

Supply air unit VEKA

Technical data 2009



FläktWoods

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Description of the unit



VEKA is an air treatment unit with a low overall height and offers the right solution when the installation space is limited. VEKA is available in two sizes.

VEKA can be supplied with the following combinations of components installed inside the casing:

- Filter + fan
- Filter + air heater/cooler + fan
- Filter + air heater + air cooler + fan

A sound attenuator and an electrical heater are installed in the duct .

Execution

The casing is made of white galvanized sheet steel, with 25 mm mineral wool insulation sandwiched in between.

The outer casing of VEKA is completely white. Thanks to its decorative appearance, VEKA can also be positioned in a visible place. The handles are recessed, which gives the unit a completely smooth surface without any projecting parts that can get in the way. VEKA has large service hatches equipped with locking handles that can be opened with tools.

The principal components in VEKA are fitted in the casing at the factory, which reduces the on-site installation work and gives a compact design.

VEKA is hygienic and easy to clean thanks to its smooth inside.

External dimensions

VEKA is a compact unit with small external dimensions. The height is only 355 mm, and the combi-

nation of a filter + air heater + fan is only 1000 mm long. Thanks to the small dimensions, VEKA is easily positioned in practically any desired location, e.g. above a false ceiling.

Alternative installation

VEKA is normally installed by suspending it from a ceiling. The unit is arranged so that the service hatches open downwards. Therefore no service space is required next to the unit. Suspension eyes are supplied for use in installation. VEKA can also be installed on a wall with a horizontal or vertical air direction.

Applications

VEKA is an appropriate supply air unit for the ventilation of business premises, cafés, fast-food stands, kiosks, service stations or similar premises which lack the space for an integral ventilation unit.

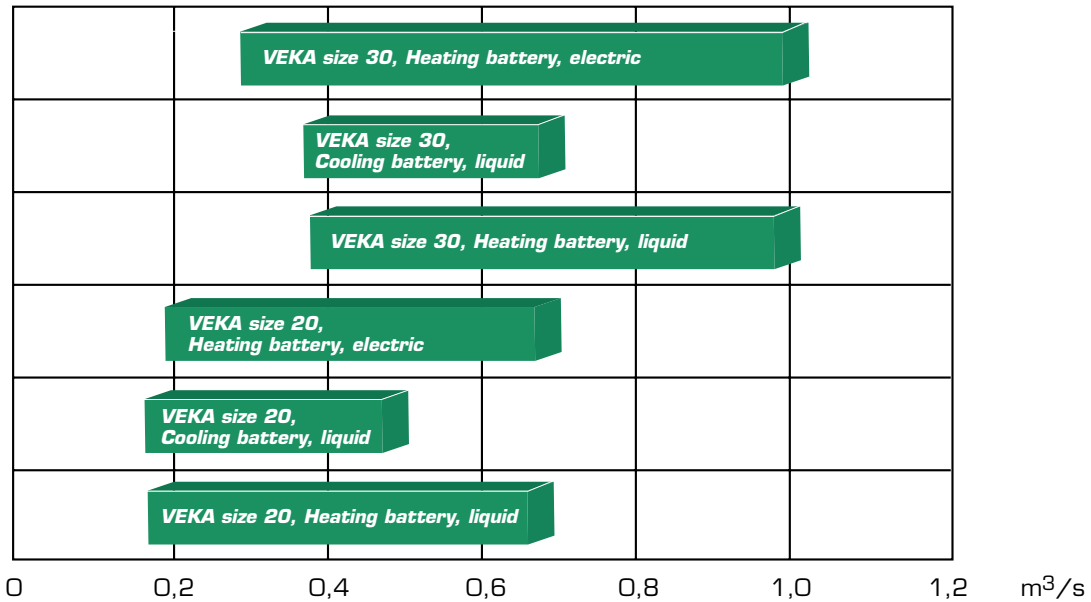
VEKA is particularly suitable as a circulation unit, for heating large porches and as a curtain unit in door openings.

Electrical, control and regulation equipment

VEKA has integrated control equipment for 1-phase connection, which makes VEKA a complete and functional supply air unit with the additional ability to control an exhaust air fan. VEKA can also be ordered with more advanced control equipment that has the same functions as the integrated control and regulation equipment, but also has communication facilities and can be connected to a 3-phase supply. The VEKA unit can also be ordered without a control equipment.

Technical data, quick selection

Flow range



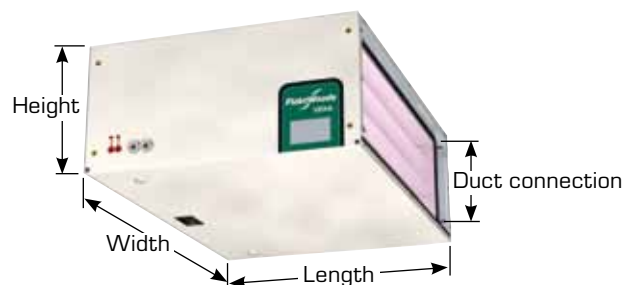
Dimensions and weight

Size	Variant (bb)	Width	Height	Length	Weight	Duct connection
20	Fan + short filter (bb=12)	750	355	500	50	600x250
	Fan + long filter (bb=13)	750	355	750	55	600x250
	Fan, heating or cooling battery + long filter (bb=14)	750	355	1000	70	600x250
	Fan, heating battery, cooling battery + long filter (bb=15)	750	355	1250	80	600x250
30	Fan + short filter (bb=12)	1050	355	500	65	900x250
	Fan + long filter (bb=13)	1050	355	750	70	900x250
	Fan, heating or cooling battery + long filter (bb=14)	1050	355	1000	85	900x250
	Fan, heating battery, cooling battery + long filter (bb=15)	1050	355	1250	100	900x250

Dimensional drawing size 20



Dimensional drawing size 30



Components

Fan

The fan is a direct driven radial fan with forward-curved blades. Its air flow and pressure increase are regulated by controlling the fan speed. It is insulated from the unit casing with a vibration damper and is equipped with a sensor for air flow measurement. The measurement sockets are connected to nipples on the outside of the casing.

Accompanying the unit are air distributors that are easily installed on the fan outlets for subsequent functions such as a sound attenuator and electrical heater. Air flow indicator VEKZ-27, which can be mounted on the unit, is available as an accessory. With the help of the air flow indicator, the air flow of the system can be readily checked in conjunction with commissioning.

