



Heat pumps, Fans, Filter boxes



- more than functional



# I n d e K l i m a M i l j ø A / S

IndeKlimaMiljø A/S, or just IKM A/S, takes advantage in many years of experience as well internally as with our partners and suppliers of solutions for the ventilation business. Hence IKM A/S has the dynamics of the small organization and the competences of the larger companies.

IKM A/S, was founded in 2003, and acquired by the present owners at the beginning of 2008.

The IKM A/S starting point is everybody's demand for a comfortable indoor climate and our need for a healthy environment.

From this point new products and methods are developed in close collaboration with architects, engineers and installers to form overall solutions based on the expertise and products from IKM A/S.

IKM A/S aims for total solutions, and we therefore appreciate a close dialog with the customer and engineering company regarding the best possible solution to the actual job.



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# VL 1500

## Description

VL 1500 is an effective AHU designed to recover heat from exhaust air and then transfer the energy for heating or for heating domestic water.



This solution makes it possible over year to recover more heat than with a traditional ventilation system.

## Application

VL heat pump is used where heat recovery of exhaust air from buildings are required, in combination with exhaust fan as ECV 1500.

The unit can be used in 3 modes.

- 1) fixed fan speed.
- 2) constant pressure in extract duct.
- 3) constant volume

You can program 3 different speeds for the unit.

Timer program to change between 3 speeds.

Remote control signal for ventilation.

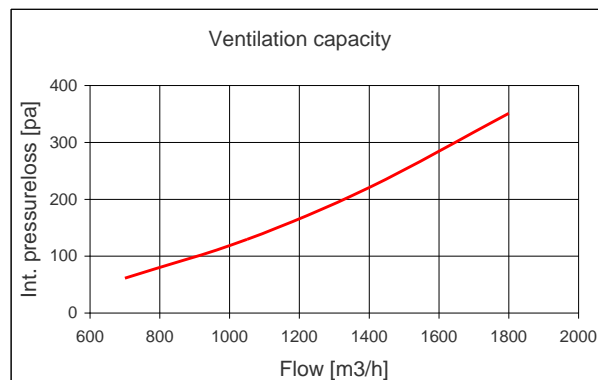
## Construction

VL heat pump upper part includes components for the treatment of waste air. Filter in extract air protects the evaporator.

When not in operation, a damper closes to ensure that no air flows through the unit during standstill.

At the bottom of the cabinet compressor and heat exchanger are positioned where the recovered energy is delivered to the heating circuit water. Also sitting here are safety switch and other refrigeration components.

## Air capacity



Rated airflow for the heat pump is 750-1800 m<sup>3</sup>/h.

## Capacity table

Model	Extract [m <sup>3</sup> /h]	Humid [%]	Perform. [kW]	Consump. [kW]	Power factor
VL1500	1800	30	9,53	1,92	5,0
VL1500	1800	60	10,40	1,92	5,4

VL 1500 modulates in the range 20-100 %.

Performance is 3-12 kW at an extract temperature of 21 C°, water temperature 32/42 C°

## Closing damper

Motor: 230V on/off

## Sound data

Frequency [Hz]	1m in front of unit [dB(A)]
125	50
250	47
500	42
1000	36
2000	31
4000	25
Average	44

Air volume: 1800 m<sup>3</sup>/h

## Technical data

VL model:	1500
Compressor:	ZRD42
Voltage V:	3 x 400
Max opt. power kW:	2,6
Max consumption A:	7
Compressor:	Copeland Scroll
Refrigerant	R424A
Elec. supply	3x400V N PE, 50HZ

## Measures

## Dimensions

Measures:	(h x l x d) 1534 x 770 x 706 mm excl. connections.
Cabinet:	Double sided galvanized steel with 50 mm insulation (BS 30). 2 doors with handles on front 2 doors on rear
Water connection:	1" RG
Cassette filter:	G3 1 pcs. 592x592x48 mm
Condense drain:	Stainless connection $\varnothing$ 20
Duct connection:	$\varnothing$ 400
Weight:	210 kg

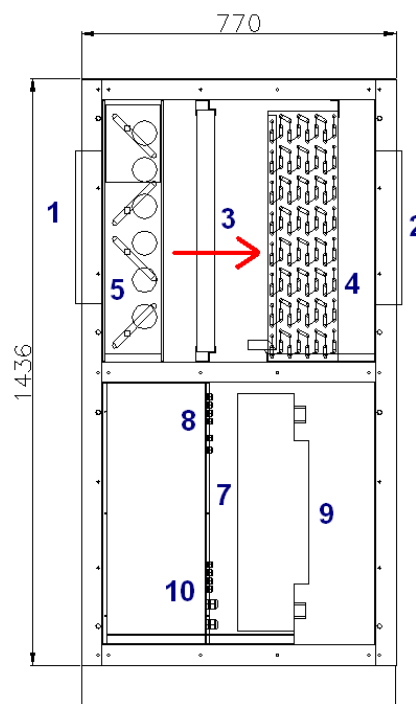
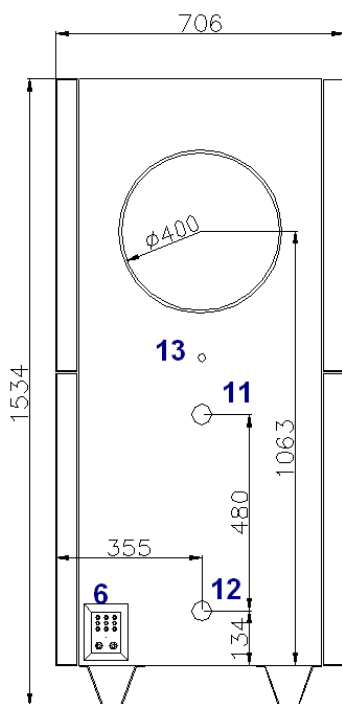
## Controller

