO2 and NH3 sensor	4
Relay outputs for cooling and heating	9
0-10V outputs for light and ventilation controls	5
Error relay 24Vdc/2A	1
24Vdc/80mA power supply	2
12Vdc/25mA power supply	1

Upgrade options CL-5400	
Functional expansion using module bus	✓
Communication via the RS-485 PCB	✓
Weather station	✓
General	
Power supply: 230Vac-50/60Hz	
Load: 30VA	
Protection class: IP 54	
Dimensions: 230 x 320 x 155 mm	
ABS housing	
Min. ambient temperature: -5°C	
Max. ambient temperature: 40°C	

### ECO-Prop recirculation fan

The Stienen BE ECO-Prop can be controlled accurately by the SPM or MPM power control. The recirculation fan is distinguished by its hugely energy-efficient character. Its large diameter enables this Stienen fan to displace the same amount of air as the usual smaller fans, but at a much lower speed.

This offers three advantages:

1. considerable energy savings
2. a low sound level
3. reduced draught and/or dehydration symptoms

The ECO-Prop is covered in plastic sheeting.

### ELM-150 motors

The CL-5400 works in conjunction with two types of motors:

- ELM-150C to drive the curtains
- ELM-150V to drive the air inlet valves

### FarmConnect (optional)

The FarmConnect farm software collects all current and historical data of all control computers on your farm, combines this data, and then presents it in clear overviews, graphs and tables. FarmConnect gives you access to your farm data. Wherever you are, you are always connected to your company so that you can intervene immediately if necessary.



### Stienen BE, Agri Automation

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## GSC-4

Easy step controller for switching on extra fan capacity

- Suitable for foil greenhouse tent tunnels and other greenhouses
- Controls up to 4 ventilation groups
- Controls heating, cooling, ventilation, RH and recirculation
- Has a duty cycle to further reduce minimum ventilation
- Current temperature and internal RH at a glance
- Built-in alarm function





## GSC-4

easily and efficiently controls 4 ventilation groups

This 'Greenhouse Step Controller' is a stepwise controller to switch on extra fans in foil greenhouse tent tunnels, poultry houses or similar applications. To simplify operation, the GSC-4 switches heating, cooling and ventilation based on fixed programmed points. In order to be able to further reduce the minimum ventilation level, you can control the first step by using the duty cycle. The GSC-4 also has an RH sensor input that switches off the cooling operation if the RH measured exceeds a preset value.

### Step control

GSC-4

The duty cycle has a fixed 120s ON time; its OFF time varies depending on the temperature difference between the programmed duty cycle temperature and the programmed temperature at which VENT.1 needs to switch on at full capacity.

If the temperature in the greenhouse exceeds the duty cycle temperature setting, VENT.1 will start running in duty cycle mode until the programmed temperature for VENT.1 is reached.

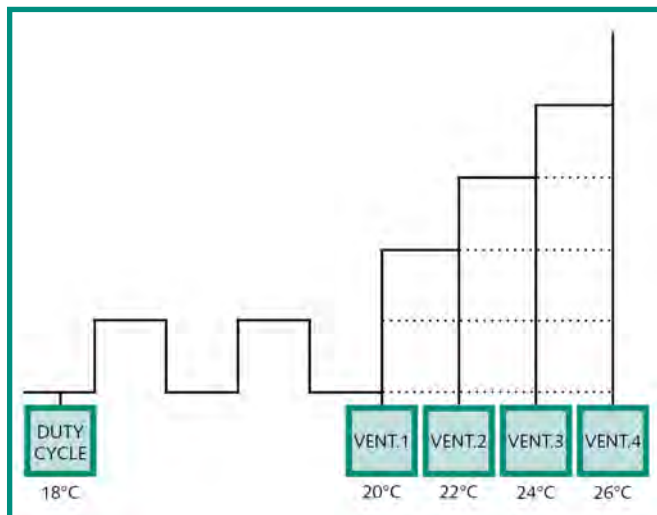
### ECO-Prop

recirculation fan for modern livestock farming

The main benefit of the ECO-Prop is its energy efficiency. Its large diameter enables this Stienen fan to displace the same amount of air as conventional, smaller fans, but at a much lower speed. This has three advantages:

1. considerable energy savings
2. low noise level
3. reduced draughts and/or dehydration symptoms

The ECO-Prop is covered in plastic sheeting and can be controlled accurately using the Stienen MPM-5 or SPM-6/12 power controller or a frequency drive.



### Technical specifications

General	
Supply voltage	230Vac - 50/60Hz
Load	25VA
Dimensions: 215 x 225 x 120 mm	215x225x120
ABS housing	✓
Protection category IP-54	IP 54
Min. ambient temp.: -5°C	-5°C
Max. ambient temp.: 40°C	40°C
Inputs	
RH sensor; 0-10Vdc	1
Outside temperature sensor	1
Indoor temperature sensors	2
Outputs	
Relay output, 230Vac/2A, for cooling	1
Relay output, 230Vac/2A, for heating	1
Relay output, 230Vac/2A, for recirculation	1
Relay outputs, 230Vac/2A, for ventilation	4
Error relay, 24Vdc/2A	1
Option	
Communication via RS-485 PCB	✓

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## NVR-1 / NVR-1P

Ventilation control in animal  
houses with natural ventilation

- Simple rotary knob operation
- Controls a ventilation valve or curtain using a winch motor
- Displays current in-house temperature
- Delay function enabling the climate in the house to adjust to the new situation
- Flap position feedback as a percentage (NVR-1P)
- Heating control (NVR-1P)
- Frost protection (NVR-1P)



## NVR-1

automatic controller for houses with natural ventilation

The NVR-1 controls the ventilation valves or curtains on the basis of pre-set temperatures. If the temperature in the house drops below the pre-set value, the controller will cause the valves or curtains to close further. An increase in temperature will have the opposite result. You can use the 'delay button' to enable the climate to adjust to the new situation. A sudden drop in temperature by 2°C or more (as may occur with inclement weather) will cause the ventilation valve or curtain to be closed at an accelerated pace.

## NVR-1P

provides the right balance between natural ventilation and heating

The right balance between ventilation and heating is necessary in houses with natural ventilation that also have heating installed. You can use the rotary knobs to set the required temperature, minimum and maximum ventilation, the bandwidth and the neutral zone. These functions ensure that a certain degree of ventilation is present at all times and prevent the house from being heated while ventilation is being increased. This makes the NVR-1P an efficient and economic ventilation control unit.

## Technical specifications

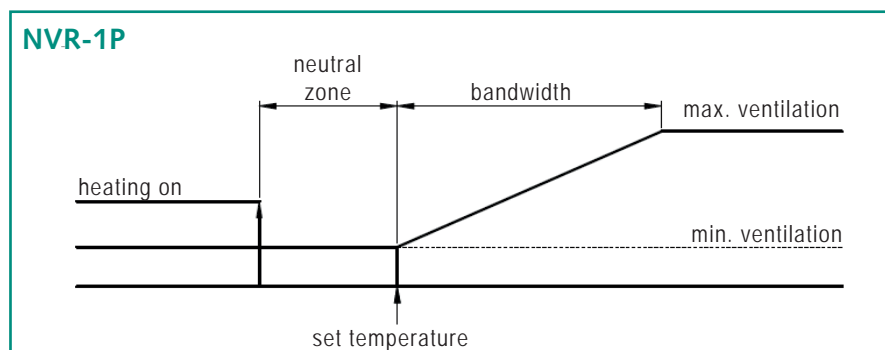
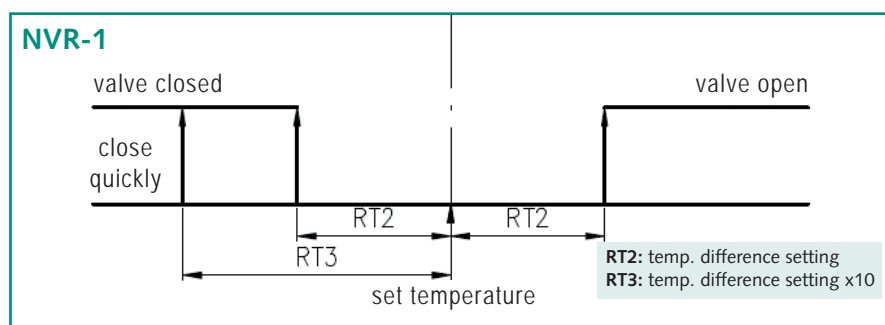
General	NVR-1	NVR-1P
Supply voltage	230Vac - 50/60Hz	230Vac - 50/60Hz
Temperature setting	5-40°C	5-40°C
Delay setting	0,5-4 min.	0,5-4 min.
Running time setting	intern. 1-20 sec.	intern. 1-20 sec.
Bandwidth setting	-	2,5-7,5°C
Minimum valve opening setting	-	0-50%
Maximum valve opening setting	-	20-100%
Neutral zone setting - heating	-	1,5-8°C
Frost protection	-	✓
ABS housing	✓	✓
<b>Inputs and outputs</b>		
Temperature sensor	1	1
Heating contact, 230Vac/2A	-	1
Potentiometer input (10KΩ)	-	1
Relay output, 230Vac/2A (open/dose control)	1	1
<b>Note</b>		
For use on a motor with position feedback	✓	✓

## ELM-150

motors



The NVR-1P works in conjunction with the ELM-150 motors. There are two versions: the ELM-150V motors drive air intake valves and the ELM-150C motors drive curtains.



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## FarmRemote

Access to your farm controls  
at any time and place in the  
world

- Remotely monitor your farm
- Secure and fast connection with the WEB-SEC interface
- Easy to set on your PC, smartphone or tablet
- No subscription fee



## Secure connection with WEB-SEC

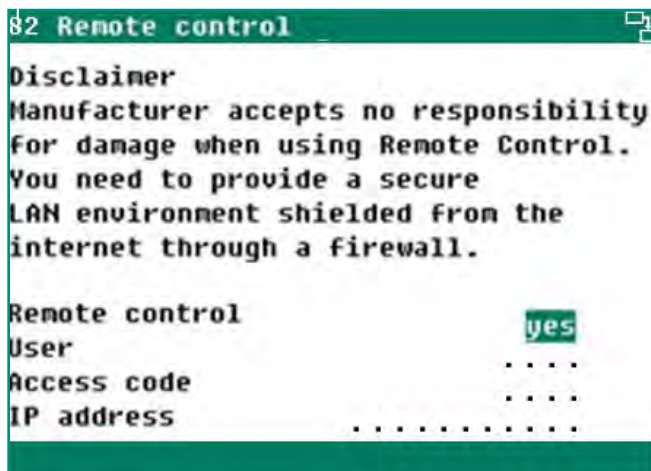
WEB-SEC creates a secured and encrypted VPN connection (Virtual Private Network) with a cloud server. Using a smartphone, tablet or PC you can make a secure connection with the cloud server and taking over the display and keyboard from the Stienen control concerned. In this way it is possible to safely monitor and necessarily intervene in your farm at any time and place in the world.

- \* Only the new generation of Stienen controls has the Remote Control function: PL-9500, PL-9400, PFA-9400, PFV-9400, KL-6400, KFM-6400, CLK-20, WEB-485 (CPU's without EPROM)
- ✓ First check if your installer has configured (and activated) the Remote Control function.



## Activating Remote Control

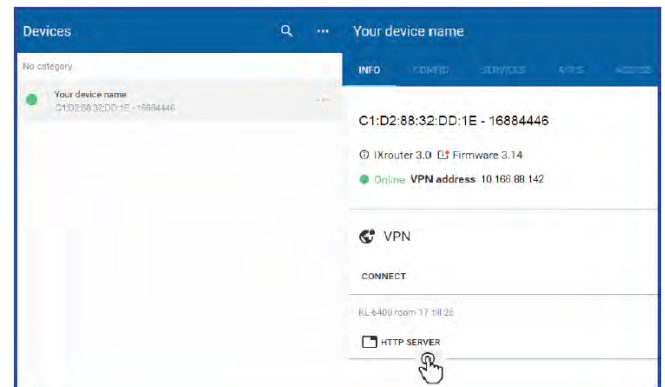
1. Go to the user settings of the control to be remotely operated and select successively:  
*System -> Remote control:*



2. Set *Remote control* to *yes*;
3. Set a *User name* and *Access code* (unequal 0000);

## Using Remote Control

1. Log in into the IXON platform: <https://connect.ixon.cloud/>.



2. Click on **HTTP SERVER** of the device into which you want to log in. A Login window appears.
3. Log in with your *User name* and *Access code* and confirm by clicking *Login*.