Air heater and air cooler for water

Finned heat exchangers with Cu tubes and Al fins are used as an air heater and air cooler. The air heaters are available with 2-tube or 3-tube rows. The frost protection sensors of the air heaters can be installed in a finned tube. The air coolers are available with 4-tube rows and are provided with a stainless steel condensation water trough with an outlet on the inspection side.

A unit with an air cooler may only be mounted horizontally and with the service hatches facing downwards.

Transition piece, VEKZ-53

Used for duct connection and installed, for example, on a duct heater. It has a PG-connection at one end and a flange at the other.

Cut-off damper for duct installation, VEVA

The rectangular cut-off damper for duct installation directly to the inlet of the unit is made of galvanized steel sheet and can be provided with an attached on/off actuator with spring-assisted return. The damper has a connection frame for a guide and is mounted directly on the unit. The damper blades are connected via external toothed wheels made of PP plastic.



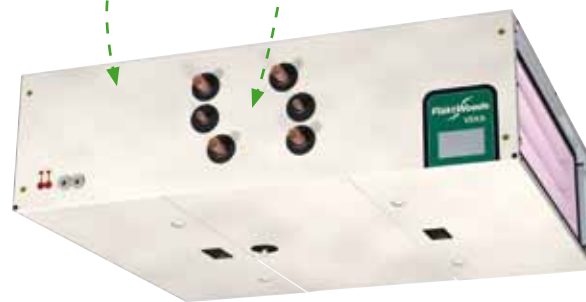
Electrical duct heater, VEEK

The electrical heater is installed in a duct and has its own control cabinet for temperature regulation. The electrical heater is equipped with automatic and manual overheating protection.



Duct sound attenuator, VELD

The duct sound attenuator is of the baffle type with a surface coating of Cleantec to prevent fibres from being carried along. The sound attenuator can be used on both the suction and the pressure side.



Flexible sleeve, VEKZ-51

Flexible sleeve of fibreglass fabric for flexible connection of ducts.

Filter

VEKA is provided with a bag filter that is available in two lengths. Good sealing around the filter is achieved with a clamping device, which presses the filter frame against a soft rubber gasket.



Counter-flange, VEKZ-52

Used to mount a duct directly on the unit's inlet.

Technical data, size 20

Fan and short filter
(bb=12)



Dimensions and weight

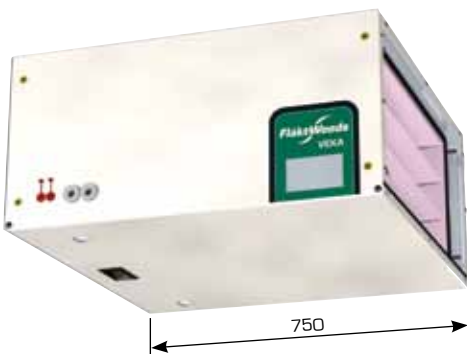
bb	Weight unit	Filter type (mm)	Filter length (mm)
12	50	287 x 592	120
13	55	287 x 592	360
14	70	287 x 592	360
15	80	287 x 592	360

Electrical data

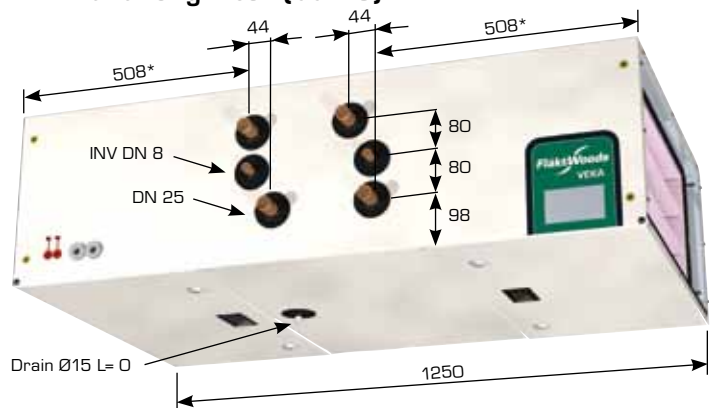
Size 20	Recommended fuses	Supply
Without control equipment	10 A	230/400 V
Integrated control equipment	16 A	1 x 230 V
Separate control cabinet	16 A*	3 x 400 V
Frequency changer	16 A (0,75 kW) 25 A (1,5 kW)	1 x 230 V

* Without exhaust air fan 10 A

Fan and long filter
(bb=13)

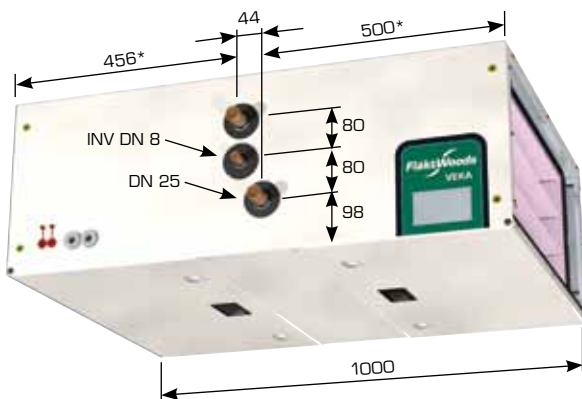


Fan, heating battery, cooling battery and long filter (bb=15)



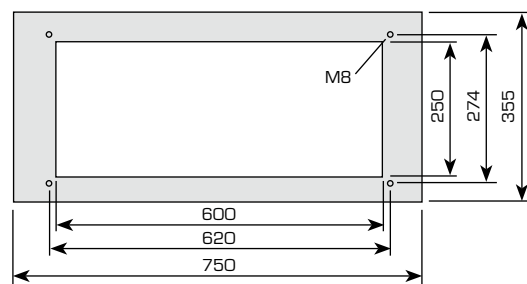
* Viewed in direction of air flow

Fan, heating or cooling battery and long filter (bb=14)