Control panel:	IKM RC2 VL control
Main control:	IKM MC2 VL control

## Accessories

Feet:	Vibration dampers $\varnothing$ 50
Fan:	For extraction of correct air volume for VL 1500, the fan ECV 1500 can be used. (See datasheet)

- 1: Extract
- 2: Exhaust
- 3: Filter
- 4: Evaporator
- 5: Extracts damper
- 6: Cable entry
- 7: Compressor
- 8: Hi/Lo pressure switch
- 9: Heater
- 10: Elec. conn.
- 11: Water out
- 12: Water in
- 13: Condense drain



# VL 3000

## Description

VL 3000 is an effective AHU designed to recover heat from exhaust air and then transfer the energy for heating or for heating domestic water.



This solution makes it possible over year to recover more heat than with a traditional ventilation system.

## Application

VL heat pump is used where heat recovery of exhaust air from buildings are required, in combination with exhaust fan as ECV 3000.

The unit can be used in 3 modes.

- 1) fixed fan speed.
- 2) constant pressure in extract duct.
- 3) constant volume

You can program 3 different speeds for the unit.  
 Timer program to change between 3 speeds.  
 Remote control signal for ventilation.

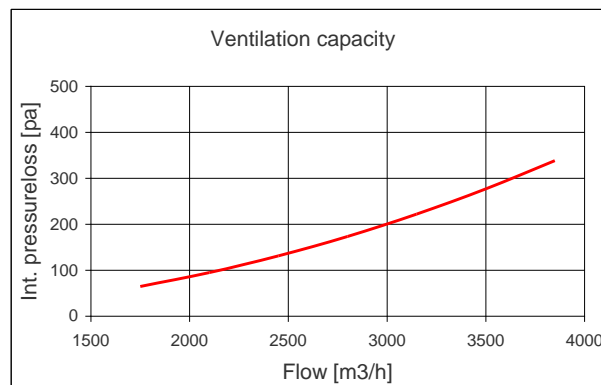
## Construction

VL heat pump upper part includes components for the treatment of waste air. Filter in extract air protects the evaporator.

When not in operation, a damper closes to ensure that no air flows through the unit during standstill.

At the bottom of the cabinet compressor and heat exchanger are positioned where the recovered energy is delivered to the heating circuit water. Also sitting here are safety switch and other refrigeration components.

## Air capacity



Rated airflow for the heat pump is 1800-3600 m<sup>3</sup>/h.

## Capacity table

Model	Extract [m³/h]	Humid [%]	Perform. [kW]	Consump. [kW]	Power factor
VL3000	3600	30	18	4,0	4,5
VL3000	3600	60	20	4,1	4,7

VL 3000 modulates in the range 20-100 %.

Performance is 4-20 kW at an extract temperature of 21 C°, water temperature 32/42 C°

## Closing damper

Motor: 230V on/off

## Sound data

Frequency [Hz]	1m in front of unit [dB(A)]
125	52
250	49
500	44
1000	38
2000	33
4000	27
Average	46

Air volume: 3600 m<sup>3</sup>/h

## Technical data

VL model:	3000
Compressor:	ZRD72
Voltage V:	3 x 400
Max opt. power kW:	6,6
Max consumption Amp:	11,3
Compressor:	Copeland Scroll
Refrigerant	R424A
Elec. supply	3x400V N PE, 50HZ

## Measures

## Dimensions

Measures:	(h x l x d) 1534 x 770 x 998 mm excl. connections.
Cabinet:	Double sided galvanized steel with 50 mm insulation (BS 30). 2 doors with handles on front 2 doors on rear
Water connection:	1" RG
Cassette filter:	G3 1 pcs. 292x592x48 mm G3 1 pcs. 592x592x48 mm
Condense drain:	Stainless connection ø20
Duct connection:	Ø500
Weight:	282 kg