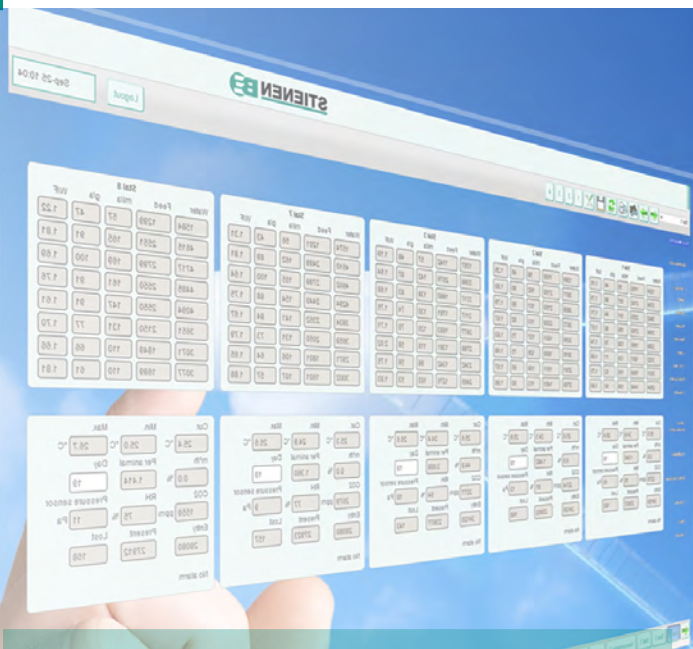
Each device has its own tab bearing the name of the control concerned.

Stienen BE does not take any responsibility for a malfunctioning of its controls caused by an unsecure remote control connection (without WEB-SEC).

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## FarmConnect

### CLOUD COMPUTING

Animal house management from your computer, tablet or smartphone

- Remote control and readout, 24/7 and anywhere in the world
- Clear overviews per animal house, farm and cycle
- Easy data exchange
- Optimum data security

Stat 2	Stat 3	Stat 7	Water	Feed	g/a	W/F
1100	1367	1074	1584	1291	58	43
1101	3390	4510	1299	2499	102	89
1102	3117	4882	4717	2788	185	100
1103	2817	4294	4485	2449	154	88
1104	2788	3859	4894	2352	141	84
1105	2342	2915	3071	2050	131	73
1106	2465	3002	3071	2150	109	64
1107			3071	1949	57	1.88

# FarmConnect View, compare, analyse and manage

FarmConnect is Stienen BE's management program, connecting you to all the Stienen management computers in your company day and night. The program provides you with an up-to-date view of your animals' performance. You can study your animals' data at leisure via internet and compare it to the results of other houses or previous cycles.

You can look, compare, analyse and correct where necessary. These performance dashboards are default features of FarmConnect. However, they can be customised to suit your needs and give you a real-time view of your entire farm, anywhere and at any time, so that nothing is left to chance.



## Optimum data security

FarmConnect has been developed and set up according to the highest cybercrime security standards. This optimally protects your system and data against any malicious external influences.





## Climate management

The new generation of management computers controls the climate in animal houses and generates and records important data, including several climate variables, such as ventilation, temperature, relative humidity and CO2. FarmConnect collects all current and historical data from the management computers and presents them in easy to understand tables and graphs.

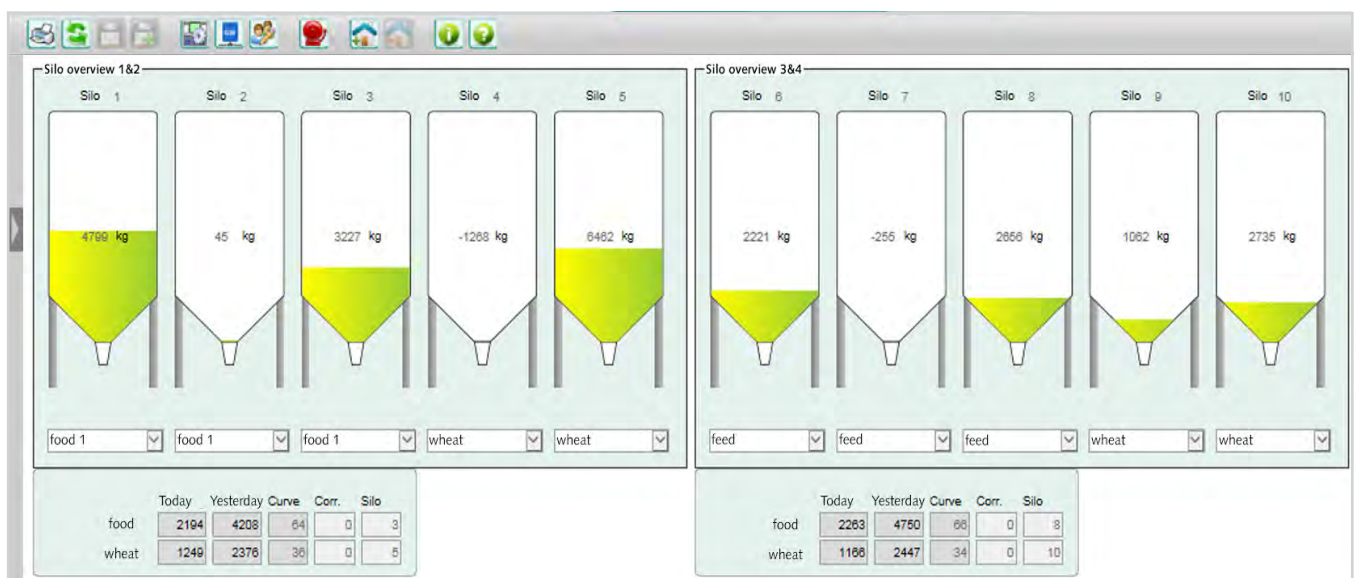
One screen will show you all the parameters that concern a specific control aspect. Since a good climate should lead to good technical results, our management computers record several different types of data, including the use of feed and water, weight increase, mortality and uniformity.



## Water and feed management

FarmConnect can assist you with your feed strategy and gives you information that can help you achieve improved results, such as lower feed costs and better animal performance. The water-to-feed ratio is an important indicator of your animals' health.

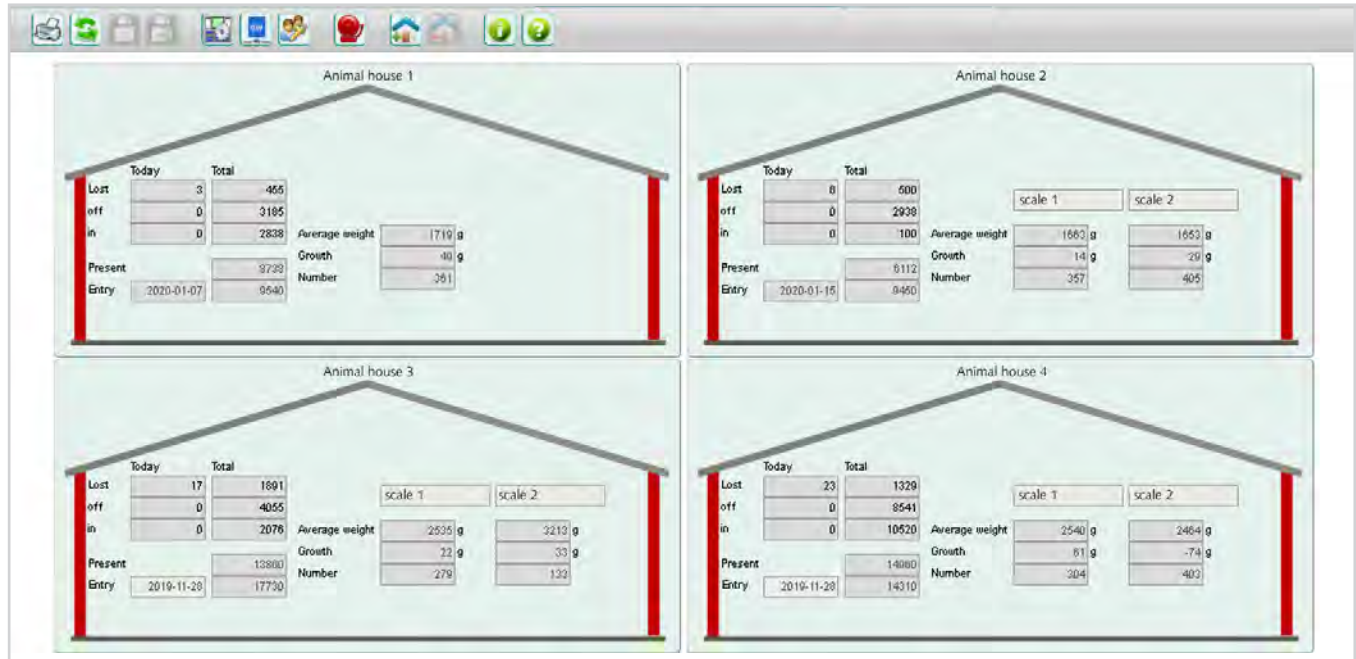
Here, any differences in water and feed consumption are immediately visible, enabling you take action in good time and before any defects or deficiencies can cause any negative consequences.



## Monitoring and managing animal weight

Monitoring your animals' weight, and thus their growth, is often very important. FarmConnect lets you determine the optimum delivery weight and enables you to take action immediately if any animals stop growing or lose weight. An animal's weight is also an indication of its health status. You can link animal weight to feed, water and climate data so that you always have a perfect view of how your animals are doing.

If you generate data from different animal houses, you can compare the results of the different houses after each cycle and learn from them. Animal health translates into good technical results. An animal's daily growth and its feed and water intake are important parameters enabling any user to take the necessary action in good time.



## Added value of data exchange

Monitoring your animals' weight, and thus their growth, is often very important. FarmConnect lets you determine the optimum delivery weight and enables you to take action immediately if any animals stop growing or lose weight. An animal's weight is also an indication of its health status. You can link animal weight to feed, water and climate data so that you always have a perfect view of how your animals are doing.

## About Stienen BE

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Stienen BE is dedicated to providing total solutions for all companies. We find it very important that our equipment should be easy to use. And we also attach great importance to having a customer focus and considering things from our customers' perspectives. That is why we will never cease to invest in the knowledge, skills and reliability of our organisation and of our partners in your area. We do this because we believe in the future of our company as a family business.



Stienen BE has its own youtube channel where you can find field reports and animated clips of automation solutions for poultry and pig farming.



## FC-102

Pre-programmed  
frequency converter

- Pre-programmed for rapid and smooth commissioning
- Pre-programmed with the optimum user settings; no unwanted ventilation downtime
- Robust IP55 housing and high-quality 3C3 coating for optimum protection
- High overall and operational reliability
- Maintenance free
- Ensures enormous energy savings
- Worldwide 24/7 service



## FC-102 frequency converter

for optimum climate control in the house in order to improve business operations and business results

**Pre-programmed** | The FC-102 is pre-programmed by Stienen BE. All parameters have been pre-set for use with Stienen equipment. This means that it will only take a few minutes to commission this frequency converter. Furthermore, this frequency converter can directly communicate with the new generation of Stienen controls.

**Ideal climate** | FC-102's continuous control creates an optimum climate in all situations. Continual fan speed adjustment using the FC-102 prevents major temperature differences. This saves energy whilst also reducing noise, wear and maintenance, and thus improving operational reliability.

**Optimum protection** | The IP55 or IP66 versions provide the best protection possible against moisture and dirt. By default, the electronics of the FC-102 are class 3C3-coated. As a result, the FC-102 does not require any maintenance. This does away with the need to prematurely replace capacitors or the actual cooling fan: their lifetime is identical to that of the frequency converter. The integrated DC coils suppress any harmonics disturbances.

**Cost saving** | Reduced energy consumption means immediate cost savings: reducing the speed by 20% lowers the energy consumption by at least 50%. The FC-102 can drive several motors at a time. If a substantial number of fans is used, this enables the number of converters to be reduced and costs to be saved. The FC-102's continuous speed control is its main energy saving feature.

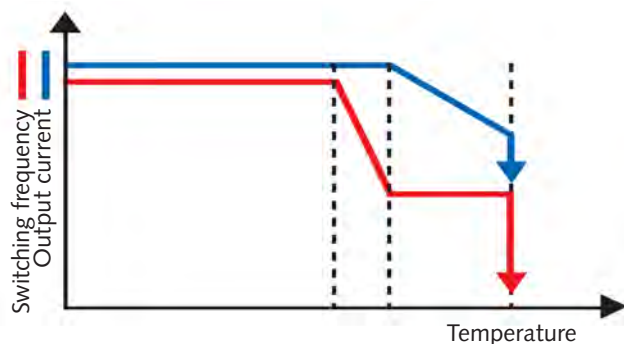
**High reliability** | The FC-102 is excellently suited to applications where ventilation failures might cause enormous material loss, especially in the livestock and greenhouse sectors. If any phases are down, this will be detected; likewise, if the maximum temperature in the actual converter is exceeded, this will be compensated for by an adjustment in the drive performance. In this way, problems will be signalled well in time to automatically adjust the fan speed and prevent the ventilation system from failing completely. The FC-102 offers optimum protection against peak voltages, e.g. if lightning strikes.

### Coating



Coated electronics for high operational reliability and a longer service life.

### Operational reliability



A VLT® converter compensates for over-temperature for a short period by changing the switching frequency and reducing the output current to thus keep the fan drive, i.e. ventilation, running.