* Viewed in direction of air flow

Connection dimensions, inlet and outlet



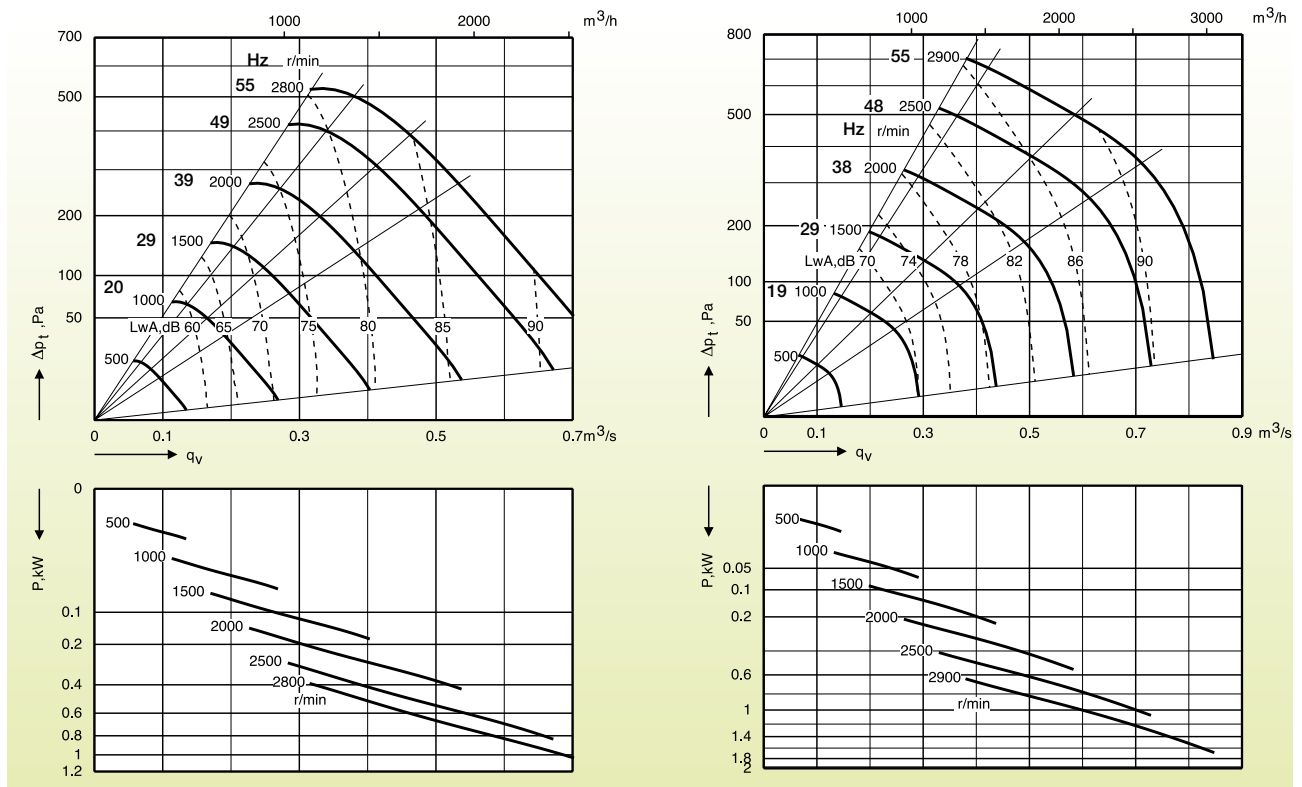
Technical data, size 20

Fan graph

The graph is intended to provide an overview. Exact data can be found in our unit selection program, ACON. The graph shows the available external pressure drop for the duct system.

Pressure drop through the filter and any coils must be added to the external pressure drop. The indicated weighted sound power levels in dB(A) are applicable in a duct on the outlet side of the fan.

Size 20 with 3-phase motor



C= 4 motor: 0.75 kW, 2-pole, 230/400 V, 3-phase, 50 Hz 3.65 / 2.10 A, recommended fuse 10 A

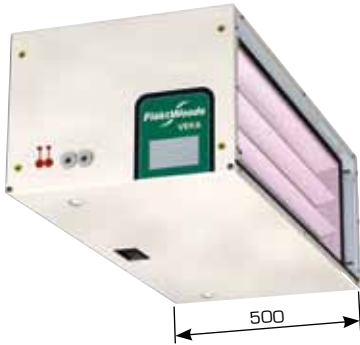
C= 5 motor: 1.5 kW, 2-pole, 230/400 V, 3-phase, 50 Hz 6.25 / 3.6 A, recommended fuse 10 A

The speed of the fans can be controlled with a frequency changer.

Δpt = total pressure increase of the fan, excluding outlet loss

Technical data, size 30

Fan and short filter
(bb=12)



Dimensions and weight

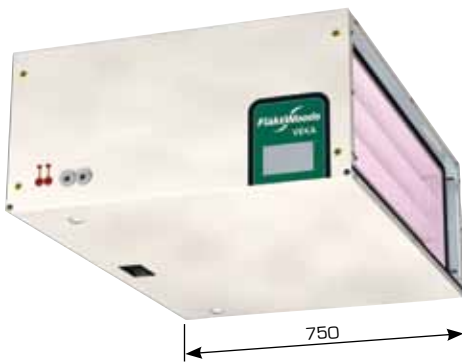
bb	Weight unit	Filter type (mm)	Filter length (mm)
12	65	287 x 892	120
13	70	287 x 892	360
14	85	287 x 892	360
15	100	287 x 892	360

Electrical data

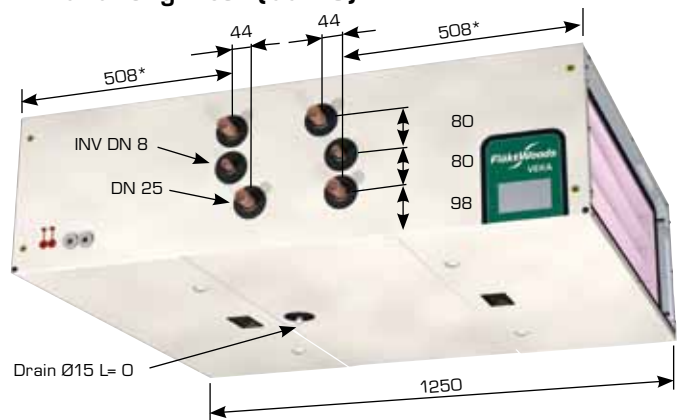
Size 30	Recommended fuses	Supply
Without control equipment	10 A	230/400 V
Integrated control equipment	16 A	1 x 230 V
Separate control cabinet	16 A*	3 x 400 V
Frequency changer	16 A (0,75 kW) 25 A (1,5 kW)	1 x 230 V

* Without exhaust air fan 10 A

Fan and long filter
(bb=13)