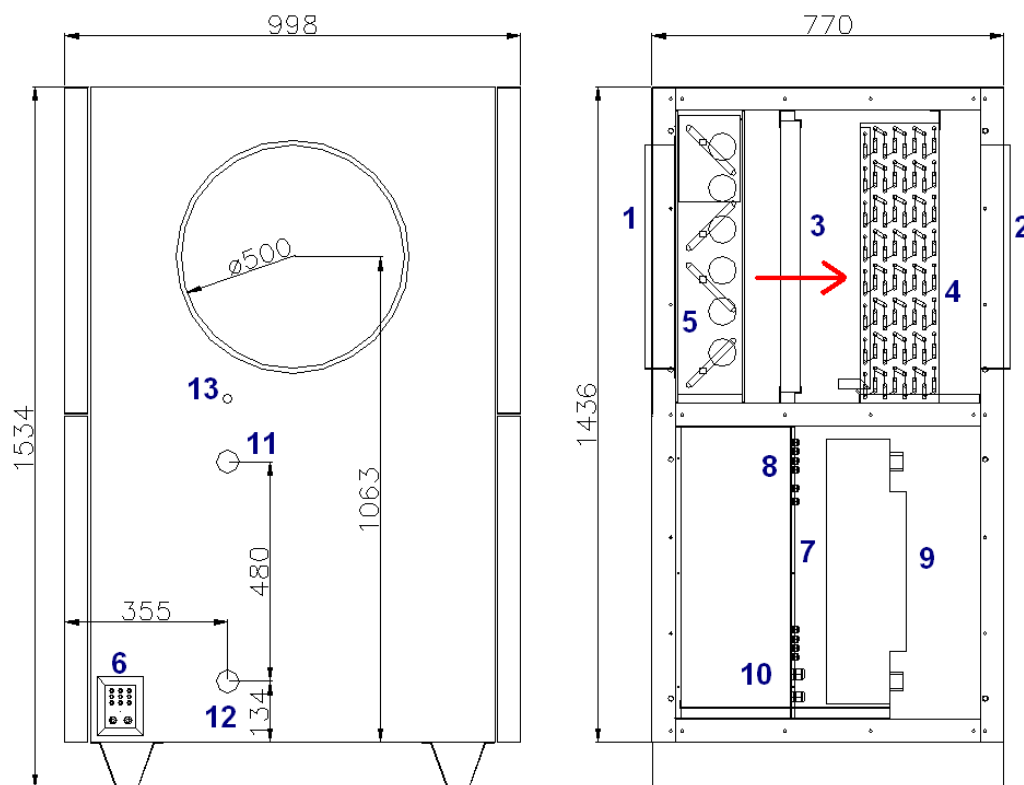
## Controller

Control panel:	IKM RC2 VL control
Main control:	IKM MC2 VL control

## Accessories

Feet:	Vibration dampers Ø50
Fan:	For extraction of correct air volume for VL 3000, the fan ECV 3000 can be used. (See datasheet)

- 1: Extract
- 2: Exhaust
- 3: Filter
- 4: Evaporator
- 5: Extracts damper
- 6: Cable entry
- 7: Compressor
- 8: Hi/Lo pressure switch
- 9: Heater
- 10: Elec. conn.
- 11: Water out
- 12: Water in
- 13: Condense drain



# VL 6000

## Description

VL 6000 is an effective AHU designed to recover heat from exhaust air and then transfer the energy for heating or for heating domestic water.



This solution makes it possible over year to recover more heat than with a traditional ventilation system.

## Application

VL heat pump is used where heat recovery of exhaust air from buildings are required, in combination with exhaust fan as ECV 6000.

The unit can be used in 3 modes.

- 1) fixed fan speed.
- 2) constant pressure in extract duct.
- 3) constant volume

You can program 3 different speeds for the unit.

Timer program to change between 3 speeds.

Remote control signal for ventilation.

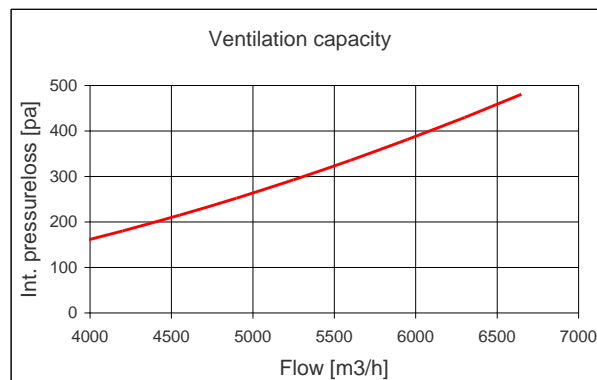
## Construction

VL heat pump upper part includes components for the treatment of waste air. Filter in extract air protects the evaporator.

When not in operation, a damper closes to ensure that no air flows through the unit during standstill.

At the bottom of the cabinet compressor and heat exchanger are positioned where the recovered energy is delivered to the heating circuit water. Also sitting here are safety switch and other refrigeration components.

## Air capacity



Rated airflow for the heat pump is 4000-7000 m<sup>3</sup>/h.

## Capacity table

Model	Extract [m <sup>3</sup> /h]	Humid [%]	Perform. [kW]	Consump. [kW]	Power factor
VL6000	7000	30	33	7,5	4,5
VL6000	7000	60	36	7,8	4,6

VL 6000 modulates in the range 20-100 %.