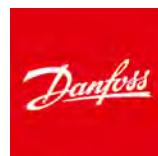
### Technical specifications

General	
Power range	1,1 kW - 1,2 MW
Supply voltage	3 x 200-240 V - 3 x 380-500 V 3 x 525-690 V
Output voltage	0-100% of the supply voltage
Analog inputs	2 x -10 to +10 V or 0/4 to 20 mA
Digital inputs	6, two of which can be used as dig. outputs
Analog outputs	1 x 0/4 to 20 mA
Relay outputs	2 X 240 Vac, 2A and 400 Vac, 2A
Communication	FC protocol, N2 Metasys, FLN Apogee, Modbus RTU
Motor cable length	Max. 150m
Standard provided with integrated RFI filters and DC coils	

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Official partner of







# Ventilation chimneys

for modern livestock farming

- Made entirely of HDPE, both single walled and double walled
- UV-resistant
- Can be fitted on AQC measuring and control units and SGS fans without the use of coupling rings
- Complete product line
- 80% reduction of transport volume due to compact design
- Easy click-system assembly
- Easy to clean



## Compact ventilation chimneys

air intake and air exhaust chimneys  
in single- and double-walled designs

Stienen BE supplies smart, compact ventilation chimneys for air intake and exhaust. The ventilation chimneys seamlessly fit the AQC measuring and control units and SGS fans. When assembled together into one system, they are sturdy and they can be installed quickly.

To save on transport costs, the chimneys are supplied with a coupling strip. This enables them to be assembled at the project site.

To prevent condensation, this ventilation chimney is also suitable for double-walled application. The sturdy double-walled structure with an 8mm air cavity between the inner and outer walls ensures an insulation value of  $2W/m^2K$ .

## Air supply chimneys

with integrated recirculation section for equal pressure ventilation

If the use of air inlet valves is virtually impossible or if you want to ventilate on the basis of equal pressure, the air can be brought in by applying a partial vacuum or by using an intake fan. The air supply chimney features a unique air distribution unit made up of stainless steel fins. They can be positioned in the direction required in order to easily avoid any obstacles such as purlins. The built-in recirculation section ensures that hot air in the house is mixed with the incoming fresh outside air. The insulated upper section of the chimney and the stationary air layer of 8 mm between the inner and outer walls prevent the air from condensing in the chimney. The backdraught shutter determines the recirculation air-to-outside air ratio.

## Accurate air flow rate control

using a Stienen AQC measuring and control unit



We recommend using an air entry cone to ensure the optimum functioning of the Stienen SGS fan and exhaust chimney. The air entry cone reduces air inflow resistance by 20% or more. This can be combined with the Stienen AQC measuring and control unit to regulate the air flow rate very accurately. This is because the diameter of the AQC exactly matches the diameter of the exhaust chimney.

## Transportation

The HDPE ventilation chimneys can be produced in compact versions, enabling up to 80% reduction in transport volume.

## Simple system



An aluminium connection profile is used to simply click the wall ends together.



The profile ensures a perfect alignment of both ends.



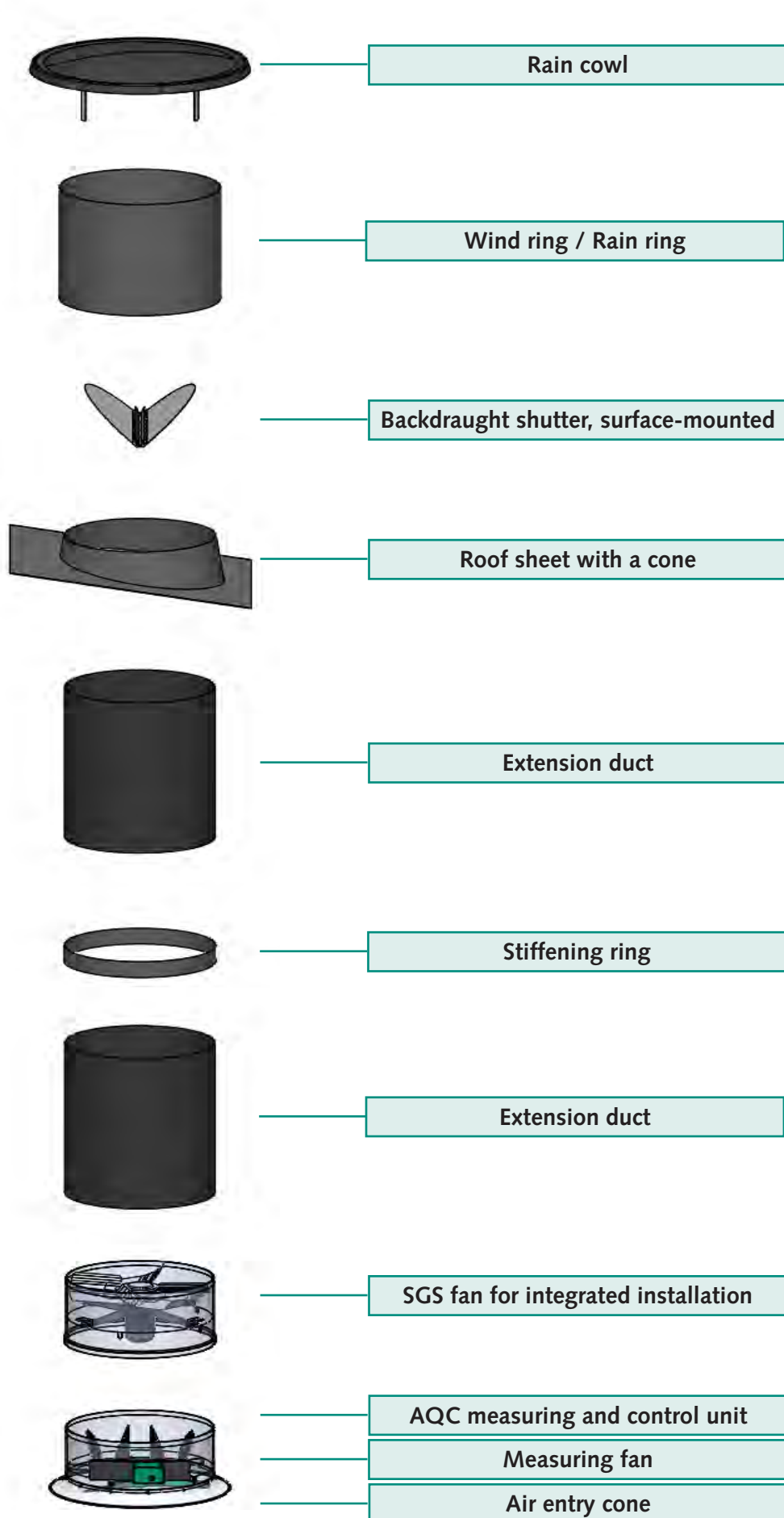
With double-walled chimneys the wall ends are attached to each other using a rubber profile.

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## Example of an HDPE exhaust chimney with accessories



## Technical specifications

Ø Chimney (mm)	Design*			
	Air intake chimney capacity (m <sup>3</sup> /h) measured at 20 Pa	Air supply chimney capacity (m <sup>3</sup> /h) combined with SGS fan measured at 50 Pa	Ø AQC (mm)	Air exhaust chimney capacity AQC (m <sup>3</sup> /h) compatible with exhaust chimney, measured at an air speed of approx. 7 m/s
320	1.400	x	300	1.700
370	2.000	x	350	2.400
420	2.600	x	400	3.100
470	3.200	x	450	4.000
520	3.900	x	500	5.000
580	4.900	x	560	6.200
645	6.100	10.000	630	7.600
730	7.800	13.000	710	10.000
820	9.800	22.400	820	12.800
920	12.400	25.500	920	16.500

\* Available as HDPE compact, HDPE welded, PUR 40mm with fibre glass coating and 25mm PUR Optimavent.

## Accessories (optional)

The following accessories are available for all chimney sizes listed:






## Specification

for compiling  
air outlet chimneys

- singel-walled and double-walled
- compact version (up to 80% reduction in transport volume) or assembled
- 10 chimney diameters:  
Ø30 Ø35 Ø40 Ø45 Ø50  
Ø56 Ø63 Ø71 Ø82 Ø92

Article numbers for chimney diameters:				Description
Ø30	Ø35			
	34.76.10-S	34.76.11-S		<b>Rain cowl + brackets</b> Reduces water penetration. Note, however, that the chimney output will also be reduced.
	34.76.00-S	34.76.01-S		<b>Rain ring, compact</b> High collar preventing ingress of rain.
	34.75.60-S	34.75.61-S		<b>Backdraught shutter, surface mounted</b> Shuts off the chimney when the fan is not active; no weather influences and unneeded heat loss from the house.
				Warning in case of power failure: lack of emergency ventilation capacity, risk of heat draining and lack of control of air volume.
	34.76.40-S	34.76.41-S		<b>Roof plate with cone</b> One-piece moulded roof sheet with cone for added strength.
	34.76.20-S	34.76.21-S		<b>Rubber roof cover + mounting kit</b> This roof cover can be used instead of a roof sheet with cone. Advantage: this roof flashing is much more flexible and adapts perfectly to chimney and roof plate.
	34.75.29-S	34.75.30-S	SW* 0.5m	<b>Extension ducts, compact</b> Advantage of double-walled chimneys: the 8mm of insulating stagnant air between the inner and outer walls prevents interior condensation caused by cold outside air.
	34.75.39-S	34.75.40-S	SW* 1.0m	
	34.75.49-S	34.75.50-S	SW* 1.5m	
	34.75.70-S	34.75.71-S	DW* 0.5m	
	34.75.80-S	34.75.81-S	DW* 1.0m	
	34.75.90-S	34.75.91-S	DW* 1.5m	
	34.76.30-S	34.76.31-S		<b>Stiffening ring</b> Firming inner ring for correct tip clearance of the fan and optimal air flow.
	34.72.00-S	34.72.10-S	SW*	<b>Coupling sock</b> Coupling piece and firming outer ring to firmly connect two chimney parts.
	34.72.19-S	34.72.20-S	DW*	
	-	34.01.00	VAR ring	<b>VAR ring</b> Universal fan ring, with attachment points and coupling kit.
	34.30.00	34.30.00	coupling set	
	36.70.41	36.70.43	230V, 1400rpm, 50Hz	<b>Built-in fan</b> For diameters Ø71, Ø82 and Ø92 fans can be delivered in ventilation assemblies. 60Hz on demand.
	36.70.61	36.70.63	400V, 1400rpm, 50Hz	
	30.31.00	30.32.00	AQC-ZM	<b>AQC air control / measure&amp;air control unit</b> Air control unit with air entry cone for accurately measuring and controlling room ventilation.
	30.21.50	30.22.50	AQC-G	
	34.74.01-S	34.74.02-S	VLi for AQC/VAR	<b>Air entry cone</b> Type VLi: cone for reducing the air entry resistance (by 20%). Type VAI: extended AQC air entry cone
	34.74.11-S	34.74.12-S	VAI for extended ACQ	

\* SW = single-walled  
DW = double-walled





Article numbers for chimney diameters:				Description
Ø40	Ø45			
	34.76.12-S	34.76.13-S		<b>Rain cowl + brackets</b> Reduces water penetration. Note, however, that the chimney output will also be reduced.
	34.76.02-S	34.76.03-S		<b>Rain ring, compact</b> High collar preventing ingress of rain.
	34.75.62-S	34.75.63-S		<b>Backdraught shutter, surface mounted</b> Shuts off the chimney when the fan is not active; no weather influences and unneeded heat loss from the house.
				Warning in case of power failure: lack of emergency ventilation capacity, risk of heat draining and lack of control of air volume.
	34.76.42-S	34.76.43-S		<b>Roof plate with cone</b> One-piece moulded roof sheet with cone for added strength.
	34.76.22-S	34.76.23-S		<b>Rubber roof cover + mounting kit</b> This roof cover can be used instead of a roof sheet with cone. Advantage: this roof flashing is much more flexible and adapts perfectly to chimney and roof plate.
	34.75.31-S	34.75.32-S	SW* 0.5m	<b>Extension ducts, compact</b> Advantage of double-walled chimneys: the 8mm of insulating stagnant air between the inner and outer walls prevents interior condensation caused by cold outside air.
	34.75.41-S	34.75.42-S	SW* 1.0m	
	34.75.51-S	34.75.52-S	SW* 1.5m	
	34.75.72-S	34.75.73-S	DW* 0.5m	
	34.75.82-S	34.75.83-S	DW* 1.0m	
	34.75.92-S	34.75.93-S	DW* 1.5m	
	34.76.32-S	34.76.33-S		<b>Stiffening ring</b> Firming inner ring for correct tip clearance of the fan and optimal air flow.
	34.72.11-S	34.72.12-S	SW*	<b>Coupling sock</b> Coupling piece and firming outer ring to firmly connect two chimney parts.
	34.72.21-S	34.72.22-S	DW*	
	34.02.00	34.03.00	VAR ring	<b>VAR ring</b> Universal fan ring, with attachment points and coupling kit.
	34.30.00	34.30.00	coupling set	
	36.70.45	36.70.47	230V, 1400rpm, 50Hz	<b>Built-in fan</b> For diameters Ø71, Ø82 and Ø92 fans can be delivered in ventilation assemblies. 60Hz on demand.
	36.70.65	36.70.67	400V, 1400rpm, 50Hz	
	30.33.00	30.34.00	AQC-ZM	<b>AQC air control / measure&amp;air control unit</b> Air control unit with air entry cone for accurately measuring and controlling room ventilation.
	30.23.50	30.24.50	AQC-G	
	34.74.03-S	34.74.04-S	VLI for AQC/VAR	<b>Air entry cone</b> Type VLI: cone for reducing the air entry resistance (by 20%). Type VAI: extended AQC air entry cone
	34.74.13-S	34.74.14-S	VAI for extended ACQ	