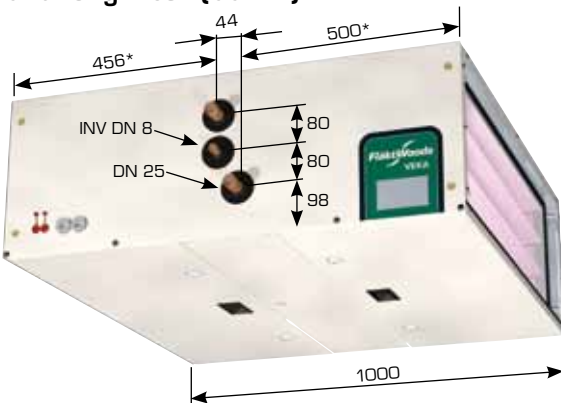


Fan, heating battery, cooling battery and long filter (bb=15)



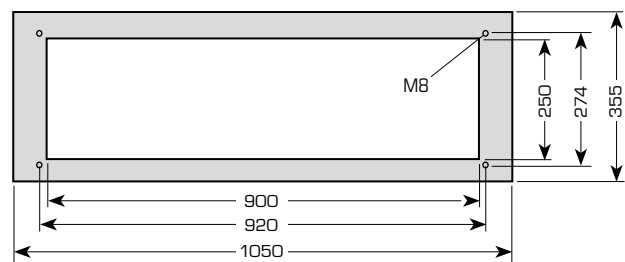
* Viewed in direction of air flow

Fan, heating or cooling battery and long filter (bb=14)



* Viewed in direction of air flow

Connection dimensions, inlet and outlet



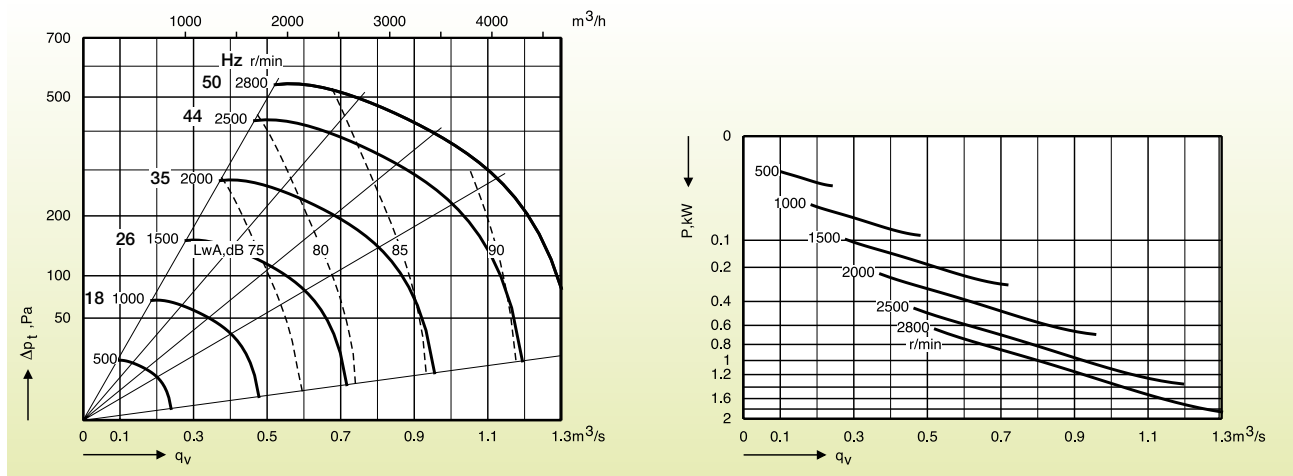
Technical data, 30

Fan graph

The graph is intended to provide an overview. Exact data can be found in our unit selection program, ACON. The graph shows the available external pressure drop for the duct system.

Pressure drop through the filter and any coils must be added to the external pressure drop. The indicated weighted sound power levels in dB(A) are applicable in a duct on the outlet side of the fan.

Size 30 with 3-phase motor

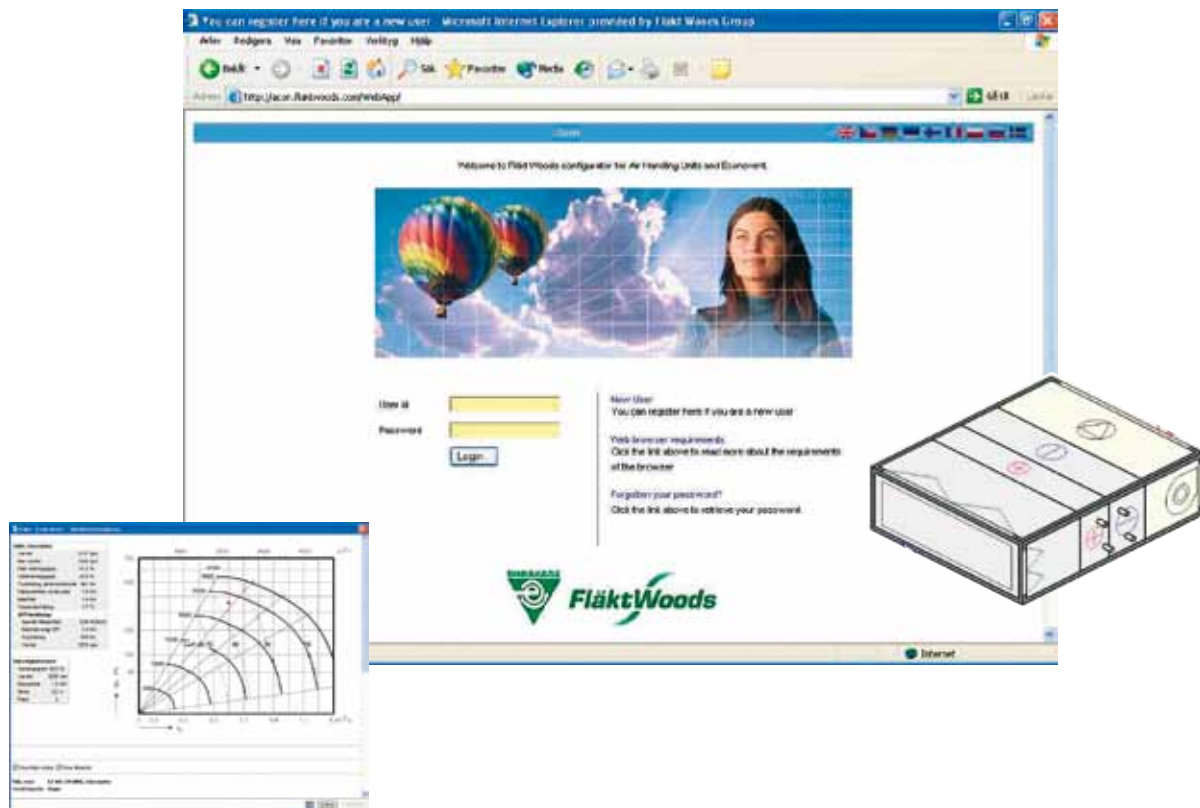


C=6 motor: 1.5 kW, 2-pole, 230/400 V, 3-phase, 50 Hz
5.8 / 3.7 A, recommended fuse 10 A

The speed of the fans can be controlled with a frequency changer.