Performance is 7-36 kW at an extract temperature of 21 C°, water temperature 32/42 C°

## Closing damper

Motor: 230V on/off



## Sound data

Frequency [Hz]	1m in front of unit [dB(A)]
125	53
250	50
500	45
1000	39
2000	33
4000	28
Average	48

Air volume: 6000 m<sup>3</sup>/h

## Technical data

VL model:	6000
Compressor:	ZRD125
Voltage V:	3 x 400
Max opt. power kW:	11,4
Max consumption Amp:	19,5
Compressor:	Copeland Scroll
Refrigerant	R424A
Elec. supply	3x400V N PE, 50HZ

## Measures

## Dimensions

Measures:	(h x l x d) 1759 x 770 x 1298 mm excl. connections.
Cabinet:	Double sided galvanized steel with 50 mm insulation (BS 30). 2 doors with handles on front 2 doors on rear
Water connection:	2" RG
Cassette filter:	G4 2 pcs. 592x817x48 mm
Condense drain:	Stainless connection ø20
Duct connection:	Ø630
Weight:	412 kg

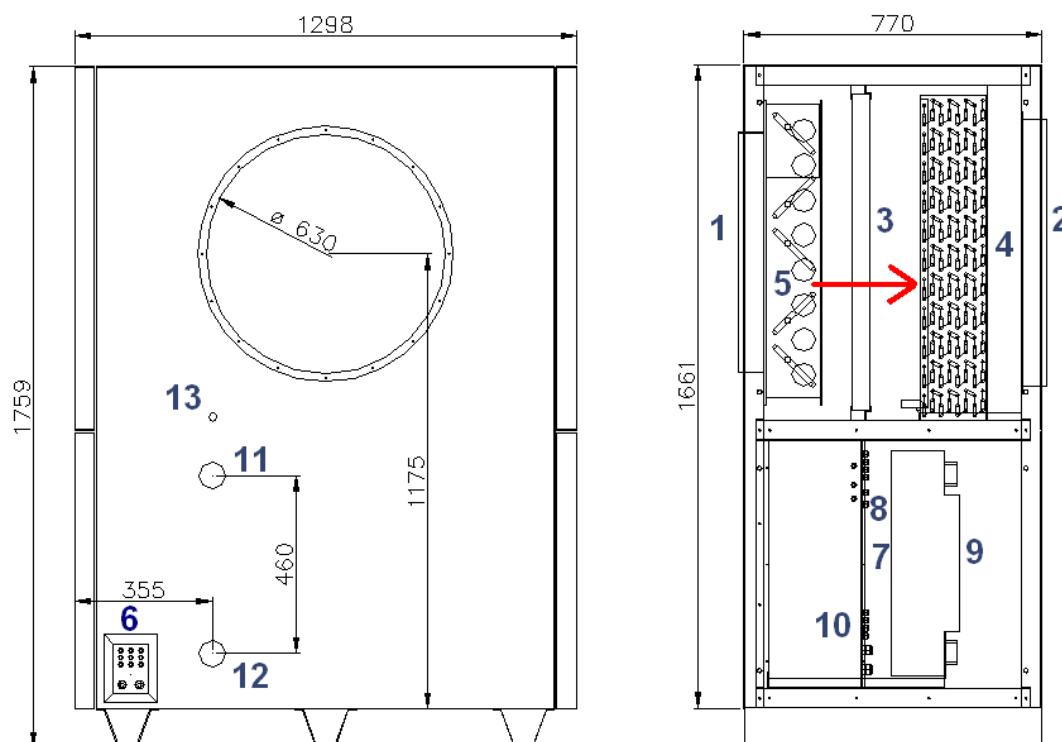
## Controller

Control panel:	IKM RC2 VL control
Main control:	IKM MC2 VL control

## Accessories

Feet:	Vibration dampers Ø50
Fan:	For extraction of correct air volume for VL-6000, the fan ECV 6000 can be used. (See datasheet)

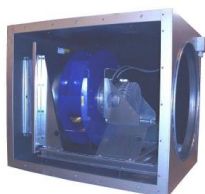
- 1: Extract
- 2: Exhaust
- 3: Filter
- 4: Evaporator
- 5: Extracts damper
- 6: Cable entry
- 7: Compressor
- 8: Hi/Lo pressure switch
- 9: Heater
- 10: Elec. conn.
- 11: Water out
- 12: Water in
- 13: Condense drain



# ECV1500

## Description

ECV 1500 is a complete fan box with high efficiency EC-fan with modulating speed.



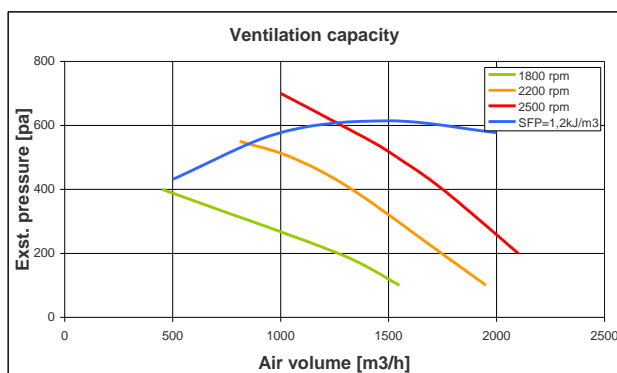
Doors on each side means the fan can be used both left and right.