\* SW = single-walled  
DW = double-walled



Article numbers for chimney diameters:				Description
Ø50	Ø56			
	34.76.14-S	34.76.15-S		<b>Rain cowl + brackets</b> Reduces water penetration. Note, however, that the chimney output will also be reduced.
	34.76.04-S	34.76.05-S		<b>Rain ring, compact</b> High collar preventing ingress of rain.
	34.75.64-S	34.75.65-S		<b>Backdraught shutter, surface mounted</b> Shuts off the chimney when the fan is not active; no weather influences and unneeded heat loss from the house.
				 Warning in case of power failure: lack of emergency ventilation capacity, risk of heat draining and lack of control of air volume.
	34.76.44-S	34.76.45-S		<b>Roof plate with cone</b> One-piece moulded roof sheet with cone for added strength.
	34.76.24-S	34.76.25-S		<b>Rubber roof cover + mounting kit</b> This roof cover can be used instead of a roof sheet with cone. Advantage: this roof flashing is much more flexible and adapts perfectly to chimney and roof plate.
	34.75.33-S	34.75.34-S	SW* 0.5m	<b>Extension ducts, compact</b> Advantage of double-walled chimneys: the 8mm of insulating stagnant air between the inner and outer walls prevents interior condensation caused by cold outside air.
	34.75.43-S	34.75.44-S	SW* 1.0m	
	34.75.53-S	34.75.54-S	SW* 1.5m	
	34.75.74-S	34.75.75-S	DW* 0.5m	
	34.75.84-S	34.75.85-S	DW* 1.0m	
	34.75.94-S	34.75.95-S	DW* 1.5m	
	34.76.34-S	34.76.35-S		<b>Stiffening ring</b> Firming inner ring for correct tip clearance of the fan and optimal air flow.
	34.72.13-S	34.72.14-S	SW*	<b>Coupling sock</b> Coupling piece and firming outer ring to firmly connect two chimney parts.
	34.72.23-S	34.72.24-S	DW*	
	34.04.00	34.05.00	VAR ring	<b>Fan ring</b> Universal fan ring, with attachment points and coupling kit.
	34.30.00	34.30.00	coupling set	
	36.70.49	36.70.51	230V, 1400rpm, 50Hz	<b>Built-in fan</b> For diameters Ø71, Ø82 and Ø92 fans can be delivered in ventilation assemblies. 60Hz on demand.
	36.70.69	36.70.71	400V, 1400rpm, 50Hz	
	30.35.00	30.36.00	AQC-ZM	<b>AQC air control / measure&amp;air control unit</b> Air control unit with air entry cone for accurately measuring and controlling room ventilation.
	30.25.50	30.26.50	AQC-G	
	34.74.05-S	34.74.06-S	VLI for AQC/VAR	<b>Air entry cone</b> Type VLI: cone for reducing the air entry resistance (by 20%). Type VAI: extended AQC air entry cone
	34.74.15-S	34.74.16-S	VAI for extended ACQ	






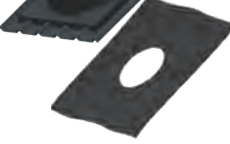




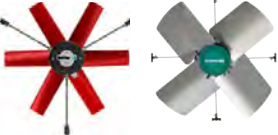


\* SW = single-walled  
DW = double-walled





Article numbers for chimney diameters:  
Ø63                      Ø71

Description

	34.76.16-S	34.76.17-S		<b>Rain cowl + brackets</b> Reduces water penetration. Note, however, that the chimney output will also be reduced.
	34.76.06-S	34.76.07-S		<b>Rain ring, compact</b> High collar preventing ingress of rain.
	34.75.66-S	34.75.67-S		<b>Backdraught shutter, surface mounted</b> Shuts off the chimney when the fan is not active; no weather influences and unneeded heat loss from the house.
				 Warning in case of power failure: lack of emergency ventilation capacity, risk of heat draining and lack of control of air volume.
	34.76.46-S	34.76.47-S		<b>Roof plate with cone</b> One-piece moulded roof sheet with cone for added strength.
	34.76.26-S	34.76.27-S		<b>Rubber roof cover + mounting kit</b> This roof cover can be used instead of a roof sheet with cone. Advantage: this roof flashing is much more flexible and adapts perfectly to chimney and roof plate.
	34.75.35-S	34.75.36-S	SW* 0.5m	<b>Extension ducts, compact</b> Advantage of double-walled chimneys: the 8mm of insulating stagnant air between the inner and outer walls prevents interior condensation caused by cold outside air.
	34.75.45-S	34.75.46-S	SW* 1.0m	
	34.75.55-S	34.75.56-S	SW* 1.5m	
	34.75.76-S	34.75.77-S	DW* 0.5m	
	34.75.86-S	34.75.87-S	DW* 1.0m	
	34.75.96-S	34.75.97-S	DW* 1.5m	
	34.76.36-S	34.76.37-S		<b>Stiffening ring</b> Firming inner ring for correct tip clearance of the fan and optimal air flow.
	34.72.15-S	34.72.16-S	SW*	<b>Coupling sock</b> Coupling piece and firming outer ring to firmly connect two chimney parts.
	34.72.25-S	34.72.26-S	DW*	
	34.06.00	34.06.50	VAR ring	<b>Fan ring</b> Universal fan ring, with attachment points and coupling kit.
	34.30.00	34.30.02	coupling set	
	36.70.53	36.70.55	230V, 1400rpm, 50Hz	<b>Built-in fan</b> For diameters Ø71, Ø82 and Ø92 fans can be delivered in ventilation assemblies. 60Hz on demand.
	36.70.73	36.70.75	400V, 1400rpm, 50Hz	
	30.37.00	30.38.00	AQC-ZM	<b>AQC air control / measure&amp;air control unit</b> Air control unit with air entry cone for accurately measuring and controlling room ventilation.
	30.27.50	30.28.50	AQC-G	
	34.74.07-S	34.74.08-S	VLi for AQC/VAR	<b>Air entry cone</b> Type VLI: cone for reducing the air entry resistance (by 20%). Type VAI: extended AQC air entry cone
	34.74.17-S	34.74.18-S	VAI for extended ACQ	

\* SW = single-walled  
DW = double-walled



Article numbers for chimney diameters:				Description
Ø82	Ø92			
	34.76.18-S	34.76.19-S		<b>Rain cowl + brackets</b> Reduces water penetration. Note, however, that the chimney output will also be reduced.
	34.76.08-S	34.76.09-S		<b>Rain ring, compact</b> High collar preventing ingress of rain.
	34.75.68-S	34.75.69-S		<b>Backdraught shutter, surface mounted</b> Shuts off the chimney when the fan is not active; no weather influences and unneeded heat loss from the house.
				Warning in case of power failure: lack of emergency ventilation capacity, risk of heat draining and lack of control of air volume.
	34.76.48-S	34.76.49-S		<b>Roof plate with cone</b> One-piece moulded roof sheet with cone for added strength.
	34.76.28-S	34.76.29-S		<b>Rubber roof cover + mounting kit</b> This roof cover can be used instead of a roof sheet with cone. Advantage: this roof flashing is much more flexible and adapts perfectly to chimney and roof plate.
	34.75.37-S	34.75.38-S	SW* 0.5m	<b>Extension ducts, compact</b> Advantage of double-walled chimneys: the 8mm of insulating stagnant air between the inner and outer walls prevents interior condensation caused by cold outside air.
	34.75.47-S	34.75.48-S	SW* 1.0m	
	34.75.57-S	34.75.58-S	SW* 1.5m	
	34.75.78-S	34.75.79-S	DW* 0.5m	
	34.75.88-S	34.75.89-S	DW* 1.0m	
	34.75.98-S	34.75.99-S	DW* 1.5m	
	34.76.38-S	34.76.39-S		<b>Stiffening ring</b> Firming inner ring for correct tip clearance of the fan and optimal air flow.
	34.72.17-S	34.72.18-S	SW*	<b>Coupling sock</b> Coupling piece and firming outer ring to firmly connect two chimney parts.
	34.72.27-S	34.72.28-S	DW*	
	34.07.00	34.08.00	VAR ring	<b>Fan ring</b> Universal fan ring, with attachment points and coupling kit.
	34.30.02	34.30.02	coupling set	
	36.70.57	36.70.59	230V, 1400rpm, 50Hz	<b>Built-in fan</b> For diameters Ø71, Ø82 and Ø92 fans can be delivered in ventilation assemblies. 60Hz on demand.
	36.70.77	36.70.79	400V, 1400rpm, 50Hz	
	30.39.00	30.40.00	AQC-ZM	<b>AQC air control / measure&amp;air control unit</b> Air control unit with air entry cone for accurately measuring and controlling room ventilation.
	30.29.50	30.30.50	AQC-G	
	34.74.09-S	34.74.10-S	VL I for AQC/VAR	<b>Air entry cone</b> Type VLI: cone for reducing the air entry resistance (by 20%). Type VAI: extended AQC air entry cone
	34.74.19-S	34.74.20-S	VA I for extended ACQ	

\* SW = single-walled  
DW = double-walled





## Composed parts of air outlet chimney

Stienen BE supplies smart, compact ventilation chimneys. The ventilation chimneys seamlessly fit the AQC measuring and control units and SGS fans. To save on costs, composed chimney parts can be ordered. The table below shows the possibilities and specifications per diameter:

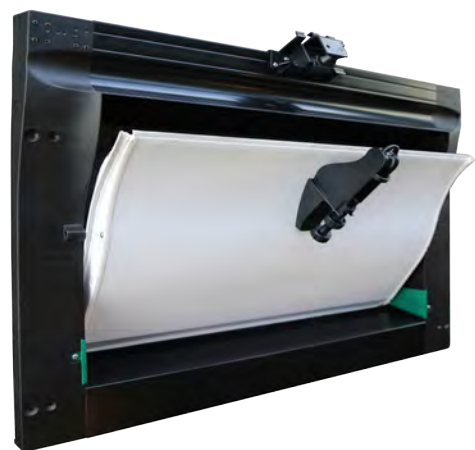
Article numbers of assembled chimneys with diameters:					Description
Ø30	Ø35	Ø40	Ø45	Ø50	
32.01.50	32.02.50	32.03.50	32.04.50	32.05.50	<b>SMV-XX</b> Measuring fan 12V + mounting brackets.
31.01.50	31.02.50	31.03.50	31.04.50	31.05.50	<b>LMU-XX</b> Measuring fan with air entry cone + SMV + turbulence cross
					<b>AV-Assembly-XX</b> (without fan)
33.60.53	33.60.55	33.60.57	33.60.59	33.60.61	<b>ZM</b> AQC + VAR + SS couplings without measuring fan
33.70.03	33.70.05	33.70.07	33.70.09	33.70.11	<b>G</b> AQC + VAR + SS couplings with measuring fan
30.60.00	30.61.00	30.62.00	30.63.00	30.64.00	<b>RO-AQC-XX</b> Protection grid for AQC with mounting heights <2850mm
34.70.00-S	34.70.10-S	34.70.11-S	34.70.12-S	34.70.13-S	<b>KO-XX</b> Rain ring + ext. duct 1m + roof sheet, corrugated 178
34.75.00-S	34.75.10-S	34.75.11-S	34.75.12-S	34.75.13-S	<b>KO-XX-C</b> (compact version) Rain ring + extension duct 1m + roof sheet, flat 178

Article numbers of assembled chimneys with diameters:					Description
Ø56	Ø63	Ø71	Ø82	Ø92	
32.07.50	32.08.50	32.09.50	32.10.50	32.11.50	<b>SMV-XX</b> Measuring fan 12V + mounting brackets
31.06.50	31.07.50	31.08.50	31.09.50	31.10.50	<b>LMU-XX</b> Measuring fan with air entry cone + SMV + turbulence cross
					<b>AV-Assembly-XX</b> (without fan)
33.60.63	33.60.65	33.60.67	33.60.69	33.60.71	<b>ZM</b> AQC + VAR + SS couplings without measuring fan
33.70.13	33.70.15	33.70.17	33.70.19	33.70.21	<b>G</b> AQC + VAR + SS couplings with measuring fan
30.65.00	30.66.00	30.67.00	30.68.00	30.69.00	<b>RO-AQC-XX</b> Protection grid for AQC with mounting heights <2850mm
34.70.14-S	34.70.15-S	34.70.16-S	34.70.17-S	34.70.18-S	<b>KO-XX</b> Rain ring + ext. duct 1m + roof sheet, corrugated 178
34.75.14-S	34.75.15-S	34.75.16-S	34.75.17-S	34.75.18-S	<b>KO-XX-C</b> (compact version) Rain ring + extension duct 1m + roof sheet, flat 178

## Aerowing

Air inlet  
with constant and  
independent air throw

- Robust central operation
- Aerodynamic design
- Constant air throw over the entire ventilation range
- Minimal risk of freezing
- Very easy to assemble
- Easy to control using Stienen equipment





## Accurate and constant ventilation

**The secret of a healthy climate is to provide your animals with the right volume of fresh air at the right speed in the right place. Your animals don't care how the air leaves the house. What matters to them is how it comes in!**

The primary requirement for a healthy climate is a good air distribution, keeping it moving evenly all the time. The temperature in the house should remain constant and draughts should be avoided. Sufficient air exchange is necessary to remove CO<sub>2</sub>, ammonia and dust to keep your animals healthy.