Δpt = total pressure increase of the fan, excluding outlet loss

Technical data, dimensioning



Dimensioning of unit via the web

Air handling configuration – ACON is the name of the new generation web based product selection program.

VEKA is dimensioned rapidly and easily with ACON. The program gives a unit specification and all facts such as dimensions, efficiencies, sound levels, etc. The program also provides product-specific documentation relating to installation, mounting and care.

- Always the latest version of the software
- No installation required
- Always available on the Internet
- Fan curve with operating points, etc.
- Unit drawing can be exported to CAD
- Current delivery dates from the ordering function.

In order to access the program, you will need a user-ID and a password. You can obtain these by contacting our nearest sales office. Visit our web site, www.flaktwoods.se to locate your nearest sales office.

Control and regulation equipment for VEKA

There are three alternatives for control and regulation equipment for VEKA.

VEKA size 20 and 30

with integrated control equipment
STVE (ii = 11)



Supply
1 x 230 V
Recommended fuse
16 A

1. Integrated control equipment

The frequency exchanger for VEKA and the control unit are installed and connected at the factory.

A separate control panel is connected to the control centre and can be placed in any suitable position.

The control centre is supplied with 1 x 230 V C, 16 A. The unit must be equipped with an external load interrupter, which can interrupt the power supply to the entire unit.

VEKA size 20 and 30

with a separate control cabinet
STVE (ii = 86)



Supply
3 x 400 V
Recommended fuse without
exhaust air fan 10 A,
with exhaust air fan 16 A

2. Separate control cabinet

A separate control cabinet contains the frequency exchanger for VEKA, the control unit and the control panel. The supply for the exhaust air fan is 3 x 400 V AC, 10 A. The control cabinet is supplied with 3 x 400 V AC, 16 A.

VEKA size 20 and 30

with a separate frequency changer,
e.g. STRF



Supply
1 x 230 V
Recommended fuse
16 A (0,75 kW) / 25 A (1,5 kW)

3. Separate frequency exchanger

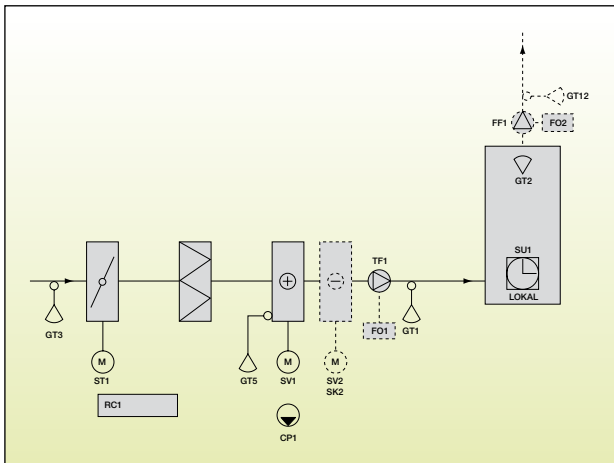
A separate frequency exchanger for VEKA can be supplied if no control unit is ordered. The frequency exchanger is supplied with 1 x 230 V AC, 16 A.

Control and regulation equipment

Comparison between integrated and separate control equipment

	Integrated control equipment	Separate control cabinet
Regulator	Built into the unit	Mounted on control cabinet
Control panel/ display	Separate, max 50 m cable	Mounted on control cabinet front
Supply	1x230VAC	3x400VAC
Fuse	16A	16 A, only for 10 A exhaust air fan
Enclosure class	IP54	IP21
Main switch	Required separately	Included in control cabinet
Frequency exchanger	Built into the unit	Included in control cabinet
Control for pumps	Max 2x2 A, 1x230VAC	max 2x10 A, 1x230VAC
Exhaust air fan control	0-10V control, supply and fused separately STYZ-50	Low/high speed control, 3 x 400 VAC, max 10 A

Control and regulation – Functional variants

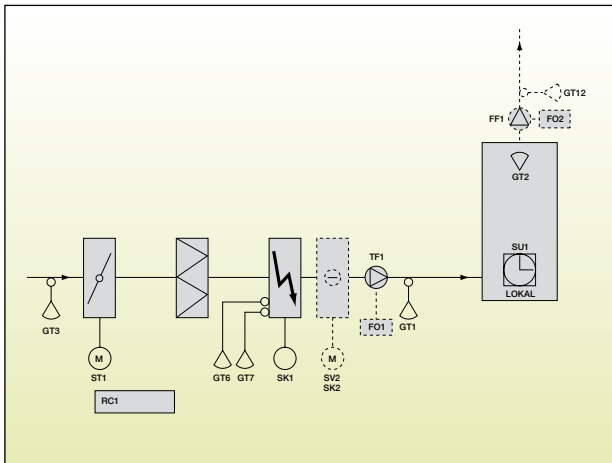


List of components

RC1	Control unit
TF1	Supply air fan
FF1	Exhaust air fan
FO1/FO2	Frequency exchanger
GT1	Temperature sensor, supply air
GT2	Temperature sensor, room
GT3	Temperature sensor, outdoor air
GT12	Temperature sensor, exhaust air
SV1	Valve actuator, hot water
GT5	Frost protection sensor, air heater
ST1	Damper actuator, outdoor air
SV2/SK2	Valve actuator cold/step controller cold
SU1	Timer

Control and regulation equipment

Comparison between integrated and separate control equipment



List of components

RC1	Control unit
TF1	Supply air fan
FF1	Exhaust air fan
FO1/FO2	Frequency exchanger
GT1	Temperature sensor, supply air
GT2	Temperature sensor, room
GT3	Temperature sensor, outdoor air
GT12	Temperature sensor, exhaust air
GT6	Overheating protection, automatic
GT7	Overheating protection, manual
SK1	Thyristor control device
ST1	Damper actuator, outdoor air
SU1	Timer

Technical data

Standards

The control and regulation equipment meets the following standards and regulations:

EC Machinery Directive 98/37/EC, machinery electrical equipment, EN 60204-1.