## Use

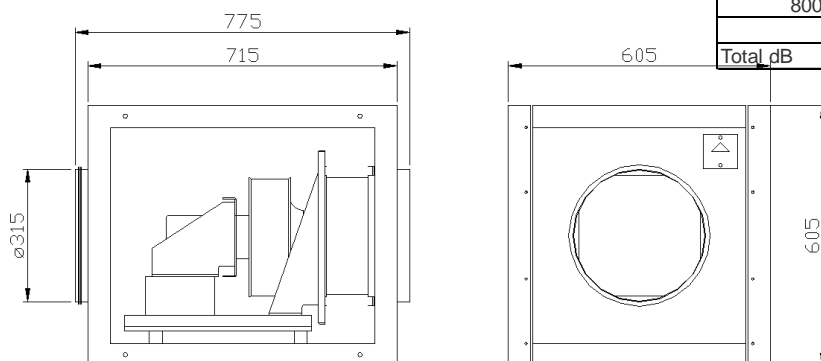
ECV1500 is well suited for extract air or supply air where it is desired to control air volume by 0-10V signal.

## Air performances

The diagram shows the available pressure for the duct system. Internal pressure drops are deducted.



## Measures



## Motor

Isolation class: F  
 Tightness class: IP 54  
 EC-motor: 3x400 V 50/60 Hz  
 3,6 A  
 2,2 KW  
 3550 RPM  
 Operating range: -25°C to +60°C  
 Features: 0-10V / PWM control signal

## Fan

Type: Centrifugal fan with backward curved blades.  
 Number of blades: 7 blades  
 K-factor (m<sup>3</sup>/h): 95

## Building

Measures: (h x w x l)  
 605 x 605 x 715 mm  
 excl. duct connections and electric box.  
 Cabinet: Double encapsulated galvanized steel plates with 50mm insulation (BS 30).  
 Doors: Detachable doors with bolts on both sides.  
 Duct connection: Ø315 (nipple measure) with rubber gasket  
 Weight: 74 kg

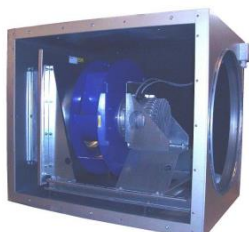
## Sound data

Air volume	1500m <sup>3</sup> /h 400pa				2000m <sup>3</sup> /h 500pa			
	In		Out		In		Out	
	Hz	Lw dB	Lw(A) dB	Lw dB	Lw(A) dB	Lw dB	Lw(A) dB	
63	70	72	45	47	75	77	50	52
125	73	75	58	60	79	81	64	66
250	75	77	67	69	81	83	73	75
500	74	76	71	73	80	82	78	80
1000	73	75	73	75	79	81	79	81
2000	65	67	66	68	72	74	73	75
4000	62	64	63	65	68	70	69	71
8000	60	62	59	61	68	70	66	68
Total dB	80	82	76	78	87	89	83	85

# ECV3000

## Description

ECV 3000 is a complete fan box with high efficiency EC-fan with modulating speed.



Doors on each side means the fan can be used both left and right.

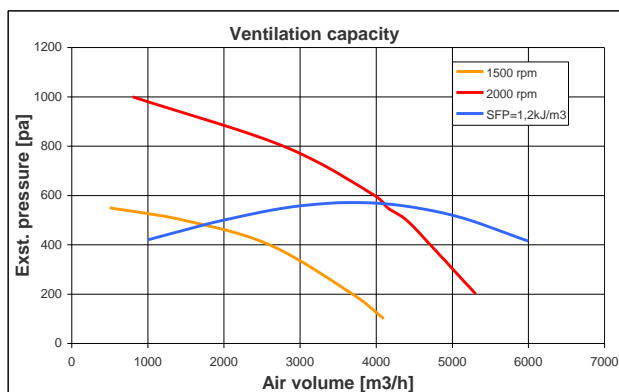
## Use

ECV3000 is well suited for extract air or supply air where it is desired to control air volume by 0-10V signal.

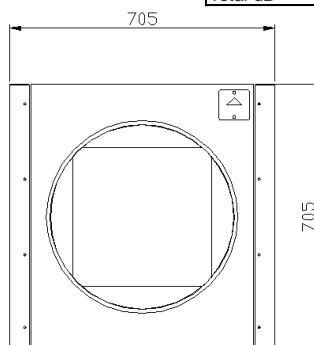
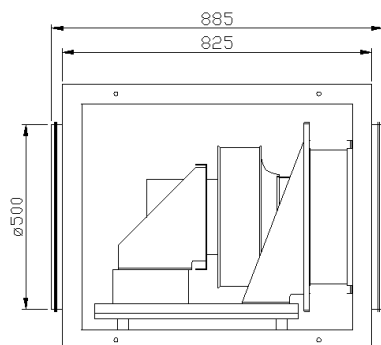
## Air performances

The diagram shows the available pressure for the duct system.