Stienen BE has developed the AeroWing to optimise the distribution of the air throughout your poultry house under all conditions.



## Inlets for tunnel ventilation

Tunnel ventilation can be used as additional ventilation during extreme warm days. The inlets for tunnel ventilation can be used alongside the conventional AeroWing. This should provide an additional cooling effect by taking the air with a higher speed over the animals.

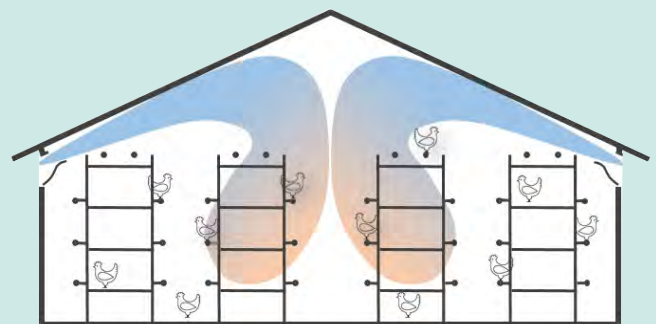


## AeroWing mounting position

The mounting position of the AeroWing depends on the type of housing. The example below shows two poultry houses with different housing systems: floor housing and aviary or cage housing.



For floor housing, the AeroWing can be installed at a low height, since the air throw is independent of the roof slope. An additional advantage of this is that obstacles at roof height, such as roof trusses, lighting or winch-suspended feed and water lines, do not affect the air distribution.



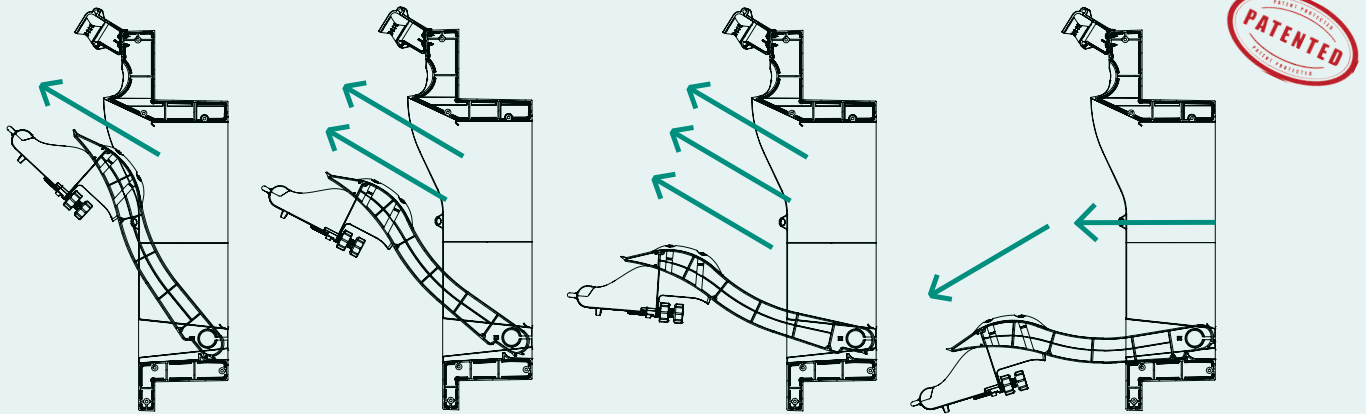
For aviary or cage housing systems, the AeroWing can be placed high up to ensure ventilation between the roof and the housing system.



# AeroWing unique benefits

## 1. Constant and independent air throw

The aerodynamic design of the AeroWing gives the incoming air a 22-degree angle, resulting in an air throw path which is always known and enables any kind of ventilation, regardless of the roof structure. A constant air throw is even guaranteed at minimum ventilation.

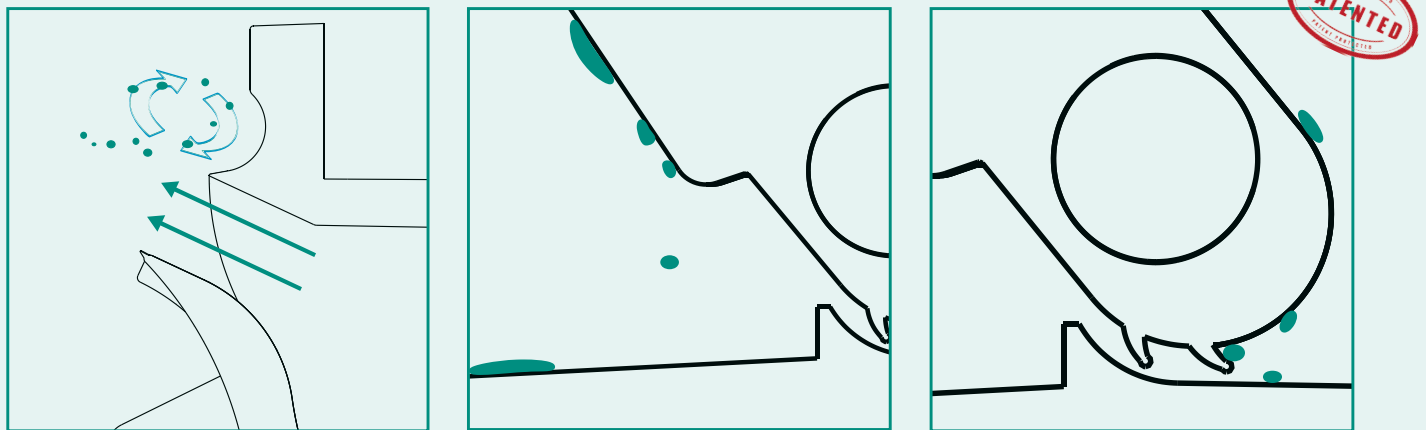


### LOWERING PRESSURE DROP

If the ventilation level is 70% or higher, the pressure can be lowered to apply displacement ventilation.

## 2. Minimal risk of freezing

Cold incoming air cools the hot and moist air in the house, causing condensation. This condensate may cause moving parts to freeze. The AeroWing avoids this problem in three ways:



The air inlet uses the venturi effect to draw in the air inside the house along with the incoming air. The round opening keeps the air in the house moving to prevent condensate from forming on the valve.

The blunt corner on the inside of the valve and the slanted edge of the lower corner sections cause the condensate to run off the moving parts.

Two rubber strips seal the lower side of the flap to prevent the condensate from dripping into the moving parts and the air from leaking away under the valve.

**YouTube** In our video channel you will find an animation video of the AeroWing.

## LDA-200 and EGM winch motor

To control air inlet systems in intensive livestock buildings Stienen BE has developed the LDA-200 and the EGM winch motor

**LDA-200:** robust brushless 24V motor with a tensile force of twice 1000N. Thanks to the direct connection with pull cables, only a fine adjustment will be necessary. Any risk of expansion of the pull cables is minimized by pulling in two directions. The LDA-200 motor is equipped with a stainless steel rack and pinion drive system. Moreover, the LDA-200 motor can be set without any use of tools and without opening it.



**EGM winch motor:** robust brushless 24V motor with a tensile force of 100 resp. 250 kg. As standard, the EGM series is supplied with a cable drum and is available with a 0-10V control signal or potentiometer feedback.



## Technical specifications

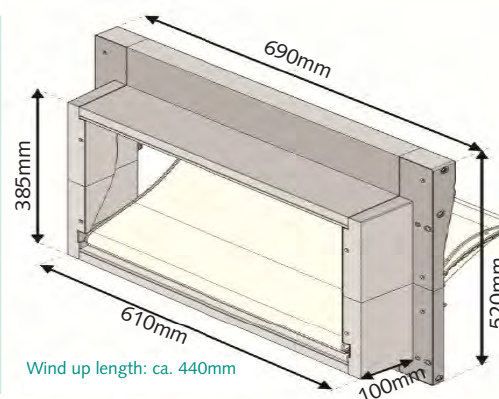
### General

- Constant and independent air throw
- Minimal risk of freezing
- Supplied as a self-assembly kit which saves 30% of transport volume
- Very easy to assemble
- Long service life due to the use of stainless steel and plastic materials
- Perfect in combination with other Stienen BE equipment

### Options

- Can be expanded vertically using 1 or more connecting piece(s)
- Spring opening
- Available with a plastic grille
- Available with a rod guide

## Dimensions AW1-16



## Matrix

Type	Layers	Cut-out (mm) *		Rear view (mm)		Front view (mm)		Air flow (m <sup>3</sup> /h)				Force Kg
		Width	Height	Width	Height	Width	Height	10 Pa	20 Pa	30 Pa	40 Pa	
AW1-16 C	1	617	390	610	385	690	520	1,600	2,200	2,700	3,100	5
AW1-24 C	1	902	390	895	385	975	520	2,400	3,400	4,100	4,800	6
AW1-32 C **	1	1187	390	1180	385	1260	520	3,200	4,500	5,500	6,400	7
TAW2-48	2	902	745	895	740	975	875	4,800	6,700	8,300	9,500	12
TAW2-64	2	1187	745	1180	740	1260	875	6,400	9,100	11,100	12,800	14
TAW3-72	3	902	1100	895	1095	975	1230	7,200	10,100	12,400	14,300	18
TAW3-96	3	1187	1100	1180	1095	1260	1230	9,600	13,600	16,600	19,200	21
TAW3-120	3	1472	1100	1465	1095	1545	1230	12,000	17,000	20,900	24,100	24
TAW4-95	4	902	1455	895	1450	975	1585	9,500	13,500	16,500	19,100	24
TAW4-128	4	1187	1455	1180	1450	1260	1585	12,800	18,100	22,200	25,600	28
TAW4-161	4	1472	1455	1465	1450	1545	1585	16,100	22,700	27,800	32,100	32
TAW5-119	5	902	1810	895	1805	975	1940	11,900	16,900	20,700	23,900	30
TAW5-160	5	1187	1810	1180	1805	1260	1940	16,000	22,600	27,700	32,000	35
TAW5-201	5	1472	1810	1465	1805	1545	1940	20,100	28,400	34,800	40,200	40

\* With the recess dimensions any tolerance variations in width or height have been taken into account.

\*\* As standard, the AW1-32 C has been equipped with 2 brackets.

## Stienen BE Agri Automation

Stienen BE is a leading family company (1977) which has strong roots in the livestock farming. By nature we are very close to the farmer. We are a global supplier of innovative automation solutions for poultry and pig farms. Climate solutions, automation systems, management software and peripheral equipment are developed and produced in-house.

## Eco-Prop

Recirculation fan for modern livestock farming

- High energy efficiency
- Provides sufficient air flow
- Reduces temperature differences in the animal house
- Provides a homogeneous composition of the climate in the animal house
- Can be integrated into a cage system
- High-speed and low-speed versions
- Enables accurate regulation
- Low noise level
- CE compliant





## ECO-Prop

recirculation fan for modern livestock farming

The main benefit of the ECO-Prop is its energy efficiency. Its large diameter enables this Stienen fan to displace the same amount of air as conventional, smaller fans, but at a much lower speed. This has three advantages:

1. considerable energy savings
2. low noise level
3. reduced draughts and/or dehydration symptoms

The ECO-Prop is covered in plastic sheeting and can be controlled accurately using the Stienen MPM-5 or SPM-6/12 power controller or a frequency drive.

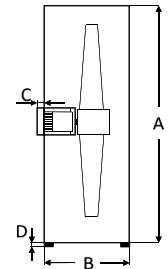


## Configuration overview

General	
Supply voltage	230 Vac, 50/60 Hz
Protection class housing	IP 25
Protection class actuator	IP 55
Min. ambient temperature	-5°C
Max. ambient temperature	40°C

## Dimensions

Section	mm
A	881
B	292
C	35
D	13



## ECO-Prop-50

RPM	460 RPM
Current	0.78 A
Load	90 W
Noise level	50 dB
Air volume	5400 m <sup>3</sup> /h
Weight	12.45 kg

## ECO-Prop-70

RPM	620 RPM
Current	0.88 A
Load	135 W
Noise level	53 dB
Air volume	7500 m <sup>3</sup> /h
Weight	12.45 kg



The ECO-Prop-50 and -70 are covered in white plastic sheeting.