EMC Directive 89/336/EEC, EN 61800-3 (emission) EN6100-6-3:2001 and immunity EN61000-6-2:2001

Environmental requirements

Ambient temperature during operation: 0-40°C when the control equipment is built in.

Ambient temperature during operation: 0-35°C for separate control cabinet.

Accessories such as the sensors, valve and damper motors are supplied loose.

The insulation and function of regulation equipment is tested before delivery.

Regulation functions:	Integrated control equipment	Separate control cabinet
Supply air, exhaust air and room regulation	Yes	Yes
24-hour/weekly clock	Yes	Yes
Min and max limit of supply air temperature	Yes	Yes
Outdoor temperature compensation	Yes	Yes
Outdoor temperature-controlled fan speed	Yes	Yes
Circulation pump control and supply	Yes	Yes
Electrical or waterborne air heater	Yes	Yes
Control of water cooler	Yes	Yes
Control of DX cooler	No	Yes
External reference value	No	Yes
Timer input	Yes	Yes
Night-time cooling	No	Yes
Night-time heating	No	Yes
Freezing monitor function	Yes	Yes
Buzzer alarm	Yes	Yes
Operating mode indicator	Yes	Yes
Filter monitor	Yes (not with external stop)	Yes
External stop for the unit	Yes (not with filter monitor)	Yes
Fire/smoke alarm input	Yes	Yes
Communication:	No	Lon, Modbus, Web

Control and regulation equipment

Speed regulation built-in control equipment

A constant speed for the supply air fan and the exhaust air fan is set on the control panel. Two speeds for each fan permit switching of the fan speed with a clock, timer, presence sensor or via pre-set security regulation.

The exhaust air fan is controlled via a 0-10V signal. If the exhaust air fan has a single-speed or a two-speed motor, the electrical control unit STYZ-50 can be ordered separately. This receives 0-10V signal and controls the motor relay switches.

Speed regulation separate control cabinet

High or low speed are set on the frequency changer of the supply air fan. Two speeds for each fan permit switching of the fan speed with a clock, timer, presence sensor or via a preset security regulation.

The control centre gives a signal to the exhaust air fan's frequency exchanger in order to change between high and low speed.

Temperature regulation

The following options are available for control and regulation functions:

Supply air regulation

Function: Maintaining the temperature in the supply air duct constant at the set reference value.

Exhaust air regulation

Function: Maintaining the temperature in the exhaust air constant at the set reference value via cascade regulation of the supply air temperature with a minimum and maximum limit.

Room regulation

Function: Maintaining the temperature in the premises constant at the set reference value via cascade regulation of the supply air temperature with a minimum and maximum limit.

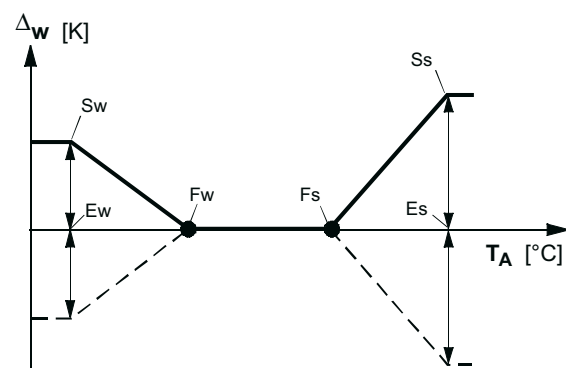
Outdoor temperature-controlled fan speed

One simple way of avoiding cooling of premises is to prevent forcing of the fans when the outdoor temperature falls below an adjustable value.

Setting: Set the breaking point for the outdoor temperature on the control centre.

Outdoor temperature compensation (summer and winter compensation)

Function: Shifts the set reference value for the supply air, exhaust air or room temperature.



Key

F_s	Starting point for summer compensation
E_s	Finishing point for summer compensation
S_s	Delta (total shift) in K at finishing point E_s
F_w	Starting point for winter compensation
E_w	Finishing point for winter compensation
S_w	Delta (total shift) in K at finishing point E_w
T_A	Outdoor temperature
D_w	Reference value change

Night-time cooling (only separate control cabinet)

The night-time cooling setting is used during the summer half of the year. Cold outdoor air can then be used to cool down the premises at night. Uses outside ordinary operating times.

Function: Starts the unit if cooling is required when the outdoor temperature is lower than the room temperature. The cooling valve, if present, is closed.

Control and regulation equipment

Night-time heating (only separate control cabinet)

Night-time heating is used to prevent the premises from cooling down during the night outside ordinary operating times.

Function: Starts the unit and opens full output for the air heater if the room temperature falls below the set value.

Communication

Various communication possibilities are available:

Modbus

LonWorks and web communication (only with separate control cabinet)

External components

Control of air heater

Control signal 0-10V for valve actuator or electric air heater with a built-in thyristor.

Frost protection: When the unit is not in operation, the water temperature is maintained constantly at 25°C. During operation, the valve is controlled so that the return temperature does not fall below 12°C. If the temperature falls below 5°C, the unit is stopped and an alarm is triggered.

Circulation pump for the air heater

The circulation pump can obtain supply and control from the control centre. Running-up takes place via the control centre. The pump alarm can be connected to the control centre.

Control of air cooler

Control signal 0-10V for air cooler, water.

Control for cooler for direct expansion, DX (only separate control cabinet).

Circulation pump for air cooler

The circulation pump can obtain supply and control from the control centre. Running-up takes place via the control centre. A pump alarm can be connected to the control centre.

Combustion gas system

A combustion gas system can be connected to the unit.

Function: Stopping the unit and buzzer alarm.

Operating mode indication/Buzzer alarm output

Operating mode indication of the supply air fan and buzzer alarm can be obtained via the terminal block. The buzzer alarm can generate an acoustic signal if required.

Accessories

Electrical heater for mounting in a duct, VEEK

An electrical heater, VEEK, for mounting in a duct has been developed to heat the supply air in a ventilation system.

The casing is made of aluminium zinc coated steel sheet with heating elements in stainless material, EN 1.4541.1.

The electrical heater casing has an air gap insulated heat shield and is provided with a PG connection.