Internal pressure drops are deducted.



## Measures



## Motor

Isolation class: F  
 Tightness class: IP 54  
 EC-motor: 3 x 400 V 50/60 Hz  
 3,3 A  
 1,95 KW  
 2300 RPM  
 Operating range: -25°C to +60°C  
 Features: 0-10V / PWM control signal

## Fan

Type: Centrifugal fan with backward curved blades.  
 Number of blades: 7 blades  
 K-factor (m3/h): 154

## Building

Measures: (h x w x l)  
 705 x 705x 825 mm  
 excl. duct connections and electric box.  
 Cabinet: Double encapsulated galvanized steel plates with 50mm insulation (BS 30).  
 Doors: Detachable doors with bolts on both sides.  
 Duct connection: Ø500 (nipple measure) with rubber gasket  
 Weight: 71 kg

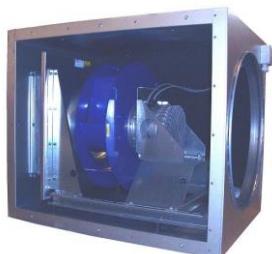
## Sound data

Air volume	2500m³/h 400pa				4000m³/h 500pa				
	Frequency	In	Out	In	Out	In	Out	In	Out
	Hz	Lw dB	Lw(A) dB	Lw(A) dB	Lw dB	Lw(A) dB	Lw(A) dB	Lw dB	Lw(A) dB
	63	67	69	42	44	69	71	44	46
	125	78	80	64	66	73	75	58	60
	250	77	79	69	71	87	89	77	79
	500	73	75	69	71	81	83	78	80
	1000	69	71	69	71	76	78	75	77
	2000	66	68	67	69	72	74	73	75
	4000	65	67	66	68	72	74	73	75
	8000	63	65	62	64	71	73	70	72
Total dB		82	84	76	78	89	91	83	85

# ECV6000

## Description

ECV 6000 is a complete fan box with high efficiency EC-fan with modulating speed.



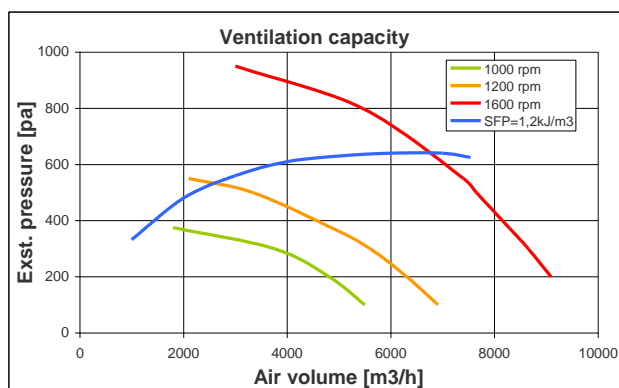
Doors on each side means the fan can be used both left and right.

## Use

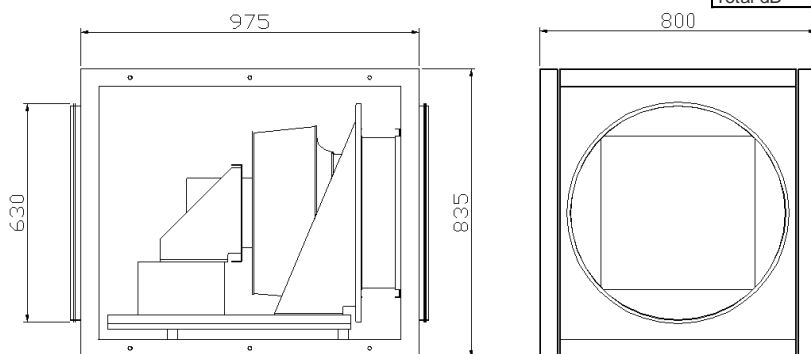
ECV6000 is well suited for extract air or supply air where it is desired to control air volume by 0-10V signal.

## Air performances

The diagram shows the available pressure for the duct system. Internal pressure drops are deducted.



## Measures



## Motor

Isolation class: F  
 Tightness class: IP 54  
 EC-motor: 3 x 400 V 50/60 Hz  
 3,9 A  
 2,4 KW  
 1660 RPM  
 Operating range: -25°C to +60°C  
 Features: 0-10V / PWM control signal

## Fan

Type: Centrifugal fan with backward curved blades.  
 Number of blades: 7 blades  
 K-factor (m<sup>3</sup>/h): 252

## Building

Measures: (h x b x d)  
 835 x 800 x 975 mm  
 excl. duct connections and electric box.  
 Cabinet: Double encapsulated galvanized steel plates with 50mm insulation (BS 30).  
 Doors: Detachable doors with bolts on both sides.  
 Duct connection: Ø630 (nipple measure) with rubber gasket  
 Weight: 90 kg