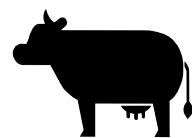
## Stienen BE, Agri Automation

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## Air inlet systems

for modern livestock farming

- Made entirely of plastic and stainless steel
- An appropriate solution for every situation
- Modular system
- Flexible dimensions
- Easy to install



## An optimum climate in the animal house

Your animals are your capital and the climate in the animal house is an important factor in their development. The right amount of air, of the right quality, with the right speed and in the right place for your animals. That is the secret to a healthy climate in animal houses. What is important for your animals is how the air enters the house; not how it leaves the house. Good air distribution where there is a calm,

consistent movement of air means a good climate in your animal house. The AeroWing has been carefully shaped to achieve this. The result: a constant temperature in the house, without any draughts. This should be combined with sufficient ventilation to remove temperature, moisture, CO<sub>2</sub>, ammonia and dust. Stienen BE supplies air intake systems of several different types and designs:

- AeroWing
- AeroWing-tunnel
- AeroFlex
- AeroRoof
- AeroFree

### AeroWing

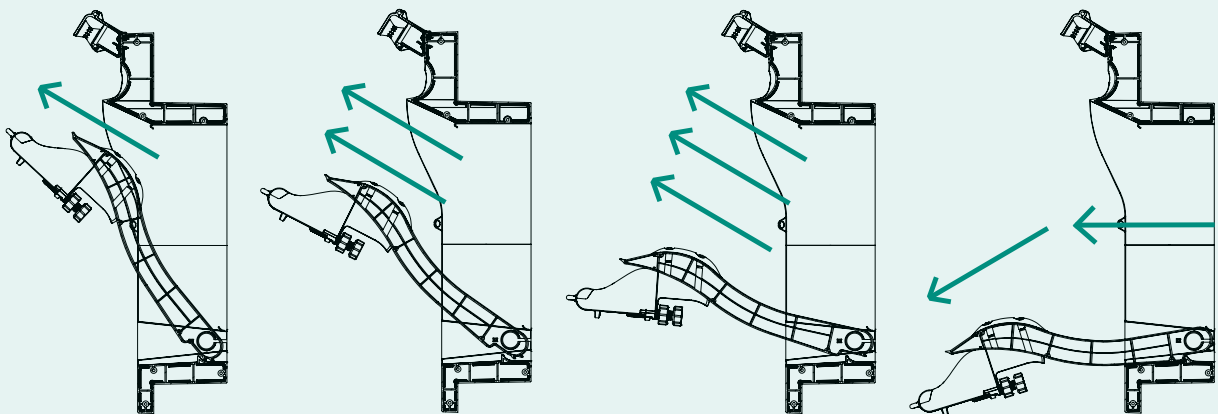
for a constant and independent incoming air throw

The aerodynamic shape of the AeroWing angles the incoming air at 22°. This means that the path of the air throw is always known and this enables ventilation independently of the roof. A constant air throw is guaranteed, even at minimum ventilation levels. The AeroWing is available in various different sizes and tunnel versions, with two, three, four or five valve layers.

### AeroWing-tunnel

for extra ventilation

Tunnel ventilation can be used to increase ventilation levels on extremely hot days. Tunnel flaps are applied in addition to the conventional AeroWing in order to create a cooling effect by subjecting the animals to air at a higher velocity.



#### LOWERING PRESSURE DROP

If the ventilation level is 70% or higher, the pressure can be lowered to apply displacement ventilation.

## Technical specifications AeroWing and AeroWing-tunnel

Type	Layers	Cut-out (mm) *		Rear view (mm)		Front view (mm)		Air flow (m <sup>3</sup> /h)				Force Kg
		Width	Height	Width	Height	Width	Height	10 Pa	20 Pa	30 Pa	40 Pa	
AW1-16 C	1	617	390	610	385	690	520	1,600	2,200	2,700	3,100	5
AW1-24 C	1	902	390	895	385	975	520	2,400	3,400	4,100	4,800	6
AW1-32 C **	1	1187	390	1180	385	1260	520	3,200	4,500	5,500	6,400	7
TAW2-48	2	902	745	895	740	975	875	4,800	6,700	8,300	9,500	12
TAW2-64	2	1187	745	1180	740	1260	875	6,400	9,100	11,100	12,800	14
TAW3-72	3	902	1100	895	1095	975	1230	7,200	10,100	12,400	14,300	18
TAW3-96	3	1187	1100	1180	1095	1260	1230	9,600	13,600	16,600	19,200	21
TAW3-120	3	1472	1100	1465	1095	1545	1230	12,000	17,000	20,900	24,100	24
TAW4-95	4	902	1455	895	1450	975	1585	9,500	13,500	16,500	19,100	24
TAW4-128	4	1187	1455	1180	1450	1260	1585	12,800	18,100	22,200	25,600	28
TAW4-161	4	1472	1455	1465	1450	1545	1585	16,100	22,700	27,800	32,100	32
TAW5-119	5	902	1810	895	1805	975	1940	11,900	16,900	20,700	23,900	30
TAW5-160	5	1187	1810	1180	1805	1260	1940	16,000	22,600	27,700	32,000	35
TAW5-201	5	1472	1810	1465	1805	1545	1940	20,100	28,400	34,800	40,200	40

\* Tolerance deviations in width and height have been taken into account in the cut-out dimensions.

\*\* AW1-32 C has two brackets as standard.



## AeroFlex

for situations where the air needs to be steered

We recommend the AeroFlex in situations where it is very important that the air is steered. The adjustable fins steer the air in the desired direction. This enables perfect steering of the air in broad animal houses, animal houses with obstacles, or in poultry houses with aviary or cage systems. The AeroFlex with a V-type slide valve guarantees the desired throw even at minimum ventilation levels. The air is then bundled to create a 'jet stream'. To ensure a long service life, the AeroFlex is made entirely of plastic and stainless steel; it can also be custom-made to fit any opening. The AeroFlex valves are also available in transparent (daylight) and multiple designs. The AeroFlex is self-opening and is closed by a motor. The fins are installed in front of the slide; the fin position has little or no impact on the effective air intake.



## Technical specifications AeroFlex

Type	Integration dimensions			Net surface area (cm <sup>2</sup> )	Capacity (m <sup>3</sup> h)			Tensile force (kg)	Stroke length (mm)
	W	H	D		10Pa	20Pa	80Pa		
UF-2500	540	345	100	1525	1800	2500	2900	2	350
UF-3500	640	395	100	2130	2550	3500	4050	2.5	400
UF-5350	940	445	100	3240	3900	5350	6150	3.5	450
UF-7500	1,040	495	100	4550	5450	7500	8650	4.5	500
UF-9000	1,120	545	100	5454	6550	9000	10350	5	550

### Dimensions of made to measure solutions

Width : 200-1120 mm (any increment is possible)  
 Height : 245-670 mm (in 25mm increments)  
 Depth : 0-500 mm (in 25mm increments)



## AeroRoof

for situations that require the 'coanda' effect

The AeroRoof is self-opening and is closed by a motor. The design with a curved flap steers the air horizontally along the ceiling for an optimum 'coanda' (ceiling) effect. Versions with a straight flap direct the air downwards, in a straight line. The AeroRoof ceiling valves are available with single and double valves and are made entirely of plastic and stainless steel to guarantee a long service life. We can provide matching solutions for all applications. The valves are also available as kits that need to be assembled on site. This saves up to 70% on transport volume.

## Technical specifications AeroRoof

Type	Integration dimensions			Net surface area (cm <sup>2</sup> )	Capacity (m <sup>3</sup> h)			Tensile force (kg)	Stroke length (mm)
	W	H	D		10Pa	20Pa	80Pa		
PVH-E-2400	320	100	600	1456	1750	2400	2750	1.5	320
PVH-E-3350	670	100	700	2046	2450	3350	3850	2	370
PVH-E-4500	420	100	800	2736	3250	4500	5150	2.5	420
PVH-D-4800	600	100	600	2912	3500	4800	5500	3	320
PVH-D-6750	700	100	700	4092	4900	6750	7750	4	370
PVH-D-9000	800	100	800	5472	6550	9000	10350	5	420

### Dimensions of made to measure solutions

Width : 320/670/420/600/700/800  
 Height : 100-500 mm (in increments of 25 mm)  
 Depth : 200-1120 (in increments of 25 mm)

## AeroFree

for smooth and hassle-free pop-hole opening control

The AeroFree enables you to smoothly control the pop-holes to the outdoor range. The AeroFree pop-hole door is self-closing and is opened using a motor. Fitting rooms with multiple pop-holes doors offers the advantage of being able to close some shutters in cold periods. To ensure a long service life, the AeroFree pophole slide shutter is made entirely of plastic and stainless steel.



## Technical specifications AeroFree

Type	Integration dimensions			Net pop-hole (mm)	Cut-out(mm)		Tensile force (kg)	Stroke length (mm)	Dimensions of made to measure solutions
	W	H	D		W	H			
KU-H1-1000	1040	540	100	1000	1050	550	6	550	Width: 200-4800 mm (any increment is possible)
KU-H1-1100	1140	540	100	1100	1150	550	6.5	550	
KU-H2-2000	2086	540	100	2001	2096	550	12	550	Height: 245-670 mm (in 25mm increments)
KU-H2-2200	2286	540	100	2201	2296	550	13	550	
KU-H3-3000	3132	540	100	3002	3142	550	18	550	Depth: 0-500 mm (in 25mm increments)
KU-H3-3300	3432	540	100	3302	3442	550	19.5	550	

## Overview Aero product range

available made to measure



AeroWing



AeroWing-tunnel



AeroFree single



AeroFree multiple



AeroRoof horizontal with a single air intake



AeroRoof horizontal with a double air intake



AeroRoof horizontal with turn-air



AeroRoof vertical with a single air intake



AeroRoof vertical with a double air intake



AeroFlex with a V-type / lag slide valve



AeroFlex transparent



AeroFlex multiple

## Stienen BE Agri Automation

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## EGM

Winch motor for controlling  
air inlet valves

- Robust 24V motor
- Long service life thanks to brushless stepping motor
- Easy to adjust
- Completely dust and splash proof
- Protected against overload
- Available with an ESE emergency power supply module





## EGM-100 and EGM-250

with massive torque

The EGM motors have been specially developed to control air inlet systems in intensive livestock buildings. They are fitted with robust brushless 24V motors with a tensile force of 100 and 250 kg respectively. The integrated microprocessor continuously monitors the maximum torque preventing damage due to overload. The EGM can be adjusted without tools and without opening it, thus ensuring a long service life and splash water tightness. As standard, the EGM series

is supplied with a cable drum and is available with a 0-10V control signal or potentiometer feedback. The intelligent DMS-24-2CA or DMS-24-AM end station can control the EGM-CA motor and feedback its exact position by means of communication through a single cable. This minimises the need of wiring, resulting in attractive cost savings.

### Technical specifications

General	
Supply voltage	24 Vac (50/60 Hz) / 24-30 Vdc
Control voltage	0-10 Vdc
Input impedance	≥ 10 kΩ
Max. duty cycle	15 minutes
Protection class	IP 54
Ambient temperature	0-40 °C
Max. number of revolutions	5.25

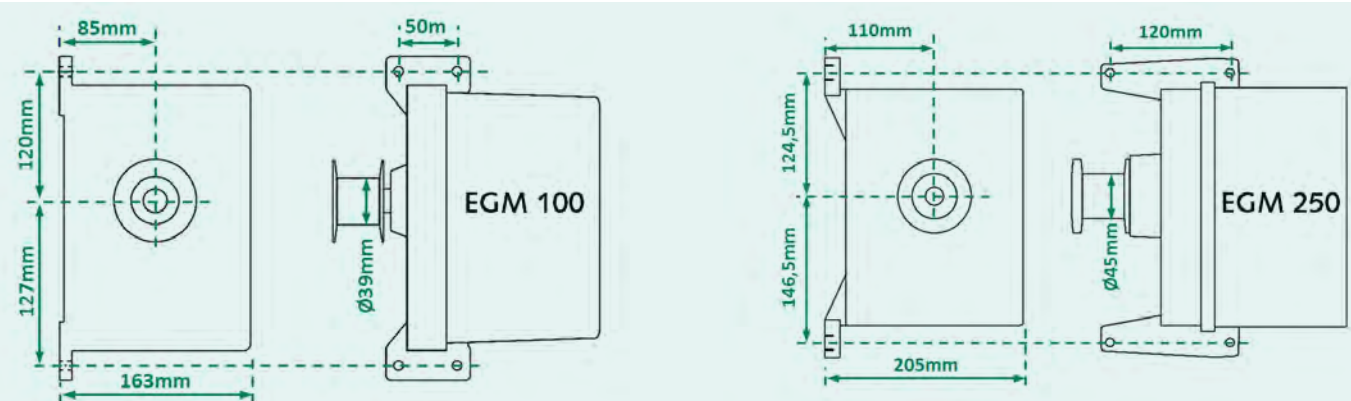
### ESE (optional)

emergency current module for maximum certainty

The EGM winch motors can be expanded by an ESE emergency current module. In the event of a power outage or an emergency situation, an ESE module immediately ensures that the EGM motors drive the air inlet valves to their pre-set positions. Of course, the battery condition is monitored permanently to guarantee that the primary needs of the animals are fulfilled. A maximum of eight EGM-100 motors or four EGM 250 motors can be connected to a single ESE module.