VEEK is provided with output regulation.

The maximum permissible operating temperature for outgoing air is 40°C, and the ambient temperature of the heater must not exceed 30°C. Installed in the heater are two overheating protectors, one capable of automatic resetting and one capable of manual resetting. The electrical heater is available in 9, 15 and 21 kW output variants for VEKA size 20, and in a 24 kW output variant for VEKA size 30. VEEK is available for 3 x 400 V. IP class 43.

The heater can be mounted in a horizontal or vertical duct with the connection box to the side. Mounting with the connection box facing upwards or downwards is NOT permitted.

The air velocity over the front area of the heater must not be less than 1.5 m/s.



The VEEK air heater with a thyristor has the necessary relay switches preinstalled. The output is regulated from an external control signal 0 - 10 V DC. The electronic temperature regulator controls the output with so-called time-proportional regulation (Pulse/Pause method). This gives very accurate temperature regulation.

The temperature is always finely regulated, however, by the electronic Pulse/Pause control. The control equipment has an alarm output with potential-free contact, which indicates tripped overheating protection.

The air heater is supplied separately from an external electrical control unit with a power cable and a control circuit.

The control circuit must be sealed against the fan/flow. This also applies for devices with a built-in electrical, control and regulation unit.

VEEK-aa-bb-c-d-e-4

Size aa	Output variant bb	Connection mm	Power output kW	External dimension mm (BxHxL)	Weight kg	Min air flow m ³ /s	Max power consumption at 400V AC
20	11	600x250	9	769x288x800	30	0,225	13
20	12	600x250	15	769x288x800	35	0,225	22
20	13	600x250	21	769x288x800	40	0,225	30
30	23	900x250	24	1069x288x800	48	0,338	35

Sound attenuator for installation in a duct, VELD

Rectangular sound attenuator VELD consists of a casing made of hot-dip galvanized steel sheet and built-in baffles.

The sound attenuator has an uninsulated casing.

VELD-aa-b-1

Size aa	Connection mm	Length mm	Weight kg
20	600x250	950	16
20	600x250	1250	20
30	900x250	950	21
30	900x250	1250	28



Duct connections are provided with a PG connection.

The baffle has a filling of glass wool for damping the fan and orifice noise to a ventilated space.

The sound attenuators provide high damping in the low frequency ranges and have damping elements positioned on the largest side of the casing.

Accessories

Cut-off damper for duct installation, VEVA

The rectangular cut-off damper, VEVA, for duct installation directly to the inlet of the unit is made of galvanized steel sheet and can be provided with a mounted on/off actuator with or without spring-assisted return.

The damper has a connection frame for the guide and is mounted directly on the unit. The damper blade is connected via external toothed wheels made of PP plastic.



Size aa	Connection mm	Length mm
20	600x250	120
30	900x250	120

Flexible sleeve, VEKZ-51

Flexible sleeve made of fibreglass fabric for flexible connection of ducts.



Size aa	Connection mm	Length mm
20	600x250	120
30	900x250	120

Counter-flange, VEKZ-52

Used to mount a duct directly on the unit or other connection accessories.



Size aa	Connection mm	Length mm
20	600x250	30
30	900x250	30

Transition piece, VEKZ-53

Used for duct connection and in particular on the unit outlet to accommodate the air distributors of the fans ahead of an electrical heater.

It can also be mounted on the unit inlet or on other connection accessories, such as a flexible sleeve. The sleeve has a PG connection at one end and a flange at the other.



Size aa	Connection mm	Length mm
20	600x250	100
30	900x250	100

Spare filter, VEKZ-54-b

Bag filter available in two lengths. Filter length 120 mm with filter class G3 (EU3) and length 360 mm filter class G3 synthetic and F6 (EU3 and EU6) fibreglass.



Air flow indicator, VEKZ-27

Manometer for measurement of air flow. Can be mounted on the end wall of the unit and connected to nipples.

Supplied loose.



Product code

VEKA
Supply air unit

VEKB-aa-bb-c-0-e-f-g-3-i

Unit size **(aa)** _____
20,30

Unit length **(bb)** _____
12 fan + Filter short (120)* (L=500)
13 fan + Filter long (360) (L=750)
14 fan + Heat or Cold + Filter (L=1000)
15 fan + Heat and Cold + Filter (L=1250)
*Only with g = 0.1

Fan, motor **(c)** _____
4 = size 20, 0.75 kW, 230/400V, 3-phase motor
5 = size 20, 1.5 kW, 230/400V, 3-phase motor
6 = size 30, 1.5 kW, 230/400V, 3-phase motor

Heat recovery **(d)** _____
0 = without

Heating battery **(e)** _____
0 = without heating battery
2 = heater, 2 tube rows
3 = heater, 3 tube rows

Cooling battery **(f)** _____
0 = without cooling battery
4 = cooler, 4 tube rows **
** Not in conjunction with e = 3

Filter **(g)** _____
0 = without filter
1 = G3 (EU 3), 120 mm
2 = G3 (EU 3), 360 mm
3 = F6 (EU 6), 360 mm

Generation digit **(h)** _____
3

Connection side **(i)** _____
1 = right
2 = left

Cut-off damper **VEVA-aa-b-1**

Unit size **(aa)** _____
20, 30

Ramisolering **(b)** _____
0 = without insulation
1 = with insulation

Air flow indicator **VEKZ-27-1**

Electrical heater **VEEK-aa-bb-c-d-4**

Unit size **(aa)** _____
20,30

Output **(bb)** _____
11 = size 20, 9 kW (9 kW)
12 = size 20, 15 kW (15 kW)
13 = size 20, 21 kW (15+6 kW)
23 = size 30, 24 kW (15+9 kW)

Voltage **(c)** _____
2 = 3 x 400 V

Control equipment for heater **(d)** _____
2 = mounted on the electrical heater (only 3 x 400 V)

Sound attenuator **VELD-aa-b-1**

Unit size **(aa)** _____
20, 30

Length **(b)** _____
1 = short
2 = long

Flexible sleeve **VEKZ-51-bb-1**

Unit size **(bb)** _____
20, 30

Counter-flange **VEKZ-52-bb-1**

Unit size **(bb)** _____
20, 30

Product code

Transition piece **VEKZ-53-bb-1**

Unit size **(bb)** _____
20, 30

Spare filter **VEKB** **VEKZ-54-b**

Filter type **(b)** _____
1 = size 20, G3 (EU 3), 120 mm
2 = size 20, G3 (EU 3), 360 mm
4 = size 20, F6 (EU 6), 360 mm
5 = size 30, G3 (EU 3), 120 mm
6 = size 30, G3 (EU 3), 360 mm
8 = size 30, F6 (EU 6), 360 mm