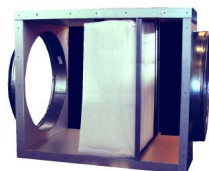
## Sound data

Air volume	4000m <sup>3</sup> /h 400pa				6000m <sup>3</sup> /h 500pa				
	Frequency	In	Out	In	Out	In	Out	In	Out
	Hz	Lw dB	Lw(A) dB	Lw dB	Lw(A) dB	Lw dB	Lw(A) dB	Lw dB	Lw(A) dB
	63	68	70	43	45	69	71	44	46
	125	80	82	64	66	86	88	72	74
	250	76	78	69	71	83	85	75	77
	500	71	73	68	70	78	80	74	76
	1000	69	71	69	71	74	76	74	76
	2000	67	69	68	70	72	74	73	75
	4000	66	68	67	69	70	72	71	73
	8000	63	65	62	64	68	70	67	69
	Total dB	83	85	76	78	89	91	81	83

# FKV1500

## Description

FKV1500 is a complete filter box with panel filters or bag filters depending on demands.



Detachable doors make it easy to change filters from both sides.

## Use

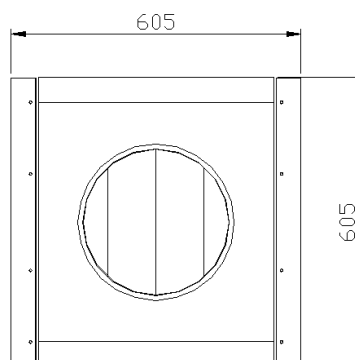
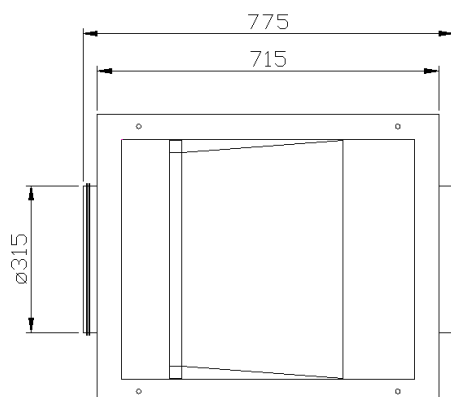
FKV1500 is suitable for extract air or supply air where it is desired to filter the air in different filtering classes.

## Filter types

Classification:	EN 779
Fine filter class:	EU5
Measures:	490x490x535
Number of bags:	6
Fine filter class:	EU7
Measures:	490x490x535
Number of bags:	10

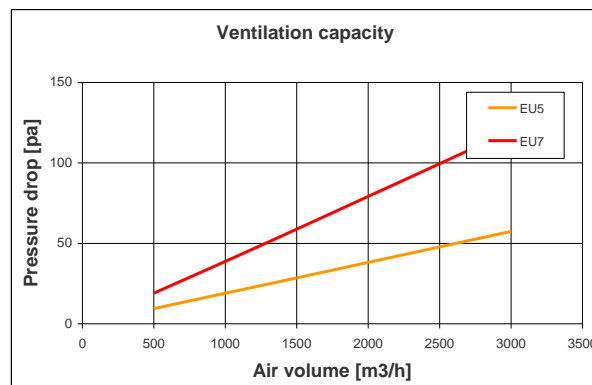
Other filter grades on request.

## Measures



## Pressure drop

The diagram shows pressure drops with various filter grades.



Max. pressure drop:	Coarse filters	250 pa
	Fine filters	300 pa

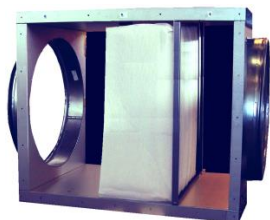
## Building

Measures:	(h x w x l) 605 x 605 x 715 mm excl. duct connections.
Cabinet:	Double encapsulated galvanized steel plates with 50mm insulation (BS 30).
Doors:	Detachable doors with bolts on both sides.
Duct connection:	Ø315 (nipple measure) with rubber gasket
Weight:	34 kg

# FKV3000

## Description

FKV3000 is a complete filter box with panel filters or bag filters depending on demands.



Detachable doors make it easy to change filters from both sides.

## Use

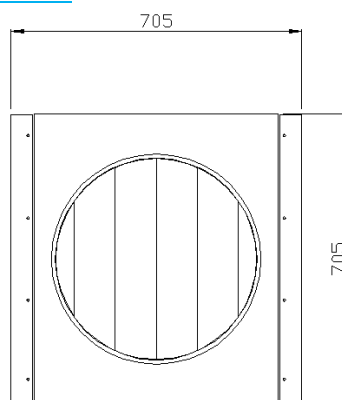
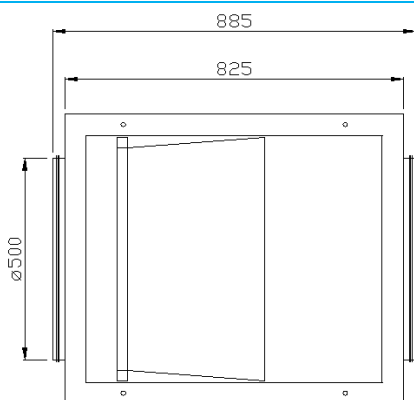
FKV3000 is suitable for extract air or supply air where it is desired to filter the air in different filtering classes.