	EGM-100P	EGM-100CA	EGM-250P	EGM-250CA
Max. load	30 VA / 20 W	30 VA / 20 W	60 VA / 40 W	60 VA / 40 W
Stroke length (min. - max.)	13-70 cm	13-70 cm	15-80 cm	15-80 cm
Nominal tensile force	1000 N	1000 N	2500 N	2500 N
Speed	6-13 cm/min.	6-13 cm/min.	5-11 cm/min.	5-11 cm/min.
Potentiometer feedback	✓	-	✓	-
0-10Vdc signal with position feedback	-	✓	-	✓

### Dimensions EGM-100 and EGM-250



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## ELM

Winch motor for controlling  
air inlets

- Robust 230V motor
- Self-locking drive
- Low noise
- Maintenance-free



## ELM winch motor

geared motor with limit switch

The ELM motor has been specially developed to control various types of air inlets in intensive livestock buildings. The winch motor is fitted with a 230V motor with a tensile force of 335 to 800 kg, depending on the model. The ELM is available in four different versions:

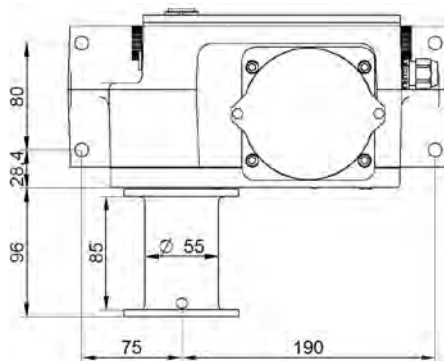
- ELM-150V Valve control
- ELM-150C Curtain control
- ELM-100-2A Gear rack drive (2-shaft)
- ELM-250-2A Gear rack drive (2-shaft)



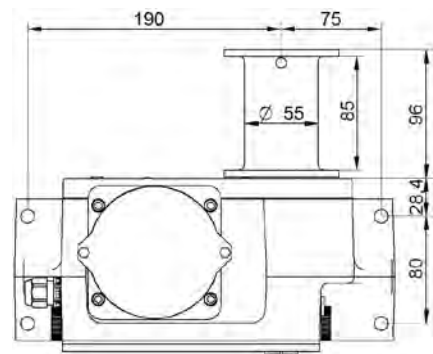
## Technical specifications

	ELM-150V	ELM-150C	ELM-100-2A (2-shaft)	ELM-250-2A (2-shaft)
Drive	valve control	curtain control	gear rack drive	gear rack drive
Supply voltage	230 Vac, 50 Hz	230 Vac, 50 Hz	230 Vac, 50 Hz	230 Vac, 50 Hz
Max. current	0.7 A	0.7 A	1.1 A	1.0 A
Weight	12.5 kg	12.5 kg	11.0 kg	13.0 kg
Shaft torque	150 Nm	150 Nm	100 Nm	250 Nm
Max. tensile force	500 kg	500 kg	335 kg	800 kg
Speed	1 rpm	1 rpm	2,5 rpm	1 rpm
Limit switches	max. 6 rev.	max. 12 rev.	max. 18 rev.	max. 6 rev.
Max. duty cycle	10 minutes	10 minutes	20 minutes	20 minutes
Feedback potmeter	10 kΩ ±20%	10 kΩ ±20%	10 kΩ ±20%	10 kΩ ±20%
Connection cable length	1.6 m	1.6 m	1.6 m	1.6 m
Protection class	IP 54	IP 54	IP 54	IP 54
Ambient temperature	-5 °C to +52 °C	-5 °C to +52 °C	-15° C to +60 °C	-15 °C to +60 °C
Wind-up length Ø4 mm cable resp. revolutions of motor shaft				
• gearwheel, 1 thread	58-116 cm	63-218 cm	3-9.5 rev.	3-9.5 rev.
•• gearwheel, 2 threads	26-116 cm	36-132 cm	-	-
••• gearwheel, 3 threads	17-80 cm	27-81 cm	1-5 rev.	1-5 rev.
•••• gearwheel, 5 threads	8-49 cm	18-50 cm	1-3.5 rev.	1-3.5 rev.

## Dimensions ELM-150V / ELM-150C



## Dimensions ELM-100-2A / ELM-250-2A



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## AL-10

Smart alarm device  
with specified messages

- Clear displaying of activated inputs
- Independent operation of alarm contacts
- Optional alarm key switch
- Internal battery for constant contact monitoring
- Protected communication with FarmConnect and FarmRemote



## AL-10

for constant and transparent monitoring

This alarm controller takes its name from its ten independent alarm groups. Every alarm input has an alarm output linked to it, enabling alarm handling priorities to be programmed. The keys and the corresponding signal LEDs provide you with a straightforward and clear indication of where a problem was detected. The AL-10 communicates the alarm and the corresponding location to either your siren and/or phone output (as selected by you), enabling you to take action as

required. The alarm inputs can be switched on/off individually and have a default retard function of 30 minutes. This retard function can be activated if the alarm is reported via your phone. You can also program a dialler delay for every individual input. A key switch is optionally available to prevent unauthorised deactivation of an alarm. The internal battery powers the AL-10 if the mains power is down, thus guaranteeing constant monitoring.

## Technical specifications

General	
Supply voltage	230Vac - 50/60Hz
Connected load	15VA
Dimensions	300x230x120
ABS housing	✓
Protection class	IP 20
Min. ambient temperature	-5°C
Max. ambient temperature	20°C
Inputs	
Individually programmable alarm inputs	10
Alarm retard input	1
Outputs	
Individually programmable alarm outputs per input, 24Vdc/0.5A	10
Error relay 24Vdc/0.5A (dialler)	1
Siren output 12Vdc/0.5A	1
Options	
Key switch	✓
Communication via RS-485 PCB	✓

## Sirene

with optical alarm

To ensure that the alarm is always heard, this tight and waterproof siren with its sound level between 117dB and 127dB and flashing light signal generates highly noticeable alarm signals. The AL-10 enables you to deviate from the default siren pattern and set a pattern of your own preference. This controller also has a night-time siren setting, where the siren will not be activated during the nighttime period as programmed by you. Of course, the dialler will then still relay the signal to your phone.



## FarmRemote (optional)

The remote control feature of the AL-10 enables you to read the current data of your animal house remotely using your smartphone, tablet or PC. You can even operate the AL-10 from the comfort of your armchair. The Stienen WEB-SEC interface guarantees a secure connection.



## FarmConnect (optional)

The FarmConnect farm software collects all current and historical data of all control computers on your farm, combines this data, and then presents it in clear overviews, graphs and tables. FarmConnect gives you access to your farm data. Wherever you are, you are always connected to your company so that you can intervene immediately if necessary.

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## AM/AS

### ALARM PANELS

Contact alarm with or without memory

- Available with various alarm inputs
- Alarm contacts can be operated separately
- Active input clearly visible
- Standard with internal battery for constant contact monitoring
- Easy to use





## AM alarm panel

easy to use and transparent panel with memory

The AM-6 enables six contacts (e.g. control devices, line voltage pilots or thermostats) to be monitored independently of each other. All inputs can be switched on or off as you wish. The corresponding signal LEDs indicate the current status:

- Led off: alarm contact is inactive
- Led on: there is/was an alarm
- Led is blinking: alarm contact switched off

The AM-6 has a memory function so if the reason for the alarm is solved without your intervention, you can still see which contact was affected. This makes it easy to trace malfunctions that occur repeatedly. The internal battery is tested automatically every day, guaranteeing constant monitoring.

## AS alarm panel

easy to use and transparent panel with 1, 12 or 18 contacts

Easy to use and highly efficient at the same time. Three different alarm panels are available as part of this series. The front panel is designed such that it is easy to understand and you can see at a glance where an alarm has occurred. All inputs can be switched on or off as you wish. The test button can be used to test the attached siren. If the mains voltage is down, the internal battery will activate the alarm.

## Technical specifications AM / AS

General	AM	AS-1	AS-12	AS-18
Supply voltage	230Vac - 50/60Hz	230Vac - 50/60Hz	230Vac - 50/60Hz	230Vac - 50/60Hz
Connected load	15VA	15VA	15VA	15VA
Protection class	IP 54	IP 54	IP 54	IP 54
ABS housing	✓	✓	✓	✓
Dimensions	170x216x120	170x216x120	216x275x130	216x275x130
<b>Inputs and outputs</b>				
Contact inputs	6	1	12	18
Error relay 24Vac/2A	1	1	1	1
Siren output 12Vdc /0.5A	1	1	1	1
<b>Functionalities</b>				
Internal memory	✓	-	-	-
Permanent battery monitoring	✓	-	-	-

## Siren

with optical signal

To ensure that the alarm is always heard, this tight and waterproof siren with its sound level between 117dB and 127dB and flashing light signal generates highly noticeable alarm signals.



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## ASU series

Constant and independent house temperature monitoring

- Independent alarm system for maximum safety
- Can be applied in 4, 10, or 16 zones
- Alarm functions can be expanded by means of contact inputs
- Easy to understand lay-out so that you can see at a glance which zone triggers the alarm
- Temperature compensation
- Features a selector switch to activate the alarm siren and/or telephone dialler in the event of an alarm
- Permanent battery monitoring
- Simple operation



## ASU serie

ensures permanent temperature monitoring

The alarm systems in the ASU series independently monitor the house temperature. Separate temperature sensors ensure constant house climate registration and the system activates the alarm if any set limits are exceeded. The alarm system also features contact inputs to monitor external functions and factors such as the climate control system or door contacts. The easy-to-understand panel lay-out of the ASU series shows you at a glance which alarm zone has been triggered and whether it is a temperature alarm or an external alarm. The integrated temperature compensation prevents any unnecessary alerts in the event of high outside temperatures. The Stienen alarm systems are powered by their own batteries that feature an intelligent drip charging system with temperature compensation. This is monitored permanently. All these features allow the ASU series to guarantee maximum reliability at your farm at all times.

## Technical specifications

General	ASU-4	ASU-10	ASU-16
Supply voltage	230Vac - 50/60Hz	230Vac - 50/60Hz	230Vac - 50/60Hz
Load	15VA	15VA	15VA
Protection category	IP-54	IP-54	IP-54
ABS housing	✓	✓	✓
Min. ambient temp.	-5°C	-5°C	-5°C
Max. ambient temp.	40°C	40°C	40°C
<b>Inputs and outputs</b>			
Outside temperature sensors	2	2	2
Siren output, 12Vdc/0.5A	1	1	1
Alarm contacts for dialler	2	2	2
Temperature sensors	4	10	16
Contact inputs	4	10	16
Dimensions	280x220x120mm	370x285x145mm	370x285x145mm

## ALSIR

Siren with optical alarm

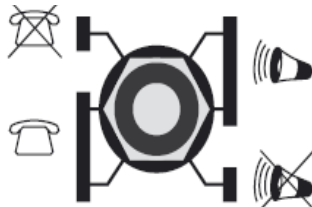
To ensure that the alarm is always heard, this siren with its sound level of 122±5dB and flashing light signal generates highly noticeable alarm signals. The siren is dust tight and waterproof.



## Frontswitch

for easy operation

The front switch makes it easy for you to set how you would you like to be alerted in the event of an alarm. You can activate and/or deactivate both the dialler and the siren independently of each other.



## Temperature sensor

NB10



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## Matrix

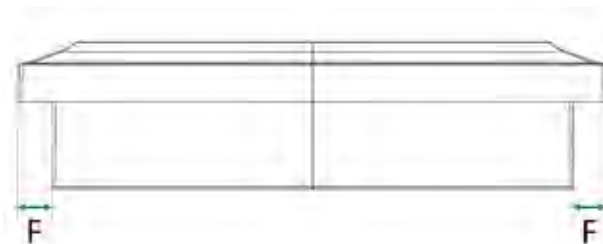
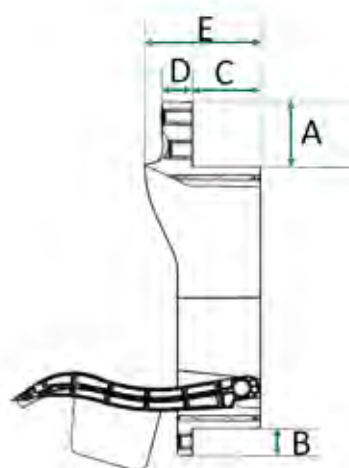
Type	Layers	Cut-out (mm) *		Rear view (mm)		Front view (mm)		Air flow (m <sup>3</sup> /h)				Force Kg
		Width	Height	Width	Height	Width	Height	10 Pa	20 Pa	30 Pa	40 Pa	
AW1-16 C	1	617	390	610	385	690	520	1,600	2,200	2,700	3,100	5
AW1-24 C	1	902	390	895	385	975	520	2,400	3,400	4,100	4,800	6
AW1-32 C **	1	1187	390	1180	385	1260	520	3,200	4,500	5,500	6,400	7
TAW2-48	2	902	745	895	740	975	875	4,800	6,700	8,300	9,500	12
TAW2-64	2	1187	745	1180	740	1260	875	6,400	9,100	11,100	12,800	14
TAW3-72	3	902	1100	895	1095	975	1230	7,200	10,100	12,400	14,300	18
TAW3-96	3	1187	1100	1180	1095	1260	1230	9,600	13,600	16,600	19,200	21
TAW3-120	3	1472	1100	1465	1095	1545	1230	12,000	17,000	20,900	24,100	24
TAW4-95	4	902	1455	895	1450	975	1585	9,500	13,500	16,500	19,100	24
TAW4-128	4	1187	1455	1180	1450	1260	1585	12,800	18,100	22,200	25,600	28
TAW4-161	4	1472	1455	1465	1450	1545	1585	16,100	22,700	27,800	32,100	32
TAW5-119	5	902	1810	895	1805	975	1940	11,900	16,900	20,700	23,900	30
TAW5-160	5	1187	1810	1180	1805	1260	1940	16,000	22,600	27,700	32,000	35
TAW5-201	5	1472	1810	1465	1805	1545	1940	20,100	28,400	34,800	40,200	40

\* With the recess dimensions any tolerance variations in width or height have been taken into account.