Control equipment **STVE-4-0-ccc-ddd-0-f-4-h-ii-j**

Fan output **(ccc)** _____
007 = 0.75 kW
015 = 1.5 kW

Air heater **(ddd)** _____
000 = without reheating
003 = heating water, external shunt
004 = electrical, thyristor built into air heater

Cold **(f)** _____
0 = no cold
1 = cooling water

Mains voltage **(g)** _____
4=3x400 V AC

Delivery alternative **(h)** _____
1= built-in (only 1 x 230 V AC) (ii=11)
4=wall cabinet (only 3 x400 v AC) (ii=86)

Control unit **(ii)** _____
11 = Integrated control unit (Motron)*
86 = Siemens Saphir ACX 36*
* including immersion sensor supplied when ddd=003

Control unit display **(j)** _____
0 = Integrated control equipment with display (ii=11)
5 = Siemens Saphir, sign-based 8 rows (ii=86)

Temperature regulation **STYZ-01-bb-c-d-e-0-g-h-0-j-1**

Control centre **(bb)** _____
11 = Integrated control unit (Motron)
86 = Siemens Saphir ACX 36

Regulation mode **(c)** _____
1 = Supply air regulation
2 = Exhaust air regulation
3 = Room regulation

Night-time cooling **(d)** _____
0 = without
1 = with (bb=86)

Night-time heating **(e)** _____
0 = without
1 = with (bb=86)

Reference value shift **(g)** _____
0 = without
1 = outdoor compensated temperature reference value

Flow compensation **(h)** _____
0 = none
1 = blocking high speed at low outdoor temperature

Type of sensor **(j)** _____
2 = NI 1000LG, Siemens
4 = NTC, Motron

Speed regulation **STYZ-02-bb-c-0-0-1**

Control unit **(bb)** _____
86= Siemens Saphir ACX 36

Speed regulation supply air **(c)** _____
1 = constant speed via frequency changer
2 = two-speed via frequency changer

Product code

Control of external exhaust air fan

STYZ-50-b-c-d-eee-fff-2

Motor (b)

- 1 = single-speed motor
- 2 = two-speed motor, separate windings
- 4 = frequency changer operation

Voltage (c)

- 1 = 1-phase, 1 x 230 V AC
- 3 = 3-phase, 3x400 V AC

Control (d)

- 1 = parallel with the unit
- 2 = continuous operation
- 3 = manual operation via external selector switch (selector switch not included in the supply)
- 4 = manual operation via selector switch on cabinet front

Rated current, high speed (eee)

Example ATAL-4-00240-4-0 consumes at high speed according to table 6 3 A. Enter eee = 063

Rated current, low speed (fff)

Example ATAL-4-00240-4-0 consumes at low speed according to table 3 1 A. Enter fff = 031
For single-speed motor, enter fff = 000

Type (g)

- 2 = Supplied separately (VEKA)

Communication

STYZ-05-86-7-0-0-2

Control unit (bb)

- 11 = Integrated control unit (Motron)
- 86 = Siemens Saphir ACX 36

Protocol (c)

- 3 = Lon Works
- 7 = Modbus RTU

Fire function

STYZ-20-1

Damper actuator unit

STYZ-27-1-cc-1

Positioning (b)

- 1 = outdoor air damper

Type of actuator (cc)

- 01 = two-position, 8 Nm, 24 VAC
- 31 = two-position with spring-assisted return, 15 Nm, 24 VAC

Delivery form (d)

- 1 = unfitted if controller supplied at the same time

Extended/forced operation

STYZ-40-b-c-d-e-f

Forcing operation (b)

- 1 = extended operation
- 2 = forced flow
- 3 = forced flow, extended operation

Control via external timer (c)

0 – 5 items

Control via external push-button (d)

0 – 5 items

Control via CO₂ monitor (e)

0 – 5 items

Control via movement detector (f)

0 – 5 items

Control and controller documentation

STYZ-36-bb-5-dd-2-f-g-1

Control unit (bb)

- 11 = Integrated control unit (Motron)
- 86 = Siemens Saphir ACX 36

Unit size (dd)

- 02 = size 20
- 03 = size 30

Language on electrical diagram (f)

- 1 = Swedish
- 2 = German
- 3 = English
- 4 = Finnish

Language on controller display (g)

- 1 = Swedish
- 2 = German
- 3 = English
- 4 = Finnish

Product code

Control water battery STYZ-70-20-c-d-e-1-ggg

Controller alternative (c) _____

1 = actuator

2 = valve + actuator

3 = Complete shunt unit with pump and actuator

Valve type (d) _____

0 = without

2 = 2-way

3 = 3-way

Positioning (e) _____

1 = heat

2 = cold

low coefficient (kvs value) (ggg) _____

000 = without

002 = 0.25

025 = 2.5

250 = 25, etc.

Frequency inverter STRF-5-bb-ccc-4*-1-2-2-1-ii-15

(Loose supplied frequency inverter 1 x 230 V)

Unit family (a) _____

5 = VE

Unit size (bb) _____

02=size 20

03=size 30

Output (ccc) _____

007 = 0.75 kW

015 = 1.5 kW

Operating frequency high speed (ii) _____

[Hz]

Brand (jj) _____

ABB ACS 350

Safety switch, unfitted STVZ-66-b-1

Execution (b) _____

1 = 1-phase, built-in control system (Motron)

2 = 3-phase, Siemens Saphir control equipment

The safety switch must not be fitted to a unit controlled by STVE or by a frequency inverter.

* Norway: d = 2 (230)

We Bring Air to Life

Fläkt Woods is a global leader in air management. We specialise in the design and manufacture of a wide range of air climate and air movement solutions. And our collective experience is unrivalled.

Our constant aim is to provide systems that precisely deliver required function and performance, as well as maximise energy efficiency.

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Fläkt Woods is providing solutions for ventilation and air climate for buildings as well as fan solutions for Industry and Infrastructure.

● Air Handling Units (AHUs)

Modular, compact and small AHU units. Designed to ensure optimisation of indoor air quality, operational performance and service life.

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Supply and exhaust diffusers and valves for installation on walls, ceiling or floor are all included in our large range and fit all types of applications.

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