## Filter types

Classification:	EN 779
Coarse Class:	G3
Measures:	592x592x40
Coarse Class:	G4
Measures:	592x592x360
Number of bags:	6
Fine filter class:	EU5
Measures:	592x592x600
Number of bags:	6
Fine filter class:	EU7
Measures:	592x592x535
Number of bags:	10

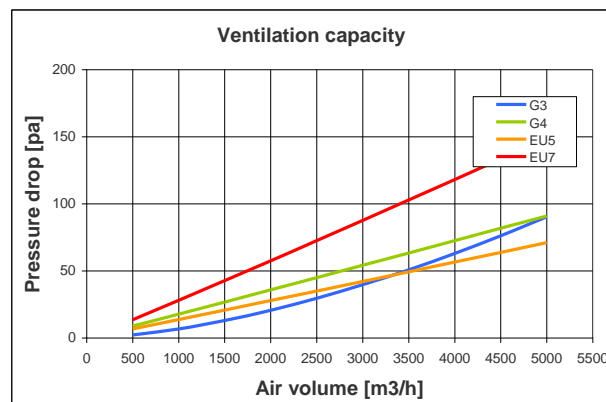
Other filter grades on request.

## Measures



## Pressure drop

The diagram shows pressure drops with various filter grades.



Max. pressure drop:	Coarse filters	250 pa
	Fine filters	300 pa

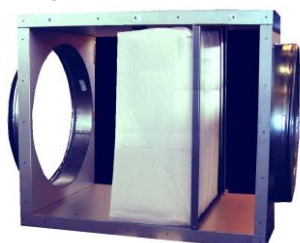
## Building

Measures:	(h x b x d) 705 x 705 x 825 mm excl. duct connections.
Cabinet:	Double encapsulated galvanized steel plates with 50mm insulation (BS 30).
Doors:	Detachable doors with bolts on both sides.
Duct connection:	Ø500 (nipple measure) with rubber gasket
Weight:	34 kg

# FKV6000

## Description

FKV6000 is a complete filter box with panel filters or bag filters depending on demands.



Detachable doors make it easy to change filters from both sides.

## Use

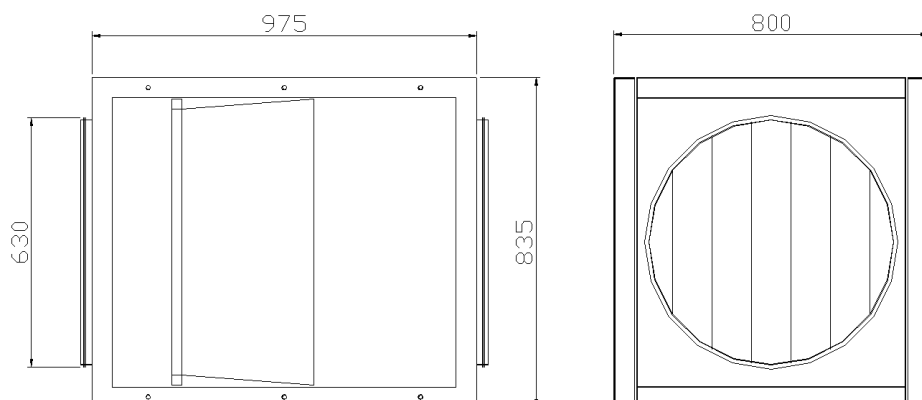
FKV6000 is suitable for extract air or supply air where it is desired to filter the air in different filtering classes.

## Filter types

Classification:	EN 779
Fine filter class:	EU5
Measures:	674x722x600
Number of bags:	6
Fine filter class:	EU7
Measures:	674x722x600
Number of bags:	10

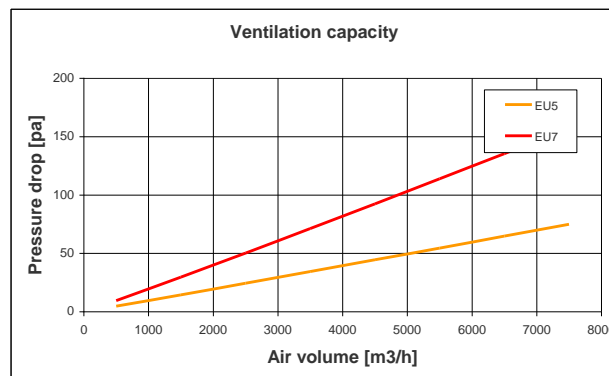
Other filter grades on request.

## Measures



## Pressure drop

The diagram shows pressure drops with various filter grades.



Max. pressure drop:	Coarse filters	250 pa
	Fine filters	300 pa

## Building

Measures:	(h x b x d) 835 x 800 x 975 mm excl. duct connections.
Cabinet:	Double encapsulated galvanized steel plates with 50mm insulation (BS 30).
Doors:	Detachable doors with bolts on both sides.
Duct connection:	Ø630 (nipple measure) with rubber gasket
Weight:	53 kg