\*\* As standard, the AW1-32 C has been equipped with 2 brackets.

### Standard dimensions

A	95 mm
B	40 mm
C	100 mm
D	45 mm
E	170 mm
F	40 mm



## Matrix I-O overview

	Inputs					Outputs							AQC		Communication					
	10K NTC sensors	0-10Volt input	Digital input	Potentiometer feedback	Power supply 0-10V sensor(s)	0-10Volt output	230V 2A relays out	24Vac 2Amp. Alarm relays	Output 35Vdc 30mA opt.	Output 230V/24Vac solid state	Open/Close motor/valve contr	6Amp out 30-230V	12Amp out 30-230V	AQC 24Vdc	AQC manufactured $\geq 2010$	RS-485	Module-Bus	FN-Bus	ME-54W meteostation	PL-Meteostation
CBA-2000	3		1			3	2	1						4	Yes	No	No	No	No	No
CBA-2006	3		1			2	2	1			1			4	Yes	No	No	No	No	No
CBA-2012	3		1			2	2	1				1		4	Yes	No	No	No	No	No
CB-3000	4(6)	2(0)	1		Yes	5	3	1						4	Yes	No	No	No	No	No
ECB-4 <i>option CB-3000</i>		2					4								No	No	No	No	No	No
CL-5400	5	4	3		Yes	5	9	1						2	Yes	Yes	No	Yes	Yes	Yes
KL-6001-6	4	1	1			2		1		2	1			4	Yes	Yes	No	No	No	No
KL-6001-12	4	1	1			2		1		2		1		4	Yes	Yes	No	No	No	No
KL-64															No	Yes	No	No	No	No
KL-6401	4	1	1			3		1		2				4	Yes	Yes	No	No	No	No
RKL-4 <i>Option KL-6401</i>							4								No	No	No	No	No	No
KL-6402	12	4				12		1						4	Yes	Yes	No	No	No	No
KL-6405	12	5*				12		1						5	Yes	Yes	No	No	No	No
KL-6410	12	10*				22	12	1						10	Yes	Yes	No	No	No	No
KL-6405-Input <i>Opt.LL-6405/10</i>	5	5			Yes	5									No	No	No	No	No	No
KFV-6400	10	4	5		Yes	8	7	1						2	Yes	No	No	No	No	Yes
KFM-6400			6				6	1	2						Yes	Yes	Yes			
KL-6500								1							Yes					
KLC-100	2	2			Yes	3	6	1							Yes					
KLD-100	3					3	2	1						2	Yes					
PL-9000	5	4	3		Yes	5	9	1						2	Yes	Yes	No	No	No	Yes
PL-9400	10	4	5		Yes	8	7	1						1	Yes	No	No	No	No	Yes
PL-9500	10	4	5		Yes	8	7	1						1	Yes	No	No	No	No	Yes
PFA-9400			3				6	1	3						Yes	Yes	Yes	No	No	No
PFS-16			3				6	1	3						Yes	Yes	Yes	No	No	No
PFV-9400								1							Yes	Yes	Yes			
PFV-9412			3				6	1	3						Yes	Yes	Yes	No	No	No
PSW-16								1							Yes	Yes	Yes	No	No	No
PEC-9200								1							Yes	Yes	Yes	No	No	No
PW-8															Yes	No	No	No	No	No
CLK-20	5	4	3		Yes	5	9	1						2	Yes	Yes	No	No	No	Yes
DLOG-20	5	5	10					1							Yes	Yes	No	No	No	No
DLOG-40	10	10	20					1							Yes	Yes	No	No	No	No
DINP-10K	10														No	Yes	No	No	No	No
DINP-10L		10			Yes										No	Yes	No	No	No	No
DINP-16M			16												No	Yes	No	No	No	No
DINP-20MM			20												No	Yes	No	No	No	No
DOUT-5C-i								5							No	Yes	No	No	No	No
PL-9200 METEO															No	Yes	No	No	No	No
RTO-10-EXT			5			10	2								No	Yes	No	No	No	No
DIN/OUT-i	5	1	4		Yes	4	6								No	Yes	No	No	No	No
DIN/OUT-12-i	5	1	4		Yes	4	6					1			No	Yes	No	No	No	No

\*12V power supply or 0-10V input





## Matrix SGS fans

### Air output of SGS fans as m<sup>3</sup>/h

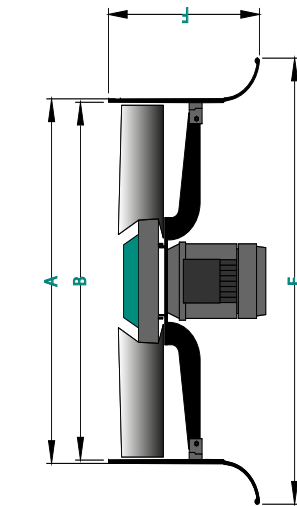
Part. Nr.	Type	RPM	30 Pa	40Pa	50Pa	60Pa	75Pa	100Pa	125Pa	150Pa	175Pa	200Pa	Watt	I-max.
36.40.00	SGS-71T-A4X	900	16.090	15.990	15.550	15.130	14.810	13.950	x	x	x	x	750	2,3
36.40.01	SGS-82T-A2A	900	18.550	18.120	17.230	15.130	15.130	13.410	x	x	x	x	750	2,3
36.40.02	SGS-82T-B4A	900	20.150	19.990	19.830	18.980	18.550	17.270	x	x	x	x	1100	3,3
36.40.03	SGS-82T-C4D	900	25.080	24.860	24.330	24.010	23.900	22.830	22.400	x	x	x	1500	4,0
36.40.04	SGS-82T-C4E	900	23.150	22.610	22.510	22.290	21.970	21.550	20.690	19.830	17.266	x	1500	4,0
36.40.05	SGS-92T-B2K	900	28.070	27.000	26.250	25.720	24.110	21.120	x	x	x	x	1100	3,3
36.40.06	SGS-92T-B4L	900	24.860	24.110	23.580	22.830	22.610	21.150	x	x	x	x	1100	3,3
36.40.07	SGS-92T-C4R	900	28.210	27.970	27.430	26.840	26.500	25.820	x	x	x	x	1500	4,0
36.40.08	SGS-92T-D4S	900	33.230	32.730	32.250	31.820	31.390	30.100	28.390	27.540	25.820	24.970	2200	6,0

### Danfoss frequency converter IP55

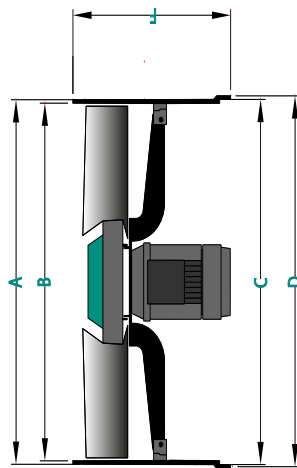
Part. Nr.	Type	kW	Amp.
50.24.06	FC-102-P1K1	1,1	3,0
50.24.07	FC-102-P1K5	1,5	4,1
50.24.08	FC-102-P2K2	2,2	5,6
50.24.09	FC-102-P3K0	3,0	7,2
50.24.10	FC-102-P4K0	4,0	10,0
50.24.11	FC-102-P5K5	5,5	13,0
50.24.12	FC-102-P7K5	7,5	16,0
50.24.13	FC-102-P11K	11,0	24,0
50.24.14	FC-102-P15K	15,0	32,0
50.24.15	FC-102-P18K	18,5	37,5
50.24.16	FC-102-P22K	22,0	44,0

### Dimensions of SGS fans in mm

Type SGS Fan	A	B	C	D	E	F
SGS-71T-VAR	729	716	730	747	-	430
SGS-71T	729	716	-	-	872	412
SGS-82T-VAR	818	802	818	835	-	430
SGS-82T	818	802	-	-	1000	412
SGS-92T-VAR	930	920	931	947	-	430
SGS-92T	930	920	-	-	1116	412



SGS 71T - 82T - 92T



SGS 71T VAR - 82T VAR - 92T VAR

# Multifan fans

## Multifan Axial Fans 230V

Part. Nr.	Type	RPM	30 Pa	40Pa	50Pa	70Pa	80Pa	100Pa	Watt	I-nom	I-max	Min. AQC
36.70.41	4E30	1400	2.140		1.870				104	0,5	0,6	95
36.70.43	4E35	1400	3.200		2.910				170	0,9	1,1	134
36.70.45	4E40	1400	3.480		4.030				237	1,1	1,3	175
36.70.47	4E45	1400	5.860		5.400		4.460		317	1,6	1,9	220
36.70.49	4E50	1400	7.610		7.080		6.110	5.540	443	2,0	2,4	280
36.70.51	6E56	900	8.980		8.200		6.400		530	2,4	2,9	350
36.70.53	6E63	900	10.920		10.100		8.520		600	3,0	3,6	435
36.70.55	6E71	900	11.900		11.080		9.550	9.750	630	3,0	3,6	565
36.70.57	6E82	900	13.040	12.294	11.551	9.999	9.001	7.418	592	2,5	2,8	730
36.70.59	6E92	900	18.400		16.500				790	4,0	4,8	940

## Multifan Axial Fans 400V

Part. Nr.	Type	RPM	30 Pa	40Pa	50 Pa	70Pa	80Pa	100Pa	Watt	I-nom	I-max	Min. AQC
36.70.61	4D30	1400	2.050		1.810				94	0,3	0,3	95
36.70.63	4D35	1400	3.280		2.880				169	0,5	0,6	134
36.70.65	4D40	1400	4.380		4.040		3.500		225	0,6	0,7	175
36.70.67	4D45	1400	5.850		5.390		4.610		299	0,7	0,8	220
36.70.69	4D50	1400	7.630		7.160		6.280		414	1,1	1,2	280
36.70.71	6D56	1400	7.450		6.500				310	1,2	1,3	350
36.70.73	6D63	900	10.560		9.620		7.740		520	1,3	1,6	435
36.70.75	6D71	900	15.050		13.930		11.930	9.980	920	2	2,2	565
36.70.77	6D82	900	20.723	19.453	18.088	14.969	13.061	8.443	945	1,9	2	730
36.70.79	6D92	900	22.300		20.400		17.000		1080	2,6	3,2	940

## Multifan End Wall Fan 230/400V 50Hz

Part. Nr.	Type	RPM	20 Pa	40Pa	60Pa				Watt	I-nom	I-max
35.40.25	MF-130	450	41.370	37.030	30.940				1.650	5.4 / 3.1	5.9 / 3.4

## AQC-G

Ø	Min.	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0
30	95	1.526	1.653	1.780	1.908	2.035	2.162	2.289	2.416	2.543	2.671	2.798
35	134	2.077	2.250	2.423	2.596	2.769	2.943	3.116	3.289	3.462	3.635	3.808
40	175	2.713	2.939	3.165	3.391	3.617	3.843	4.069	4.296	4.522	4.748	4.974
45	220	3.434	3.720	4.006	4.292	4.578	4.864	5.150	5.436	5.723	6.009	6.295
50	280	4.239	4.592	4.946	5.299	5.652	6.005	6.359	6.712	7.065	7.418	7.772
56	350	5.317	5.760	6.204	6.647	7.090	7.533	7.976	8.419	8.862	9.305	9.749
63	435	6.730	7.291	7.851	8.412	8.973	9.534	10.095	10.656	11.216	11.777	12.338
71	565	8.548	9.260	9.972	10.684	11.397	12.109	12.821	13.534	14.246	14.958	15.670
82	730	11.401	12.351	13.301	14.252	15.202	16.152	17.102	18.052	19.002	19.952	20.902
92	940	14.352	15.548	16.744	17.939	19.135	20.331	21.527	22.723	23.919	25.115	26.311